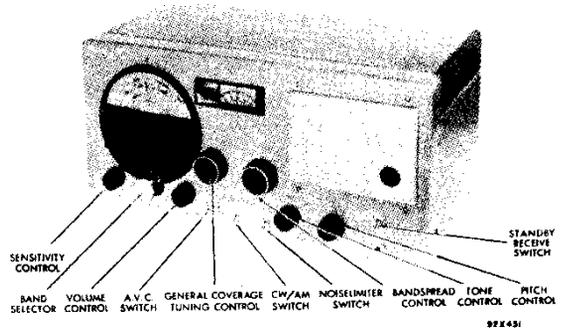


GENERAL

- Tubes Seven plus rectifier
 - Speaker 5-inch PM
 - Speaker V.C. Impedance. 3.2 ohms
 - Headset Output High Impedance
 - Antenna Provision for external antenna
 - Tuning Manual
- | Tuning Range | Band Selector Position | Frequency Range |
|------------------------|------------------------|------------------|
| | 1. | 540 kc - 1680 kc |
| | 2. | 1680 kc - 5.4 mc |
| | 3. | 5.3 mc - 15.5 mc |
| | 4. | 15.5 mc - 44 mc |
- Intermediate Frequency 455 kc.
 - Power Supply 105-125 V. DC or 60 cycles AC
 - Power Consumption 40 Watts



REPLACING LAMPS

Refer to Fig. 7 for the location of the two dial lamps used in the receiver. To gain access to defective lamps, reach in through cabinet cover and unclip the dial lamp sockets. The sockets may then be brought out into the open to change the defective lamp. Replace lamps with 6-8 V. Mazda #47 (Brown bead) lamps or equivalent.

ALIGNMENT PROCEDURE

It will be necessary to remove the receiver chassis from the cabinet to make alignment adjustments. The chassis is held in the cabinet by three screws along both the bottom edge of the front panel and the rear of the cabinet, and two screws on either side of the front panel.

Before starting the alignment procedure, check the position of the general coverage dial index marker on the low frequency end of the range and the bandspread dial on zero position. The general coverage condenser should index at max. capacity, and the bandspread condenser at min. capacity.

The standard RMA dummy antenna mentioned in the alignment chart consists of a 200 mmf. condenser in series with a 20 uh r-f choke which is shunted by a 400 mmf condenser in series with a 400 ohm carbon resistor.

Set the following controls before alignment.

- SENSITIVITY Set at maximum
- VOLUME Set at maximum
- AVC switch Set at OFF
- BAND SPREAD Set at zero
- CW/AM Set at AM (See step 2)
- NOISE LIMITER Set at OFF
- STANDBY RECEIVE. Set at RECEIVE
- TONE SWITCH Set at HIGH

For the settings of the remaining controls, see alignment chart.

RESTRINGING DIAL CORD

To restringing the general coverage tuning dial cord, cut an 18-inch length of 30 lb. test dial cord and tie one end to the tension spring of the main tuning capacitor drive pulley at position "1" on the diagram. Follow the numbers "1" through "4", and at position "4" stretch the tension spring and tie the cord securely.

To restringing the band spread tuning dial cord, cut a 36-inch length of dial cord and follow the procedure as above, starting at position "A" on the diagram. Note that the tuning drive shafts are wrapped with two and a fraction turns of dial cord for proper traction.

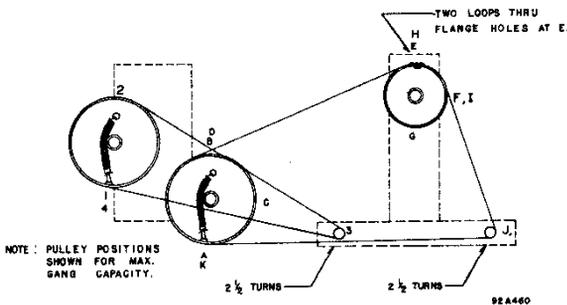


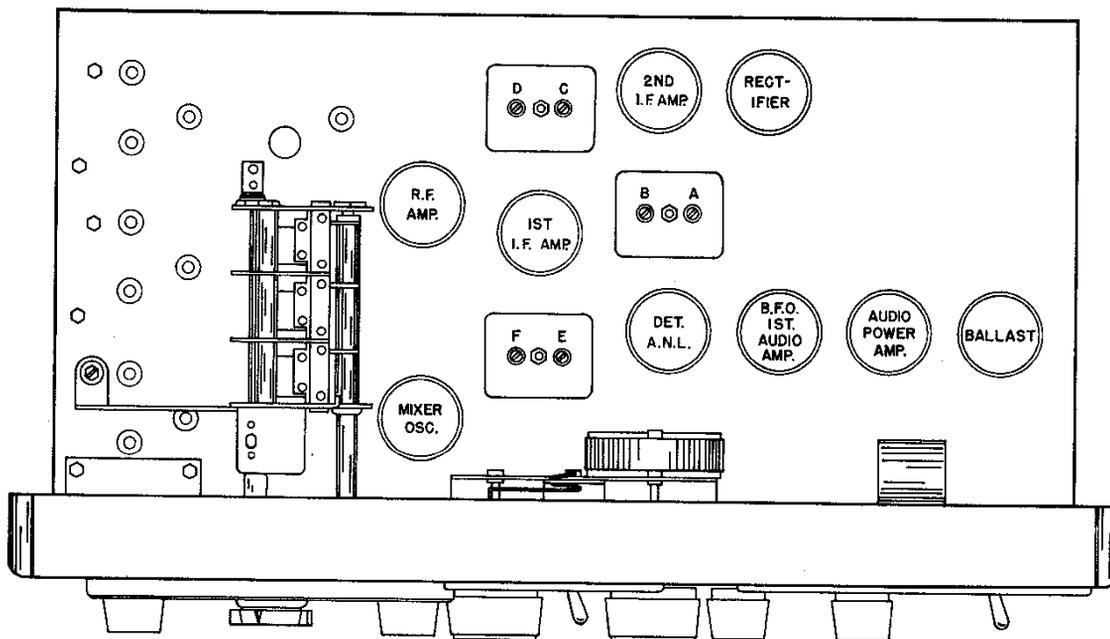
Fig. 1. Dial cable stringing procedure

MODEL S-52

ALIGNMENT CHART

Step	Dummy Antenna	Signal Generator Coupling	Signal Generator Frequency	Band Switch Setting	Receiver Dial Setting	Adjust	Remarks
1	None	Stator plates in center section of tuning gang.	455 kc	"1"	1000 kc	A, B, C, D, E, F	Maximum audio output at speaker voice coil. Use just enough signal generator output to obtain a 50 mw signal level.
2	None	See step 1	455 kc (No modulation)	"1"	1000 kc	S1	With the CW/AM switch set at CW, remove the pitch control knob and adjust S1 for zero beat. Replace the knob with the dot in the center position.
3	Std RMA dummy	"A1" on antenna strip. Jumper connected between "A2" and "G"	36 mc 18 mc	"4"	36 mc 18 mc	*G, H, I *S2,S3,S4	Maximum output as in step 1.
4	Std RMA dummy	See step 3	14 mc 10 mc	"3"	14 mc 10 mc	*J, K, L *S5, S6, S7	Maximum output as in step 1.
5	Std RMA dummy	See step 3	5 mc 1.8 mc	"2"	5 mc 1.8 mc	*M, N, O *S8	Maximum output as in step 1.
6	Std RMA dummy	See step 3	1500 kc 600 kc	"1"	1500 kc 600 kc	*P, Q, R *T	Maximum output as in step 1.

*Note - Calibration adjustments.



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Fig. 2. Top view, alignment points

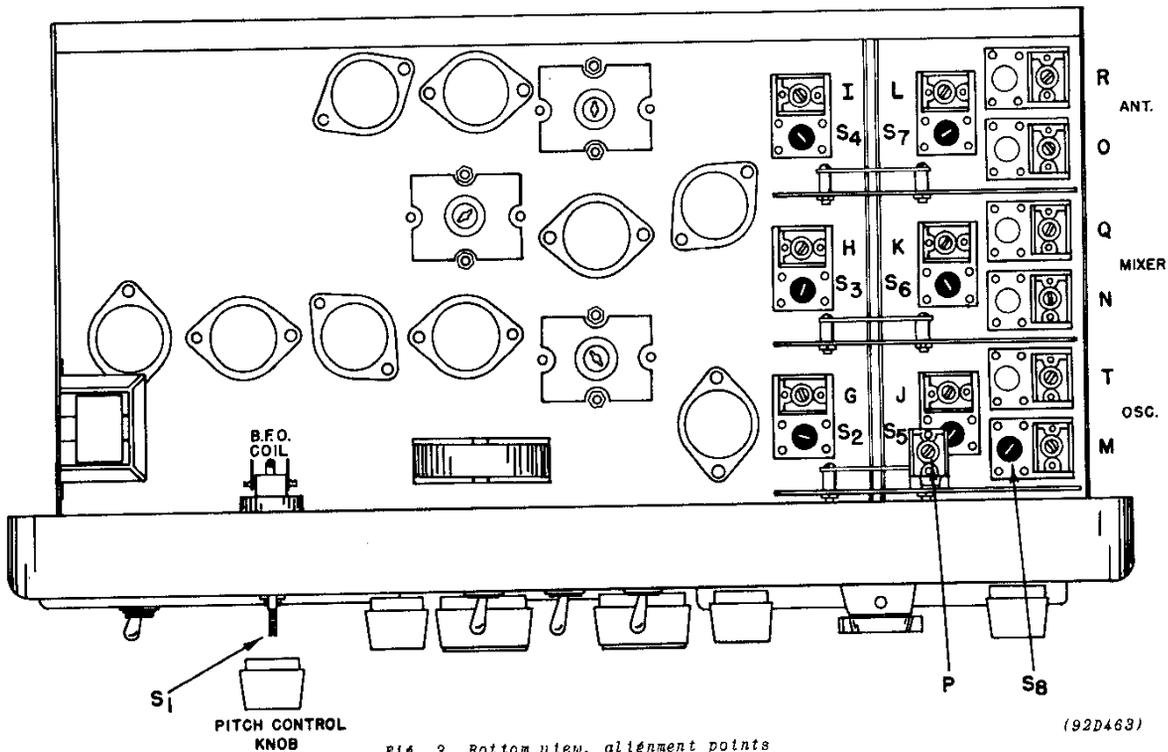


Fig. 3. Bottom view, alignment points

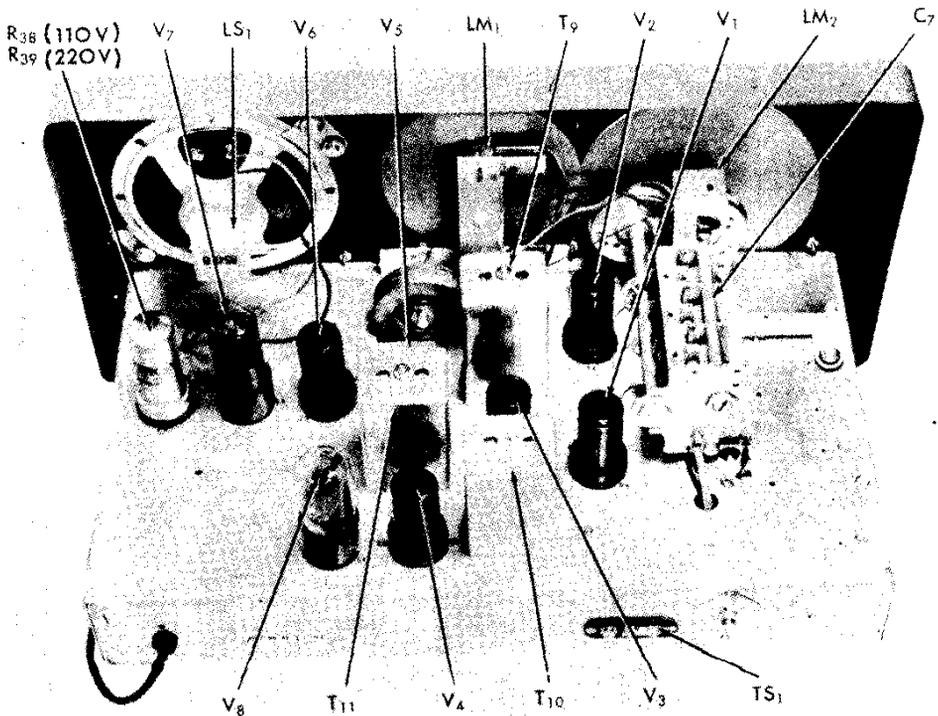
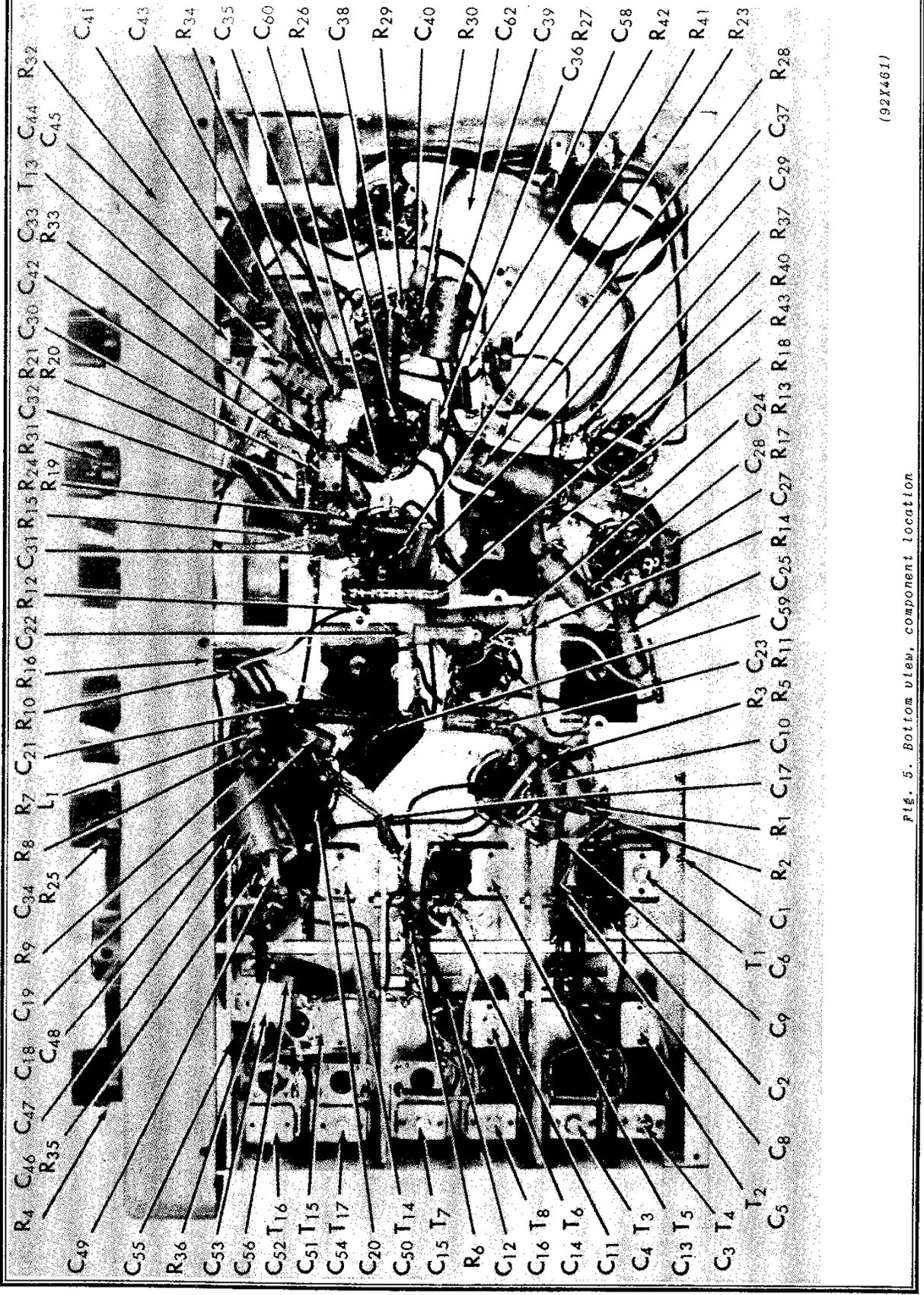


Fig. 4. Top view, component location

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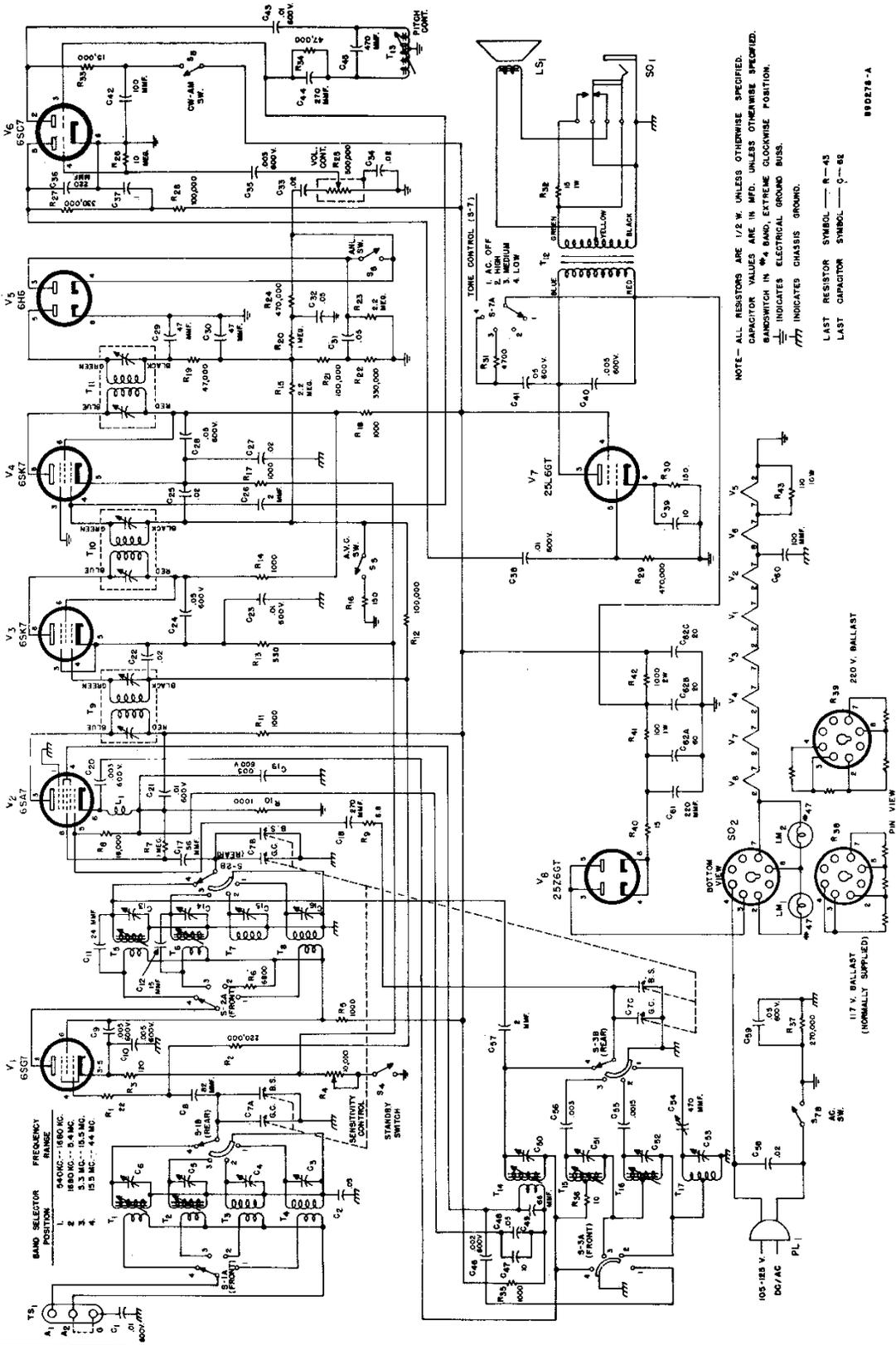
MODEL S-52



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Fig. 5. Bottom view, component location

MODEL S-52



NOTE - ALL RESISTORS ARE 1/2 W UNLESS OTHERWISE SPECIFIED.
 CAPACITOR VALUES ARE IN MFD. UNLESS OTHERWISE SPECIFIED.
 BANDWIDTH IN *% BAND, EXTREME CLOCKWISE POSITION.
 ⊕ INDICATES ELECTRICAL GROUND BUS.
 ⊕ INDICATES CHASSIS GROUND.
 LAST RESISTOR SYMBOL — R-43
 LAST CAPACITOR SYMBOL — C-56

Fig. 8. Schematic diagram

SERVICE PARTS LIST

SERVICE PARTS LIST (Cont.):

Ref. No.	Description	Hallcrafters Part Number	Ref. No.	Description	Hallcrafters Part Number
CONDENSERS			TRANSFORMERS AND COILS		
C-1,21,23,38,43	.01 mfd. 600 V., tubular paper	46A2103J	T-1	Transformer, antenna stage, band 4	51B783
C-2	.05 mfd. 200 V., tubular paper, braided leads	46A091	T-2	Transformer, antenna stage, band 3	51B782
C-3,4	Trimmers, adjustable, part of transformers T-4,3 respectively	44A147	T-3	Transformer, antenna stage, band 2	51B781
C-5,6	Trimmers, adjustable, part of transformers T-2,1 respectively	44A149	T-4	Transformer, antenna stage, band 1	51B780
C-7	Tuning condenser, 3 section	48C138	T-5	Transformer, mixer stage, band 4	51B787
C-8	82 mmf. 500 V., mica	CM20A820K	T-6	Transformer, mixer stage, band 3	51B786
C-9,10,19,40	.005 mfd. 600 V., tubular paper	46AZ502J	T-7	Transformer, mixer stage, band 2	51B785
C-11	24 mmf. 500 V., ceramic	CC21UK240M	T-8	Transformer, mixer stage, band 1	51B784
C-12	15 mmf. 500 V., ceramic	CC21UK150M	T-9	Transformer, 1st I.F.	50C185
C-13,14	Trimmers, adjustable, part of transformers T-5,8 respectively	44A149	T-10	Transformer, 2nd I.F.	50C186
C-15,16	Trimmers, adjustable, part of transformers T-7,8 respectively	44A147	T-11	Transformer, detector stage	50C192
C-17	56 mmf. 500 V., mica	CM20A560K	T-12	Transformer, audio output	55A110
C-18,44	270 mmf. 500 V., mica	CM20A271K	T-13	Transformer, B.F.O.	54B033-2
C-20,35	.003 mfd. 600 V., tubular paper	46AZ302J	T-14	Transformer, osc. stage, band 4	51B791
C-22,25,27,33,34	.02 mfd. 200 V., tubular paper	46AU203J	T-15	Transformer, osc. stage, band 3	51B913
C-24,28,41	.05 mfd. 600 V., tubular paper	46AY503J	T-16	Transformer, osc. stage, band 2	51B789
C-26,57	2 mmf., twisted wire gimmick		T-17	Transformer, osc. stage, band 1	51B912
C-29,30	47 mmf. 500 V., mica	CM20A470M	L-1	Choke, R.F.	53B138
C-31,32,48	.05 mfd. 200 V., tubular paper	46AU503J	SWITCHES		
C-36,61	220 mmf. 500 V., mica	CM20A221M	S-1	Band switch section, antenna stage	62B039
C-37	.1 mfd. 600 V., tubular paper	46AY104J	S-2	Band switch section, mixer stage	62B039
C-39	10 mfd. 25 V., electrolytic	45A121	S-3	Band switch section, oscillator stage	62B044
C-42,60	100 mmf. 500 V., mica	CM20A101M	S-4,5,6,8	Switch, toggle, S.P.S.T., STANDBY-RECEIVE, A.V.C., A.N.L., and CW-AM	60A138
C-45	470 mmf. 500 V., mica	CM20A471J	S-7	Switch, PWR-TONE control	60A225
C-46	.002 mfd. 600 V., tubular paper	46AZ202J	PLUGS AND SOCKETS		
C-47	10 mfd. 150 V., electrolytic	45A097	PL-1	Line cord	87B1573
C-49	63 mmf. 500 V., ceramic	CC25UK680K	SO-1	Headset jack	36A004
C-50	Trimmer, adjustable, part of transformer T-14	44A149	SO-2	Socket, octal (tube and ballast)	6A035
C-51	Trimmer, adjustable, part of transformer T-15	44A148		Socket, dial light, general cover-age dial	86B071
C-52	Trimmer, adjustable, part of transformer T-16	44A147		Socket, dial light, bandsread dial	86B068
C-53	Trimmer, adjustable	44A191	TUBES, RECTIFIERS AND LAMPS		
C-54	Trimmer, adjustable, part of transformer T-17	44A188	V-1	Type 6SG7, antenna	90X6SG7
C-55	1500 mmf. 5% 500 V., mica	CM30C152J	V-2	Type 6SA7, mixer	90X6SA7
C-56	3000 mmf. 500 V., mica	CM30C302K	V-3,4	Type 6SK7, 1st and 2nd I.F. amplifiers	90X6SK7
C-58	.02 mfd. 600 V., moulded paper	46AC203J	V-5	Type 6H6, detector and noise limiter	90X6H6
C-59	.05 mfd. 600 V., tubular (Special)	46A150	V-6	Type 6SC7, 1st audio and B.F.O.	90X6SC7
C-62	60-20-20 mfd. 150 V., electrolytic	45B128	V-7	Type 25L6GT, audio power amplifier	90X25L6GT
RESISTORS			V-8	Type 25Z6GT, rectifier	90X25Z6GT
R-1	22 ohms 1/2 watt, carbon	RC20AE220M	LM-1,2	Lamp, dial light, Mazda #47	39A004
R-2	220,000 ohms 1/2 watt, carbon	RC20AE224M	MISCELLANEOUS		
R-3	120 ohms 1/2 watt, carbon	RC20AE121M	TS-1	Terminal strip, antenna	88A032
R-4	Resistor, variable, 10,000 ohms, SENSITIVITY control	25B587		Lock, line cord	76A397
R-5,11,14,18,35	1,000 ohms 1/2 watt, carbon	RC20AE102M		Shaft, bandswitch and index plate	74B172
R-6	6800 ohms 1/2 watt, carbon	RC20AE682K		Collar, bandswitch	77A043
R-7,20	1 megohm 1/2 watt, carbon	RC20AE105M		Bracket, dial drive mtg.	87B503
R-8	18,000 ohms 1/2 watt, carbon	RC20AE183K		Dial shaft, bandsread	74A169
R-9	6.8 ohms 1/2 watt, carbon	RC20AE068K		Drive shaft, main tuning	74A171
R-10,17	1,000 ohms 1/2 watt, carbon	RC20AE102K		Drive shaft, bandsread	74A170
R-12,21,28	100,000 ohms 1/2 watt, carbon	RC20AE104M		Washer, spring (Bandswitch, bandsread dial, and main tuning drive shafts)	4A043
R-13	330 ohms 1/2 watt, carbon	RC20AE331K		Spring, retainer (Bandsread, and main tuning drive shaft)	75A082
R-15,23	2.2 megohms 1/2 watt, carbon	RC20AE225M		Flywheel, bandsread tuning	71A178
R-18,30	150 ohms 1/2 watt, carbon	RC20AE151M		Pulley, bandsread dial	28A012
R-19,34	47,000 ohms 1/2 watt, carbon	RC20AE473M		Dial cord	38A001
R-22,27	330,000 ohms 1/2 watt, carbon	RC20AE334M		Spring, dial cord	75A012
R-24,29	470,000 ohms 1/2 watt, carbon	RC20AE474M		Dial, bandsread	83B254
R-25	Resistor, variable, 500,000 ohms, VOLUME control	25B586		Dial, general coverage	83D240
R-26	10 megohms 1/2 watt, carbon	RC20AE106M		Escutcheon, bandsread dial	7B017
R-31	4700 ohms 1/2 watt, carbon	RC20AE472M		Escutcheon, general coverage dial	7C034
R-32	15 ohms 1 watt, carbon	RC30AE150M		Speaker, P.M.	85B050
R-33	15,000 ohms 1/2 watt, carbon	RC20AE153M		Baffle, speaker	83C223
R-36	10 ohms 1/2 watt, carbon	RC20AE100M	LS-1	Grill, speaker	7C016
R-37	270,000 ohms 1/2 watt, carbon	RC20AE274M		Knob, PITCH CONTROL	15A058
R-38	Resistor, ballast, 110 V. operation	24B875		Knob, SENSITIVITY, VOLUME and and TONE	15A049
R-39	Resistor, ballast, 220 V. operation	24B874		Knob, TUNING and BANDSPREAD	15A047
R-40	15 ohms 1/2 watt, carbon	RC20AE150M		Knob, BAND SELECTOR	15B053
R-41	100 ohms 1 watt, carbon	RC30AE101K			
R-42	1,000 ohms 2 watt, carbon	RC40AE102K			
R-43	110 ohms 10 watt, carbon	24BG111E			