INCOMING TRUNK CIRCUITS

NON CENTREX

TESTS USING MASTER TEST FRAME (MTF)

NO. 5 CROSSBAR OFFICES

1. GENERAL

1.01 This section describes methods for testing non centrex features of nonwire-spring-relay and wire-spring-relay type incoming trunks. For centrex tests, use BSP Section 218-251-502.

1.02 The reasons for reissuing this section are listed below. Since this reissue is a general revision, no revision arrows have been used to denote significant changes. This reissue affects Equipment Test Lists.

(a) The section has been divided into two separate sections to segregate tests of centrex features from regular tests covered in this section.

(b) The section title and paragraph 1.01 have been changed to reflect the above information.

(c) The majority of the tests have been relettered to maintain alphabetical continuity, minor changes have been made in test contents.

(d) Paragraph 1.09 and 1.10 have been added, and the effect of 1.09 has been applied throughout the section.

1.03 The tests covered are:

INCOMING TRUNKS—AUTOMATIC START OF RINGING

1.04 Tests K through Q require action and verification at the distant office switchboard.

1.05 Table A is included for recording local office information that affects the use of the lettered steps in the test procedures.

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, the steps designated by that letter should be omitted.

1.07 The manner of selecting some circuits and test conditions at the master test frame (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 On issue 76D of SD-25800-01 a group of 18 "class of test" lamps was replaced by a single "start test" lamp designated STT. Since the designation given to the lamp is not specific, the lamp will not be called out in the section, as well as the 18 discontinued lamps, DT, ORIG, ITDO, ITNP, OGT, INC, OR, SDR, IR, MISC, IAO, MLV, LT, IMS, PTT, TVT, ATNT, and IMT.

1.10 On Test A—If non operate test of A relay is desired—two craftspeople will be required for verification.

2. APPARATUS

Test A

2.01 Testing cord, 893 cord, 6 feet long, equipped with two 360A tools (1W13B cord) and two KS-6278 connecting clips (for making test connections to terminal strip terminals).

Tests A Through J

2.02 Master test control circuit, SD-25800-01.

2.03 Patching cord, P3E cord, 6 feet long, equipped with two 310 plugs (3P7A cord).

Tests A Through N

2.04 Trunk test circuit, SD-25918-01.

Tests D, E, F

2.05 KS-3008 stopwatch or equivalent.

Test I

2.06 Blocking and insulating tools as required. Use tools and apply as covered in Section 069-020-801.

3. PREPARATION

Tests A Through J

3.01 Obtain information regarding incoming trunks from office records and trunk circuit SD drawings. In Table A, record the originating office code, directing digit number, and local and tandem office codes associated with each incoming trunk. Also in Table A, record whether or not optional wiring is provided in each trunk by placing a check mark in the YES or NO column as applicable. If link reseizure delay is provided, record the BL lead appearance.

Note: Refer to Table A when performing tests to determine if an action covered by a lettered step is required.

Tests H, O

3.02 Obtain the permanent overflow test number from office records.

Test J

3.03 Obtain the free terminating test line number from office records.

Test P

3.04 Obtain the permanently busy number from office records.

Tests K Through Q

3.05 Obtain the ringing test line numbers from office records.

3. PREPARATION (Cont)

STEP	ACTION	VERIFICATION
	Note: Refer to paragraph 1.07 and 1.08.	
Tests A Through N		
1	At MTF— Restore all keys and switches.	

STEP	ACTION	VERIFICATION
2	Momentarily operate RL key.	All lamps extinguished.
	Tests A Through J	
3	Select ITNP class of test.	
4	Have trunk made busy at originating office.	
5	At relay rack frame— Check that A relay of trunk is not operated, then patch T jack on trunk unit to ITT jack on relay rack frame.	
6a	If directing digit or digits are required— At MTF— Select digits as required for incoming class of trunk under test.	
	Tests A Through F, K Through N	
7	Operate TTL key.	
8	Select ringing combination 1.	
	Tests A, D, E	
9b	If trunk is arranged for tandem completion— Select digits as required for tandem outgoing office code.	
10b	Select TAN subclass of test.	
	Tests K Through N	
11	At MTF— Operate TR, TSW keys.	
12	Establish a separate talking connection to distant switchboard and request switchboard attendant to check that trunk to be tested is idle.	

STEP	ACTION	VERIFICATION

4. METHOD

STEP	ACTION	VERIFICATION

INCOMING TRUNKS—AUTOMATIC START OF RINGING

A. Trunk Seizure

Trunks From Step-by-Step Offices—Local and Tandem Completion

11	Operate TLK, LS keys. ***Note:*** Refer to paragraph 1.10.	
12c	If nonoperate test of A relay is desired— Operate BLA, LLP keys.	
13c	Momentarily operate ST key.	At relay rack frame— At trunk circuit under test— A relay does not operate.
14c	At MTF— Momentarily operate RL key.	All lamps extinguished.
15c	Restore BLA, LLP keys.	
16	Operate SXS, REC keys.	
17	Momentarily operate ST key.	Trouble record taken. FG_, TF_, ITC_ designations perforated representing trunk link frame and incoming trunk class of the trunk selected (Table C). SLV lamp may be momentarily lighted. If trunk is arranged for local completion— TS lamp lighted. R- lamp flashes. Ringing tone heard in unison with R- lamp flashes. If trunk is arranged for tandem completion— DIS1, LK2, MRL lamps lighted.
18	Operate ANS key; ***start timing.***	Steady high tone heard. If trunk is arranged for local completion— R- lamp extinguished. Ringing tone silenced. If immediate charge feature is provided— OGT-CS lamp lighted. If delayed charge feature is provided— In 5 to 8 seconds— OGT-CS lamp lighted.

STEP	ACTION	VERIFICATION
19	Restore TLK, SXS, ANS, REC keys.	OGT-CS lamp extinguished. Steady high tone silenced.
20	Momentarily operate RL key.	All lamps extinguished.
	Trunks—Except Revertive Pulsing—From Other Than Step-by-Step Offices—No Ground Shunt on A Relay—Local and Tandem Completion	
21d	If trunk is arranged for link reseizure delay— At relay rack frame— Ground BL lead on terminal strip associated with trunk in accordance with Table A.	
22	At MTF— Operate HS, LLP, TLK keys.	
23	Operate SLP key.	
24c	If nonoperate test of A relay is desired— Operate BLA key.	
25c	Momentarily operate ST key.	At relay rack frame— At trunk circuit under test— A relay does not operate.
26c	Momentarily operate RL key.	All lamps extinguished.
27c	Restore BLA key.	
28	Operate REC key.	
29e	If trunk has resistance shunts on A relay— Restore LLP key.	
30	Momentarily operate ST key.	Trouble record taken. FG_, TF_, ITC_ designations perforated representing trunk link frame and incoming trunk class of the trunk selected (Table C). OGT-CS lamp may be momentarily lighted. If trunk is not arranged for link reseizure delay— SLV lamp lighted.
31d	If trunk is arranged for link reseizure delay— Remove ground from BL lead.	SLV lamp lighted.
32	Restore HS, REC keys.	
33	Operate LS key.	SLV lamp extinguished. If trunk is arranged for local completion— TS lamp lighted.

STEP	ACTION	VERIFICATION
		R- lamp flashes. Ringing tone heard in unison with R- lamp flashes. If trunk is arranged for tandem completion— DIS1, LK2, MRL lamps lighted.
34b	If trunk is arranged for tandem completion— Operate ANS key.	OGT-CS lamp lighted. Steady high tone heard.
35	Restore LS key.	OGT-CS or TS lamp remains lighted.
36e	If trunk has resistance shunts on A relay— Restore SLP key.	If trunk is arranged for local completion— TS lamp extinguished. Steady high tone silenced.
37	Restore TLK, LLP keys.	
38b	If trunk is arranged for tandem completion— Restore ANS key.	OGT-CS lamp extinguished. Steady high tone silenced.
39	Momentarily operate RL key.	All lamps extinguished.
Trunks—Except Revertive Pulsing—From Other Than Step-by-Step Offices—Ground Shunt on A Relay—Local and Tandem Completion		
40	Operate HS, TLK, REC keys.	
41f	If trunk, when normal, has ground on ring terminal of T test jack— Operate IRV key.	
42	Momentarily operate ST key.	Trouble record taken. FG_, TF_, ITC_ designations perforated representing trunk link frame and incoming trunk class of the trunk selected (Table C).
43	Hold GS key operated for about 3 seconds.	SLV lamp ***not*** lighted.
44f	If trunk, when normal, has ground on ring terminal of T test jack— Restore IRV key.	
45	Operate SLP key.	SLV lamp lighted. OGT-CS lamp may be momentarily lighted.
46	Restore HS, REC keys.	
47	Operate LS key.	SLV lamp extinguished. If trunk is arranged for local completion— TS lamp lighted. R- lamp flashes.

STEP	ACTION	VERIFICATION
		Ringing tone heard in unison with R- lamp flashes. If trunk is arranged for tandem completion— DIS1, LK2, MRL lamps lighted.
48	Restore SLP key.	SLV lamp lighted.
49g	If trunk has 1000-ohm loop compensation— Operate COMP key.	
50	Operate LLP key.	SLV lamp extinguished.
51b	If trunk is arranged for tandem completion— Operate ANS key.	OGT-CS lamp lighted. Steady high tone heard.
52	Restore LS key.	OGT-CS or TS lamp remains lighted.
53	Restore TLK, LLP keys.	If trunk is arranged for local completion— TS lamp extinguished. Steady high tone silenced.
54b	If trunk is arranged for tandem completion— Restore ANS key.	OGT-CS lamp extinguished. Steady high tone silenced.
55	Momentarily operate RL key.	All lamps extinguished.
56g	If trunk has 1000-ohm loop compensation— Restore COMP key.	
Trunks—Revertive Pulsing—From Other Than Step-by-Step Offices—No Ground Shunt on A Relay—Local and Tandem Completion		
57	Operate TLK, REC keys.	
58e	If trunk has resistance shunts on A relay— Operate LS, SLP keys.	
59	Momentarily operate ST key.	Trouble record taken. FG_, TF_, ITC_ designations perforated representing trunk link frame and incoming trunk class of the trunk selected (Table C). SLV, OGT-CS lamps may be momentarily lighted. If trunk is arranged for local completion— TS lamp lighted. R- lamp flashes. Ringing tone heard in unison with R- lamp flashes. If trunk is arranged for tandem completion— DIS1, LK2, MRL lamps lighted.

STEP	ACTION	VERIFICATION
60b	If trunk is arranged for tandem completion— Operate ANS key.	OGT-CS lamp lighted. Steady high tone heard.
61e	If trunk has resistance shunts on A relay— Restore LS key.	OGT-CS or TS lamp remains lighted.
62	Restore TLK, SLP, REC keys.	If trunk is arranged for local completion— TS, R- lamps extinguished. Steady high tone silenced.
63b	If trunk is arranged for tandem completion— Restore ANS key.	OGT-CS lamp extinguished. Steady high tone silenced.
64	Momentarily operate RL key.	All lamps extinguished.
65	Operate SLP, HS, TLK keys.	
66	Momentarily operate ST key.	SLV lamp lighted. OGT-CS lamp may be momentarily lighted. After approximately 1 second— SLV lamp extinguished.
67	Momentarily operate RL key.	All lamps extinguished.
68	Restore SLP, HS, TLK keys.	
Trunks—Revertive Pulsing—From Other Than Step-by-Step Offices—Ground Shunt on A Relay—Local and Tandem Completion		
69	Operate HS, TLK, REC keys.	Trouble record taken. FG_, TF_, ITC_ designations perforated representing trunk link frame and incoming trunk class of the trunk selected (Table C).
70	Momentarily operate ST key.	Trouble record taken. FG_, TF_, ITC_ designations perforated representing trunk link frame and incoming trunk class of the trunk selected (Table C).
71	Hold GS key operated for approximately 3 seconds.	SLV lamp ***not*** lighted.
72	Hold RVP key operated.	SLV lamp lighted.
73	Restore HS, REC keys.	
74	Operate LS key.	SLV lamp extinguished. If trunk is arranged for local completion— TS lamp lighted. R- lamp flashes. Ringing tone heard in unison with R- lamp

STEP	ACTION	VERIFICATION
		flashes. If trunk is arranged for tandem completion— DIS1, LK2, MRL lamps lighted.
75	Restore RVP key.	SLV lamp lighted.
76g	If trunk has 1000-ohm loop compensation— Operate COMP key.	
77	Operate LLP key.	SLV lamp extinguished.
78b	If trunk is arranged for tandem completion— Operate ANS key.	OGT-CS lamp lighted. Steady high tone heard.
79	Restore LS key.	TS or OGT-CS lamp remains lighted.
80	Restore TLK, LLP keys.	If trunk is arranged for local completion— TS, R- lamps extinguished. Steady high tone silenced.
81b	If trunk is arranged for tandem completion— Restore ANS key.	OGT-CS lamp extinguished. Steady high tone silenced.
82g	If trunk has 1000-ohm loop compensation— Restore COMP key.	
83	Momentarily operate RL key.	All lamps extinguished.
All Trunks		
84	Restore all keys and switches not required in next test.	
85	At relay rack frame— Remove patching cord from T, ITT jacks.	
86	Have originating office restore trunk to service.	
B. Ringing—Local Completion		
9	Operate TLK, SXS, LS, KRC keys.	
10	Momentarily operate ST key.	TS lamp lighted. Ringing detection lamp flashes. (Refer to Table B.) Ringing tone heard in unison with lamp flashes.
11	Momentarily operate RL key.	All lamps extinguished. Ringing tone silenced.

STEP	ACTION	VERIFICATION
12	Repeat Steps 10 and 11 for each ringing combination provided to be applied to ringing test line. (Refer to Table B.)	
13	Restore TLK, SXS, LS, KRC keys.	
14	Restore all keys and switches not required in next test.	
15	At relay rack frame— Remove patching cord from T, ITT jacks.	
16	Have originating office restore trunk to service.	

C. Pretrip and Trip—Local Completion

Note: CODE 1 GEN ringing should be used in performing this test.

9	Operate TLK, SXS, LS, KRC keys.	
10	Momentarily operate ST key.	TS lamp lighted. R- lamp flashes. Ringing tone heard in unison with R- lamp flashes.
11	Hold PTP key operated for 1/2 scond during silent interval of ringing cycle.	R- lamp continues to flash at same rate.
12b	If test circuit has a 1500-ohm test resistance (ZF option)— Hold TRP key operated for 1/2 second during silent interval of ringing cycle.	R- lamp extinguished. Ringing tone silenced.
13c	If test circuit has a 1622-ohm test resistance (ZG option)— Hold TRP key operated for 1 second during silent interval of ringing cycle.	R- lamp extinguished. Ringing tone silenced.
14	Momentarily operate RL key.	All lamps extinguished.
15	Restore TLK, SXS, LS, KRC keys.	
16d	If office is equipped with range extension for unigauge cabling— Select ringing combination 4.	
17d	Repeat Steps 10 through 15.	
18	Restore all keys and switches not required in next test.	

STEP	ACTION	VERIFICATION
19	At relay rack frame— Remove patching cord from T, ITT jacks.	
20	Have originating office restore trunk to service.	
D.	**Supervision—Originating and Terminating Ends Disconnect**	
11	Operate TLK, SXS, LS keys.	
12	Momentarily operate ST key.	If trunk is arranged for local completion— TS lamp lighted. R- lamp flashes. Ringing tone heard in unison with R- lamp flashes. If trunk is arranged for tandem completion— DIS1, LK2, MRL lamps lighted. SLV lamp may be momentarily lighted.
13	Operate ANS key; ***start timing.***	OGT-CS lamp lighted. Steady high tone heard. If trunk is arranged for local completion— R- lamp extinguished. Ringing ton silenced.
14	After 6 seconds— Restore ANS, TLK keys simultaneously.	OGT-CS lamp extinguished. If trunk is arranged for local completion— TS lamp extinguished.
15	Restore SXS, LS keys.	
16	Momentarily operate RL key.	All lamps extinguished.
17	Restore all keys and switches not required in next test.	
18	At relay rack frame— Remove patching cord from T, ITT jacks.	
19	Have originating office restore trunk to service.	
E.	**Supervision—Terminating End Disconnect**	
	Note: Do not make this test until assured that the trunk has been idle for 4 minutes where tube-type RL relay is used and 2 minutes where 235-type RL relay is used.	
11	Operate TLK, SXS, LS keys.	
12	Momentarily operate LS key.	SLV lamp may be momentarily lighted. If trunk is arranged for local completion—

STEP	ACTION	VERIFICATION
		TS lamp lighted. R- lamp flashes. Ringing tone heard in unison with R- lamp flashes. If trunk is arranged for tandem completion— DIS1, LK2, MRL lamp lighted.
13	Operate ANS key.	OGT-CS lamp lighted. Steady high tone heard. If trunk is arranged for local completion— R- lamp extinguished. Ringing tone silenced.
14	Restore ANS key; ***start timing.***	OGT-CS lamp extinguished. Steady high tone silenced. If trunk is arranged for permanent signal alarm— Aisle pilot, main aisle pilot lamps lighted. At relay rack frame— PS lamp lighted. Minor alarm sounds.
15	At MTF— Restore TLK, SXS, LS keys.	TS lamp extinguished, if lighted. If trunk is arranged for permanent signal alarm— Aisle pilot, main aisle pilot lamps extinguished. At relay rack frame— PS lamp extinguished. Minor alarm silenced.
16	At MTF— Momentarily operate RL key.	All lamps extinguished.
17	Restore all keys and switches not required in next test.	
18	At relay rack frame— Remove patching cord from T, ITT jacks and restore MB switch to N position.	
19	Have originating office restore trunk to service.	

F. Supervision—Originating End Disconnect—Local Completion

Note: Do not make this test until assured that the trunk has been idle for 4 minutes that the trunk has been idle for 4 minutes where tube-type RL relay is used and 2 minutes where 235-type RL relay is used.

9	Operate TLK, SXS keys.	

STEP	ACTION	VERIFICATION
10	Momentarily operate ST key.	TS lamp lighted. R- lamp flashes. Ringing tone heard in unison with R- lamp flashes.
11	Operate ANS key.	R- lamp extinguished. OGT-CS lamp lighted. Steady high tone heard.
12	Restore TLK key; ***start timing.***	OGT-CS lamp extinguished. In 13 to 32 seconds— TS lamp extinguished. Steady high tone silenced.
13	Momentarily operate RL key.	All lamps extinguished.
14	Restore SXS, ANS, LS key.	
15	Restore all keys and switches not required in next test.	
16	At relay rack frame— Remove patching cord from T, ITT jacks.	
17	Have originating office restore trunk to service.	
G. Line-Busy—Local Completion		
7	Operate BB, TLK, SXS, LS keys.	
8	Momentarily operate ST key.	Line-busy tone heard at 120 ipm. OGT-CS lamp may flash in unison with tone.
9	Momentarily operate RL key.	All lamps extinguished. Line-busy tone silenced.
10	Restore BB, TLK, SXS, LS keys.	
11	Restore all keys and switches not required in next test.	
12	At relay rack frame— Remove patching cord from T, ITT jacks.	
13	Have originating office restore trunk to service.	
H. Overflow—Local Completion		
7b	If trunk is arranged for local completion only— At MTF— Select digits assigned permanent overflow test number.	

STEP	ACTION	VERIFICATION
8c	If trunk is arranged for local and tandem completion— At MTF— Select A_ through G_ digits as requied for local completion office code and permanent overflow test number.	
9	Operate KY, TLK, SXS, LS keys.	
10	Momentarily operate ST key.	Overflow tone heard at 120 ipm. OGT-CS lamp may flash in unison with tone.
11	Momentarily operate RL key.	All lamps extinguished.
12	Restore all keys and switches not required in next test.	
13	At relay rack frame— Remove patching cord from T, ITT jacks.	
14	Have originating office restore trunk to service.	

I. Overflow—Bylink Path Failure

7	At relay rack frame of trunk— Insulate contact 6 of R relay.	
8	At MTF— Operate TLK, LS, SXS keys.	
9	Momentarily operate ST key.	SLV lamp may be momentarily lighted. Overflow tone heard at 120 ipm.
10	Momentarily operate RL key.	All lamps extinguished.
11	Restore all keys and switches not required in next test.	
12	At relay rack frame of trunk— Remove insulator from 6 contact of R relay.	
13	Remove patching cord from T, ITT jacks.	
14	Have originating office restore trunk to service.	

J. Free Call—Local Completion

7b	If trunk is arranged for local completion only— At MTF— Select digits assigned free terminating test line number.	

STEP	ACTION	VERIFICATION
8c	If trunk is arranged for local and tandem completion— At MTF— Select A_ through G_ digits as required for local completion office code and free terminating test line number.	
9	Operate KRC, TLK, SXS, LS keys.	
10	Select ringing combination 1.	
11	Momentarily operate ST key.	TS lamp lighted. R- lamp flashes. Ringing tone heard in unison with R- lamp flashes.
12	Operate ANS key.	R- lamp extinguished. OGT-CS lamp ***not*** lighted. Steady high tone heard. If trunk is arranged to return charge supervision— OGT-CS lamp lighted.
13	Momentarily operate RL key.	All lamps extinguished. Steady high tone silenced.
14	Restore all keys and switches not required in next test.	
15	At relay rack frame— Remove patching cord from T, ITT jacks.	
16	Have originating office restore trunk to service.	

INCOMING TRUNKS—CONTROLLED RINGING

K. Call to Ringing Test Line

13	Request distant switchboard attendant to originate a call to one of the ringing test line numbers.	At MTF— R-, R+, T-, or T+ lamp flashes. (Refer to Table B.) If office is arranged for coinless access to operator— PK lamp lighted. At distant switchboard— Cord supervisory lamp lighted. Ringing tone heard.
14	At MTF— Hold PTP key operated for 1/2 second during silent interval of ringing cycle.	R-, R+, T-, or T+ lamp continues to flash.

STEP	ACTION	VERIFICATION
15a	If test circuit has a 1500-ohm test resistance (ZF option)— Hold TRP key operated for 1/2 second during silent interval of ringing cycle.	R-, R+, T-, or T+ lamp extinguished. At distant switchboard— Ringing tone not heard.
16b	If test circuit has a 1622-ohm circuit test resistance (ZG option)— Hold TRP key operated for 1 second during silent interval of ringing cycle.	R-, R+, T-, or T+ lamp extinguished. At distant switchboard— Ringing tone not heard.
17	At MTF— Operate TLK key.	Talking path established between MTF telephone set and distant switchboard. At distant switchboard— Cord supervisory lamp extinguished.
18	Request attendant to disconnect from trunk when disconnect signal is received, or proceed to any other test on this trunk.	
19	At MTF— Restore TLK key.	At distant switchboard— Cord supervisory lamp lighted.
20c	If office is equipped with range extension for unigauge cabling— Request distant switchboard attendant to originate a call to ringing test line number arranged for range extension for unigauge cabling (ringing combination 4).	At MTF— R- lamp flashes. (Refer to Table B.) At distant switchboard— Cord supervisory lamp lighted. Ringing tone heard.
21	Repeat Steps 14 through 17.	
22	Restore all keys and switches not required in next test.	
23	Disconnect from separate connection.	
L. Ringing		
13	Request distant switchboard attendant to originate a call to one of the ringing test line numbers.	R-, R+, T-, or T+ lamp flashes. (Refer to Table B.)
14	Operate TLK key.	R-, R+, T-, or T+ lamp extinguished. Talking path established between MTF telephone set and distant switchboard.
15	Request attendant to disconnect from trunk when disconnect signal is received and to originate another call over trunk using a different test line number.	
76	Restore TLK key.	

STEP	ACTION	VERIFICATION
17	Repeat Steps 13 through 16 for each ringing test line number provided in the office.	
18	Request attendant to disconnect from trunk when disconnect signal is received, or proceed to any other test on this trunk.	
19	Restore TLK key.	At distant switchboard— Cord supervisory lamp lighted.
20	At MTF— Restore all keys and switches not required in next test.	
21	Disconnect from separate talking connection.	
M. Rering		
13	Request distant switchboard attendant to originate a call to one of the ringing test line numbers.	R-, R+, T-, or T+ lamp flashes.
14	Operate TLK key.	R-, R+, T-, or T+ lamp extinguished. Talking path established between MTF telephone set and distant switchboard.
15	Restore TR key.	
16	Request attendant to rering.	R- lamp momentarily lighted while ringing current is applied.
17	Request attendant to rering after a disconnect signal is received.	
18	Operate TR key.	
19	Restore TLK key.	R-, R+, T-, or T+ lamp flashes.
20	Operate TLK key.	R-, R+, T-, or T+ lamp extinguished.
21	Request attendant to disconnect from trunk when disconnect signal is received, or proceed to any other test on this trunk.	
22	Restore TLK key.	At distant switchboard— Cord supervisory lamp lighted.
23	At MTF— Restore all keys and switches not required in next test.	
24	Disconnect from separate talking connection.	

STEP	ACTION	VERIFICATION
N. Coin Control		
13	Request distant switchboard attendant to originate a call to one of the ringing test line numbers.	R-, R+, T-, or T+ lamp flashes.
14	Operate TLK key.	R-, R+, T-, or T+ lamp extinguished. Talking path established between MTF telephone set and distant switchboard.
15	Restore TR key.	
16	Operate CN key.	
17	At distant switchboard— Request attendant to collect coin.	At MTF— CC lamp momentarily lighted. CND lamp lighted. If negative coin collect potential is used— PK lamp ***not*** lighted. At distant switchboard— CP lamp momentarily lighted.
18	Request attendant to collect coin again.	CP lamp ***not*** lighted.
19	At MTF— Momentarily restore CN key.	CND lamp extinguished.
20	At distant switchboard— Request attendant to return coin.	At MTF— CR lamp momentarily lighted. CND lamp lighted. If negative coin potential is used— PK lamp ***not*** lighted. At distant switcboard— CP lamp momentarily lighted.
21	Request attendant to return coin again.	CP lamp ***not*** lighted.
22	Request attendant to disconnect from trunk when disconnect signal is received.	
23	At MTF— Restore CN, TLK keys.	CND lamp extinguished.
24	Restore all keys and switches not required in next test.	
25	Disconnect from separate talking connection.	
O. Overflow		
1	Establish separate talking connection to distant switchboard.	

STEP	ACTION	VERIFICATION
2	Request distant switchboard attendant to check that trunk to be tested is idle before proceeding with test.	
3	Request attendant to originate call to permanent overflow test number.	At distant switchboard— Cord supervisory lamp flashes at overflow rate.
4	Request attendant to disconnect from trunk.	
P. Call to Busy Line		
1	Establish a separate talking connection to distant switchboard.	
2	Request distant switchboard attendant to check that trunk to be tested is idle before proceeding with test.	
3	Request attendant to originate call to permanently busy number.	At distant switchboard— Busy tone heard and/or cord supervisory lamp flashes at line-busy rate.
4	Request attendant to disconnect from trunk.	
Q. Call to Busy Line—No Test		
1	Originate call from a telephone station in local office to distant switchboard.	
2	Request distant switchboard attendant to restore TLK key associated with answering cord.	
3	Request attendant to originate verification call to originating telephone station, using no-test trunk to be tested.	Talking path established between originating telephone station in local office and distant switchboard over no-test trunk.
4	Request attendant to disconnect from trunk when disconnect signal is received.	
5	At local office— Restore receiver to switchhook of telephone station.	

EPT REVERTIVE PULSING, STEP-BY-STEP OFFICES					INCOMING TRUNKS, REVERTIVE PULSING					
	GRD SHUNT ON A RELAY									
ES INTS A EL	1000-OHM LOOP COMP		GRD ON TERM. R OF TRK (T) JACK WHEN TRK IS NORM		GRD SHUNT ON A REL		RES SHUNTS ON A REL		1000-OHM LOOP COMP	
NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO

TABLE B — RINGING CODE CHECK CHART

RINGING COMB. OTRC, RC- KEYS OR RCT1 KEY & RCU- SWITCH	RINGING SELECTION SWITCH SELECT MAGNETS OPERATED	RINGING DETECTION LAMP LIGHTED	RINGING TEST LINE NO.	RINGING CODES	RINGING INTERVAL IN SECONDS 0 1 2 3 4 5 6	REMARKS
1*†	0,6	R—		Code 1 Gen		
2	0,2	R—		Code 1 Gen		
		R—		Code 2 Gen		
		R—		Continuous		
3*	0,3	R+		Code 2+		
		R—		Code 1 Gen		
		R—		Code 3 Gen		
		R+		Code 3+		
4	0,4	R—		Code 4 Gen		
		R—		Code 1 HV		
		R—		Code 2 Gen		
5*	0,5	R+		Code 2+		
		R—		Code 2 Gen		
		R—		Code 5 Gen		
		§¶		—48 Ring, Grd Tip		Silent Level
6	0,7	§¶		—48 Ring, Grd Tip		Silent Level
		R+		Code 1+		
		R—		Code 2 Gen		
7*	1,7	T—§		—48 Tip, Grd Ring		Silent Level
		T+		Code 1+		
		T—		Code 2 Gen		
8*	0,8	R—		Code 1 Gen		Free Line
		R+		Code 2+		
9	1,8	T—		Code 1 Gen		Free Line
		T+		Code 2+		
10‡	0,6	R—		Code 1 Gen		
11*†	1,6	T—		Code 1 Gen		
12*	1,2	T—		Code 1 Gen		
		T—		Code 2 Gen		
		T—		Continuous		
13	1,3	T+		Code 2+		
		T—		Code 1 Gen		
		T—		Code 3 Gen		
		T+		Code 3+		
14*	1,4	T—		Code 4 Gen		
		T—		Code 1 HV		
		T—		Code 2 Gen		
15	1,5	T+		Code 2+		
		T—		Code 2 Gen		
		T—		Code 5 Gen		
		T—§		—48 Tip, Grd Ring		Silent Level

*These ringing combinations check all equipped crosspoints on the ringing selection switch.
†In offices arranged for marker controlled immediate ring, set RMBR switch to position 1.
‡Ringing combination 10 is listed for information purposes only and should not be used for testing the ringing feature.
§If line link pulsing or direct access to No. 101 ESS is provided, operate RTK key to test silent level.
¶No indication.

TABLE C

OPTION	INCOMING TRUNK CLASS (ITC-)		FUNCTION
	NO†	DESIGNATION	
WK	0	—	Not used.
WL		ONN	Not used.
WK	1	TB	Toll, physical, and theoretical.
WL		SE	Supervision , EN number.
WK	2	MB	Manual, physical, and theoretical.
WL		SA	Supervision, non-discriminating numbers.
WK	3	FB	Full selector, physical, and theoretical.
WL		NA	No supervision, non-discriminating numbers.
WK	4	TT	Toll, theoretical.
WL		NE	No supervision, extra theoretical.
WK	5	MT	Manual, theoretical.
WL		ST	Supervision, theoretical.
WK	6	FT	Full selector, theoretical.
WL		NT	No supervision, theoretical.
WK	7	TP	Toll, physical.
WL		RN	Not used.
WK	8	MP	Manual , physical.
WL		SP	Supervision, physical
WK	9	FP	Full selector, physical.
WL		NP	No supervision, physical.

*Check office wiring lists for option provided .

†Check local records for Incoming trunk class (ITC-) used.