

INCOMING INTERCEPT ONI-1 TRUNK CIRCUIT SD-97572-01  
TESTS USING PORTABLE TEST SET J94747A  
NO. 1 TRUNK CONCENTRATOR

1. GENERAL

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1.01 This section describes a method of testing operator number identification trunk circuit SD-97572 that handles one class of service (ONI-1) using trunk test set J94747A. The ONI-1 trunk circuit interfaces the intercept trunks from the remote central office to the vertical selection controls of the trunk concentrator (TC).

**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.

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1.02 The reasons for reissue of this section are to include arrangements for concentrating intercepted calls to No. 5 ACD and to the No. 23 desk, and reverse the steps in the following tests:

**C. Concentrator Time-Out After Seizure:**

This test checks that 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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- (a) Test A—Steps 22e and 23e
- (b) Test B—Steps 27e and 28e
- (c) Test C—Steps 23e and 24e
- (d) Test D—Steps 25f and 26f
- (e) Test E—Steps 21e and 22e
- (f) Test F—Steps 22e and 23e

**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 to return reorder tone to the customer.

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This reissue affects 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 crossbar automatic call distributor (ACD), or No. 23 operating room desk (No. 23-desk), that a signal is returned from the AIS, that a talking path is established, and that release of the trunk is normal.

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**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, and a permanent signal (PS) lamp will light.

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

This test checks that when a false ground is

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detected on the ST lead, a trouble lamp will light and the trunk is locked out of service.

1.04 Tests D and E cannot be performed on trunks which terminate on a 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 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 4 cords except Test A which requires 3 cords. All 4-wire trunk tests require 5 cords except Test A which requires 4 cords.

3. PREPARATION

STEP

ACTION

VERIFICATION

All Tests

- 1 ♦At TC test set—  
Set TTS switch as follows:  
  

TYPE SIGNALING	SWITCH POSITION
HIGH-LOW	HLT
2-WIRE LOOP	AOIL
2-WIRE-E&M	OFF
4-WIRE-E&M	4WT♦
- 2 Select ONI-1 trunk to be tested.
- 3 At distant office associated with trunk selected in Step 1—  
Arrange to have trunk made busy.
- 4 At test set—  
Restore all keys to normal.
- 5 At incoming trunk frame—  
Using 3P7A cord, connect the -48V jack to the -48V jack on TC test set.

**Caution: To avoid possible grounding of battery supply lead, connect cord**

STEP	ACTION	VERIFICATION
	<i>to test set first and, when disconnecting, remove cord from test set last.</i>	
6a	If testing 2-wire trunks— At the trunk selected in Step 1— Using 3P7A cord, connect TST line jack to 2W TST jack on TC test set.	
7a	Using 3P7A cord, connect TRK jack to TRK jack on TC test set.	
8b	If testing 4-wire trunks— At the trunk selected in Step 1— Using 3P7A cord, connect TST-R jack to the RCV1 jack on TC test set.	
9b	Using 3P7A cord, connect TST-T jack to TRT2 jack on TC test set.	
10b	Using 3P7A cord, connect TRK jack to TRK jack on TC test set.	
11	At TC test set— Operate -48V key.	-48V lamp lighted.

**Tests A through D**

12	At incoming trunk frame— Operate BCO key.	◆BCO lamp lighted.◆
13	At TC test set— Plug head telephone set into A-B jacks.	

**4. METHOD**

STEP	ACTION	VERIFICATION
<b>A. Operational Test</b>		
14c	If testing 2-wire trunk with high-low or loop signaling— Operate FT key.	FT lamp lighted.
15c	Momentarily operate TSZ key.	TSZ lamp lighted. OHI/OP lamp momentarily lighted. WNK/ANS lamp flashes then lighted. At incoming trunk frame— ON_ CT_ lamps lighted.
16c	At TC test set— Operate TALK key.	TALK lamp lighted. Talking path established with ◆distant◆ operator.

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<b>STEP</b>	<b>ACTION</b>	<b>VERIFICATION</b>
17c	Momentarily operate RL key.	TSZ, WNK/ANS lamps extinguished. At incoming trunk frame— ON_ CT_ lamps extinguished.
18d	If testing 2-wire or 4-wire trunks with E&M signaling— At TC test set— Momentarily operate TSZ key.	TSZ lamp lighted.
19d	Operate FT key.	FT lamp lighted. OHI/OP lamp momentarily lighted. WNK/ANS lamp flashes then lighted. At incoming trunk frame— ON_ CT_ lamps lighted.
20d	At TC test set— Operate TALK key.	TALK lamp lighted. Talking path established with distant operator.
21	Restore FT key and then all other keys to normal.	All lamps extinguished.
22e	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.	
23e	At distant office— Arrange to have trunk restored to service.	

**B. Trunk Time-Out After Seizure**

14	At the incoming trunk frame— Using 3P7A cord, connect TT jack to TT jack on TC test set.	
15c	If testing 2 wire trunk with high-low or loop signaling— At TC test set— Operate TT key.	TT lamp lighted.
16c	Momentarily operate TSZ key.	TSZ lamp lighted. At incoming trunk frame— ON_ lamp lighted. Within 10 seconds— TBL_ lamp lighted. At TC test set— OHI/OP lamp lighted.
17c	Operate TALK key for loop trunk or TONE key for high-low trunk.	TALK or MFT lamp lighted. 120 ipm tone heard in receiver.

STEP	ACTION	VERIFICATION
18c	Momentarily operate SIG-B key.	At incoming trunk frame— CT_ lamp lighted. TBL_ lamp extinguished.
19c	At TC test set— Momentarily operate SIG-B key.	
20	◆Momentarily operate RL key.◆	At incoming trunk frame— ON_ CT_ lamps extinguished.
21	At TC test set— Restore all keys to normal.	All lamps extinguished.
22d	If testing 2-wire or 4-wire trunk with E&M signaling— At TC test set— Momentarily operate TSZ key	TSZ lamp lighted.
23d	Operate TT key.	TT lamp lighted. ◦ At incoming trunk frame— ON_ lamp lighted. Within 10 seconds— At TC test set— OHI/OP lamp lighted.
24d	Operate TALK key.	TALK lamp lighted. 120 ipm tone heard in receiver.
25d	Momentarily operate SIG-B key.	At incoming trunk frame— TBL_ lamp extinguished. CT_ lamp lighted.
26d	At TC test set— Momentarily operate SIG-B key.	
27d	At TC test set— Restore TT key and then all other keys to normal.	All lamps extinguished.
28e	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.	
29e	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>		
14	At incoming trunk frame— Using 3P7A cord, connect TT jack to TT jack on TC test set.	
15c	If testing 2-wire trunk with high-low or loop signaling— At the TC test set— Operate TT key.	TT lamp lighted.
16c	Momentarily operate TSZ key.	TSZ lamp lighted. At incoming trunk frame— ON_ lamp lighted.
17d	If testing 2-wire or 4-wire trunk with E&M signaling— Momentarily operate TSZ key.	TSZ lamp lighted.
18d	Operate TT key.	TT lamp lighted. At incoming trunk frame— ON_ lamp lighted.
19	Within 10 seconds after performing previous step— Operate TO key.	TO lamp lighted. OHI/OP lamp momentarily lighted.
20	Operate TONE key for high-low trunk or TALK key for all other trunks.	MFT or TALK lamp lighted. 120 ipm tone heard in receiver.
21c	If testing 2-wire trunk with high-low or loop signaling— Momentarily operate RL key.	TSZ lamp extinguished. At incoming and trunk frame— ON_ lamp extinguished.
22d	If testing 2-wire or 4-wire trunk with E&M signaling— At TC test set— Momentarily operate SIG-B key twice.	
23	At TC test set— Restore all keys to normal.	All lamps extinguished.
24e	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.	
25e	At distant office— Arrange to have trunk restored to service.◆	

STEP	ACTION	VERIFICATION
<b>D. OGT Time-Out</b>		
14	At incoming trunk frame— Using 3P7A cord, connect TT jack to TT jack on TC test set.	
15c	If testing 2-wire trunk with high-low or loop signaling— At TC test set— Operate TT key.	TT lamp lighted.
16c	Momentarily operate TSZ key.	TSZ lamp lighted. At incoming trunk frame— ON_ lamp lighted.
17d	If testing 2-wire or 4-wire trunk with E&M signaling— At TC test set— Momentarily operate TSZ key.	TSZ lamp lighted.
18d	Operate TT key.	TT lamp lighted. At incoming trunk frame— ON_ lamp extinguished.
19	Within 10 seconds after performing previous step— Momentarily operate SIG-B key.	SIG lamp momentarily lighted. At incoming trunk frame— CT_ lamp lighted.
20	At TC test set— Momentarily operate SIG-B key.	SIG, OHI/OP lamps momentarily lighted.
21	Operate TONE key for high-low trunk or TALK key for all other trunks.	MFT or TALK lamp lighted. 120 ipm tone heard in receiver.
22d	◆If testing 2-wire or 4-wire trunk with E&M signaling— At TC test set— Release TT key.	TSZ lamp extinguished. At incoming trunk frame— ON_ CT_ lamps extinguished.
23e	If testing other trunks than Step 22d— At TC test set— Momentarily operate RL key.	TSZ lamp extinguished. At incoming trunk frame— ON_ CT_ lamps extinguished.◆
24	At TC test set— Restore all keys to normal.	All lamps extinguished.
25f	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.	

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<b>STEP</b>	<b>ACTION</b>	<b>VERIFICATION</b>
26f	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 frame— Using 3P7A cord, connect TT jack to TT jack on TC test set.	
13c	If testing 2-wire trunk with high-low or loop signaling— At TC test set— Operate TT key.	TT lamp lighted.
14c	Momentarily operate TSZ key.	TSZ lamp lighted. At incoming trunk frame— ON_ lamp lighted.
15d	If testing 2-wire or 4-wire trunk with E&M signaling— At TC test set— Momentarily operate TSZ key.	TSZ lamp lighted.
16d	Operate TT key.	TT lamp lighted. At incoming trunk frame— ON_ lamp lighted.
17	At TC test set— Momentarily operate SIG-B key.	SIG lamp momentarily lighted. At incoming trunk frame— CT_ lamp lighted.
18	At TC test set— Momentarily operate SIG-G key.	WNK/ANS, SIG, OHI/OP lamps momentarily lighted.
19	Momentarily operate SIG-B key.	SIG, OHI/OP lamps momentarily lighted. At incoming trunk frame— PS_ lamp lighted.
20	At TC test set— Momentarily operate RL key.	TSZ lamp extinguished.
21	Restore TT key and then all keys to normal.	All lamps extinguished.
22e	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.	
23e	At distant office— Arrange to have trunk restored to service.♦	

STEP	ACTION	VERIFICATION
<b>F. False Ground on ST Lead While Trunk is Idle</b>		
<i>Note:</i> When performing this test, position the TTS switch in the OFF position for E&M trunks and in the <b>AOIL</b> position for loop trunks.		
12	At incoming trunk frame— Using 3P7A cord, connect TT jack to TT jack on TC test set.	
13c	If testing 2-wire trunk with high-low or loop signaling— At TC test set— Operate TT key.	TT lamp lighted.
14c	Operate XST key.	XST, OHI/OP lamps lighted. At incoming trunk frame— TBL_ lamp lighted.
15c	At TC test set— Restore XST key.	XST lamp extinguished.
16c	At incoming trunk frame— Manually restore XST relay in trunk to normal.	At TC test set— OHI/OP lamp extinguished.
17c	At TC test set— Restore TT key and then all keys to normal.	All lamps extinguished.
18d	If testing 2-wire or 4-wire trunk with E&M signaling— At TC test set— Operate XST key.	XST lamp lighted.
19d	Operate TT key.	TT, OHI/OP lamps lighted. At incoming trunk frame— TBL_ lamp lighted.
20d	Manually release XST relay in trunk.	AR lamp lighted. TBL_ lamp extinguished. At TC test set— XST lamp extinguished.
21d	At incoming trunk frame— Operate AR key.	AR lamp extinguished.
22d	Momentarily operate SIG-B key twice.	
23d	Restore TT key and then all other keys to normal.	All lamps extinguished.

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<b>STEP</b>	<b>ACTION</b>	<b>VERIFICATION</b>
24e	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.	
25e	At distant office— Arrange to have trunk restored to service.◆	