

L MULTIPLEX TERMINALS
LMX-1
CARRIER AND PILOT SUPPLY
IDLE INDICATOR RELAY CIRCUIT AND LAMPS
OPERATIONAL CHECK

This section supersedes and updates information previously contained in Section 356-089-501 which has been cancelled. *Equipment Test Lists are affected.*

The purpose of this test is to check the proper operation of the idle indicator lamps and relay circuits. A lighted green idle lamp on a panel indicates that the associated circuit is idle and free for testing.

APPARATUS

553-Type Lamp Extractor

319-Type Lamp Cap Puller

STEP	PROCEDURE
	<p><i>Caution: Transfer of the carrier supply will cause hits on data and telegraph service; therefore, the number of transfers should be limited to minimize service interruptions.</i></p> <p>1 Set the transfer control switches as indicated in Table A or B.</p> <p>2 Observe that the proper idle indicator lamp(s) is lighted.</p> <p>3 If the proper idle indicator lamp(s) does not light, perform the following steps to localize the trouble:</p> <ul style="list-style-type: none">(a) Using a 553-type lamp extractor and a 319-type lamp cap puller, remove the suspect idle indicator lamp and check for continuity.(b) Refer to the proper SD and check the operation of the associated idle indicator relays. <p>4 Return the transfer control switches to their original positions.</p>

TABLE A

IDLE LAMP INDICATIONS WHEN REG AND EM CARRIER AND PILOT GENERATORS ARE PROVIDED												
POSITION OF CARRIER AND PILOT TRANSFER AND CONTROL SWITCHES												
LIGHTED IDLE INDICATOR LAMP		4 KHZ	308 KHZ	556 KHZ	2064 KHZ	3096 KHZ	7266 KHZ	8320 KHZ	13.0 MHZ	14.04 MHZ	15.60 MHZ	18.20 MHZ
4-kHz HARM GEN	EM	A	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM
	REG	B	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM
4-kHz HARM GEN 124-kHz HARM GEN	EM	A ¹	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM
	REG	B ¹	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM
308- and 556-kHz PIL GEN	REG	NORM	EM	EM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM
	EM	NORM	REG	REG	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM
2064- and 3096-kHz PIL GEN	REG	NORM	NORM	NORM	EM	EM	NORM	NORM	NORM	NORM	NORM	NORM
	EM	NORM	NORM	NORM	REG	REG	NORM	NORM	NORM	NORM	NORM	NORM
7266- and 8320-kHz PIL GEN	REG	NORM	NORM	NORM	NORM	NORM	EM	EM	NORM	NORM	NORM	NORM
	EM	NORM	NORM	NORM	NORM	NORM	REG	REG	NORM	NORM	NORM	NORM
13-MHz CARR AMP	REG	NORM	NORM	NORM	NORM	NORM	NORM	NORM	EM	NORM	NORM	NORM
	EM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	EM	NORM	NORM
14.04-MHz CARR AMP	REG	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	EM	NORM
	EM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	EM
15.6-MHz CARR AMP	REG	NORM	NORM	NORM	NORM	NORM	NORM	NORM	REG	NORM	NORM	NORM
	EM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	REG	NORM	NORM
18.2-MHz CARR AMP	REG	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	REG	NORM
	EM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	REG
520-kHz HARM GEN	REG	NORM	NORM	NORM	NORM	NORM	NORM	EM	EM	EM	EM	EM
	EM	NORM	NORM	NORM	NORM	NORM	NORM	REG	REG	REG	REG	REG
INT FREQ CONV	REG	NORM	EM	EM	EM	EM	EM	NORM	NORM	NORM	NORM	NORM
	EM	NORM	REG	REG	REG	REG	REG	NORM	NORM	NORM	NORM	NORM
PRI FREQ CONV	REG	NORM	EM	EM	EM	EM	EM	EM	EM	EM	EM	EM
	EM	NORM	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG
4-kHz FREQ SUP	REG	A ²	EM	EM	EM	EM	EM	EM	EM	EM	EM	EM
	EM	B ²	REG	REG	REG	REG	REG	REG	REG	REG	REG	REG

Notes

1. The 4-kHz harmonic generator feeding the 124-kHz harmonic generator must be switched.
2. All 4-kHz harmonic generators must be switched.

TABLE B

IDLE LAMP INDICATIONS AT INTERMEDIATE POWER FEED STATIONS WHERE ONLY EMERGENCY PILOT GENERATORS ARE PROVIDED								
LIGHTED IDLE INDICATOR LAMP		POSITION OF TRANSFER AND CONTROL SWITCHES						
		4 KHZ HARM GEN	13.00 MHZ	14.04 MHZ	15.60 MHZ	18.20 MHZ	PIL 1 JACK	LP CO ³ KEY
INT FREQ CONV ALL PIL GEN	EM	NORM	NORM	NORM	NORM	NORM	CLEAR	RELEASE
NONE		NORM	NORM	NORM	NORM	NORM	CLEAR	OPERATE
NONE		NORM	NORM	NORM	NORM	NORM	PLUGGED	OPERATE
NONE		NORM	NORM	NORM	NORM	NORM	PLUGGED	RELEASE
4-kHz HARM GEN	EM	A ³	NORM	NORM	NORM	NORM		
	REG	B ³	NORM	NORM	NORM	NORM		
4-kHz HARM GEN 124-kHz HARM GEN	EM	A ³	NORM	NORM	NORM	NORM		
	REG	B ³	NORM	NORM	NORM	NORM		
18-MHz CARR AMP	REG	NORM	EM	NORM	NORM	NORM		
	EM	NORM	REG	NORM	NORM	NORM		
14.04-MHz CARR AMP	REG	NORM	NORM	EM	NORM	NORM		
	EM	NORM	NORM	REG	NORM	NORM		
15.6-MHz CARR AMP	REG	NORM	NORM	NORM	EM	NORM		
	EM	NORM	NORM	NORM	REG	NORM		
18.2-MHz CARR AMP	REG	NORM	NORM	NORM	NORM	EM		
	EM	NORM	NORM	NORM	NORM	REG		
520-kHz HARM GEN PRI FREQ CONV	REG	NORM	EM	EM	EM	EM		
	REG	NORM	EM	EM	EM	EM		
4-kHz FREQ SUP 520-kHz HARM GEN PRI FREQ CONV	REG	A ⁴	EM	EM	EM	EM		
	REG	A ⁴	EM	EM	EM	EM		
	REG	A ⁴	EM	EM	EM	EM		
4-kHz FREQ SUP 520-kHz HARM GEN	EM	B ⁴	EM	EM	EM	EM		
	EM	B ⁴	REG	REG	REG	REG		
PRI FREQ CONV	EM	NORM	REG	REG	REG	REG	CLEAR	RELEASE

Table Notes:

1. The PIL jack is located in the transmitting repeater bay.
2. The LP CO key is located on the J68828X idle indicating relay panel.
3. The 4-kHz harmonic generator feeding the 124-kHz harmonic generator must be switched.
4. All 4-kHz harmonic generators must be switched.