

MODEL 4130 TEST SET
DATA AMENDMENT SHEET
FOR USE WITH
MODEL 4130 INSTRUCTION BOOK

The purpose of this sheet is to amend or make corrections to the Model 4130 Instruction Book.

The following information replaces paragraphs 4-7 and 4-7.1 of the subject instruction book.

4-7. SENSITIVITY TEST

The sensitivity test function provides a means to measure the sensitivity, selectivity, and receive frequency calibration of an FM receiver. A group of 13 calibrated FM signals, each 0.50 +0.20 microvolt in amplitude and simultaneously frequency modulated with both 150 Hz and 1 kHz tones, are generated by the Model 4130 for these test. The frequencies are: 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85 and 90 MHz. The purpose of the 150 Hz and 1 kHz tones follows:

- a. 150 Hz Tone - The 150 Hz tone is used to unsquelch certain receivers, such as the AN/PRC-77, AN/PRC-68, or the AN/PRC-12 series equipped with "new squelch". Note - Receivers not equipped with "new squelch" rely upon "old squelch" where RF carrier detection is used for unsquelching. The terms "old" and "new" squelch are used with receivers equipped with the 150 Hz "new squelch". A receiver selector switch is used to select the "old squelch" or "new squelch" operation.
- b. 1 kHz Tone - The 1 kHz tone is used for audible detection by the operator during these tests. The the receiver unsquelches, this tone should be heard regardless of the type of squelch, "old" or "new", selected.

Two procedures are listed next, one for checking sensitivity, and another to check the receive frequency and selectivity. They are listed in the recommended order for an AN/VRC-12 series receiver. Other receiver types may be more easily checked following a different order. Keep in mind that the results obtained from these checks are often interdependent.

Continued

4-7.1. SENSITIVITY CHECK

Receiver sensitivity is checked as follows:

- a. Connect the Model 4130 in the transmission line between the radio set and an appropriate dummy load, as shown in figure 3-1. Use of the antenna, in place of the dummy load, may cause problems with the test if other radiated signals are received by the antenna during the test.
- b. Select the FLD STR/SENS position on the function switch.
- c. Depress the PUSH TO TEST button momentarily to generate the FM signals.
- d. Perform the following checks as indicated:
 1. Receivers with "old squelch" and "new squelch":
 - a. Old squelch off - The 1 kHz tone should be heard at each even 5 MHz frequency from 30-90 MHz across the receive band.
 - b. Old squelch on - The receiver may or may not unsquelch at each even 5 MHz from 30 to 90 MHz. When the receiver unsquelches, the 1 kHz tone should be heard.
 2. Receivers with "new squelch" only:
 - a. New squelch off - The 1 kHz tone should be heard at each even 5 MHz frequency from 30 to 90 MHz across the receive band.
 - b. New squelch on - The receiver should unsquelch and the 1 kHz tone should be heard at 75 MHz. The receiver may or may not unsquelch at other even 5 MHz frequencies across the receive band. Whenever the receiver does unsquelch, the 1 kHz tone should be heard.