

92X421

RESTRINGING DIAL CORD

Restring the dial drive with 30 lb test dial cord. Tie one end to the tension spring and follow the sequence outlined in Fig. 1. Stretch the tension spring and tie the end of the cord securely to the spring as shown.

Set the tuning condenser at maximum capacity (closed), attach the pointer to the string and line it up with the left hand index mark on the dial scale.

REPLACING LAMPS

Refer to Fig. 7 for the location of two dial lamps used in the receiver. To gain access to defective lamps, reach in through the cabinet cover and unclip the dial lamp socket by compressing the side springs. The socket may then be brought out into the open to change the defective lamp. Replace all lamps with 6-8 V. Mazda #44 (Blue bead) lamps or equivalent.

ALIGNMENT PROCEDURE

The receiver is equipped with AUTOMATIC FREQUENCY CONTROL on the FM band to compensate for oscillator drift and improve the tuning function on the FM band. The correction factor is approximately 5 times: AFC takes hold 250 kc before the station frequency is reached and releases before tuning 500 kc beyond the station frequency when receiving a 1000 microvolt signal.

The standard RMA dummy specified in the alignment chart consist 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.

When making the alignment adjustments set the tone control at NORMAL and the volume control at maximum volume. Use just enough signal generator output to obtain the results indicated on the chart.

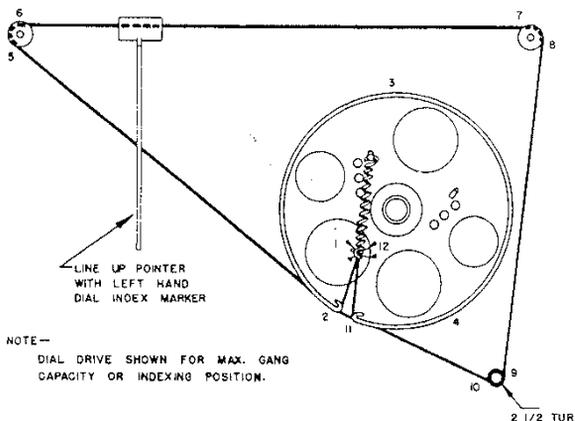


Fig. 1. Dial cable stringing procedure. (92B382)

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MODELS S-55, S-56

ALIGNMENT CHART:

Step	Dummy Antenna	Signal Generator Coupling	Signal Generator Frequency	Band Switch Pos.	Radio Dial Setting	Adjust	Remarks
1	0.01 mfd. cap.	To high cap. stator of center section.	455 kc	"BC"	1000 kc	A,B,C, D,E	Adjust for max. audio output. Keep audio output below 500 MW to avoid AVC action.
2	0.01 mfd. cap. in series with a 4700 ohm carbon resistor.	To low cap. stator of center section.	10.7 mc	"FM"	90 mc	F,G,H, I,J,K	Adjust for max. voltage as measured between pin #3 of 6H6 and ground with an electronic volt meter. Adjust signal generator output for approx. 2 volts DC at this point.
3	0.01 mfd. cap.	See step 2.	10.7 mc	"FM"	90 mc	L	Adjust for zero voltage as measured between the junction of R27 and R28 and ground with an electronic volt meter.
4	Std RMA dummy	To terminals "A" and "G" on terminal strip TS-2.	1500 kc	"BC"	1500 kc	*M,N,O	Adjust for max. output as in step 1.
5	Two 150 ohm carbon resistors	To terminals "D-D" on terminal strip TS-1.	105 mc	"FM"	105 mc	*P,Q	Adjust for max. voltage as measured across R24 with an electronic volt meter. Adjust signal generator output for approx. 1 volt DC at this point.

*Note - Calibration adjustments.

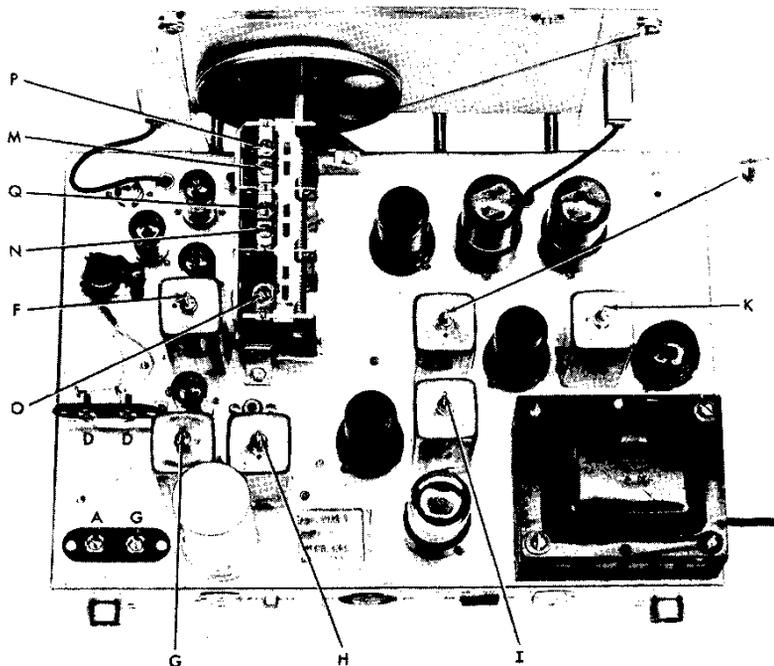


Fig. 2. Alignment adjustments, top view.

MODELS S-55, S-56

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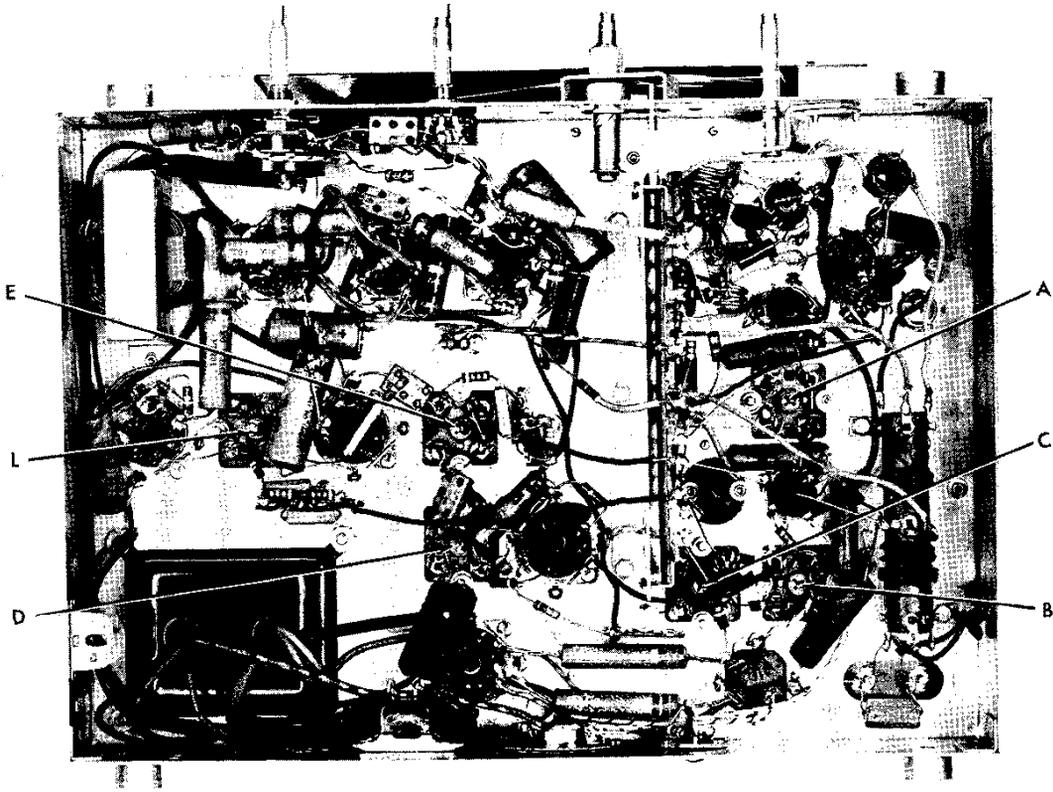


Fig. 3. Alignment adjustments, bottom view. (92X410)

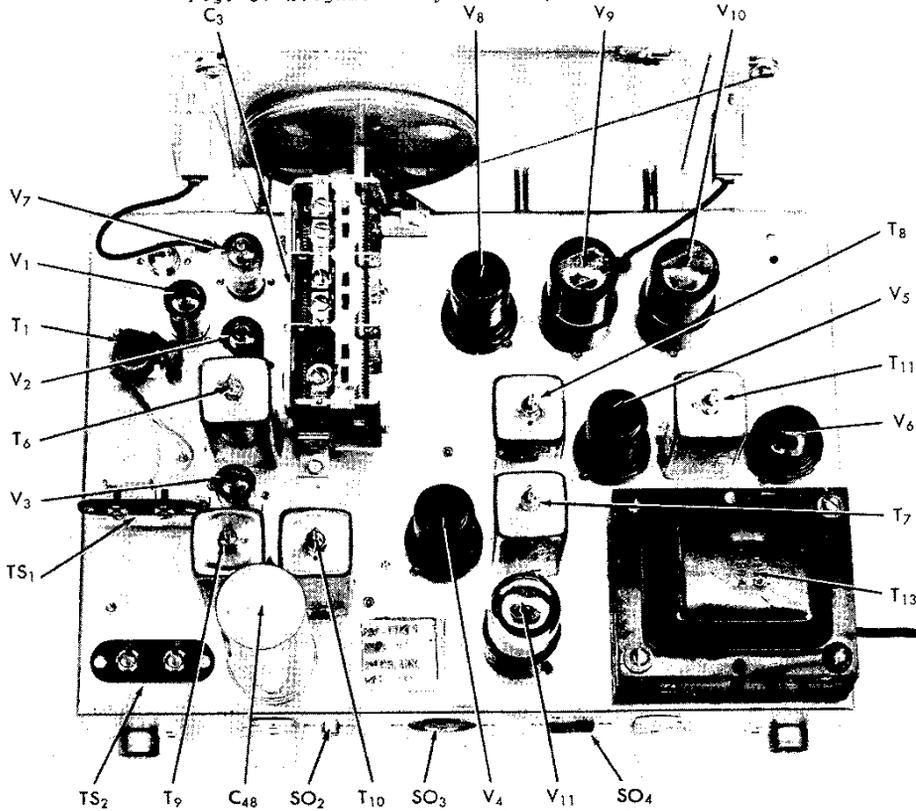


Fig. 4. Component location, top view.

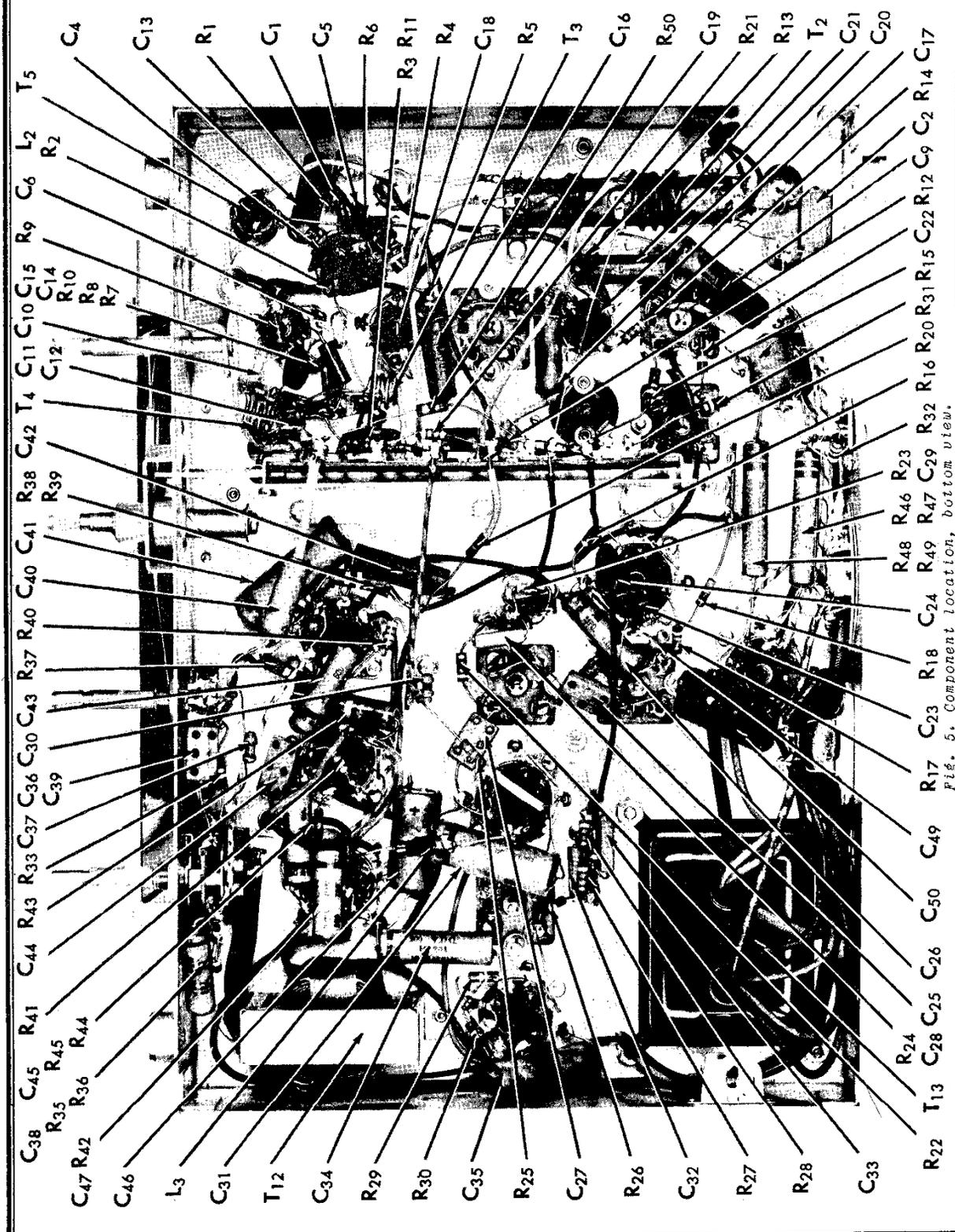


Fig. 5. Component location, bottom view.

19-1920

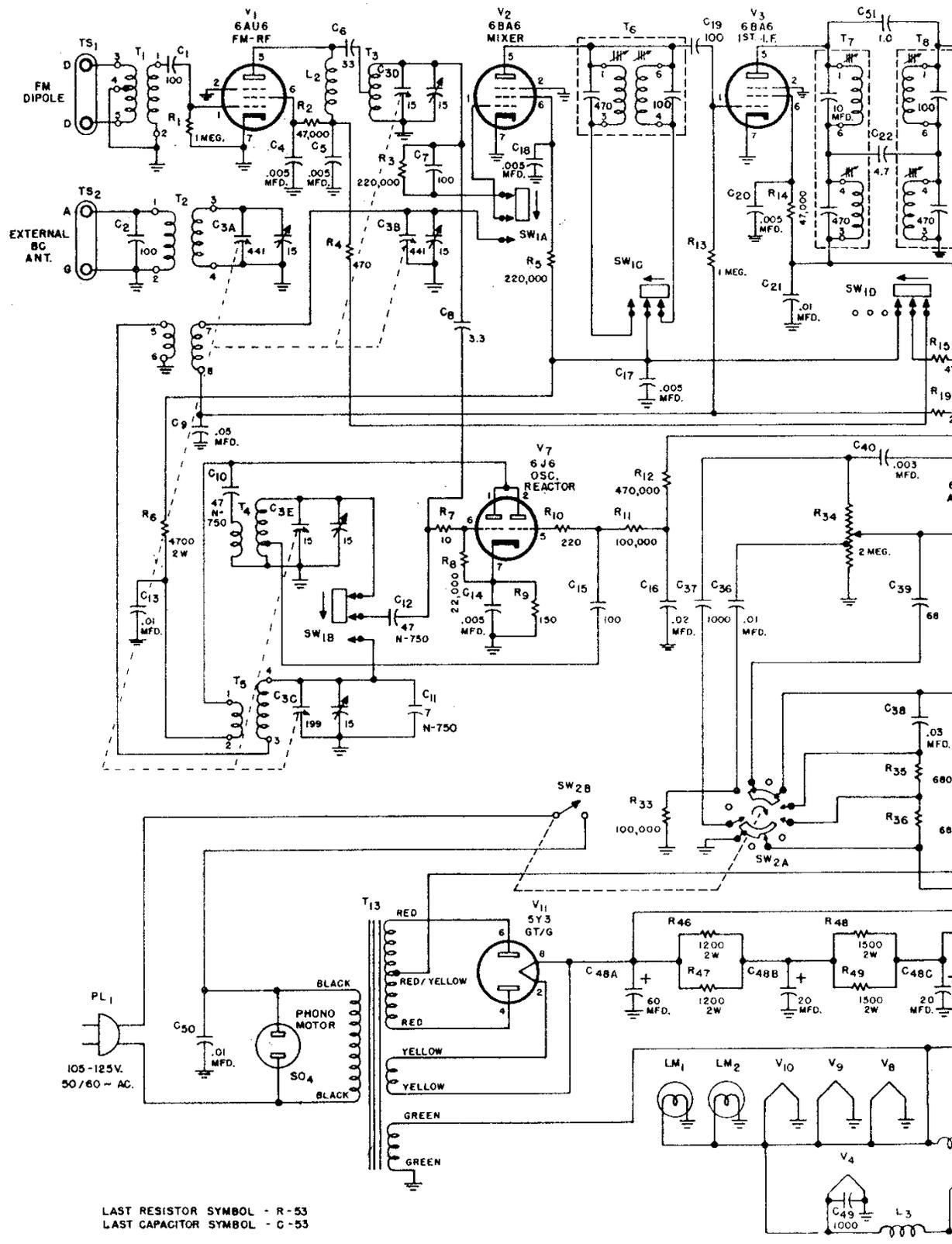
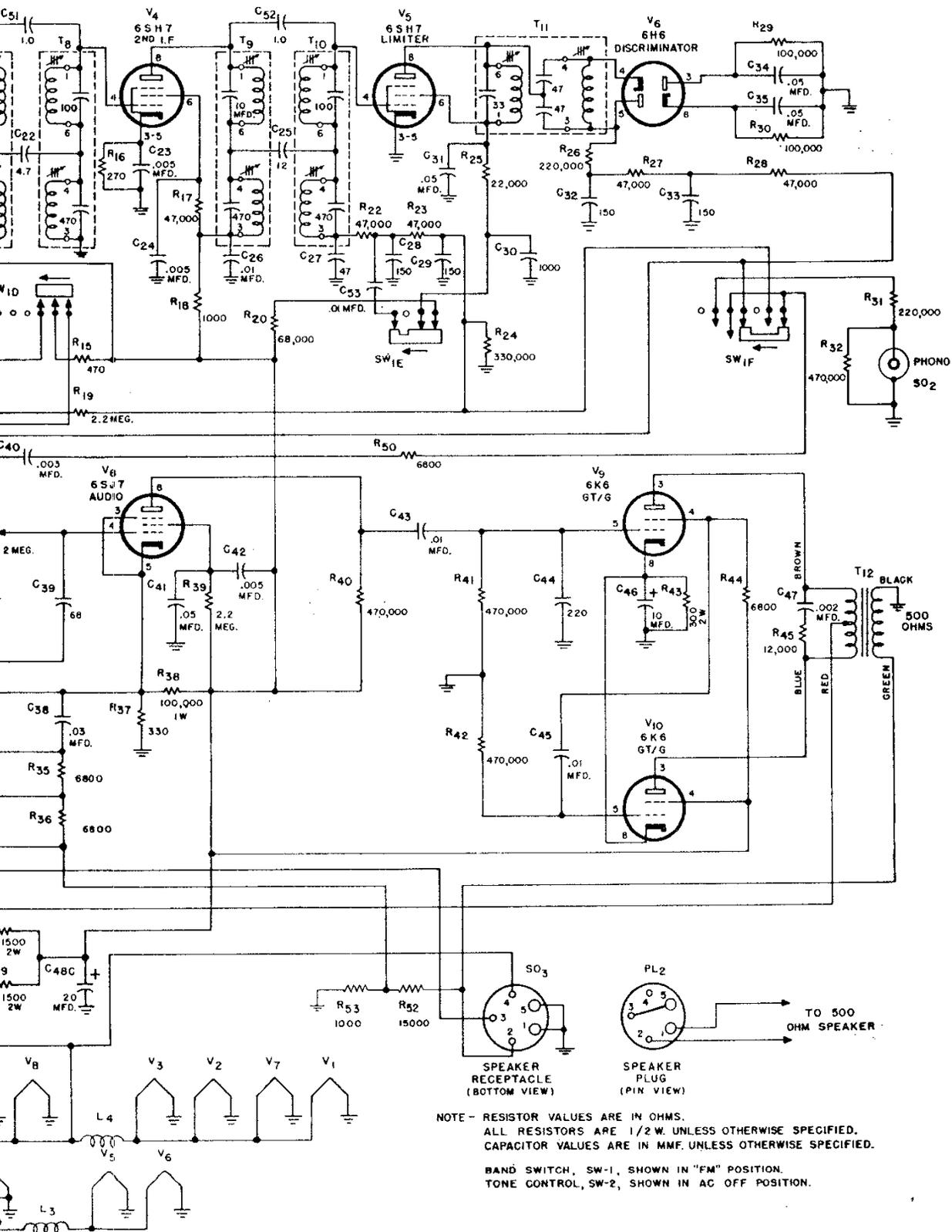


Fig. 8. Schemati



NOTE - RESISTOR VALUES ARE IN OHMS.
 ALL RESISTORS ARE 1/2 W. UNLESS OTHERWISE SPECIFIED.
 CAPACITOR VALUES ARE IN MMF. UNLESS OTHERWISE SPECIFIED.

BAND SWITCH, SW-1, SHOWN IN "FM" POSITION.
 TONE CONTROL, SW-2, SHOWN IN AC OFF POSITION.

9. Schematic diagram.

SERVICE PARTS LIST

Ref. No.	Description	Hallcrafters' Part Number	
CONDENSERS			
C-1,7,15,19	100 mmf. 500 V., ceramic	47B20101M5	RC20AE271K
C-2	100 mmf. 500 V., mica	CM20A101M	RC20AE102M
C-3	Tuning condenser, 5 sections	48C196	RC20AE225M
C-4,5,14,17,18,20,23,24	.005 mfd. 450 V., ceramic	47A168	RC20AE683M
C-6	3.3 mmf. 500 V., ceramic	CC20UK330K	RC20AE334M
C-8	3.3 mmf. 500 V., bakelite	47A160-5	RC20AE104K
C-9,34,35	.05 mfd. 200 V., tubular paper	46AU503J	RC40AE301J
C-10,12	47 mmf. 500 V., ceramic	CC20UK470M	RC20AE123K
C-11	7 mmf. 500 V., ceramic	CC20UJ070K	RC40AE122K
C-13,21,26,36,43,45	.01 mfd. 600 V., tubular paper	46AZ103F	RC40AE152K
C-16	.02 mfd. 200 V., tubular paper	46AU203J	
C-22	4.7 mmf. 500 V., bakelite	47A160-6	
C-25	12 mmf. 500 V., mica	CM20A120K	
C-27	47mmf. 500 V., mica	CM20A470M	
C-28,29,32,33	150 mmf. 500 V., mica	CM20A151M	
C-30,37,49	1000 mmf. 500 V., ceramic	47B20102M5	
C-31,41	.05 mfd. 600 V., tubular paper	46AY503J	
C-38	.03 mfd. 200 V., tubular paper	46AU303J	
C-39	68 mmf. 500 V., mica	CM20A680M	
C-40	.003 mfd. 600 V., tubular paper	46AZ302J	
C-42	.005 mfd. 600 V., tubular paper	46AZ502J	
C-44	220 mmf. 500 V., mica	CM20A221M	
C-46	10 mfd. 25 V., electrolytic	45A121	
C-47	.002 mfd. 600 V., tubular paper	46AZ202J	
C-48	60-20-20 mfd. 450 V., electrolytic	45B113	
C-50	.01 mfd. 600 V., molded paper	46AG103J	
C-51,52	1 mmf. 500 V., bakelite	47A160-2	
C-53	.01 mfd. 600 V., tubular paper	46AY103J	
RESISTORS			
R-1,13	1 megohm 1/2 watt, carbon	RC20AE105M	
R-2,14,17,22,23,27,28	47,000 ohms 1/2 watt, carbon	RC20AE473M	
R-3,5,26,31	220,000 ohms 1/2 watt, carbon	RC20AE224M	
R-4,15	470 ohms 1/2 watt, carbon	RC20AE471M	
R-6	4700 ohms 2 watts, carbon	RC40AE472M	
R-7	10 ohms 1/2 watt, carbon	RC20AE100M	
R-8,25	22,000 ohms 1/2 watt, carbon	RC20AE223M	
R-9	150 ohms 1/2 watt, carbon	RC20AE151M	
R-10	220 ohms 1/2 watt, carbon	RC20AE221M	
R-11,33	100,000 ohms 1/2 watt, carbon	RC20AE104M	
R-12,32,40,	470,000 ohms 1/2 watt, carbon	RC20AE474M	

TRANSFORMERS AND COILS

T-1	Transformer, FM, antenna stage	51B1021
T-2	Transformer, BC, mixer stage	51B1059
T-3	Transformer, FM, mixer stage	51B1022
T-4	Transformer, FM, osc. stage	51B1073
T-5	Transformer, BC, osc. stage	51B1020
T-6	Transformer, 1st I.F.	50B409
T-7,9	Transformer, 2nd I.F. and AM Detector & FM limiter	50B407
T-8,10	Transformer, 2nd I.F. and AM Detector & FM limiter	50B408
T-11	Transformer, FM, detector stage	50B410
T-12	Transformer, audio output	55B109
T-13	Transformer, power	52C152
L-2	Plate choke for tube V1	53B124
L-3	Filament choke for tubes V5 & 6	53B123
L-4	Filament choke for tubes V1,2,3, & 7	53A136

- 15B068-4 Knob, tuning and volume controls (Model S-55)
- 15B077-3 Knob, tuning and volume controls (Model S-56)
- 87A379 Terminal strip, antenna (Marked D-D)
- 88A327 Terminal strip, antenna (Marked A-C)
- 76A299 Line cord lock
- 16A007 Mounting foot, rubber

- TS-1
- TS-2

SWITCHES

- Band switch assembly
- Switch, tone control

PLUGS AND SOCKETS

- Line cord and plug
- Receptacle, television, phono
- Receptacle, speaker
- Receptacle, phono motor
- Socket, octal (tube)
- Socket, miniature (tube)
- Socket & bracket, dial light

- SW-1
- SW-2

- PL-1
- SO-2
- SO-3
- SO-4

TUBES, RECTIFIERS AND LAMPS

- 6AU6 antenna
- 6BA6 mixer, 1st I.F.
- 6SH7 2nd I.F., limiter
- 6H6 discriminator
- 6J6 osc. & AFC
- 6SJ7 audio amp.
- 6K6GT power amp.
- 5Y3GT rectifier
- Lamp, 6-8 V., 250 Ma., Mazda #44

- V-1
- V-2,3
- V-4,5
- V-6
- V-7
- V-8
- V-9,10
- V-11
- LM-1,2

MISCELLANEOUS

- Shaft, tuning
- Pulley, idler
- Switch, cam
- Drive pin
- Collar
- Bushing
- Bracket, dial plate mtg.
- Dial plate
- Dial background (paper)
- Dial glass (calibrated)
- Clip (for dial glass 22C201)
- Rubber spacer, for dial clip
- Pointer
- Dial cord
- Spring, dial cord
- Dial glass (clear)
- Clip (for dial glass 22B205)
- Escutcheon (Model S-55)
- Escutcheon (Model S-56)
- Knob, tone and range controls (Model S-55)
- Knob, tone and range controls (Model S-56)

- 74A247
- 28A052-6
- 77A261
- 74A246
- 77A267
- 77A266
- 67A793
- 63B332
- 32A446
- 22C201
- 76A390
- 16A126
- 82A147
- 38A019
- 75A012
- 22B205
- 76A331
- 7C067-1
- 7C067
- 15B077-4
- 15B068-3

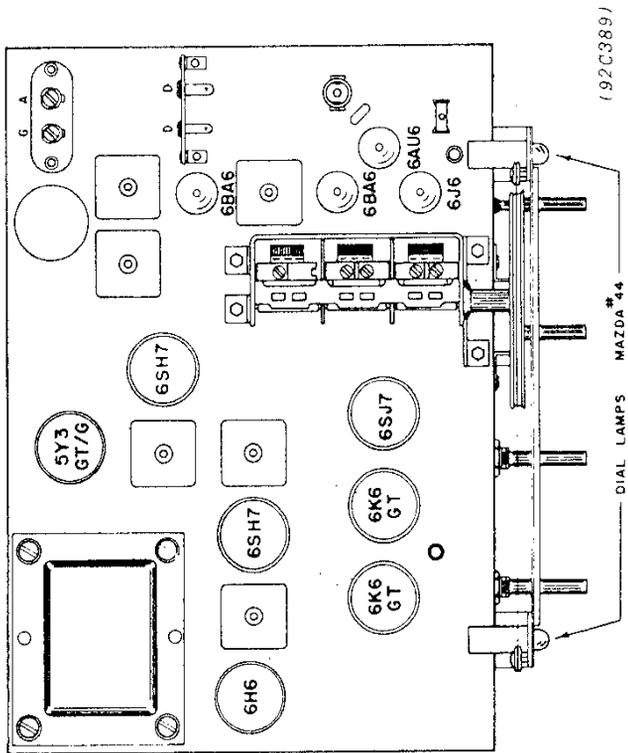


Fig. 7. Top view, location of tubes and dial lamps.