



SERVICE BULLETIN

EQUIPMENT SERIES: 32S

BULLETIN NO. 4A

DATE: 2-20-62

Page 1 of 4

EQUIPMENT TYPE: TRANSMITTERS 32S-1, 32S-2

SUBJECT: TO IMPROVE CW OPERATION

THIS SERVICE BULLETIN SUPERCEDES 32S SERVICE BULLETIN NO. 4, DATED 8-21-61. TO ENSURE FULL EFFECTIVENESS OF THE MODIFICATION IN THIS BULLETIN, UNITS WHICH DO NOT HAVE THE FOUR DIODES (CR1, CR2, CR3, AND CR4) IN THE BALANCED MODULATOR SHOULD HAVE THE MODIFICATION IN 32S SERVICE BULLETIN NO. 2 INSTALLED.

The modifications described in this service bulletin are to provide improved CW operation of the transmitters. They consist of eliminating the spurious r-f signal that may be transmitted along with the main signal, and eliminating a short carrier "burst" that may occur immediately upon closing of the vox relay.

MODIFICATION PROCEDURE:

Refer to figures 1, 2, and 3 for physical location of components and circuit changes made by this modification.

1. Remove Phillips-head screws and four feet from bottom of cabinet.
2. Lift lid and remove the two unpainted Phillips-head screws in the top rim. Slide unit out of cabinet.
3. Turn unit bottom side up with front panel toward operator.
4. Solder a short piece of bus wire across 470K-ohm resistor R70. R70 is located at the left edge of the chassis near relay K1 and soldered between terminal 4 of terminal strip TS25 and terminal 3 of adjacent terminal strip TS26A. (Refer to figure 3.)

NOTE: If the modification in bulletin no. 4 has been installed previously, omit step 4.

5. Change C115 from a 0.01- to a 0.05-uf capacitor (913-3679-00). This capacitor is located across the KEY jack on back of unit. (CW waveshape characteristics are affected by this capacitor, and the operator may change its value to suit his preference.)
6. Remove 0.01-uf capacitor C8 which is connected between terminals 3 and 4 of TS13.
7. Remove 180K-ohm resistor R11 which is connected between terminals 2 and 4 of TS13.

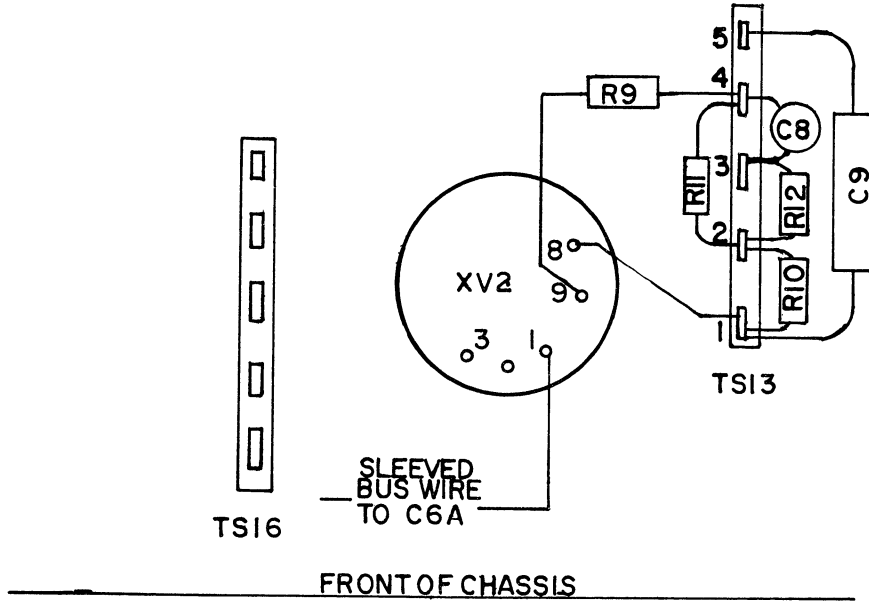
8. Remove 15K-ohm resistor R12 which is connected between terminals 2 and 3 of TS13.
9. Remove 220-ohm resistor R10 which is connected between terminals 1 and 2 of TS13.
10. Remove wire which is connected from pin 1 of tube V2 to (+) side of 8-uf dual-section fixed electrolytic capacitor C6A. This capacitor is located adjacent to the BFO TEST.
11. Install new 10K-ohm resistor R11 (745-3394-00) from pin 1 of tube V2 to terminal 2 of TS13.
12. Install new 4-uf capacitor C8 (183-1783-00) from pin 1 of tube V2 to terminal 3 of TS13 with plus (+) lead connected to pin 1. It might be advisable to check if any possibility exists in which the (+) lead might short out to another component, if so, sleeve lead with insulation removed from lead of old C8.
13. Connect no. 22 AWG red (439-7068-00) from terminal 2 of TS13 to feed-through capacitor, C137, on PA grid compartment.
14. Install new 1K-ohm resistor R10* (745-1352-00) between terminals 1 and 3 of TS13.
15. Disconnect lead of 220K-ohm resistor R9 which is connected to terminal 4 of terminal strip TS13 and reconnect to terminal 3 of TS13. (The other end of R9 is connected to pin 9 of V2.)
16. Replace unit and four feet to cabinet.
17. Readjust balance modulator as detailed in the 32S-1/2 Instruction Book, paragraph 4.4.10.

PARTS REQUIRED: Modification kit 549-5108-00 which consists of the following items:

PRICE: \$.92

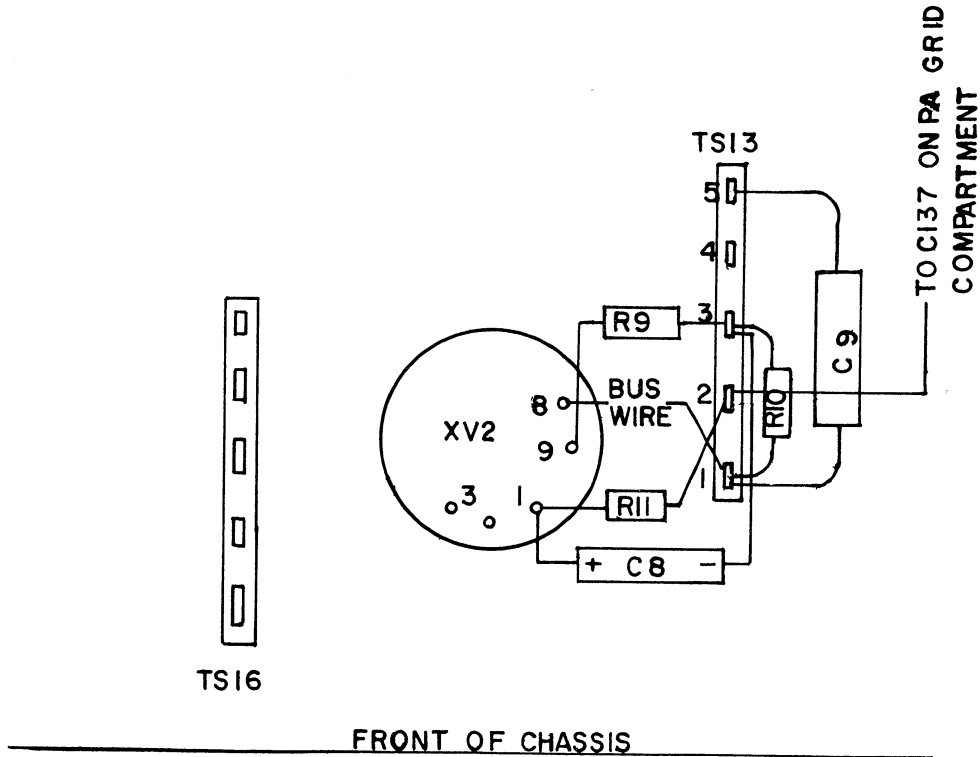
<u>Qty</u>	<u>Description</u>	<u>Collins Part Number</u>	
1	Resistor, 1K-ohm, 1/2 watt	R10	745-1352-00
1	Capacitor, 4-uf, 350 volt	C8	183-1783-00
1	Resistor, 10K-ohm, 1 watt	R11	745-3394-00
1	Capacitor, 0.05-uf	C115	913-3679-00
0.8 (ft)	Wire, #22 AWG red Teflon insulated		439-7068-00

The above parts may be obtained from Collins Radio Company, Service Parts Department, Cedar Rapids, Iowa at the prices indicated. All orders for these parts should specify modification kit 549-5108-00 and make reference to 32S Service Bulletin No. 4A. Price does not include State sales tax or postage. To determine postage, consider weight of less than one pound for parcel post shipment.



BEFORE MODIFICATION

NOTE: Position of wires and components may vary slightly due to production changes.



AFTER MODIFICATION

Figure 1. Physical Location of Cathode Follower Components Affected By This Modification.

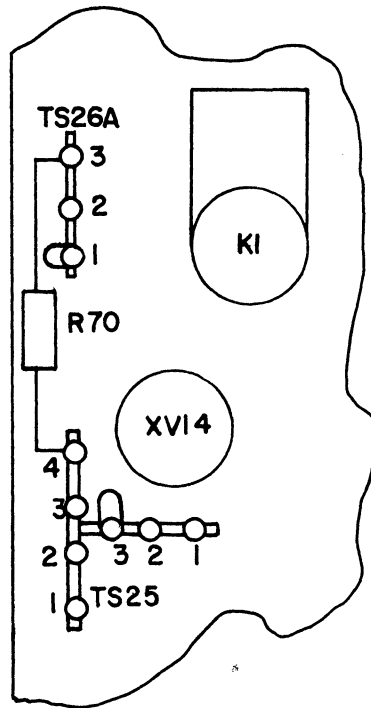


Figure 2. Physical Location of R70 on 32S-1/2 Chassis

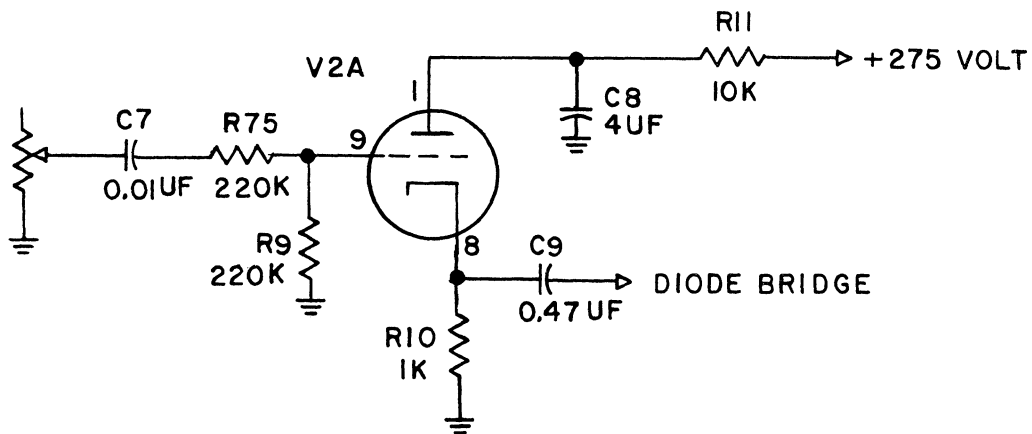


Figure 3. Cathode Follower Circuitry in 32S-1/2 After Modification