



# SERVICE BULLETIN

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## SERVICE BULLETIN NO. 2

EQUIPMENT SERIES: 32S-3

September 21, 1967  
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EQUIPMENT TYPE: 32S-3 TRANSMITTER

SUBJECT: REMOVAL OF AUDIO DISTORTION

This service bulletin applies only to 32S-3 units modified according to 32S-3 Service Bulletin No. 1 titled "Improve VOX Circuit to Eliminate Intermittent Dropout, and Improve Operation of First Audio Amplifier", dated 8-8-67 and revised 8-31-67. The modification described in this service bulletin should be performed in conjunction with the referenced, revised Service Bulletin No. 1, or following that modification, only if excessive audio distortion occurs in cases where the transmitter is operated in other than normal situations.

This modification consists of adding a 680-ohm resistor in the cathode circuit of the first audio amplifier stage that will increase the signal level which can be applied to the first audio grid before saturation takes place. This condition is apt to occur when the transmitter is fed from a RTTY tone keyer or from audio oscillators during tests. No distortion should be encountered when using a microphone.

This change has been incorporated in production units. To determine whether your transmitter has it included, examine the circuit to check the components for the modification installation listed in the procedure below.

The change described in this service bulletin will be covered in the fifth edition of the 32S-3 Transmitter Instruction Book.

### MODIFICATION PROCEDURE

1. Remove 32S-3 from cabinet as follows.
  - a. Disconnect all power and external connections.
  - b. Remove the four cabinet feet, and remove the screw located in the cabinet bottom midway between the rear feet.

- c. Lift the cabinet lid and remove the two unpainted screws fastening the chassis to the cabinet at the front rim.
  - d. Apply pressure from the rear of the unit and push the transmitter chassis forward within the cabinet until the front panel protrudes about an inch from the cabinet.
  - e. Grip the front panel at the edges, and slide the transmitter chassis forward and out of the cabinet. Turn the transmitter upside down and place it on a suitable work bench.
2. Disconnect and discard the bus wire connected between tube socket XV1, pin 8, and switch S8C, pin 2. Replace the bus wire with a new 680-ohm resistor, R1 (745-1345-000).
  3. Replace transmitter chassis in cabinet and secure in place with the hardware removed in step 1.

PARTS REQUIRED

<u>QTY</u>	<u>DESCRIPTION</u>	<u>SYMBOL</u>	<u>COLLINS PART NUMBER</u>
1	Resistor, 680-ohm, 1/2-watt	R1	745-1345-000

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.