

L MULTIPLEX TERMINALS
LMX-1
TERMINAL CIRCUITS
TESTS
TERMINAL COMPENSATING NETWORKS

The purpose of this test is to adjust the supergroup compensating network.

This section supersedes Section 356-127-501. *Equipment Test Lists are affected.*

Supergroup compensating networks are provided to adjust the terminal impedance at frequencies used for L1 carrier line pilots. For carrier terminals arranged for 8-supergroup operation, three adjustments are provided. These adjustments are located at frequencies of 64, 2064, and 3096 kHz. When a terminal is arranged for 10-supergroup operation, an additional adjustment is provided at 556 kHz.

APPARATUS

Transmission Test Equipment having the following capabilities (Section 356-010-500):

Sending Test Equipment

Output:

- (a) Frequency range: 64 to 3096 kHz
- (b) Power: -10 dBm
- (c) Impedance: 75 ohms

Receiving Test Equipment

Input:

- (a) Frequency range: 64 to 3096 kHz
- (b) Power: -50 dBm to -30 dBm
- (c) Impedance: 75 ohms

P2BJ Cords

75-ohm resistor, such as type 106A

P-265974 tool

STEP	PROCEDURE
	<p><i>Note:</i> If supergroup 2 is the only supergroup equipped, the tests in this section are not required.</p>
1	Check that the spare hybrid coil meets the balance requirements of Section 356-018-505.
2	If no odd supergroups are equipped with supergroup compensating networks, check that a 75-ohm resistor is connected across terminals 7 and 8 of the SG MBF HYB coil. If odd supergroups are equipped with supergroup compensating networks, disconnect the wire from terminal 8 of the SG MBF HYB coil and connect a 75-ohm 106A resistor, or equivalent, across terminals 7 and 8.
3	Calibrate the receiving test equipment for a 75-ohm terminated measurement of 64 kHz at -34 dBm.
4	Calibrate the sending test equipment for an output of 64 kHz at -10 dBm.
5	Connect the test equipment according to patches (1) and (2) in Fig. 1. Connect patch (3) from the SP HYB LINE jack to the REG SG MOD OUT jack.

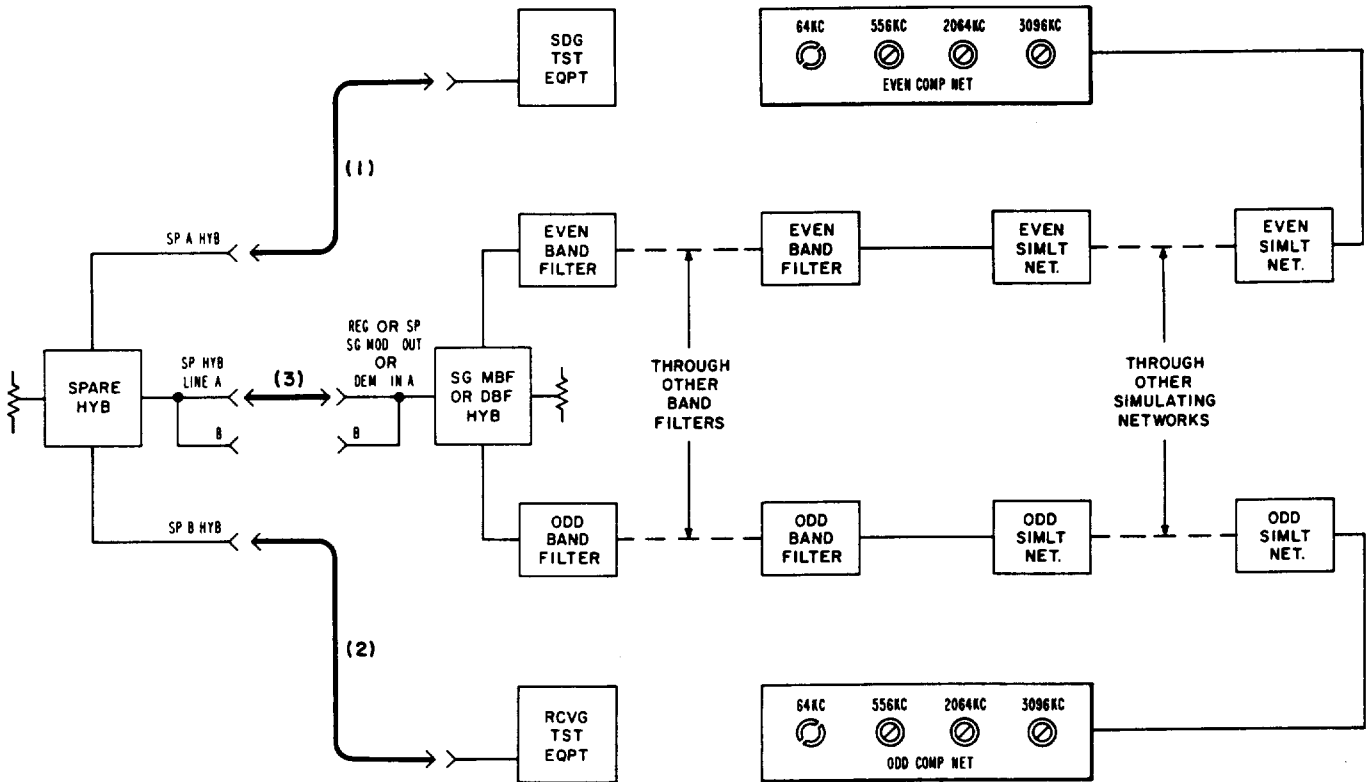


Fig. 1—Measurement and Adjustment of Terminal Compensating Networks—Test Setup

STEP	PROCEDURE																		
6	<p>Measure and record the output power.</p> <p>Requirement: See Table A.</p> <p style="text-align: center;">TABLE A</p> <table border="1" data-bbox="327 506 1225 932"> <thead> <tr> <th data-bbox="327 506 518 629" rowspan="2">TEST FREQUENCY (KHZ)</th> <th colspan="2" data-bbox="518 506 1225 570">OUTPUT POWER REQUIREMENTS</th> </tr> <tr> <th data-bbox="518 570 885 629">8-SUPERGROUP OFFICE</th> <th data-bbox="885 570 1225 629">10-SUPERGROUP OFFICE</th> </tr> </thead> <tbody> <tr> <td data-bbox="327 629 518 719">64</td> <td data-bbox="518 629 885 719">Less than -34 dBm*</td> <td data-bbox="885 629 1225 719">Less than -44 dBm</td> </tr> <tr> <td data-bbox="327 719 518 787">556</td> <td data-bbox="518 719 885 787">Not required</td> <td data-bbox="885 719 1225 787">Less than -30 dBm</td> </tr> <tr> <td data-bbox="327 787 518 855">2064</td> <td data-bbox="518 787 885 855">Less than -34 dBm</td> <td data-bbox="885 787 1225 855">Less than -37 dBm</td> </tr> <tr> <td data-bbox="327 855 518 932">3096</td> <td data-bbox="518 855 885 932">Less than -34 dBm</td> <td data-bbox="885 855 1225 932">Less than -36 dBm</td> </tr> </tbody> </table> <p>* Example: -35 dBm is less than -34 dBm.</p>		TEST FREQUENCY (KHZ)	OUTPUT POWER REQUIREMENTS		8-SUPERGROUP OFFICE	10-SUPERGROUP OFFICE	64	Less than -34 dBm*	Less than -44 dBm	556	Not required	Less than -30 dBm	2064	Less than -34 dBm	Less than -37 dBm	3096	Less than -34 dBm	Less than -36 dBm
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7	<p>If the requirement of Step 6 is not met, adjust the 64 KC screw in the side of the regular EVEN COMP NET. to obtain maximum loss. Verify that the strapping of the compensating network is in accordance with the circuit drawing.</p> <p>Note: The screw adjustment designated 64 KC must be adjusted with a P-265974 tool (Fig. 2).</p>																		

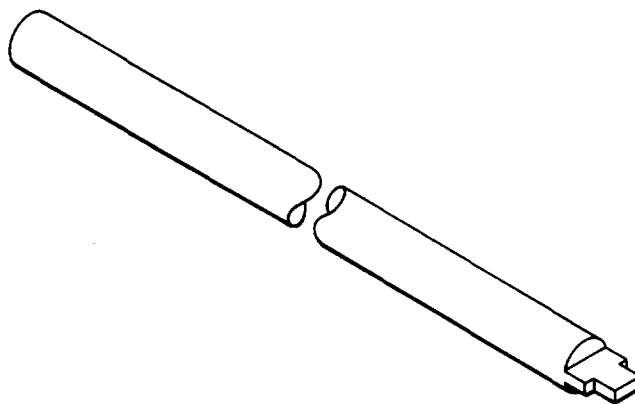


Fig. 2—P-265974 Tool

STEP	PROCEDURE
8	Repeat Steps 3 through 5 for frequencies of 556, 2064, and 3096 kHz.
9	<p>Measure and record the output power at each frequency.</p> <p>Requirement: See Table A.</p>
10	If the requirement of Step 9 is not met, adjust the corresponding screw in the side of the regular EVEN COMP NET. to obtain maximum loss. Verify that the strapping of the compensating network is in accordance with the circuit drawing.
11	<p>Restore the wiring on the SG MBF HYB coil removed in Step 2. Measure and record the output power at the four frequencies.</p> <p>Requirement: See Table A.</p>
12	<p>If the requirements of Step 11 are not met, adjust the corresponding screw in the side of the regular ODD COMP NET. to obtain maximum loss.</p> <p>Caution: Do not readjust the EVEN COMP NET. during or after adjustment of the ODD COMP NET.</p>
13	Repeat Steps 2 through 8 on the spare supergroup transmitting compensating networks by connecting patch (3) from the SP HYB LINE jack to the SP SG MOD OUT jack.
14	Repeat Steps 2 through 8 on the regular supergroup receiving compensating networks by connecting patch (3) from the SP HYB LINE jack to the REG SG DEM IN jack.
15	Repeat Steps 2 through 8 on the spare supergroup receiving compensating networks by connecting patch (3) from the SP HYB LINE jack to the SP SG DEM IN jack.
16	Remove all patches and restore service to normal.