Installation Engineering Handbook 281
Western Electric
Denver Works

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DIMENSION® 2000 AND CUSTOM PBX
DID TRUNK TESTING
(USING LC9 CIRCUIT PACK)

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1. GENERAL

1.1   This section describes the procedures to be followed to test Direct Inward Dialing trunks on the DIMENSION 2000 and Custom PBX. This will be accomplished by using the ITE-5735 PBX Trunk Test Set with its associated connecting cords.

1.2   The ITE-5735 Trunk Test Set is a loop-around type set, that is: testing is accomplished by dialing out on 1 trunk which is looped back into another. The DID trunks to be tested in this section will always be the incoming trunk (LC9 circuit pack).

1.3   The outgoing trunk (an LC8 CP) will be permanently associated with the originating test station by use of Procedure 551 at the MAAP panel.

1.4   All DID trunks equipped, should be tested whether or not they will be used initially. Some administrative changes to the program may be necessary to accomplish this.

1.5   If the DID trunks are defined to accept TOUCH-TONE, the originating station telset should be a TOUCH-TONE instrument. Similarly, rotary dial only defined trunks should be tested from a rotary dial instrument. The ITE-5735 Set will repeat either type of pulsing.

2. RECORDS

2.1   From SD-97-1313 should be used to record the results of these tests.

3. TOOLS AND TEST EQUIPMENT

3.1   1 ITE-5735 Trunk Test Set, PBX
      1 ITE-9259 Connecting Cord (part of
                  ITE-5735 set)
      1 Rotary Dial Telephone Set (500DR
         or equivalent)
      1 Touch-Tone Dial Telephone Set
         (1500D or equivalent)

4. DRAWINGS

4.1   The following drawings may be required to test and clear troubles on the DID trunks:

      SD-1E480-01
      Customer Order Document (COD)

5. PREPARATION

5.1   .Locate the Trunk Test Set near the cross connect field and plug it into a source of 117VAC. The power switch is on the back panel of the set. Connect GRD-1 or GRD-2 to System ground (not power ground). It may be necessary to run a temporary wire from the 201 cabinet ground bar for this connection.

5.2   Locate the trunks to be tested on the cross connect field and be sure they are all defined in the administrative section of the program. If there are any spare DID trunk packs, these should also be defined and tested. After test, the spare trunk definitions must be removed from the program. Define the spare trunks the same as the trunks that are to be used at cutover.

5.3   If there is a large number of trunks to be tested, testing can be expedited if 3 people perform the tests. One person is stationed at the cross connect field to move the 961C Connectors from trunk to trunk and to call out the state of test set lamps (if they cannot be seen by the "dialers"). Two other people dial and answer the calls set up through the trunks and the test set. The trunk set has 2 test circuits so 2 trunks may be tested simultaneously.

5.4   By locating the trunk set at the cross connect field the trunk and all installer wiring is tested. This is as electrically close as it is possible to get to the serving central office without actually connecting the trunk to a CO cable pair. If there is a voice repeater between the trunk and the cross connect field, it too will be tested.

5.5   If DID trunks are defined to receive rotary dial only, they should be so tested. If TOUCH-TONE is defined, set up the test calls from a TOUCH-TONE telephone.

5.6   An example of the use of Procedure 551 to associate a line with a particular outgoing trunk each time the access code is dialed, is described on page 3.

6.   PROCEDURE

6.01   Connect a telset to a non-restricted line. If the DID trunks are defined as TOUCH-TONE, use the 1500J set. For dial pulse trunks, use the 500JR set.

6.02   At the MAAP, associate this line with 1 outgoing trunk using Procedure 551.

6.03   At the cross connect field, connect A1 or C2 of the ITE-9259 Cord to the outgoing trunk pair run from the CSS 201 trunk carrier. The red half of the 961C connector is on the right.

6.04   Plug the ITE-9259 Cord into the trunk set; plug the trunk set into an AC receptacle; set the REV BATT switch to OFF; set the MODE switch to DID; set the RESET switch to lock, set the MTR STROKE switch to OFF and turn on the set (switch on back of set). No lamps should light.

6.05   At the cross connect field, connect B1 or D2 of the 961C Connector (red side to the right) of the ITE-9259 Cord to the first DID trunk to be tested. If A1 was connected in 6.03, B1 must be used here. Similarly, C2 in 6.03 dictates use of D2 here.

6.06   From the test telephone connected in 6.01 above, dial the access code of the outgoing trunk. The SEIZE lamp on the trunk set should light and the LED on the DID trunk pack under test should also light.

6.07   Dial or TOUCH-TONE convenient station defined in the system as accessible from the DID trunks (unrestricted). The other test telset may be connected for this purpose. The called station should ring (two ring groups) and audible ringback should be heard by the calling station.

6.08   Answer the called station. Ringing should cease, a talking circuit should be established and the ANSWER lamp on the trunk set should light. Leave, the connection up at least 20 seconds.

6.09   Hang-up both test telsets. The SEIZE and ANSWER lamps on the trunk set should go dark. The DID circuit pack LED should also go dark.

6.10   Repeat 6.05 thru 6.09 for all the DID trunks in turn until all have been tested.

6.11   On the last DID trunk in each trunk group, dial the listed directory number (LDN). Verify that the console loop lamp and the audible signal responds and that the correct alpha numeric display (or correct ICI lamp) lights.

6.12   Answer the call at the console. The ANSWER lamp on the trunk test set should light and a talking connection should be established to the calling instrument.

6.13   Release the call by hanging up the calling station and by depressing the RELEASE key on the console. The lamps on the trunk set and in the DID trunk pack should go dark.

PROCEDURE 551 - STATION TO TRUNK TEST CALL

TEST NUMBER	TEST LINE EQPMT LOCATION					TEST 2 TRUNK EQUIPMENT LOCATION					TEST 1	TEST 3			
	MODULE	CABINET	CARRIER	SLOT	CKT	MODULE	CABINET	CARRIER	SLOT	CKT					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

A   B   C

A. ENTER 2 IN FIELD 1.

B. ENTER COMPLETE OUTGOING TEST LINE LOCATION IN FIELDS 2 THRU 6.

C. ENTER COMPLETE OUTGOING TEST TRUNK LOCATION IN FIELDS 7 THRU 11.

7.   TROUBLE INVESTIGATION

7.1   If the SEIZE lamp does not light on
            the trunk set, first check the LED
on the outgoing trunk pack defined for use in
this test. If it does not come on when the
access code is dialed, check for error in use
of Procedure 551 or an incorrect access code.

7.2   If the outgoing circuit pack LED will
            light but the trunk set SEIZE lamp
will not, check for open wiring or split pairs
from the trunk carrier to the cross connect
field. If the trunk set SEIZE lamp can be
made to light by grounding the RING test point
on the outgoing trunk circuit pack, the circuit
pack may be defective.

7.3   If the ANSWER lamp on the trunk set
            lights before the called station
answers, check for a reversed pair from the
cross connect field to the DID trunk carrier.

7.4   If the SEIZE lamp on the trunk set
            lights on seizure but the DID trunk
pack LED does not, wiring may be open, pairs
may be split or the DID trunk may be defective.

7.5   If an incorrect number is rung, several
            points to check are:

A.   Defective dial on calling telset.
      Change the instrument.

B.   Defective outgoing trunk pack.
      Change out circuit pack.

C.   Defective pulse repetition in trunk
      set. Use other circuit and later
      return set to stockkeeping location
      with note that it is defective.

D.   Defective DID pack. Change circuit
      pack.

E.   Occasional failures occurring at
      regular intervals (1 call failure out
      of 5 for example) may be caused by
      a defective incoming register.

Reason for Issue:
  New Section

Manager, Denver PBX PECC