



# SERVICE BULLETIN

COMMUNICATIONS  
75S-3B RECEIVER, CPN 522-3316-000  
75S-3C RECEIVER, CPN 522-3317-000  
SERVICE BULLETIN NO. 2

## SECOND MIXER PLATE CIRCUIT IMPROVEMENT

### 1. PLANNING INFORMATION

#### A. Effectivity

This modification is applicable to 75S-3B/3C units manufactured prior to approximately June 1, 1968.

#### B. Reason

The modification covered in this bulletin changes the function of an if transformer T4 from the AM position to the second mixer V4, plate circuit which provides a low impedance path to signal voltages other than the 455-KHz if frequency. The result is an overall improved performance of the equipment in the sideband and CW modes.

#### C. Description

Installation of this modification requires removing a resistor and a choke, replacing a choke and two capacitors, and wiring changes in the second mixer plate circuit.

#### D. Compliance

This modification is a product improvement to be installed at the option of the customer. 75S-3B/3C Service Bulletin No. 1, revised September 29, 1967, must have been installed in the field or production in order for the results of the modification in this bulletin to be successful.

#### E. Approval

None required.

#### F. Manpower

The estimated time required to complete this modification is 2.5 man-hours.

#### G. Material - Cost and Availability

For modification parts, price quotations (minimum order charge is \$15.00), and availability contact Collins Radio Company, Service Parts Department, Cedar Rapids, Iowa 52406. All parts orders must specify the Collins modification kit number, or part numbers, quantity required, and reference this service bulletin.

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H. Tooling - Price and Availability

No special tools are required.

I. Weight and Balance

Not applicable.

J. References

75S-3B/3C Service Bulletin No. 1, revised 9-29-67 is referred to in paragraph 1.D. for instructions that this 75S-3B/3C Service Bulletin No. 2 modification must be preceded by or performed in conjunction with the referenced modification.

K. Other Publications Affected

Edition No. 5 of the 75S-3B and 75S-3C Receiver instruction book will include the changes covered by this service bulletin.



2. ACCOMPLISHMENT INSTRUCTIONS

A. Modification Procedure

- (1) Remove four feet and the screw located midway between rear feet from bottom of cabinet.
(2) Remove the unpainted screws located under lid along front of cabinet.
(3) Slide chassis from the cabinet.
(4) Referring to figure 1 for location, remove cover over T4 and XV4. Retain cover and attaching hardware.
(5) Referring to figure 1 for locations, remove and discard the following components and wires from their respective connections:

Table with 3 columns: DESCRIPTION, FROM, TO. Rows include: 15K resistor, R89 (S7-10 to Ground); 0.001-uf capacitor, C32 (S7-10 to XV4-6); 3-pf capacitor, C92 (T4-3 to T5-3); 10-mh choke, L4 (XV4-1 to XV4-6); 100-uh choke, L16 (XV8-8 to Ground); Bus wire (T4-4 to T4-2); Bus wire (T4-1 to S7-5).

- (6) Referring to figure 2 for locations, install the following components and wires to their respective connections:

Table with 4 columns: COLLINS PART NO., DESCRIPTION, FROM, TO. Rows include: 422-4312-000 Wire, #22 AWG bus, Teflon (XV4-3 to T4-2); 422-4312-000 Wire, #22 AWG bus, Teflon (XV4-6 to T4-1); 916-0122-000 6-pf capacitor, C92 (T5-3 to S7-5); 916-0122-000 6-pf capacitor, C32 (T4-3 to S7-10 (common)); 240-2141-000 100-uh choke, L16 (XV8-8 to Ground).

B. Testing Procedure

- (1) Referring to figure 3 for tuning adjustment locations, perform the following alignment steps using the crystal calibrator as a signal source and the S-meter as a peak indicator:



- (a) Position MODE switch to LSB and FUNCTION switch to CAL. Tune receiver to center of bandpass near 100 on the dial (approximately 1.5 kHz tone) and adjust PRESELECTOR for an S-5 reading on the S-meter.
  - (b) Using Walsco 2543 hex-tuning wrench or equivalent, peak the two slugs in T4. Both slugs can be peaked from the top of the unit.
  - (c) Peak capacitor C122 with a small flat-blade screwdriver.
  - (d) Repeat peaking T4 slugs.
- (2) Replace cover removed in step (4), and replace chassis to cabinet removed in paragraph 2.A. step (1).

NOTE Figure 4 is a schematic diagram of present production 75S-3B/3C units second mixer plate circuit.

C. Identification Procedure

- (1) Enter SB 2 on the information chart on outside of the unit if one is presently installed.
- (2) Enter SB 1 and SB 2 on information chart (280-3778-010) and adhere to an appropriate location on outside of the unit if one is not presently installed.



3. MATERIAL INFORMATION

A. The table itemized below lists the parts required for the modification of one 75S-3B/3C receiver.

B. Modification parts consist of the following:

<u>NEW COLLIN-</u> <u>PART NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>
422-4312-000	1.5 ft	Wire, #22 AWG, bus, Teflon
916-0122-000	2	Capacitor, 6-pf, C92, C32
240-2141-000	1	Choke, 100-uh, L16
280-3778-010	1	Chart, Information

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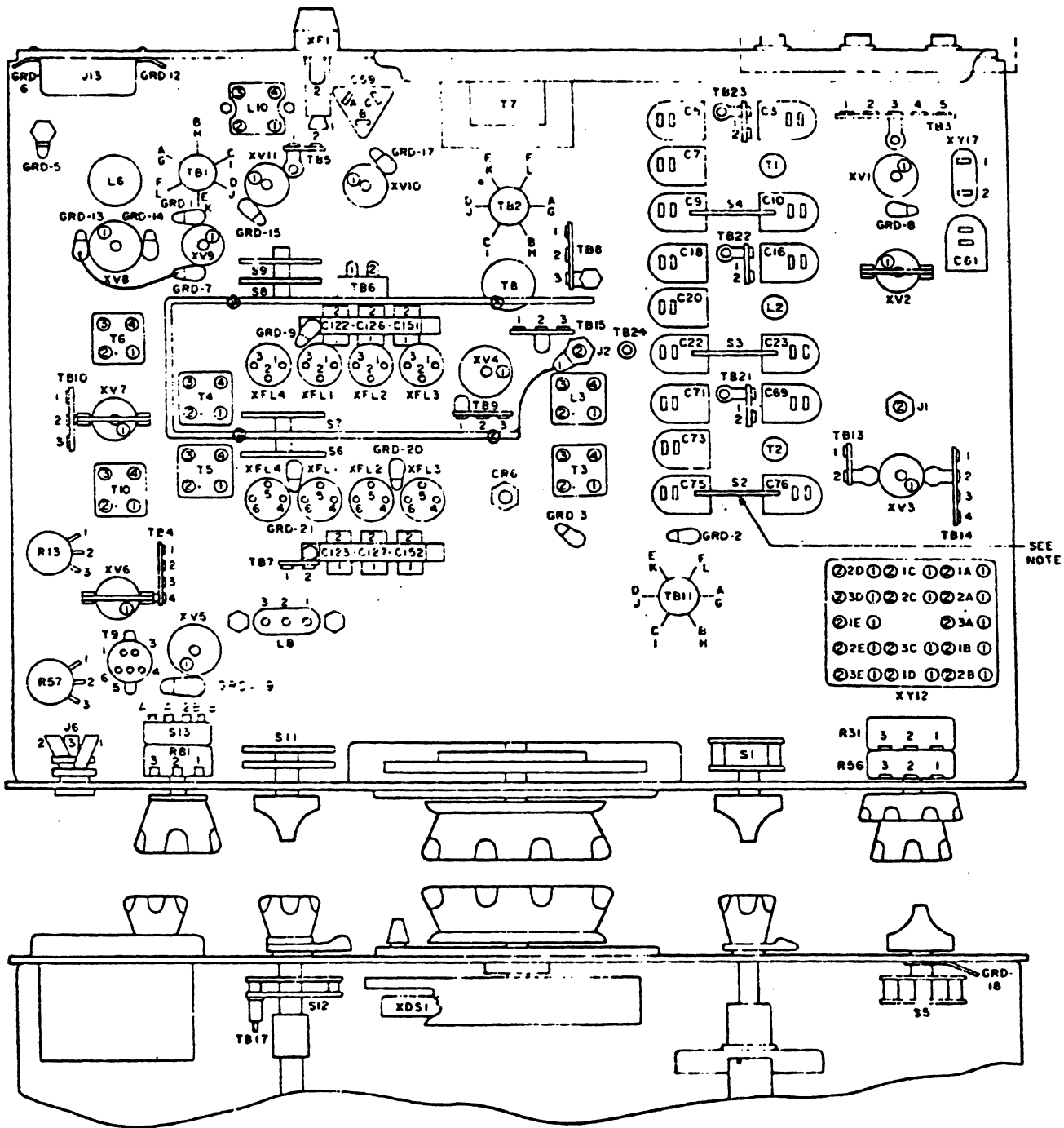
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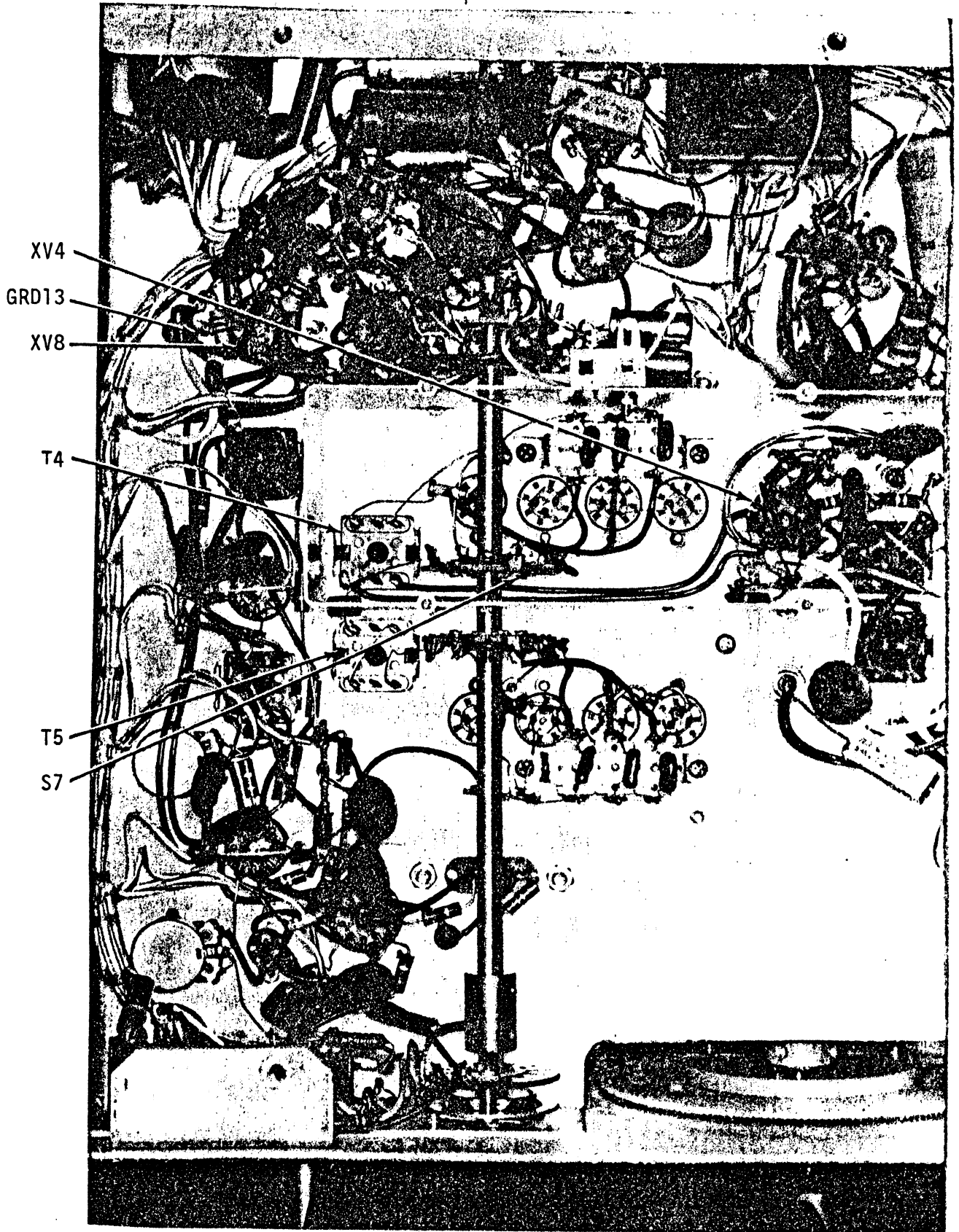
NOTE:

ALL SWITCH WAFERS ARE MOUNTED WITH THEIR TOP FRONT IDENTIFICATION MARKS NEAREST THE CHASSIS AND TOWARD THE FRONT. TERMINAL NUMBER 1 IS THE FIRST TERMINAL CLOCKWISE FROM THE IDENTIFICATION MARK.



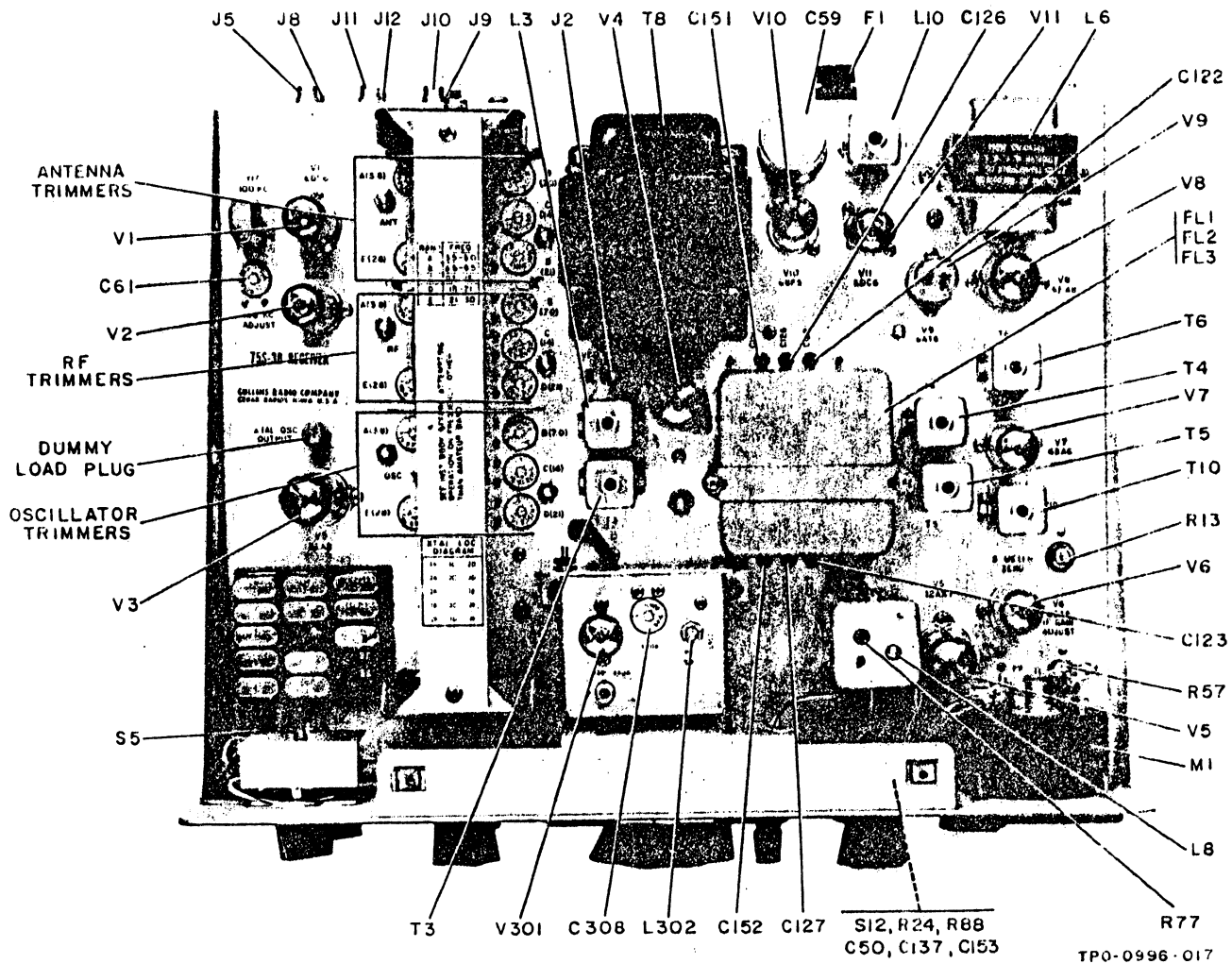
SEE NOTE

Chassis Component Location, Bottom View Figure 1



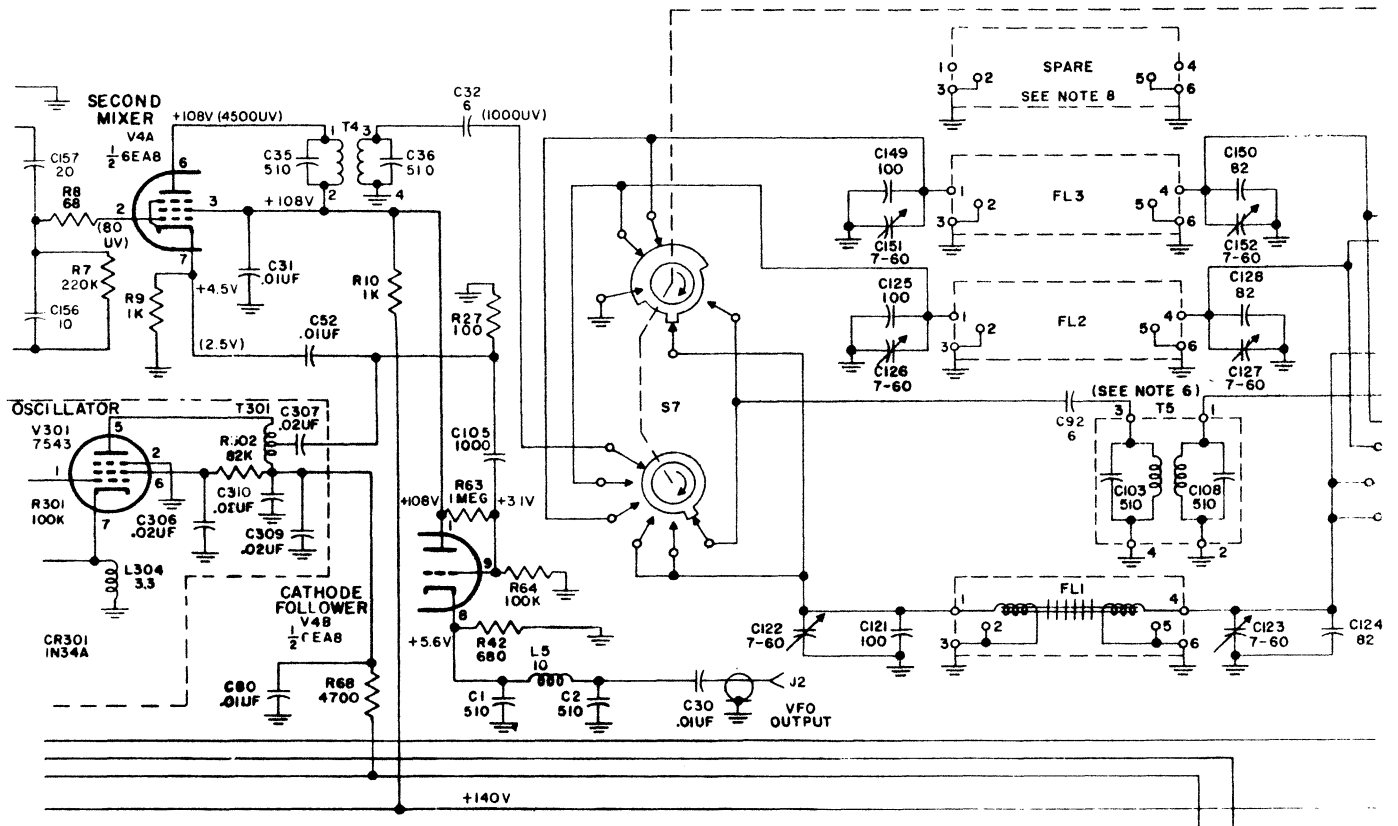
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Chassis Component Location, Bottom View  
Figure 2



75S-3B/3C Location of Adjustments  
Figure 3





75S-3B/3C Receiver, Second Mixer Plate Circuit, Partial Schematic Diagram  
Figure 4

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