

MODEL S-77



Radio Receiver Model S-77, front view.

- Tubes Seven plus rectifier
- Speaker 5-inch PM
- Speaker V.C. Impedance 3.2 ohms
- Headset Output Low Impedance
- Antenna Provision for external antenna
- Tuning Manual
- Intermediate Frequency 455 kc
- Power Supply 105-125 V. DC/60 cycles AC (using 117 V. ballast tube, R-38) or 210-250 V. DC/60 cycles AC (using 220 V. ballast tube, R-39)
- Power consumption 40 Watts

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

SERVICE INSTRUCTIONS

RESTRINGING DIAL CORD

To restring the main tuning dial cord, cut a 15-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 restring the band spread tuning dial cord cut a 22-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.

REPLACING LAMPES

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. G.E. #47 (brown bead) lamps or equivalent.

ALIGNMENT PROCEDURE

For I-F amplifier alignment it will be necessary to remove the receiver chassis from the cabinet. 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.

NOTE - R-F alignment should be accomplished through the holes provided in the cabinet bottom as the oscillator calibration will be effected slightly by changes in the capacity between the cabinet bottom and the r-f coils and wiring.

Before starting the alignment procedure, check the position of the main tuning index marker on the low frequency end of the range and set the bandsread dial on zero position. The main tuning condenser should index at max. capacity, and the bandsread 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

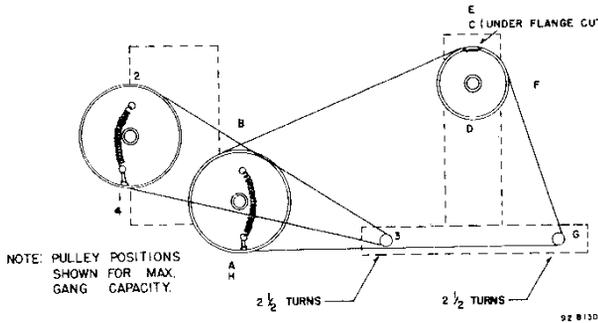


FIG. 1. DIAL CABLE STRINGING PROCEDURE

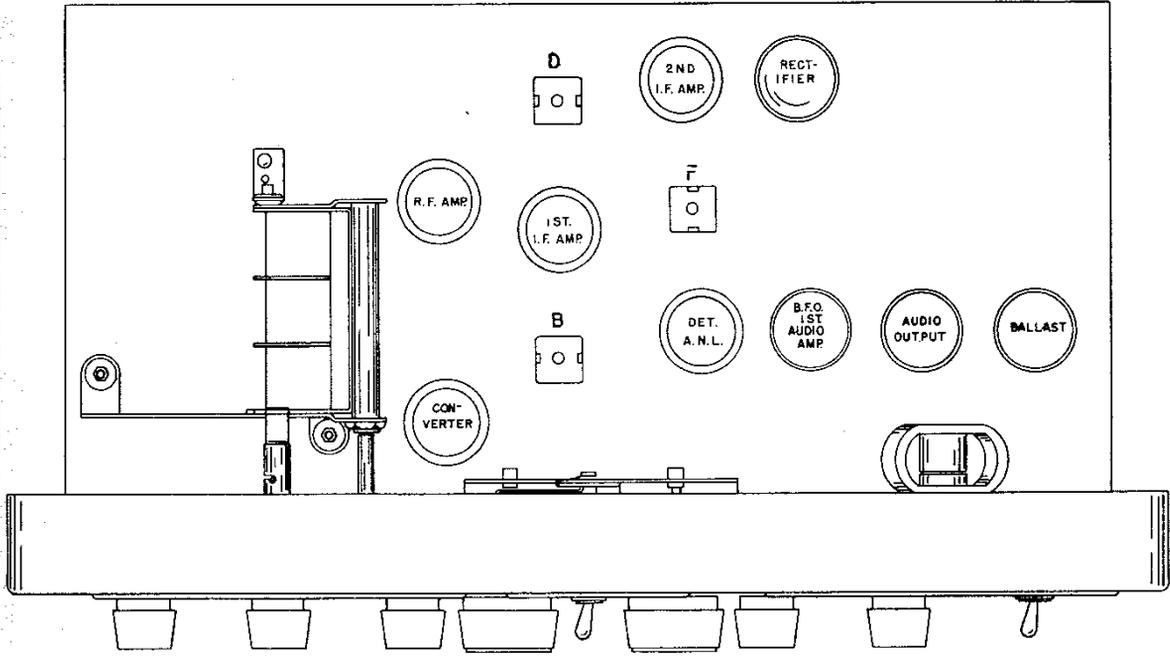
For the settings of the remaining controls, see alignment chart.

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	G	With the CW/AM switch set at CW, remove the pitch control knob and adjust "G" for zero beat. Replace the knob with the dot on 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	*H,I,J *K,L,M	Maximum output as in step 1.
4	Std RMA dummy	See step 3	14 mc 10 mc	"3"	14 mc 10 mc	*N,O,P *Q,R,S	Maximum output as in step 1.
5	Std RMA dummy	See step 3	5 mc 1.8 mc	"2"	5 mc 1.8 mc	*T,U,V *W	Maximum output as in step 1.
6	Std RMA dummy	See step 3	1500 kc 600 kc	"1"	1500 kc 600 kc	*X,Y,Z *Z'	Maximum output as in step 1.

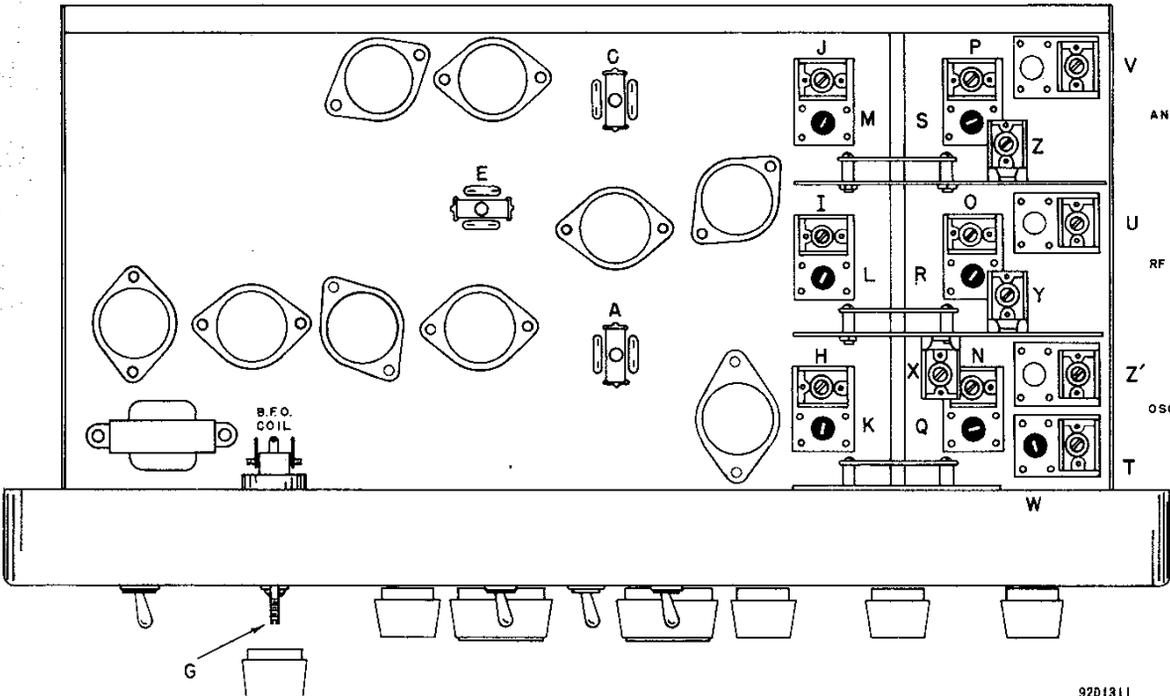
*Note - Calibration adjustments.

MODEL S-77



92D1310

FIG. 2. TOP VIEW, ALIGNMENT POINTS



92D1311

FIG. 3. BOTTOM VIEW, ALIGNMENT POINTS

R₃₈ (110 V)

R₃₉ (220 V)

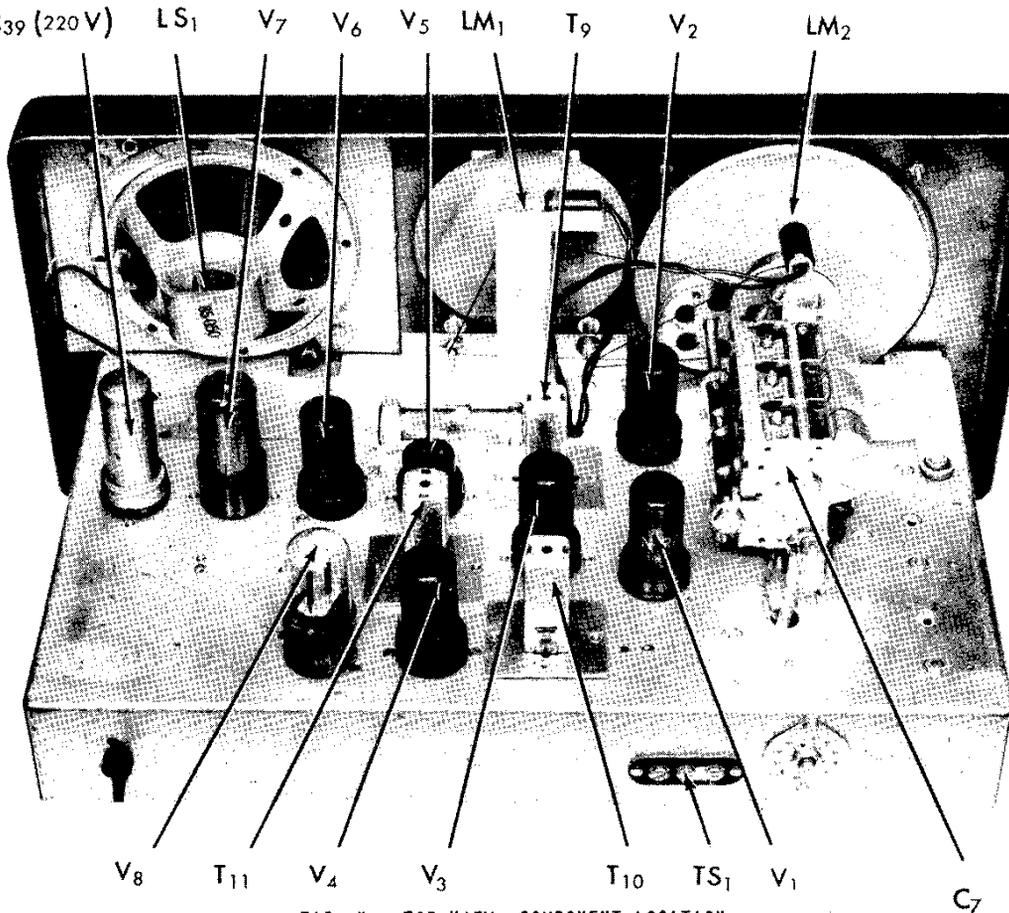
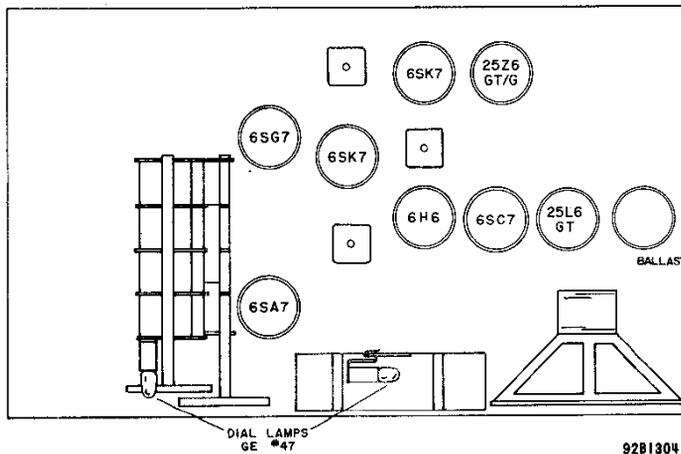


FIG. 4. TOP VIEW, COMPONENT LOCATION

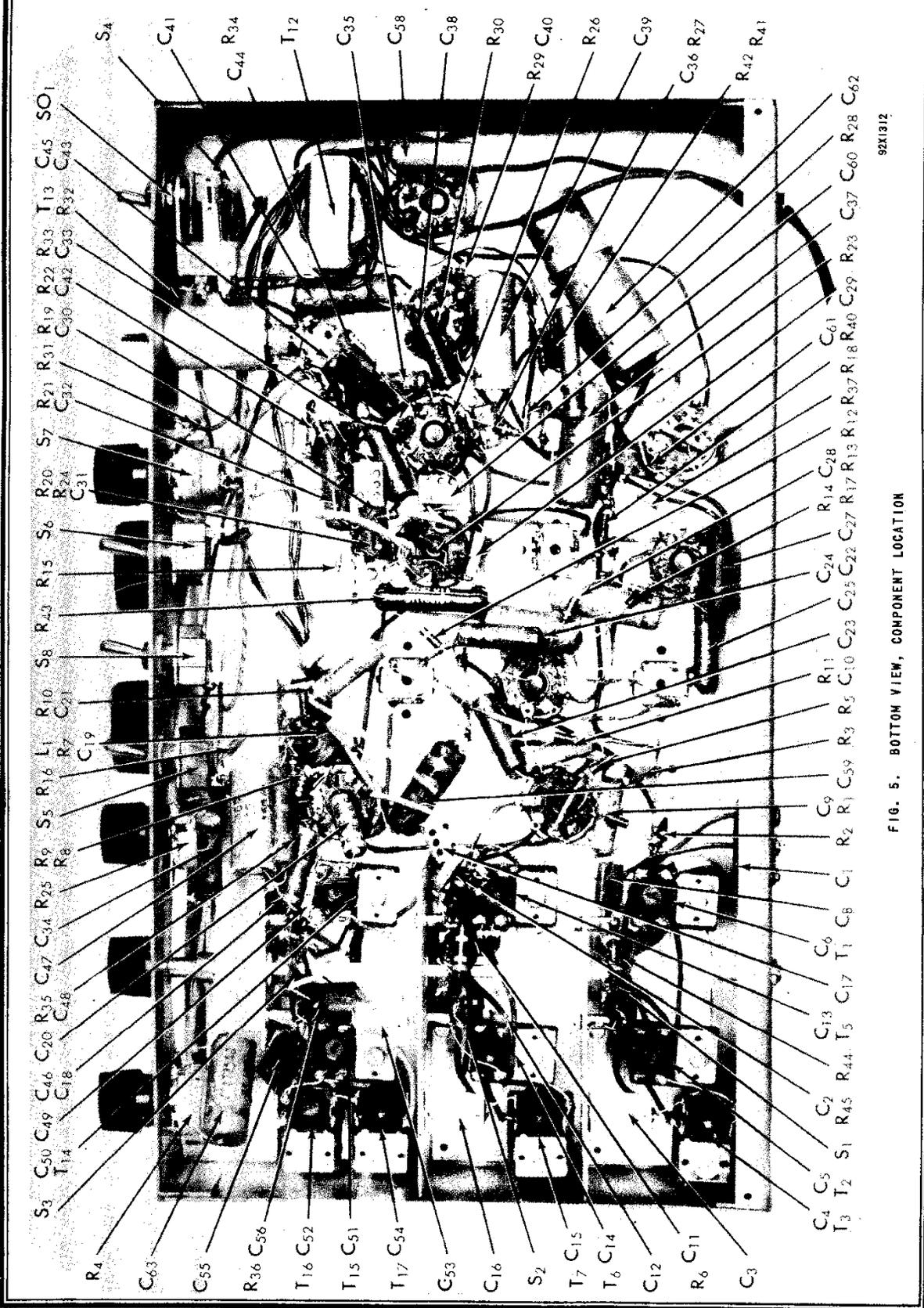
92X1313



92B1304

FIG. 7. TOP VIEW, LOCATION OF TUBES AND DIAL LAMPS

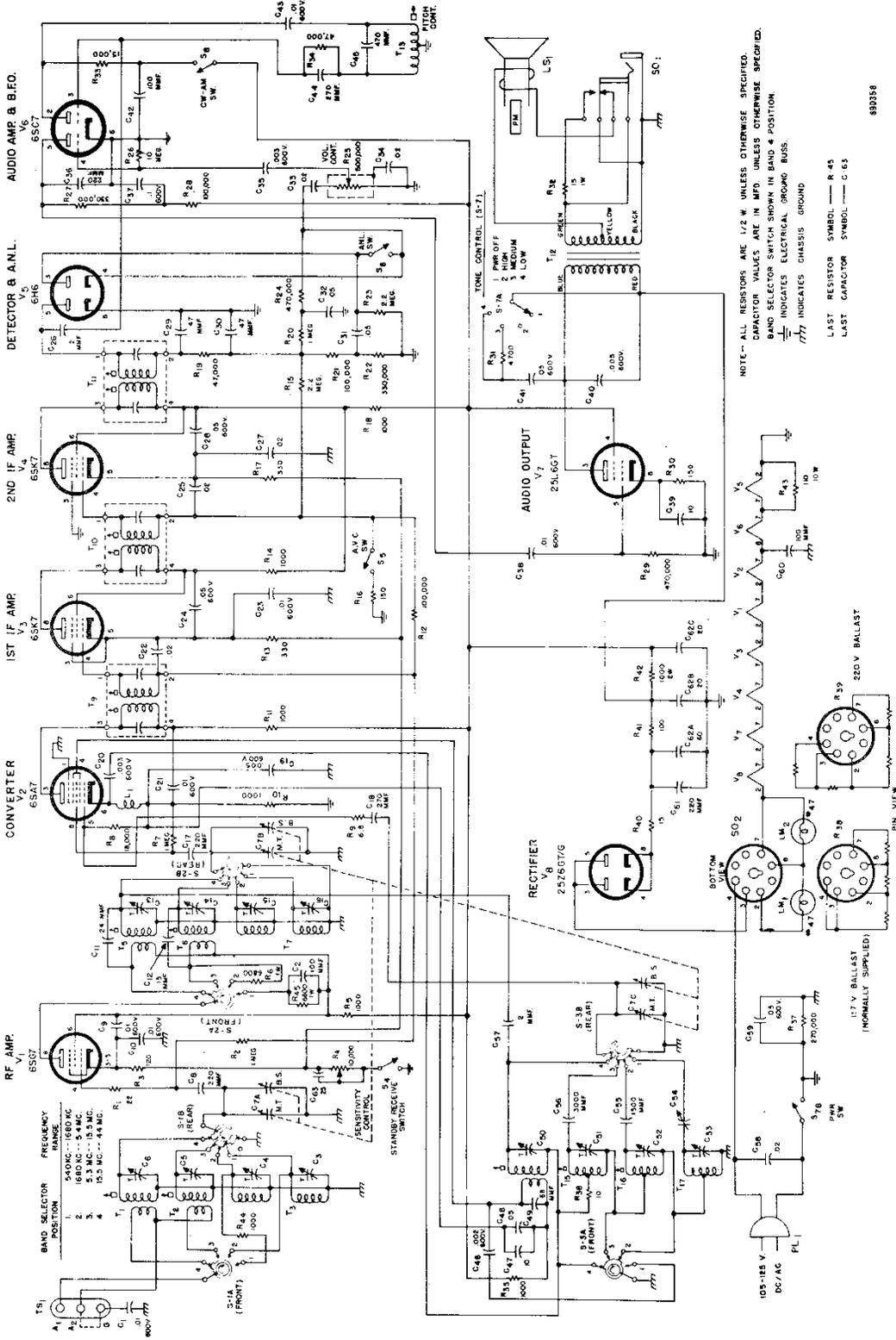
MODEL S-77



92X1912

FIG. 5. BOTTOM VIEW, COMPONENT LOCATION

MODEL S-77



NOTE- ALL RESISTORS ARE 1/2 W UNLESS OTHERWISE SPECIFIED.
 CAPACITOR VALUES ARE IN MFD. UNLESS OTHERWISE SPECIFIED.
 BAND SELECTOR SWITCH SHOWN IN BAND 4 POSITION.
 □ INDICATES ELECTRICAL GROUND BUSS.
 ⊥ INDICATES CHASSIS GROUND.
 LAST RESISTOR SYMBOL — R 45
 LAST CAPACITOR SYMBOL — C 65

892358

FIG. 8. SCHEMATIC DIAGRAM

VALUES & TOLERANCES SHOWN ARE NOMINAL & VARIATIONS MAY BE NECESSARY TO OBTAIN OPTIMUM PERFORMANCE. TO THE NOMINAL VALUE OF THE PART BEING REPLACED.

