ANALOG MULTIPLEX TERMINAL EQUIPMENT
COMMON EQUIPMENT
J68953AF MASTERGROUP CONNECTOR (PASSIVE)
IN-SERVICE TESTS

1. GENERAL

1.01 This section provides the procedures for in-service measurement and, if necessary, adjustment of the overall loss of the J68953AF passive mastergroup connector (MGC) circuits.

1.02 This section is reissued to make minor corrections and to make the terminology used compatible with Sections 356-029-100 and 356-029-502. Revision arrows have been omitted. Equipment Test Lists are not affected.

1.03 The procedures of this test will measure the power levels of supergroup pilots representing the low, mid, and high portions of the basic mastergroup spectrum at the most convenient trunk input and output test access jacks. If necessary, the loss at midband is adjusted via the attenuator LEVEL ADJ control on the MGC associated with the trunk under test.

1.04 This test is written for one direction of transmission and should be repeated for the opposite direction.

1.05 If the requirements of this test cannot be met, the trunk circuit should be taken out of service and tested according to Section 356-029-502 to verify the quality of the passive MGC and its connecting trunks.

1.06 The passive MGC may be used in either of two circuit arrangements; one arrangement connects the connector trunks through the mastergroup distributing frame (MGDF) and the other arrangement connects the trunks directly to a mastergroup translator [MGT-( )] on each side of the connector. In either arrangement, trunk cabling terminates at the rear of each respective unit (MGC, MGT, or MGDF).

1.07 These tests are conducted for either connecting arrangement via test access ports (jacks) located on the faceplate of the MGT-( ). In-service test access at the MGDF is not recommended.

APPARATUS:

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

Receiving Test Equipment capable of detecting, from 75-ohm circuits, signals between 0.5 and 3.2 MHz at -80 dBm

Patch cords, as required (75 ohms)

STEP	PROCEDURE

Note: The pilot frequencies specified in this procedure should be used, if available; however, these pilots may not be available under certain operating conditions. It may be necessary to try a number of pilots to find signals (group or supergroup pilots) that are present near the low, mid, and high ranges of the basic mastergroup spectrum. Level requirements specified are applicable to all group or supergroup pilots. Group and supergroup pilot frequencies are specified in Section 359-200-520.

1 Prepare the receiving test equipment (RTE) for making 75-ohm terminated measurements at a power level of approximately -80 dBm at the frequencies shown in Table A.

2 Patch the RTE to the OUT TEST jack on the receiving MGT demodulator for the circuit under test. [See patch (A) in Fig. 1.]

3 Measure and record the power level of the low, mid, and high supergroup pilot signals listed in Table A (see note above).

Requirement: Each pilot approximately -80 dBm.

4 Patch the RTE to the IN TEST jack on the transmitting MGT modulator for the circuit under test. [See patch (B) in Fig. 1.]

5 Measure the pilot level of the midband (SG 117, 1792.08 kHz) pilot signal.

Requirement: The level measured shall be the same as measured in Step 3, ±0.1 dB.

If the requirement ***is met,*** record the level measured and proceed to Step 6.

If the requirement ***is not met,*** a slight adjustment may be made by turning the LEVEL ADJ potentiometer on the faceplate of the MGC under test. If adjustment is necessary, adjust to -80.0 dBm. If the level measured is significantly off (more than 2.0 dB), the circuit should be taken out of service and tested according to Section 356-029-502.

6 Measure and record the level of the low (SG 113, 800.08 kHz) and the high (SG 128, 3080.08 kHz) pilots.

Requirement: The level of each pilot shall be within 0.4 dB of the level measured in Step 3.

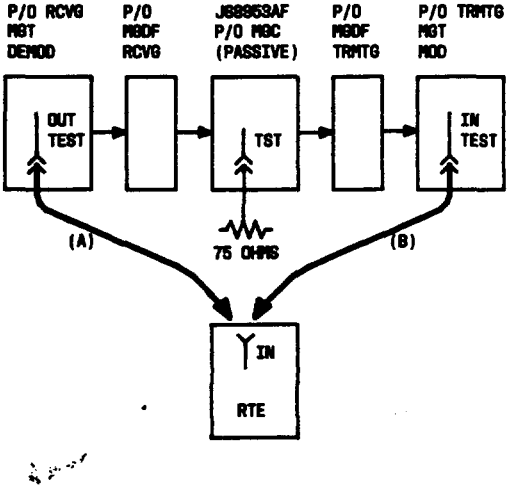
If the requirement ***is not met,*** remove the circuit from service and test according to Section 356-029-502.

Note: If an MGC filter is suspected of not properly suppressing the 2840-kHz mastergroup pilot signal or signals outside the basic mastergroup band, remove the circuit from service and test according to Section 356-029-502.

7 When all requirements have been met, disconnect all test equipment.

TABLE A

SG PILOT FREQUENCY kHz			NOMINAL POWER LEVEL	
			AT RCVG MGT DEMOD, OUT TEST JACK	AT TRMTG MGT MOD, IN TEST JACK
Low	SG 113	800.08	−80.0 dBm	−80.0 dBm
Mid	SG 117	1792.08	−80.0 dBm	−80.0 dBm
High	SG 128	3080.08	−80.0 dBm	−80.0 dBm



NOTE:
SG PILOT LEVEL AT OUT TEST AND IN TEST JACKS IS APPROXIMATELY -80.0 DBM

Fig. 1—In-Service Test Setup