

# INCOMING INTERCEPT ONI-3 E AND M LEAD SIGNALING TRUNK TESTS USING PORTABLE TEST SET J94747A NO. 1 TRUNK CONCENTRATOR

## 1. GENERAL

PAGE

**1.01** This section describes a method of testing operator number identification E and M lead signaling trunk circuit SD-97574-01 (ONI-3) using trunk test set J94747A (SD-97576-01). The ONI-3 trunk circuit interfaces the intercept trunks from the remote central office to the vertical selection controls of the trunk concentrator (TC).

when the concentrator fails to switch a call within the preset time period, the incoming trunk will go off-hook to the central office and reorder tone will be returned to the customer. . . . .

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**1.02** This section is reissued to rearrange the order of Step 16 and 18b in Test F. This reissue does not affect the Equipment Test List.

**1.03** The tests covered are:

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**A. Operational Test:** This test checks that the trunk can be seized forward to the Automatic Intercept System (AIS), No. 5 automatic call distributor (No. 5 ACD), or No. 23-desk and a signal is returned from the AIS, No. 5 ACD, or No. 23-desk, that a talking path is established, and release of the trunk is normal. When the trunk is equipped for optional spinoff to a collocated announcement machine or spinoff to an operator position, these features are also tested. . . . .

**D. OGT Time-Out:** This test checks that when the OGT has timed out waiting for a wink signal from the automatic intercept center (AIC), or No. 5 ACD, the OGT will return a signal to the incoming trunk causing the incoming trunk to release the connection through the concentrator and return reorder tone to the customer. . . . .

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**B. Trunk Time-Out After Seizure:** This test checks that when the ten second timer in the trunk functions before an outgoing trunk (OGT) has been connected, the incoming trunk will go off-hook to the central office and reorder tone will be returned to the customer. . . . .

**E. OGT Time-Out After Wink-AIC or No. 5 ACD, On-Hook:** This test checks that when the OGT times out following a valid wink signal from the AIC, the OGT will send a signal to the incoming trunk causing it to release the connection through the concentrator. This test also checks that a permanent signal (PS) lamp will light. . . . .

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**C. Concentrator Time-Out After Seizure:** This test checks that

**F. False Ground on ST Lead While Trunk is Idle:** This test checks that when a false ground is detected on the ST lead, a trouble lamp will light and the trunk is locked out of service. . . . .

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**1.04** Tests D and E cannot be performed on trunks if the No. 1 TC terminates traffic to a No. 23-desk.

**1.05 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

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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**

**All Tests**

**2.01** TC portable trunk test set J94747A (SD-97576-01).

**2.02** Head telephone set, 52M or equivalent.

**2.03** Patching cords, P3E cord, 6 feet long, equipped with two 310 plugs (3P7A cord) in the following quantities. All 2-wire trunk tests require 5 cords except Test A which requires 4 cords. All 4-wire trunk tests require 6 cords except Test A which requires 5 cords.

**Test F**

**2.04** Blocking tool. Use and apply as covered in Section 069-020-801.

**3. PREPARATION**

STEP	ACTION	VERIFICATION
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**All Tests**

- |   |   |  |
|---|---|--|
| 1 | Select ONI-3 trunk to be tested.  |  |
| 2 | At distant office associated with trunk selected in Step 1—<br>Arrange to have trunk made busy. |  |
| 3 | At TC test set—<br>Restore all keys to normal.  |  |
| 4 | At incoming trunk frame—<br>Using 3P7A cord, connect -48V jack to -48V jack on TC test set.     |  |

**Caution:** To avoid possible grounding of battery supply lead, connect cord to test set first and, when disconnecting, remove cord from test set last.

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|----|--|--|
| 5  | Using 3P7A cord, connect TRK jack to TRK jack on TC test set.                                      |  |
| 6  | Using 3P7A cord, connect E&M jack to E&M jack on TC test set.                                      |  |
| 7a | If testing 2-wire trunks—<br>Using 3P7A cord, connect TST line jack to 2W TST jack on TC test set. |  |
| 8b | If testing 4-wire trunks—<br>Using 3P7A cord, connect TST-R jack to RCV1 jack on TC test set.      |  |

STEP	ACTION	VERIFICATION
9b	Using 3P7A cord, connect TST-T jack to TRT2 jack on TC test set.	
10	At TC test set— Operate -48V key.	-48V lamp lighted.
11	At incoming trunk frame— Operate BCO key.	BCO lamp lighted.

**Tests A Through D, and F**

12	At TC test set— Plug head telephone set into A—B jacks.	
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**4. METHOD**

STEP	ACTION	VERIFICATION
<b>A. Operational Test</b>		
13a	If testing 2-wire trunks— At TC test set— Operate TTS switch to 03EM position.	
14b	If testing 4-wire trunks— At TC test set— Operate TTS switch to 4WT position.	
15	Operate FT key.	FT lamp lighted.
16	Momentarily operate TSZ key.	TSZ lamp lighted. At incoming trunk frame— ON_ lamp lighted.
17c	If trunk is not equipped with trouble or blank number spinoff options— Select a class of intercept to the AIC. At the TC test set— Dial the proper digit as follows: Regular intercept—1— Trouble intercept—2— Blank number intercept—3.	When arrangement is with No. 5 ACD or No. 23-desk— WNK/ANS lamp lights to indicate an answer supervision has been received. When arrangement is with AIS— WNK/ANS lamp flashes to indicate MF digits have been transmitted, then lights after answer supervision has been received.
18c	Operate TALK key.	TALK lamp lighted. Machine intercept announcement heard or operator answers.
19c	Momentarily operate RL key.	TSZ, WNK/ANS lamps extinguished. At incoming trunk frame— ON_ CT_ lamps extinguished.

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STEP	ACTION	VERIFICATION
20c	Repeat Steps 16 through 19c until all three classes of intercept have been selected.	
21d	If trunk is equipped with trouble spinoff option— At TC test set— Operate TSZ key.	TSZ lamp lighted. At incoming trunk frame— ON_ lamp lighted.
22d	At TC test set— Dial the digit 2.	
23d	Operate TALK key.	Operator answers.
24d	Momentarily operate RL key.	TSZ lamp extinguished. At incoming trunk frame— ON_ lamp extinguished.
25e	If trunk is equipped with blank number spinoff option (AIC arrangement only) — At TC test set— Operate TSZ key.	TSZ lamp lighted. At incoming trunk frame— ON_ lamp lighted.
26e	At TC test set— Dial the digit 3.	
27e	Operate TALK key and listen to two cycles of the recorded announcement.	TALK lamp lighted. Within 40 seconds— Recorded announcement heard. After two cycles of the recorded announcement— At incoming trunk frame— CT_ lamp lighted. At TC test set— WNK/ANS, OHI/OP lamps flash. When operator answers— WNK/ANS lamp lighted.
28e	Momentarily operate RL key.	TSZ, WNK/ANS, OHI/OP lamps extinguished. At incoming trunk frame— ON_ CT_ lamps extinguished.
29	At TC test set— Restore all keys to normal.	All lamps extinguished.
30f	If no other tests are to be performed on this trunk— At TC test set— Remove all patching cords between test set and incoming trunk frame.	
31f	At distant office— Arrange to have trunk restored to service.	

STEP	ACTION	VERIFICATION
<b>B. Trunk Time-Out After Seizure</b>		
13	At incoming trunk frame— Using 3P7A cord, connect TT jack to TT jack on TC test set.	
14a	If testing 2-wire trunks— At TC test set— Operate TTS switch to 03EM position.	
15b	If testing 4-wire trunks— At TC test set— Operate TTS switch to 4WT position.	
16	Operate TT key.	TT lamp lighted.
17	Momentarily operate TSZ key.	TSZ lamp lighted. At incoming trunk frame— ON_ lamp lighted.
18	At TC test set— Dial the digit 1.	Within approximately 10 seconds— At incoming trunk frame— TBL_ lamp lighted. At TC test set— OHI/OP lamp lighted.
19	Operate TALK key.	TALK lamp lighted. 120 ipm tone heard in receiver.
20	Momentarily operate RL key.	At incoming trunk frame— ON_ lamp extinguished.
21	At incoming trunk frame— Manually restore TTO relay in trunk to normal.	TBL_ lamp extinguished. At TC test set— OHI/OP lamp extinguished.
22	Momentarily operate SIG-B key twice.	
23	Restore TT key and then all other keys to normal.	All lamps extinguished.
24c	If no other tests are to be performed on this trunk— At TC test set— Remove all patching cords between test set and incoming trunk frame.	
25c	At distant office— Arrange to have trunk restored to service.	

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<b>STEP</b>	<b>ACTION</b>	<b>VERIFICATION</b>
<b>C. Concentrator Time-Out After Seizure</b>		
13	At incoming trunk— Using 3P7A cord, connect TT jack to TT jack on TC test set.	
14a	If testing 2-wire trunks— At TC test set— Operate TTS switch to 03EM position.	
15b	If testing 4-wire trunks— At TC test set— Operate TTS switch to 4WT position.	
16	Operate TT key.	TT lamp lighted.
17	Momentarily operate TSZ key.	TSZ lamp lighted. At incoming trunk frame— ON_ lamp lighted.
18	At TC test set— Dial the digit 1.	
19	Within 10 seconds after performing Step 18— Operate TO key.	OHI/OP and TO lamps lighted.
20	Operate TALK key.	TALK lamp lighted. 120 ipm tone heard in receiver.
21	Momentarily operate RL key.	TSZ lamp extinguished. At incoming trunk frame— ON_ lamp extinguished.
22	At TC test set— Momentarily operate SIG-B key twice.	
23	Restore all keys to normal.	All lamps extinguished.
24c	If no other tests are to be performed on this trunk— At TC test set— Remove all patching cords between test set and incoming trunk frame.	
25c	At distant office— Arrange to have trunk restored to service.	
<b>D. OGT Time-Out</b>		
13	At the incoming trunk frame—	

STEP	ACTION	VERIFICATION
14a	If testing 2-wire trunks— At TC test set— Operate TTS switch to 03EM position.	
15b	If testing 4-wire trunks— At TC test set— Operate TTS switch to 4WT position.	
16	Operate TT key.	TT lamp lighted.
17	Momentarily operate TSZ key.	TSZ lamp lighted. At incoming trunk frame— ON_ lamp lighted.
18c	If trunk is not equipped with ROTO and TTR relays— At TC test set— Dial the digit 1.	
19c	Within 10 seconds after performing preceding step— Momentarily operate SIG-B key.	SIG lamp momentarily lighted. At incoming trunk frame— CT_ lamp lighted.
20c	At TC test set— Momentarily operate SIG-B key.	SIG lamp momentarily lighted. OHI/OP lamp lighted.
21c	Operate TALK key.	TALK lamp lighted. 120 ipm tone heard in receiver.
22d	If trunk is equipped with ROTO and TTR relays— At TC test set— Operate TSZ key.	TSZ lamp lighted. At incoming trunk frame— ON_ lamp lighted.
23d	At TC test set— Dial the digit 2.	
24d	Within 10 seconds after performing above step— Momentarily operate SIG-B key.	SIG lamp momentarily lighted. At incoming trunk frame— CT_ lamp lighted.
25d	At TC test set— Momentarily operate SIG-B key.	SIG lamp momentarily lighted. OHI/OP lamp lighted.
26d	Operate TALK key.	TALK lamp lighted. 120 ipm heard in receiver. After approximately 10 seconds— 120 ipm tone ceases. OHI/OP lamp extinguished.

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<b>STEP</b>	<b>ACTION</b>	<b>VERIFICATION</b>
27	Momentarily operate RL key.	TSZ lamp extinguished. At incoming trunk frame— ON_ CT_ lamps extinguished.
28	At TC test set— Restore TT key and then all keys to normal.	All lamps extinguished.
29e	If no other tests are to be performed on this trunk— At TC test set— Remove all patching cords between test set and incoming trunk frame.	
30e	At distant office— Arrange to have trunk restored to service.	
<b>E. OGT Time-Out After Wink—AIC or No. 5 ACD On-Hook</b>		
12	At incoming trunk— Using 3P7A cord, connect TT jack to TT jack on TC test set.	
13a	If testing 2-wire trunks— At TC test set— Operate TTS switch to 03EM position.	
14b	If testing 4-wire trunks— At TC test set— Operate TTS switch to 4WT position.	
15	Operate TT key.	TT lamp lighted.
16	Momentarily operate TSZ key.	TSZ lamp lighted. At incoming trunk frame— ON_ lamp lighted.
17	At TC test set— Dial the digit 1.	
18	Momentarily operate SIG-B key.	SIG lamp momentarily lighted. At incoming trunk frame— CT_ lamp lighted.
19	At TC test set— Momentarily operate SIG-G key.	SIG, WNK/ANS lamps momentarily lighted.
	<b>Note:</b> If the SIG-G key is operated twice, the OHI/OP lamp will light.	



STEP	ACTION	VERIFICATION
20	At TC test set— Momentarily operate SIG-B key.	SIG lamp momentarily lighted. At incoming trunk frame— PS_ lamp lighted.
21	At TC test set— Momentarily operate RL key.	TSZ lamp extinguished. At incoming trunk frame— ON_ PS_ CT_ lamps extinguished.
22	At TC test set— Restore TT key and then all keys to normal.	All lamps extinguished.
23c	If no other tests are to be performed on this trunk— At TC test set— Remove all patching cords between test set and incoming trunk frame.	
24c	At distant office— Arrange to have trunk restored to service.	

**F. False Ground on ST Lead While Trunk is Idle**

13	At TC test set— Operate TTS switch to OFF position.	
14	At incoming trunk frame— Using 3P7A cord, connect TT jack to TT jack on TC test set.	
15	Block nonoperated TTO relay.	
16	At TC test set— Operate TT key.	TT lamp lighted.
17a	◆If testing 2-wire trunks— At TC test set— Operate TTS switch to 03EM position.	
18b	If testing 4-wire trunks— At TC test set— Operate TTS switch to 4WT position.	
19	Momentarily operate XST key.◆	XST lamp momentarily lighted. At incoming trunk frame— TBL_ lamp lighted.
20	At TC test set— Operate TSZ key.	TSZ lamp lighted. At incoming trunk frame— ON_ lamp lighted.
21	At TC test set— Dial the digit 1.	OHI/OP lamp lighted.

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<b>STEP</b>	<b>ACTION</b>	<b>VERIFICATION</b>
22	Operate TALK key.	TALK lamp lighted. 120 ipm tone heard in receiver.
23	Momentarily operate RL key.	TSZ lamp extinguished. At incoming trunk frame— ON_ lamp extinguished.
24	Manually restore XST relay in trunk to normal.	TBL_ lamp extinguished. At TC test set— OHI/OP lamp extinguished.
25	Restore TT key and then all keys to normal.	All lamps extinguished.
26	Remove blocking tool from TTO relay.	
27c	If no other tests are to be performed on this trunk— At TC test set— Remove all patching cords between test set and incoming trunk frame.	
28c	At distant office— Arrange to have trunk restored to service.	