Zenith Radio Corp.

Model: H723Z	Chassis:	Year: Pre 1952
Power:	Circuit:	IF:
Tubes:		
Bands:		

Resources
Riders Volume 22 - ZENITH 22-15
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The 7H04Z 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 7H04Z 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 others.

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.

Note: If a 12AT7 is replaced with a 12AU7 or vice versa, the RF portion of this reciever must be realigned.

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

A vacuum tube voltmeter with 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.

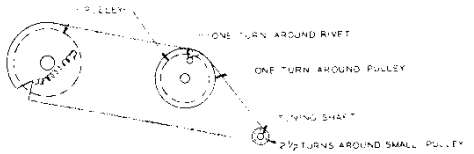
The signal generator output should be kept just high enough to get an indication on the meter.

(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).

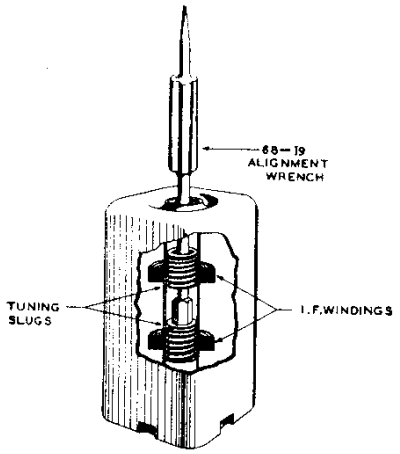
(c) Vacuum Tube Voltmeter from Limiter Grid to Chassis.

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

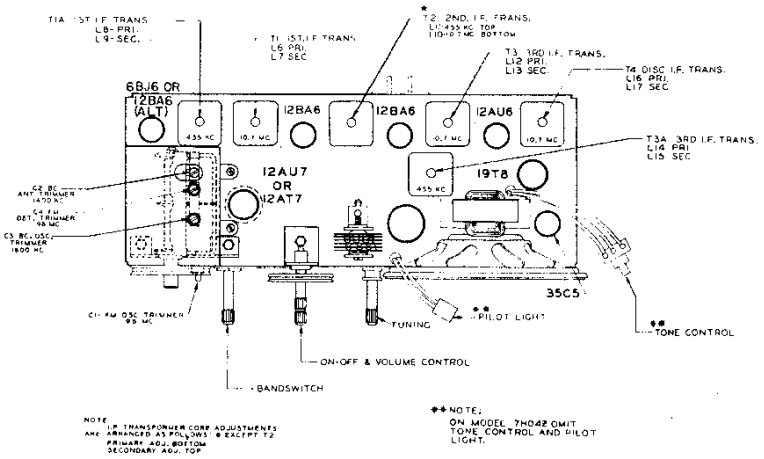


DIAL CORD DRIVE

TUBE AND TRIMMER LOCATION



Detail of
IF Transformer



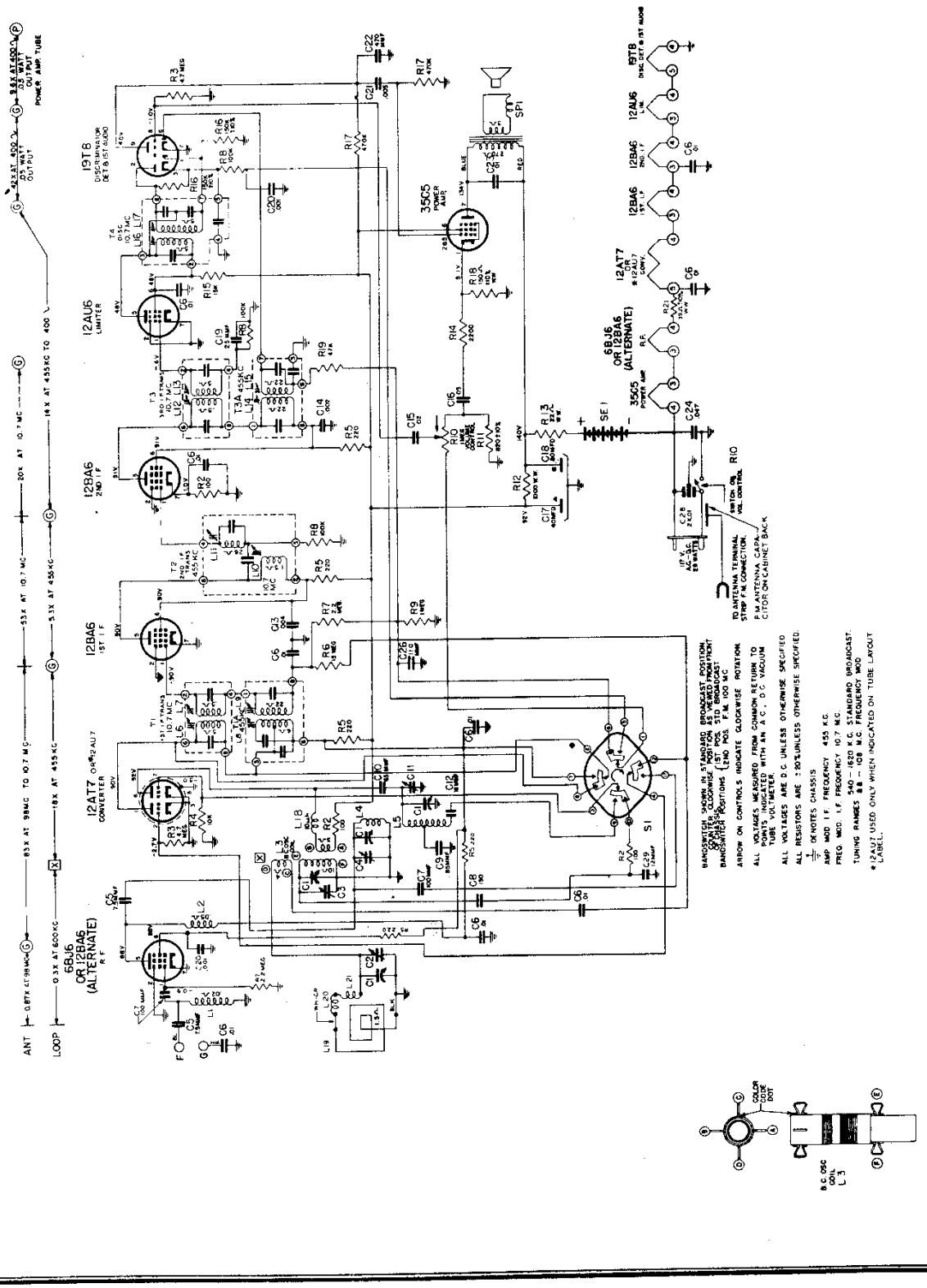
NOTE: I.F. TRANSFORMER CORE ADJUSTMENTS ARE ARRANGED AS FOLLOWS & EXCEPT T2
PRIMARY ADJ. BOTTOM
SECONDARY ADJ. TOP

**NOTE: ON MODEL 7H042 OMIT TONE CONTROL AND PILOT LIGHT.

ALIGNMENT PROCEDURE

Operation	Connect Oscillator to	Dummy Antenna	Input Signal Frequency	Band	Set Dial To	Adj. Trimmers	Purpose
1	Pin 2-12AT7 or 12AU7 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 or 12AU7 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.

MODEL H723Z,
Ch. 7H04Z



PARTS LIST

PART NO.	DIAG. NO.	DESCRIPTION
		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
S-17334		Tuning Shaft & Pulley Assem.
S-17336		Tuning Shaft Brkt. & Ins. Strip Assem.
S-17350		Dial Cord & Eyelet Assem.
S-17467		Brkt. & Pulley Assem.
		COILS & CHOKES
20-328	L5	F.M. Osc. Coil
20-331	L4	F.M. Mixer "
20-333	L18	R.F. Choke "
20-335	L2	R.F. Plate Load Coil
20-336	L1	F.M. Antenna Coil
95-1102	T3A	3rd. I.F. Trans. 455KC
95-1150	T3	1st. & 3rd. I.F. Trans. 10.7 MC (2 Used)
95-1153	T4	Disc. Trans. 10.7 MC
95-1250	T1A	1st. I.F. Trans. 455KC
95-1251	T2	2nd. I.F. Trans. 10.7 MC & 455 KC
S-17340	L3	B.C. Osc. Coil Assem.
		CONDENSERS
22-3	C6	.01 Mfd. Ceramic Disc. (9 Used) 500V
22-5	C26	110 Mmfd. " " (or 22-1669) 500V
22-6	C22	470 Mmfd. Ceramic 500V
22-229	C21	.005 Mfd. 600V
22-448	C13	.004 " 600V
22-830	C15	.02 " 600V
22-1126	C23	.01 " 400V
22-1158	C16	.05 " 200V
22-1220	C14	.002 " 600V
22-1507	C19	25 Mmfd. Ceramic 500V
22-1669	C7	100 " " (2 Used) 500V
22-1675	C8	150 " " 500V
22-1676	C20	.001 Mfd. " (2 Used) 500V
22-1757	C18,C17	Elect. Cond. 40 Mfd. - 150V - 80 Mfd. 150V

PART NO.	DIAG. NO.	DESCRIPTION
		CONDENSERS Cont'd.
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 Gang Two Sect. B.C. Two Section F.M.
22-2256	C10	65 Mmfd. Ceramic 500V
22-2257	C12	16 Mmfd. Ceramic 500V
22-2258	C9	85 Mmfd. Ceramic 500V
22-2276	C28	Dual Ceramic - .01 Mfd. 500V
22-2278	C29	12 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.
63-1744	R2	100 Ohm 1/2W 20% Ins. Res. (3 Used)
63-1758	R5	220 Ohm 1/2W 20% Ins. Res. (5 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. (2 Used)
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	Volume Control & Switch
63-2424	R21	39 Ohm W.W. 1W 10% Ins. Res.
		MISCELLANEOUS
11-85		Line Cord & Plug (6 ft.)
12-1070		Wavemagnet Mtg. Brkt.
14-1272		Plastic Table Cabinet for H723UZ

PART NO.	DIAG. NO.	DESCRIPTION
		MISCELLANEOUS Cont'd.
16-656		Packing Carton
19-175		Coil Mtg. Clip (Used on S-17340)
24-535		Line Cord Plug Cover
49-689	SP1	5-1/4" PM Speaker ZC5091 Cone & Voice Coil
54-129		Speed Nut (9 used to mt. Grille & Baffle)
54-271		6-32 X 1/4" Palnut Steel (1 used on ea. I.F.)
57-1686		Emblem Plate
57-1690		Emblem Mtg. Plate
57-1717		Chassis Bottom Plate
58-188		Two Prong Plug
78-787		Two Contact Socket (Cabt. Back)
78-806		Miniature Tube Socket
78-869		Miniature Tube Socket
78-870		Miniature Tube Socket (3 Used)
78-871		Miniature Tube Socket
78-903		Miniature Tube Socket
83-1056		Wavemagnet Mtg. Strip
83-1829		Insulator Strip
85-501		Band Switch
97-293		Chassis Mtg. Stud (2 Used)
110-152		Grill Cloth
112-281		#10 X 3/4" Truss Hd. S.T. Stat. Br. Screw (2 Used Chassis Mtg.)
114-297		#6 X 1/4" Hex Hd. S.T. (4 Used on S-17679 & 6 Used 57-1717)
114-356		#6-32 X 1-1/4" Hex Hd. S.T. Screw (Used on 212-7)
126-618		Tube Shield
138-42		Cabinet Grill
139-91		Speaker Baffle
149-89		Iron Core
159-69		Plug Button
196-153		Speaker Gasket
202-697		F.M. Instruction Book
202-860		Instruction Book
212-7	SE1	Selenium Rectifier
S-17366		Cabt. Back Assem.
S-17679		Gang Cond. Shield & Terminal Strip Assem.
S-17696	L19	Wavemagnet Assem.
S-17855	L21	Choke Coil Assem.
S-17856	L20	Loop Loading Coil Assem.