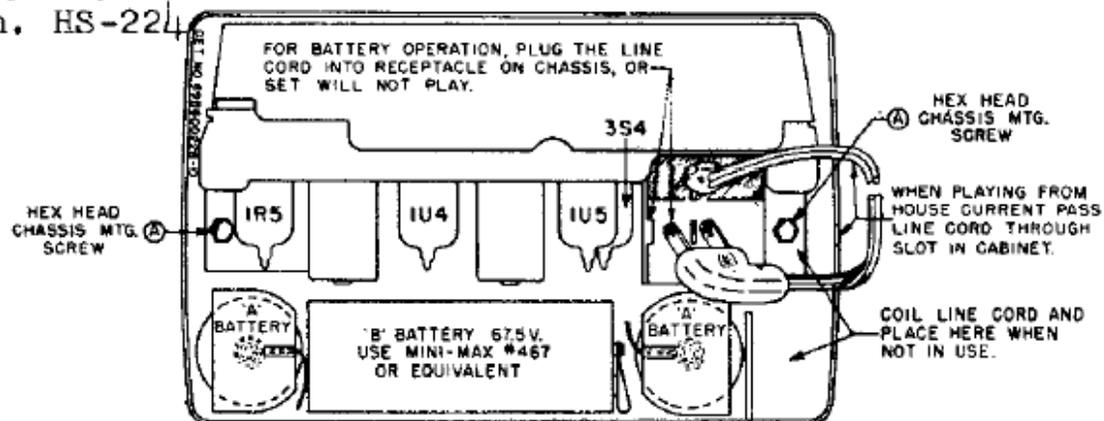


MODELS 5J1, 5L1,
Ch. HS-250: 5J1U.
5L1U, Ch. HS-224



NOTE - 'A' BATTERIES: USE TWO 1-1/2V FLASHLIGHT CELLS- EVEREADY #950 OR EQUIVALENT. INSTALL 'A' BATTERIES SO SPRING CONTACTS BOTTOM OF BATTERIES.

FIGURE 1. BATTERY INSTALLATION & CHASSIS REMOVAL INSTRUCTIONS

ALIGNMENT

NOTE: The receiver may be operated either from a battery or from the commercial power lines during alignment. If AC power is used, it is recommended that an isolation transformer be placed between the power line and the receiver. If an isolation transformer is not available, connect the low side of the signal generator to B- through a .1 mf capacitor.

1. Connect a low range output meter across the speaker voice coil.
2. Connect the low side of the signal generator to B-.
3. Set the signal generator for 400 cycle, 30%

modulation.

4. Turn the receiver volume control to maximum.
5. Use a small fibre screwdriver for aligning the IF and diode transformers.
6. As stages are brought into alignment, reduce the signal generator input to keep the output of the receiver at approximately .05 watt (.05 watt = .40 volts on the output meter) to avoid overloading the receiver.
7. See Figure 2 for adjustment locations and the following chart for procedure.

ALIGNMENT CHART

STEP	DUMMY ANTENNA	GENERATOR CONNECTION	GENERATOR FREQUENCY	GANG SETTING	ADJUST	REMARKS
IF ALIGNMENT						
1.	.1 mf	Grid of conv. (pin 6, IR5)*	455 Kc	Fully open	1, 2 & 3	Adjust for maximum.
RF ALIGNMENT						
2.	-	Grid of conv. (pin 6, IR5)*	1620 Kc	Fully open	4	Adjust for maximum.
3.	-	-	-	-	-	Install chassis in cabinet, leaving output meter connected to speaker. NOTE: Batteries should be in cabinet.
4.	-	Radiation loop**	1400 Kc	Tune for maximum	5	Adjust for maximum. Trimmer is reached through hole under plug button on side of cabinet.

*On chassis HS-250 return the grid of the converter tube to AVC either through the loop or through a 4.7 meg resistor (as in chassis HS-224).

**Connect generator output across 5" diameter, 5 turn loop and couple inductively to receiver loop. Keep loops at least 12" apart.

MODELS 5L1, 5L1U, Rev.;
 5L2, 5L2U, 5L1U, 5L2U;
 5J1, 5J1U, Rev.; 5J2,
 5J2U; Ch. HS-224, HS-250

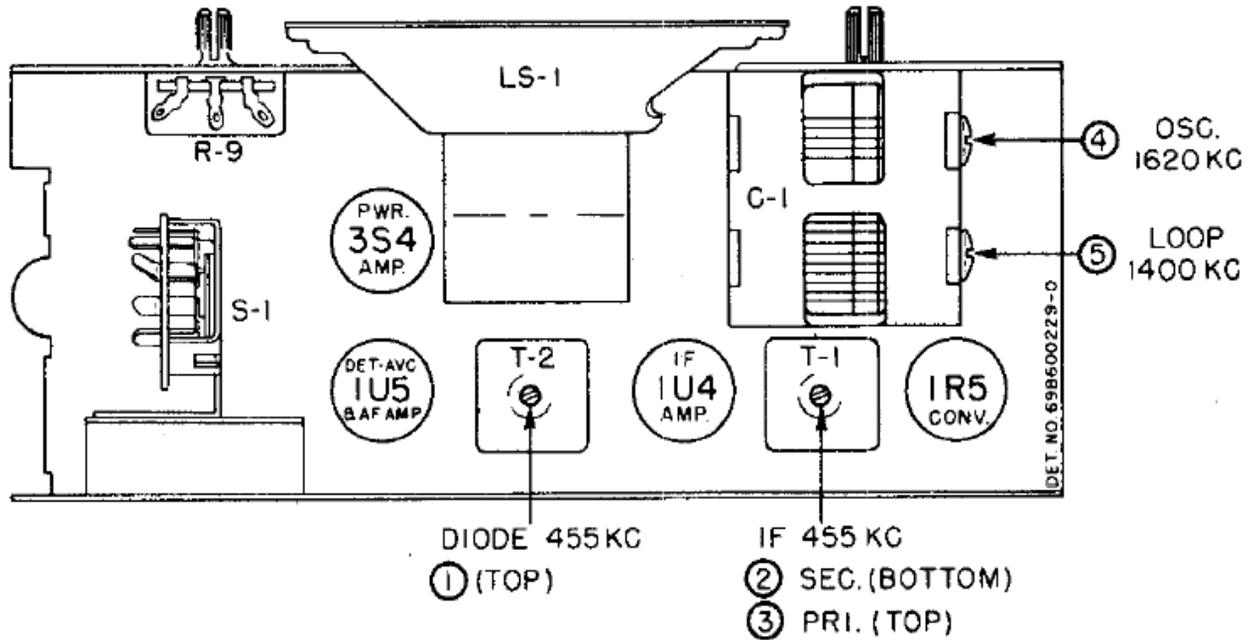


FIGURE 2. TUBE AND TRIMMER LOCATIONS

SERVICE NOTES

GENERAL

The chassis of this receiver is isolated from the AC power line circuit by a capacitor-choke assembly to eliminate the shock hazard when handling the receiver. However, as an additional precaution when aligning or servicing the receiver from AC, an isolation transformer should be inserted between the power line and the chassis.

The tubes are exposed when the rear cover is opened. It is not necessary to remove the chassis to replace tubes.

TO REMOVE THE CHASSIS FROM THE CABINET:

1. Pull off the two control knobs on the front of the cabinet.
2. Open the rear cover and remove the batteries.
3. Disconnect the two loop antenna leads from the chassis.
4. Remove the two hex head screws holding the chassis to the cabinet ("A" - "A" in Figure 1).
5. Slide the chassis from the cabinet.

PRODUCTION REVISIONS

The following revisions in the chassis and cabinets have been made from early production receivers:

1. Alternate IF and diode transformers have been added, with connections as shown on the circuit diagrams. Electrically, the original and the alternate transformers are interchangeable.
2. A multiple capacitor-resistor plate is used in some chassis to replace several resistors and capacitors in the audio circuit. Refer to the appropriate circuit diagram when servicing a chassis.
3. A battery retainer spring, which clips to the rear edge of the chassis, has been provided for the 5J1 and 5J2 series models to prevent the "B" battery from forcing off the rear cover.
4. The rear cover locking clips on the early 5J1 and 5J2 series models were replaced with a different type to provide better locking. The new type clips are interchangeable with the old clips.

REAR COVER HINGE INSTALLATION

The proper method for installing a new hinge in the 5L1, 5L2 and 5L1U, 5L2U series is shown in Figure 3. Note that the under side of the cabinet should rest on an iron block during the heating process to prevent the formation of a heat bubble on the bottom of the cabinet.

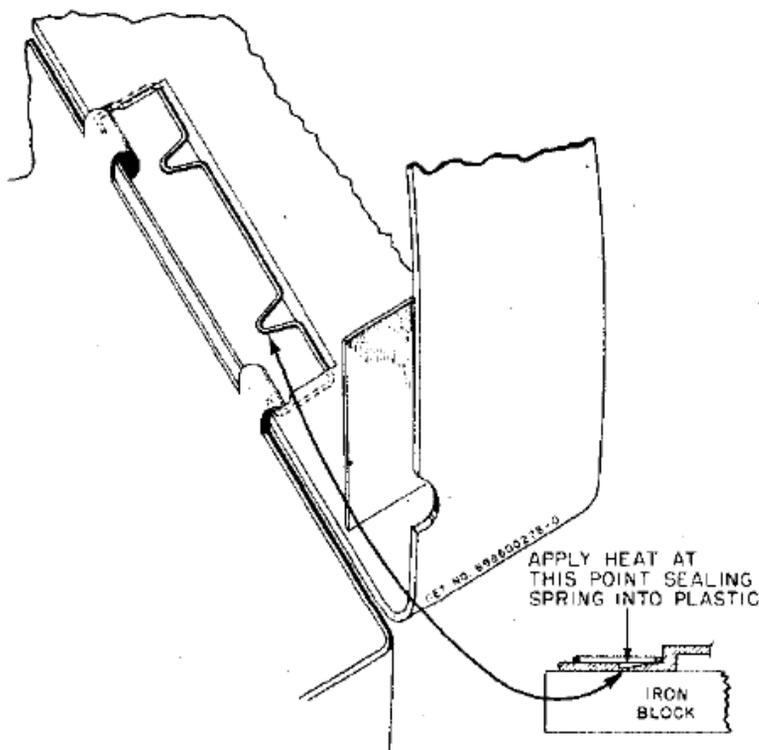


FIGURE 3.

HINGE INSTALLATION FOR 5L1 AND 5L1U SERIES