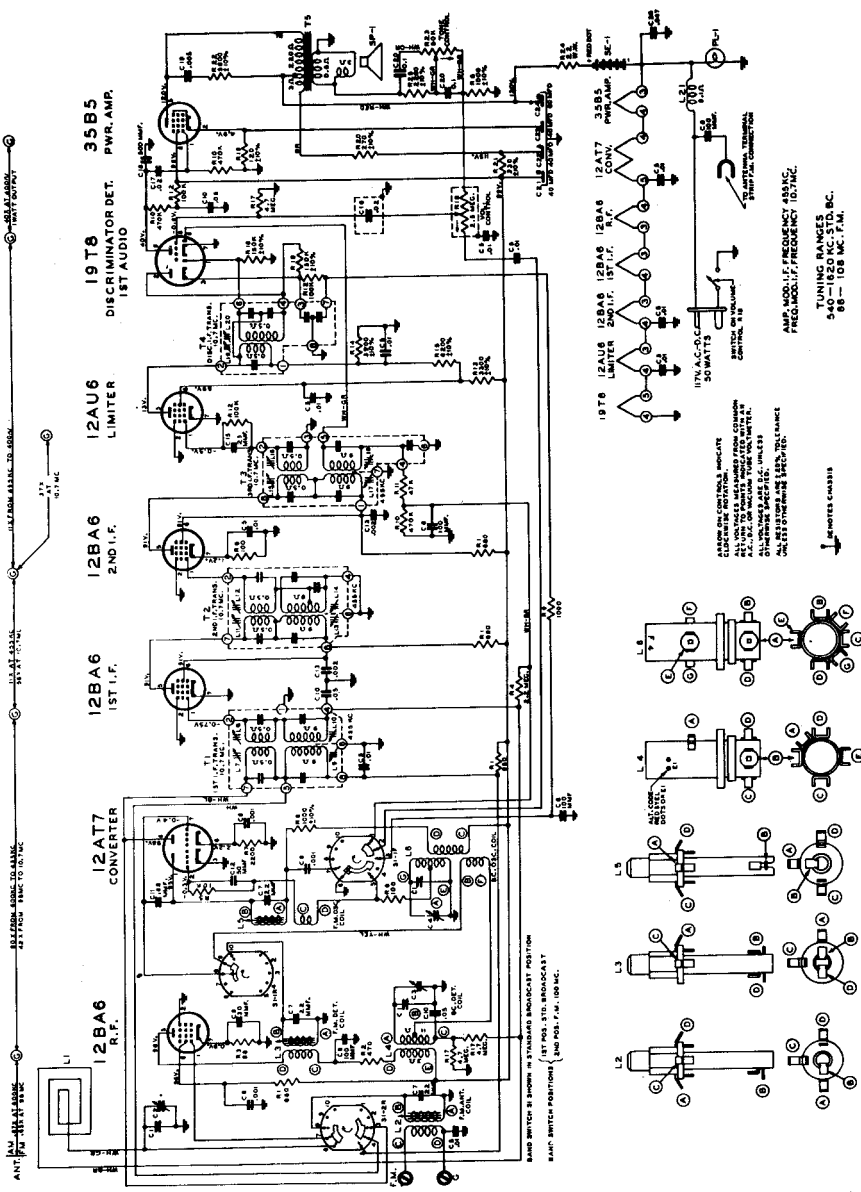




Zenith Radio Corp.

Zenith Radio Corp.			
	Model: 7H920	Chassis:	Year: Pre 1951
	Power:	Circuit:	IF:
	Tubes:		
	Bands:		
Resources			
Riders 20 (XX) ZENITH 20-43			
Riders 20 (XX) ZENITH 20-44			
Riders 20 (XX) ZENITH 20-45			
Riders 20 (XX) ZENITH 20-46			



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ALIGNMENT PROCEDURE

Operation	Connect Oscillator To	Dummy Antenna	Input Signal Frequency	Band	Set Dial To	Adj. Trimmers	Purpose
1	Pin 7 12AT7 Converter 2 turns loosely cpd. to wavemagnet	.05 Mfd.	455 KC. Modulated	BC	600 Kc.	L-9, 10, 13, 14, 17 and 18	Align I. F. channel for maximum output.
2	2 turns loosely cpd. to wavemagnet		1600 KC. Modulated	BC	1600 Kc.	C4	Set oscillator to dial scale.
3	2 turns loosely cpd. cpld. to wavemagnet		1400 KC. Modulated	BC	1400 Kc.	C2 and C3	Align det. and ant. stages.
4 (a)	Pin 1 (grid) on 12AU6 limiter.	.05 Mfd.	10.7 Mc. Unmodulated	FM		L19 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		L20 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		L15 and L16 Prim. and Sec. of 3rd. IF transformer	Align 3rd. IF transformer for maximum reading.
7 (c)	Pin 1 (grid) on 12BA6 1st. IF.	.05 Mfd.	10.7 Mc. Unmodulated	FM		L11 and L12 Prim. and Sec. of 2nd. IF transformer	Align 2nd. IF transformer for maximum reading.
8 (c)	Pin 7 (grid) on 12AT7 converter tube socket	.05 Mfd.	10.7 Mc. Unmodulated	FM		L7 and L8 Prim. and Sec. of 1st. IF transformer	Align 1st. IF Transformer for maximum reading.
9 (c) (d)	Antenna Post F (Remove line ant.)	270 ohms	98 Mc. Unmodulated	FM	98 Mc.	L5 Osc. Coil Slug L3 and L2 Det.	Set Oscillator to dial scale.
10 (c) (d)		270 ohms	98 Mc. Unmodulated	FM	98 Mc.	L3 and L2 Det. and RF coil Slugs	Align det. and ant. stages to maximum reading.

IMPORTANT

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.

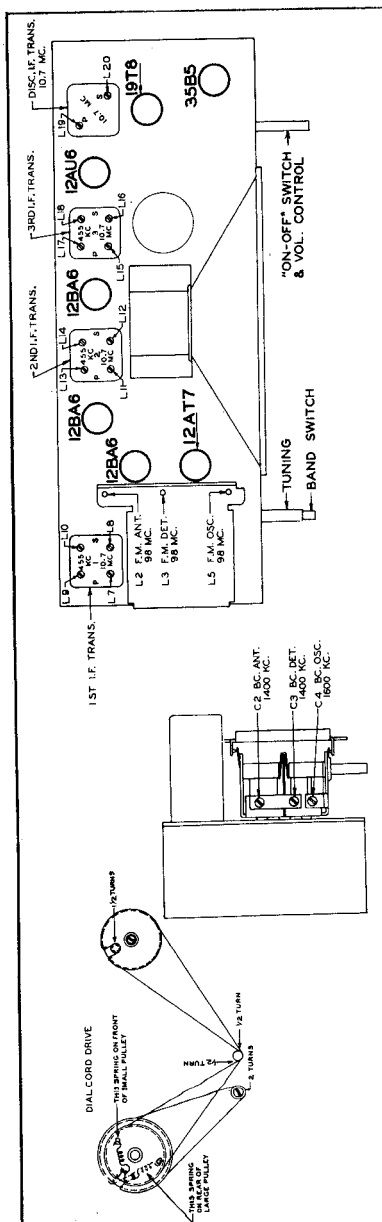
The signal generator output should be kept just high enough to get an indication on the meter.

(a) Vacuum Tube Voltmeter Lug 6 on discriminator transformer to chassis (half discriminator load).

(b) Vacuum Tube Voltmeter Lug 3 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.



TUBE AND TRIMMER LOCATION

The 7F01 chassis incorporates a superheterodyne circuit with two stages of IF and one stage of RF amplification on all bands.

When adjustments are made on the 7F01 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.

AM Alignment: The alignment of this chassis on the standard broadcast band is conventional. The alignment slugs in the IF transformers are threaded and screw into the coil forms. The slugs are slotted for a small size fiber screw driver. Do not press hard on the aligning tool or the threads in the coil forms will strip and adjustment will be impossible.

FM RF Alignment: The tuning slugs are attached to threaded shafts and the slugs are varied in the field of the coils by turning the shafts clockwise or counter-clockwise. After adjustment the shafts must be secured with a drop of speaker cement.

FM IF Alignment: The same type of tuning slugs for aligning the AM IF Amplifier are used for the FM I.F.'s. Observe the same precautions when making adjustments.

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. A center zero 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.

PARTS LIST

PART NO.	REF. NO.	DESCRIPTION	PART NO.	REF. NO.	DESCRIPTION
<u>DIAL ASSEMBLY</u>			<u>RESISTORS</u>		
12-1407		Dial Light Socket Mounting Bracket	63-1772	R2	470 Ohm 1/2 W. 20% Ins. Res.
26-389		Louvre Dial	63-1779	R1	680 Ohm 1/2 W. 20% Ins. Res.
46-338		Tuning Control Knob	63-1785	R8	1000 Ohm 1/2 W. 10% Ins. Res.
46-688		Tone Control Knob	63-1786	R9	1000 Ohm 1/2 W. 20% Ins. Res.
46-718		Band Switch Knob	63-1799	R25	2200 Ohm 1/2 W. 10% Ins. Res.
54-211		Speed Nut (4 used on Dial Scale Mtg.)	63-1800	R7	2200 Ohm 1/2 W. 20% Ins. Res.
57-1335		Tone Knob Esc.	63-1806	R13	3300 Ohm 1/2 W. 10% Ins. Res.
76-493		Tuning Shaft	63-1810	R14	3900 Ohm 1/2 W. 10% Ins. Res.
78-786		Dial Light Socket	63-1817	R22	5600 Ohm 1/2 W. 10% Ins. Res.
80-49		Dial Cord Spring	63-1824	R15	8200 Ohm 1/2 W. 10% Ins. Res.
80-209		Tuner Arm Tension Spring	63-1828	R5	10K Ohm 1/2 W. 20% Ins. Res.
80-444		Tuner Arm Stop Spring	63-1856	R11	47K Ohm 1/2 W. 20% Ins. Res.
80-581		Tuner Arm Pressure Spring	63-1870	R12	100K Ohm 1/2 W. 20% Ins. Res.
83-1504		Dial Light Shield	63-1876	R16	150K Ohm 1/2 W. 10% Ins. Res.
93-475		Felt Washer (S-14129)	63-1898	R10	470K Ohm 1/2 W. 20% Ins. Res.
92-490		Felt Washer (Used on S-13944)	63-1926	R4	2.2 Megohm 1/2 W. 20% Ins. Res.
94-371		Pointer Pulley Bushing	63-1940	R17	4.7 Megohm 1/2 W. 20% Ins. Res.
100-97		Dial Light Bulb			
114-26		#8 x 1/4" Hex. Hd. S.T. Screw Type Z Cad. (Used on 12-1407)	12-1070		Wavemagnet Mounting Bracket (2 used)
188-30		Retaining Ring	14-851		Cabinet for 7H920W (or 14-848)
188-102		Clamping Ring	14-1020		Cabinet for 7H920 (or 14-850)
S-13944		Pointer, Pulley & Bushing Assembly (59-205)	19-139		Cabinet Back Retaining Clip (4 used)
S-13945		Cam, Pulley and Bushing	49-608	SP-1	7 1/2" P. M. Speaker
S-13981		Tone Control Bracket & Lug Assembly	54-139		208-608 Cone & Voice Coil Assembly
S-13982		Dial Cord & Eyelet Assembly	54-140		#3/8-32 x 9/16" Palmut Type 9N Steel Cad. (Used to mount Volume Control)
S-13983		Dial Cord & Eyelet Assembly			#3/8-32 x 9/16" Hex. Nut Steel
S-14129		Volume Control Knob Assembly			(Used to mount Tone Control)
S-14429		Tuner Arm Assembly	54-226		Speed Nut Tinnerman (3 used to mount Tuning Cores)
<u>COILS & CHOKES</u>			57-1269		I.F. Transformer Terminal Plate
S-12256	L21	A.C. Line Choke Coil Assembly	58-128		Two Prong Plug
S-13971	T2	2nd. I.F. Transformer Assembly	74-52		Plastic Speaker Screen
S-13972	T3	3rd. I.F. Transformer Assembly	78-782		Miniature Tube Socket (7 contact)
S-13973	T4	Discriminator Transformer Assembly	78-788		Miniature Tube Socket (9 contact)
S-13974	L4	Broadcast Detector Coil Assembly	78-794		Miniature Tube Socket (3 used)
S-14192	L2	F.M. Antenna Coil Assembly	78-795		Miniature Tube Socket (7 contact)
S-15733	L5	F.M. Oscillator Coil Assembly	78-854		Miniature Tube Socket (9 contact)
S-15743	L3	F.M. Detector Coil Assembly	85-464		Band Switch
S-15888	L6	Broadcast Osc. Coil Assembly	93-665		Fibre Washer (2 used on S-14385)
S-15981	T1	1st. I.F. Transformer Assembly	93-719		.031 x 5/16 x 7/16 Steel Washer Cad. Pl. (4 used on 74-52)
<u>CONDENSERS</u>			94-334		Speaker Mounting Bushing
22-3	C5	.01 Mfd. Ceramic (Disc.)	94-485		Fibre Bushing (1 ea. used on 63-1584) and 63-1582)
22-829	C10	.05 Mfd.	94-598		R.F. Plate Mounting Bushing (4 used)
22-854	C18	.0005 Mfd.	95-1035		Output
22-1220	C13	.002 Mfd.	97-284		Dial Cord Guide Stud
22-1367	C12	.50 Mmfd. Ceramic	97-293		Insulating Stud (4 used on Chassis Mtg.)
22-1506	C7	.22 Mmfd. Ceramic	110-130		Grill Cloth
22-1507	C15	.25 Mmfd. Ceramic	112-281		#10 x 3/4" Oval B.H.S.T. Stat. Bronze (4 used on chassis mounting)
22-1661	C21, C22	Elect. 8-4-40 Mfd.	112-697		#6 x 7/16" Straight Side B.H.S.T. Steel Cad. Pl. (4 used on back)
22-1669	C8, C23, & C24	150V-40 Mfd.	114-26		#8 x 1/4" Hex. Hd. S.T. Screw Steel Cad. Pl. (2 used on S-13977)
22-1676	C6	.001 Mfd. Ceramic	114-78		#6 x 32 x 5/16" Hex. Hd. Slotted S. T. (Wavemagnet Mtg.)
22-1677	C1	Three Gang Variable	114-160		#6 x 7/8" Hex. Hd. S. T. Screw (1 used to Mnt. 212-3)
22-1683	C16	.02 Mfd. (Shielded)	114-292		#6 x 5/8" Hex. Hd. Sl. S. T. Screw (Rused)
22-1702	C19	.005 Mfd.	114-319		#8-32 x 11/16" Hex. Hd. Slotted M.S. Steel (4 used)
22-1705	C9	.30 Mmfd. Ceramic	125-17		Rubber Grommet (4 used on 49-608)
22-1706	C11	.68 Mmfd. (Molded)	125-62		Rubber Grommet (4 used on R.F. Plate)
22-1775	C26	.047 Mfd.	139-69		Speaker Baffle
22-2084	C20	.1 Mfd.	149-64		Tuning Core (3 used)
<u>RESISTORS</u>			188-34		Ring (Used on 63-1582)
63-1202	R21	330 Ohm W.W. 2 W 10% Ins. Res.	202-697		F.M. Instruction Book
63-1450	R24	22 Ohm W.W. 1 W 20% Ins. Res.	202-741		Instruction Book
63-1452	R20	270 Ohm W.W. 2 W 10% Ins. Res.	212-3	SE-1	Selenium Rectifier
63-1582	R23	Tone Control	S-13977	L1	Wavemagnet Assembly
63-1584	R18	Volume Control & Switch	S-14128		Cabinet Back, A.C. Plug & Cord Assembly (Complete)
63-1737	R3	68 Ohm 1/2 W. 20% Ins. Res.	S-14358		Wavemagnet Cable Assembly
63-1744	R6	100 Ohm 1/2 W. 20% Ins. Res.	S-14562		Cabinet Back, A.C. Plug & Cord Assembly (W Model Only) (Complete)
63-1747	R19	120 Ohm 1/2 W. 10% Ins. Res.			