

**OUTGOING SENDER CONNECTOR
AND OUTGOING SENDER LINK CIRCUITS**

TESTS USING OFFICE TEST FRAME TEST CIRCUIT SD-27633-01 (J23260)

NO. 5 CROSSBAR OFFICES

1. GENERAL

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1.01 This section describes a method of testing outgoing sender connector and outgoing sender link circuits using office test frame test circuit (OTF) SD-27633-01 (J23260), Issue 2D and subsequent issues and trouble indicator and connector circuit (TIC) SD-27634-01 in No. 5 crossbar offices.

relays of the outgoing sender connector (OSC) and the even or odd markers, respectively. **4**

D. Line Link Pulsing Circuit Features:
This test checks that all markers and senders have access to all LLP circuits. **4**

1.02 This section is reissued for the following reasons:

- (a) To change title to add office test frame test circuit J number
- (b) To add Test D to provide a method for testing line link pulsing (LLP) access
- (c) To make corrections to Part 3, Tests A and B
- (d) To make minor changes as required.

1.04 Test C requires verification at the OSC frame and requires that all markers be made busy to an OSC for the duration of the test.

1.05 Lettered Steps: A letter a, b, c, etc, added to a step number in Part 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.

1.03 The tests covered are:

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A. Trunk Access to Senders: This test checks that each trunk in a trunk group has access to each sender in the associated sender group. **3**

B. Sender Selection by Marker: This test checks that each completing marker has access to each sender in a sender group. **3**

C. False Continuity—MA Relay: This test checks for false continuity on the GBE or GBO leads between the MA

2. APPARATUS

Tests A, B, C

2.01 322A make-busy plugs as required.

Tests A, B, D

2.02 Office test frame test circuit SD-27633-01 (J23260).

Test C

Test D

2.03 716C test receiver, or equivalent, attached to a W2AB cord, equipped with two 360A tools (2W21A cord), one KS-6278 connecting clip, and one 411A (test pick) tool.

2.04 Patching cord, P3E cord, 6 feet long, equipped with two 310 plugs (3P7A cord).

3. PREPARATION

STEP	ACTION	VERIFICATION
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Tests A, B

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|----|--|-------------------------|
| 1 | At OTF—
Restore all keys and switches. | |
| 2 | At TIC—
Momentarily operate RLS key. | All lamps extinguished. |
| 3 | At OTF—
Operate MKR-, FS- keys to select completing marker and trunk link frame on which trunk to be tested appears. | |
| 4 | Set CST, CSU switches to select class of service with access to trunk route. | |
| 5 | Operate OTL, MCB, DO, NT, REC keys. | |
| 6 | Set A- through N- DIAL switches as required to select trunk route and a test line in distant office. | |
| 7 | Operate -D key to agree with number of digits to be dialed.

<i>Note:</i> If a 13-digit call is dialed, do not operate any of the -D keys. | |
| 8 | Set LL switch to 0. | |
| 9 | Set PS switch to 10-34 to select pulsing speed. | |
| 10 | At jack, lamp, and key circuit—
Operate BAT key. | |
| 11 | Insert make-busy plug into MB- jack of trunk selected. | |
| 12 | At OTF—
Set TS switch and operate EVEN or ODD key to select trunk to be tested. | |

STEP	ACTION	VERIFICATION
13	Set RSG switch to OSB- to select sender group.	
14	Set RSS switch to select sender to be tested.	

4. METHOD

STEP	ACTION	VERIFICATION
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A. Trunk Access to Senders

15	Operate ST key.	At TIC— TB-, FS-, TS-, FAK or FBK lamps lighted corresponding to location of trunk on trunk link frame. CN-, S- lamps lighted corresponding to location of sender in OSC. ◆OS-, OSG-, SSA or SSB lamps lighted corresponding to sender and sender group selected.
16	Momentarily operate RLS key.	<i>Note:</i> TM1 relay will operate causing TF lamp to light and call will not complete.◆ All lamps extinguished.
17	At OTF— Restore ST key.	
18	Repeat Steps 13 through 17, selecting a different sender on each call until all senders are tested to this particular trunk.	
19	At jack, lamp, and key circuit— Remove make-busy plug from MB- jack of trunk selected.	
20	Repeat Steps 11 through 19, selecting each trunk of trunk group.	
21	At OTF— Restore all keys and switches not required in next test.	

B. Sender Selection by Marker

15	Operate ST key.	At TIC— TB-, FS-, TS-, FAK or FBK lamps lighted corresponding to location of trunk on trunk link frame. CN-, S- lamps lighted corresponding to location of sender in OSC.
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STEP	ACTION	VERIFICATION
		<p>DR- lamp lighted corresponding to marker used in test. ♦OS-, OSG-, SSA or SSB lamps lighted corresponding to sender and sender group selected.</p> <p><i>Note:</i> TM1 relay will operate causing TF lamp to light and call will not complete.♦</p>
16	Momentarily operate RLS key.	All lamps extinguished.
17	At OTF— Restore ST key.	
18	Repeat Steps 13 through 17, selecting a different sender on each call until all senders are tested to a particular marker.	
19	♦Repeat Steps 15 through 18, selecting a different marker until all markers are tested.	
20	At jack, lamp, and key circuit— Remove make-busy plug from MB- jack of trunk selected.♦	
21	At OTF— Restore all keys and switches not required in next test.	

C. False Continuity—MA Relay

1	At jack, lamp, and key circuit— Insert make-busy plugs into each SCMB- jack for each marker of OSC under test.	<p>At outgoing sender connector frame— Check for no ground on contacts of relay in connector as follows: 01 of MA1 12 of MA2.</p>
2	At jack, lamp, and key circuit— Remove make-busy plugs from SCMB- jacks.	

D. ♦Line Link Pulsing Circuit Features

1	At OTF— Restore all keys and switches.	
2	At TIC— Momentarily operate RLS key.	All lamps extinguished.
3	Have an incoming trunk made busy at originating office.♦	

STEP	ACTION	VERIFICATION
4	◆At relay rack frame— When A relay of selected trunk is not operated, patch ITT jack to T jack of selected trunk.	
5	At OTF— Operate ITT, ITT1 keys.	
6a	If selected trunk is arranged for multifrequency operation— Operate MF key.	
7b	If selected trunk has A relay ground shunt— Operate GS key.	
8c	If selected trunk has short conductor loop— Operate SLP key.	
9d	If selected trunk does not require a start dial signal— Operate ONHK key.	
10	Set LL switch to 0.	
11	At jack, lamp, and key circuit— Operate BAT key.	
12	At OTF— Set PS switch to 10-34.	
13	Set A- through N- DIAL switches as required to select a directory number associated with LLP circuit.	
14	Operate -D key to agree with number of digits to be dialed.	
15	Operate MCB key.	
16	Set RS1 or RS2 switch to select ringing combination.	
17	Set A- through D- SENDER switches as required to select digits sender will output, as determined from office records, for directory number selected.	
18	Operate -SD key to agree with number of digits to be outputted.	
19e	If MF outputting— Operate MFS key.◆	

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STEP	ACTION	VERIFICATION
20f	◆If DP outpulsing— Operate DPS key.	
21g	If wink start is required— Operate WK key.	
22h	If sender starts outpulsing immediately— Operate CL2S key.	
23	Operate LLP, NTLS keys.	
24	Operate PBX2 key.	
25	Operate MKR- key to select completing marker.	
26	Set RSG switch to OSB to select sender group.	
27	Set RSS switch to select sender to be tested.	
28	Set TBT, TBU switches to select number group tens block of directory number associated with LLP circuit.	
29	Operate S- key to select line in tens block when required.	
30	Set LLS switch to select line link frame.	
31	Operate ST key.	LLP lamp lighted. IS lamp lighted. TGT lamp lighted. EP lamp lighted. CS lamp lighted. OS-, OSG-, SSA or SSB lamps lighted corresponding to sender and sender group selected.
		Note: TM1 relay will operate causing TF lamp to light and call will not complete.
		At jack, lamp, and key circuit— SC- lamp lighted. SCSP- lamp lighted.
32	At OTF— Restore ST key.	All lamps extinguished.
33	Repeat Steps 26, 27, 31, 32 until all LLP senders have been selected.	
34	Repeat Steps 25 through 32, testing other completing marker with all LLP senders and trunks. ◆	

STEP	ACTION	VERIFICATION
35	◆ Restore all keys and switches.	
36	At relay rack frame— Remove patching cord.	
37	Have incoming trunk restored to service at distant office.◆	