



# S Service Bulletin

**Hallicrafters** .....

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## ADDITIONAL NOTES ON THE TRANSCEIVE (SLAVE) OPERATION OF THE HALLICRAFTERS HT-44 COMMUNICATIONS TRANSMITTER AND SX-117 RECEIVER.

There are several changes in the original circuitry of the HT-44 which improve the performance of this equipment when operated in Transceive with the SX-117. These changes, and their purpose, are shown on the attached errata sheet. Also shown are two revisions in the output meter circuit that will correct specific complaints as noted. These modifications are incorporated in all HT-44's on which the first six digits of the serial number are 344001 — although it would be well to check for them in cases where it might be deemed necessary.

In the SX-117, the muting change listed in Note 1 under paragraph 7-2 in the HT-44 manual is a must for transceive operation, and each set should be checked even though it is above the 117001 number mentioned in the book. This is actually a typographical error and should be serial number 117005. To provide further isolation we are now also going to cut off the first mixer tube by lifting the cathode resistor R7 from ground and returning it to the muting line, schematically at the junction of R24 and R25. Physically this can be accomplished by removing R30 from the terminal strip directly behind the V2 socket. The other end of R30 remains connected to pin 9 of the V2B socket, and the free end dressed up in the air so that it is available as a test point for alignment purposes. One end of R7 is lifted from ground and reconnected to the terminal lug freed by moving R30. Also from this same lug a .001 mfd 500-volt ceramic disc capacitor is run to the ground terminal on the same terminal strip. Another lead is connected from the terminal lug junction of R7 and the .001 capacitor to the receive/standby terminal lug on the rear of the chassis. This requires a lead approximately 9 inches long and makes the most direct connection. SX-117's with this latter change will bear serial numbers with 117006 as the first six digits.

There is one other note that might be of benefit. In the receiver the most critical factor is the adjustment of the crystal-controlled first conversion oscillator. The method of making the adjustments is explained in paragraph 6-5 of the receiver manual. If any doubt exists, these circuits should be checked with a voltmeter as explained.

If the connecting cables between the two units are other than supplied with the Hallicrafters CA-44 cable assembly, it is imperative that they be made of Type RG-62/AU coaxial cable 28 inches long. This is 92-ohm cable with very low capacity. Even if CA-44 cables are used, each cable should be checked individually to see that it is grounded at both ends of the shield if unusual or spurious oscillations are experienced.

Operation of the HT-44 and SX-117 in the three different modes (HT-44 alone, transceive with the transmitter VFO, and transceive with the receiver VFO) will probably require different settings of the "RF Level" control in CW and AM or the "Mic Gain" control in sideband. When these controls are properly adjusted for the mode being used, the output from the transmitter will be within less than 1 db in all three methods of operation.