

## LINE VERIFICATION

### TESTS USING OFFICE TEST FRAME TEST CIRCUIT SD-27633-01 (H-595-950)

#### NO. 5 CROSSBAR OFFICES

##### 1. GENERAL

PAGE

1.01 This section describes a method of making line verification tests in No. 5 crossbar offices equipped with the office test frame test circuit (OTF) SD-27633-01 (H-595-950), Issue 1 and the trouble indicator and connector circuit (TIC) SD-27634-01.

1.02 This section is reissued for the following reasons:

- (a) To add SD and H numbers to the section title
- (b) To revise Part 2 to include P3E patching cord for all tests
- (c) To revise Tests A and B to have incoming trunk made busy at originating office
- (d) To revise Test A to include calling line identification verification
- (e) To include all tens blocks associated with PBX hunting group
- (f) To make minor changes as required.

1.03 The tests covered are:

PAGE

**A. Number Group and Line Link Frame—Nonterminal Hunting:**

This test checks frame units, vertical group, horizontal group, vertical file, class of service, and ringing combination.

3

**B. Number Group and Line Link Frame—Terminal Hunting or PBX Line:**

This test checks the following: (1) Frame units, vertical group, horizontal

group, vertical file, and ringing combination. (2) The number of line sleeves connected to each SC relay. (3) Verification that the correct line sleeve cross-connections have been made. (4) Verification of the A (advance) cross-connection where a PBX group appears in more than one tens block. (5) Verification of the EG (end-of-group) cross-connection.

3

**C. AMA Translator:** This test checks the cross-connections for the originating office and the billing or directory number in the translator that serves the line being verified.

6

**D. ANI Translator:** This test checks the cross-connections for the directory number in the translator that serves the line being verified.

7

1.04 Test B requires that all lines of a PBX group be made busy for a short interval. Care should be exercised to minimize interruptions.

1.05 When testing lines that appear in an AMA translator, a special NNX code should be used for test purposes to prevent the customer from being falsely charged for a call.

1.06 **Lettered Steps:** A letter a, b, c, etc, added to a step number in Parts 3 and 4 of this section indicates an action which may or may not be required depending on local conditions. The condition under which a lettered step or a series of lettered steps should be made is given in the ACTION column, and all steps governed by the same condition are designated by the same letter within a test. Where a condition does not apply, all steps designated by that letter should be omitted.

**SECTION 218-400-501**

**2. APPARATUS**

**2.03** 351C (make-busy) plugs.

**¶All Tests**

**Tests C, D**

**2.01** Patching cord, P3E cord, 8 feet long, equipped with two 310 plugs (3P6E cord).¶

**2.04** Patching cord, P3U cord, 7 feet long, equipped with one 310 plug and one 351A plug (3P27B cord).

**Test B**

**2.02** 329A (make-busy) plug.

**3. PREPARATION**

<b>STEP</b>	<b>ACTION</b>	<b>VERIFICATION</b>
-------------	---------------	---------------------

**Tests A, B**

- |     |  |  |
|-----|--|--|
| 1a  | ¶If incoming trunk is used for test—<br>Have trunk made busy at originating office.  |  |
| 2a  | At trunk relay rack frame—<br>Check that A relay of trunk is not operated,¶<br>then patch T jack on trunk unit to ITT jack<br>on relay rack frame. |  |
| 3a  | At OTF—<br>Operate ITT, ITT1 keys.   |  |
| 4b  | If incoming trunk being used requires MF<br>pulsing—<br>Operate MF key.  |  |
| 5b  | ¶Set MF switch to MIN L.¶  |  |
| 6c  | If trunk being used does not require start dial<br>signal—<br>Operate ONHK key.  |  |
| 7d  | If trunk is equipped with A relay ground shunt<br>option—<br>Operate GS key.   |  |
| 8e  | ¶If trunk is arranged for short loop operation—<br>Operate SLP key.¶   |  |
| 9f  | If IAO trunk is used for test—<br>Operate IAO, OTL keys.   |  |
| 10f | Set CST-, CSU- switches to select class of<br>service.   |  |
| 11  | ¶Set LL switch to 0.   |  |
| 12  | Set PS switch to desired pulsing speed.¶   |  |

STEP	ACTION	VERIFICATION
13	Operate 4D, 5D, or 7D key.	
14	Operate CB, MKR-, MCB keys.	

#### 4. METHOD

STEP	ACTION	VERIFICATION
------	--------	--------------

##### A. Number Group and Line Link Frame—Nonterminal Hunting

15	Set A- through G- DIAL switches to select directory number under test or to select IAO code and directory number under test.	
16	Operate ST key.	After completion of dialing— At TIC— FUT-, VGT-, HGT-, VFT-, RCT- lamps lighted corresponding to line link location and ringing combination of line being verified. ◆If line being verified is arranged for calling line identification— LVM lamp lighted.◆
17	At OTF— Restore ST key.	
18	At TIC— Momentarily operate RLS key.	All lamps extinguished..
19	At OTF— Restore all keys and switches not required in next test.	
20a	◆If incoming trunk is used for test— At trunk relay rack frame— Remove patching cord from T, ITT jacks.	
21a	Have trunk restored to service at originating office.◆	

##### B. Number Group and Line Link Frame—Terminal Hunting or PBX Line

15	Operate PBX1 key.	
16	Set A- through G- DIAL switches to select lowest directory number in PBX or intraoffice code and lowest directory number being verified in PBX group.	

SECTION 218-400-501

STEP	ACTION	VERIFICATION
17	Operate ST key.	After completion of dialing— At TIC— FUT-, VGT-, HGT-, VFT-, RCT- lamps lighted corresponding to line link location and ringing combination of line under test in PBX group. S0 through S9 lamps lighted corresponding to number of lines with sleeve cross-connections in PBX group.  <i>Note:</i> A lamp will not light if the line is busy or if the sleeve cross-connection is missing.
18	At OTF— Restore ST key.	
19	At TIC— Momentarily operate RLS key.	All lamps extinguished.
20	At OTF— Restore PBX1 key; operate PBX2 key.	
21	Insert 329A plug into S- jack corresponding to first line in PBX hunting group.	
22	Operate ST key.	After completion of dialing— At TIC— FUT-, VGT-, HGT-, VFT-, RCT- lamps lighted corresponding to line link location and ringing combination of line in hunting group associated with S- jack. S0 through S9 lamps <i>not</i> lighted.
23	At OTF— Restore ST key.	
24	At TIC— Momentarily operate RLS key.	All lamps extinguished.
25	At OTF— Move 329A plug into next succeeding S- jack corresponding to next line in PBX hunting group.	
26	◆Repeat Steps 22 through 25 until all lines in tens block have been verified.◆	
<b>PBX Group Consists of One Tens Block</b>		
27	Remove 329A plug from S- jack.	
28	Restore CB key.	

STEP	ACTION	VERIFICATION
29	Operate ST key.	Line-busy tone heard. This checks that an EG cross-connection has been made.
30	Restore ST key.	
<b>PBX Group Consists of More Than One Tens Block</b>		
31	◆Set A- through G- DIAL switches to select last line in tens block just tested.◆	
32	At line link frame— Insert 351C plug into line link vertical appearance of line selected.	
33	At OTF— Operate ST key.	After completion of dialing— At TIC— FUT-, VGT-, HGT-, VFT-, RCT- lamps lighted for first line in succeeding tens block and ringing combination. If first line is busy— Next line location will be displayed.
34	At OTF— Restore ST key.	
35	At TIC— Momentarily operate RLS key.	All lamps extinguished.
36	At line link frame— Remove 351C plug from line link vertical.	
37	◆At OTF— Set A- through G- DIAL switches to select first line in subsequent tens block.	
38	Repeat Steps 21 through 26 to test lines in subsequent tens block.	
39	Repeat Steps 31 through 38 until all tens blocks associated with PBX hunting group have been verified.◆	
40	Remove 329A plug from S- jack when last line of tens block associated with PBX hunting group has been tested.	
41	Operate ST key.	Line-busy tone heard. This checks that an EG cross-connection has been made.
42	Restore ST key.	

STEP	ACTION	VERIFICATION
------	--------	--------------

**Line Sleeve Cross-Connection**

*Caution: Before proceeding with this test, refer to 1.04.*

- |     |   |                       |
|-----|---|-----------------------|
| 43  | At line link frame—<br>Insert 351C plugs into all line link appearances of PBX hunting group.                       |                       |
| 44  | At OTF—<br>Set A- through G- DIAL switches to select intraoffice code and billing or directory number of PBX group. |                       |
| 45  | Restore CB, PBX2 keys.  |                       |
| 46  | Operate ST key.   | Line-busy tone heard. |
| 47  | Restore ST key.   |                       |
| 48  | Restore all keys and switches not required in next test.  |                       |
| 49  | At line link frame—<br>Immediately remove all 351C plugs from line link appearances of PBX hunting group.           |                       |
| 50a | ◆If incoming trunk is used for test—<br>At trunk relay rack frame—<br>Remove patching cord from T, ITT jacks.       |                       |
| 51a | Have trunk restored to service at originating office.◆  |                       |

**C. AMA Translator**

- |    |   |  |
|----|---|--|
| 1  | At line link frame—<br>Patch from SP jack to line link vertical unit of line being verified.            |  |
| 2  | At OTF—<br>Patch OTL jack to SP jack.   |  |
| 3  | Operate OTLP, TV-, TVR- keys.   |  |
| 4a | If tip party is being verified—<br>Operate TP key.  |  |
| 5  | Set A- through K- DIAL switches to select office code and directory number assigned for permanent busy. |  |

STEP	ACTION	VERIFICATION
6	Operate ST key.	After completion of dialing— At TIC— TV-, TLR-, FU 2/5, VG 2/6, HG 2/5, VF 1/5 lamps lighted corresponding to line location of calling customer.
7	At OTF— Restore ST key.	
8	At TIC— Momentarily operate RLS key.	All lamps extinguished.
9	At OTF— Remove patching cord from OTL, SP jacks.	
10	At line link frame— Remove patching cord from SP jack and line link vertical.	
11	At OTF— Restore all keys and switches not required in next test.	

#### D. ANI Translator

- 1 At line link frame—  
Patch from SP jack to line link vertical unit  
of line being verified.
- 2 At OTF—  
Patch OTL jack to SP jack.
- 3 Operate MKR-, MCB, OGT, NT, NCH keys.
- 4 Operate TV-, TVR- keys.
- 5 Operate -D key for number of digits to be  
dialed.
- 6 Operate ANI, 8SD, FS- keys.
- 7a If multifrequency sender is used—  
Operate **◆MFS◆** key.
- 8b **◆**If dial pulse sender is used—  
Operate DPS key.
- 9c If line circuit being verified is arranged for  
E and M supervision—  
Operate **EM** key.**◆**

**SECTION 218-400-501**

<b>STEP</b>	<b>ACTION</b>	<b>VERIFICATION</b>
10	Operate A- through K- DIAL switches to select office code and directory number to be dialed.	
11d	If access code 0 or 1 is required— Operate PREL DIGIT switch to 10 or 1.	
12	Operate A- SDR switch for identifying digit; operate B- through H- SDR switches as required for calling line number.	
13	Operate ST key.	After completion of dialing— At TIC— TV-, FU 2/5, VG 2/6, HG 2/5, VF 1/5, TH-, HN-, T-, U- lamps lighted corresponding to line location and line number set up on SDR switches.
14	Operate ST key.	
15	At OTF— Restore ST key.	
16	At TIC— Momentarily operate RLS key.	All lamps extinguished.
17	At OTF— Remove patching cord from OTL, SP jacks.	
18	At line link frame— Remove patching cord from SP jack and line link vertical.	
19	At OTF— Restore all keys and switches.	