



SERVICE BULLETIN

EQUIPMENT SERIES: 32S

BULLETIN NO. 6

DATE: 7-10-64

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EQUIPMENT TYPE: TRANSMITTER 32S-3

SUBJECT: IMPROVE OPERATION OF 1ST AUDIO AMPLIFIER

The modification in this bulletin will improve the operation of the first audio amplifier, resulting in better overall performance.

It has been found that choke L-1 in the grid of tube V1 is self resonant on random frequencies which in some transmitters results in various unrelated malfunctions, usually when accessories (phone patch, linear amplifier, etc.) are employed.

Choke L-1 is replaced with a 47K ohm 1/2 watt resistor, resistor R1 is eliminated and the value of resistor R101 is changed to reduce hum caused by heater to cathode leakage in some tubes. These resistors were changed in production some time ago. For this reason, some radios may have this portion of the modification previously installed. Capacitor C188 is added to bypass the cathode of V1A to rf.

MODIFICATION PROCEDURE:

1. Remove 32S-3 cabinet as follows:
 - a. Disconnect all power and external connections.
 - b. Remove the four feet, and the screw located midway between rear feet.
 - c. Lift the lid, and remove the two unpainted screws located at the front edge of the rim.
 - d. From the rear, push the transmitter chassis forward until the front panel protrudes from the cabinet about an inch.
 - e. Grasping the front panel at the edges, slide the transmitter out of the cabinet. Turn transmitter upside down on suitable work bench.

NOTE: REFER TO INSTRUCTION BOOK PAGE 6-8.

The tube socket for tube V1, symbol XV1, is shown in the lower right-hand corner of the chassis, figure 6-4. Terminal strip, TB1, is to the right of socket XV1 and has R101 and C1 mounted on it. Terminal strip, TB5, is to the left and adjacent to socket XV1.

2. Substitute a 47K resistor (745-1422-00) for choke L1. The choke is located between XV1 pin 9 and terminal strip TB1. The symbol for the 47K resistor will be R138.
3. Substitute a 100K resistor (745-1436-00) for 1 meg resistor R101. The resistor is located on terminal strip TB1.

4. Substitute bus wire (421-2220-00) and sleeving (152-2633-00) for resistor R1, 680 ohms, connected between XV1 pin 8 and switch wafer S8F terminals 9 and 10.
5. Connect a 0.1 uf capacitor (913-3152-00) between XV1 pin 8 and ground terminal of terminal strip TB5.
6. Replace transmitter chassis in cabinet and return to operation.

PARTS REQUIRED:

Price: \$.83

Modification kit 757-2815-001 which consists of the following items:

<u>Qty</u>	<u>Description</u>		<u>Collins Part Number</u>
1	Resistor, 47K, 1/2 watt, comp.	R138	745-1422-00
1	Resistor, 100K, 1/2 watt, comp.	R101	745-1436-00
1	Capacitor, 0.1 uf	C188	913-3152-00
0,5 ft	Wire, no. 22 AWG bare bus		421-2220-00
0.5 ft	Insulation sleeving, electrical		152-2633-00

The above parts may be obtained from Collins Radio Company, Service Parts Department, Cedar Rapids, Iowa at no charge for orders received on or before January 7, 1965. After this date the price indicated becomes effective, subject to change without notice. Orders to be filled at no charge must include the serial number of the transmitter being modified. All orders must specify modification kit 757-2815-001 and make reference to 32S Service Bulletin No. 6. The parts are available for immediate shipment.