

**SERVICE BULLETIN**

MISC. GROUP *Superseded By* Rev. 2-28-64

*Old Original
Updated*

EQUIPMENT SERIES: 62S

BULLETIN NO. 1

DATE: 9-30-63

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EQUIPMENT TYPE: 62S-1 VHF CONVERTER

SUBJECT: IMPROVEMENT IN OPERATION OF ALC CIRCUIT

This modification will improve operation of the alc circuit. A 1N457 diode, CR10, is added to limit the operation of this circuit to changes in grid current of the proper polarity only. An additional 1N457 diode, CR11, and 47K resistor, R75, are added to increase efficiency of operation by providing a low impedance path between the PA grid and bias supply.

To determine if this modification should be installed, observe the grid current in TUNE position on 2 meters. If meter deflects downscale before rising upscale, as the MIC gain or input drive level from the exciter is increased from zero drive, it is suggested that this modification be performed.

MODIFICATION PROCEDURE:

1. Disconnect all cables patching the 62S-1 to the exciter and antenna. Remove the line cord from the a-c socket.
2. Loosen and remove the four screws holding the feet to the cabinet, and the screw located midway between the two rear feet.
3. Set the cabinet back in its normal position, and remove the two unpainted flathead screws on the front lip of the cabinet just under the front edge of the lid.
4. Gently slide the chassis assembly forward until the unit extends about two inches beyond the front edge of the cabinet. Grasp the chassis assembly on either side, and slide the unit out of the cabinet.
5. Place the unit upside down on the working surface with the panel closest to the operator. Refer to figure 1 for chassis layout and figure 2 for schematic diagram of modified circuit. (Reference also may be made to the 62S-1 Instruction Book, figure 6-2 for chassis layout.)
6. Locate terminal strips TB7, TB8, and TB9 above and slightly to the right of FL2. It is suggested in performing this modification, that all disconnecting and removal of components and wiring be done first, and then steps 7 through 16 gone over again to reconnect and install components and wires as specified. Grasp with a long-nosed pliers, or other suitable heat sink-device all diode leads to be connected or that are connected to terminals to which heat is applied.
7. Remove .1-uf disc ceramic capacitor C124, connected from TB7-2 to TB7-3.

8. Locate and remove the lead of 220-uhy choke L44, connected to TB8-3. Connect this lead to TB8-2
9. Locate and remove the lead of 1K, 1/2-watt resistor R21, connected to TB8-2. Connect this lead to TB9-1.
10. Locate and remove the leads of 18K, 1/2-watt resistor R59, connected from TB8-2 to TB9-1. Connect the leads of this resistor from TB8-3 to TB7-3.
11. Locate and remove the white-black-green wire from TB7-3. Connect this wire to T37-4.
12. Locate and remove the green wire from TB8-3. Connect this wire to TB8-2.
13. Locate and remove the white-black-red-green wire from TB8-2. Connect this wire to TB9-1.
14. Connect 47K, 1/4 watt resistor R75 (745-0809-00) from TB8-2 to TB9-1.
15. Connect 1N457 diode CR10 (353-0204-00) from TB7-2 to TB7-3 with cathode (color bar) end connected to TB7-2.
16. Connect other 1N457 diode CR11 (353-0204-00) from TB8-2 to TB9-1 with cathode (color bar) end connected to TB9-1.
17. All solder connections should be made carefully, and all loose wire clip-pings and solder removed.
18. Install chassis assembly in cabinet by following in reverse the removal process. No adjustment or tests are necessary. Normal operation of the 62S-1 will be indicated by the lack of downscale deflection of the PA grid current meter.

PARTS REQUIRED:

Price: \$.70

Modification kit 756-4308-00, which consists of the following items:

<u>Qty</u>	<u>Description</u>	<u>Collins Part Number</u>
1	Resistor, 47K $\pm 10\%$, 1/4 watt	R75
2	Diode, 1N457	CR10, CR11

The above parts may be obtained from Collins Radio Company, Service Parts Department, Cedar Rapids, Iowa at no charge for six months after the date of this bulletin. All orders should specify modification kit 756-4308-00 and make reference to 62S Service Bulletin No. 1. The price indicated is subject to change without notice.

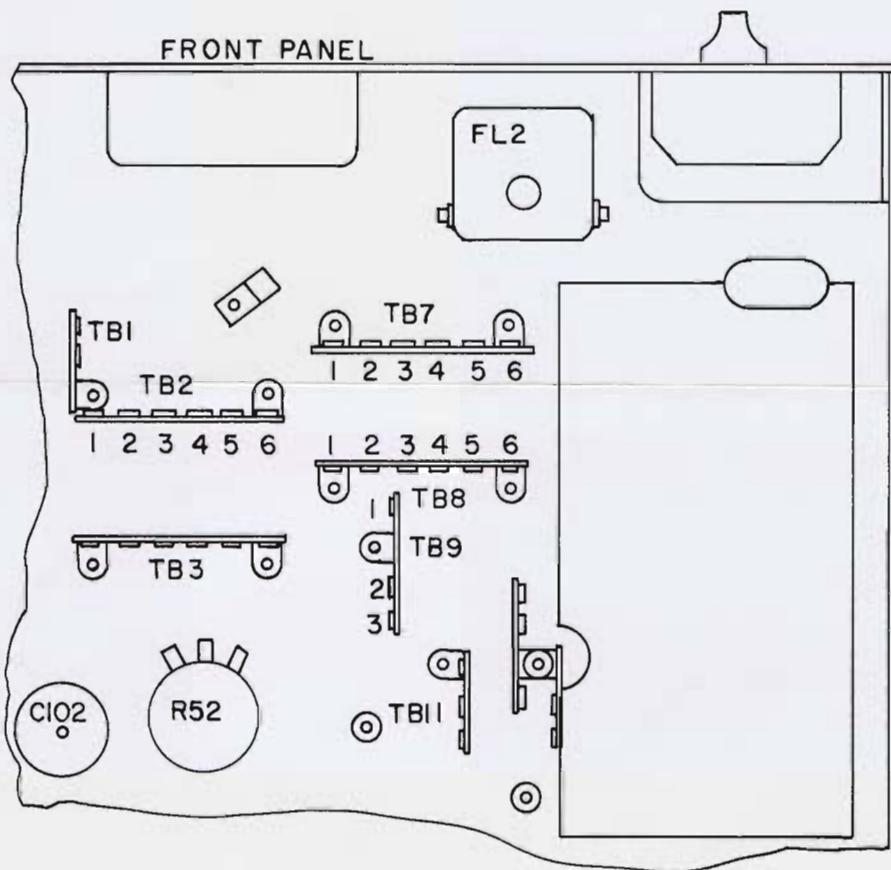


Figure 1. Partial Bottom View of 62S-1

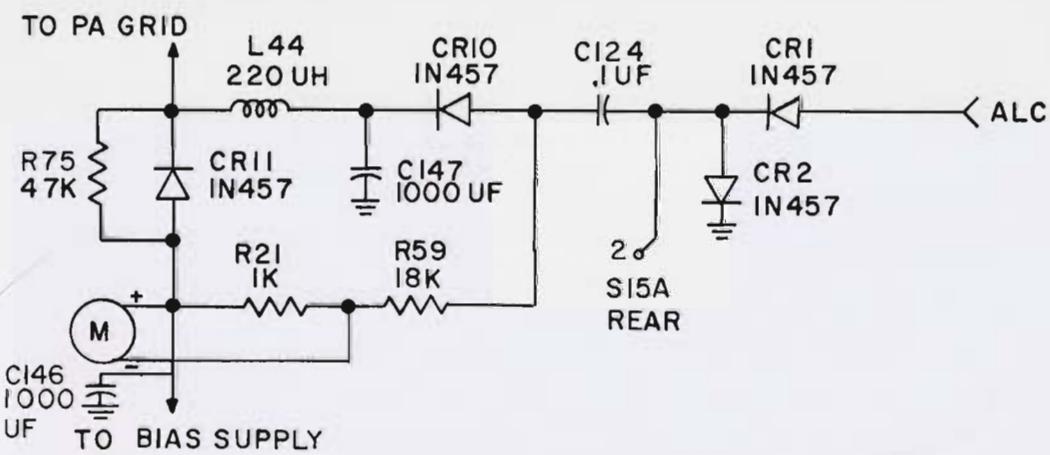


Figure 2. Schematic Diagram of Changes Resulting from this Modification