L MULTIPLEX TERMINALS
COMMON EQUIPMENT
MASTERGROUP CONNECTOR J68829K (MMX-1 TO MMX-1)
IN-SERVICE TESTS

This section provides procedures for in-service tests of the mastergroup connector circuit.

This section is reissued to remove the attenuator adjustment, which should be performed only on an out-of-service basis, and to change the test procedure. Opening the mastergroup connector drawer results in a poor signal ground path which raises the noise level. Arrows are used to indicate significant changes. ***Equipment Test Lists are not affected.***

Received supergroup pilot signals located near the low end, middle, and high end of the mastergroup band are measured at the MG OUT B jack. These same pilot signals are measured at the MG CONN OUT B jack. The loss through the connector circuit should be 7 dB. If necessary, the loss at the midband pilot is adjusted to be 7 dB. The loss at the low and high supergroup pilots should not differ more than ±0.4 dB from the loss at the midband pilot.

APPARATUS:

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

Receiving test equipment capable of detecting, from 75-ohm circuits, signals between 50 and 3100 kHz at powers between -30 and -45 dBm.

STEP	PROCEDURE
	At receiving high-frequency patch bay,
1	Prepare the receiving test equipment for 75-ohm terminated measurements at -34 dBm.
2	Remove the 75-ohm terminating plug from the MG OUT B jack associated with the mastergroup connector under test.
3	Connect the receiving test equipment to this MG OUT B jack [patch (1), Fig. 1].

STEP	PROCEDURE

4 Measure and record the power of three supergroup pilots located near the low end, middle, and high end of the basic mastergroup band.

Note: Measure the pilot signals at 800.08 kHz (SG113), 1792.08 kHz (SG117), and ◗3080.08 kHz (SG128)◖ if these pilot signals are present. If any of these supergroups are not assigned for service, refer to the facility layout chart and select another supergroup pilot to be measured. Supergroup pilot frequencies are listed in Table A. Nominal pilot power at the MG OUT B jack is -34 dBm.

5 Remove the test equipment and replace the terminating plug removed.

At transmitting high-frequency patch bay,

6 Remove the terminating plug ***or*** patch plug from the MG CONN OUT B jack associated with the mastergroup connector under test.

Note: Mastergroup surveillance equipment, when provided, is connected via a patch plug between the MG CONN OUT B and ANALY IN jacks. To prevent an alarm at the mastergroup surveillance system while this patch plug is removed, this mastergroup can be bypassed by operating the appropriate switch on the mastergroup identification panel of the mastergroup surveillance system.

7 Connect the receiving test equipment to this MG CONN OUT B jack [patch (2), Fig. 1].

8 Measure and record the power of the middle pilot: 1792.08 kHz (SG117), if present. Otherwise, select another supergroup pilot near the middle of the band.

Note: Nominal pilot power at the MG CONN OUT B jack is -41 dBm.

9 Determine the loss between the MG OUT B and MG CONN OUT B jacks at the middle pilot frequency.

Requirement: 7.00 ±0.25 dB

10 ◗Proceed to Step 11 if the requirement is met. Otherwise, proceed to Step 15.◖

11 Record the loss between the MG OUT B and MG CONN OUT B jacks at the middle pilot frequency.

12 Measure and record the power of the low pilot (800.08 kHz) and the high pilot ◗(3080.08 kHz)◖ at the MG CONN OUT B jack.

TABLE A

SUPERGROUP PILOT FREQUENCIES

SUPERGROUP	PILOT FREQUENCY
SG128	3080.08
SG127	2832.08
SG126	2584.08
SG125	2336.08
SG118	2040.08
SG117	1792.08
SG116	1544.08
SG115	1296.08
SG114	1048.08
SG113	800.08
SG112	315.92

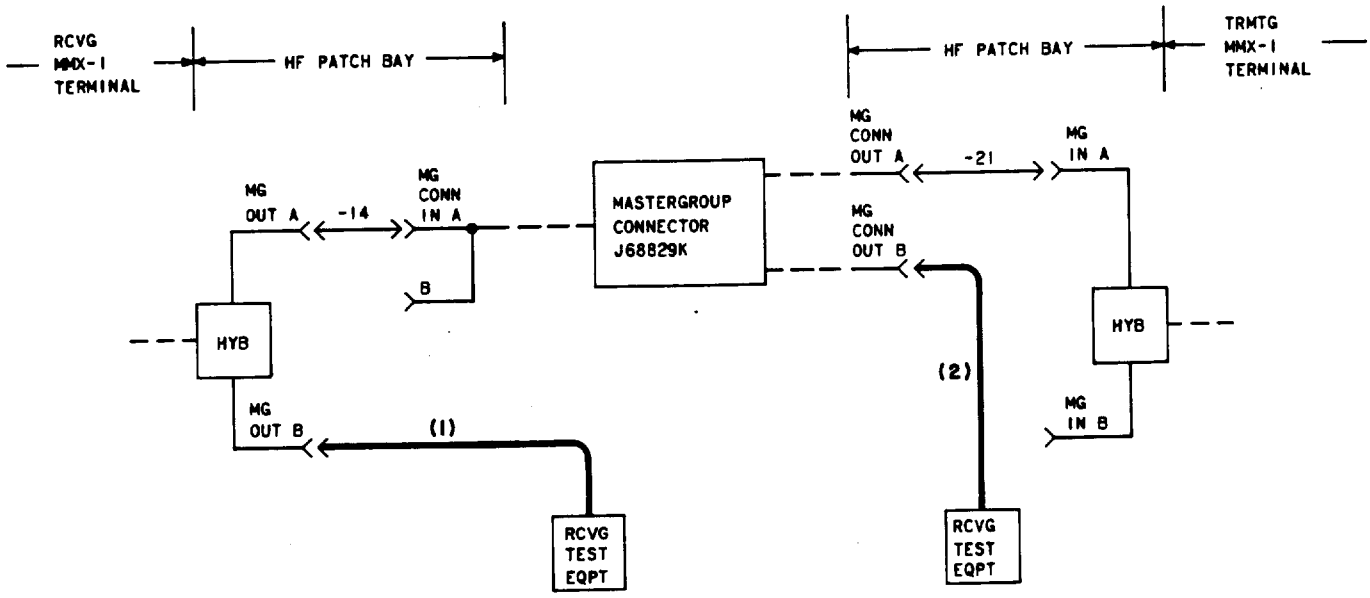

Fig. 1—Mastergroup Connector Test Connections

STEP	PROCEDURE
13	Determine the loss between the MG OUT B and MG CONN OUT B jacks at the low and high pilot frequencies. ***Note:*** Use the power values recorded in Steps 4 and 12. ***Requirement:*** The loss at each pilot frequency is within ±0.4 dB of the loss at the middle pilot frequency.
14	Proceed to Step 17 if the requirement is met. Otherwise, proceed to Step 15.
15	Remove the mastergroup connector from service and test. ***Note:*** Patching procedures to remove a mastergroup connector from service are provided in Section 356-026-300. Out-of-service test procedures are provided in Section 356-026-502.
16	Repeat the appropriate steps in this section after locating and clearing the trouble.
17	Remove all test equipment.
18	Replace the terminating plug or patch plug removed from the MG CONN OUT B jack. ***Note:*** Restore the mastergroup surveillance system to normal, if required, by releasing the operated switch on the mastergroup identification panel.