



SERVICE BULLETIN

EQUIPMENT TYPE 75A-3 and 75A-2A BULLETIN NO.

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Subject: Modification to reduce internal noise in the receiver and effectively improve the signal to noise ratio under average operating conditions.

Procedure:

1. Short out the cathode resistor R-48 on I.F. amplifier V-5.
2. Short out the cathode resistor R-78 on I.F. amplifier V-18. This can be done most easily by removing the tube from the socket on the mechanical filter assembly and soldering a small bus jumper from pin 2 to pin 3 on the tube itself.
3. Connect a 100,000 ohm 1/2 watt resistor between pins 1 and 2 on the bottom of the mechanical filter adapter. A suitable resistor for this purpose can be obtained free of charge by contacting the Service Parts Department, Collins Radio Company, Cedar Rapids, Iowa. The part number to specify is 745-1128-00.

Explanation

It has been determined that in early 75A-3 receivers, the tube noise from V-18 was sufficient to over-ride the front-end noise of the receiver. This has been corrected in later sets by grounding the cathodes of these stages and allowing the front-end noise to predominate. These changes increased the overall gain of the set to the point where there may be a slight tendency to oscillate. The 10,000 ohm resistor serves to lower the plate load of V-18 and reduce the overall gain to about its original figure.

As a simple check on operation after these changes have been made, the following test can be made. Removing the first RF amplifier tube with the antenna disconnected should result in a drop of audio noise of at least 6 db. Make this test with the audio volume control set at about mid-scale to preclude any possibility of audio overloading. Set the emission switch to the AM position, the RF gain full on and the frequency dial at about 14.2 mc. Also, peak the antenna trimmer for maximum noise output before removing the RF amplifier tube. This test will give you a pretty good idea of how your set is performing and will tell you whether your receiver gain is correct and whether the receiver noise is coming from the first tube, as it should be.

Address any inquiries concerning this Bulletin to:

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