DIMENSION® 2000 AND CUSTOM PBX TOUCH TONE® REGISTERS TEST (LC10B AND LC54B)

CONTENTS

1. GENERAL

1.1 This section provides the procedure of testing all equipped TOUCH TONE Registers (LC10B and LC54B) in the DIMENSION PBX.

1.2 There is no requirement that this section has to be performed unless the system is equipped with TOUCH TONE Register(s), LC10B and LC54B.

2. RECORDS

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

3. TOOLS AND TEST EQUIPMENT

3.1 Tools

3.11 2 - 249A Telephone Set Adapter
2 - 2500 Type TOUCH TONE Telephone Set, or equivalent
1 - ITE 4208A Telephone Hand Set
1 - ITE 9153L Cord Assembly

3.2 Test Equipment

3.21 1 - ITE 5654 Logic Probe
1 - ITE 5632 Digital Voltmeter, or equivalent

4. DOCUMENT AND DRAWING

4.1 Customer Order Document - COD SD1E480-01

5. PROCEDURE

5.01 Choose a station (not console) with TOUCH TONE and non-termination Line Class of Service from the COD, Station Line Assignments and Class of Service Assignments Sections. This station is defined as a Test Line.

NOTE: For a system equipped with all rotary station sets, it is necessary for the Installer to temporarily change one of the Class of Services from rotary to TOUCH TONE by using PROC 010. Reinstate the Class of Service after this section is completed. Do not enter the temporary Class of Service change onto the tape manually or during 23 hour tape update.

5.02 From the Station Line Assignments of COD, choose one valid directory number from the list below and call it Station B.

5.021 For a three digit numbering plan system:

159 249 357 429 519 618 726 816 915
195 294 375 492 591 681 762 861 951
168 267 348 438 537 627 735 834 924
186 276 384 483 573 672 753 843 942

5.022 For a four digit numbering plan system:

T159 T249 T357 T429 T519 T618 T726 T816 T915
T195 T294 T375 T492 T591 T681 T762 T861 T951
T168 T267 T348 T438 T537 T627 T735 T834 T924
T186 T276 T384 T483 T573 T672 T753 T843 T942

T = any valid thousand number of a four digit dialing plan.

5.03 Connect a 2500 Type TOUCH TONE Telephone Set to the test line using a 249A Adapter (see FIG. 1). Place the test line on-hook.

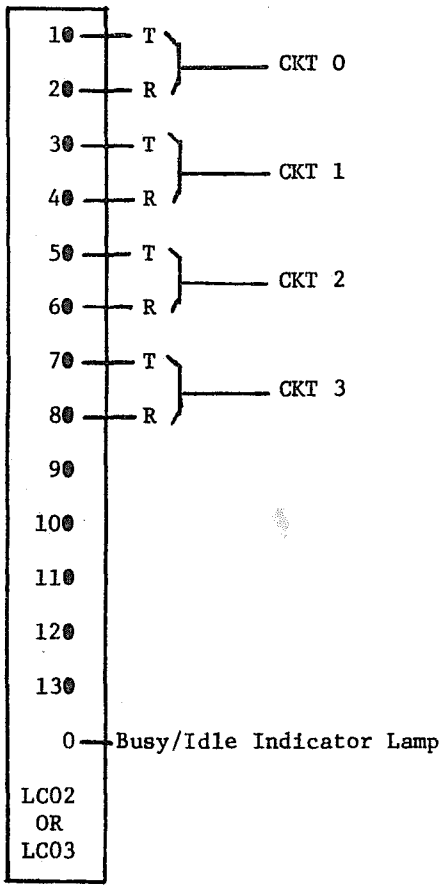

FIG. 1

5.04 Connect a 2500 Type or ITE-4208A Telephone Set to Station B using a 249 Adapter (see FIG. 1). Place Station B on-hook.

5.05 Connect MAAP Panel and verify that the generic tape is inserted in the tape cartridge.

5.06 Call in PROC 550.

5.061 Press PROC NO.

5.062 Dial 550 and then depress ENTER key.

5.063 Wait for the WAIT light to extinguish.

5.064 TEST NO. 1 is displayed in Field 1.

5.07 Enter the equipment location of test line in Fields 2, 3, 4, 5 and 6. Depress EXECUTE key.

5.071 Verify that:

5.0711 Field 7 = 1 (TOUCH TONE Telephone)

5.0712 Fields 8, 9, 10, and 11 display the first TOUCH TONE register.

5.08 Press EXECUTE key and verify for the following results:

5.081 Field 13 = 1 (test line is on-hook).

5.09 Go off-hook on test line and verify that:

5.091 Field 13 = 2.

5.092 Dial tone is heard at test line.

5.10 On test line, dial Station B and verify:

5.101 Field 13 = 3.

5.102 Field 12 = Extension of Station B

5.103 Ringer is heard at Station B.

5.11 Go off-hook from Station B.

5.111 Verify that a normal talking connection is set up between test line and Station B.

5.112 There is no change on the MAAP panel display.

5.12 Go on-hook on both test line and Station B.

NOTE: Any TOUCH TONE Register can be retested in the following steps:

A) Go on-hook on both test line and Station B.

B) Press EXECUTE key.

C) Repeat PAR. 5.09 through 5.12.

5.13 Repeat PAR. 5.08 through 5.12, but use another directory number (called party) containing a digit zero (Operator "0" can be used).

5.14 Depress NEXT CIRCUIT key.

5.141 Verify that Field 13 = -.

5.15 Depress EXECUTE key and verify:

5.151 Field 13 = 1.

5.152 Fields 8, 9, 10 and 11 = a new TOUCH TONE Register.

5.153 Repeat PAR. 5.09 through 5.14 for testing the new TOUCH TONE Register.

5.16 Repeats PAR. 5.09 through 5.153 for all TOUCH TONE Registers.

5.17 If any Line Class of Service was temporarily changed to TOUCH TONE Class of Service as indicated in PAR. 5.01, reload system (tape to memory) and verify that the Line Class of Service is back to the original state.

5.18 This completes the Testing of the TOUCH TONE Register and disconnect the MAAP.

6. TROUBLE LOCATING AIDS

LC10B TOUCH TONE REGISTER

DIGITAL MULTIMETER - 1 VOLT AC Scale

TP	LC10B
1	TR-
2	GRD

The audio signal going to LC54B. There are no components between these test points and the board connector. The following are approximate levels:

TOUCH TONE Present	1	VAC
Dial Tone Present	0.5	VAC
Intercept Tone Present	0.25	VAC
No Tone or Register Not Connected	0	VAC

		1	2	3	4	5	6	7	8	9	*	0	#	DIGIT DIALED
8	L1	X	X	X										
9	L2				X	X	X							
10	L3							X	X	X				LAMPS
11	L4										X	X	X	LIT
12	H1	X			X			X			X			
13	H2		X			X			X			X		
14	H3			X			X			X			X	

	H1	H2	H3
L1	1	2	3
L2	4	5	6
L3	7	8	9
L4	*	0	#

(PAR. 6 continued on Page 4)

These lamps indicate tones detected by LC54B and stored in registers on LC10B (2 out of 7). Should light as long as a TOUCH TONE button is depressed or until register is released due to, (1) having received the correct number of digits, or (2) time out (about 20 seconds). There is additional decoding before these signals leave LC10B.

LC54B TOUCH TONE RECEIVER

	H1	H2	H3
L1	1	2	3
L2	4	5	6
L3	7	8	9
L4	*	0	#

L1 = 697 HZ
L2 = 770 HZ
L3 = 852 HZ
L4 = 941 HZ
H1 = 1209 HZ
H2 = 1336 HZ
H3 = 1447 HZ

TP	LC54B
1	L1
2	L2
3	L3
4	L4
5	H1
6	H2
7	H3
8	SIG IN
9	+6V
10	-6V
11	+5V
12	GRD

LOGIC PROBE - Signal present for about 45 msec after tone is detected. Logic level indications of the tones detected (2 out of 7). These leads are wired directly to LC10B. There are no components between these test points and the board connector.

DIGITAL MULTIMETER - 1 Volt AC Scale. The audio signal from LC10B is available here. There are no components on LC54B before this test point. The following are approximate levels:

TOUCH TONE Present	1	VAC
Dial Tone Present	0.5	VAC
Intercept Tone Present	0.25	VAC
No Tone or Receiver Not Connected	0	

DIGITAL MULTIMETER - 10 Volts DC Scale. These voltages are generated internally on this board and may be measured here with respect to GRD (TP12).

GROUND - Used with TPs 8, 9, 10 and 11 to measure SIG IN or internal power supply voltages.

Reason for Issue:
New Section

Manager, Denver PBX PECC