

Zenith Radio Corp.

Model: H723Z1

Chassis:

Year: Pre 1955

Power:

Circuit:

IF:

Tubes:

Bands:

Resources

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The 7H04Z1 chassis incorporates a superneterodyne 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 7H04Z1 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: 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 isolation resistor of 2,000,000 ohms in series with the hot lead will serve for FM adjustments. This lead should be shielded.

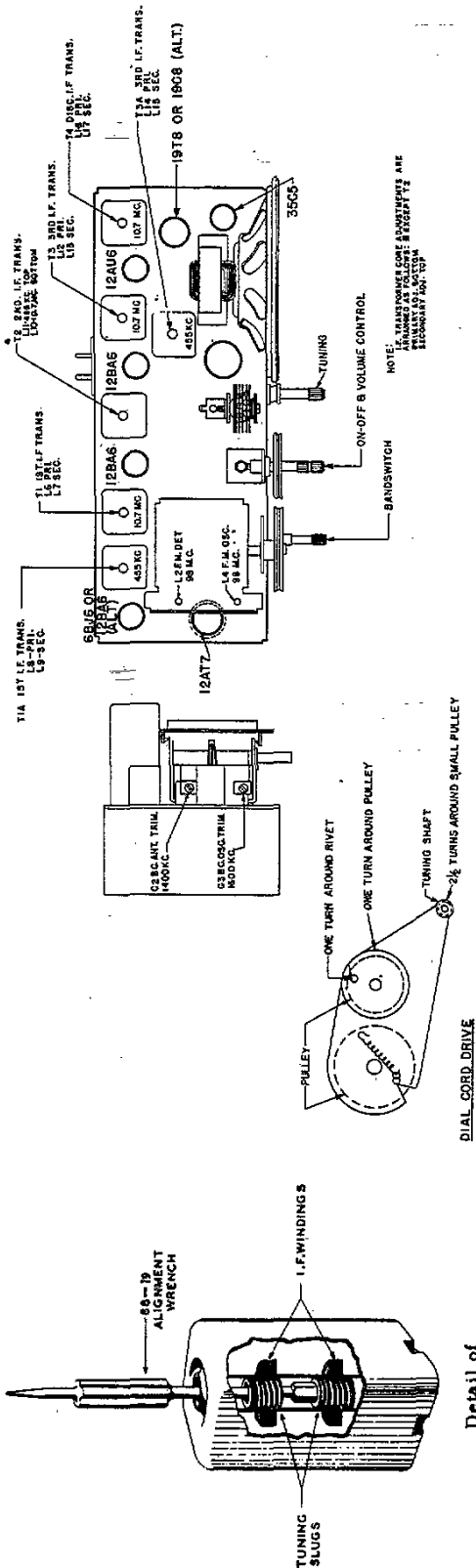
An AC output meter connected across the primary or secondary of the output transformer will be satisfactory for all AM adjustments.

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.

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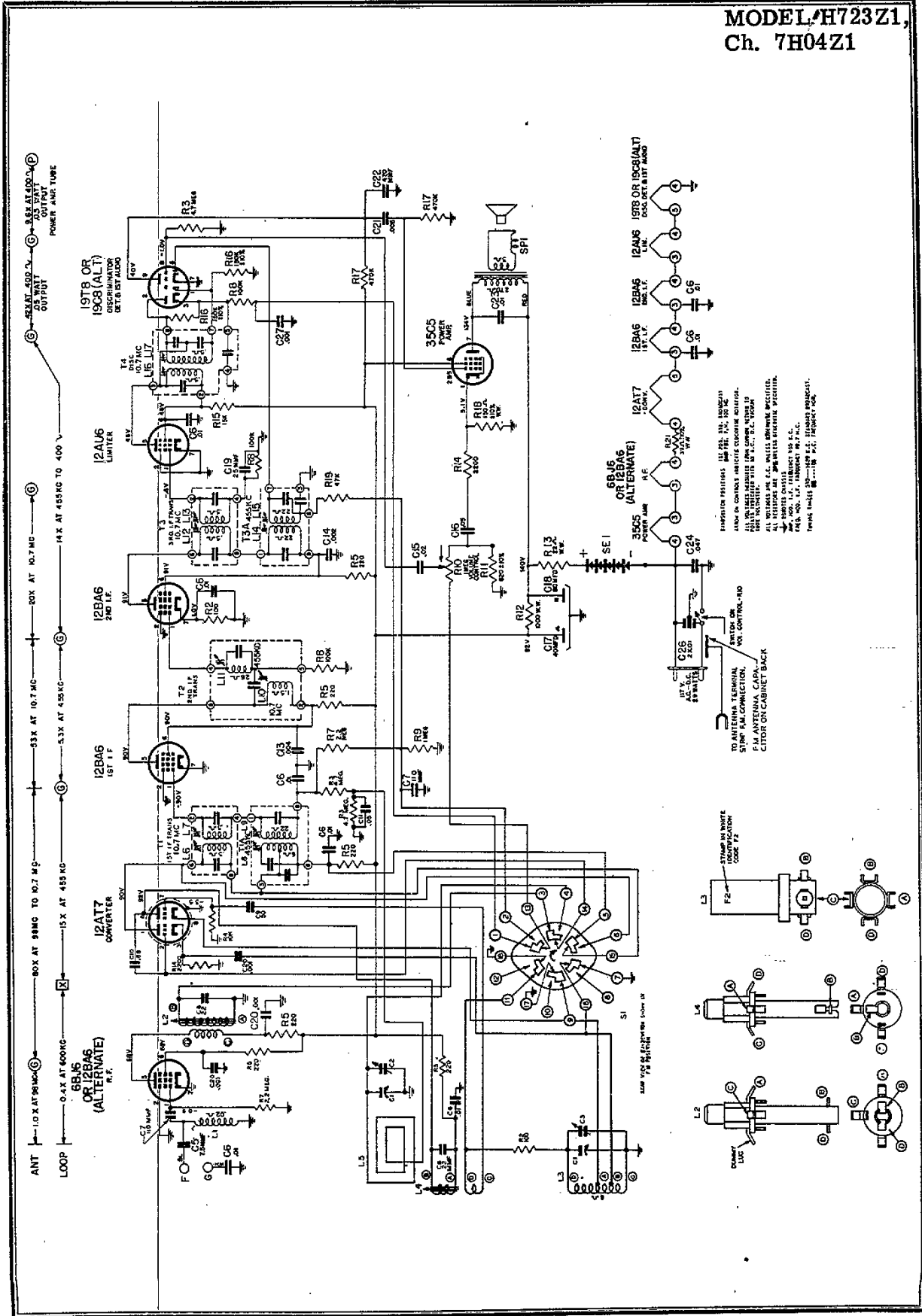
TUBE AND TRIMMER LOCATION



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		L16 coil slug	Align primary of discriminator for maximum reading.
5 (b)	Pin 1 (grid) on 12AU6 limiter.	.05 Mfd.	10.7 Mc. Unmodulated	FM		L17 coil slug	Adjust secondary of discriminator for zero reading.
6 (c)	Pin 1 (grid) on 12BA6 2nd IF.	.05 Mfd.	10.7 Mc. Unmodulated	FM		L12 and L13 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		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		L6 and L7 Prim. and Sec. of 1st IF transformer.	Align 1st IF transformer for maximum reading.
9 (c)	Antenna Post FM (Re-move line ant.)	270 ohms	98 Mc. Unmodulated	FM	98 Mc.	L4 Osc. Coil	Set Oscillator to dial scale.
10 (c) (d)		270 ohms	98 Mc. Unmodulated	FM	98 Mc.	L2 Det. Coil.	Align det. stage to maximum reading.

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NO.	DIAG. NO.	DESCRIPTION	PRICE
46-859		Dial Assembly	.15
46-860		Band Switch Knob	.15
46-900		Tuning Control Knob	.10
59-251		Volume Control Knob	.70
80-69		Dial Pointer	.05
80-444		Dial Cord Tension Spring	.05
80-580		Tuner Arm Tension Spring	.06
188-150		Tuner Arm Stop Spring	.55
S-14524		Retaining Ring (1 used on S-17334 & S-17467)	.75
S-14525		Capacitor Pulley & Cam Assembly	.45
S-17334		Tuner Arm Assembly	.15
S-17336		Tuning Shaft & Pulley Assembly	.60
S-17467		Tuning Shaft Brkt. & Ins. Strip Assembly	
S-18442		Brkt. & Pulley Assembly	
		Dial Cord & Eyelet Assembly	
		Coils & Chokes	
20-355	L1	F.M. Antenna Coil	1.60
95-1102	T3A	3rd. I.F. Trans. - 455 Kc.	2.25
95-1150	T1, T3	1st. & 3rd. I.F. Trans. - 10.7 Mc (2 used)	2.25
95-1153	T4	Disc. Trans. - 10.7 Mc	1.60
95-1250	T1A	1st. I.F. Trans. - 455 Kc	1.65
95-1251	T2	2nd. I.F. Trans. - 10.7 Mc & 455 Kc	.75
S-13871	L2	F.M. Detector Coil Assembly	.65
S-15694	L3	Broadcast Osc. Coil Assembly	.55
S-15733	L4	F.M. Osc. Coil Assembly	
		Condensers	
22-3	C6	.01 Mfd. Ceramic (8 used)	.26
22-5	C7	110 Mmfd. Ceramic (Disc.)	.26
22-6	C22	470 Mmfd. Ceramic	.26
22-229	C21	.005 Mfd.	.20
22-448	C13	.004 Mfd.	.20
22-829	C11	.05 Mfd.	.20
22-830	C15	.02 Mfd.	.20
22-1126	C23	.01 Mfd.	.20
22-1158	C16	.05 Mfd.	.20
22-1220	C14	.002 Mfd.	.33
22-1367	C9	50 Mmfd. Ceramic	.33
22-1506	C8	22 Mmfd. Ceramic	.40
22-1676	C20	.001 Mfd. Ceramic (3 used)	3.00
22-1742	C1	Two Section Gang Cond.	2.50
22-1757	C17, 18	Elect. Cond. 40 Mfd. - 1.50V x 80 Mfd. 150V	.20
22-1766	C10	.68 Mmfd. Ceramic	.26
22-1775	C24	.047 Mfd.	.35
22-1852	C5	7.5 Mmfd. Ceramic	.26
22-1887	G19	25 Mmfd. Ceramic	.30
22-2112	C27	.001 Mfd. Ceramic	.50
22-2276	C26	Dual Ceramic .01 Mfd. -.01 Mfd. 500V.	.21
		Resistors	
63-686	R18	150 ohm W.W.	.21
63-1450	R13	22 ohm W.W.	.24
63-1744	R2	100 ohm	.21 (2 used)
63-1758	R5	220 ohm	.21 (6 used)
63-1782	R11	820 ohm	.21
63-1800	R14	2200 ohm	.21 (2 used)

PART NO.	DIAG. NO.	DESCRIPTION	PRICE
63-1828	R4	10K ohm	.21
63-1835	R15	15K ohm	.21
63-1856	R19	47K ohm	.21 (2 used)
63-1870	R8	100K ohm	.21 (2 used)
63-1876	R16	150K ohm	.21 (2 used)
63-1898	R17	470K ohm	.21 (2 used)
63-1912	R9	1 Megohm	.21
63-1926	R7	2.2 Megohm	.21 (2 used)
63-1940	R3	4.7 Megohm	.21 (3 used)
63-2143	R10	Volume Control & Switch	1.81
63-2424	R21	39 ohm W.W.	.30
63-3137	R12	1000" W.W. 5W	
		Miscellaneous	
11-85		Line Cord & Plug (6 ft.)	.65
12-1070		Wavemagnet Mfg. Brkt.	.25
14-1350		Plastic Cabinet for H723Z1	
16-656		Packing Carton	6.00
49-707	SP1	5 1/4" PM Speaker	
		Cone & Voice Coil	
		Output Trans.	
54-129		Speed Nut (9 used on Baffle & Grille Cloth)	.01
57-1717		Chassis Bottom Plate	.30
57-1721		Emblem Plate	.25
58-200		Two Prong Plug	.15
78-806		Miniature Tube Socket	.35
78-850		Miniature Tube Socket	.20
78-869		Miniature Tube Socket (3 used)	.15
78-870		Miniature Tube Socket	.15
78-871		Miniature Tube Socket	.15
80-684		Ground Spring	.03
83-1056		Wavemagnet Mfg. Strip	.07
83-1829	S1	Insulator Strip	.01
85-516		Band Switch	.01
93-94		Insulating Shoulder Washer	.03
93-1097		Insulating Washer	.18
94-485		Insulating Bushing	.02
97-293		Chassis Mfg. Stud	.01
110-180		Grill Cloth	.02
112-281		#10 x 3/4" Truss Hd. ST St. Br. (2 used on S-17467 & 6 used 57-717)	.01
114-297		Chassis Mfg.	.02
114-356		#6 x 1 1/4" Hex Hd. ST (1 used on S-17366)	.02
126-618		Tube Shield	.02
139-98		Speaker Baffle	.40
149-64		Iron Core & Spring (2 used)	.01
159-69		Plug Button (4 used on S-17366)	.40
196-153		Speaker Gasket	.10
202-697		F.M. Instruction Book	1.80
202-898		Instruction Book	1.25
212-7	SE1	Selenium Rectifier	1.50
S-14957	L5	Wavemagnet Assembly	
S-17366		Cabinet Back Assembly (complete)	
S-18434		Band Switch Ext. Shaft Assembly	

Prices shown are suggested list prices and are subject to change without notice.