NO. 3 ESS
SYSTEM VERIFICATION
TRUNK AND LINE TEST PANEL (TLTP)
(TRUNKS)

CONTENTS

1. GENERAL INFORMATION

1.1 Description: The purpose of this section is to verify the operation of the Trunk and Line Test Panel (TLDP) on a system verification basis. It verifies the capabilitiy of the TLTP to perform trunk testing as designed. The TLTP has two fixed network appearances (Access Trunks 1 and 2) enabling the system to connect up to two trunks to the panel at any given time.

1.2 Sequence: These tests may be performed after the TLTP has been tested manually and Section 528.02 of this handbook has been completed successfully. Refer to Section 500 of this handbook for further preferred test sequence information.

1.3 References

1.31 The following documents will be useful as references for the execution of the tests of this section:

Document	Title
SD/CD-3H904-01	No. 3 ESS Test Frame
HB 269, Sec. 500	Planning Information for System Verification
HB 269, Sec. 502	No. 2B and 3 ESS, System Verification General Information
HB 269, Sec. 528	System Verification, Trunk and Line Test Panel, General Information and Operating Procedures

2. RECORDS AND REQUIREMENTS

2.1 Records: The results of the tests of this section shall be recorded on forms SD-97-1313 and SD-97-1315. For detailed information on filling out test records, see Section 6B, Handbook 3.

2.2 Requirements: The tests in this section are based on the No. 3 ESS Performance Requirements BSP 820-650-180.

3. TEST EQUIPMENT

Amt.	Code	Type
2	ITE-9140 (L1) or	Clip Cords (Double Ended)
** 1	ITE-4631 or	Test Headset

** Optional

4. PRELIMINARY INFORMATION

4.1 These tests will utilize the Universal Trunk Circuit (SD-3H220-01) as the test circuit for testing the TLTP. Either of the following CPS may be used in the UT circuit: FB382 CPS (Two-Way E&M Lead Trunk Circuit) or the CPS-FB399 (Outgoing Reverse Battery Trunk Circuit). Table 2 will use FB382 and Table 3 will use FB399. Either circuit and test procedure is acceptable.

4.2 *The installer has the option which circuit to use for the tests. He must then look in the local office records and find the Trunk Group Number (TGN), the Member Number (MEMNO) and the Scan Point Number (SPN) of the circuit he has chosen.

* IMPORTANT: THE ONLY PREREQUISITE TO THIS IS THAT THE CHOSEN CIRCUIT MUST USE PERIPHERAL DECODER (PD) POINTS 0, 1 AND 2 FOR RELAYS A, B AND C RESPECTIVELY.

4.3 The heat coils at the CDF for the test circuit must be pulled out.

5. TEST PROCEDURE

5.1 System Connection

5.11 Perform the steps in Table 1 for connecting the trunk circuit to the TLTP.

If the connection is made correctly, it verifies the interfacing of the TLTP program and translations with the hardware.

5.2 Tests Using CPS-FB382

5.21 Perform the tests in Table 2 when performing the tests using the CPS-FB382 Two-Way E&M trunk circuit.

OR

5.3 Tests Using CPS-FB399

5.31 Perform the tests in Table 3 when performing the tests using the CPS-FB399 Outgoing Reverse Battery trunk circuit.

5.4 Testing with AT2

5.41 When testing has been completed with Access Trunk 1 (AT1), repeat the entire procedure for Access Trunk 2 (AT2). Remember to substitute (2) for (1) at all appropriate places (such as VM2 for VM1).

TABLE 1

STEP	KEY OR FEATURE	OPERATION	LOCATION	RESULT	COMMENTS
1	ON (key)	Depress	TLTP	TLTP program is loaded. The ON lamp will light in one of the following states: 60 IPM - program being loaded. 120 IPM - loading denied due to system too busy or a higher priority program is in progress. Steady - program is loaded.	If the ON button is depressed again, the TLTP program will be unloaded therefore, CAUTION IS ADVISED. WAIT FOR STEADY LAMP!
2	Access Trunk 1 (key)	Depress	Access Trunk Control	Lamp within key lights steady.	
3	Handset	Lift off-hook	Panel mounted telephone.	Dial tone is heard.	Origination is entered into the system.
4	1	Depress	Panel mounted Touch-Tone® dial.	C.I.D. is entered into system.	Digit 1 is reserved for trunks - and service circuits.
5	3 digits (TGN) - - - - - 3 digits (MEMNO)	Depress	Panel mounted Touch-Tone® dial.	Trunk group number and member number of circuit being tested is entered into system.	
6	# (Touch-Tone key)	Depress	Panel mounted Touch-Tone® dial.	The # sign sends an execute signal to the system and the TGN and MEMNO are outpulsed.	
7	Progress or Error (lamp)	Observe	Status	Lights as follows: Steady - request successfully completed. Momentarily off - request has been recognized. 60 IPM - error in attempting to perform valid request. 120 IPM - error in input information	Lamp should be steady before continuing.

TABLE 1 (Cont'd)

STEP	KEY OR FEATURE	OPERATION	LOCATION	RESULT	COMMENTS
8	Equipment Status 1 (Lamp)	Observe	Status	Lights as follows: Steady - selected circuit was in idle state and connection was successful. 60 IPM - selected circuit was traffic busy. No connection was made. 120 IPM - selected circuit was maintenance busy. Connection was successful.	Lamp must be steady or flashing at 120 IPM before continuing.

TABLE 2 (For CPS-FB382 ONLY)

STEP	KEY OR FEATURE	OPERATION	LOCATION	RESULT	COMMENTS
1	VM1	Depress	Test Select	Lamp within key lights. 100K lamp lights.	
2	GRD (key)	Depress	Voltmeter control	Voltmeter reads 100V on the 120V scale	Idle and continuity check state
3	GRD (key)	Depress to release	Voltmeter control	Voltmeter reads "0"	
4	Access Trunk (switch)	Set to "1" position	State Control	Sets up for AT1	
5	PD Triplet (rotary switch)	Turn to ABC position	PD Triplet	Sets up for PD points 0, 1 and 2	
6	ABC (switches)	Set to ABC positions	State Control	PD order is set up	
7	Execute (key)	Depress	PD Triplet	PD order is sent. Relay "B" of circuit under test operates.	
8	MVM (key)	Depress	Voltmeter control	Lamp within key lights. Meter reads 48V on 120V scale.	
9	ABC (switches)	Set to: $\overline{A}$ $\overline{B}$ $\overline{C}$ positions	State Control		
10	Execute (key)	Depress	PD Triplet	All relays release. Meter reads "0".	
11	MVM (key)	Depress to release	Voltmeter control	Lamp within key goes out	
12	TTY	Type in the following message: MON:SCAN a,b! a = scanner number b = row number	Maintenance Center TTY	The scanner row containing the ferrod of the circuit under tes is displayed on the display lamps of the system status panel.	Refer to input manual for message content and correctness.

TABLE 2 (Cont.)

STEP	KEY OR FEATURE	OPERATION	LOCATION	RESULT	COMMENTS
13	Clip cords	Clip cord terminal 201 to terminal 208 and terminal 209 to terminal 008.	At the FB382 circuit under test.		
14	Clip cords	Remove the clip cords that were put on at Step 15.	At the FB382 circuit under test.		
15	TTY	Type in the following message: STOP:UTIL!	Maintenance Center TTY		
16	Release 1 (key)	Depress	Access trunk control	All lamps except "ON" lamp go out.	
17	VM1	Depress to release	Test Select	Lamp within key goes out. 100K lamp goes out.	
18	ON (key)	Depress	TLTP	"ON" lamp goes out. The TLTPC program is released. TLTP is idled.	

TABLE 3 (For CPS-FB399 ONLY)

STEP	KEY OR FEATURE	OPERATION	LOCATION	RESULT	COMMENTS
1	VM1 (key)	Depress	Test Select	Lamp within key lights. 100K lamp lights.	
2	Access Trunk (switch)	Set to "1" position	State Control		
3	Associated Junctor (switch)	Set to "NO" position	State Control		
4	PD Triplet (rotary switch)	Turn to "ABC" position	PD Triplet		
5	A B C (switches)	Set to $\bar{A}$ B $\bar{C}$ positions	State Control	PD order is set up.	
6	Execute (key)	Depress	PD Triplet	PD order is executed. "B" relay on circuit under test operates.	Continuity check state.
7	GRD (key)	Depress	Voltmeter	Lamp within key lights. Meter reads $\approx$100 on the 120V scale.	Continuity
8	GRD (key)	Depress to release	Voltmeter	Lamp within key goes out. Meter read "0".	
9	VM1 (Key)	Depress to release	Test Select	100K lamp and lamp within this key goes out.	
10	ABC (switches)	Set to A B $\bar{C}$	State Control	PD order is set up.	
11	Execute (key)	Depress	PD Triplet	PD order is executed. "B" relay remains operated and "A" operates on the circuit under test.	Talk local state
12	TTY	Type in the following message: MON:SCAN a,b! a = scanner number n = row number	Maintenance Center TTY	The scanner row containing the ferrod of the circuit under test is displayed lamps of the system status panel	Refer to input Manual for message content and correctness.

TABLE 3 (Cont.)

STEP	KEY OR FEATURE	OPERATION	LOCATION	RESULT	COMMENTS
13	Clip Cords and 1000-ohm resistors	Clip cord Pin 006 thru a 1000-ohm resistor to Pin 019.	On the FB399 circuit under test.	48V and ground applied to the tip and ring leads of the test circuit. The ferrod of the circuit under test saturates and the associated lamp on the display lamps on the system status panel will light.	To verify that the correct ferrod has saturated, compare the number of the display lamp that lit with the scan point number for SPN consists of the scanner, row and column. The column number should coincide with the number of the display lamp.
14	ABC (switches)	Set to $\overline{A}$ $\overline{B}$ $\overline{C}$	State Control	PD order is set up.	
15	Execute (key)	Depress	PD Triplet	PD order is executed. All relays are released on the associated ferrod is unsaturated. The display lamp on the system status panel associated with the circuit ferrod goes out.	
16	Clip cords and 1000-ohm resistor	Remove	On the FB399 CP under test	48V & Ground are removed.	
17	TTY	Type in the following message: STOP:UTIL!	Maintenance Center TTY		
18	Release 1 (key)	Depress	Access Trunk Control	All lamps go out except the "ON" lamp.	
19	ON (key)	Depress	TLTP	Lamp within key goes out. The TLTPC program is released. TLTP is idled.	

Arrows indicate new or changed information.

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4-4-80

Reason for Reissue:
To correct date.