

REVERTING CALL TRUNKS
TESTS USING TRUNK TEST CIRCUIT SD-25918-01
NO. 5 CROSSBAR OFFICES

1. GENERAL

PAGE

1.01 This section provides a method of testing reverting call trunks, SD-25703-01, SD-25704-01, SD-26068-01, and SD-26069-01, using the master test frame and trunk test circuit.

C. *Pretrip and Trip:* This test checks the operation of the trip relay. **8**

1.02 This section is reissued for the following reasons:

- (a) To add testing features for an office arranged for the Electronic Translation System (ETS)
- (b) To revise Table A and B for immediate ringing features
- (c) To revise Test O
- (d) To make minor changes as required.

D. *Supervision Hold and Release Features:* The following features are checked: (1) Operation of the RL relay and ability of the trunk to hold when extra digits are dialed into the trunk. (2) When 4-party selective and 8-party semiselective trunks are being tested, the trunk will release when the called party disconnects if an unused digit is dialed into the trunk. **9**

E. *Trunk-Busy Features:* This test checks that only a test call can complete to an idle made-busy trunk. **12**

This reissue does not affect Equipment Test Lists.

STATION DIGIT MARGINAL TESTS (DIAL PULSE AND "TOUCH-TONE") USING AUTOMATIC MONITOR, REGISTER AND SENDER TEST CIRCUIT SD-25680-01

1.03 The tests covered are:

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A. *Trunk Seizure and Release:*
The following features are checked:
(1) Seizure and release of the trunk and completion of a connection from the master test frame (MTF) to the reverting call trunk. (2) Continuity of the tip and ring of the trunk and the polarity of the talking battery. (3) That a service call can complete to an idle trunk. **5**

F. *Dial Pulse:* This test checks loop and leak marginal conditions for various relays in the reverting call trunk when a station digit is received by the trunk. **12**

B. *Ringing Features:* This test checks the ability of the trunk to apply all ringing codes and that they are applied to the proper side of the line and are of the correct polarity. **5**

G. *Single Frequency—TOUCH-TONE:* This test checks the ability of a reverting call trunk to disregard signals comprised of a single TOUCH-TONE frequency. **13**

H. *Special 3-Frequency—TOUCH-TONE:* This test checks the ability of a reverting call trunk to disregard signals comprised of three frequencies, two of which are a valid combination of TOUCH-TONE frequencies at a normal

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dB level with a third frequency above the band of TOUCH-TONE frequencies at a higher dB level. 14

I. Maximum and Minimum Frequency— TOUCH-TONE: This test checks the ability of a reverting call trunk to function properly when it receives TOUCH-TONE signals comprised of frequencies which are higher or lower than the normal frequency. 16

J. Low and High Level Test— TOUCH-TONE: This test checks the ability of the reverting call trunk to function properly over a fixed range of signal input levels. 16

STATION DIGIT MARGINAL TESTS ("TOUCH-TONE") USING REGISTER AND CAMA SENDER TEST SET CIRCUIT SD-25676-01

K. Single Frequency: This test checks the ability of a reverting call trunk to disregard signals comprised of a single TOUCH-TONE frequency. 17

L. Special 3-Frequency: This test checks the ability of a reverting call trunk to disregard signals comprised of three frequencies. Two are TOUCH-TONE frequencies at a normal dB level; the third frequency is above the band of TOUCH-TONE frequencies at a higher dB level. 18

M. Maximum and Minimum Frequency: This test checks the ability of a reverting call trunk to function properly when it receives TOUCH-TONE signals comprised of frequencies which are higher or lower than the normal frequency. 19

N. Low and High Level Test: This test checks the ability of the reverting call trunk to function properly over a fixed range of signal input levels. 20

STATION DIGIT MARGINAL TESTS (DIAL PULSE) USING 3A PULSE GENERATING TEST SET SD-25686-01

O. Dial Pulse: This test checks loop and leak marginal test conditions for various relays in the reverting call trunk when a station digit is received by the trunk. This test is for use in offices equipped only for rotary dial telephone sets. 21

1.04 After ringing is set, the reverting call trunk will release until ringing is tripped. If the test call is abandoned before ringing is tripped, the trunk will not release. This condition is indicated by the AS lamp being lighted.

1.05 ♦When testing reverting call trunks, a condition of the IAO trunk busy with the same TS as the reverting call trunk under test, will give a trunk-busy (TB) lamp indication. In this case, make all reverting call trunks busy on the same trunk link frame except the one under test. Restore the TS key so that any idle IAO trunk may be used to start the test. If all IAO trunks are busy on the same trunk link frame, the test cannot be done until at least one IAO trunk is idle. Complete the test during periods of low traffic conditions.♦

1.06 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.

1.07 The manner of selecting some circuits and test conditions at the 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.

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

1.09 When the office is arranged for ETS, the distributors and scanners associated with the marker and trunk used in the test call must be in service or in a *maintenance-busy* condition—not in an *out-of-service* condition. To change a scanner on distribution from an *out-of-service* to a *maintenance-busy* condition, use the procedure given in the following section for the office arrangement.

218-799-701—Taking ETS Equipment Out-of-Service.

1.10 When the trunk under test is arranged for ETS, the first completed test call from the MTF will cause the TST bit to be set in the trunk register associated with the selected trunk, enabling trunk scanning to be repeated on the FT lamp at the MTF trunk test circuit. As long as the TST bit is set in the trunk register, supervision will continue to be repeated on the lamp, even on service calls. The TST bit will remain set in the trunk register until (1) a test call is made from the MTF to another trunk, or (2) the command **STOP:TRK TST** is entered at the maintenance TTY.

2. APPARATUS

All Tests

2.01 Master test control circuit SD-25800-01.

3. PREPARATION

STEP

ACTION

VERIFICATION

All Tests

Note: Refer to 1.04, 1.05, 1.07, 1.09, and 1.10.

- | | | |
|---|---|-------------------------|
| 1 | At MTF—
Restore all keys and switches. | |
| 2 | Momentarily operate RL key. | All lamps extinguished. |
| 3 | Select A_ through G_ digits for office code and number assigned to originating test line. | |

2.02 Trunk test circuit SD-25918-01.

Test D

2.03 KS-3008 stopwatch or equivalent.

Tests F Through J

2.04 Automatic monitor, register, and sender test circuit SD-25680-01.

Tests K Through N

2.05 Test circuit for register and CAMA sender circuits SD-25988-01.

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

2.07 Patching cord, P3K cord, 6 feet long, equipped with two 310 plugs (3P15A cord) (for patching RC jacks).

2.08 Testing cord, 20-conductor cord, 6 feet long, equipped with one KS-13875 plug and one KS-13895 plug (W20C cord) (for connecting IRT jack of test circuit for register and CAMA sender circuits to IRT jack of test set).

Test O

2.09 3A pulse generating test set J94732A and power supply unit J94732B (SD-95686-01).

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STEP	ACTION	VERIFICATION
4	Select marker.	
5	Select MISC class of test.	
6	Operate FS, TS, KRC keys.	
7	Select class of service and rate treatment as required.	
8a	◆If ETS provided— Operate PCS, PTS keys.	
9	Select originating class of call and translator indication as required.◆	
10	Select trunk.	
11	Operate GPA/GPB key as required for selected group when trunk is in an allotted subgroup.	

Tests A Through E, G Through J

12b If TOUCH-TONE signaling is used—
Operate PB key.

Tests A, C Through N

13 ◆Select ringing combination 01.◆

14 Operate TLK key.

Tests B, C, F Through N

15c If RVC key is provided—
Operate RVC key.

16d If TR key is provided and RVC key is *not* provided—
Operate TR key.

Tests K Through N

17 Connect test set IRT jack to IRT jack at MTF.

18 Patch test set RC jack to master test control circuit RC jack.

19 At test set—
Set L switch to OFF.

20 Operate PB, RP keys.

STEP	ACTION	VERIFICATION
Test O		
21	Patch ORT jack on trunk test circuit to OUTPUT CP jack on 3A pulse generating test set.	
22	At MTF— Operate TLK key.	

4. METHOD

STEP	ACTION	VERIFICATION
A. Trunk Seizure and Release		
15	Momentarily operate ST key.	<p>◆If ETS provided— FT lamp lighted.◆ AS lamp lighted. PK lamp not lighted. If trunk under test is SD-25703-01 or SD-26068-01— Line-busy tone heard. If trunk under test is SD-25704-01 or SD-26069-01— High tone heard. If TOUCH-TONE signaling is used— TOUCH-TONE dial tone or 440-Hz tone heard.</p>
16c	If trunk under test is SD-25703-01 or SD-26068-01— Momentarily restore TLK key.	AS lamp remains lighted.
17	Restore TLK key.	<p>◆If ETS provided— FT lamp extinguished.◆ AS lamp extinguished.</p>
18	Momentarily operate RL key.	All lamps extinguished.
19	Restore all keys and switches not required in next test.	

B. Ringing Features**For SD-25703-01 or SD-26068-01 Reverting Call Trunks**

17	Operate TLK key.	
18	Select first ringing combination as shown in Table A.	

STEP	ACTION	VERIFICATION
25	Restore all keys and switches not required in next test.	
For SD-25704-01 or SD-26069-01 Reverting Call Trunks		
26	Operate TLK key.	
27	Select first ringing combination as indicated in Table B.	
28	Momentarily operate ST key.	<p>◆If ETS provided— FT lamp lighted.◆ AS lamp lighted. PK lamp <i>not</i> lighted. High tone heard. If TOUCH-TONE signaling is used— TOUCH-TONE dial tone or 440-Hz tone heard.</p>
29	Using dial of MTF telephone circuit— Dial station digit associated with ringing combination as indicated in Table B.	<p>AS lamp remains lighted. High tone silenced. Line-busy tone heard.</p>
30	Restore TLK key.	<p>AS lamp remains lighted. Lamps associated with ringing combination selected lighted as indicated in Table B.</p>
31	Operate TLK key.	<p>AS lamp remains lighted. R±, T± lamps extinguished.</p>

◆TABLE B◆

RC	STATION DIGIT	TRUNK EQUIPPED TO SERVE			RINGING DETECTION			
		2P	4PFS	8PSS	CALLED		CALLING	
					LAMP	CODE	LAMP	CODE
†11	2	✓	✓	✓	T -	1	R -	1
†01	3	✓	✓	✓	R -	1	T -	1
07	4		✓	✓	T +	1	R +	1
06	5		✓	✓	R +	1	T +	1
12	6			✓	T -	2	R -	2
03 or 08*	7			✓	R +	2	T -	2
12 or 09*	8			✓	T +	2	R +	2
02	9			✓	R -	2	T +	2

* Trunk equipped with 4W ringing selection switch.

† In offices arranged for marker controlled immediate ring, set RMBR switch to position 1.

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STEP	ACTION	VERIFICATION
32	Restore TLK key.	◆If ETS provided— FT lamp extinguished.◆ AS lamp extinguished.
33	Momentarily operate RL key.	All lamps extinguished.
34	Repeat Steps 26 through 33 for each ringing combination provided as indicated in Table B.	
35	Restore all keys and switches not required in next test.	
C. Pretrip and Trip		
17	Momentarily operate ST key.	◆If ETS provided— FT lamp lighted.◆ AS lamp lighted. PK lamp <i>not</i> lighted. If trunk under test is SD-25703-01 or SD -26068-01— Line-busy tone heard. If trunk under test is SD-25704-01 or SD-26069-01— High tone heard. If TOUCH-TONE signaling is used— TOUCH-TONE dial tone or 440-Hz tone heard.
18e	If trunk under test is SD-25703-01 or SD-26068-01— Restore TLK key.	AS lamp remains lighted. R- lamp lighted for 2 seconds every 6 seconds. T- lamp lighted for 1/2 second every 3 seconds.
19f	If trunk under test is SD-25704-01 or SD-26069-01— Using dial of MTF telephone circuit, dial station digit 3.	AS lamp remains lighted. Line-busy tone heard.
20f	Restore TLK key.	AS lamp remains lighted. R- lamp lighted for 2 seconds every 6 seconds. T- lamp lighted for 1/2 second every 3 seconds.
21	While R-, T- lamps are extinguished— Operate PTP key for 1/2 second.	R-, T- lamps continue to flash.
22	While R-, T- lamp are extinguished— Operate TRP key for 1 second.	R-, T- lamps <i>not</i> lighted. AS lamp extinguished. ◆If ETS provided— FT lamp extinguished.◆
23	Momentarily operate RL key.	All lamps extinguished.

STEP	ACTION	VERIFICATION
24	Restore all keys and switches not required in next test.	
D. Supervision Hold and Release Features		
For SD-25703-01 or SD-26068-01 Reverting Call Trunks		
15	Momentarily operate ST key.	◆If ETS provided— FT lamp lighted.◆ AS lamp lighted. PK lamp <i>not</i> lighted. Line-busy tone heard.
16	Using dial of MTF telephone circuit, dial station digit 0.	AS lamp remains lighted.
17	Restore TLK key.	AS lamp remains lighted.
18	Operate TLK key.	AS lamp remains lighted.
19	Restore TLK key.	◆If ETS provided— FT lamp extinguished.◆ AS lamp extinguished.
20	Momentarily operate RL key.	All lamps extinguished.
21c	If trunk is equipped with a 235-type RL relay— Allow 2 minutes to elapse before proceeding with Step 21.	
22d	If trunk is equipped with a tube-type RL relay— Allow 4 minutes to elapse before proceeding with Step 21.	
23	Operate TLK key.	
24	Momentarily operate ST key; <i>start timing</i> .	◆If ETS provided— FT lamp lighted.◆ AS lamp lighted. Line-busy tone heard. In 13 to 32 seconds— AS lamp extinguished. ◆If ETS provided— FT lamp extinguished.◆
25	Momentarily operate RL key.	All lamps extinguished.
26	Restore all keys and switches not required in next test.	

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STEP	ACTION	VERIFICATION
For SD-25704-01 or SD-26069-01 Reverting Call Trunks		
27	Momentarily operate ST key.	♦If ETS provided— FT lamp lighted.♦ AS lamp lighted. PK lamp <i>not</i> lighted. High tone heard. If TOUCH-TONE signaling is used— TOUCH-TONE dial tone or 440-Hz tone heard.
28	Using dial of MTF telephone circuit, dial station digit 0.	AS lamp remains lighted. Line-busy tone heard.
29	Restore TLK key.	♦If ETS provided— FT lamp extinguished.♦ AS lamp extinguished.
30	Momentarily operate RL key.	All lamps extinguished.
31	Operate TLK key.	
32	Momentarily operate ST key.	♦If ETS provided— FT lamp lighted.♦ AS lamp lighted. High tone heard. If TOUCH-TONE signaling is used— TOUCH-TONE dial tone or 440-Hz tone heard.
33	Dial station digit 1.	Line-busy tone heard. AS lamp remains lighted.
34	Restore TLK key.	♦If ETS provided— FT lamp extinguished.♦ AS lamp extinguished.
35	Momentarily operate RL key.	All lamps extinguished.
36f	If trunk under test is arranged for 4-party selective ringing only— Repeat Steps 31 through 35 using each of digits 6, 7, 8, 9.	
37d	If trunk is equipped with a tube-type RL relay— Allow 4 minutes to elapse before proceeding with Step 36.	
38	Operate TLK key.	

STEP	ACTION	VERIFICATION
39	Momentarily operate ST key; <i>start timing</i> .	♦If ETS provided— FT lamp lighted.♦ AS lamp lighted. High tone heard. If TOUCH-TONE signaling is used— TOUCH-TONE dial tone or 440-Hz tone heard. If trunk is equipped with a tube-type RL relay— In 13 to 32 seconds— AS lamp extinguished. ♦If ETS provided— FT lamp extinguished.♦ If trunk is <i>not</i> equipped with a tube-type RL relay— In 21 to 32 seconds— AS lamp extinguished. ♦If ETS provided— FT lamp extinguished.♦
40	Momentarily operate RL key.	All lamps extinguished.
41d	If trunk is equipped with a tube-type RL relay— Allow 4 minutes to elapse before proceeding with Step 40.	
42	Momentarily operate ST key.	♦If ETS provided— FT lamp lighted.♦ AS lamp lighted. High tone heard. If TOUCH-TONE signaling is used— TOUCH-TONE dial tone or 440-Hz tone heard.
43	Using dial of MTF telephone circuit, dial station digit 3; <i>start timing</i> .	If trunk is equipped with a tube-type RL relay— In 13 to 32 seconds— AS lamp extinguished. ♦If ETS provided— FT lamp extinguished.♦ If trunk is <i>not</i> equipped with a tube-type RL relay— In 21 to 32 seconds— AS lamp extinguished. ♦If ETS provided— FT lamp extinguished.♦
44	Momentarily operate RL key.	All lamps extinguished.
45	Restore all keys and switches not required in next test.	

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STEP	ACTION	VERIFICATION
E. Trunk-Busy Features		
15	At relay rack frame— Set MB switch to MB.	MB lamp lighted.
16	At MTF— Operate NTFS, NTTS keys.	
17	Momentarily operate ST key.	♦If ETS provided— FT lamp lighted.♦ AS lamp lighted. PK lamp <i>not</i> lighted. Line-busy tone or high tone heard. If TOUCH-TONE signaling is used— TOUCH-TONE dial tone or 440-Hz tone heard.
18c	If trunk under test is SD-25703-01 or SD-26068-01— Momentarily restore TLK key.	AS lamp remains lighted.
19	Restore TLK key.	AS lamp extinguished.
20	Momentarily operate RL key.	All lamps extinguished. ♦If ETS provided— FT lamp remains lighted.♦
21	Operate FS, TS keys.	
22	Operate TLK key.	
23	Momentarily operate ST key.	TB lamp lighted.
24	Momentarily operate RL key.	All lamps extinguished.
25	Restore all keys and switches not required in next test.	
26	At relay rack frame— Restore MB switch to N.	♦If ETS provided— FT lamp extinguished.♦

**STATION DIGIT MARGINAL TESTS (DIAL PULSE AND
"TOUCH-TONE") USING AUTOMATIC MONITOR,
REGISTER AND SENDER TEST CIRCUIT SD-25680-01**

F. Dial Pulse

- 17 Operate 7PPS MIN BR key.
- 18 Select L_ digit 2 (station digit).

STEP	ACTION	VERIFICATION
19	Momentarily operate ST key.	◆If ETS provided— FT lamp lighted.◆ AS lamp lighted. High tone heard.
20	Operate RVTK key.	
21	Restore TLK key.	High tone silenced.
22	Momentarily operate ST key.	
23	Operate TLK key.	Line-busy tone heard.
24	Restore RVTK key.	
25	Restore TLK key.	R-, R+, T-, or T+ lamp flashes to coincide with L- setting. (Refer to Table B.) Line-busy tone silenced.
26	Operate TLK key.	R-, R+, T-, or T+ lamp extinguished.
27	Momentarily operate RL key.	All lamps extinguished.
28	Repeat Steps 18 through 27 for each station digit 3 through 9 as required for party identification in use.	
29	Repeat Steps 17 through 28 operating 7PPS MAX BR, 15PPS MIN BR, 15PPS MAX BR, 24PPS MAX BR keys.	
30	Restore all keys and switches not required in next test.	

G. Single Frequency—TOUCH-TONE

17	Operate SLO key.	
18	Select L_ digit 2 (station digit).	
19	Set FCB, FCA switches to first position as indicated in Table C.	
20	Momentarily operate ST key.	◆If ETS provided— FT lamp lighted.◆ AS lamp lighted. TOUCH-TONE dial tone or 440-Hz tone heard.
21	Operate RVTK key.	
22	Restore TLK key.	TOUCH-TONE dial tone or 440-Hz tone silenced.

STEP	ACTION	VERIFICATION
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TABLE C

SWITCH POSITIONS		FREQUENCIES TRANSMITTED	
FCB	FCA	DESIGNATION	HZ
SFH	4	HF4	1633
	3	HF3	1477
	2	HF2	1336
	1	HF1	1209
SFL	1	LF0	697
	2	LF3	770
	3	LF6	852
	4	LF9	941

- | | | |
|----|--|---|
| 23 | Momentarily operate ST key. | |
| 24 | Operate TLK key. | TOUCH-TONE dial tone or 440-Hz tone heard. |
| 25 | Restore RVTK key. | |
| 26 | Restore TLK key. | ♦If ETS provided—
FT lamp extinguished.♦
AS lamp extinguished.
TOUCH-TONE dial tone or 440-Hz tone silenced. |
| 27 | Momentarily operate RL key. | All lamps extinguished. |
| 28 | Operate TLK key. | |
| 29 | Repeat Steps 19 through 28 for each setting of FCB, FCA switches as indicated in Table C. | |
| 30 | Repeat Steps 18 through 29 for each station digit 3 through 9 as required for party identification in use. | |
| 31 | Restore all keys and switches not required in next test. | |

H. Special 3-Frequency—TOUCH-TONE

- | | |
|----|------------------------------------|
| 17 | Operate SLO key. |
| 18 | Select L_ digit 2 (station digit). |

STEP	ACTION	VERIFICATION
19	Set FCB, FCA switches to first position as indicated in Table D.	
20	Momentarily operate ST keys.	◆If ETS provided— FT lamp lighted.◆ AS lamp lighted. TOUCH-TONE dial tone or 440-Hz tone heard.
21	Operate RVTK key.	
22	Restore TLK key.	TOUCH-TONE dial tone or 440-Hz tone silenced.
23	Momentarily operate ST key.	
24	Operate TLK key.	TOUCH-TONE dial tone or 440-Hz tone heard.
25	Restore RVTK key.	
26	Restore TLK key.	◆If ETS provided— FT lamp extinguished.◆ AS lamp extinguished. TOUCH-TONE dial tone or 440-Hz tone silenced.
27	Momentarily operate RL key.	All lamps extinguished.
28	Operate TLK key.	
29	Repeat Steps 19 through 28 for each setting of FCA switch as indicated in Table D.	
30	Repeat Steps 18 through 29 for each station digit 3 through 9 as required for party identification in use.	
31	Restore all keys and switches not required in next test.	

TABLE D

SWITCH POSITIONS		FREQUENCIES TRANSMITTED	
FCB	FCA	DESIGNATION	HZ
3FS	1	HF1, LF0	2000
	2	HF2, LF3	2000
	3	HF3, LF6	2000
	4	HF2, LF9	2000

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STEP	ACTION	VERIFICATION
I. Maximum and Minimum Frequency—TOUCH-TONE		
17	Operate SLO key.	
18	Set FCA switch to OFF.	
19	Set FCB switch to MNF.	
20	Select L_ digit 2 (station digit).	
21	Momentarily operate ST key.	◆If ETS provided— FT lamp lighted.◆ AS lamp lighted. TOUCH-TONE dial tone or 440-Hz tone heard.
22	Operate RVTK key.	
23	Restore TLK key.	TOUCH-TONE dial tone or 440-Hz tone silenced.
24	Momentarily operate ST key.	
25	Operate TLK key.	Line-busy tone heard.
26	Restore RVTK key.	
27	Restore TLK key.	R-, R+, T-, or T+ lamp flashes to coincide with L- setting. (Refer to Table B.) Line-busy tone silenced.
28	Operate TLK key.	R-, R+, T-, or T+ lamp extinguished.
29	Momentarily operate RL key.	All lamps extinguished.
30	Repeat Steps 20 through 29 for each station digit 3 through 9 as required for party identification in use.	
31	Set FCB switch to MXF.	
32	Repeat Steps 20 through 29 for each station digit 2 through 9 as required for party identification in use.	
33	Restore all keys and switches not required in next test.	
J. Low and High Level Test—TOUCH-TONE		
17	Operate SLO key.	
18	Operate LLV key.	

STEP	ACTION	VERIFICATION
19	Select L_ digit 2 (station digit).	
20	While trunk is idle— Momentarily operate ST key.	◆If ETS provided— FT lamp lighted.◆ AS lamp lighted. TOUCH-TONE dial tone or 440-Hz tone heard.
21	Operate RVTK key.	
22	Restore TLK key.	TOUCH-TONE dial tone or 440-Hz tone silenced.
23	Momentarily operate ST key.	R-, R+, T-, or T+ lamp flashes to coincide with L- setting. (Refer to Table B.)
24	Operate TLK key.	Line-busy tone heard. R-, R+, T-, or T+ lamp extinguished.
25	Restore RVTK key.	
26	Restore TLK key.	R-, R+, T-, or T+ lamp flashes to coincide with L- setting. (Refer to Table B.) Line-busy tone silenced.
27	Operate TLK key.	R-, R+, T-, or T+ lamp extinguished.
28	Momentarily operate RL key.	All lamps extinguished.
29	Operate HLV key.	
30	Repeat Steps 19 through 28 for each station digit 3 through 9 as required for party identification in use.	
31	Restore all keys and switches not required in next test.	

**STATION DIGIT MARGINAL TESTS ("TOUCH-TONE")
USING REGISTER AND CAMA SENDER TEST SET
CIRCUIT SD-25676-01**

K. Single Frequency

21	Set FCB, FCA switches to first position as indicated in Table C.	
22	At test set— While trunk is idle— Momentarily operate STT key.	At MTF— AS lamp lighted. TOUCH-TONE dial tone or 440-Hz tone heard. ◆If ETS provided— FT lamp lighted.◆

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STEP	ACTION	VERIFICATION
23	Operate RVTK key.	
24	Restore TLK key.	TOUCH-TONE dial tone or 440-Hz tone silenced.
25	At test set— Momentarily operate SF-IA key.	
26	At MTF— Operate TLK key.	TOUCH-TONE dial tone or 440-Hz tone heard.
27	Restore RVTK key.	
28	Restore TLK key.	TOUCH-TONE dial tone or 440-Hz tone silenced. AS lamp extinguished. ♦If ETS provided— FT lamp extinguished.♦
29	Momentarily operate RL key.	All lamps extinguished.
30	Operate TLK key.	
31	Repeat Steps 21 through 30 for each setting of FCB, FCA switches as indicated in Table C.	
32	Repeat Steps 21 through 31 for each station digit 3 through 9 as required for party identification in use.	
33	Restore all keys and switches not required in next test.	
34	Remove patching and testing cords from test set.	

L. Special 3-Frequency

21	Set FCB, FCA switches to first position as indicated in Table D.	
22	At test set— While trunk is idle— Momentarily operate STT key.	At MTF— AS lamp lighted. TOUCH-TONE dial tone or 440-Hz tone heard. ♦If ETS provided— FT lamp lighted.♦
23	Operate RVTK key.	
24	Restore TLK key.	TOUCH-TONE dial tone or 440-Hz tone silenced.

STEP	ACTION	VERIFICATION
25	At test set— Momentarily operate SF-IA key.	
26	At MTF— Operate TLK key.	TOUCH-TONE dial tone or 440-Hz tone heard.
27	Restore RVTK key.	
28	Restore TLK key.	◆If ETS provided— FT lamp extinguished.◆ AS lamp extinguished. TOUCH-TONE dial tone or 440-Hz tone silenced.
29	Momentarily operate RL key.	All lamps extinguished.
30	Operate TLK key.	
31	Repeat Steps 21 through 30 for each setting of FCA switch as indicated in Table D.	
32	Repeat Steps 21 through 31 for each station digit 3 through 9 as required for party identification in use.	
33	Restore all keys and switches not required in next test.	
34	Remove patching and testing cords from test set.	

M. Maximum and Minimum Frequency

21	Set FCA switch to OFF.	
22	Set FCB switch to MNF.	
23	At test set— Momentarily operate STT key.	At MTF— AS lamp lighted. TOUCH-TONE dial tone or 440-Hz tone heard. ◆If ETS provided— FT lamp lighted.◆
24	Operate RVTK key.	
25	Restore TLK key.	TOUCH-TONE dial tone or 440-Hz tone silenced.
26	At test set— Key station digit 2 on TOUCH-TONE set.	At MTF— R-, R+, T-, or T+ lamp flashes to coincide with digit keyed. (Refer to Table B.)

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STEP	ACTION	VERIFICATION
27	Operate TLK key.	R-, R+, T-, or T+ lamp extinguished.
28	Restore RVTK key.	
29	Restore TLK key.	AS lamp extinguished. ◆If ETS provided— FT lamp extinguished.◆
30	Momentarily operate RL key.	All lamps extinguished.
31	Operate TLK key.	
32	Repeat Steps 22 through 31 for each station digit 3 through 9 as required for party identification in use.	
33	Repeat Steps 23 through 31 for MXF setting of FCB switch for each station digit 2 through 9 as required for party identification in use.	
34	Restore all keys and switches not required in next test.	
35	Remove patching and testing set.	

N. Low and High Level Test

21	Operate LLV key.	
22	At test set— Momentarily operate STT key.	At MTF— AS lamp lighted. TOUCH-TONE dial tone or 440-Hz tone heard. ◆If ETS provided— FT lamp lighted.◆
23	Operate RVTK key.	
24	Restore TLK key.	TOUCH-TONE dial tone or 440-Hz tone silenced.
25	At test set— Key station digit 2 on TOUCH-TONE set.	At MTF— R-, R+, T-, or T+ lamp flashes to coincide with digit keyed. (Refer to Table B.)
26	Operate TLK key.	R-, R+, T-, or T+ lamp extinguished.
27	Restore RVTK key.	
28	Restore TLK key.	AS lamp extinguished. ◆If ETS provided— FT lamp extinguished.◆

STEP	ACTION	VERIFICATION
29	Momentarily operate RL key.	All lamps extinguished.
30	Operate TLK key.	
31	Operate HLV key.	
32	Repeat Steps 24 through 31 for each station digit 3 through 9 as required for party identification in use.	
33	Restore all keys and switches not required in next test.	
34	Remove patching and testing cords from test set.	

**STATION DIGIT MARGINAL TESTS (DIAL PULSE) USING
3A PULSE GENERATING TEST SET SD-25686-01**

O. Dial Pulse

Note: The 3A pulse generating test set shall be known to be correctly calibrated.

- 23 At 3A pulse generating test set—
Prepare test to provide condition A as indicated in Table E.

◆ TABLE E ◆

CONDITION	PPS	PERCENT BREAK
A	7	50
B		80
C	15	65
D	24	55
E		70

- 24 Set PULSES PER TRAIN switch to 2.
- 25 At MTF—
Momentarily operate ST key.

◆If ETS provided—
FT lamp lighted.◆
AS lamp lighted.
High tone heard.

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STEP	ACTION	VERIFICATION
26	◆Operate RVTK key.◆	
27	At MTF— Restore TLK key.	High tone silenced.
28	At 3A pulse generating test set— Operate TRAIN CONTROL key to PULSE.	
29	Operate TLK key.	Line-busy tone heard.
30	At 3A pulse generating test set— Restore TRAIN CONTROL key to NOR.	
31	At MTF— Restore ◆RVTK,◆ TLK keys.	R-, R+, T-, or T+ lamp flashes to coincide with 3A pulse generating test set PULSES PER TRAIN switch setting. (Refer to Table B.) Line-busy tone silenced.
32	Operate TLK key.	R-, R+, T-, or T+ lamp extinguished.
33	Momentarily operate RL key.	All lamps extinguished.
34	Repeat Steps 24 through 33 for each station digit 3 through 9 as required for party identification in use.	
35	Repeat Steps 23 through 34 to provide conditions B through E as indicated in Table E.	
36	Restore all keys and switches.	
37	Remove patching cord from MTF.	