"SLC*"-96 SUBSCRIBER LOOP CARRIER SYSTEM

DIGITAL LINE PRESERVICE TESTS

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1. GENERAL

1.01 This section provides procedures for performing preservice tests on an SLC-96 digital line from the Central Office Main Distributing Frame (CO MDF) to the last repeater or to the power looping repeater if the system is powered from the central office terminal (COT) and from the remote terminal (RT). Additional tests from the SLC-96 COT to the RT are contained in Task Oriented Practice (TOP) 363-202-400. The methods for testing 238A, 239A, 208-, 209-, 217-, and 251-type repeaters prior to installing them in a digital line can be found in Section 363-201-225. The SLC-96 system is described in Section 363-202-100.

1.02 Whenever this section is reissued, the reason for reissue will be given in this paragraph. This section affects the Equipment Test List (ETL)†.

1.03 Prior to starting ***terminal-to-terminal*** installation tests of TOP 363-202-400 and 363-202-401, performance of all main and protection digital lines of each SLC-96 system should be checked to the extent possible.

1.04 When the media for an SLC-96 system is T1 digital lines (with standard or low power repeaters) terminating in T1 office repeater bays, the preservice tests are performed per Section 365-224-500 which is used for T1 trunk facilities.

1.05 ***If the digital lines are equipped with optional fault-locating filters, fault-locating tests will be performed in addition to the tests of this section.*** Fault-locating tests are performed using the procedures of Section 363-202-515 (passive filters) or 363-202-516 (active filters). Appropriate records of initial fault-locating tests should be retained for future reference. If the fault-locating option is not to be used, it is recommended that the FL jacks at the RT be plugged to show that the jacks are not to be used.

2. PROCEDURES

APPARATUS:

At the Last Repeater

1—Sierra 317B T1 Line and Repeater Test Set

or

1—Sierra 417A-2 PCM Line and Repeater Test Set

At the COT MDF

1—107B Power Unit (Fig. 1)

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†This ETL has not been issued as of this date. Consult future indices to determine when this section becomes available.

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Bell System except under written agreement

APPARATUS:

1—Cord, W6P, equipped with a safety grounding clip

1—310-Type Dummy Plug

2—MDF Test Cords, according to the type of frame protectors

FRAME TYPE	TEST CORD
444 Jack	P2CY
C50	P2DC
300	2P34A
302	W2GD
303	W2GM

STEP	PROCEDURE

At the Last Repeater

1 Remove the repeater from the digital line to be tested and insert it into the 317B or 417A-2 repeater slot.

Note: Verify that the proper adapter insert in the 317B or 417A-2 is being used for the type of repeater being tested.

2 Insert the probe from the 317B or 417A-2 into the repeater slot from which the repeater was removed in Step 1.

Note: Verify that the proper probe on the 317B or 417A-2 is being used for the type of repeater housing that you have.

3 Set the TERMINATION switch on the 317B or 417A-2 to the LOOP/FROG position and operate the POWER switch to ON.

Note: The digital line to be tested is now looped back toward the CO.

At Central Office MDF

4 Verify that all patch cords and power cords have been removed from the 107B and the 107B AC switch is in the OFF position.

DANGER: The 107B must produce a high dc voltage (+135 and -135 volts to ground) to power the repeatered line under test. It is designed to prevent high voltages on the patch cords until connections have been made to the 107B jacks and the safety grounding clip has been connected.

STEP	PROCEDURE

The W6P patch cord must be used to make these connections. Use of substitute cords defeats the safety features and may prevent the 107B from powering the line under test.

5 Complete the following patch/test cord connections in the order given (see Fig. 2).

CORD TYPE	FROM	TO
According to Frame Type	MDF Protector/Connector/Jack Side 1 of Digital Line Under Test	W6P Cord Side 1 (No safety grounding clip)
According to Frame Type	MDF Protector/Connector/Jack Side 2 of Digital Line Under Test	W6P Cord Side 2 (Attach safety grounding clip to adjacent framework ground)

Note 1: Side 2 of the W6P cord is equipped with a safety grounding clip which corresponds to the knurled side of the 474A plug on the other end of the cord.

Note 2: Verify that the connections are as given in Step 5 and Fig. 2; otherwise, incorrect readings will result.

6 After the above connections are complete and have been checked, insert the 474A plug end of the W6P cord into the 107B LSI/LSO jacks, noting that the knurled side of the 474A plug is connected to the LSI jack.

DANGER: The following steps place voltages of up to 300 volts dc on the cable pairs being tested. Verify that outside plant personnel are notified before connecting the 107B power supply to the line under test.

7 Set the 107B LINE CURRENT switch to the 60 mA position.

8 Plug the 107B power cord into a convenient 117-Vac 60-Hz outlet; operate the meter switch to the V OUT position, and place the AC switch to ON.

Requirement 1: The OUTPUT ON lamp lights.

Requirement 2: The meter indicates between 20 and 270 volts (0 to 320V scale).

9 Operate the meter switch to the -I position and note the meter indication.

Requirement: The meter indicates between 50 and 70 mA.

Note: No current reading indicates an open line.

10 Operate the meter switch to the +I position and note the meter indication (lower scale).

STEP	PROCEDURE

Requirement: The meter indication does not change more than one division (5 mA) from that of Step 9.

Note: A difference in meter readings of more than 5 mA indicates a cable pair leakage to ground. Refer cable trouble to the proper work group.

11 Depress the TRANSMIT ERRORS button on the 107B.

Requirement: The ERRORS lamp flashes repeatedly, indicating transmission around the looped line.

Note: If this requirement is not met, check the test connections and test equipment, then refer to Section 363-202-515 or 363-202-516 for digital line trouble-locating information.

12 Insert a dummy plug into the 107B FL SIG jack.

Requirement: The PULSES and ERRORS lamps remain extinguished while the dummy plug is in the FL SIG jack.

13 Remove the dummy plug from the FL SIG jack.

Requirement: The PULSES lamp lights continuously, and the ERRORS lamp does not flash more than five times in any 30-second period.

14 Set the 107B POWER UNIT AC switch to the OFF position.

15 Unplug the power cord of the 107B from the 117-Vac outlet.

16 Repeat Steps 1 through 15 for all main and protection digital lines to be tested.

17 When testing is completed, turn the 107B AC switch to the OFF position, and remove all connections at the MDF and at the last repeater location.

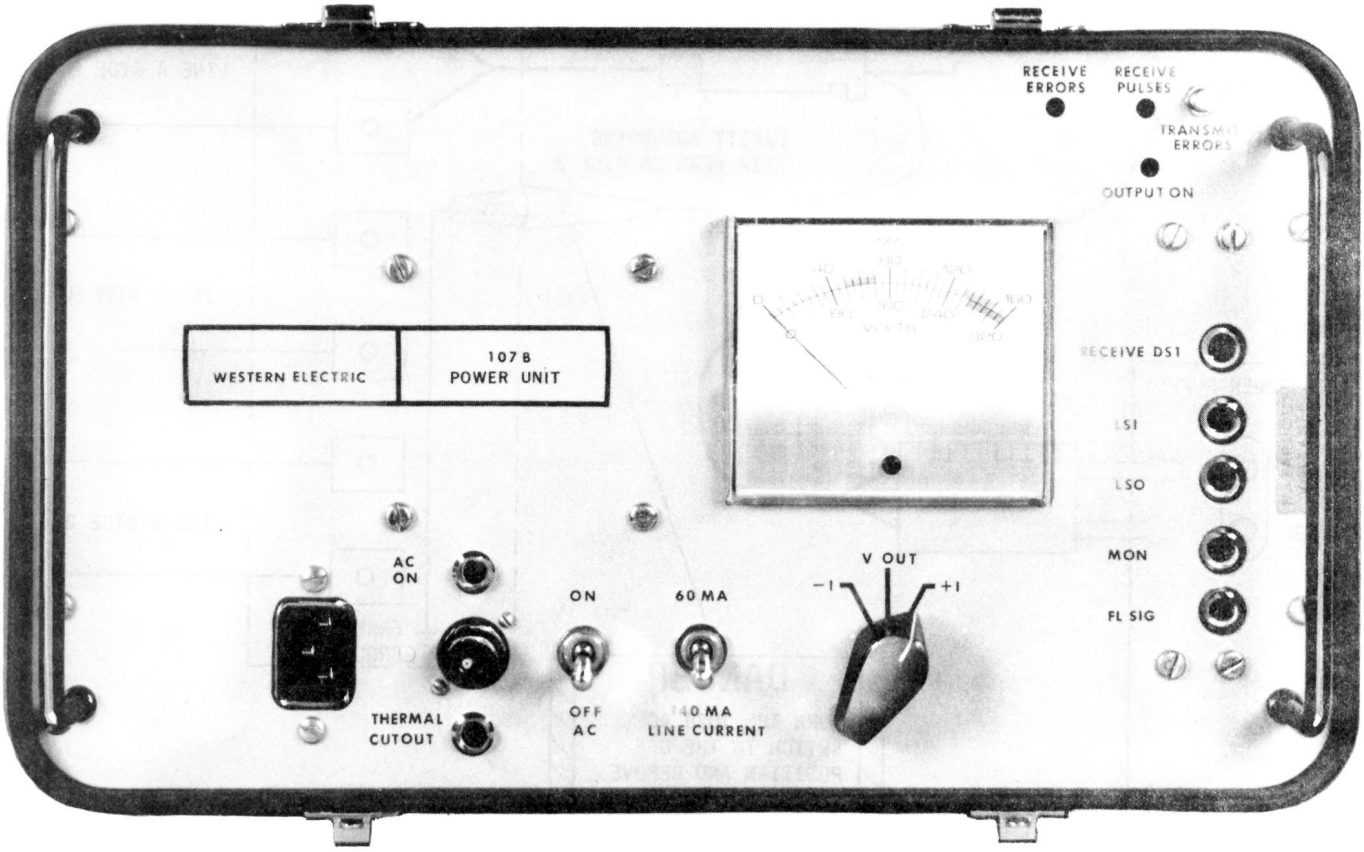

Fig. 1—107B Power Unit

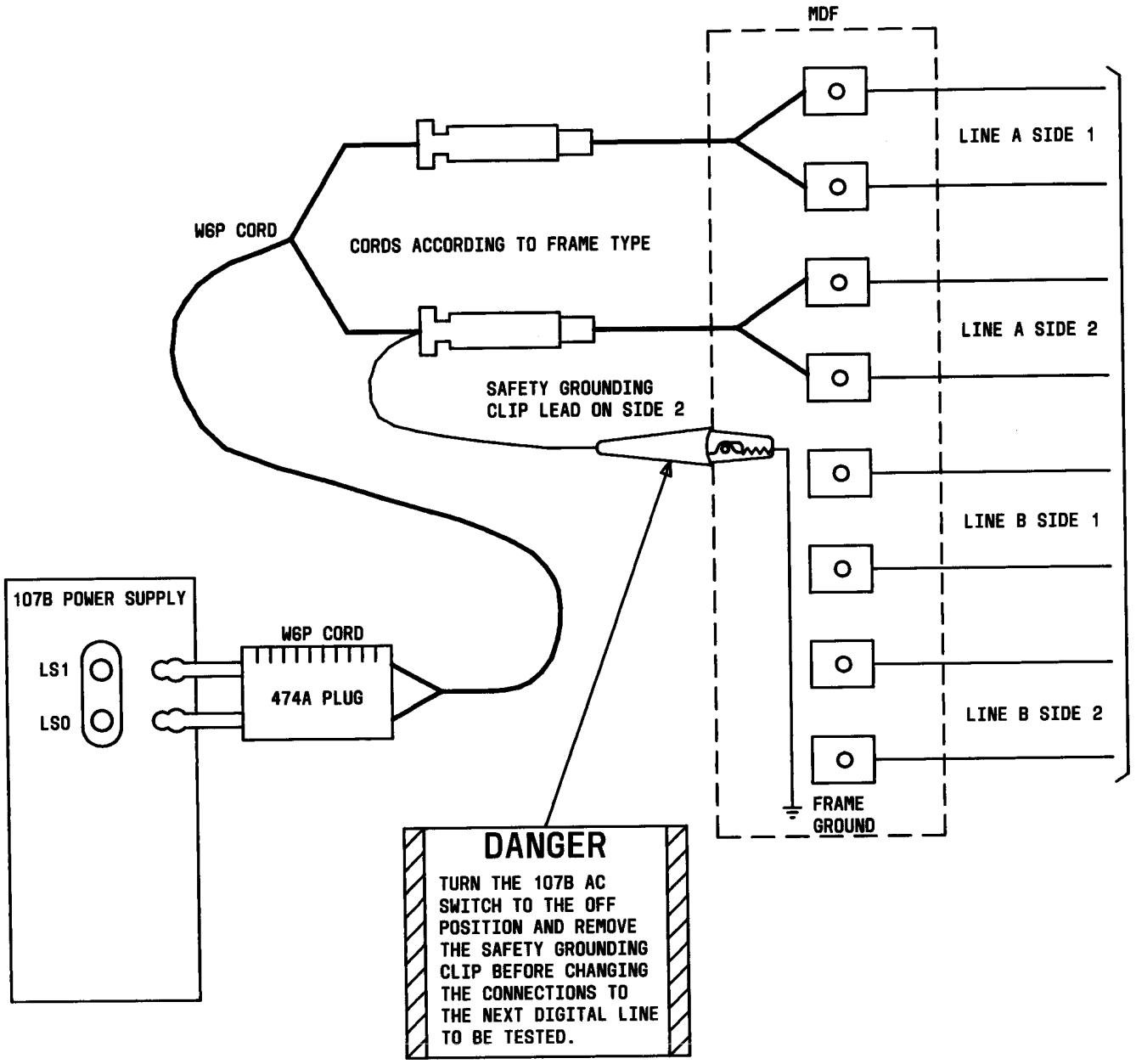

Fig. 2—Test Arrangement at MDF Using the 107B Power Unit