

# AUTOMATIC INTERCEPT SYSTEM LINE CIRCUITS

## SD-27892-01 AND SD-27893-01

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

#### NO. 5 CROSSBAR OFFICES

#### NOT ARRANGED FOR LINE LINK OUTPULSING

#### 1. GENERAL

PAGE

1.01 This section describes a method of testing Automatic Intercept System line circuits SD-27892-01 and SD-27893-01, using the office test frame test circuit SD-27633-01 (J23260), in No. 5 crossbar offices not arranged for line link outpulsing.

(SD-27893-01) is checked under forward and reverse bias. . . . .

3

1.02 The reasons for reissuing this section are listed below. Revision arrows are used to emphasize the more significant changes. Equipment Test Lists are affected.

**D. All-Lines-Busy and Circuit-Busy Indications:** The following features are checked: (1) All-lines-busy indication to senders. (2) Idle-busy line indication to senders. . . . .

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- (a) To add Test F.
- (b) To add paragraph 1.05
- (c) To make minor revisions as required.

**E. AIC Call:** This test checks for proper termination to the AIC. . . . .

5

1.03 The tests covered are:

**F. Automated Loop Testing (ALT):** This test verifies the LT1, LT2, and LT3 resistors that are added to enable automated loop testing equipment to distinguish between a faulty line and a line routed to intercept. . . . .

6

PAGE

**A. Seizure and Release:** . . . . . 3

**B. Reorder:** This test checks for proper circuit response to a sender reorder signal. . . . . 3

**C. Make-Busy and Remote Make-Busy:** The following features are checked: (1) The circuit can be made service-busy from the jack, lamp, and key circuit. (2) The circuit can be seized for testing when maintenance-busy. (3) The circuit cannot be seized when remotely made service-busy by the automatic intercept center (AIC). (4) The MB diode

**1.04 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, the steps designated by that letter should be omitted.

**1.05** When ALT is furnished, a termination is provided to allow distinction between a faulty line condition and a line which has been routed to intercept. The termination consists of three 35.2K ohm resistors, LT1, LT2, and LT3,

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**SECTION 218-412-502**

which are connected between the tip and ring leads, the tip lead and ground, and the ring lead and ground, respectively. The resistors are under control of the F relay which removes the resistors so that the marker is able to make successful false cross and ground test.⚡

**2. APPARATUS**

**All Tests**

**2.01** Office test frame test circuit, J23260 (SD-27633-01).

**Tests C, D**

**2.02** 322A (make-busy) plug.

**3. PREPARATION**

STEP	ACTION	VERIFICATION
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**Tests A, B, C, E**

- |   |   |                         |
|---|---|-------------------------|
| 1 | At OTF—<br>Restore all keys and switches.               | All lamps extinguished. |
| 2 | At TIC—<br>Momentarily operate RLS key.                 | All lamps extinguished. |
| 3 | At OTF—<br>Operate MKR_key to select completing marker. |                         |

**⚡Tests A, B, C, E,⚡**

- |     |   |  |
|-----|---|--|
| 4   | Operate IAO, WK keys.   |  |
| 5   | Set L-L switch to 0.  |  |
| 6   | Operate AIS, MCB keys.  |  |
| 7   | Set sender switches A through H for digits to be outpulsed by sender. |  |
| 8   | Operate 8SD key.  |  |
| 9   | Operate MFS key.  |  |
| 10  | Operate OTL key.  |  |
| 11  | Set PS switch to 44-11.   |  |
| 12a | If Touch-Tone® is required—<br>Operate TT key.                        |  |

**Test D**

**2.03** 67C test set, or equivalent, equipped with one KS-6278 connecting clip (for use in checking presence of battery or ground on terminals).

**2.04** Blocking and insulating tools as required. Use tools and apply as covered in Section 069-020-801.

**2.05** Testing cord, 893 cord, 6 feet long, equipped with two 360A tools (1W13B cord) and one KS-6278 connecting clip (for connecting battery to terminal strip terminals).

STEP	ACTION	VERIFICATION
13b	If a particular sender is required— Operate AIS_ key.	
14c	If SD-27892-01 is under test— Operate EM key.	
15	Operate 7D key.	

**Tests A, B, C**

- |    |   |  |
|----|---|--|
| 16 | Set A through G DIAL switches for digits of a directory number. |  |
| 17 | Operate AIRI key.   |  |

**4. METHOD**

STEP	ACTION	VERIFICATION
<b>A. Seizure and Release</b>		
18	Set AIL_ switch to select line under test.	
19	Operate ST key.	OS lamp lighted. After end of dialing— EP, TOK lamps lighted. If SD-27892-01 is under test— EM lamp lighted.
20	Restore ST key.	All lamps extinguished.
21	Restore all keys and switches not required in next test.	
<b>B. Reorder</b>		
18	Operate OF key.	
19	Set AIL_ switch to select line under test.	
20	Operate ST key.	OS lamp lighted. 120-ipm high tone heard.
21	Restore ST key.	OS lamp extinguished. 120-ipm high tone silenced.
22	Restore all keys and switches not required in next test.	
<b>C. Make-Busy and Remote Make-Busy</b>		
18	Set AIL_ switch to select line under test.	

STEP	ACTION	VERIFICATION
19	Insert make-busy plug into MB_jack associated with line under test.	
20	Operate NTLS, AILS keys.	
21	Operate ST key.	OS lamp lighted. After end of dialing— EP, TOK lamps lighted. If SD-27892-01 is under test— EM lamp lighted.
22	Operate RTL key.	
23	Operate LTH key.	LTH lamp lighted.
24	Restore ST key.	OS, EP, TOK lamps extinguished. If SD-27892-01 is under test— EM lamp extinguished.
25	Restore RTL key.	AIS LMB_ lamp associated with line under test lighted.
26	Operate RVT key.	AIS LMB_ lamp extinguished.
27	Restore RVT key.	AIS LMB_ lamp associated with line under test lighted.
28	Remove make-busy plug from MB- jack.	
29	Restore NTLS key.	
30	Operate ST key.	120-ipm high tone heard.
31	Restore ST key.	120-ipm high tone silenced.
32	Restore all keys and switches not required in next test.	◆All lamps extinguished◆

#### D. All-Lines-Busy and Circuit-Busy Indications

1	At sender relay rack frame— Insulate 8B of TM relays of all senders associated with circuit under test.	
2	At jack, lamp, and key circuit— Insert make-busy plug into MB_jack associated with circuit under test.	AIS LMB_ lamp associated with circuit under test lighted.
3a	If circuit under test is first circuit— At relay rack frame— Connect battery to terminal 44 of terminal strip A.	Battery present on terminal 54 of terminal strip A.

STEP	ACTION	VERIFICATION
4b	If circuit under test is other than first circuit— At relay rack frame— Connect battery to terminal 54 of terminal strip A of preceding circuit.	Battery present on terminal 54 of terminal strip A.
5	Block operated SLI relay.	
6	Block nonoperated B relay.	Battery present on terminal 54 of terminal strip A.
7	Block operated D relay.	
8	Block nonoperated SLI relay.	Battery present on terminal 54 of terminal strip A.
	<b>Note:</b> Perform Steps 9 and 10 without delay to prevent service seizure of circuit under test.	
9	Remove blocking tools from SLI, D relays.	Ground present on terminals 45, 47 of terminal strip A.
10	Block operated D relay.	Ground absent on terminal 45 of terminal strip A.
11	Block operated SLI relay.	
12	Remove blocking tool from D relay.	Ground absent on terminal 45 of terminal strip A.
13	Remove blocking tools from SLI, B relays.	Ground absent on terminals 45, 47 of terminal strip A.
14c	If no further tests are to be performed— At sender relay rack frame— Remove insulators from TM relay of all senders associated with circuit under test.	
15	At jack, lamp, and key circuit— Remove make-busy plug from MB_ jack associated with circuit under test.	AIS LMB_ lamp extinguished.
<b>E. AIC Call</b>		
16	Operate DOT, DL4, AIRI keys.	
17	Set A through G DIAL switches to select number such that last three digits are 10X and office code is a working code.	
18	Operate ST key.	OS lamp lighted. After end of dialing—

STEP	ACTION	VERIFICATION
		ED, TKT lamps lighted. 1000-Hz tone heard.
19	Restore ST key.	All lamps extinguished. 1000-Hz tone silenced.
20	Restore all keys and switches.	
<b>F. Automated Loop Testing</b>		
1	Select line number associated with intercept line circuit.	
2	Operate LT, SCO keys.	If dial pulsing is provided— Low tone heard If MF pulsing is provided— KP lamp lighted.
3	Dial or key C digit, of office code if required, and numericals of line being tested.	If dial pulsing is provided— Low tone silenced. If MF pulsing is provided— KP lamp extinguished.
4	Restore LT, SCO keys.	
5	At voltmeter test circuit— Operate VMT1 key.	
6	Operate and restore T1REV key several times.	On 120V scale voltmeter indicates a constant deflection between 80 and 82.
7	Operate 20000, G keys.	On 24V scale voltmeter indicates a reading between 10 and 12.
8	Operate T1REV key.	On 24V scale voltmeter indicates a reading between 10 and 12.
9	Restore T1REV, 20000, G, VMT1 keys.	
10b	If no further tests are to be made— At MTF— Restore all keys and switches.⬇	