DIMENSION® 2000 PBX
CONFERENCE CIRCUIT BOARD TEST
(PROC 571)

CONTENTS

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1. GENERAL

1.1 Procedure 571 should be used when trouble with a conference call has been reported.

1.2 Procedure 571 is used to:

a. Test all conference circuit pack(s) (LC06B) port-to-port transmissions and display features (see Note 1).

b. Connect a test line (TST L) and tone monitor (see Note 2) to each of the conference output ports or to the tone source (see Note 1).

c. Manually step through each of the 56 port-to-port transmission connections to allow extended test time listening intervals.

Notes: 1 - Refer to Customer Order Document (COD) for LC06B slot(s) assignment and Test Line (TST L).

2 - Tone monitor is internal to the LC204/LC04.

1.3 Procedure 571 provides two testing modes:

Test 1 - Test each of the 56 port pairs for the displayed conference circuit pack (fields 10-13, Figure 1) using a selected tone source.

Test 2 - Tests transmission through a single conference port pair, allows extended test line listening intervals for testing each of the 56 port pairs of a displayed circuit pack.

1. GENERAL (Cont'd)

1.4 During the test (Test 1 or 2), craftsperson can listen to the port-to-port transmission of the tone (field 8) through a telephone set.

1.5 Fields are defined in Table A (see Note 3, Figure 2).

Note 3 - Refering to codes for field 8:

Dial Tone (DT)	=	350 and 440 Hz
Recall Tone (RDT)	=	350 and 440 Hz
Miscellaneous Tone (MT)	=	440 Hz
Busy Tone (BT)	=	480 and 620Hz
Reorder Tone (RT)	=	480 and 620 Hz
Audible Ringback Tone (ART)	=	440 and 480 Hz
Special Audible Ringback Tone (SART)	=	440 and 480 Hz

TABLE A

FIELD AND CODES DEFINITIONS

Field	Code	Definition
1	1-2	Test number
+ Test Line Equipment Location:		
2	0-24	Module number
3	0-4	Cabinet number
4	0	Line group control carrier number
	1-4	Line port carrier number
5	5, 7-10, 12-18	Slot number in line group control carrier
	2-19, 11-18	Slot number in line port carrier
6	0-3	Circuit
7		Test line I/O connection:
	0	Tone, test line, and tone monitor connected together
	1	Tone connected to conference input port and test line and monitor connected to conference output port

TABLE A (Cont'd)

Field	Code	Definition
8		Tone applied to conference input port:
	0	Dial tone
	1	Recall tone
	2	Miscellaneous tone
	3	Intercept tone
	4	Busy tone
	5	Reorder tone
	6	Audible ringback tone
	7	Special audible ringback tone
9	0-7	Conference port selected for input
Conference Circuit Pack Equipment Location:		
10	0-24	Module number
11	0-4	Cabinet number
12	0-4	Carrier number
13	2-9	Slot in trunk port carrier
	6-12, 15-20	Slot in module control and trunk port carrier
14	0-7	Conference port selected for tone monitor and test line (output)
15		Fault count:
	0	No failure
	1-56	Failure count
	84	Test line connect failure
	85	Tone connect failure
	86	Tone monitor connect failure
	92	Unable to seize trunk
	93	Conference port connect failure
	94	No conference port match

Field	Code	Definition
16	*	Total number of circuit packs in the system
17	*	Displayed conference circuit pack index number

+ A default test line is provided which may be changed if desired. The new test line must be in service and not busied out.

* Encode range dependent on system configuration.

I/O - Input/Output

2. RECORD

2.1 Form SD-97-1313 is required for recording the results of this test.

3. TEST EQUIPMENTS

AMT.	ITE	DESCRIPTION
1	4208A	Telephone Handset
1	9153L	Cord Assembly

4. CIRCUIT PACK(S) THAT MAY BE REQUIRED

AMT.	LC NUMBER	DESCRIPTION
1	LC06B	Attendant conference circuit

5. TEST PROCEDURE

5.1 PROC NO., 571, ENTER - Loads program into memory from tape. Test 2 is automatically selected (default test). Depressing the NEXT TEST key repeatedly will increment the Test number in field 1 to desired test.

5.2 Test 1:

Test 1 steps through each of 56 different input port-to-output port transmissions and increments the fault count (field 15) each time the tone sampled at the output port is below the tone monitor threshold. This test steps to a new input port-to-output port measurement every 0.5 seconds for an interrupted tone.

When Test 1 is called in, default test line and conference circuit pack equipment locations are displayed in fields 2 through 6 and 10 through 13, respectively. The module number in field 2 is flashed, indicating an optional entry field. Either the circuits displayed can be used or other circuits can be selected.

5. TEST PROCEDURE (Cont'd)

5.2.1 Circuit selection can be accomplished as follows:

1. To select another test line, enter the new test line equipment location in fields 2 through 6; e.g.:

   (Test Line Module); ENTER; (Cabinet); ENTER; (Carrier); ENTER; (Slot); ENTER; (Circuit); ENTER

   Note: The new test line must be in service and not busied out. If only field 2 is changed, a default test line for the new module will be provided.

2. To select another conference circuit pack (LC06B) for testing, use the CHANGE FIELD sequence to enter the new equipment location in fields 10 through 13; e.g.:

   CHANGE FIELD; 10; ENTER; (Module); ENTER; (Cabinet); ENTER; (Carrier); ENTER; (Slot); ENTER; (Circuit); ENTER

   Depressing NEXT CIRCUIT selects another conference circuit pack for testing, displaying the next conference circuit pack in the system.

5.2.2 To start the test, select Test 1 and depress the EXECUTE key. During test execution the MAAP WAIT indicator light turns on and the following fields are displayed:

Field	Contents
1	Test number
2-6	Test line equipment location
7	Test line I/O connection
8	Selected tone input
9	Conference circuit pack port selected for tone input
10-13	Equipment location of conference circuit pack currently being tested
14	Conference circuit pack output port currently selected for tone output, not equal to input port number
15	Fault count; incremented by one each time a port-to-port transmission failure is detected

5.2.2 (Cont'd)

Field	Contents
16	Total number of conference circuit packs in the system.
17	Index number of conference circuit packs currently being tested.

While the test is being executed, the port numbers displayed in fields 9 and 14, go through their range of values, 0 through 7. The fault count in field 15 is incremented by one, each time a fault for each input-to-output port combination is detected.

On conclusion of the test (WAIT indicator off), the failure count is displayed in field 15. A 0 displayed in field 15 indicates that no port-to-port transmission errors have occurred.

5.2.3 To select another conference circuit pack for testing, depress the NEXT CIRCUIT key and press EXECUTE to begin the test. The STOP key can be used to stop execution of Test 1 and Test 2.

5.2.4 With each conference circuit pack selected for testing, a defult test line in the same module as the conference circuit pack, is displayed in fields 2 through 6. Test 1 should be executed for each conference circuit pack in the system.

5.2.5 The test line can be used to listen to the tone transmission through each conference port pair.

Note: Changes in the tone amplitude can be expected when listening with the test line because the gain between conference circuit pack trunk ports and line ports is different.

Entering a 0 in field 7 connects the test line and tone monitor to the tone source time slot, by passing the conference circuit pack. This feature of Test 1 can be used to determine whether the tone source and tone monitor are functioning properly.

5. TEST PROCEDURE (Cont'd)

5.3 Test 2:

Test 2 is used to continuously test transmission through a single selected conference circuit port pair. A selected tone (field 8) is applied to the conference circuit input port displayed in field 9. The tone monitor and test line are normally connected to the conference outpout port (field 7=1) displayed in field 14. When Test 2 is entered, the first conference circuit pack to be tested, the default test line, the first conference port pair, and the tone source and tone monitor connections are displayed in fields 2 and 14. The tone source number in field 8 is flashed, indicating an optional entry field. Test 2 can be executed with the field entries displayed, or with entries changed in the same manner as for Test 1. Depressing NEXT CIRCUIT repeatedly steps through all conference circuit packs in the system and their associated test lines. Depressing NEXT DATA repeatedly steps through all the conference circuit pack input ports displayed in field 9.

5.3.1 To start the test, select Test 2 and depress the EXECUTE key. During test execution, the MAAP WAIT indicator turns on and the following fields are displayed:

Field	Content
1	Test number
2-6	Test line equipment location
7	Test line I/O connection
8	Selected tone input
9	Conference circuit pack port selected for tone input
10-13	Equipment location of conference circuit pack currently being tested
14	Conference circuit pack output port
15	Fault count: one displayed indicates transmission failure
16	Total number of conference circuit packs in the system
17	Index number of conference circuit pack currently being tested

5. TEST PROCEDURE

5.3.2 A failure is indicated for the displayed port pair by a 1 displayed in field 15. The test tone remains connected to allow listening with the test until the STOP or NEXT DATA key is depressed.

5.3.3 Depressing the NEXT DATA key advances the test through all the conference circuit pack input ports in field 9 (0 through 7). The NEXT DATA key can be used while Test 2 is running. A successful completion of this test is indicated by a fault count of 0 in field 15.

6. TROUBLESHOOTING AIDS

6.1 Following are lists of steps to be followed:

1. Execute Test 1 for the LC06B conference circuit pack that is displayed when this procedure is called in or when the RESET key is depressed.

2. If a fault count of 0 is displayed in field 15, use NEXT CIRCUIT to select the next LC06B circuit pack.

3. Run Test 1 on all LC06B circuit packs in the system or until a non-zero failure is displayed.

4. If a non-zero fault count is displayed, replace the LC06B circuit pack indicated.

5. Repeat Test 1 to verify that no further failures have occurred. If no other failures are detected, a test line can be used to listen to each of the 56 port-to-port transmissions. Some moderate variations in tone amplitude will be heard because ports 6 and 7 have a gain amplitude fixed for trunk connections, while other ports have gain amplitude set for line connections. If one or more port-to-port transmissions sound noticeably lower in amplitude, replace the associated LC06B circuit pack and try the applicable port-to-port transmission test again.

6. If a port-to-port transmission sounds marginally lower in amplitude, run Test 2. Test 2 allows the listening interval to be controlled by toggling the test on and off, using EXECUTE and STOP. NEXT DATA can be depressed repeatedly to step through each of the other conference ports to input a tone comparative transmission tests.

   Note: Other test tones can be selected using field 8. This can result in a lower level test signal in cases such as the Busy or Reorder tones. These tones are approximately 10dB lower in amplitude than the Dial tone.

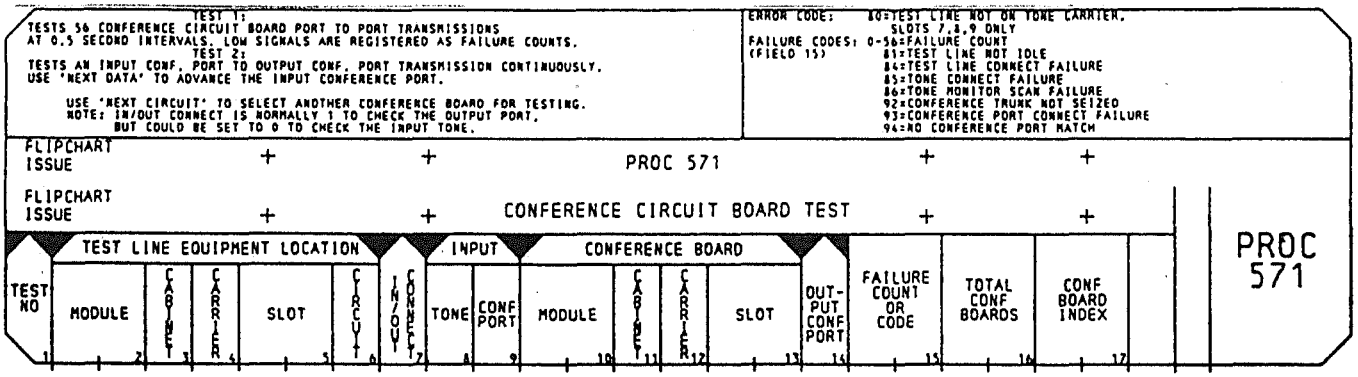

FIGURE 1 - PROCEDURE 571 FLIPCHART

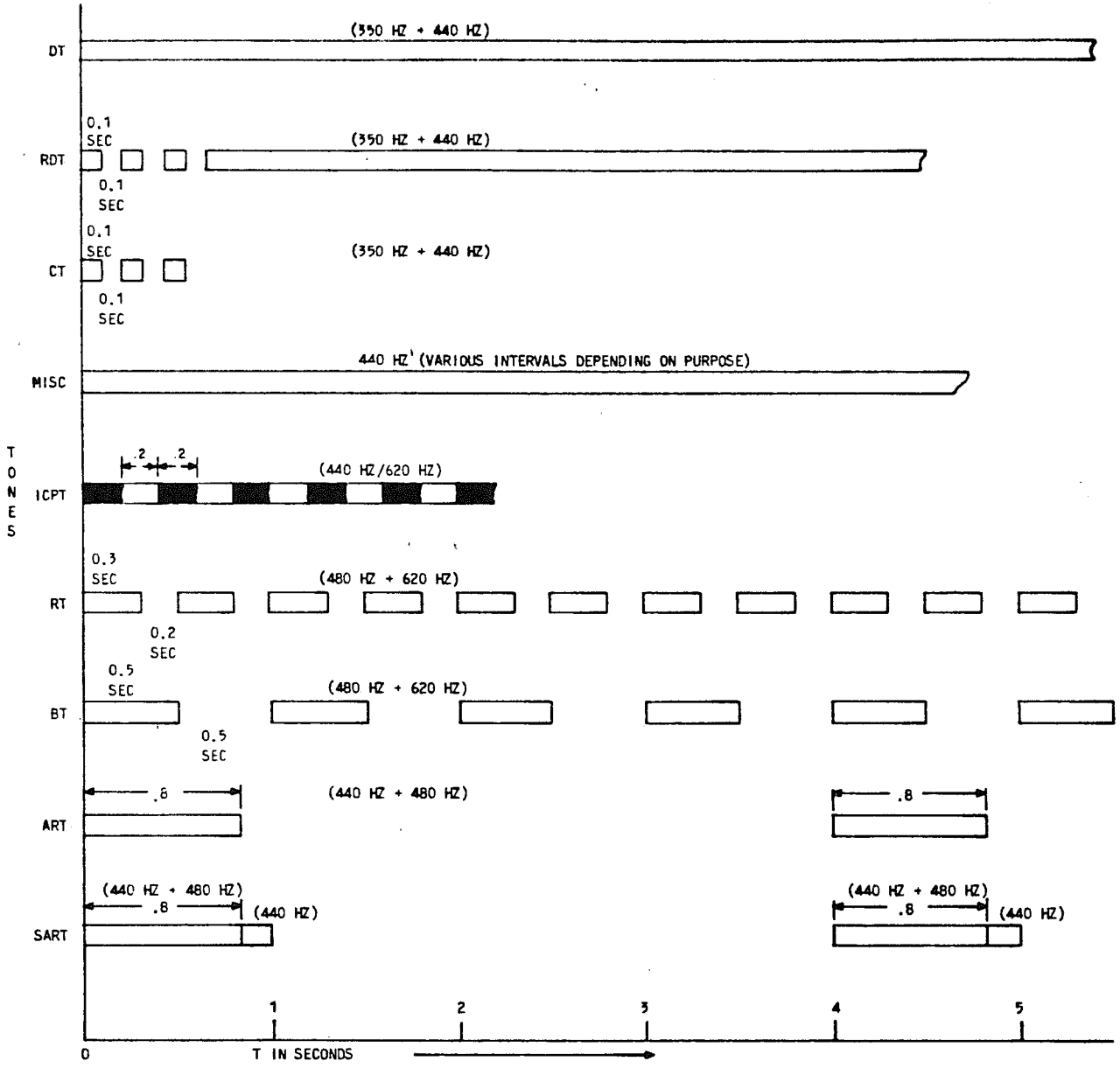

FIGURE 2 - TONES AND RINGING

Reason for Issue:
New Section

Manager, Denver PBX PECC