



# SERVICE BULLETIN

EQUIPMENT TYPE

75A-1

BULLETIN NO.

4

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SUBJECT: OPERATION OF 75A-1 WITH BREAK-IN SYSTEM

Blocking of the 75A-1 Receiver may occur under certain conditions when using break-in. This blocking effect may show up in several different forms depending upon specific conditions. The following is a description of some of these effects and our recommendations for eliminating the difficulty.

1. The receiver loses its sensitivity for a short period of time, usually only a fraction of a second, after the transmitter is turned off and the R meter swings to full scale and remains there until the receiver recovers. This effect is caused by high RF voltages being applied to the antenna terminals of the receiver when transmitting. This voltage is rectified by the first tube in the receiver, causing the automatic volume control line to charge up. After the control switches are placed in the receive position, this charge will leak off and the receiver will operate in a normal manner. Since the automatic volume control line in the receiver is grounded in CW position, this condition does not occur.

REMEDY: It is recommended that an antenna grounding relay located at the input terminals of the receiver be used when transmitting. It might also be advisable to use a short piece of shielded cable such as coax to connect the receiver to the antenna changeover relay, particularly in the event the same antenna is used both for receiver and transmitter.

2. The receiver loses its sensitivity for an indefinite period but may recover by switching the B / on and off. This is caused by positive transients due to switching appearing on the signal grid. This positive voltage causes secondary emission from this grid and with some tubes this grid may stay positive, thus lowering sensitivity.

REMEDY: The secondary emission characteristics of tubes vary widely, and a different 6SA7 tube may cure this trouble. If not, lowering the grid leak of the 6SA7 tube R5 from 100,000 ohms to 50,000 ohms should definitely eliminate this effect.