

the hallicrafters co.

SERVICE BULLETIN FOR MODEL S-38A

GENERAL

- Tubes Four plus rectifier.
 Speaker 5-inch PM.
 Voice Coil Impedance 3.2 ohms.
 Headset Output Low impedance.
 Antenna Provisions for external antenna with transmission line or single wire lead.
 Tuning Manual.
 Tuning Range
- | Band Selector Position | Frequency Range |
|------------------------|-------------------|
| 1 | 550 kc - 1650 kc. |
| 2 | 3.7 mc - 5.1 mc. |
| 3 | 5 mc - 14.5 mc. |
| 4 | 13 mc - 31 mc. |
- Intermediate Frequency. 455 kc.
 Power Supply. 105-125 V, DC or 60 cycles AC.
 Power Consumption 30 Watts

RESTRINGING DIAL CORD

To restring the general coverage tuning dial cord cut a 14-inch length of 30 lb. test dial cord and tie one end to the tension spring at position "1" on the diagram. Follow the sequence "1" through "15", and at position "15" stretch the tension spring and tie the cord securely.

To restring the band spread tuning dial cord, cut a 16-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.



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REPLACING LAMPS

Refer to Fig. 4, for the location of the dial lamp used in receiver. To gain access to the defective lamp, reach in through the rear of the cabinet (cover removed) 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 defective lamps with 6-8 V. Mazda #47 (Brown bead) lamps or equivalent.

ALIGNMENT PROCEDURE

Holes in the bottom cover permit minor adjustment of the oscillator and mixer stage trimmers, however for complete alignment, the chassis will have to be removed from the cabinet. To separate the chassis from the cabinet, remove the back cover and bottom plate. The chassis is fastened to the cabinet by four front panel screws located near the slide switches and two cabinet screws located at the bottom rear of the cabinet.

CAUTION - The four rubber grommets insulate the chassis from the cabinet. Check the condition of these grommets and replace if necessary.

The standard RMA dummy antenna specified in the alignment chart consists of a 250 mfd condenser in series with a 20 ohm r-f choke which is shunted by a 400 mfd condenser in series with a 400 ohm carbon resistor.

Set the following controls before alignment.

- AM/CW Set at AM
 SPEAKER/PHONES Set at SPEAKER
 VOLUME Set at maximum
 RECEIVE/STANDBY. RECEIVE
 BAND SPREAD Set at zero

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

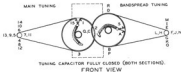


FIG. 1. Dial cable strung procedure.

ALIGNMENT CHART

Step	Dummy Antenna	Signal Generator Coupling	Signal Generator Frequency	Band Selector Setting	Receiver Dial Setting	Adjust	Remarks
1	.01 mfd cap.	Stator plates, front section of tuning gang.	455 kc	1	1000 kc	A,B,C,D	Adjust for max. audio output at speaker voice coil. Use just enough signal generator output to obtain a 50 mw signal level.
2*	See step 1	See step 1	455 kc (No modulation)	1	1000 kc	E	Set the AM/CW switch at CW. (Reset the switch at AM when step 2 is completed.) Correct BFO operation is obtained by varying the coupling between the wire "E" and the 12SK7 tube grid and plate terminals (Pins 4 and 6.) Pushing the wire toward the grid terminal increases the capacity and the strength of the beat.
3	Std. RMA dummy	High side to term. A1 on antenna strip. Jumper wire between A2 and G	30 mc	4	30 mc	*F,G	Max. output as in step 1.
4	Std. RMA dummy	See step 3.	14 mc	3	14 mc	*H,I	Max. output as in step 1.
5	Std. RMA dummy	See step 3	5 mc	2	5 mc	*K,L	Max. output as in step 1.
6	Std. RMA dummy	See step 3	1500 kc 600 kc	1	1500 kc 600 kc	*M,N *P	Max. output as in step 1.

* Note - Calibration adjustments.

** Note - This step is generally unnecessary. Adjustment should be made if a weak beat note is obtained on strong c-w signals indicating lack of coupling between wire "E" and tube socket wiring.

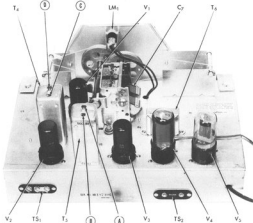


Fig. 2. Top view, alignment adjustments and component location

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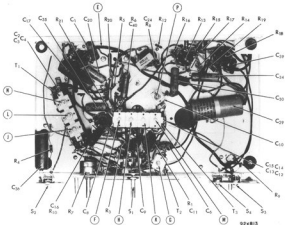


Fig. 3. Bottom view, alignment adjustments and component location

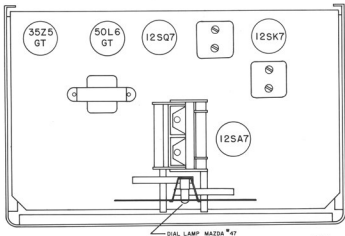
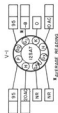


Fig. 4. Top view, location of tubes and dial lamp

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FRONT VIEW
BOTTOM VIEW OF CHASSIS



1. SOCKET VIEWS ARE BOTTOM VIEWS.
2. ALL VOLTAGES ARE MEASURED BETWEEN TUBE SOCKET TERMINALS & CHASSIS, WITH ZERO SIGNAL INPUT.
3. LINE VOLTAGE—117 V. AC. AC VOLTAGES WILL BE DC VOLTAGES WHEN OPERATING FROM A DC SOURCE.
4. ALL VOLTAGES SHOWN ARE DC UNLESS OTHERWISE SPECIFIED.
5. DC VOLTAGES SHOWN WERE MEASURED WITH AN ELECTRONIC VOLTMETER.
6. "NC" NO CONNECTION (VOLTAGES SHOWN FOR THIS TERMINAL ONLY WHEN TERMINALS ARE USED AS A TIE LUG)
7. "NM" NOT MEASURABLE. (READING GENERALLY MEANINGLESS)
8. SPACE PROVIDED FOR SERVICE METER READINGS.

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Fig. 5. Tube socket multi-plate chart.

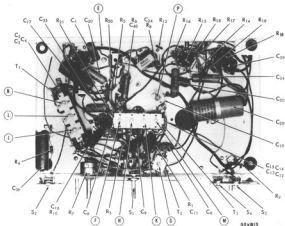


Fig. 2. Bottom view, alignment adjustments and component location

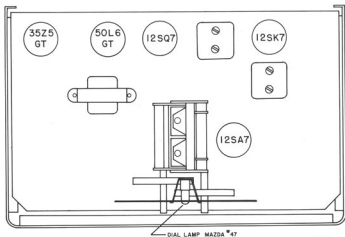
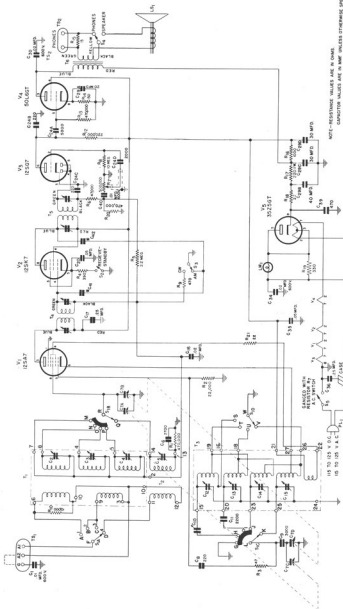
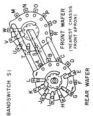


Fig. 4. Top view, location of tubes and dial lamp



NOTE—RESISTOR VALUES ARE IN OHMS.
 CAPACITOR VALUES ARE IN MF UNLESS OTHERWISE SPECIFIED.
 RESISTOR VALUES ARE IN KΩ UNLESS OTHERWISE SPECIFIED.
 NOTE—CAPACITANCE VALUES ARE IN μF UNLESS OTHERWISE SPECIFIED.
 NOTE—GROUND SYMBOL INDICATES CONNECTION TO CHASSIS GROUND.



NOTE: DIMENSIONS & PROPORTIONS SHOWN IN PICTORIAL VIEWS HAVE BEEN EXAGGERATED FOR CLARITY OF TERMINAL LUG LOCATION.

Fig. 6. Schematic diagram.