

**L MULTIPLEX TERMINALS
COMMON EQUIPMENT
TERMINAL CIRCUITS
TEST BLOCKING FILTERS AT BRANCHING POINTS**

L1 line connecting equipment is used at switching and terminal main repeater stations to provide a number of functions. One is to provide supergroup blocking to clear the frequency band of the dropped frequencies. Blocking filters provide for termination of one or more supergroups from both directions at a branching point, blocking the transmission of the terminated supergroup frequencies, and transmitting all other supergroup frequencies through the branching point.

The information in this section is included in Division 356 because of earlier nomenclature that was applied to LMX terminals in the related drawings (SD-59252-01).

The information in this section was formerly contained in Section 356-118-502 and is renumbered to place it in a more proper classification.

The equipment must be removed from service to perform this test.

The purpose of this test is to measure the loss of the blocking filters at supergroup frequencies.

APPARATUS:

The test in this section requires suitable transmission test equipment. Refer to Section 356-010-500 and select, from available equipment, sending and/or receiving units having the following capabilities:

Sending test equipment capable of delivering, into 75-ohm circuits, signals between 64 kHz and 3096 kHz at a power level of -10 dBm.

Receiving test equipment capable of detecting, from 75-ohm circuits, signals between 64 kHz and 3096 kHz at a power level of -50 dBm.

In addition to the above, the following is required:

2—368A 75-Ohm Terminating Plugs

4—P2BJ Cords.

STEP	PROCEDURE		
1	Check that the equipment to be tested is removed from service.		
2	Terminate the REC BRANCH A HYB and TRSG BRANCH A HYB jacks with the 368A terminating plugs as shown in Fig. 1.		
3	Verify that 368A terminating plugs are inserted at jack 1 of each hybrid coil.		
4	Set up and calibrate the receiving test equipment for a 75-ohm terminated measurement of 2064 kHz at a power of -50.0 dBm.		
5	Set up and calibrate the sending test equipment to produce a signal of 2064 kHz at -10.0 dBm.		
6	In the repeater bay jack field, make patches designated (1), (2), (3), and (4) in Fig. 1.		
7	Measure and record the power at the TRSG BR HYB OUT jack.		
	Requirement: -50.0 dBm \pm 0.3 dB.		
8	If the requirement of Step 7 is met, proceed to Step 9. If the requirement of Step 7 is not met, adjust the A, B, and E pads, as required, depending upon equipment configuration (the D pad is a fixed-loss pad). Table A lists the strapping procedures to obtain the various amounts of attenuation.		
TABLE A			
PADS A AND B AND PAD E STRAPPING			
FOR LOSS IN DB OF	STRAP TERMINALS OF		
	PAD A*	PAD B*	PAD E†
0	A2 to 3	B1 to 7	A1 to A2
0.5	A2 to 6, 3 to 4	B1 to 7	A1 to 1, 3 to A2
1.0	A2 to 3	B1 to 1, 3 to 7	A1 to 4, 6 to A2
1.5	A2 to 6, 3 to 4	B1 to 1, 3 to 7	A1 to 1, 3 to 4, 6 to A2
2.0	A2 to 3	B1 to 4, 6 to 7	A1 to 7, 9 to A2
2.5	A2 to 6, 3 to 4	B1 to 4, 6 to 7	A1 to 1, 3 to 7, 9 to A2
3.0	A2 to 3	B1 to 1, 3 to 4, 6 to 7	A1 to 4, 6 to 7, 9 to A2
3.5	A2 to 6, 3 to 4	B1 to 1, 3 to 4, 6 to 7	A1 to 1, 3 to 4, 6 to 7, 9 to A2
* Strap both pads A and B to obtain the corresponding loss.			
† Pad E has loss in addition to that shown, which is for use in maintenance.			

STEP	PROCEDURE																		
9	Repeat Steps 4, 5, and 7 at a frequency of 64 kHz.																		
10	Measure and record the power indication. Requirement: The indication shall be between 0.1 and 1.3 dB <i>less</i> than that recorded in Step 7 at 2064 kHz (-51.0 dBm is less than -50.0 dBm).																		
11	Repeat Steps 4, 5, and 7 at a frequency of 3096 kHz.																		
12	Measure and record the power indication. Requirement: The indication shall be 0.1 to 1.0 dB <i>more</i> than the indication recorded in Step 7 at 2064 kHz.																		
13	If supergroup 2 or supergroups 1 and 2 are blocked, proceed to Step 14. If supergroup 2 or supergroups 1 and 2 are <i>not</i> blocked, proceed to Step 16.																		
14	Repeat Steps 4, 5, and 7 at a frequency of 556 kHz. Requirement: The loss at 556 kHz shall be equal to the 64-kHz loss recorded in Step 10 plus one-half the difference between the 64-kHz loss in Step 10 and the 2064-kHz loss in Step 7 ± 0.3 dB.																		
15	If the requirement in Step 14 is not met, adjust pad C to meet the requirements. Table B indicates the terminal strapping to obtain the proper attenuation.																		
TABLE B PAD C STRAPPING																			
<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th data-bbox="533 1311 659 1379">LOSS (DB)</th> <th data-bbox="659 1311 1182 1379">STRAP TERMINALS</th> </tr> </thead> <tbody> <tr> <td data-bbox="533 1379 659 1442">0.0</td> <td data-bbox="659 1379 1182 1442">C1 to C2</td> </tr> <tr> <td data-bbox="533 1442 659 1473">0.5</td> <td data-bbox="659 1442 1182 1473">C1 to 1, 3 to C2</td> </tr> <tr> <td data-bbox="533 1473 659 1504">1.0</td> <td data-bbox="659 1473 1182 1504">C1 to 4, 6 to C2</td> </tr> <tr> <td data-bbox="533 1504 659 1566">1.5</td> <td data-bbox="659 1504 1182 1566">C1 to 1, 3 to 4, 6 to C2</td> </tr> <tr> <td data-bbox="533 1566 659 1597">2.0</td> <td data-bbox="659 1566 1182 1597">C1 to 7, 9 to C2</td> </tr> <tr> <td data-bbox="533 1597 659 1628">2.5</td> <td data-bbox="659 1597 1182 1628">C1 to 1, 3 to 7, 9 to C2</td> </tr> <tr> <td data-bbox="533 1628 659 1659">3.0</td> <td data-bbox="659 1628 1182 1659">C1 to 4, 6 to 7, 9 to C2</td> </tr> <tr> <td data-bbox="533 1659 659 1721">3.5</td> <td data-bbox="659 1659 1182 1721">C1 to 1, 3 to 4, 6 to 7, 9 to C2</td> </tr> </tbody> </table>		LOSS (DB)	STRAP TERMINALS	0.0	C1 to C2	0.5	C1 to 1, 3 to C2	1.0	C1 to 4, 6 to C2	1.5	C1 to 1, 3 to 4, 6 to C2	2.0	C1 to 7, 9 to C2	2.5	C1 to 1, 3 to 7, 9 to C2	3.0	C1 to 4, 6 to 7, 9 to C2	3.5	C1 to 1, 3 to 4, 6 to 7, 9 to C2
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16	Remove the 368A terminating plugs and test equipment and restore the equipment to normal.																		
17	Repeat this test for the other direction of transmission.																		

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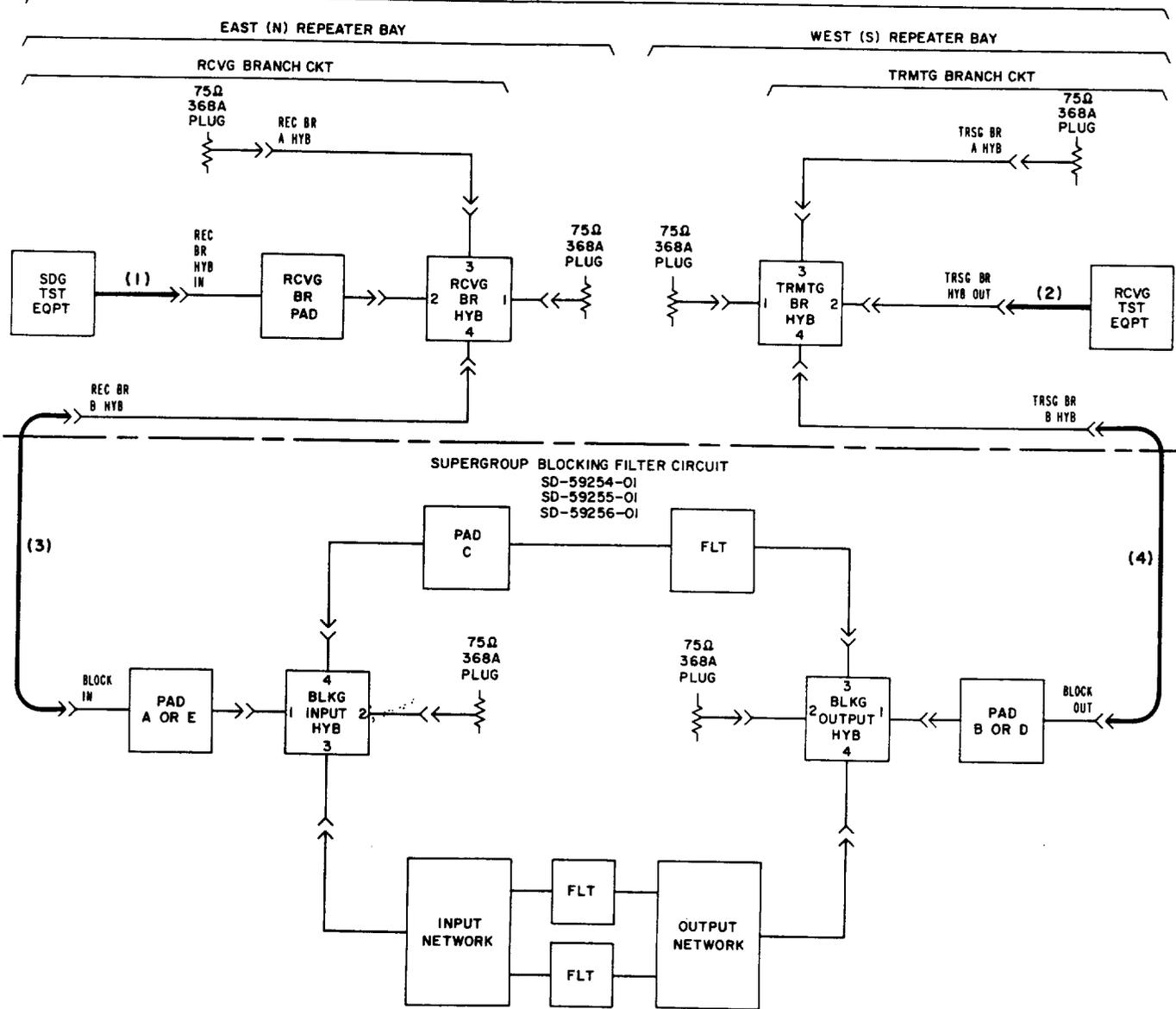


Fig. 1—Transmission Test of Blocking Filters at Branching Points