PERMANENT SIGNAL HOLDING TRUNK SD-25418-01

TESTS

NO. 1 CROSSBAR OFFICES

1. GENERAL

1.01 This section describes a method of testing permanent signal holding trunk SD-25418-01 by means of the outgoing trunk test frame (OGTT) SD-25177-01 in No. 1 crossbar offices.

1.02 This section is reissued to revise Tests B and I. The Equipment Test List is affected.

1.03 The tests covered are:

1.04 Tests B through I require actions and verifications at the sender make-busy frame.

1.05 Test H requires verification at the equipment frame.

1.06 Only those OGTT lamps which verify a circuit function that is being tested are listed in the verification column.

1.07 ***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, all steps designated by that letter should be omitted.

2. APPARATUS

All Tests

2.01 Outgoing trunk test frame SD-25177-01.

2.02 P3F cord (slate), 4 feet long, equipped with 309 plug and 310 plug (3P12A cord).

Tests A Through H

2.03 P3F cord (red), 4 feet long, equipped with 309 plug and 310 plug (3P12B cord).

Tests B Through I

2.04 Head telephone set.

Test D

2.05 KS-3008 stopwatch.

Test F

2.06 716E receiver attached to W2AB cord equipped with two 360A tools (2W21A cord), a KS-6278 connecting clip, and a 411 tool.

3. PREPARATION

STEP	ACTION	VERIFICATION
Tests A Through H		
1	At OGTT— Restore all keys to normal and operate DISC1 key.	ON1 lamp extinguished.
2	Insert plug of head telephone set into A, B jacks.	
3a	If test frame telephone circuit is equipped with 102A, 178A, or 181B induction coil— Operate A, OPR, COM keys to equal 5500 ohms in non-AMA offices or 4500 ohms in AMA offices.	
4b	If test frame telephone circuit is equipped with 102C, 178C, or 178E induction coil— Operate A, OPR, COM keys to equal 5000 ohms in non-AMA offices or 4000 ohms in AMA offices.	
5	Patch T1 jack to T jack of trunk to be tested.	BY1 lamp extinguished. ***Note:*** BY1 lamp lighted indicates busy trunk.
6	Patch MB jack to T&MB jack of trunk to be tested.	

STEP	ACTION	VERIFICATION
4. METHOD		
A. False Ground on S Lead		
7	At OGTT— Operate TST1, SUB REC, NO SDR1, RSG keys.	SUP1 lamp lighted.
8	Restore RSG, NO SDR1, SUB REC, TST1, keys.	SUP1 lamp extinguished.
9	Momentarily operate DISC1 key.	
10c	If no further tests are to be performed— Remove patching cords from T, T&MB jacks.	
B. Trunk L Relay Operate Test—S Lead Continuity Test		
7	At OGTT— Operate TST1, MISC TRK, NO SDR1 keys.	SUP1 lamp lighted. If announcement and receiver off-hook tone circuits are provided— Announcement (approximately 10-second duration) heard. ▶*Note:* If trunk is furnished with YA option, audible ringing precedes the announcement.◀ Receiver off-hook tone heard for 30 to 60 seconds. ▶*Note:* If trunk is furnished with ZU option, ROH tone is not heard on PBX or carrier class lines.◀ Permanent signal tone heard. If announcement and receiver off-hook tone circuits are not provided— Permanent signal tone heard. At sender make-busy frame— Trunk PS lamp lighted.
8	▶At sender make-busy frame— Momentarily insert cord into ANS jack.◀	At OGTT— Permanent signal tone removed from trunk. At sender make-busy frame— Trunk PS lamp flashes (60 ipm).
9	At OGTT— Restore NO SDR1, MISC TRK, TST1 keys.	SUP1 lamp extinguished.
10	Momentarily operate DISC1 key.	At sender make-busy frame— Trunk PS lamp extinguished.

STEP	ACTION	VERIFICATION
11c	If no further tests are to be performed— Remove patching cords from T, T&MB jacks.	
C. Trunk L Relay Release Test		
7	At OGTT— Operate TST1, PERM SIG, NO SDR1 keys.	At sender make-busy frame— Trunk PS lamp lighted. After call is answered— At sender make-busy frame— Trunk PS lamp flashes (60 ipm).
8	Momentarily remove cord from trunk jack.	PS lamp extinguished.
9	At OGTT— Operate and hold RFL key for 3 seconds.	
10	At sender make-busy frame— Reconnect cord to trunk jack.	Trunk PS lamp flashes (60 ipm).
11	At OGTT— Restore NO SDR1, PERM SIG, TST1 keys.	
12	Momentarily operate DISC1 key.	At sender make-busy frame— Trunk PS lamp extinguished.
13c	If no further tests are to be performed— Remove patching cords from T, T&MB jacks.	
D. Auxiliary Alarm Timing Test		
7	At OGTT— Operate TST1, PERM SIG, NO SDR1 keys.	At sender make-busy frame— Trunk PS lamp lighted. After time interval— Trunk PS lamp flashes (120 ipm). After call is answered— At sender make-busy frame— Trunk PS lamp flashes (60 ipm).
8	At sender make-busy frame— Remove cord from trunk jack. ***Note:*** The time interval of auxiliary alarm is dependent upon optional wiring as listed below:	Trunk PS lamp flashes (60 ipm).
8	14 to 30 minutes—S and V wiring 20 to 42 minutes—S wiring 30 to 62 minutes—V wiring 42 to 86 minutes—No optional wiring connected. When testing other trunks in the group, the normal time interval may be reduced by blocking operated the timing circuit A relay.	

STEP	ACTION	VERIFICATION
9	At OGTT— Operate and hold RFL key for 3 seconds.	At sender make-busy frame— Trunk PS lamp extinguished.
10	At OGTT— Release RFL key.	At sender make-busy frame— Trunk PS lamp lighted. At end of time interval— Trunk PS lamp flashes (120 ipm). Aisle pilot lamp lighted. Minor alarm sounds. After call is answered— Trunk PS lamp flashes (60 ipm). Aisle pilot lamp extinguished. Minor alarm silent.
11	Remove cord from trunk jack.	Trunk PS lamp flashes (60 ipm).
12	Reconnect cord to trunk jack.	Trunk PS lamp continues to flash (60 ipm).
13	At OGTT— Restore NO SDR1, PERM SIG, TST1 keys.	
14	Momentarily operate DISC1 key.	At sender make-busy frame— Trunk PS lamp extinguished.
15c	If no further tests are to be performed— Remove patching cords from T, T&MB jacks.	

E. S1 Lead Continuity Test

7	At OGTT— Operate TST1, PERM SIG, NO SDR1 keys.	At sender make-busy frame— Trunk PS lamp lighted. After call is answered— At sender make-busy frame— Trunk PS lamp flashes (60 ipm).
8	At OGTT— Restore A, OPR, COM keys.	
9	Operate NO SDR1 key to DISC1 position without hesitating in normal position.	At OGTT— BY1 lamp lighted.
10	At sender make-busy frame— Remove cord from trunk jack.	At OGTT— BY1 lamp extinguished.
11	At OGTT— Restore PERM SIG, TST1 keys.	
12	Momentarily operate DISC1 key.	
13c	If no further tests are to be performed— Remove patching cords from T, T&MB jacks.	

STEP	ACTION	VERIFICATION
F. Sleeve Tone		
7	At LDF or MDF— Operate PST key.	
8	At OGTT— Operate TST1, PERM SIG, NO SDR1 keys.	At sender make-busy frame— Trunk PS lamp lighted. After call is answered— At sender make-busy frame— Trunk PS lamp flashes (60 ipm).
9	Remove cord from trunk jack and disregard trunk signal.	
10	At OGTT— Remove patching cord from MB jack and test tip of plug with test receiver connected to ground.	Within 90 seconds— Permanent signal tone heard on tip of plug.
11	Reconnect patching cord to MB jack.	
12	Restore NO SDR1, PERM SIG, TST1 keys.	
13	Momentarily operate DISC1 key.	
14c	If no further tests are to be performed— Remove patching cords from T, T&MB jacks.	
15	At LDF or MDF— Restore PST key.	
G. Automatic Return of Coin on Disconnection (Coin Trunks Only)		
7c	If trunks under test are not arranged for coin service improvement features— At OGTT— Operate TST1, PERM SIG, NO SDR1, RCT keys.	At sender make-busy frame— Trunk PS lamp lighted.
8d	If trunks under test are arranged for coin service improvement features— At OGTT— Operate TST1, PERM SIG, NO SDR1, RCT, CSI keys.	At sender make-busy frame— Trunk PS lamp lighted. After call is answered— At sender make-busy frame— Trunk PS lamp flashes (60 ipm).
9	At OGTT— Operate and hold RFL key.	
10	At sender make-busy frame— Remove cord from trunk jack.	At OGTT— CR lamp momentarily lighted.

STEP	ACTION	VERIFICATION
11	At OGTT— Restore RCT, RFL keys. ***Caution: Restore RCT key as soon as CR lamp is extinguished; otherwise, trunk coin control circuit will stick.***	
12c	If trunks under test are not arranged for coin service improvement features— Restore NO SDR1, PERM SIG, TST1 keys.	
13d	If trunks under test are arranged for coin service improvement features— Restore NO SDR1, PERM SIG, TST1, CSI keys.	
14	Momentarily operate DISC1 key.	
15e	If no further tests are to be performed— Remove patching cords from T, T&MB jacks.	

H. Stuck Coin Test—Coin Time Alarm (Coin Trunks Only)

7c	If trunks under test are not arranged for coin service improvement features— At OGTT— Operate TST1, PERM SIG, NO SDR1, RCT keys.	At sender make-busy frame— Trunk PS lamp lighted.
8d	If trunks under test are arranged for coin service improvement features— At OGTT— Operate TST1, PERM SIG, NO SDR1, RCT, CSI keys.	At sender make-busy frame— Trunk PS lamp lighted. After call is answered— At sender make-busy frame— Trunk PS lamp changes to slow flash.
9	At OGTT— Operate and hold RFL key.	
10	At sender make-busy frame— Remove cord from trunk jack.	At OGTT— CR lamp momentarily lighted.
11	At OGTT— Restore RFL key.	At sender make-busy frame— Trunk C lamp lighted. Aisle pilot lamp lighted. Major alarm sounds.
12	At sender make-busy frame— Reconnect cord to trunk jack.	Trunk C lamp extinguished. Aisle pilot lamp extinguished. Major alarm retired.

STEP	ACTION	VERIFICATION
13	Remove cord from trunk jack.	Trunk C lamp lighted. Aisle pilot lamp extinguished. Major alarm silent.
14	Reconnect cord to trunk jack.	Trunk C lamp extinguished.
15	Remove cord from trunk talk jack and insert it into trunk release jack.	At trunk equipment frame— Within 30 to 60 seconds— Trunk CT lamp lighted. Green aisle pilot lamp lighted. Minor alarm sounds.
16	Remove cord from trunk prime jack.	At trunk equipment frame— Trunk CT lamp extinguished. Green aisle pilot lamp extinguished. Minor alarm silent.
17c	If trunks under test are not arranged for coin service improvement features— At OGTT— Restore RCT, NO SDR1, PERM SIG, TST1 keys.	
18d	If trunks under test are arranged for coin service improvement features— At OGTT— Restore RCT, NO SDR1, PERM SIG, TST1, CSI keys.	
19	Momentarily operate DISC1 key.	
20	Remove patching cords from T, T&MB jacks.	

I. Release Hold Relays in 1A Key Equipment

1	At OGTT— Restore all keys to normal and operate DISC1 key.	ON1 lamp extinguished.
2	⧫Insert plug of headset into A and B jacks.⧫	
3	Patch T1 jack to T jack of trunk to be tested.	BY1 lamp extinguished.
4	Operate VM TLK, REV, VM1 keys.	SV lamp flashes (60 ipm). Permanent signal tone heard on trunk.
5	⧫At sender make-busy frame— Connect cord to ANS jack.⧫	At OGTT— SV lamp lighted. Permanent signal tone removed from trunk.

STEP	ACTION	VERIFICATION
6	At sender make-busy frame— Disconnect cord from ANS jack.	At OGTT— SV lamp flashes (60 ipm). Permanent signal tone heard on trunk.
7	At OGTT— Operate FEMF, G, and 1000Ω keys.	
8	Restore REV, VM TLK keys.	SV lamp extinguished. Permanent signal tone no longer heard. ▶If trunk is equipped with ZA option—◀ Voltmeter needle swings between an upscale reading and zero at a 60-ipm rate. ▶If trunk is equipped with ZR option— Voltmeter needle does not move.◀
9	Restore VM1, FEMF, G, and 1000Ω keys.	
10	Momentarily operate DISC1 key.	
11	Remove patching cord from T jack of trunk tested.	
12	▶Remove headset from A and B jacks.◀	