

CALL IDENTITY INDEXER CIRCUIT SD-25621-01  
TESTS USING MASTER TEST FRAME  
NO. 5 CROSSBAR OFFICES

1. GENERAL

PAGE

1.01 This section describes the method of making tests of the Call Identity Indexer to verify the proper operation of cross detection relays, to verify the detection of opens and false grounds, and to verify preference selection.

**E. U\_ Relay False Operation:** This test checks for shorted make contacts on TA\_ and TB\_ relays in the operating path of the U\_ relay. . . . . 7

1.02 This section is reissued for the reasons listed below. Revision arrows are used to emphasize the more significant changes. This reissue does not affect the Equipment Test Lists.

**F. Continuity of Recorder Reservation (RP) Leads:** This test checks the ability of the call identity indexer to make preference reservations in the recorder circuit. . . . . 7

- (a) To revise PREPARATION Steps 3 and 4
- (b) To make minor changes as required.

**G. False Ground or Cross on DJ\_ Leads:** This test checks the ability of the call identity indexer to signal the transverter to call in the trouble recorder when DJ\_ leads are crossed or grounded. . . . . 8

1.03 The tests covered are:

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**A. False Operation of TL\_ Relays:** This test checks the ability of the call identity indexer to signal the recorder to call in the trouble recorder when more than one TL\_ relay operates. . . . . 4

1.04 Tests in this section should be performed during periods of light traffic but not during the time any recorders are perforating the 3 a.m. end-of-tape entries and associated splice pattern.

**B. False Ground or Cross on TC\_ Leads:** This test checks the ability of the call identity indexer to signal the recorder to call in the trouble recorder when TC\_ leads are crossed or grounded. . . . . 5

1.05 Tests A through E, and Test G will score the REC PC plant register and the traffic register associated with the recorder TPC lead, if provided. Tests A and B will score the RTR plant register. Reporting of these register operations should be in accordance with local instructions.

**C. Tens Relays Preference and Lockout:** This test checks the preference and selection of TA\_ and TB\_ relays. . . . . 5

1.06 Before performing tests requiring trunks to be made busy, verify that all trunks have restored to an idle condition to prevent interference with calls in progress requiring timing entries.

**D. Units Relays Preference and Lockout:** This test check the preference and selection of UA\_ relays. . . . . 6

1.07 Actions and verifications are required at the call identity indexer, master test frame (MTF), and recorder.

NOTICE

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**1.08** When performing tests which will cause trouble entries on the AMA tape, consult the section titled "Central Office Automatic Message Accounting Equipment— Precautions To Limit Stoppages In No. 1 Accounting Center—No. 5 Crossbar Offices."

**1.09 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.

**1.10** The manner of selecting some circuits and test conditions at the master test frame (MTF) and its associated circuits varies depending on the apparatus options furnished with these circuits. Therefore, where variable means of selection are provided, precise instructions for the selection of circuits and test conditions are not given. Precise instructions for the use of these variable means are given in Section 218-106-301.

**1.11** The location statement, At MTF—, is used to refer to all apparatus located on the four basic bays of the MTF.

**2. APPARATUS**

**Tests A Through E, G**

**2.01** 322A (make-busy) plugs as required.

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

**Tests A, B, E**

**2.03** Testing cord, 893 cord, 6 feet long, equipped with two 360A tools (1W13B cord), one 419A tool, and one KS-6278 connecting clip, as required, (for use in connecting ground to relay springs).

**Test F**

**2.04** Oscillator J94730B (SD-95616-01), part of 1A fault locator test set J94730A.

**2.05** 607A relay winding connector (for use with 1A fault locator WT jack connection to T\_ relay winding terminals).

**2.06** KS-6278 connecting clip (for use with 1A fault locator TC jack connection to battery).

**Tests F, G**

**2.07** Testing cord, 893 cord, 3 feet long, equipped with two 360A tools (1W13A cord) and two KS-6278 connecting clips, as required (for use in establishing test connections to terminal strip terminals).

**Test G**

**2.08** Master test control circuit, SD-25800-01.

**2.09** Trunk test circuit, SD-25918-01.

**2.10** 32A test set.

**Offices Arranged for CAMA**

**2.11** Test set circuit for register and CAMA sender circuits (test set), SD-25676-01.

**2.12** Test circuit for registers and CAMA sender circuits, SD-25988-01.

**2.13** Testing cord assembly, 20-conductor cord, 6 feet long, equipped with one KS-14460 L3 plug, or equivalent and one KS-14661 L3 plug, or equivalent (W20C cord) (for connecting test set to the test circuit for register and CAMA sender circuits).

**2.14** Patching cord, P3K cord, 6 feet long, equipped with two 310 plugs (3P15A cord) (for connecting trunk test circuit to CAMA incoming trunk circuit).

## 3. PREPARATION

## STEP

## ACTION

## VERIFICATION

*Note:* Refer to paragraphs 1.10 and 1.11.

## Tests A Through E

***Offices Equipped With Two or More Regular Recorders Per Recorder Group and Trunk Transfer Not Provided***

- 1a If outgoing or CAMA trunks are associated with call identity indexer under test—  
At MTF—  
Insert make-busy plugs into MB jacks associated with trunks served by call identity indexer under test.
- 2b If intraoffice trunks are associated with call identity indexer under test—  
At relay rack frame—  
Set MB switches to MB on trunks served by call identity indexer under test.

***Offices Equipped With Two or More Regular Recorders Per Recorder Group and Trunk Transfer Provided***

- 3a If outgoing or CAMA trunks are associated with call identity indexer under test—  
At MTF—  
Insert make-busy plugs into MB jacks associated with trunks served by call identity indexer under test.
- 4b If intraoffice trunks are associated with call identity indexer under test—  
At relay rack frame—  
Set MB switches to MB on trunks served by call identity indexer under test.♦

***Offices Equipped With One Regular Recorder Per Recorder Group***

*Note:* Perform these tests without delay because test conditions affect service. All message unit or bulk billed calls will be free calls and all detailed billed or toll calls will be routed to overflow.

- 5c If emergency recorder is in service—  
Replace emergency recorder with regular recorder.

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STEP	ACTION	VERIFICATION
6	At MTF— Insert make-busy plug into MB jack associated with recorder serving call identity indexer under test.	
7	At perforator cabinet— Mark tape. (Refer to paragraph 1.08.)	

4. METHOD

STEP	ACTION	VERIFICATION
<b>A. False Operation of TL_ Relays</b>		
8	At recorder associated with call identity indexer under test— When recorder is idle— Block nonoperated TCT relay.	
9	At call identity indexer under test— When call identity indexer is idle— Connect ground to 3T of T0 relay.	
10	Momentarily connect ground to 3T of next higher numbered T_ relay.	Minor alarm sounds. At MTF— Trouble record taken. XTL, XTC designations perforated.
11	At recorder frame— Momentarily operate AR key.	Minor alarm silenced.
12	Repeat Steps 10 and 11 for remaining T_ relays.	
13	At call identity indexer under test— Disconnect ground from 3T of T0 relay.	
14	At recorder associated with call identity indexer under test— Remove blocking tool from TCT relay.	
15d	If trunks were made busy— Restore to service all made-busy trunks served by call identity indexer under test.	
16e	If recorder was made busy— At MTF— Remove make-busy plug from MB jack associated with recorder.	
17e	At perforator cabinet— Mark tape. (Refer to paragraph 1.08.)	

STEP	ACTION	VERIFICATION
<b>B. False Ground or Cross on TC_ Leads</b>		
8	At recorder associated with call identity indexer under test— When recorder is idle— Block nonoperated TCT relay.	
9	At call identity indexer under test— Momentarily connect ground to 2T of UA0 relay.	Minor alarm sounds. At MTF— Trouble record taken. XTC designation perforated. XTL designation <i>not</i> perforated.
10	At recorder frame— Momentarily operate AR key.	Minor alarm silenced.
11	Repeat Steps 9 and 10 for remaining UA_ relays.	
12	At recorder associated with call identity indexer under test— Remove blocking tool from TCT relay.	
13d	If trunks were made busy— Restore to service all made-busy trunks served by call identity indexer under test.	
14e	If recorder was made busy— At MTF— Remove make-busy plug from MB jack associated with recorder.	
15e	At perforator cabinet— Mark tape. (Refer to paragraph 1.08.)	
<b>C. Tens Relays Preference and Lockout</b>		
8	At recorder associated with call identity indexer under test— Block nonoperated TA, TCT relays.	
9	At call identity indexer under test— Block operated T0 relay.	TA0, TB0, TL0 relays operated.
10	Block operated T1 relay.	TA1, TB1, TL1 relays operated. TA0, TB0, TL0 relays released.
11	Block operated next higher numbered T_ relay.	Correspondingly numbered TA_, TB_, TL_ relays operated. Next lower numbered TA_, TB_, TL_ relays released.

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STEP	ACTION	VERIFICATION
12	Repeat Step 11 until all T_ relays are blocked operated.	
13	Remove blocking tools from T_ relays.	
14	At recorder associated with call identity indexer under test— Remove blocking tools from TA, TCT relays.	
15d	If trunks were made busy— Restore to service all made-busy trunks served by call identity indexer.	
16e	If recorder was made busy— At MTF— Remove make-busy plug from MB jack associated with recorder.	
17e	At perforator cabinet— Mark tape. (Refer to paragraph 1.08.)	
<b>D. Units Relays Preference and Lockout</b>		
8	At recorder associated with call identity indexer under test— Block nonoperated IP, TCT relays.	
9	At call identity indexer under test— Block operated U0 relay.	UA0 relay operated.
10	Block operated U1 relay.	UA1 relay operated. UA0 relay released.
11	Block operated next higher numbered U_ relay.	Correspondingly numbered UA_ relay operated. Next lower numbered UA_ relay released.
12	Repeat Step 11 until all U_ relays are blocked operated.	
13	Remove blocking tools from U_ relays.	
14	At recorder associated with call identity indexer under test— Remove blocking tools from IP, TCT relays.	
15d	If trunks were made busy— Restore to service all made-busy trunks served by call identity indexer.	
16e	If recorder was made busy— At MTF—	

STEP	ACTION	VERIFICATION
	Remove make-busy plug from MB jack associated with recorder.	
17e	At perforator cabinet— Mark tape. (Refer to paragraph 1.08.)	
<b>E. U_ Relay False Operation</b>		
8	At call identity indexer under test— Block nonoperated T0 relay.	
9	Connect ground to 8B of TB0 relay.	U_ relays nonoperated.
10	Remove ground from 8B of TB0 relay.	
11	Connect ground to contact of TB_ or TA_ relay associated with next higher numbered U_ relay in accordance with Table A.	U_ relays nonoperated.
12	Remove ground from contact of TB_ or TA_ relay.	
13	Repeat Steps 11 and 12 for remaining U_ relays listed in Table A.	
14	Remove blocking tool from T_ relay.	
15	Block nonoperated next higher numbered T_ relay.	
16	Repeat Steps 9 through 14 for all T_ relays.	
17d	If trunks were made busy— Restore to service all made-busy trunks.	
18e	If recorder was made busy— At MTF— Remove make-busy plug from MB jack associated with recorder.	
19e	At perforator cabinet— Mark tape. (Refer to paragraph 1.08.)	
<b>F. Continuity of Recorder Reservation (RP-) Leads</b>		
1	At recorder frame— Connect power to 1A fault locator, set W-T switch to T, and set HR-LRT switch to LRT.	
2	At call identity indexer under test— Connect WT jack of 1A fault locator to relay winding 10TR of T0 relay and TC jack to	At recorder associated with call identity indexer under test— Using 147-type amplifier—

STEP	ACTION	VERIFICATION
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TABLE A

U-RELAY	TB-CONTACT	U-RELAY	TA-CONTACT
U0	8B	U5	8B
U1	5B	U6	5B
U2	2B	U7	2B
U3	2T	U8	2T
U4	7T	U9	7T

battery.

500-Hz tone heard while probe is held near RIP relay.

- 3 At call identity indexer under test—  
Remove test connections from T0 relay.
- 4 Repeat Steps 2 and 3 for remaining T\_ relays.
- 5 Remove power from 1A fault locator.

#### G. False Ground or Cross on DJ\_ Leads

**Note:** Refer to paragraph 1.06.

- 1a If outgoing or CAMA trunks are associated with call identity indexer under test—  
At MTF—  
Insert make-busy plugs into MB jacks associated with trunks in positions 10 through 19 of call identity indexer under test.
- 2b If intraoffice trunks are associated with call identity indexer under test—  
At relay rack frame—  
Set MB switches to MB on trunks in positions 10 through 19 of call identity indexer under test.
- 3 At MTF—  
Restore all keys and switches.
- 4 Momentarily operate RL key. All lamps extinguished.

#### LAMA Trunks

- 5c If outgoing trunks are served by call identity indexer under test—  
Select OGT class of test.

STEP	ACTION	VERIFICATION
6c	Select A_ through L_ digits as required for access to AMA outgoing route.	
7c	Select OR or FAC class of call with LT1 translator indication.	
8d	If intraoffice trunks are served by call identity indexer under test— Select IAO class of test.	
9d	Select A_ through C_ digits as required for local office code requiring AMA treatment.	
10d	Operate TTL key.	
11d	Select ringing combination.	
12	Select AMA class of service and rate treatment as required for access to selected route.	
13	Select marker.	
14	Select trunk associated with trunk position number 10 in call identity indexer under test.	
15	At call identity indexer under test— Connect DJ0 lead to DJ1 lead in accordance with Table B using A or DJ terminal strip as provided.	
16	At MTF— Operate GPA/GPB key as required when trunk is in an allotted subgroup.	
17	Select route advance as required for access to selected trunk.	
18	Operate NTFS, NTTS, TLK, KY keys.	
19	At call identity indexer frame— Insert plug of 32A test set into RC jack.	
20	Momentarily operate white (ST) button on 32A test set.	At call identity indexer— U_ relays operated corresponding to DJ_ leads connected in Table B. At MTF— AE, IE, T0, T1, U4, U7 lamps lighted. Trouble record taken. XU designation perforated.
21	Momentarily operate RL key.	All lamps extinguished.

STEP ACTION VERIFICATION

TABLE B  
TRUNK NUMBER AND ASSOCIATED DJ - LEAD TERMINAL NUMBER

TRUNK POS. NO. IN CII	CONNECT FROM		TRUNK POS. NO. IN CII	CONNECT TO	
	LEAD	TERMINAL NO.		LEAD	TERMINAL NO.
A TERMINAL STRIP					
10	DJ0	10	11	DJ1	11
12	DJ2	12	13	DJ3	13
14	DJ4	14	15	DJ5	15
16	DJ6	16	17	DJ7	17
18	DJ8	18	19	DJ9	19
DJ TERMINAL STRIP					
10	DJ0	0	11	DJ1	1
12	DJ2	2	13	DJ3	3
14	DJ4	4	15	DJ5	5
16	DJ6	6	17	DJ7	7
18	DJ8	8	19	DJ9	9

- 22 Select trunk associated with next trunk position number listed in Table B.
- 23 At call identity indexer under test—  
Connect DJ\_ leads associated with trunk selected in accordance with Table B.
- 24 Repeat Steps 20 and 21.
- 25 Repeat Steps 22 through 24 for remaining trunk numbers listed in Table B.
- 26 At call identity indexer under test—  
Remove test connections from DJ\_ leads.
- 27e If DJK relay is provided in call identity indexer under test—  
At MTF—  
Momentarily operate ST key. AS, IE, T0, T1, U4, U7 lamps lighted.  
RN\_ lamp lighted for recorder associated with call identity indexer under test.
- 28e At call identity indexer under test—  
Momentarily apply ground to terminal strip A, terminal 10, or terminal strip DJ, terminal At MTF—  
Trouble record taken—  
REC designation perforated.

STEP	ACTION	VERIFICATION
	0, as applicable, for 2 seconds using 1W13A cord (refer to paragraph 2.07).	
29e	Momentarily operate RL key.	All lamps extinguished.
30	Remove plug of 32A test set from RC jack at call identity indexer under test.	
31	Restore to service all trunks made busy for this test.	
32	At MTF— Restore all keys and switches.	

#### CAMA Trunks

33	At MTF— Patch IRT jack to IRT connector of register and CAMA sender test set.	
34	Select ITNP class of test.	
35	Select A_ through L_ digits as required for tandem or intertoll terminating route.	
36	Set POS switch to 0.	
37	Set MF switch to MIN L.	
38	Insert make-busy plug into MB_jack associated with trunk position 10 in call identity indexer under test.	
39	When trunk is idle— Connect CAMA/CNTX jack to T jack of trunk associated with trunk position number 10 in call identity indexer under test.	
40	At test set— Set L switch to OFF.	
41f	If trunk selected for test is arranged for ANI— Operate AI, AD keys.	
42g	If trunk selected for test is not arranged for ANI— Operate OD key.	
43	Operate keys in accordance with Table C for trunk selected.	CAMA lamp lighted.

STEP

ACTION

VERIFICATION

TABLE C

CAMA INCOMING TRUNK		TYPE OF COMPLETION	OUTGOING TRUNK OUT SUPERVISION	OPERATE KEYS
TYPE	INC SUPV			
Non-BL	Rev Bat.	Tandem	—	KY, TLK, CAM0, COGT, SLP
Non-BL	Rev Bat.	Intertoll	Rev Bat.	KY, TLK, CAM1, COGT, SLP
Non-BL	Rev Bat.	Intertoll	E&M Leads	KY, TLK, CAM1, SLP, E-M
BL	E&M Leads	Tandem	—	KY, TLK, CAM0, COGT, CEM1
BL	E&M Leads	Intertoll	Rev Bat.	KY, TLK, CAM1, COGT, CEM1
BL	E&M Leads	Intertoll	E&M Leads	KY, TLK, CAM1, E-M, CEM1
BL	Rev Bat.	Tandem	—	KY, TLK, CAM0, COGT, SXS
BL	Rev Bat.	Intertoll	Rev Bat.	KY, TLK, CAM1, COGT, SXS
BL	Rev Bat.	Intertoll	E&M Leads	KY, TLK, CAM1, E-M, SXS
BL	Loop*	Tandem	—	KY, TLK, CAM0, COGT, SXS, IRV
BL	Loop*	Intertoll	Rev Bat.	KY, TLK, CAM1, COGT, SXS, IRV
BL	Loop*	Intertoll	E&M Leads	KY, TLK, CAM1, E-M, SXS, IRV

\*Incoming from intramural (local) step-by-step office

- 44 Remove from service all trunks in tens group of call identity indexer under test.
- 45 At call identity indexer under test—  
Interconnect DJ0 lead to DJ1 lead in accordance with Table B using A or DJ terminal strip as provided.
- 46f If CAMA trunk is arranged for ANI—  
At MTF—  
Momentarily operate ST key.
- MRL, CK2, LK2, OGT-CS lamps lighted.  
At test set—  
RR lamp lighted.

STEP	ACTION	VERIFICATION
47f	Momentarily operate, in turn, the following keys: KP, numeral 0 for X digit, calling number, ST.  <i>Note:</i> Keying must be completed in 4.8 seconds to avoid sender timeout.	When last digit is pulsed— RR lamp extinguished. At MTF— IE, T4, T7 lamps lighted. U_ lamps lighted correspond to highest numbered crossed DJ_ lead. RN_ lamp lighted for recorder associated with call identity indexer under test. Trouble record taken. TV, XU designations perforated.
48g	If CAMA trunk is not arranged for ANI— At MTF— Momentarily operate ST key.	MRL, CK2, LK2, POSC, OGT-CS lamps lighted. At test set— P lamp lighted.
49g	Key calling number.	P lamp extinguished. At MTF— IE, T4, T7 lamps lighted. U_ lamps lighted correspond to highest numbered crossed DJ_ lead. RN_ lamp lighted for recorder associated with call identity indexer under test. Trouble record taken. TV, XU designations perforated.
50	At MTF— Momentarily operate RL key.	All lamps extinguished except CAMA.
51	At call identity indexer under test— Remove test connection from terminal for DJ1 lead as covered in Table B and connect in turn to terminal strip for DJ2 through DJ9 as covered in Table B and repeat Steps 37, 46f through 50, as required, for each connection.	
52	Remove test connection from terminal strip covered in Table B.	
53h	If DJK relay is provided in call identity indexer under test and CAMA trunk selected for test is arranged for ANI— At MTF— Momentarily operate ST key.	MRL, CK2, LK2, OGT-CS lamps lighted. At test set— RR lamp lighted.
54h	Momentarily operate, in turn, the following keys: KP, numeral 0 for X digit, calling number, ST.  <i>Note:</i> Keying must be completed in 4.8 seconds to avoid sender timeout.	When last digit is pulsed— RR lamp extinguished. At MTF— IE, T4, T7, U4, U7 lamps lighted. RN_ lamp lighted for recorder associated with call identity indexer under test.

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STEP	ACTION	VERIFICATION
55i	If DJK relay is provided in call identity indexer under test and CAMA trunk selected for test is not arranged for ANI— At MTF— Momentarily operate ST key.	MRL, CK2, LK2, POSC, OGT-CS lamps lighted. At test set— P lamp lighted.
56i	Key calling number.	P lamp extinguished. At MTF— IE, T4, T7, U4, U7 lamps lighted. RN_ lamp lighted for recorder associated with call identity indexer under test.
57j	If DJK relay is provided in call identity indexer under test— At call identity indexer— Momentarily apply ground to terminal strip A, terminal 10, or terminal strip DJ, terminal 0, as applicable, for 2 seconds using the 67C test set or equivalent.	At MTF— Trouble record taken. REC designation perforated.
58j	Momentarily operate RL key.	All lamps extinguished except CAMA.
59	Remove all patching cords, if required, restore all keys and switches not required in next test.	CAMA lamp extinguished.
60	Restore to service all trunks made busy for this test.	