

L MULTIPLEX TERMINALS
LMX-1
CARRIER AND PILOT SUPPLY
J68857X STABILIZED 64-KHZ PILOT SUPPLY
IN-SERVICE TESTS

Carrier frequencies at both L-type multiplex terminals of a line facility (or radio channel) must be synchronized. A highly stabilized 64-kHz line pilot is used for automatic synchronization of the 4-kHz primary frequency supply circuits and for regulating, alarm, and switching functions. A stabilized 64-kHz signal is also required for calibrating the 64-kHz pilot measuring circuit in the LMX-1 terminal.

The primary purpose of the stabilized pilot supply circuit is to furnish a 64-kHz signal at closely controlled levels to the transmitting LMX-1 terminal, and to assure continuity of the pilot signal. The stabilizing circuit receives a 64-kHz input from the channel carrier distributing bus and maintains a constant output power over a wide range of temperature, voltage, and input amplitude variations. Two stabilizer and switch control units are provided for protective purposes. If a working stabilizer fails, an automatic switch circuit will transfer the load to the idle stabilizer and will provide an alarm indication.

The purpose of this test is (a) to measure and, if necessary, adjust the power output of the 64-kHz stabilizer and (b) to measure and, if necessary, adjust the stabilizer alarm circuit. This is an in-service test.

This section affects Equipment Test Lists.

APPARATUS:

The procedures in this section require suitable transmission test equipment. Refer to Section 356-010-500 and select, from available equipment, a receiving unit having the following capabilities:

Receiving test equipment capable of detecting, from 135-ohm circuits, a 64-kHz signal at a power level of 0 dBm.

In addition to the above, the following is required:

KS-14510 Volt-Ohm-Milliammeter (VOM), or another dc voltmeter with a sensitivity of at least 20,000 ohms per volt

3P20B Cord

STEP	PROCEDURE
	<p><i>Note:</i> The requirements in this section are based upon the power level of the 64-kHz input signal being correct. The 64-kHz signal from the channel carrier supply may be tested in accordance with Section 356-250-502.</p> <p><i>Caution: Simultaneous removal of both stabilizers will cause a service interruption.</i></p> <p>Stabilizer</p> <p>1 Set up and calibrate the receiving test equipment for a 135-ohm terminated measurement of 64-kHz at 0 dBm.</p> <p>2 Make patch designated (1) in Fig. 1.</p> <p><i>Note:</i> Side contacts on the REG test jacks will cause automatic switching from regular to standby stabilizer units and loss of test signal to the 64-kHz pilot measuring circuit. Transfer is indicated by the BUS ON STBY lamp.</p> <p>3 Measure the power at the 64KC STAB REG test circuit jacks.</p> <p><i>Requirement:</i> 0.0 dBm \pm0.05 dB.</p> <p>4 If the requirement of Step 3 is met, proceed to Step 8.</p> <p>5 If the requirement of Step 3 is not met, adjust the STAB ADJ control on the REG 64-kHz stabilizer and switch control front panel for a measurement of 0.0 dBm.</p> <p>6 If the requirement of Step 3 cannot be met, replace the REG 64-kHz stabilizer and switch control unit.</p> <p>7 Repeat Steps 3, 4, and 5.</p> <p>8 Remove patch (1) and make patch designated (2) in Fig. 1.</p> <p><i>Note:</i> The pilot supply will witch to the REG stabilizer unit. Transfer is indicated by the BUS ON REG lamp.</p> <p>9 Repeat Steps 3 through 7 for the STBY 64-kHz stabilizer.</p> <p>10 Remove patch designated (2) in Fig. 1.</p> <p>Switch Control Unit</p> <p>11 Make patch designated (3) in Fig. 1.</p> <p>12 Measure the voltage.</p> <p><i>Requirement:</i> 8.3 \pm0.1 volts dc.</p> <p>13 If the requirement of Step 12 is met, proceed to Step 17.</p>

STEP	PROCEDURE
14	If the requirement of Step 12 is not met, adjust the SW CONT ADJ control on the REG 64-kHz stabilizer and switch control front panel to meet the requirement.
15	If the requirement of Step 12 cannot be met, replace the REG 64-kHz stabilizer and switch control unit.
16	Repeat Steps 3 through 5 and Steps 11 through 14.
17	Remove patch (3) and make patch designated (4) in Fig. 1.
18	Repeat Steps 11 through 16 for the STBY 64-kHz switch control unit.
19	Remove all patches and restore the STBY stabilizer and switch control unit to normal service.

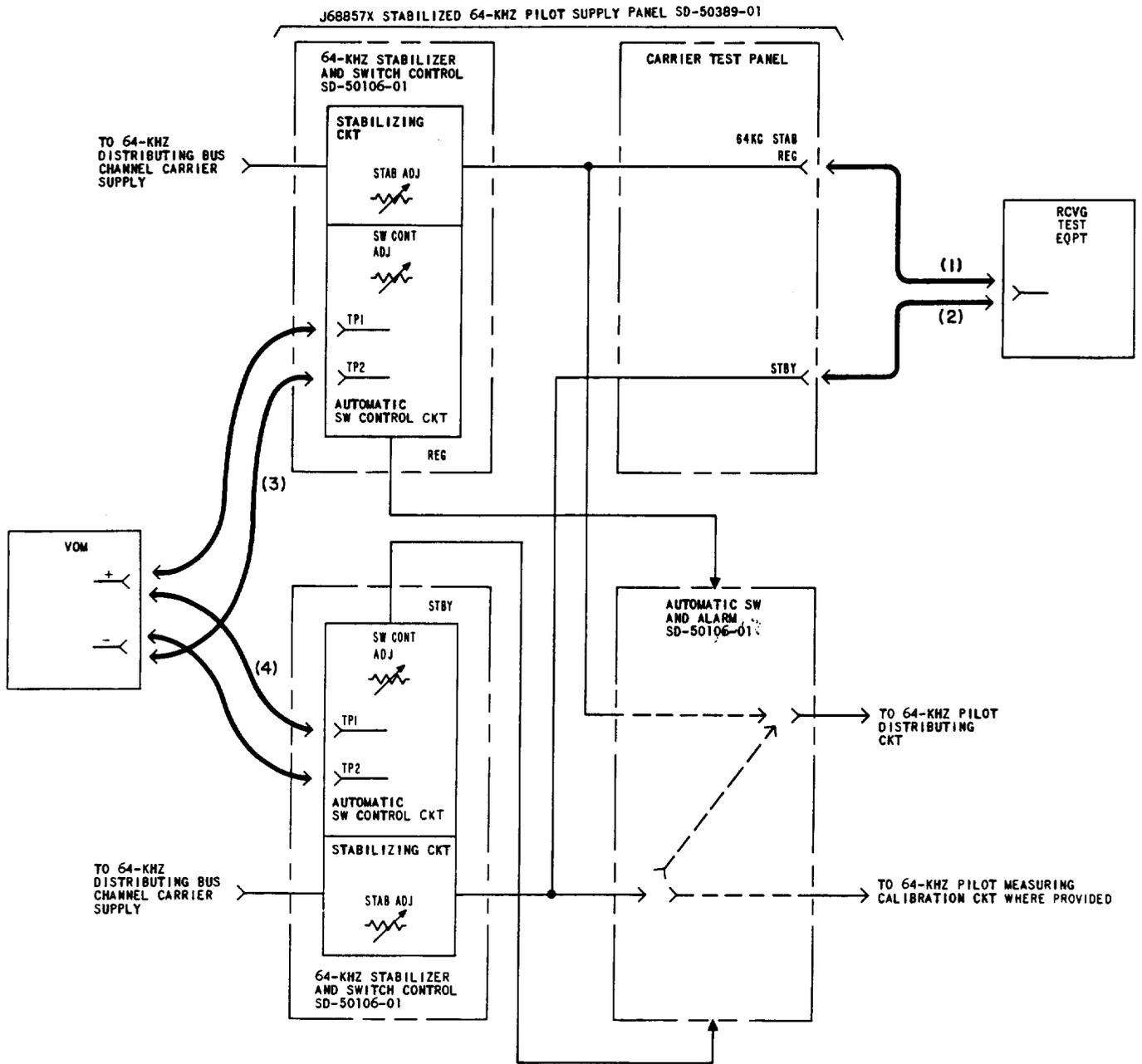


Fig. 1—64-KHZ Stabilizer and Alarm Test