REPLACING PAGE ADDENDUM
Filing Instructions:

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AUTOMATIC NUMBER IDENTIFICATION IDENTIFIER CIRCUIT

TESTS

NO. 1 CROSSBAR OFFICES

1. GENERAL

1.001 This addendum supplements Section 216-907-501, Issue 3. The attached pages must be inserted in the section in accordance with the filing instructions above.

1.002 This addendum is issued to add a 712A tool to the list of apparatus in Table A and 2.07.

Attached:

Page 3 dated July 1971, revised
Page 4 dated July 1971, reissued

AUTOMATIC NUMBER IDENTIFICATION IDENTIFIER CIRCUIT

TESTS

NO. 1 CROSSBAR OFFICES

1. GENERAL

1.01 This section describes a method of testing identifier circuits using outpulser-identifier test circuit SD-95815-01 in No. 1 crossbar offices.

1.02 This section is reissued to include tests of the identifier circuits when arranged for PBX automatic identified outward dialing (AIOD). Tests A, B, C, D, and F have been changed to conform with the new circuit arrangements.

1.03 The tests covered are:

1.04 During Tests A, B, C, D, and F the test call (TC) register will score. The reporting of this operation should be in accordance with local instructions.

1.05 Digits which are selected by operation of digit keys are registered on digit lamps on a two-out-of-five basis. Where a test verification requires comparison of digit keys operated with digit lamps lighted, a translation must be made.

1.06 *Lettered Steps:* A letter a, b, c, etc, added to a step number in Part 3 or 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.

2. APPARATUS

2.01 Apparatus required for each test is shown in Table A. Details of each item are covered in the paragraph indicated by the number in parentheses.

TABLE A

APPARATUS	TESTS								
	A	B	C	D	E	F	G	H	I
Outpulser-Identifier Test Circuit SD-95815-01	1	1	1	1	1	1	–	–	–
Outpulser Circuit SD-95811-01	1	1	1	1	–	1	–	–	–
Identifier Circuit SD-95810-01	–	–	–	–	1	–	1	1	1
Hewlett-Packard Vacuum Tube Voltmeter (VTVM) Model 400D	–	–	–	–	1	–	–	–	–

TABLE A (Cont)

APPARATUS	TESTS								
	A	B	C	D	E	F	G	H	I
Timing Test Set J24753A (SD-25707-01)	–	–	–	–	–	–	–	1	–
Pulse Checking Test Set J94723 (SD-96362-01)	–	–	–	–	–	–	–	–	1
329A (make-busy) Plug	–	–	–	–	1	–	1	1	1
KS-6278 Connecting Clip	–	–	–	–	1	–	–	1	–
624A Tool	–	–	–	–	–	–	–	2	–
639A Tool	–	–	–	–	–	–	–	–	2
651D Tool	–	–	–	–	–	–	–	–	2
◗712A Tool (2.07)	–	–	–	–	1	–	–	–	–◖
KS-14737 Insulating Tool	–	–	–	–	–	–	2	–	–
298 Tool (2.02)	–	–	–	–	1	–	–	–	–
Cord (2.03)	–	–	–	–	1	–	–	–	–
Cord (2.04)	–	–	–	–	–	1	–	–	–
Cord (2.05)	–	–	–	–	–	–	–	1	2
Cord (2.06)	–	–	–	–	–	–	–	1	–

2.02 A 298 tool consisting of a test pick equipped with a connecting cord terminated with a 35 cord tip (for connecting upper terminal of VTVM to test point).

2.03 Testing cord, 893 cord, 6 feet long, equipped with two 360A tools (1W13B cord) (for connecting lower terminal of VTVM to ground).

2.04 Testing cord, W1AT cord (to connect NNT jack to selected network).

2.05 Patching cord, P3K cord, 6 feet long, equipped with two 310 plugs (3P15A cord).

2.06 Testing cord, W3M cord, 6 feet long, equipped with 310 plug and 360A, B, and C tools (3W4A cord).

2.07 ◗712A tool (to adjust levels when required in Test E).◖

3. PREPARATION

STEP	ACTION	VERIFICATION
	Tests A through F	
1	At outpulser-identifier trunk test (OITT) frame— Restore all keys.	
	Tests A, B, C, D, and F	
2	Operate OIT key.	
3	Operate OP- key to select outpulser.	

STEP	ACTION	VERIFICATION
4a	If more than one identifier group is associated with OITT— Operate IG- key to select proper identifier group.	
5	Operate ID0/1 key to select identifier to be tested.	

4. METHOD

STEP	ACTION	VERIFICATION
A. Particular Number Identification		
6	Operate test circuit keys as shown in Test Chart 1.	
7	Operate ST key.	At OITT— Lamps lighted as shown in Test Chart 1.
8	Restore ST key.	All lamps extinguished.
9	Restore all keys not required for next test.	

TEST CHART 1

TEST A

TEST NO.	TEST CIRCUIT KEYS												TEST CIRCUIT LAMPS								
	OFF	O				NO				TP (Note 3)	NP	SO	OF-I	TH	H	T	U	I	ITP	RP	SO
		TH	H	T	U	TH	H	T	U												
1	0	0	1	2	3	1	2	3	4	—	—	—	0	4,7	0,1	0,2	1,2	4,7	—	+	—
2	1	1	2	3	4	2	3	4	5	—	+	—	1	0,1	0,2	1,2	0,4	4,7	—	+	—
3	2	2	3	4	5	3	4	5	6	—	+	—	2	0,2	1,2	0,4	1,4	4,7	—	+	—
4	3	3	4	5	6	4	5	6	7	—	—	—	3	1,2	0,4	1,4	2,4	4,7	—	+	—
5	4	4	5	6	7	5	6	7	8	—	+	—	4	0,4	1,4	2,4	0,7	4,7	—	+	—
6	5	5	6	7	8	6	7	8	9	+	—	+	5	1,4	2,4	0,7	1,7	1,2	+	—	+
7	6	6	7	8	9	7	8	9	0	—	+	+	6	2,4	0,7	1,7	2,7	1,2	—	+	+
8	0	7	8	9	0	8	9	0	1	+	—	+	0	0,7	1,7	2,7	4,7	1,2	+	—	+
9	1	8	9	0	1	9	0	1	2	+	+	+	1	1,7	2,7	4,7	0,1	1,2	+	—	+
10	2	9	0	1	2	0	1	2	3	+	+	+	2	2,7	4,7	0,1	0,2	1,2	+	—	+

Notes:

1. (+) in column means operated key or lighted lamp; (—) in column means nonoperated key and lamp *not* lighted.
2. The chart shows testing sequence where six offices are equipped. Where this is not the case, use office keys of offices which are equipped.
3. If the OFF- key is associated with an AIOD unit, the TP key operation is not required.
4. If an AIOD unit is served by the ANI equipment, it may be associated with any one of the OFF (0-6) office keys, depending on the installation. When the AIOD associated office key is operated, the IOD test circuit lamp will light.

STEP	ACTION	VERIFICATION
	B. Recycle Scanning	
→ 6	Operate OFF- key not associated with AIOD unit.	
7	Operate THO-, HO-, TO-, UO- keys to select calling line directory number.	
8	Operate TH2AT key.	
9	Operate ST key.	At OITT — All OF-S, all OF-R, THS, HS, TS, US, THR lamps lighted.
10	Restore ST key.	All lamps extinguished.
11	Restore TH2AT key.	
12	Operate H2AT, T2AT, U2AT keys.	
13	Operate ST key.	All OF-S, THS, HS, TS, US, OF-R (number agrees with OFF- selected), HR, TR, UR lamps lighted.
14	Restore ST key.	All lamps extinguished.
↱ 15b	If an AIOD unit is associated with the identifier group under test — Operate OFF- key associated with AIOD unit.	
16b	Operate THO-, HO-, TO-, UO-, keys to select PBX trunk number.	
17b	Operate TH2AT key.	
18b	Operate ST key.	All OF-S, all OF-R, THS, HS, TS, US, THR, and IOD lamps lighted.
19b	Restore ST key.	
↳ 20b	Restore TH2AT key.	
21	Restore all keys not required for next test.	
	C. Multiparty Identification	
→ 6	Operate OFF- key not associated with AIOD unit. P,3R → see 1.02 Use OFF-0 or 1	
7	Operate PTY key.	
8	Operate ST key.	At OITT — I0, I1, PTY, THS, OF-S (number of lighted lamps indicates OFF- selected) lamps lighted.

STEP	ACTION	VERIFICATION
9	Restore ST key.	All lamps extinguished.
10	Restore all keys not required for next test.	
	D. Steering	
6	Operate HTR key.	
→ 7	Operate OFF- key not associated with AIOD unit.	
8	Operate THO-, HO-, TO-, UO- keys to select calling line directory number.	
9	Operate ST key.	At OITT — OF-S (number agrees with OFF- selected), THS, HS, TS, US, HTR lamps lighted.
10	Restore ST key.	All lamps extinguished.
11	Restore HTR key.	
12	Operate OFX key.	
13	Operate CTT key (cancel trouble ticket).	
14	Operate ST key.	OFX lamp lighted.
15	Restore ST key.	All lamps extinguished.
16	Restore all keys not required for next test.	
	E. Voltage Levels in Amplifier-Detector Circuits	
	Caution: Performing this test removes one of the two identifiers of an identifier group from service.	
2	At trouble ticketer frame — Insert make-busy plug into I-B jack of identifier under test.	
3	At identifier under test — Block operated TST1 relay.	
4a	If more than one identifier group is associated with OITT — At OITT — Operate IG- key to select proper identifier group.	
5	At OITT — Operate ADR key.	At OITT — ADR lamp lighted.

STEP	ACTION	VERIFICATION
6	Operate key to select amplifier-detector circuit to be tested in accordance with Table B.	

TABLE B

AMPLIFIER-DETECTOR	KEY
0	THO0
1	THO1
2	THO2
3	THO3
4	THO4
5	THO5
6	THO6
7	THO7
8	THO8
9	THO9
PTY	PTY
SO	SO

RANGE 100 V Rx1

7	At VTVM — Connect grounding lead between lower terminal and identifier frame ground and test lead between upper terminal and PA2 jack of amplifier-detector under test.	
8	Read meter.	At VTVM — 29.5 Meter indicated ~~80~~ volts ac.
9	At amplifier-detector — Remove test lead from PA2 jack and connect to PC jack.	Meter indicated ~~70~~ volts ac or higher. (set to 76 adj N2 at back)
10	At OITT — Restore THO-, PTY, or SO key.	
11	Operate THNO- key to select amplifier-detector circuit under test in accordance with Table C.	

TABLE C

AMPLIFIER-DETECTOR	KEY
0	THNO0
1	THNO1
2	THNO2
3	THNO3

STEP	ACTION	VERIFICATION

TABLE C (Cont)

AMPLIFIER-DETECTOR	KEY
4	THNO4
5	THNO5
6	THNO6
7	THNO7
8	THNO8
9	THNO9

Note: PTY and SO amplifier-detectors are not tested with the nonoperate test signal.

12	At VTVM — Read meter.	At VTVM — Meter indicated less than 15 volts ac.
13	At amplifier-detector — Remove test lead from PC jack and connect to PA2 jack.	Meter indicated less than 22.5 volts ac.
14b	If voltage values are not within tolerance — Refer to Note 105 in SD-95810-01 for adjustment procedures.	
15	Repeat Steps 1 through 14b for each amplifier-detector of identifier under test.	
16	Remove blocking tool from TST1 relay.	
17	At trouble ticketer frame — Remove make-busy plug from I-B jack.	
18	At OITT — Restore all keys.	At OITT — ADR lamp extinguished.

F. Amplifier-Detector Connecting Circuits

6	Depending on connector relay to be checked, select a number network at primary number network frames which requires selected connector relay for connection to amplifier-detector circuits of identifier under test.	
→ 7	Operate OFF- key of office or AIOD unit associated with number network frames containing selected number networks.	
8	Operate SVN, IDK keys.	
9b	If selected number network is cross connected as a tip party — Operate TP key.	

STEP	ACTION	VERIFICATION
10	At primary number network frame — Connect W1AT cord from NNT jack to selected number network.	
11	At OITT — Operate ST key.	At OITT — Two-out-of-five lamps lighted for TH, H, T, U digits of number networks selected.
12	Restore ST key.	All lamps extinguished.
13	Restore all keys not required for next test.	
14	At primary number network frame — Remove test cord.	

G. Identifier Lockout

Caution: Performing this test removes one of the two identifiers of an identifier group from service.

1	At trouble ticketer frame — Insert make-busy plug into I0B jack of identifier under test.	
2	At identifier 0 frame — Block operated ON2, PC1 relays of ID0.	
3	Momentarily operate ON2 relay of ID1.	At identifier under test — LO relay of ID1 momentarily operated.
4	Remove blocking tools.	
5	Insulate 12M of ON relay and 5B of TST1 relay.	
6	Block operated EP, then ON, RP relays of ID0.	OFO, THS relays of ID0 operated.
7	Momentarily operate LO relay of ID0.	OFO, THS relays of ID0 momentarily released.
8	Remove blocking tools from ON, RP, and then EP relays.	OFO, THS relays of ID0 released.
9	Remove insulating tools from ON and TST1 relays.	
10	At trouble ticketer frame — Remove make-busy plug from I0B jack.	
11	Insert make-busy plug into I1B jack.	
12	At identifier 1 frame — Block operated ON2, PC1 relays of ID1.	

STEP	ACTION	VERIFICATION
13	Block operated LO relay of ID1.	
14	Momentarily operate ON2 relay of ID0.	LO relay of ID0 not operated.
15	Remove blocking tool from LO relay of ID1.	
16	Momentarily operate ON2 relay of ID0.	LO relay of ID0 momentarily operated.
17	Remove blocking tools from ON2, PC1 relays of ID1.	
18	Insulate 12M of ON relay and 5B of TST1 relay of ID1.	
19	Block operated EP, then ON, RP relays of ID1.	OFO, THS relays of ID1 operated.
20	Momentarily operate LO relay of ID1.	OFO, THS relays of ID1 momentarily released.
21	Remove blocking tools from ON, RP, and then EP relays.	
22	Remove insulating tools from ON and TST1 relays.	
23	At trouble ticketer frame — Remove make-busy plug from I1B jack.	

H. Heavy Traffic Timer

Caution: Performing this test removes one of two identifiers of an identifier group from service.

1	At trouble ticketer frame — Insert make-busy plug into I-B jack of identifier under test.	
2	Using timing test set, make timing tests of HTT timer in accordance with timing requirements table in SD-95810-01.	Timing requirements met. J24753A Timing Set
3	Remove make-busy plug.	

I. Timing Requirements of PD Pulsing Relay

Caution: Performing this test removes one of two identifiers of an identifier group from service.

1	At trouble ticketer frame — Insert make-busy plug into I-B jack of identifier under test.	
2	Using pulse checking test set, make timing tests of PD relay. Refer to Section 163-653-501 and timing requirements table in SD-95810-01.	Timing requirements met.
3	Remove make-busy plug.	