



SERVICE BULLETIN

COLLINS RADIO COMPANY

Cedar Rapids, Iowa 52406

COMMUNICATIONS

30S-1 RF LINEAR AMPLIFIER

SERVICE BULLETIN NO 3

REDUCE EXCESSIVE ALC CONTROL

30S-1 units originally employed a 12AL5 dual-diode as the alc rectifier, V203. Some production runs of this tube exhibited high space-charge characteristics resulting in objectionable high standoff voltage on the alc line. The method recommended to ensure proper alc operating voltage is to substitute 1N457 silicon diodes for the tube.

This modification is to be performed at the option of the customer and it is suggested that the decision be based on past experience with the equipment. The estimated time to perform this modification is 1 hour.

The 10th edition of the 30S-1 RF Linear Amplifier Instruction Book, Collins part number 523-5879000, includes the modification covered by this service bulletin.

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.

In order to determine if your unit has this modification installed, observe the top side of relay shelf to locate the tube and socket for V203 which is adjacent to CR205 and CR207 on the right and toward relays K203 and K202. If type 12AL5 tube V203 is present the 30S-1 has not been modified.

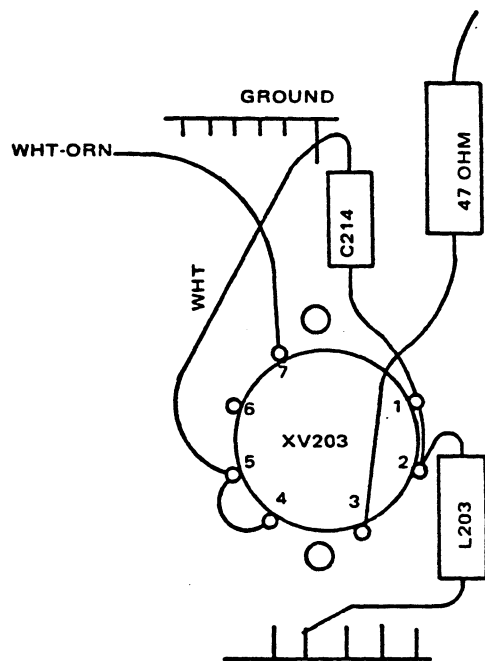
MODIFICATION PROCEDURE

1. Remove all power to the unit and remove and position relay shelf to allow access to underside of shelf. It might be necessary to loosen R207 to allow room for movement.
2. Remove and discard 12AL5, V203 tube from socket XV203.

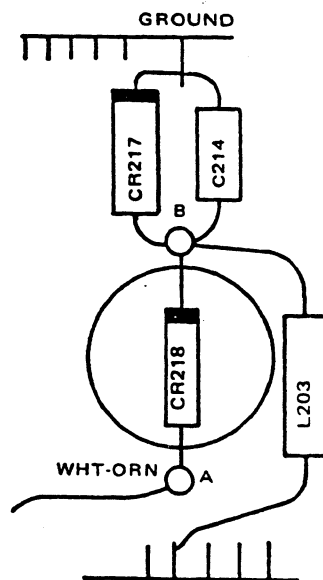


NOTE: Refer to figure 1 for component and wiring locations in following steps.

3. Remove and discard white wire from XV203 pins 4 and 5 to terminal strip ground.
4. Remove securing hardware and lift socket XV203 out of the way.
5. Install two terminals A and B (306-0234-000) in removed XV203 socket mounting holes with screws (343-0285-000) and washers (373-8010-000).
6. Disconnect white-orange wire (from J202) at XV203-7 and reconnect it to terminal A.
7. Disconnect L203 lead from XV203-2 and reconnect to terminal B.
8. Disconnect C214 lead from XV203-1 and reconnect to terminal B. Discard XV203 that is now free of circuit.
9. Install 1N457 diode CR218 (353-0204-000) from terminal A to terminal B (banded end).
10. Install 1N457 diode CR217 (353-0204-000) from terminal B to terminal strip ground (banded end).



BEFORE MODIFICATION



AFTER MODIFICATION

30S-1 SB 3 Modification, Components -- Wiring Locations
Figure 1

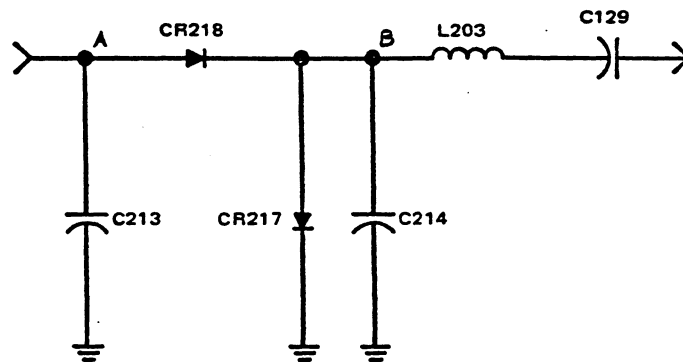


11. Replace shelf and R207 to unit and restore power removed in step 1. Check the amplifier for proper operation.
12. Mark SB 3 on information chart (280-3778-010) and apply to an appropriate location on the outside of the unit if it is your wish to identify unit as modified.

NOTE: Figure 2 is a schematic presentation of the modification.

PARTS REQUIRED

<u>COLLINS PART NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>
353-0204-000	2	Diode, 1N457, silicon (CR217, CR218)
306-0234-000	2	Terminal, insulated, (A, B)
373-8010-000	2	Washer, shakeproof
343-0285-000	2	Screw, 4-40 x 1/4, brass
287-3778-010	1	Chart, information



30S-1 SB 3 Modification, Schematic Diagram, Partial View
Figure 2