

MODELS S-53-A,
S-53-AU

GENERAL

- Tubes Seven plus rectifier
 - Speaker 5-inch PM
 - Voice Coil Impedance. 3.2 ohms
 - Headset Output Low Impedance
 - Antenna Provision for external antenna
 - Tuning. Manual
- | Tuning Range. | Range | Frequency Coverage |
|-----------------------|-------|--------------------|
| | A | 550 KC - 1650 KC |
| | B | 2.6 MC - 6.4 MC |
| | C | 6.2 MC - 16.5 MC |
| | D | 14 MC - 31 MC |
| | E | 48 MC - 55 MC |
- Intermediate Frequency 2,075 mc
 - Power Supply S-53A 105-125 V. 50 to 60 cycles AC
 - S-53AU. 105-250 V. 40 to 130 cycles AC
 - Power Consumption 50 watts

RESTRINGING DIAL CORD

To restringing the general coverage dial cord, cut a 48-inch length of 30 lb. test dial cord and tie one end to the tension spring of the general coverage tuning capacitor drive pulley at position "1" on the diagram. Follow the sequence "1" through "12" and at position "12" stretch the tension spring and tie the cord securely.

Set the general coverage tuning condenser at maximum capacity and attach and set the pointer in line with the left hand index marker.

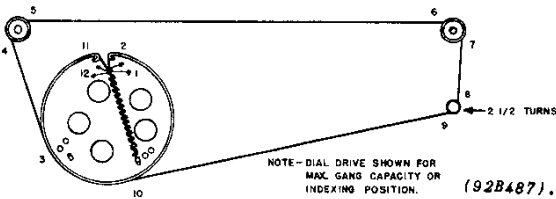


Fig. 1. Dial cable stringing procedure, general coverage dial.

To restringing the band spread dial cord, cut a 36-inch length of 30 lb. test dial cord and follow the procedure as above, starting at position "A" ending at "L".

Set the bandspread condenser at minimum capacity and attach and set the pointer at "100" on the logging scale.

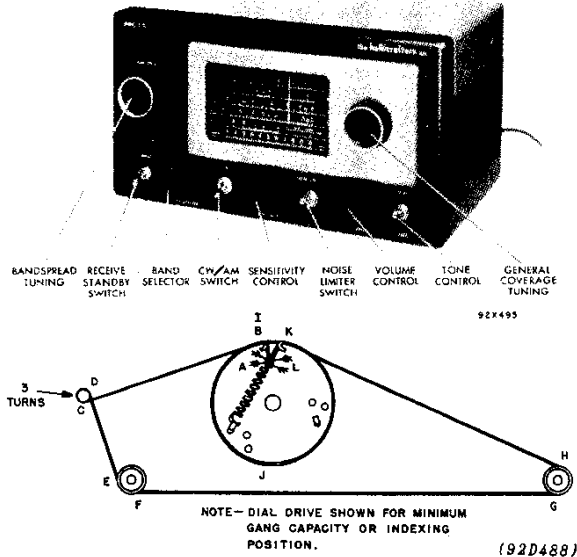


Fig. 2. Dial cable stringing procedure, band spread dial.

REPLACING LAMPS

Refer to Fig. 8. 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 #44, (Blue bead) lamps or equivalent.

ALIGNMENT PROCEDURE

Set the following controls before alignment.

- STANBY/RECEIVE Set at RECEIVE
- CW/AM Set at AM (see step 2)
- SENSITIVITY Set at maximum
- NOISE LIMITER Set at OFF
- VOLUME Set at maximum
- TONE switch. Set at HIGH
- BANDSPREAD Set at 100
- SPEAKER/PHONES switch. Set at SPEAKER

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, index the general coverage dial pointer on the low frequency end of the range and index the bandspread dial pointer at 100. The general coverage condenser should index at maximum capacity and the bandspread condenser should index at minimum capacity.

ALIGNMENT CHART

Step	Dummy Antenna	Signal Generator Coupling	Signal Generator Frequency	Band Selector Setting	Receiver Dial Setting	Adjust	Remarks
1	0.1 mfd. capacitor	High side to front stator section of tuning cap. Low side to chassis.	455 kc	A	Tuning cap. fully open	S1,S2,S3,S4,S5, S6,	Adjust for maximum audio output at speaker voice coil. Use just enough signal generator output to obtain a 50 mw audio level.
2	See step 1.	See step 1.	455 kc	A	See step 1.	S9	With the CW/AM switch set at CW, adjust S-9 for zero beat.
3	300 ohm carbon resistor	High side to "A1" on antenna strip. Jumper connected between "A2" and "G"	1500 kc 600 kc	A	1500 kc 600 kc	*A,B *C	Adjust for maximum output as in step 1.
4	See step 3.	See step 3.	6 mc	B	6 mc	*D,E	Adjust for maximum output as in step 1.
5	See step 3.	See step 3.	15 mc	C	15 mc	*F,G	Adjust for maximum output as in step 1.
6	See step 3.	See step 3.	30 mc	D	30 mc	*I,H	Adjust for maximum output as in step 1.
7	See step 3.	See step 3.	52 mc	E	52 mc	*J,K	Adjust for maximum output as in step 1.

*Note - Calibration adjustments.

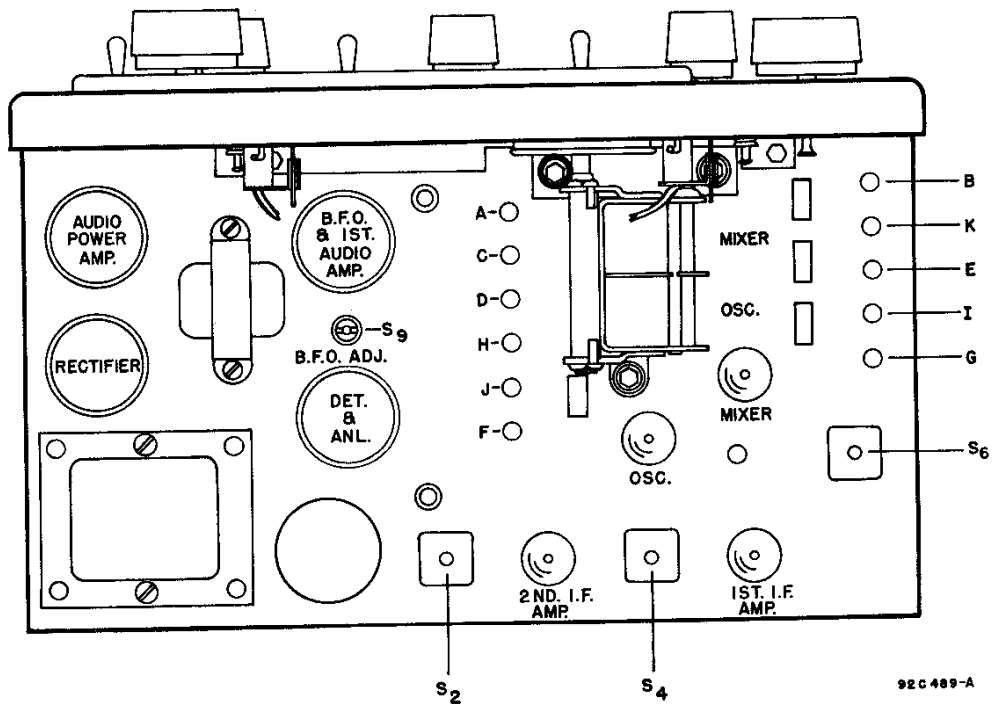


Fig. 3. Alignment points, top view.

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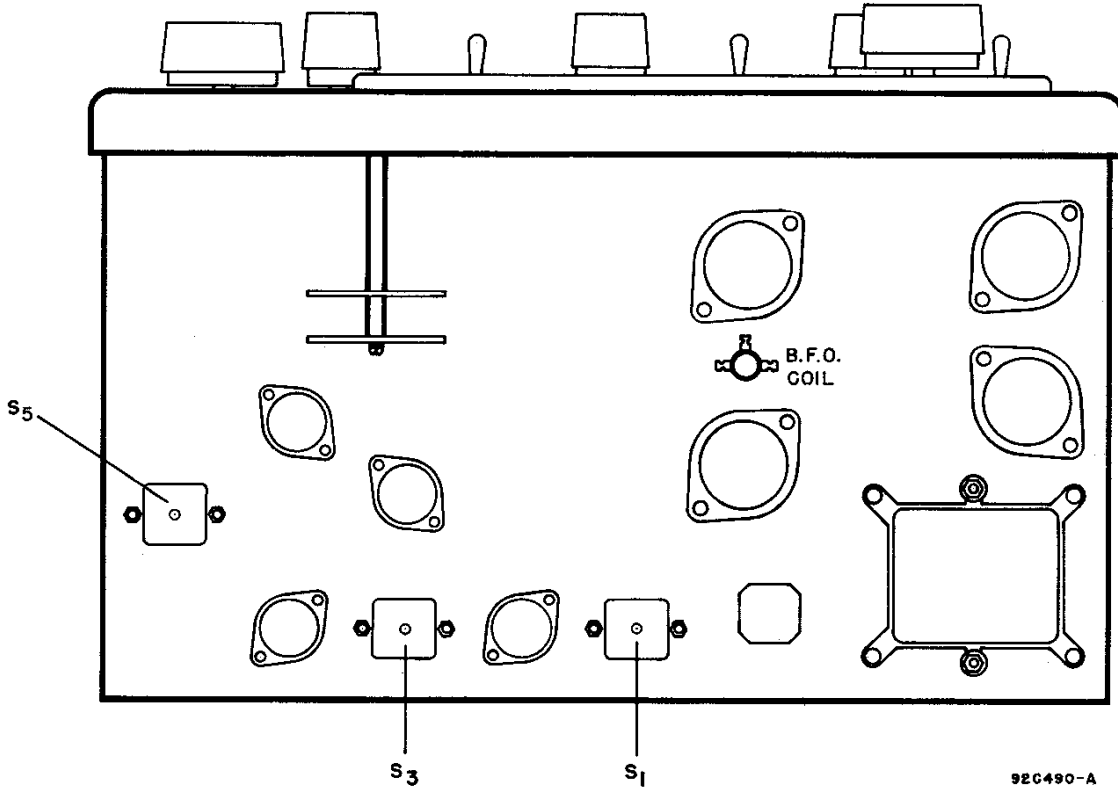


Fig. 4. Alignment points, bottom view.

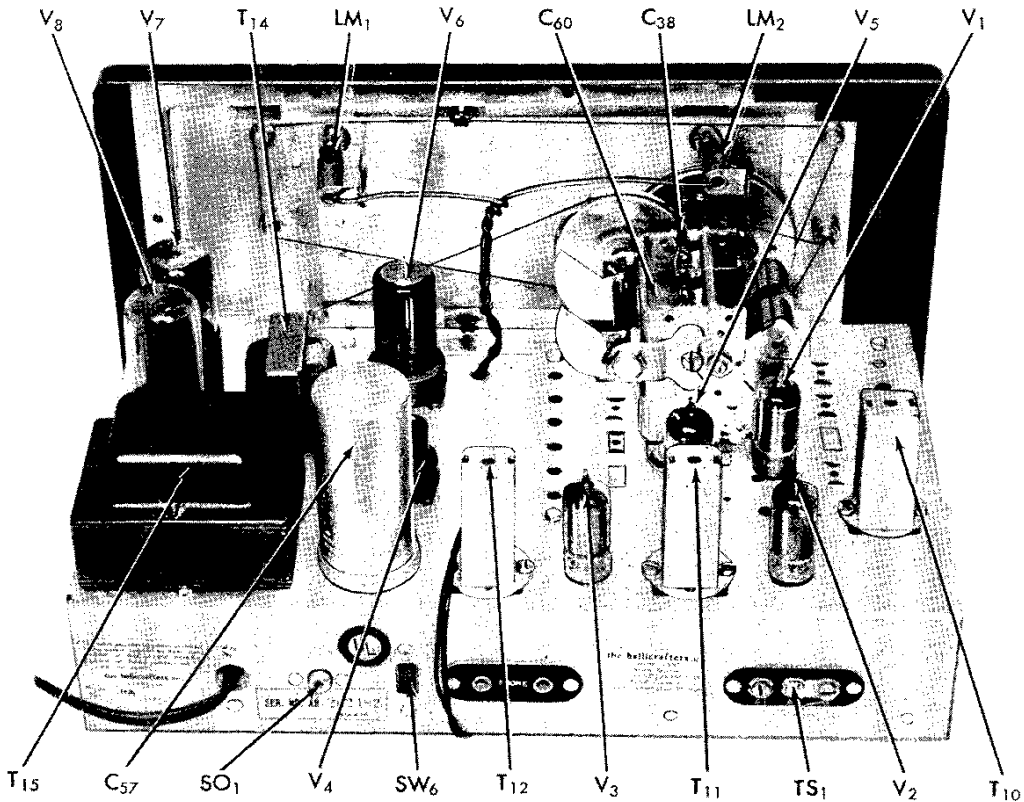


Fig. 5. Component location, top view.

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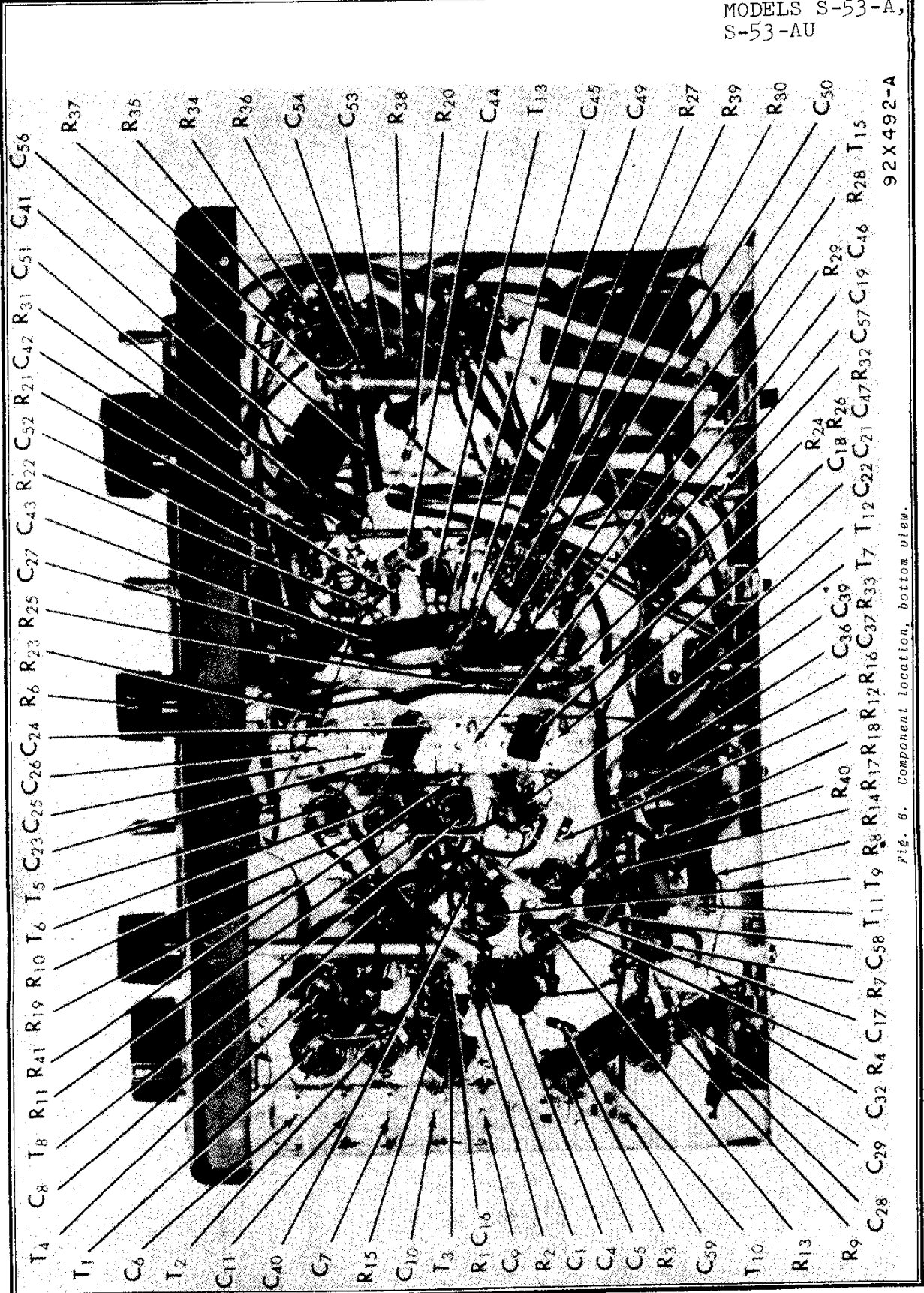
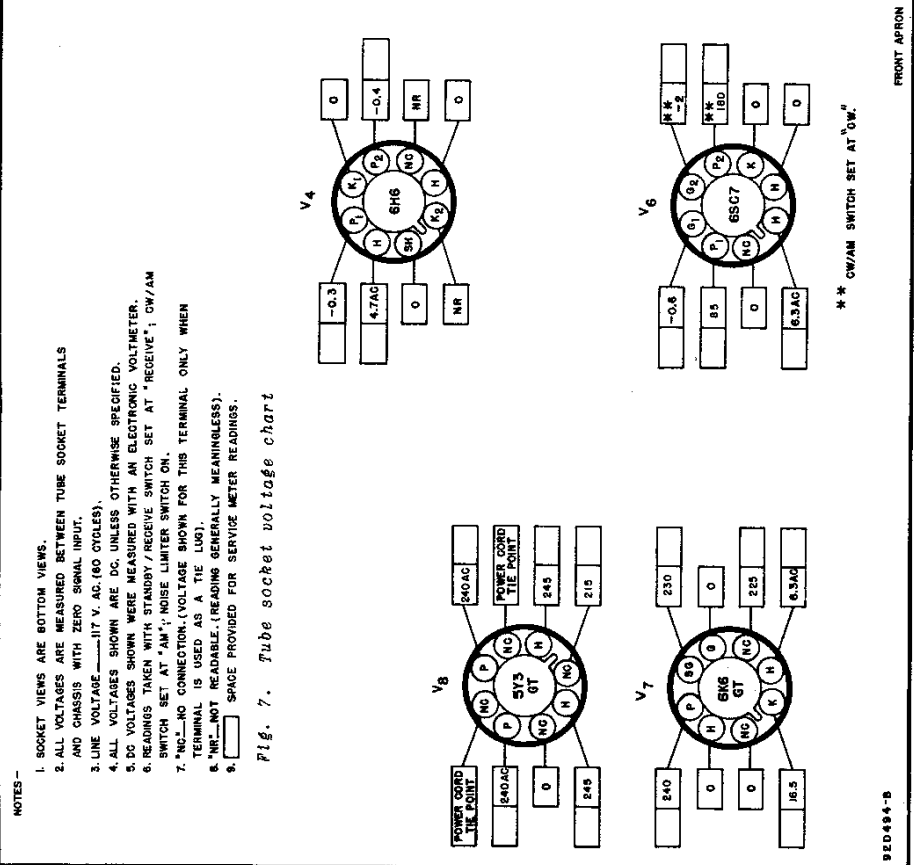
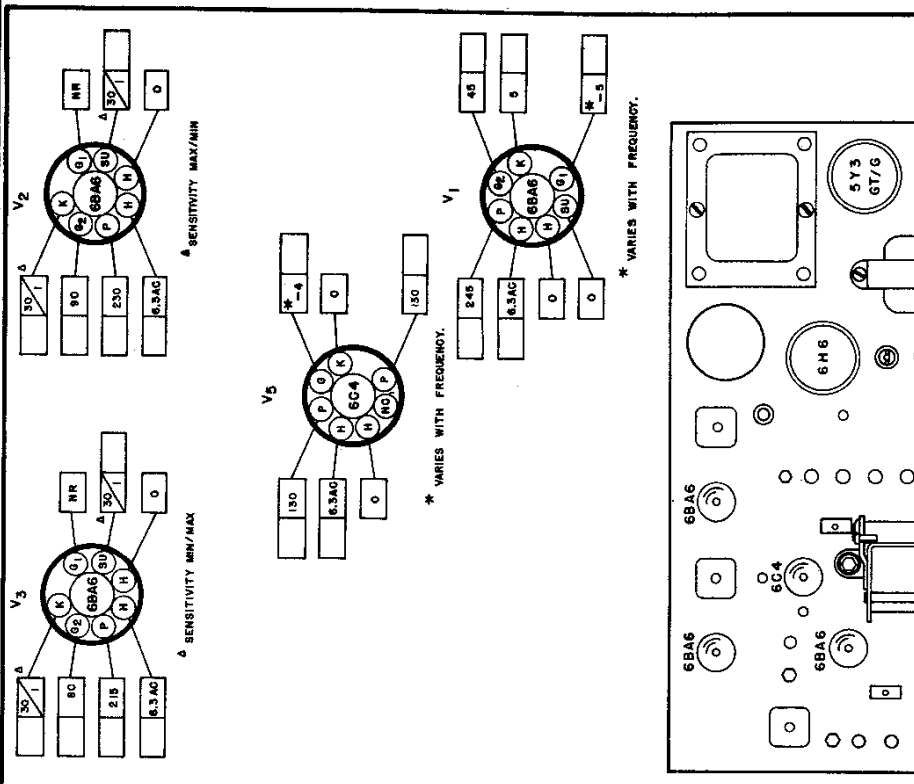


Fig. 6. Component location, bottom view.

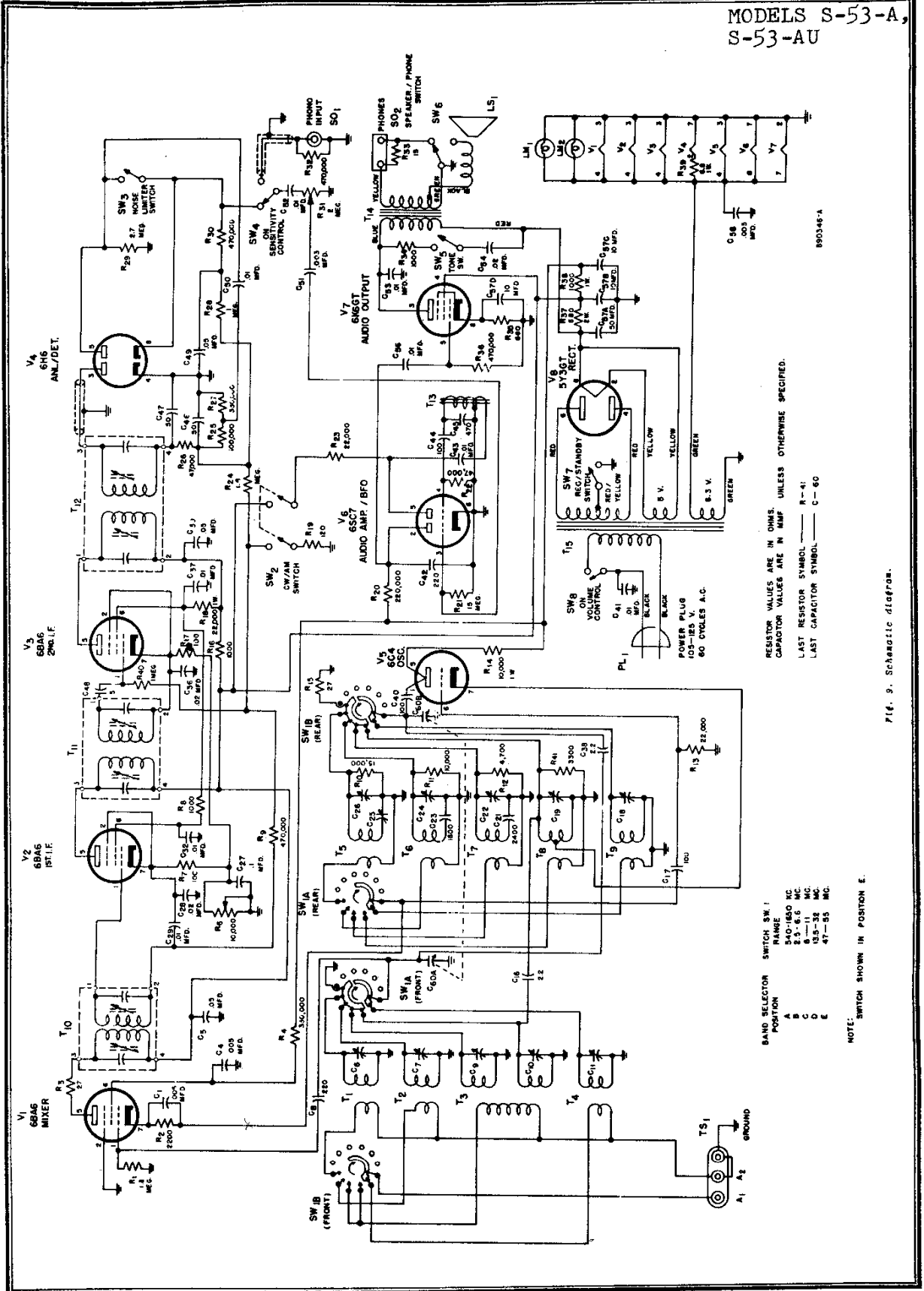
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- NOTES -
1. SOCKET VIEWS ARE BOTTOM VIEWS.
 2. ALL VOLTAGES ARE MEASURED BETWEEN TUBE SOCKET TERMINALS AND CHASSIS WITH ZERO SIGNAL INPUT.
 3. LINE VOLTAGE _____ 117 V. AC. (60 CYCLES).
 4. ALL VOLTAGES SHOWN ARE DC, UNLESS OTHERWISE SPECIFIED.
 5. DC VOLTAGES SHOWN WERE MEASURED WITH AN ELECTRONIC VOLTMETER.
 6. READINGS TAKEN WITH STANDBY/RECEIVE SWITCH SET AT "RECEIVE"; CW/AM SWITCH SET AT "AM"; NOISE LIMITER SWITCH ON.
 7. "NC" = NO CONNECTION (VOLTAGE SHOWN FOR THIS TERMINAL ONLY WHEN TERMINAL IS USED AS A TIE POINT).
 8. "NR" = NOT READABLE. (READING GENERALLY MEANINGLESS).
 9. _____ SPACE PROVIDED FOR SERVICE METER READINGS.

Fig. 7. Tube socket voltage chart

Fig. 8. Top view, location of tubes and dial lamps.



RESISTOR VALUES ARE IN OHMS.
CAPACITOR VALUES ARE IN MUF UNLESS OTHERWISE SPECIFIED.
LAST RESISTOR SYMBOL — R-41
LAST CAPACITOR SYMBOL — C-60

BAND SELECTOR SWITCH SW 1

POSITION	RANGE
A	840-1820 KC
B	2.5-6.5 MC
C	8-11 MC
D	14-18 MC
E	47-55 MC

NOTE: SWITCH SHOWN IN POSITION E.

Fig. 9. Schematic diagram.

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SERVICE PARTS LIST

Ref. No.	Description	Manufacturers Part Number	Ref. No.	Description	Manufacturers Part Number
CONDENSERS					
C-1,4,58	.005 mfd. 450 V., ceramic	47A168	T-7	Transformer, oscillator stage, band C	51A1237
C-5,39,49	.05 mfd. 400 V., tubular	46AW503J			
C-6,7,9,10	Trimmer assembly, 5 sections, antenna stage	44B355	T-8	Transformer, oscillator stage, band D	51B1238
C-8,42	220 mmf. 500 V., mica	47X20B221K	T-9	Transformer, oscillator stage, band E	51B1239
C-16,38,	2.2 mmf. 500 V., ceramic	47A160-4			
C-17,40,44	100 mmf. 500 V., ceramic	47A086	T-10,11	Transformer, 1st and 2nd IF	50C241
C-18,19,22,	Trimmer assembly, 6 sections, oscillator stage	44B388	T-12	Transformer, 3rd IF	50C242
24,25,26			T-13	Transformer, BFO	54B043
C-21	2400 mmf. 500 V., silver mica	47X20C242J	T-14	Transformer, audio output	55B107
C-23	1800 mmf. 2% 500 V., silver mica	47X20C182G	T-15	Transformer, power (Standard) (Used on S-53-A)	52C164
C-27	.1 mfd. 200 V., tubular	46AU104J			
C-28,36,54	.02 mfd. 600 V., tubular	46AY203J			
C-29,32,37,	.01 mfd. 600 V., tubular	46AZ103J			
43,50,52,					
53,56					
C-41	.01 mfd. 600 V., molded paper	46AC103J	SW-1	Band switch assembly	60B323
C-45	470 mmf. 500 V., mica	47X20B471J	SW-2	Switch, toggle DPST, CW/AM control	60A285
C-46,47	50 mmf. 500 V., ceramic	47A091	SW-3,5,7	Switch, toggle, SPST, STANDBY/REC., NOISE LIMITER & TONE control	60A138
C-48	5 mmf. 500 V., ceramic	47X20UK050K			
C-51	.003 mfd. 600 V., tubular	46AZ302J	SW-4	Switch, part of SENSITIVITY control, R-6	
C-57	50-10-10 mfd. 350-10-25 V., electrolytic	45B122	SW-6	Switch, slide, SPDT, SPEAKER/PHONE control	60A243
C-60	Tuning condenser, 2 section	48C198	SW-8	Switch, part of VOLUME control R-31	
RESISTORS					
R-1,24	1.8 megohms 1/2 watt, carbon	23X20X185M			
R-2	2200 ohms 1/2 watt, carbon	23X20X222M			
R-3,15	27 ohms 1/2 watt, carbon	23X20X270M			
R-4,27	330,000 ohms 1/2 watt, carbon	23X20X334K	PL-1	Line cord and plug	87A078
R-6	10,000 ohms, variable SENSITIVITY control	25B603	SO-1	Receptacle, phono	36A041
R-7,17	100 ohms 1/2 watt, carbon	23X20X101K	SO-2	Receptacle, headphone jack	88A071
R-8,16,34	1000 ohms 1/2 watt, carbon	23X20X102M		Socket, octal (tube)	6A269
R-9,30,32,	470,000 ohms 1/2 watt, carbon	23X20X474M		Socket, miniature (tube)	6A297
36				Socket, dial light	86B063
R-10	15,000 ohms 1/2 watt, carbon	23X20X153K			
R-11	10,000 ohms 1/2 watt, carbon	23X20X103K	V-1,2,3	6BA6, mixer, 1st & 2nd IF amplifier	90X6BA6
R-12	4700 ohms 1/2 watt, carbon	23X20X472K	V-4	6H6, detector & ANL	90X6H6
R-13,23	22,000 ohms 1/2 watt, carbon	23X20X223M	V-5	6C4, oscillator	90X6C4
R-14	10,000 ohms 1 watt, carbon	23X30X103K	V-6	6SC7, audio amplifier & BFO	90X6SC7
R-18	22,000 ohms 1 watt, carbon	23X30X223M	V-7	6K6-GT, power amplifier	90X6K6-GT
R-19	120 ohms 1/2 watt, carbon	23X20X121M	V-8	5Y3-GT, rectifier	90X5Y3-GT
R-20	220,000 ohms 1/2 watt, carbon	23X20X224K	LM-1,2	Lamp, 6-8 V., 250 ma., Mazda #44	39A003
R-21	15 megohms 1/2 watt, carbon	23X20X156K			
R-22,26	47,000 ohms 1/2 watt, carbon	23X20X473M			
R-25	100,000 ohms 1/2 watt, carbon	23X20X104K			
R-28,40	1 megohm 1/2 watt, carbon	23X20X105M			
R-29	2.7 megohms 1/2 watt, carbon	23X20X275M	TS-1	Terminal strip, antenna	88A032
R-31	2 megohms, variable, VOLUME control	25B602		Lock, line cord	76A299
R-33	15 ohms 1/2 watt, carbon	23X20X150M		Clip, coil mtg.	76A325
R-35	680 ohms 1/2 watt, carbon	23X20X681K		Shaft, tuning drive	74A248
R-37	680 ohms 2 watts, carbon	23X40X681M		"C" washer (tuning drive shaft)	4A139
R-38	1000 ohms 1 watt, carbon	23X30X102M		Spring, dial cord	75A012
R-39	6.8 ohms 1 watt, carbon	23X30X068K		Dial cord	38A019
R-41	3300 ohms 1/2 watt, carbon	23X20X332K		Plate, dial	63C333
TRANSFORMERS AND COILS					
T-1	Transformer, antenna stage, band A	51B1028		Pointer, general coverage dial	82A149
T-2	Transformer, antenna stage, band B	51B1244		Pointer, band spread dial	82A148
T-3	Transformer, antenna stage, band C & D	51B1026		Dial Glass (Calibrated)	22C204
T-4	Transformer, antenna stage, band E	51B1030	LS-1	Gasket, dial glass	12A042
T-5	Transformer, oscillator stage, band A	51B1235		Clip, dial glass mtg.	76A390
T-6	Transformer, oscillator stage, band B	51B1236		Pad, dial clip	16A126
				Pad, felt (round disc)	14A166
				Pad, sponge rubber	16A047-1
				Mounting feet, rubber	16A007
				Speaker, P.M.	85C030
				Knob, BAND SELECTOR, SENSITIVITY and VOLUME controls	15A050
				Knob, BANDSPREAD & general coverage controls	15A047
TRANSFORMERS AND COILS (Cont.)					
SWITCHES					
PLUGS AND SOCKETS					
TUBES, RECTIFIERS AND LAMPS					
MISCELLANEOUS					