L60A/L120A LMX-2 CARRIER TERMINAL
TRANSMITTING CIRCUITS
GROUP MODULATOR
IN-SERVICE PILOT ADJUSTMENT

The purpose of this test is to measure and, if necessary, to adjust the five group pilots in each transmitting group bank on an in-service basis.

This section is reissued to reorganize, update, and delete reference to the comparison method of measurement. ***Equipment Test Lists are not affected.***

The design of the L60A and L120A terminals provides a pilot frequency for each channel bank. The pilot frequency is introduced into each group by the pilot insertion circuit. Either 92 kHz or 104.08 kHz may be provided as a pilot frequency. When a 92-kHz pilot is provided, the 92-kHz carrier leak from a channel bank or the 92-kHz pilot from a group connector is blocked by the band elimination filter (BEF) and 92 kHz is introduced into each group by the 92-kHz pilot insertion circuit. The 92-kHz BEF and pilot insertion circuit immediately precede the channel bank hybrid coil in the transmission path. When a 104.08-kHz pilot is provided, the 104.08-kHz pilot is offset 80 Hz from the 104-kHz channel 2 carrier. A carrier leak BEF is generally not provided in the pilot insertion units. The 104-kHz carrier leak should be maintained at an acceptable value of −75 dBm or lower at the output of the transmitting channel bank hybrid.

The group pilots have a dual purpose: (a) to regulate the output of the receiving supergroup amplifiers and the receiving group amplifiers and (b) to provide a 315.92-kHz or 424-kHz test pilot for the supergroup demodulator and a 104.08-kHz or 92-kHz test pilot for each group demodulator.

When measuring a 104.08-kHz group pilot, the J68858AT pilot filter set is required if a carrier leak BEF is not provided in the pilot insertion unit.

APPARATUS

Transmission test equipment: Refer to Section 356-010-500 and select, from available equipment, a receiving unit having the following capabilities:

Receiving test equipment (RTE) capable of detecting, from 135-ohm circuits, signals between 92 kHz and 104.08 kHz at a power of −62 dBm.

Note: A J68858AT (58AT) pilot filter set is required when measuring the 104.08-kHz pilot.

STEP	PROCEDURE
1	Measure the output power of the 92- or 104.08-kHz pilot at the CH BANK OUT ALT jack. ***Requirement:*** -62 dBm$\pm$0.05 dB
2	If the requirement of Step 1 is not met, slowly adjust the ADJ control in the pilot insertion unit to meet the requirement.
3	If the requirement of Step 1 still cannot be met, make pilot supply tests per Section 356-291-501 or 356-292-501, as appropriate, and repeat Steps 1 and 2.
4	If the requirement of Step 1 still cannot be met, remove the patch and make busy the associated channel bank; then replace the faulty pilot insertion unit. ***Note:*** Faulty pilot insertion units cannot be replaced on an in-service basis. Repeat this test for all pilot insertion units.