DIMENSION® 600/2000 PBX
STATION TO LINK TEST CALL
(PROC 552)

1. GENERAL

1.1 This section is issued in order to make available the information contained in the Administration and Maintenance Manual, 500 - 497, PROC 552.

1.2 The attachment provides procedures for testing and troubleshooting link circuits between modules.

ATTACHMENT

PROC 552 (6 pages)

Reason for Issue:
New Section

Manager, Denver PBX PECC

PROCEDURE 552 - STATION TO LINK TEST CALL

A. DESCRIPTION

Procedure 552 provides the capability to transmit a miscellaneous tone through a link pair to the test line.

Procedure 552 is used primarily to troubleshoot wiring problems (connectors, cables, and cross-connect field) between the link pair.

Three tests are available:

- Test 1 - Tests all links in a module.
- Test 2 - Tests a specific receiving link.
- Test 3 - Tests a specific transmitting link.

TEST 1:	TEST 2:	TEST 3:	NOTES:	ERROR CODE:	STATE:
TESTS ALL LINKS IN A MODULE. USE 'NEXT CIRCUIT' TO OBTAIN THE NEXT UNTESTED RECEIVING LINK IN THE MODULE. USE 'NEXT UNIT' TO OBTAIN THE NEXT UNTESTED RECEIVING LINK & TEST LINE IN NEXT MODULE.	TESTS A SPECIFIED LINK (ADVANCES THROUGH RCVG LINKS). USE 'NEXT CKT' TO OBTAIN THE NEXT RCVG LINK IN THE MODULE. USE 'NEXT UNIT' TO OBTAIN RCVG LINK & TEST LINE IN NEXT MODULE.	TESTS A SPECIFIED LINK (ADVANCES THROUGH TRMTG LINKS). USE 'NEXT CKT' TO OBTAIN NEXT TRANSMITTING LINK IN MODULE. USE 'NEXT UNIT' TO OBTAIN TRANSMITTING LINK IN NEXT MODULE.	1. A DEFAULT TEST LINE & LINK ARE DISPLAYED 2. BEFORE 'EXECUTE' IS OPERATED THE MODULE NO. OF THE TEST LINE MUST MATCH THE RECEIVING LINK MOD NO 3. AFTER 'EXECUTE' MISC TONE IS HEARD	62-SEE NOTE 2 PAD STATUS: 0=PAD OUT 1=PAD IN	0=TEST LINE OR LINK NOT AVAILABLE 1=TEST IN PROGRESS 4=ALL LINKS IN MODULE TESTED 5=ALL LINKS IN SYSTEM TESTED

USE 'BUSY OUT' & 'RLS BUSY OUT' TO CHANGE BUSY OUT STATUS OF LINK. USE 'NEXT DATA' TO CHANGE PAD STATUS.

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PROC 552

	TEST LINE EQUIPMENT LOC							TEST 1&2					TEST 3							
TEST NO	MODULE	CABINET	CARRIER	SLOT	CIRCUIT	PAD STATUS		RECEIVING LINK EQUIP LOC					TRANSMITTING LINK EQUIP LOC					MTCE BUSY STAT	STATE	
								MODULE	CAB	CARR	SLOT	CKT	MODULE	CAB	CARR	SLOT	CKT			
1	2	3	4	5	6	7		8	9	10	11	12	13	14	15	16	17	18	19	
2.		0.	1.	1.		9.	0.	0.		0.	0.	2.		5.	1.		1.	0.	2.		5.	1.	0.	1.		552

FIELD 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

B. FIELD DEFINITIONS AND CODES

Field	Code	Definition
1	1-3	Test number
Test line equipment location:		
2	0-24	Module number
3	0-4	Cabinet number
4	0-4	Carrier number
5	4-28	Slot number
6	0-3	Circuit number
7		Pad status:
	0	Pad out
	1	Pad in
Receiver link equipment location:		
8	0-24	Module number
9	0-4	Cabinet number
10	0-4	Carrier number
11	04-08, 10-15, 17-21, 23-28	Slot number in link carrier (LC100)
12	0-3	Circuit number
Transmitting link equipment location:		
13	0-24	Module number
14	0-4	Cabinet number
15	0-4	Carrier number
16	04-08, 10-15, 17-21, 23-28	Slot number in link carrier (LC100)
17	0-3	Circuit number

B. FIELD DEFINITIONS AND CODES (Contd)

Field	Code	Definition
18		Maintenance busy status:
	0	Not busy.
	1	Busy.
19		State:
	0	Test line or link not available.
	1	Test in progress.
	4	End of module test. All links in the module have been raised.
	5	End of system test. All links in the system have been tested.

C. TEST PROCEDURES

A list of station to link test call tests, what each one does, and how each is run follows:

Call in Procedure 552:

PROC NO.; 552; ENTER

Test 1 is automatically selected. Depressing the NEXT TEST key repeatedly advances the procedure to the desired test.

CAUTION

Before a test can be run (EXECUTE key depressed), the module number of the test line (field 2) must match the module number of the originating link (field 8). If they do not match, when EXECUTE is depressed, special error code 82 is displayed.

Test 1:

Test 1 tests all links in a module.

When Test 1 is called in, default test line and receiving link equipment locations and pad status are displayed in fields 2 and 7 respectively. The module number in field 2 is flashed, indicating an optional entry. Either the circuits displayed can be tested or other circuits can be selected.

Circuit selection can be accomplished as follows:

1. To select another test line, enter the test line equipment location; eg: (Test Line Module); ENTER; (Cabinet); ENTER; (Carrier); ENTER; (Slot); ENTER; (Circuit); ENTER

2. To select another receiving link, use the change field sequence to enter the receiving line equipment location; eg:

   CHANGE FIELD; 8; ENTER; (Receiving Link Mondule); ENTER; (Cabinet); ENTER; (Carrier); ENTER; (Slot); ENTER; (Circuit); Enter

Depressing the NEXT CIRCUIT key displays next untested receiving link in the module and its associated transmitting link in another module. Depressing the NEXT UNIT key displays the next untested receiving link in the next module and its associated transmitting link in another module. Using both NEXT CIRCUIT and NEXT DATA, all untested receiving and transmitting link pairs in the system can be displayed.

To start the test, depress the EXECUTE key. EXECUTE sends a miscellaneous tone from the transmitting link over the link circuit to the receiving link. If one link circuit is operating properly, the tone can be heard over the test line that is connected to the receiving link. The state of the test is displayed in field 19.

Depressing the NEXT DATA key changes the LC100 pad status. The change can be monitored by listening over the test line while the pad status is changed back and forth. A detectable change in volume should be heard.

Use BUSY OUT to change the status of the circuit displayed, if necessary, as follows:

STOP; BUSY OUT

Use RLS BUSY OUT to change the status of the circuit displayed, if necessary, as follows:

STOP; RLS BUSY OUT

Test 2:

Test 2 tests a specified receiving link.

When Test 2 is called in, default test line and receiving link equipment locations and pad status are displayed in fields 2 through 6, 8 through 12 and 7 respectively. The module number in field 2 is flashed, indicating an optional entry. Either the circuits displayed can be tested or other circuits can be selected.

For circuit selection follow steps 1, 2 and 3 from Test 1.

C. TEST PROCEDURES (Contd)

The NEXT CIRCUIT and NEXT UNIT keys can be used to display all the receiving links in the system and their associated transmitting links. NEXT CIRCUIT displays the next receiving link in a module. NEXT UNIT displays the next receiving link in the next module.

To start the test, depress the EXECUTE key. EXECUTE sends a miscellaneous tone from the transmitting link over the link circuit to the receiving link. If the link circuit is operating properly, the tone can be heard over the test line that is connected to the receiving link. The state of the test is displayed in field 19.

Refer to Test 1 for operation of the NEXT DATA, BUSY OUT and RLS BUSY OUT keys.

Test 3:

Test 3 tests a specific transmitting link.

When Test 1 is called in, default test line and receiving link equipment locations and pad status are displayed in fields 2 through 6, 13 through 19 and 7 respectively. The module number in field 2 is flashed, indicating an optional entry. Either the circuits displayed can be tested or other circuits can be selected.

For circuit selection follow Steps 1, 2 and 3 from Test 1.

The NEXT CIRCUIT and NEXT unit keys can be used to display all the transmitting links in the system and their associated receiving links. NEXT CIRCUIT displays the next transmitting link in a module. NEXT UNIT displays the next transmitting link in the next module.

To start the test, depress the EXECUTE key. EXECUTE sends a miscellaneous tone from the transmitting link over the link circuit to the receiving link. If one link circuit is operating properly, the tone can be heard over the test line that is connected to the receiving link. The state of the test is displayed in field 19.

Refer to Test 1 for operation of the NEXT DATA, BUSY OUT and RLS BUSY OUT keys.

D. REPAIR GUIDE

When a station to link test call failure is indicated, the following steps should be performed in the order shown to isolate and repair the faulty unit:

Step **Isolation Procedure**

1. Execute the test and listen for the miscellaneous tone on the test line.

2. If the tone is not present, monitor the transmitting and receiving link circuits (see LC100 test point information) for tone transmission, using a 249A adaptor and 1013-type handset, or a KS-20599.L4 digital voltmeter. With the voltmeter set on the 10-volt ac scale, 0.04 to 0.15 volts ac should be measured across the terminals of an off-hook 500-type telephone set (or 600 ohms).

3. Refer to Table 552-1 for symptoms that may be observed and corresponding corrective action.

Table 552-1. Station to Link Test Call Repair Procedure

Failure Indication	Corrective Action
Tone is present at both link circuits.	Replace the receiving link LC100.
Tone is not present at either link circuits.	Replace the transmitting link LC100.
Tone is present at the transmitting link circuit, but not at the receiving link circuit.	Check the cables and cross-connect field.

END