

Zenith Radio Corp.

Model: H723Z2

Chassis:

Year: Pre 1955

Power:

Circuit:

IF:

Tubes:

Bands:

Resources

[Riders Volume 23 - ZENITH 23-5](#)

[Riders Volume 23 - ZENITH 23-6](#)

[Riders Volume 23 - ZENITH 23-7](#)

[Riders Volume 23 - ZENITH 23-8](#)

[Riders Volume 23 - ZENITH 23-15](#)

MODEL H723Z2,
Ch. 7H04Z2

The 7H04Z2 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 7H04Z2 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.

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).

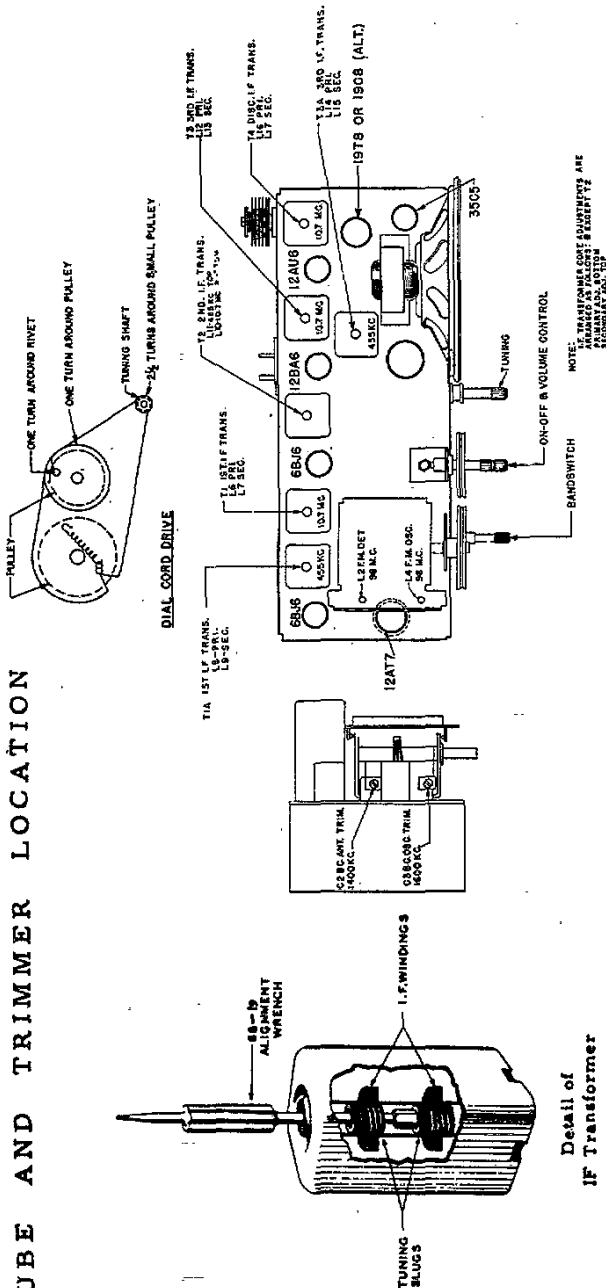
(b) Vacuum Tube Voltmeter Lug 5 on discriminator transformer to chassis (full discriminator load).

(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

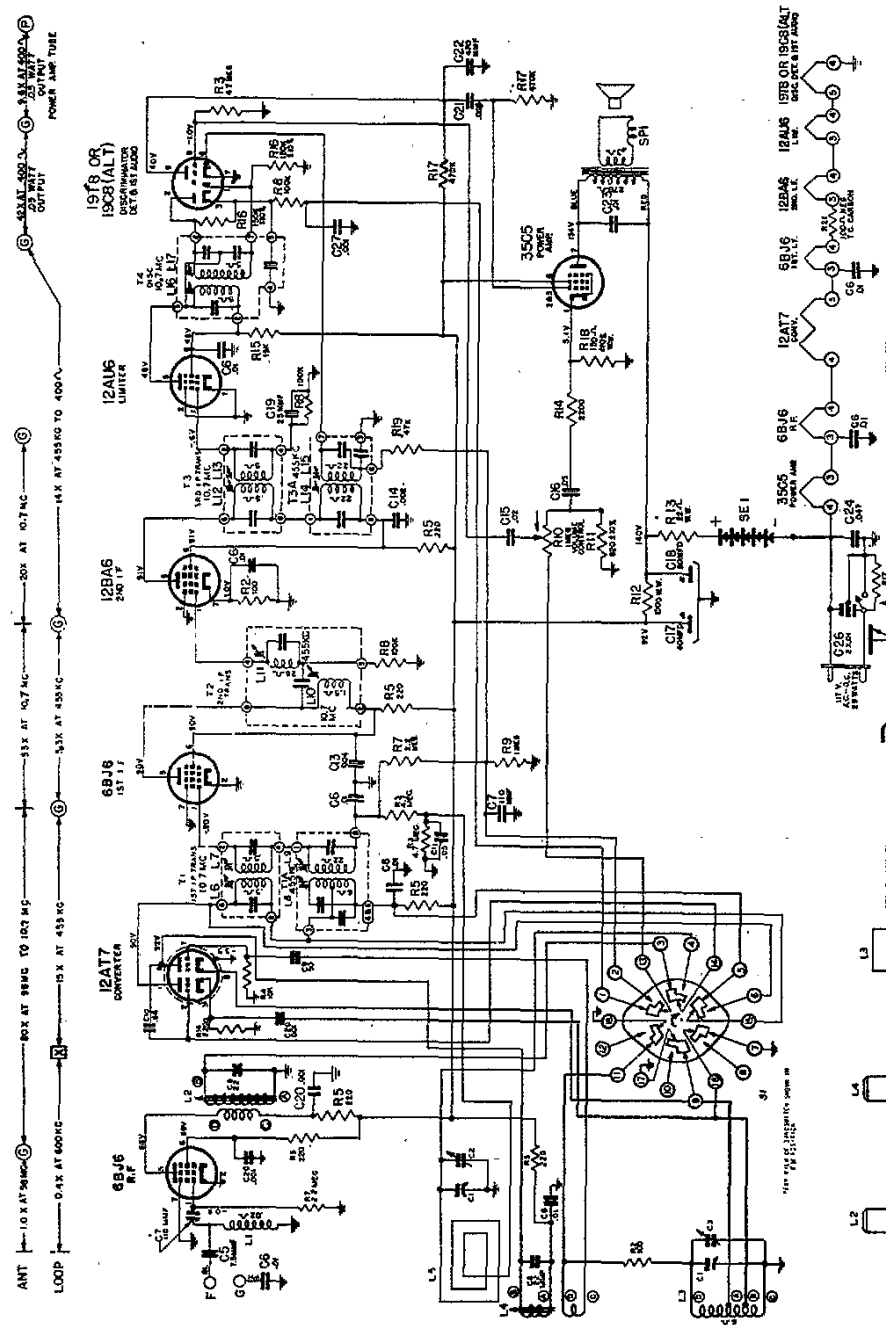


ALIGNMENT PROCEDURE

Operation	Connect Oscillator to	Dummy Antenna	Input Signal Frequency	Band	Set Dial To	Adj. Trimmers	Purpose
1	Pin 2-12A7 Converter	.05 Mfd.	455 Kc. Modulated	BC	600 Kc.	L8, 9, 11, 14, 15	Align 1, F. channel for maximum output.
2	2 turns loosely cpid. to wavemagnet		1600 Kc. Modulated	BC	1600 Kc.	C3	Set oscillator to dial scale.
3	2 turns loosely cpid. 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		Primary disc. 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 6B7G 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 12A7 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 (Remove 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.

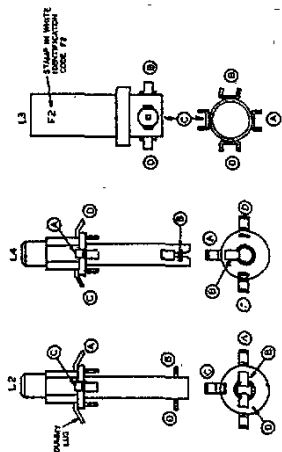
MODEL H723Z2,
Ch. 7H04Z2

MODEL H723Z2 CHASSIS 7H04Z2



BASELINE POSITION: 25.75" H., 25.00" W.
 DIMENSIONS IN PARENTHESES ARE APPROXIMATE.
 ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
 DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.
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NOTE: RESISTOR R11 IS MOUNTED OUTSIDE.
 C25 IS A 500K OHM POTENTIOMETER.
 C26 IS A 500K OHM POTENTIOMETER.
 C27 IS A 500K OHM POTENTIOMETER.
 C28 IS A 500K OHM POTENTIOMETER.
 C29 IS A 500K OHM POTENTIOMETER.



MODEL H723Z2,
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PARTS LIST

DIAG. NO.	PRICE	DESCRIPTION	PART NO.	DIAG. NO.	DESCRIPTION	PRICE
H723Z2 (Chassis 7H04Z2)						
		Dial Assembly				
46-259	.15	Band Switch Knob	61-1800 R14	2200 ohm	Res. (2 used)	.21
46-260	.10	Tuning Control Knob	63-1828 R4	10K ohm	Res.	.21
46-261	.10	Volume Control Knob	63-1835 R15	15K ohm	Res.	.21
59-251	.20	Dial Pointer	63-1856 R19	47K ohm	Res.	.21
80-444	.10	Dial Control	63-1870 R8	100K ohm	Res. (3 used)	.21
80-445	.10	Dial Cord Tension Spring	63-1876 R16	150K ohm	Res. (2 used)	.21
80-560	.05	Tuner Arm Stop Spring	63-1898 R17	470K ohm	Res. (2 used)	.21
80-817	.06	Tuner Spring	63-1912 R9	1 Megohm	Res. (2 used)	.21
80-818	.12	Tuner Arm Pressure Spring	63-1926 R7	4.7 Megohm	Res. (3 used)	.21
188-150	.02	Retaining Ring (1 used on S-17334 & S-17467)	63-2143 R10	Volume Control & Switch	Res.	.85
S-14524	.75	Capacitor Pulley & Cam Assembly	63-2787 R21	Special Resistor	Res.	.70
S-17334	.45	Tuner Arm Assembly	63-3137 R12	1K ohm WW 5W 20% Ins.		
S-17336	.15	Tuning Shaft Brkt. & Inc. Strip Assembly				
S-17467	.60	Brkt. & Pulley Assembly				
S-18442	.10	Dial Card & Eyeslet Assembly				
Coils & Chokes						
20-355 L1	.15	F.M. Antenna Coil	54-329	208-207	One & one Coil	6.00
95-102 T1A	1.60	1st. I.F. Transformer - 455 Kc	54-371	208-207	One & one Coil	1.75
95-1120 T1B	2.25	1st. & 2nd. I.F. Transformer - 10.7 Mc (2 used)	57-1711	Special Vals (1 used on Ballist. & G.I. Use Choke)	Res.	.01
95-1123 T1C	2.25	Discriminator Transformer - 10.7 Mc	57-1721	6-32x1/4" Palnut Steel (6 used on I.F.'s)	Res.	.01
95-1250 T1A	1.60	1st. I.F. Transformer - 455 Kc	58-200	Chassis Bottom Plate	Res.	.30
95-1251 T2	1.65	2nd. I.F. Transformer - 10.7 Mc & 455 Kc	78-806	Emblem Plate	Res.	.25
S-13871 L2	.75	F.M. Detector Coil Assembly	78-850	Two Prong Plug	Res.	.10
S-15694 L3	.65	Broadcast Osc. Coil Assembly	78-859	Miniature Tube Socket	Res.	.15
S-15733 L4	.55	F.M. Oscillator Coil Assembly	78-870	Miniature Tube Socket	Res.	.20
			78-871	Miniature Tube Socket	Res.	.15
			80-884	Ground Spring	Res.	.03
Condensers						
22-3 C6	.26	.01 Mfd. Ceramic (8 used)	83-1056	Wavemagnet Mfg. Strip	Res.	.03
22-5 C7	.26	110 Mmfd. Ceramic (2 used) (Disc)	83-1520	Rectifier Ins. Strip	Res.	.03
22-6 C22	.26	470 Mmfd. Ceramic	83-1640	I.F. Trans. Support Strip (6 used)	Res.	.03
22-229 C21	.20	.005 Mfd.	83-1859	Insulator Strip	Res.	.07
22-448 C13	.20	.004 Mfd.	85-515 S1	Band Switch	Res.	1.50
22-829 C11	.20	.005 Mfd.	93-94	Insulating Shoulder Washer	Res.	.01
22-830 C18	.20	.005 Mfd.	93-1097	Insulating Washer	Res.	.01
22-1126 C23	.20	.01 Mfd.	94-485	Insulating Bushing	Res.	.03
22-1129 C14	.20	.005 Mfd.	94-485	Character Mfg. Stud (2 used)	Res.	.18
22-1367 C9	.33	.01 Mfd. Ceramic (2 used)	97-275	Grille Cloth	Res.	.75
22-1506 C3	.33	.003 Mfd. Ceramic (3 used)	110-180	110x3/4" x 1/2" Hex Hd. S.T. St. Br. (2 used)	Res.	.02
22-1742 C10	.40	.003 Mfd. Ceramic	112-281	6x1/4" x 1/2" Hex Hd. S.T. (1 used on S-17366 & S-17366)	Res.	.01
22-1742 C11	3.00	Two Station Glass Condenser	114-297	6x1/4" x 1/2" Hex Hd. S.T. (used only on 212-7)	Res.	.02
22-1747 C17, C18	2.50	Elect. 40 Mfd. -150V x 20Mfd. -150V				
22-1766 C10	.26	.047 Mfd. Ceramic				
22-1775 C24	.35	7.5 Mmfd. Ceramic				
22-1852 C5	.26	25 Mmfd. Ceramic				
22-1887 C19	.30	.001 Mfd.				
22-2112 C27	.50	Dual Ceramic .01 Mfd. - .01 Mfd.				
22-2276 C26						
Resistors						
63-666 R18	.21	150 ohm WW 10% Ins.	61-1800 R14	2200 ohm	Res. (2 used)	.21
63-1450 R13	.21	10 ohm WW 20% Ins.	63-1828 R4	10K ohm	Res.	.21
63-1758 R5	.21	220 ohm WW 20% Ins.	63-1835 R15	15K ohm	Res.	.21
63-1782 R11	.21	820 ohm WW 10% Ins.	63-1856 R19	47K ohm	Res.	.21
			63-1870 R8	100K ohm	Res. (3 used)	.21
			63-1876 R16	150K ohm	Res. (2 used)	.21
			63-1898 R17	470K ohm	Res. (2 used)	.21
			63-1912 R9	1 Megohm	Res. (2 used)	.21
			63-1926 R7	4.7 Megohm	Res. (3 used)	.21
			63-2143 R10	Volume Control & Switch	Res.	1.81
			63-2787 R21	Special Resistor	Res.	.85
			63-3137 R12	1K ohm WW 5W 20% Ins.	Res.	.70
Miscellaneous						
11-85	.45	Line Cord & Plug (6 ft. lg.)				
12-1070	.25	Wavemagnet Mfg. Brkt.				
14-1150	6.25	Plastic Cabinet for H723Z2				
18-656	6.00	Packing Carton				
49-707 SP1	1.75	3/4" x 1/4" Speaker				
	.01	One & one Coil				
	.01	Special Vals (1 used on Ballist. & G.I. Use Choke)				
	.30	Chassis Bottom Plate				
	.25	Emblem Plate				
	.10	Two Prong Plug				
	.15	Miniature Tube Socket				
	.35	Miniature Tube Socket				
	.20	Miniature Tube Socket				
	.15	Miniature Tube Socket				
	.03	Ground Spring				
	.03	Wavemagnet Mfg. Strip				
	.03	Rectifier Ins. Strip				
	.07	I.F. Trans. Support Strip (6 used)				
	1.50	Insulator Strip				
	.01	Band Switch				
	.01	Insulating Shoulder Washer				
	.03	Insulating Washer				
	.18	Insulating Bushing				
	.75	Character Mfg. Stud (2 used)				
	.02	Grille Cloth				
	.01	110x3/4" x 1/2" Hex Hd. S.T. St. Br. (2 used)				
	.01	6x1/4" x 1/2" Hex Hd. S.T. (1 used on S-17366 & S-17366)				
	.02	6x1/4" x 1/2" Hex Hd. S.T. (used only on 212-7)				
	.02	6x1/4" x 1/2" Hex Hd. S.T. (used only on 212-13)				
	.20	Tube Shield				
	.40	Speaker Baffle				
	.20	Iron Core & Spring (2 used)				
	.40	Plug Button (4 used on S-17366)				
	.01	Speaker Gasket				
	.10	F.M. Instruction Book				
	.10	Instruction Book				
	1.80	Selenium Rectifier (or 212-13)				
	1.25	Wavemagnet Assembly				
	1.50	Cabinet Back Assembly (Complete)				
	.65	Band Switch Ext. Shaft Assembly				

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

