TL-1 MICROWAVE RADIO
SYSTEM TESTS
IDLE NOISE

This section describes a method for measuring the idle noise power at the receiver baseband output of a TL-1 radio receiver with the corresponding transmitter at the other end of the radio hop unmodulated and its baseband input terminated.

This issue does affect the Equipment Test List.

This test requires interruption of baseband continuity; therefore, it will constitute out-of-service tests on nondiversity systems and in-service tests on diversity systems. Refer to Section 409-306-500 for procedures for removing and restoring service on diversity and nondiversity systems.

This test is intended for initial testing of a radio hop and for cases where poor noise loading test results or noisy telephone channels indicate high idle noise.

APPARATUS:

1—J64037B 37B Transmission Measuring Set (TMS)

1—368A Termination

STEP	PROCEDURE
	For this test, the radio hop should first be aligned for correct transmitter frequency, antenna orientation, and receiver baseband amplifier gain. It is not necessary to tune the transmitter klystron to optimum linearity before this test, but the transmitter deviation sensitivity should be set at least by the reference cavity method to prevent transmitter baseband amplifier noise from appearing at an unreasonable level.
1	Remove the radio hop from service and terminate the transmitter BB IN jack with a 368A termination at the other end of the radio hop.
2	Connect a calibrated 37B TMS to the receiver RCVR OUT jack as shown in Fig. 1.
3	Starting at 50 kHz, tune the 37B TMS upward in frequency using the frequency control switches and the continuous tuning knob to cover all frequencies in the 50-kHz to 8-MHz region. Use a headset to monitor the output and tune slowly to avoid skipping isolated tones. Record the resulting noise power point-by-point on a chart similar to Fig. 2. In the regions where smooth or hissing noise is heard in the earphone, record only enough points to permit a smooth curve to be drawn. Where clean clear tones are heard, draw

STEP	PROCEDURE

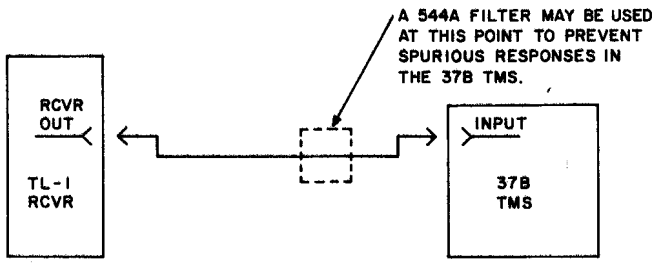

Fig. 1—Idle Noise Test—Test Setup Diagram

a small line or arrowhead to show the tone amplitude and frequency. In regions where crackling noise or noise bumps are found, indicate the amplitude and bandwidth over which the tones are found.

4 If this test is to be used in conjunction with noise loading tests, record the noise power found at the noise loading test frequencies, typically 70, 1248, and 2438 kHz.

5 Restore the hop to service in accordance with Section 409-306-500 if no further tests are required.

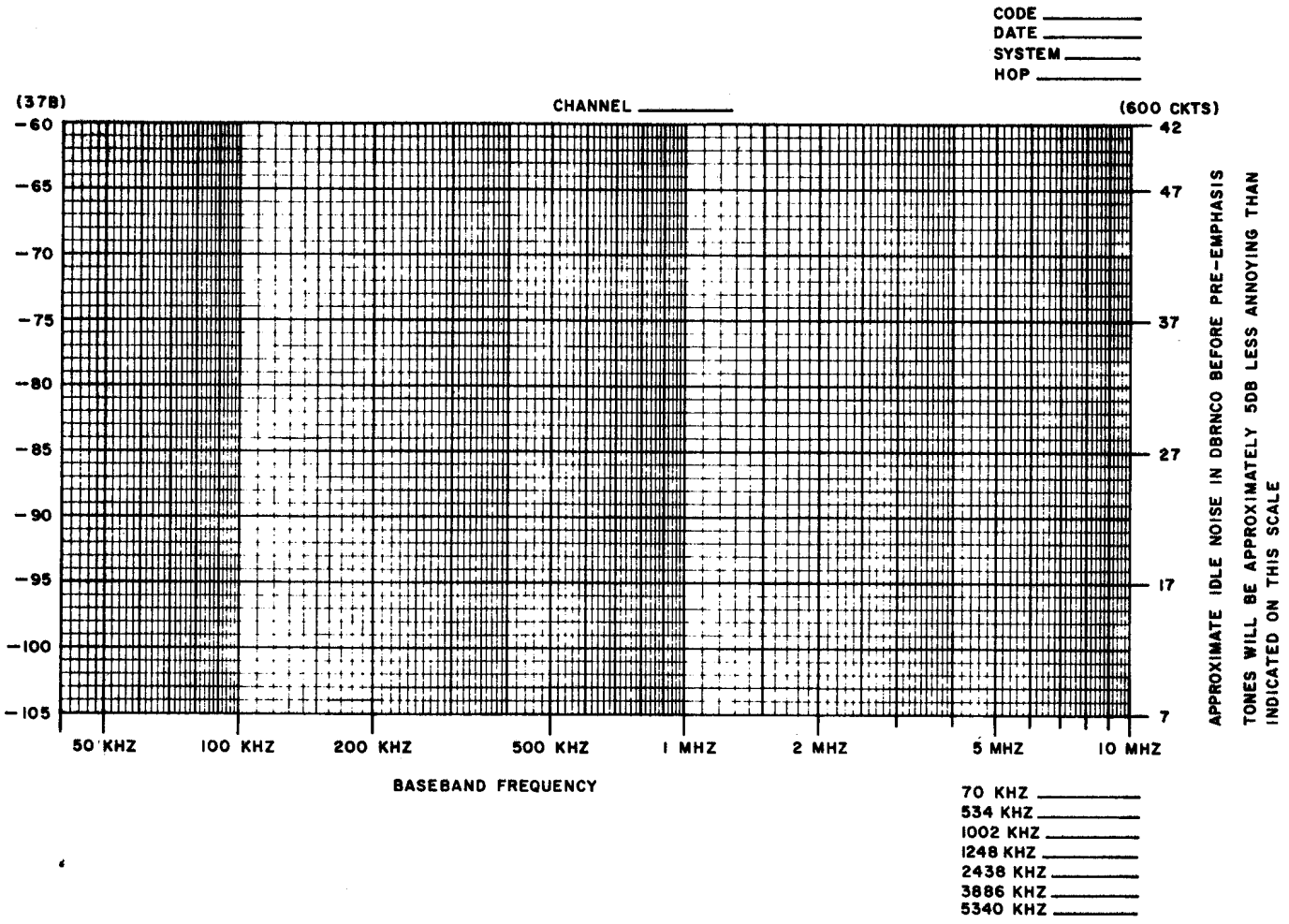

Fig. 2—Idle Noise Report