

Zenith Radio Corp.

Model: 4G903

Chassis:

Year: Pre 1951

Power:

Circuit:

IF:

Tubes:

Bands:

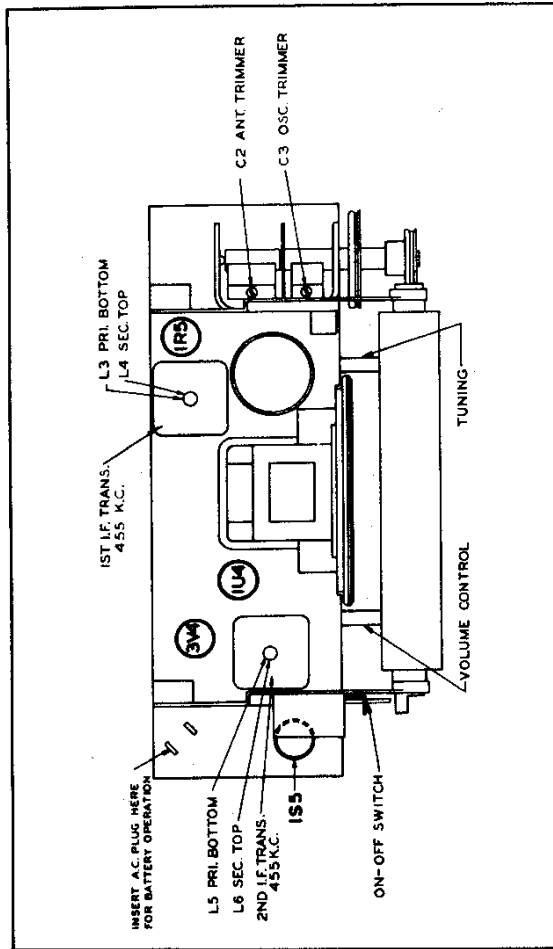
Resources

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TUBE, TRIMMER LOCATION



TO THE SERVICE MAN:

The 4F40 chassis is an AC, DC or battery operated super-heterodyne. The chassis is isolated from the DC circuit, and all measurements must be made from a common negative point. The most convenient place to reach this negative point is the terminal strip to which C17 is connected. When the change over Switch S1 is in AC position, the DC resistance from chassis to any circuit must be almost infinite. If any circuit becomes grounded a hum will result. Microphonic tubes will cause audio howl. Check the 1R5 and 1S5.

The wavemagnet is connected to the chassis by two wires that pass through the hollow dial pivots. If the R.F. becomes weak or dead, check the D.C. resistance of the wavemagnet. This D.C. resistance should be approximately .9 ohm. If it is open check the wavemagnet.

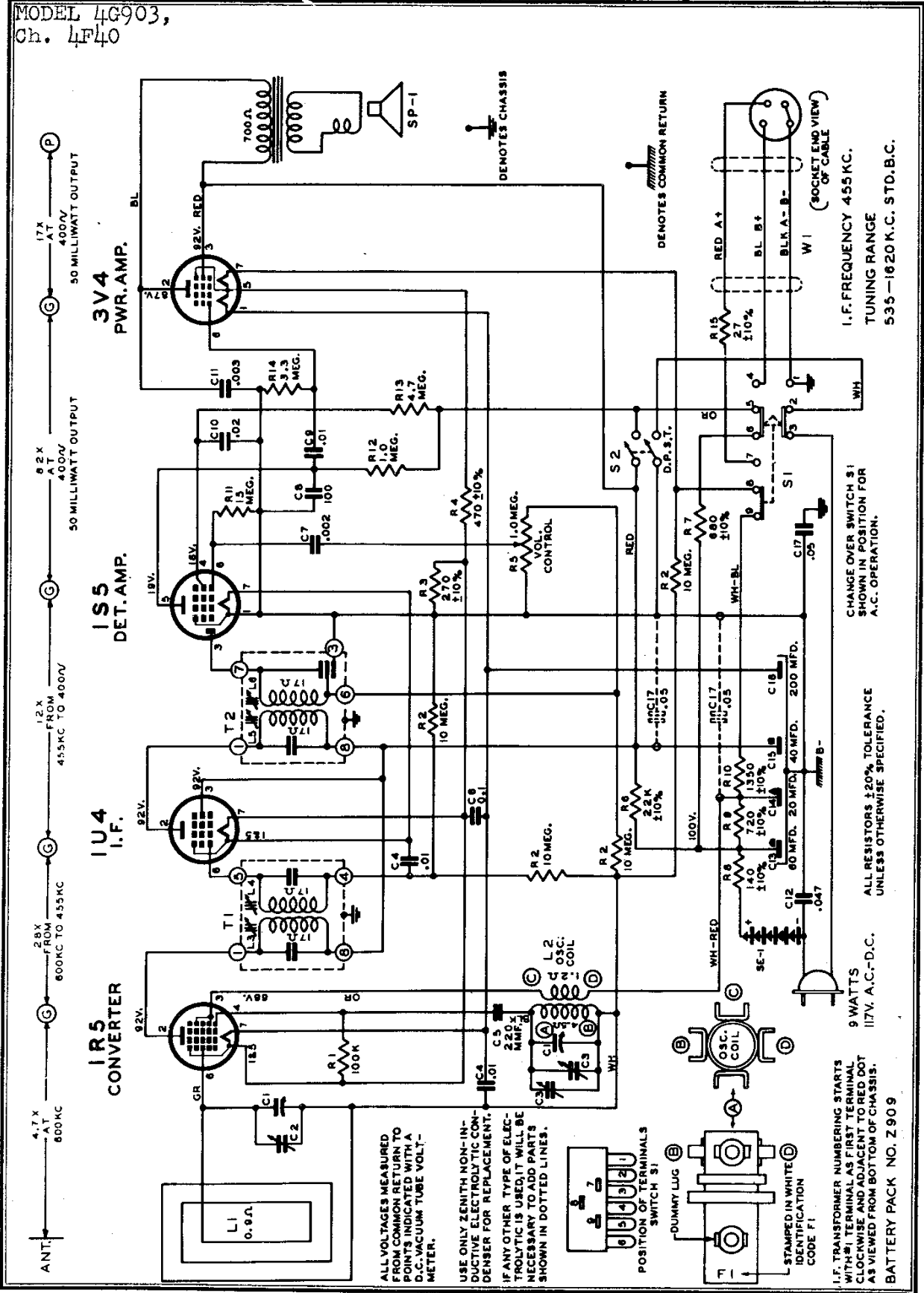
IF Alignment: Remove the chassis from the cabinet and arrange the units so that the wavemagnet can be connected. All the connections and adjustments can be made from the top of the chassis. Connect a signal generator, through a .1 mfd. dummy antenna, to the converter grid and B (common return). Connect an output meter across the voice coil of the speaker (two lugs provided). Set the signal generator to 455 Kc. and adjust L3, L4, L5 and L6 for maximum indication on the output meter. Always keep the signal output from the generator just high enough to get an indication, otherwise excessive loading may result.

RF Alignment: Connect a two turn loop across the leads of the signal generator, loosely couple this loop to the wavemagnet. Set the signal generator and the dial pointer of the receiver to 1600 Kc. and adjust C3 oscillator trimmer to resonance. Set the signal generator and dial pointer to 1400 and adjust C2 antenna trimmer to resonance. These trimmers are on the top of gang condenser. Check operation and re-install set in cabinet. Tune in a weak station near 1400 Kc. or use background noise and readjust antenna trimmer for maximum sensitivity.

ALIGNMENT PROCEDURE

OPERATION	CONNECT OSCILLATOR TO	DUMMY ANTENNA	INPUT SIG. FREQUENCY	BAND	SET DIAL TO	TRIMMERS	PURPOSE
1	Converter Grid	.1 Mid	455 Kc.	BC	600 Kc.	L3,4, 5 & 6	I.F. Alignment
2	Two turns loosely coupled to Wavemagnet		1600 Kc.	BC	1600 Kc.	Osc. Trim. C3	Set Oscillator to scale
3	Two turns loosely coupled to Wavemagnet		1400 Kc.	BC	1400 Kc.	Ant. Trim. C2	Align Wavemagnet

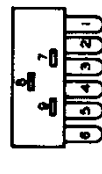
MODEL 4G903,
Ch. 4F40



ALL VOLTAGES MEASURED FROM COMMON RETURN TO POINTS INDICATED WITH A D.C. VACUUM TUBE VOLT-METER.

USE ONLY ZENITH NON-INDUCTIVE ELECTROLYTIC CONDENSER FOR REPLACEMENT.

IF ANY OTHER TYPE OF ELECTROLYTIC IS USED, IT WILL BE NECESSARY TO ADD PARTS SHOWN IN DOTTED LINES.



I.F. TRANSFORMER NUMBERING STARTS WITH #1 TERMINAL AS FIRST TERMINAL CLOCKWISE AND ADJACENT TO RED DOT AS VIEWED FROM BOTTOM OF CHASSIS.

BATTERY PACK NO. Z 909

9 WATTS 117V. A.C.-D.C.

ALL RESISTORS ±20% TOLERANCE UNLESS OTHERWISE SPECIFIED.

CHANGE OVER SWITCH S1 SHOWN IN POSITION FOR A.C. OPERATION.

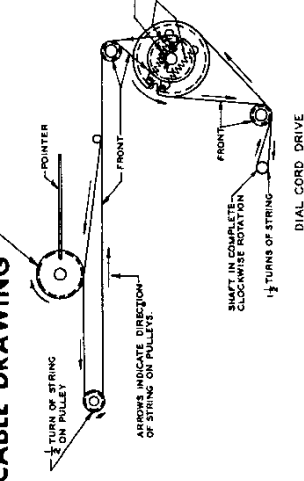
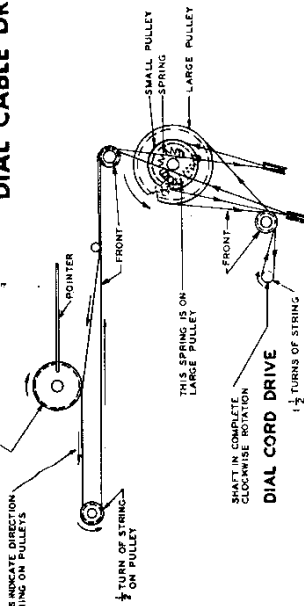
I.F. FREQUENCY 455 KC. TUNING RANGE 535-1620 K.C. STD. B.C.

DIAL CABLE DRAWING

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2 TURNS OF STRING ON POINTER PULLEY

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On receivers using Tuning Gang #22-2032, Dial String Assemblies #S-15440 (short) and #S-15441 (long) must be used.

On receivers using Tuning Gang #22-2108, Dial String Assemblies #S-15440 (short) and #S-16106 (long) must be used.

PARTS LIST

PART NO.	REF. NO.	DESCRIPTION	PART NO.	REF. NO.	DESCRIPTION
12-1554	R12	Tuning Shaft Bracket	78-782		MISCELLANEOUS
26-420	R14	Dial Scale	78-806		Miniature Tube Socket
46-785	R13	Tuning & Vol. Control Knob (2 Used)	78-807		Miniature Tube Socket
57-1490	R2	Emblems Plate	80-699		Miniature Tube Socket (2 Used)
57-1493	R11	Trim Plate	83-1600		Latch Spring
57-1513	R8	Emblem Plate (Y Model only)	83-1610		Handle Strip (Slotted)
57-1514	R8	Trim Plate (Y Model only)	85-450	S1	Wavemagnet Retaining Strip (2 Used)
76-540	R9,10	Tuning Shaft	85-451	S2	Power Change-Over Switch
80-209	R5	Dial Cord Tension Spring (3 Used)	94-472		On-Off Switch
83-978		Felt Washer (Used behind Pointer Assem.)	112-761		Handle Mfg. Bushing (2 Used)
188-32		Retaining Ring (Used on 76-540)	113-18		#2 X 1/4" PHIL. R.H.S.T. Type Z Steel N.P. (2 Used on Emblem Plate)
S15430		Pointers & Pulley Assem.	113-23		#6-32 X 5/16 Hex Hd. Slotted M.S. Steel Cad. Pl. Shakeprf. (2 Used on 85-450)
S15440		Dial Cord Assem. (Short)	114-159		#8-32 X 5/16 Hex Hd. Sl. M.S. Steel Cad. Pl. Int. Shakeprf. Lock (2 Used on S-15633)
S15441		Dial Cord Assem. (Long)	114-159		#6 X 1/4" Hex Hd. S.T. Screw Cad. Pl. (4 Used on S-15437)
S-16016		Dial Cord Assem. (Long)	114-311		#6-32 X 1" Hex Hd. Slotted M.S. Steel N.P. (1 Used to Mt. Rectifier)
95-1132	T1	1st. I. F. Transformer	114-319		#8-32 X 11/16" Hex Hd. Slotted M.S. Steel Cad. Pl. (2 Used to Mt. Handle)
95-1133	T2	2nd. I. F. "	147-156		Speaker Mfg. Spacer
S-15469	L2	Osc. Coil Assem.	156-37		Rear Latch
22-3	C9	01 Mfd. (Ceramic Disc.)	156-38		Rear Cover Catch (2 Used-Black)
22-182	C5	220 Mfd. (Molded Mica)	156-39		Door Latch (Y Model only)
22-374	C11	003 Mfd.	166-44		Rubber Bumper (Speaker & Gang)
22-493	C7	002 "	192-124		Dial Glass
22-826	C4	01 "	199-115		Flexible Handle Sleeve (With Cardboard Strips)
22-827	C6	1 "	199-116		Paper Sleeve (Used on Wavemagnet Lead)
22-829	C17	05 "	202-689		Instruction Book
22-1386	C10	100 Mfd.	212-5	SE-1	Selenium Rectifier for 212-2)
22-1669	C8		S-15427		Cabinet Front & Hinge Assem.
22-1741	C13,14		S-15433		Support Brkt. & Idler Pulley Assem. (Gang & Door)
22-1775	C1	Four Section Electrolytic	S-15434		Wavemagnet Winding Assem.
22-2032	C12	0.047 Mfd. (Molded) (or 22-1914)	S-15438		Battery Cable & Socket Assem.
22-2108	C1	Two Section Gang	S-15473	W1	Speaker Baffle & Grille Cloth Assem.
63-1719	R15	27 Ohm 1/2W 10% Ins.	S-15548		Cabinet Rear Cover Assem.
63-1761	R3	270 " 1/2W 10% Ins.	S-15549		Handle End Pieces Assem. (2 Used)
63-1771	R4	470 " 1/2W 10% Ins.	S-15595		Brkt. & Idler Pulley Assem. (Lower)
63-1778	R7	680 " 1/2W 10% Ins.	S-15631		Cabinet Front & Hinge Assem. (Y Model only)
63-1841	R6	22K " 1/2W 10% Ins.	S-15632		Cabinet Rear Cover Assem. (Y Model only)
63-1870	R1	100K Ohm 1/2W " "	S-15633		Handle End Pieces Assem. (Y Model only)