DIAL PULSE INCOMING REGISTERS SD-25729-01 AND SD-26041-01 TESTS USING TEST SET SD-25676-01 (J24756B) NO. 5 CROSSBAR OFFICES)

1. GENERAL

1.01 This section describes a method of testing dial pulse incoming registers used in No. 5 crossbar offices. The tests are made using the test circuit for register and CAMA sender circuits, the test set circuit for register and CAMA sender circuits, and the 3A pulse generating test set circuit or 4A signaling test set circuit.

1.02 This section is reissued for the following reasons:

(a) To add test O.1 to provide testing procedures for precision pulsing tests using the 4A signaling test set.

(b) To revise Test S to provide testing procedure for translation of information Code 411 over tandem, intertoll, and CAMA trunks for marker start by the register.

(c) To add Test V to provide testing procedures to check that the register will guard against completion of calls to 7-digit numbers when 10-digit numbers are dialed where pretranslators are provided.

(d) To revise all Tests to include reference to operation of keys and setting of switches in accordance with Test Chart test numbers.

This reissue affects Equipment Test Lists.

1.03 The tests covered are:

1.04 During Test G, the traffic register associated with the PD lead will score unless a CAMA trunk class is used. If a CAMA trunk class is used, the traffic register associated with the PD1 lead will score. During Tests J and K, the traffic register associated with the PS lead will score each time the register times out unless a CAMA trunk class is used. If a CAMA trunk class is used, the traffic register associated with the PD1 lead will score each time the register times out. During all tests, if all other registers in the group become busy, the traffic register associated with the GB lead will score. The reporting of the operation of these registers should be in accordance with local instructions.

1.05 ▶Tests J, K, L, and M require action and Test R requires action and verification at the register under test.◀

1.06 When tests are made at the register frame or to avoid duplicate trouble recorder cards, release the ITRR key.

1.07 If the office is equipped with the automatic monitor, register, and sender test circuit, the test circuit for register and CAMA sender circuits, and the test circuit for register and CAMA sender circuits and if the STT or STM key of the

automatic monitor, register, and sender test circuit is operated while a test by the test circuit for register and CAMA sender circuits is in progress, the circuit will release as if the RL key had been operated.

1.08 Test Charts are provided which show priming information required for each test. Spaces are provided on the charts for listing specific priming information depending on local conditions. These charts should be filled out from local records in accordance with the instructions provided in Part 5, PREPARATION OF TEST CHART.

1.09 An interchangeable code is a code that represents both a working office code in the home area and a working foreign area code. When pretranslators are provided, the dialing of an interchangeable code will result in the pretranslator grounding the CMB lead to the incoming register.

1.10 ***Lettered Steps:*** A letter a, b, c, etc, added to a step number in Part 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.

1.11 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.

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

2. APPARATUS

Tests A Through K and N Through ▶V◀

2.01 Master test control circuit SD-25800-01.

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

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

2.04 Testing cord, 20-conductor cord, 6 feet long, equipped with one KS-13875 plug and one KS-13985 plug (W20C cord) (for connecting the test set to the test circuit for register and CAMA sender circuits).

Test C

2.05 1014A dial hand test set (handset) or equivalent, equipped with a 2W38A cord assembly consisting of one W2CK cord, one 310 plug, and one 471A jack.

Tests H, J, K

2.06 KS-3008 stopwatch or equivalent.

Tests J, K, L, M, ▶V◀

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

Test L

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

Test M

2.09 Timing test set J24753A (SD-25707-01).

2.10 ▶Testing cord, W3M cord, 6 feet long, equipped with one 310 plug, one 360A tool, one 360B tool, one 360C tool (3W4A cord), and three KS-6278 connecting clips.◀

Tests O, ▶O.1◀

2.11 Patching cord, P3E cord, 8 feet long, equipped with two 310 plugs (3 P6E cord) for connecting test circuits for register and CAMA sender circuit to 3A pulse generating test set ▶or 4A signaling test set.◀

Test O

2.12 3A pulse generating test set J94732A and power supply unit J94732B (SD-95686-01).

Test O.1

2.13 4A signaling test set J94743A and loop unit J94743AB (SD-1C244-01).

Test V

2.14 Testing cord, 893 cord, 3 feet long, equipped with two 360A tools (1W13A cord).

2.15 Two 419A tools for use with 1W13A cord. Use tools and apply as covered in Section 069-131-811.

3. PREPARATION

STEP	ACTION	VERIFICATION
	Note: Refer to 1.10, 1.11, and 1.12.	
Tests A Through K and N Through V		
1	At MTF— Restore all keys and switches.	
2	Momentarily operate RL key.	All lamps extinguished.
3	Select incoming register.	
4	At test set— Patch IRT connector on test set to IRT jack on MTF or to IRT jack on incoming register frame.	
Test O		
5	Patch PLS jack on test set to OUTPUT CP jack on 3A pulse generating test set.	
6	At 3A pulse generating test set— Prepare test set as outlined in section titled 3A Pulse Generating Test Set Description and Operation.	
Test O.1		
7	Patch PLS jack on test set to SR jack on 4A signaling test set loop interface unit.	
8	At 4A signaling test set— Prepare test set as outlined in section titled 4A Signaling Test Set Description and Operation.	

STEP	ACTION	VERIFICATION
4. METHOD		
A. Regular Call		
▶4- and 5-Digit Calls◀		
5	Operate keys and set switches in accordance with Test Chart ▶Test 1.◀	
6	Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
7	At test set— Dial digits of called number as shown on Test Chart.	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. FR_, CN_, RG_ designations perforated identifying marker connector frame, connector on frame, and ***selected*** register in connector. Designations perforated identifying called number dialed, trunk link frame, trunk number, and trunk class.
8	At test set— Momentarily operate RL key.	At MTF— All lamps extinguished.
9	▶Repeat Steps 5 through 8, as required for Tests 2 through 6.◀	
▶7-Digit Calls◀		
10	Operate keys and set switches in accordance with Test Chart ▶Test 7.◀	
11	Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
12	At test set— Dial digits of called number as shown on Test Chart.	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. FR_, CN_, RG_ designations perforated identifying marker connector frame, connector on frame, and ***selected*** register in connector. Designations perforated identifying called number dialed, trunk link frame, trunk number, and trunk class.
13	At test set— Momentarily operate RL key.	At MTF— All lamps extinguished.

STEP	ACTION	VERIFICATION
14	▶Repeat Steps 10 through 13, as required for Tests 8 through 21.◀	
▶10-Digit Calls◀		
15	Operate keys and set switches in accordance with Test Chart ▶Test 22.◀	
16	Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
17	At test set— Dial digits of called number as shown on Test Chart.	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. FR_, CN_, RG_ designations perforated identifying marker connector frame, connector on frame, and ***selected*** register in connector. Designations perforated identifying called number dialed, trunk link frame, trunk number, and trunk class.
18	At test set— Momentarily operate RL key.	At MTF— All lamps extinguished.
19	▶Repeat Steps 15 through 18, as required for Tests 23 through 36.◀	
▶All Calls◀		
20	At MTF— Restore all keys and switches not required in next test.	
21a	If no further tests are to be made— At test set— Remove patching cord from IRT jack.	
B. Special Call		
5	Operate keys and set switches in accordance with Test Chart ▶Test 37.◀	
6	Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
7	At test set— Dial digits of called number as shown on Test Chart.	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken.

STEP	ACTION	VERIFICATION
		FR_, CN_, RG_ designations perforated identifying marker connector frame, connector on frame, and ***selected*** register in connector. Designations perforated identifying called number dialed, trunk link frame, trunk number, and trunk class (SPL).
8	At test set— Momentarily operate RL key.	At MTF— All lamps extinguished.
9	▶Repeat Steps 5 through 8, as required for Tests 38 and 39.◀	
10	Restore all keys and switches not required in next test.	
11a	If no further tests are to be made— At test set— Remove patching cord from IRT jack.	
C. Dial Tone		
5	Operate keys and set switches in accordance with Test Chart ▶Test 40.◀	
6	Insert plug of handset into PLS jack.	
7	Momentarily operate STT key.	RR lamp lighted. Dial tone heard at handset. At MTF— IRT, IRON lamps lighted.
8	At test set— Using handset, dial digits of called number as shown on Test Chart.	RR lamp extinguished. Dial tone silenced at handset. At MTF— IRON lamp extinguished. Trouble record taken. FR_, CN_, RG_ designations perforated identifying marker connector frame, connector on frame, and ***selected*** register in connector. Designations perforated identifying called number dialed, trunk link frame, trunk number, and trunk class.
9	At test set— Momentarily operate RL key.	At MTF— All lamps extinguished.
10	▶Repeat Steps 5 through 9, as required for Tests 41 through 49.◀	
11	Restore all keys and switches not required in next test.	

STEP	ACTION	VERIFICATION
12a	If no further tests are to be made— At test set— Remove patching cord from IRT jack.	
13a	Remove plug of handset from PLS jack.	
D. Surge		
5	Operate keys and set switches in accordance with Test Chart ▶Test 50.◀	
6	Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
7	At test set— Dial digits of called number as shown on Test Chart.	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. FR_, CN_, RG_ designations perforated identifying marker connector frame, connector on frame, and ***selected*** register in connector. Designations perforated identifying called number dialed, trunk link frame, trunk number, and trunk class.
8	At test set— Momentarily operate RL key.	At MTF— All lamps extinguished.
9	▶Repeat Steps 5 through 8, as required for Tests 51 and 52.◀	
10	Restore all keys and switches not required in next test.	
11a	If no further tests are to be made— At test set— Remove patching cord from IRT jack.	
E. Direct Pulsing		
5	Operate keys and set switches in accordance with Test Chart ▶Test 53.◀	
6	Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
7	At test set— Dial digits of called number as shown on Test Chart.	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken.

STEP	ACTION	VERIFICATION
		FR_, CN_, RG_ designations perforated identifying marker connector frame, connector on frame, and ***selected*** register in connector. Designations perforated identifying called number dialed trunk link frame, trunk number, and trunk class.
8	At test set— Momentarily operate RL key.	At MTF— All lamps extinguished.
9	▶Repeat Steps 5 through 8, as required for Tests 54 through 64.◀	
10	Restore all keys and switches not required in next test.	
11a	If no further tests are to be made— At test set— Remove patching cord from IRT jack.	
F. Bylink Pulsing		
5	Operate keys and set switches in accordance with Test Chart ▶Test 65.◀	
6	Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
7	At test set— Dial digits of called number as shown on Test Chart.	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. FR_, CN_, RG_ designations perforated identifying marker connector frame, connector on frame, and ***selected*** register in connector. Designations perforated identifying called number dialed, trunk link frame, trunk number, and trunk class.
8	At test set— Momentarily operate RL key.	At MTF— All lamps extinguished.
9	▶Repeat Steps 5 through 8, as required for Tests 66 and 67.◀	
10	Restore all keys and switches not required in next test.	
11a	If no further tests are to be made— At test set— Remove patching cord from IRT jack.	

STEP	ACTION	VERIFICATION
G. Abandoned Call		
5	Operate keys and set switches in accordance with Test Chart ▶Test 68.◀	
6	Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
7	At test set— Dial digits of called number as shown on Test Chart.	
8	Operate DIS key.	At MTF— IRON lamp extinguished.
9	At test set— Momentarily operate RL key.	
10	▶Repeat Steps 5 through 9, as required for Tests 69 and 70.◀	
11	Restore all keys and switches not required in next test.	
12a	If no further tests are to be made— At test set— Remove patching cord from IRT jack.	
H. Digit Timing		
5	Operate keys and set switches in accordance with Test Chart ▶Test 71.◀	
6	Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
7	At test set— Dial digits of called number as shown on Test Chart; ***start timing.***	In 3 to 5 seconds— RR lamp extinguished. At MTF— IRON lamp extinguished.
8	At test set— Momentarily operate RL key.	At MTF— All lamps extinguished.
9	▶Repeat Steps 5 through 8, as required for Tests 72 and 73.◀	
10	Restore all keys and switches not required in next test.	

STEP	ACTION	VERIFICATION
11a	If no further tests are to be made— At test set— Remove patching cord from IRT jack.	
I. Link Release		
5	Operate keys and set switches in accordance with Test Chart ▶Test 74.◀	
6	Momentarily operate STT key.	At MTF— IRT, IRON lamps lighted. In approximately 1 second— IRON lamp extinguished. Trouble record taken. LR (link release) designation perforated. FR_, CN_, RG_ designations perforated identifying marker connector frame, connector on frame, and ***selected*** register in connector.
7	At test set— Momentarily operate RL key.	At MTF— All lamps extinguished.
8	▶Repeat Steps 5 through 7, as required for Tests 75 and 76.◀	
9	Restore all keys and switches not required in next test.	
10a	If no further tests are to be made— At test set— Remove patching cord from IRT jack.	
J. Overall Timeout		
5	At MTF— Insert make-busy plug into IRMB_ jack associated with register under test.	
6	Operate keys and set switches in accordance with Test Chart ▶Test 77.◀	
7	At register under test— Block nonoperated OVL relay.	
8	At test set— Momentarily operate STT key; ***start timing.***	RR lamp lighted. At MTF— IRT, IRON lamps lighted. In 20 to 32 seconds— At test set— RR lamp extinguished. In 20 to 32 seconds after RR lamp extinguished— At MTF—

STEP	ACTION	VERIFICATION
		TO lamp associated with register under test lighted.
9	At test set— Momentarily operate RL key.	At MTF— All lamps extinguished.
10	At register under test— Remove blocking tool from OVL relay.	
11	At relay rack frame— Block operated RB2 relay in group-busy circuit associated with register being tested.	
12	At test set— Momentarily operate STT key; ***start timing.***	RR lamp lighted. At MTF— IRT, IRON lamps lighted. In 4 to 8 seconds— At test set— RR lamp extinguished. In 20 to 32 seconds after RR lamp extinguished— At MTF— TO lamp associated with register under test lighted.
13	At test set— Momentarily operate RL key.	All lamps extinguished.
14	At relay rack frame— Remove blocking tool from RB2 relay.	
15	At MTF— Restore H key.	
16	At register under test— Block nonoperated OVL, TRL, TC2 relays.	
17	At test set— Momentarily operate STT key; ***start timing.***	RR lamp lighted. At MTF— IRT, IRON lamps lighted. In 20 to 32 seconds— At test set— RR lamp extinguished. In 20 to 32 seconds after RR lamp extinguished— At MTF— IRON lamp extinguished.
18	At test set— Momentarily operate RL key.	At MTF— All lamps extinguished.
19	At register under test— Remove blocking tools from OVL, TRL, TC2 relays.	

STEP	ACTION	VERIFICATION
20	Block nonoperated MST relay.	
21	At test set— Momentarily operate STT key	RR lamp lighted. At register under test— TMA, TMB relays operated.
22	At test set— Dial digits of called number as shown on Test Chart.	At register under test— TMA, TMB relays momentarily released after each digit dialed.
23	At test set— Momentarily operate RL key.	At MTF— All lamps extinguished.
24	At register under test— Remove blocking tool from MST relay.	
25	Repeat Steps 6 through 24, as required for Tests 78 and 79.	
26	At MTF— Restore all keys and switches not required in next test.	
27a	If no further tests are to be made— Remove make-busy plug from IRMB_ jack associated with register under test.	
28a	At test set— Remove patching cord from IRT jack.	

K. Common Alarm Timing

5	At MTF— Insert make-busy plug into IRMB_ jack associated with register under test.	
6	Operate keys and set switches in accordance with Test Chart ▶Test 80.◀	
7	At register under test— Block nonoperated OVL relay.	
8a	If nonwire-spring-relay type register is being tested— At register under test— Insulate 3 and 4B of M relay.	
9b	If wire-spring-relay type register is being tested— At register under test— Insulate 11M of M relay.	

STEP	ACTION	VERIFICATION
10c	If alarm sending feature is provided— At MTF— Operate transfer key to NTR.	TR lamp lighted.
11	At test set— Momentarily operate RS key.	At MTF— TR lamp extinguished. LO lamp momentarily lighted.
12	At test set— Momentarily operate STT key; ***start timing.***	RR lamp lighted. At MTF— IRT, IRON lamps lighted. In 20 to 32 seconds— At test set— RR lamp extinguished. In 20 to 32 seconds after RR lamp extinguished— At MTF— TO lamp associated with register under test lighted.
13	At MTF— Remove make-busy plug from IRMB_ jack associated with register under test; ***start timing.*** ***Note:*** If another register or sender grounds the common alarm circuit during this test, it may be necessary to repeat the test.	In 10 to 15 seconds— R-S-TOA lamp lighted. Major alarm sounds.
14	Insert make-busy plug into IRMB_ jack associated with register under test.	Major alarm silenced.
15	At test set— Momentarily operate RL key.	At MTF— All lamps extinguished.
16	At register under test— Remove blocking tool from OVL relay.	
17	Remove insulation from M relay.	
18	Repeat Steps 6 through 16, as required for Tests 81 and 82.	
19	At MTF— Restore all keys and switches not required in next test.	
20a	If no further tests are to be made— Remove make-busy plug from IRMB_ jack associated with register under test.	
21a	At test set— Remove patching cord from IRT jack.	

STEP	ACTION	VERIFICATION
L. Double Connection		
1	At MTF— Insert make-busy plug into IRMB_ jack associated with register under test.	
2	Operate IRBT key.	
3a	If nonwire-spring-relay type register is being tested— At register under test— Connect ground to terminal 18 of terminal strip C on register control unit.	
4b	If wire-spring-relay type register is being tested— At register under test— Connect ground to terminal 16 of terminal strip B on register control unit.	
5	Block nonoperated TRL relay.	H relay operated.
6	Manually operate and hold ON relay.	Within approximately 1 second— TC1, TC2 relays operated. DCK relay not operated.
7	Release ON relay.	
8	Remove blocking tool from TRL relay.	
9	Remove test connection from terminal strip on register control unit.	
10	Block operated H relay. ***Note:*** Perform Steps 11, 12, and 13 immediately to prevent IRMC time alarm from operating.	
11	Manually operate ON relay.	DCK relay operated.
12	Release ON relay.	DCK relay released.
13	Remove blocking tool from H relay.	
14	At MTF— Restore IRBT key.	
15	Remove make-busy plug from IRMB_ jack associated with register under test.	

STEP	ACTION	VERIFICATION
M. AC, RV, and LR Timing		
1	At MTF— Insert make-busy plug into IRMB_ jack associated with register under test.	
2	At register under test— Patch TST1 jack of timing test set in accordance with timing requirement table of SD drawing for timer under test.	
3	Prepare timing test set in accordance with section titled Test Set for Timing Tests J24753A Description and Application and timing requirement table of SD drawing.	
4	Patch, block, or insulate relays as required and specified in timing requirement table of SD drawing.	
5	Using timing test set, measure timing intervals of timer under test in accordance with timing requirement table of SD drawing.	Timing requirement indicated on ammeter of timing test set.
6	Remove test cord from TST1 jack of timing test set and timer under test.	
7	Repeat Steps 2 through 6, as required for each remaining timer.	
8	At MTF— Remove make-busy plug from IRMB_ jack associated with register under test.	
N. Trouble Release		
5	Operate keys and set switches in accordance with Test Chart ▶Test 83.◀	
6	Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
7	At test set— Dial digits of called number as shown on Test Chart.	RR lamp extinguished. At MTF— IRON lamp extinguished.
8	At test set— Momentarily operate RL key.	At MTF— All lamps extinguished.
9	▶Repeat Steps 5 through 8, as required for Tests 84 and 85.◀	

STEP	ACTION	VERIFICATION
10	Restore all keys and switches not required in next test.	
11a	If no further tests are to be made— At test set— Remove patching cord from IRT jack.	
O. Precision Pulsing (3A Pulse Generating Test Set)		
7	Operate keys and set switches in accordance with Test Chart ▶Test 86.◀	
8	At 3A pulse generating test set— Adjust settings so interdigital time is 185 milliseconds; pulses per second and percent break corresponds to information in PRECISION PULSE GENERATOR column of Test Chart.	
9	Operate LOOP key to CLOSED.	
10	Set PULSE SEL switch to CONT TRAIN.	
11	Set PULSES PER TRAIN switch to agree with number of pulses for digit A on Test Chart.	
12	At test set (register)— Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
13	At 3A pulse generating test set— Operate TRAIN CONTROL key to PULSE.	At test set (register)— RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. Digits on Test Chart match designations perforated.
14	At 3A pulse generating test set— Operate TRAIN CONTROL key to NOR at start of last digit pulsed. ***Note:*** The number of digits pulsed can be counted by observing the revolutions on the counter tube.	
15	At test set (register)— Momentarily operate RL key.	At MTF— All lamps extinguished.
16	▶Repeat Steps 5 through 15, as required for Tests 87 through 95.◀	

STEP	ACTION	VERIFICATION
17	Restore all keys and switches not required in next test.	
18a	If no further tests are to be made— At test set (register)— Remove patching cord from IRT jack on MTF or IRT jack on incoming register frame.	
19a	Remove patching cord from OUTPUT CP jack on 3A pulse generating test set.	
O.1 ▶Precision Pulsing (4A Signaling Test Set)		
9	Operate keys and set switches in accordance with Test Chart Test 96.	
10	At signaling test set—main module— Adjust settings so pulses per second and percent break correspond to information in PRECISION PULSE GENERATOR column of Test Chart.	OPERATE-CLEAR lamp lighted.
11	At signaling test set—loop interface unit— Set FUNCTION switch to SR.	
12	At test set (register)— Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
13	At signaling test set—main module— Momentarily operate keyset # key to allow a repeated discrete train of pulses with an interdigital time of 185 ms.	
14	Momentarily operate a keyset key to agree with number of pulses for digit A on Test Chart.	WAIT TO DIAL lamp lighted. At test set (register)— RR lamp extinguished. At MTF— Trouble record taken. Digits on Test Chart match designations perforated.
15	At signaling test set—main module— Operate OPERATE-CLEAR key to CLEAR.	OPERATE-CLEAR lamp extinguished. WAIT TO DIAL lamp extinguished.
16	At test set (register)— Momentarily operate RL key.	At MTF— All lamps extinguished.
17	Repeat Steps 9 through 16, as required for Tests 97 through 105.	

STEP	ACTION	VERIFICATION
18	Restore all keys and switches not required in next test.	
19a	If no further tests are to be made— At test set (register)— Remove patching cord from IRT jack on MTF or IRT jack on incoming register frame.	
20a	Remove patching cord from SR jack on 4A signaling test set loop interface unit.◀	
P.	**Trunk Test Call**	
5	Operate keys and set switches in accordance with Test Chart ▶Test 106.◀	
6	Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
7	At test set— Momentarily operate RL key.	At MTF— All lamps extinguished.
8	▶Repeat Steps 5 through 7, as required for Tests 107 and 108.◀	
9	Restore all keys and switches not required in next test.	
10a	If no further tests are to be made— At test set— Remove patching cord from IRT jack.	
Q.	**11 Foreign Area Directing Codes**	
5	Operate keys and set switches in accordance with Test Chart ▶Test 109.◀	
6	Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
7	At test set— Dial digits of called number as shown on Test Chart.	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. FR_, CN_, RG_ designations perforated identifying marker connector frame, connector on frame, and ***selected*** register in connector. Designations perforated identifying called number dialed, trunk link frame, trunk number, and trunk class.

STEP	ACTION	VERIFICATION
8	At test set— Momentarily operate RL key.	At MTF— All lamps extinguished.
9	◗Repeat Steps 5 through 8, as required for Tests 110 through 118.◖	
10	Restore all keys and switches not required in next test.	
11	If no further tests are to be made— At test set— Remove patching cord from IRT jack.	

R. Tandem, Toll, and CAMA Incoming Classes

5	Operate keys and set switches in accordance with Test Chart ◗Test 119.◖	
6	Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
7	At test set— Dial digits of called number as shown on Test Chart.	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. FR_, CN_, RG_ designations perforated identifying marker connector frame, connector on frame, and ***selected*** register in connector. Designations perforated identifying called number dialed, trunk link frame, trunk number, and trunk class.
8	At test set— Momentarily operate RL key.	At MTF— All lamps extinguished.
9	◗Repeat Steps 5 through 8, as required for Tests 120 through 175.◖	
10	Restore all keys and switches not required in next test.	
11a	If no further tests are to be made— At test set— Remove patching cord from IRT jack.	

S. Service Codes

5	Operate keys and set switches in accordance with Test Chart ◗Test 176.◖	

STEP	ACTION	VERIFICATION
6	Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
7	At test set— Dial digits of called number as shown on Test Chart.	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. FR_, CN_, RG_ designations perforated identifying marker connector frame, connector on frame, and ***selected*** register in connector. Designations perforated identifying called number dialed, trunk link frame, trunk number, and trunk class.
8	At test set— Momentarily operate RL key.	At MTF— All lamps extinguished.
9	▶Repeat Steps 5 through 8, as required for Tests 177 through 180.◀	
10	Restore all keys and switches not required in next test.	
11	If no further tests are to be made— At test set— Remove patching cord from IRT jack.	

T. Toll Operator and/or System Codes

5	Operate keys and set switches in accordance with Test Chart ▶Test 181.◀	
6	Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
7	At test set— Dial digits of called number as shown on Test Chart.	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. FR_, CN_, RG_ designations perforated identifying marker connector frame, connector on frame, and ***selected*** register in connector. Designations perforated identifying called number dialed, trunk link frame, trunk number, and trunk class.
8	At test set— Momentarily operate RL key.	At MTF— All lamps extinguished.

STEP	ACTION	VERIFICATION
9	▶Repeat Steps 5 through 8, as required for Tests 182 through 195.◀	
10	Restore all keys and switches not required in next test.	
11a	If no further tests are to be made— At test set— Remove patching cord from IRT jack.	
U. Pretranslation		
5	Operate keys and set switches in accordance with Test Chart ▶Test 196.◀	
6	Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
7	At test set— Dial digits of called number as shown on Test Chart.	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. FR_, CN_, RG_ designations perforated identifying marker connector frame, connector on frame, and ***selected*** register in connector. Designations perforated identifying called number dialed, trunk link frame, trunk number, and trunk class.
8	At test set— Momentarily operate RL key.	At MTF— All lamps extinguished.
9	▶Repeat Steps 5 through 8, as required for Tests 197 through 213.◀	
10	Restore all keys and switches not required in next test.	
11a	If no further tests are to be made— At test set— Remove patching cord from IRT jack.	
V. ▶Pretranslator Guard Control		
5	At MTF— Insert make-busy plug into IRMB_ jack associated with register under test.	
6	Operate keys and set switches in accordance with Test Chart Test 214.	

STEP	ACTION	VERIFICATION
7	Operate ITRR key.	
8	At register under test— Strap 11M of LCM relay to upper winding of TR relay.	
9	At test set— Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
10	At test set— Dial digits of called number as shown on Test Chart.	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. FR_, CN_, RG_ designations perforated identifying marker connector frame, connector on frame, and ***selected*** register in connector. Designations perforated identifying called number dialed, trunk link frame, trunk number, and trunk class.
11	At test set— Momentarily operate RL key.	At MTF— All lamps extinguished.
12	Restore ITRR key.	
13	At register under test— Remove strap from 11M of LCM relay and upper winding of TR relay.	
14	Strap 10M of PST relay to upper winding of PRL relay.	
15	At test set— Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, TBL lamps lighted. Trouble record taken. FR_, CN_, RG_ designations perforated identifying marker connector frame, connector on frame, and ***selected*** register in connector. At register under test— PRL relay momentarily operated. CMA relay ***not*** operated.
16	At test set— Momentarily operate RL key.	At MTF— All lamps extinguished.
17	At register under test— Remove strap from 10M of PST relay and upper winding of PRL relay.	

STEP	ACTION	VERIFICATION
18	At test set— Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
19	At test set— Dial digits of called number as shown on Test Chart.	RR lamp extinguished. At MTF— IRON lamp extinguished.
20	At test set— Momentarily operate RL key.	At MTF— All lamps extinguished.
21	Repeat Steps 6 through 20, as required for Test 215.	
22	Restore all keys and switches not required in next test.	
23a	If no further tests are to be made— Remove make-busy plug from IRMB_ jack associated with register under test.	
24	At test set— Remove patching cord from IRT jack.	

5. PREPARATION OF TEST CHART

5.01 The Test Chart is used as a particular number chart and provides the priming information required for each test. Information obtained from local office records should be used to fill in the Test Chart in the following manner.

(a) Set TCL switch (0-10) at the test circuit for register and CAMA senders to select an incoming class of call and translator indication as determined by incoming register cross-connections. Where possible, use an incoming class of call and translator indication available to all incoming register groups. Record TCL switch position in the INCOMING CLASS OF CALL column.

(b) Additional test numbers are provided on the Test Chart to allow testing of all incoming register groups (dial pulse) from one Test Chart. When the incoming class of call, codes, numericals, number of digits expected, and translation and class of call marks to the marker vary among incoming register groups, additional lines must be completed as required.

(c) Where more than one incoming register group is provided, an entry must be made in the INCOMING REGISTER GROUP column to indicate the register group to which the test applies. Since it is possible to have a given combination of incoming class of call, code, number of digits required for marker start, and translator indication available in more than one register group, this column when properly completed may show several/or all register groups.

(d) Record A_ through F_ digits as required for a working area and/or office code in the CALLED NUMBER column.

(e) When bylink-type pulsing is used, record BL key in the MISCELLANEOUS KEYS AND/OR SWITCHES column.

5.02 ***Test A***

(1) For Tests 1 and 2, apply (a), (c), and (e) of 5.01 using an OA incoming class of call.

(2) For Tests 3 and 4, apply (a), (c), and (e) of 5.01 using an OB incoming class of call.

(3) For Tests 5 and 6, apply (a), (c), and (e) of 5.01 using an AB incoming class of call.

(4) When the register is not arranged for any one or two of the preceding incoming classes of call, use the remaining class(es) for Tests 1 through 6, recording an E_ digit when AB class is used, or deleting the E_ digit for OA or OB classes.

(5) For Tests 7 through 11, record the A_, B_ and C_ digits of a working office code and apply (a), (c), and (e) of 5.01, using an incoming class of call associated with a 7-digit call.

(6) For Tests 12 through 16 and 17 through 21, apply (b), (c), and (e) of 5.01.

(7) For Tests 22 through 26, apply (a), (c), (d), and (e) of 5.01, using an incoming class of call associated with a 10-digit call.

(8) For Tests 27 through 31 and 32 through 36, apply (b), (c), and (e) of 5.01.

5.03 ***Test B***

(1) For Test 37, apply (a), (c), and (e) of 5.01, using an OAS incoming class of call.

(2) For Test 38, apply (a), (c), and (e) of 5.01, using an OBS incoming class of call.

(3) For Test 39, apply (a), (c), and (e) of 5.01, using an ABS incoming class of call.

5.04 ***Test C***

(1) ▶For Tests 40 through 49,◀ record A_ through K_ digits as required and apply (a), (b), (c), and (e) of 5.01, using all incoming classes of call that require the register to return dial tone.

5.05 ***Test D***

(1) ▶For Tests 50, 51, and 52,◀ record A_ through K_ digits as required and apply (a) of 5.01, using local incoming classes of call when possible.

5.06 ***Test E***

(1) ▶For Tests 53 through 64◀ record zeros for A_ through K_ digits as required and apply (a), (b), (c), and (e) of 5.01 using local incoming class of call when possible or incoming classes of call such that the register will not recognize A0, B0, and C0 digits as a code or any portion of a code.

Note: When no incoming classes are available that will not recognize A0, B0, and C0 digits as a code or any portion of a code, then record nines for A_ through K_ digits as required for the incoming class selected.

5.07 ***Test F***

(1) ▶For Tests 65, 66, and 67,◀ record A_ through K_ digits as required and apply (a), (b), and (e) of 5.01, using local incoming classes of call when provided.

5.08 ***Test G***

(1) ▶For Tests 68, 69, and 70,◀ apply (a), (b), (c), and (e) of 5.01, using local incoming classes of call when possible.

5.09 ***Test H***

(1) ▶For Tests 71, 72, and 73,◀ record A_ through K_ digits as required and apply (a), (b), (c), and (e) of 5.01, using incoming classes of call that require digit timing.

5.10 ***Test I***

(1) ▶For Tests 74, 75, and 76,◀ apply (e) of 5.01.

5.11 ***Test J***

(1) ▶For Tests 77, 78, and 79,◀ record A_ through E_ digits as required and apply (a), (b), (c), and (e) of 5.01, using local incoming classes of call when possible.

5.12 ***Test K***

(1) ▶For Tests 80, 81, and 82,◀ apply (a), (b), (c), and (e) using local incoming classes of call when possible.

5.13 ***Tests L and M***

(1) Test Chart not required.

5.14 ***Test N***

(1) ▶For Tests 83, 84, and 85,◀ record A_ through K_ digits as required and apply (a),

(b), (c), and (e) of 5.01, using local incoming classes of call when possible.

5.15 *Test O*

(1) ▶For Tests 86 through 95, record numeral 9, 8, or 7 in each A through C column. If, for example, the numerals 999 are recorded in the A through C columns, determine from office records whether these numerals are translated as a local office code or a vacant code. If translation indicates a local office code, then the numeral 9 shall also be recorded in the D through G columns. However, if translation indicates a vacant code, only the numerals in the A through C columns are recorded.

(2) For all Tests, apply (a), (c), and (e) of 5.01, using local incoming classes of call when possible.

5.16 *Test O.1*

(1) For Tests 96 through 105, record numeral 9, 8, or 7 in each A through C column. If, for example, the numerals 999 are recorded to the A through C columns, determine from office records whether these numerals are translated as a local office code or a vacant code. If translation indicates a local office code, then the numeral 9 shall also be recorded in the D through G columns. However, if translation indicates a vacant code, only the numerals in the A through C columns are recorded.

(2) For all Tests, apply (a), (c), and (e) of 5.01, using local incoming classes of call when possible.◀

5.17 *Test P*

(1) ▶For Tests 106, 107, and 108,◀ apply (a), (b), (c), and (e) of 5.01, using local incoming classes of call when possible.

5.18 *Test Q*

(1) ▶For Tests 109 through 118,◀ record A_, B_, and C_ digits of 11 foreign area directing codes as required and apply (a), (b), (c), and (e) of 5.01 using incoming classes of call that require routing of 11 foreign area directing codes.

5.19 *Test R*

(1) ▶For Tests 119 through 175◀ code structures as indicated in Table A are used.

TABLE A

CODE STRUCTURES

DIGIT	TEST NUMBERS 119 THROUGH 146	TEST NUMBERS 147 THROUGH 175
A	2 through 9	2 through 9
B	0 and 1	2 through 9
C	0 or 2 through 9	0 through 9

(2) A test number must be completed for each assigned ***incoming class of call,*** for example, TAN, TOL, etc, as determined from office records, which is used with trunks handling calls containing area or office codes of the code structures shown in Table A.

(3) Record A, B, C code consistent with (1) and used with the selected incoming class of cal in columns A, B, and C.

(4) Record in columns D through K as required for the selected code and incoming class of call to provide the number of digits expected on calls of the selected incoming class of call. Where the selected incoming class of call is arranged to receive incoming calls of varying numbers of digits, for example, 7- and 10-digit calls, a separate test must be completed for ***each different*** number of digits required for marker start as a check of the translator indication from the register to the marker.

(5) Where translation of the A_ digit is provided in the register, at least one test shall be provided for each digit translated. These need not be separate tests designed exclusively for the purpose of testing A_ digit translation but may be combined with other test considerations as indicated in (1) through (4).

(6) Where A_ and B_ digit translation is provided in the register, at least one test shall be provided for each A_ and B_ digit combination translated. These need not be separate tests designed exclusively for the purpose of testing

A_ and B_ digit translation but may be combined with other test considerations as indicated in (1) through (4).

(7) Additional tests must be provided as indicated in (1) through (6) for ***each incoming class of call*** available to the dial pulse incoming registers.

(8) Tests 119 through 132, 133 through 146, and 147 through 160 must be completed separately as indicated in (1) through (7).

(9) Separate tests 161 through 175 must be completed for ***each*** code cross-connected in the NN0 translator. Where any codes containing a C digit of 0 are used for an office code only (NN0 translator cross-connection omitted), a separate test using one such code must be provided.

(10) For all tests, apply (a), (c), and (e) of 5.01.

5.20 ***Test S***

(1) ▶For Test 176, apply (a) and (e) of 5.01, using a tandem incoming class of call with local translator indication.

(2) For Test 177, apply (a) and (e) of 5.01, using a toll incoming class of call with local translator indication.

(3) For Test 178, apply (a) and (e) of 5.01, using a CAMA0 incoming class of call with local translator indication.

(4) For Test 179, apply (a) and (e) of 5.01, using a CAMA1 incoming class of call with local translator indication.

(5) For Test 180, record the C_ digit of a 11X service code and apply (a) and (e) of 5.01, using a tandem incoming class of call with local translator indication.◀

5.21 ***Test T***

(1) ▶For Tests 181, 182, and 183, record B_ digits of 1X1 type codes and apply (a), (b), (c), and (e) of 5.01, using incoming classes of call with which codes of the structure indicated are used.

(2) For Tests 184, 185, and 186, record B_ and C_ digits of 1XX type codes and apply (a), (b), (c), and (e) of 5.01, using incoming classes of call with which codes of the structure indicated are used.

(3) For Tests 187, 188, and 189, record B_ and C_ digits of 0XX type codes and apply (a), (b), (c), and (e) of 5.01, using incoming classes of call with which codes of the structure indicated are used.

(4) For Tests 190 and 191, record C_ digits of 11X type codes and apply (a), (b), (c), and (e) of 5.01, using incoming classes of call with which codes of the structure indicated are used.

(5) For Tests 192 through 195, record B_ and C_ digits of 11XX type codes and apply (a), (b), (c), and (e) of 5.01 using incoming class of call with which codes of the structure indicated are used.◀

5.22 ***Test U***

Note: For detailed information refer to SD-27969-01 notes 401 through 403.

(1) ▶For Tests 196 through 213,◀ a test number must be completed for each assigned incoming class of call, ie, TOL, TAN, CAMA, etc, as determined from office records, which is used with trunks handling calls containing area or office codes when the determination of the number of digits expected for various codes requires the use of pretranslation. Record selected incoming class of call in the INC CLASS OF CALL column.

(2) An NXX code consistent with (1) and used with the selected incoming class of call, is entered in the A, B, and C columns.

(3) The D through K columns are completed as required for the selected code and incoming class of call to provide the number of digits expected on calls of the selected incoming class of call.

(4) Additional Tests must be provided as indicated in (1) through (3) for each incoming class that requires a different marker start indication from the pretranslator.

(5) For all tests, apply (a), (b), (c), and (e) of 5.01.

5.23 ▶Test V

(1) For Tests 214 and 215, apply (a) through (e), using assigned foreign area and office codes with incoming classes of call and translator indications as required for 10-digit calls.◀

TEST CHART

TEST	TEST TITLE	TEST NO.	INCOMING REGISTER GROUP	MASTER TEST FRAME		TEST SET																		TEST NO.	TEST
				INC CLASS OF CALL	MISCELLANEOUS KEYS AND/OR SWITCHES	DIAL OR KEY DIGITS ON TEST SET										PULSING CONT		MISC KEYS			PRECISION PULSE GENERATOR			
						CALLED NUMBER										SPEED	LOOP COND				PULSING SPEED	% BREAK		
				TCL*		A	B	C	D	E	F	G	H	J	K	PPS DIAL	L SWITCH							
A	Regular Call	1			ITRR	3	6	0	7							10	0						1	A
	4- and 5-Digit Call	2			ITRR	6	0	7	1							10	0						2	
		3			ITRR	2	7	1	3							10	0						3	
		4			ITRR	7	1	3	6							18/20	0						4	
		5			ITRR	4	3	6	0	7						18/20	0						5	
		6			ITRR	6	0	7	1	3						18/20	0						6	
	7-Digit Call	7			ITRR				3	6	0	7				10	0						7	
		8			ITRR				6	0	7	1				10	0						8	
		9			ITRR				0	7	1	3				10	0						9	
		10			ITRR				7	1	3	6				18/20	0						10	
		11			ITRR				1	3	6	0				18/20	0						11	
		12			ITRR				3	6	0	7				10	0						12	
		13			ITRR				6	0	7	1				10	0						13	
		14			ITRR				0	7	1	3				10	0						14	
		15			ITRR				7	1	3	6				18/20	0						15	
		16			ITRR				1	3	6	0				18/20	0						16	
		17			ITRR				3	6	0	7				10	0						17	
		18			ITRR				6	0	7	1				10	0						18	
		19			ITRR				0	7	1	3				10	0						19	
		20			ITRR				7	1	3	6				18/20	0						20	
		21			ITRR				1	3	6	0				18/20	0						21	
	10-Digit Call	22			ITRR							3	6	0	7	10	0						22	
		23			ITRR							6	0	7	1	10	0						23	
		24			ITRR							0	7	1	3	10	0						24	
		25			ITRR							7	1	3	6	18/20	0						25	
		26			ITRR							1	3	6	0	18/20	0						26	
		27			ITRR							3	6	0	7	10	0						27	
		28			ITRR							6	0	7	1	10	0						28	
		29			ITRR							0	7	1	3	10	0						29	
		30			ITRR							7	1	3	6	18/20	0						30	
		31			ITRR							1	3	6	0	18/20	0						31	
		32			ITRR							3	6	0	7	10	0						32	
		33			ITRR							6	0	7	1	10	0						33	

* Test Circuit for Register and CAMA Sender Circuits SD-25988-01.

TEST CHART

TEST	TEST TITLE	TEST NO.	INCOMING REGISTER GROUP	MASTER TEST FRAME					TEST SET																TEST NO.	TEST
				INC CLASS OF CALL	MISCELLANEOUS KEYS AND/OR SWITCHES				DIAL OR KEY DIGITS ON TEST SET												PULSING CONT		MISC KEYS			PRECISION PULSE GENERATOR			
									CALLED NUMBER												SPEED	LOOP COND				PULSING SPEED	% BREAK		
				TCL*					A	B	C	D	E	F	G	H	J	K	PPS DIAL	L SWITCH							
A	(Cont)	34			ITRR										0	7	1	3	10	0						34	A
	10-Digit Call (Cont)	35			ITRR										7	1	3	6	18/20	0						35	
		36			ITRR										1	3	6	0	18/20	0						36	
B	Special Call OAS	37			ITRR				3	6	0	7							10	0						37	B
	OBS	38			ITRR				6	0	7	1							10	0						38	
	ABS	39			ITRR				7	1	3	6	0						10	0						39	
C	Dial Tone	40			ITRR														18/20	0						40	C
		41			ITRR														18/20	0						41	
		42			ITRR														18/20	0						42	
		43			ITRR														18/20	0						43	
		44			ITRR														18/20	0						44	
		45			ITRR														18/20	0						45	
		46			ITRR														18/20	0						46	
		47			ITRR														18/20	0						47	
		48			ITRR														18/20	0						48	
		49			ITRR														18/20	0						49	
D	Surge	50			ITRR														18/20	7						50	D
		51			ITRR														18/20	7						51	
		52			ITRR														18/20	7						52	
E	Direct Pulsing	53			ITRR														10	8						53	E
		54			ITRR														10	8						54	
		55			ITRR														10	8						55	
		56			ITRR														18/20	10						56	
		57			ITRR														18/20	10						57	
		58			ITRR														18/20	10						58	
		59			ITRR														18/20	9						59	
		60			ITRR														18/20	9						60	
		61			ITRR														18/20	9						61	
		62			ITRR														18/20	4						62	
		63			ITRR														18/20	4						63	
		64			ITRR														18/20	4						64	
F	Bylink Pulsing	65			ITRR	BL													10	0						65	F
		66			ITRR	BL													10	0						66	

* Test Circuit for Register and CAMA Sender Circuits SD-25988-01.

♦ TEST CHART ♦

TEST	TEST TITLE	TEST NO.	INCOMING REGISTER GROUP		MASTER TEST FRAME: INC CLASS OF CALL TCL*	MASTER TEST FRAME: MISCELLANEOUS KEYS AND/OR SWITCHES				TEST SET: DIAL OR KEY DIGITS ON TEST SET, CALLED NUMBER: A	B	C	D	E	F	G	H	J	K	PULSING CONT: SPEED PPS DIAL	PULSING CONT: LOOP COND L SWITCH	MISC KEYS			PRECISION PULSE GENERATOR: PULSING SPEED	PRECISION PULSE GENERATOR: % BREAK	TEST NO.	TEST
F	(Cont)	67				ITRR	BL													10	0						67	F
G	Abandoned Call	68								3	3									10	0						68	G
		69								3	3									10	0						69	
		70								3	3									10	0						70	
H	Digit Timing	71																		18/20	0						71	H
		72																		18/20	0						72	
		73																		18/20	0						73	
I	Link Release	74			OFF	ITRR															0						74	I
		75			OFF	ITRR															0						75	
		76			OFF	ITRR															0						76	
J	Overall Timeout	77					H													18/20	0						77	J
		78					H													18/20	0						78	
		79					H													18/20	0						79	
K	Common Alarm Timing	80					H														0						80	K
		81					H														0						81	
		82					H														0						82	
N	Trouble Release	83					IRBT													10	0						83	N
		84					IRBT													10	0						84	
		85					IRBT													10	0						85	
O	Precision Pulsing (3A Pulse Generating Test Set)	86				ITRR				†											8				7	50	86	O
		87				ITRR				†											8				7	80	87	
		88				ITRR				†											9				24	55	88	
		89				ITRR				†											4				24	55	89	
		90				ITRR				†											10				24	70	90	
		91				ITRR				†											0				24	70	91	
		92				ITRR				†											0				7	80	92	
		93				ITRR				†											0				24	55	93	
		94				ITRR				†											0				7	50	94	
		95				ITRR				†											0				7	80	95	
O.1	Precision Pulsing (4A Signaling Test Set)	96				ITRR				‡											8				7	50	96	O.1
		97				ITRR				‡											8				7	80	97	

* Test Circuit for Register and CAMA Sender Circuits SD-25988-01.
† A_ through K_ digits as required generated by 3A pulse generating test set.
‡ A_ through K_ digits as required generated by 4A signaling test set.

TEST CHART

TEST	TEST TITLE	TEST NO.	INCOMING REGISTER GROUP	MASTER TEST FRAME: INC CLASS OF CALL / TCL*	MASTER TEST FRAME: MISCELLANEOUS KEYS AND/OR SWITCHES	TEST SET: DIAL OR KEY DIGITS ON TEST SET — CALLED NUMBER A	B	C	D	E	F	G	H	J	K	TEST SET: PULSING CONT — SPEED PPS DIAL / LOOP COND L SWITCH	TEST SET: MISC KEYS	PRECISION PULSE GENERATOR: PULSING SPEED / % BREAK	TEST NO.	TEST
O.1	(Cont)	98			ITRR	‡											9		24 / 55	98	O.1
		99			ITRR	‡											4		24 / 55	99	
		100			ITRR	‡											10		24 / 70	100	
		101			ITRR	‡											0		24 / 70	101	
		102			ITRR	‡											0		7 / 80	102	
		103			ITRR	‡											0		24 / 55	103	
		104			ITRR	‡											0		7 / 50	104	
		105			ITRR	‡											0		7 / 80	105	
P	Trunk Test Call	106			ITRR												0			106	P
		107			ITRR												0			107	
		108			ITRR												0			108	
Q	11 Foreign Area Directing Code	109			ITRR	1	1				1	2	3	4		10	0			109	Q
		110			ITRR	1	1				1	2	3	4		10	0			110	
		111			ITRR	1	1				1	2	3	4		10	0			111	
		112			ITRR	1	1				1	2	3	4		10	0			112	
		113			ITRR	1	1				1	2	3	4		10	0			113	
		114			ITRR	1	1				1	2	3	4		10	0			114	
		115			ITRR	1	1				1	2	3	4		10	0			115	
		116			ITRR	1	1				1	2	3	4		10	0			116	
		117			ITRR	1	1				1	2	3	4		10	0			117	
		118			ITRR	1	1				1	2	3	4		10	0			118	
R	Tandem, Toll, and CAMA Incoming Classes	119			ITRR		0									10	0			119	R
		120			ITRR		0									10	0			120	
		121			ITRR		0									10	0			121	
		122			ITRR		0									10	0			122	
		123			ITRR		0									10	0			123	
		124			ITRR		0									10	0			124	
		125			ITRR		0									10	0			125	
		126			ITRR		0									10	0			126	
		127			ITRR		0									10	0			127	
		128			ITRR		0									10	0			128	
		129			ITRR		0									10	0			129	
		130			ITRR		0									10	0			130	

* Test Circuit for Register and CAMA Sender Circuits SD-25988-01.
‡ A_ through K_ digits as required generated by 4A signaling test set.

TEST CHART

TEST	TEST TITLE	TEST NO.	INCOMING REGISTER GROUP	MASTER TEST FRAME		TEST SET												PRECISION PULSE GENERATOR		TEST NO.	TEST
				CLASS INC OF CALL	MISCELLANEOUS KEYS AND/OR SWITCHES	DIAL OR KEY DIGITS ON TEST SET									PULSING CONT		MISC KEYS				
						CALLED NUMBER									SPEED	LOOP COND					
				TCL*		A	B	C	D	E	F	G	H	J	K	PPS DIAL	L SWITCH			PULSING SPEED	% BREAK		
R	(Cont)	131			ITRR		0									10	0					131	R
		132			ITRR		0									10	0					132	
		133			ITRR		1									10	0					133	
		134			ITRR		1									10	0					134	
		135			ITRR		1									10	0					135	
		136			ITRR		1									10	0					136	
		137			ITRR		1									10	0					137	
		138			ITRR		1									10	0					138	
		139			ITRR		1									10	0					139	
		140			ITRR		1									10	0					140	
		141			ITRR		1									10	0					141	
		142			ITRR		1									10	0					142	
		143			ITRR		1									10	0					143	
		144			ITRR		1									10	0					144	
		145			ITRR		1									10	0					145	
		146			ITRR		1									10	0					146	
		147			ITRR											10	0					147	
		148			ITRR											10	0					148	
		149			ITRR											10	0					149	
		150			ITRR											10	0					150	
		151			ITRR											10	0					151	
		152			ITRR											10	0					152	
		153			ITRR											10	0					153	
		154			ITRR											10	0					154	
		155			ITRR											10	0					155	
		156			ITRR											10	0					156	
		157			ITRR											10	0					157	
		158			ITRR											10	0					158	
		159			ITRR											10	0					159	
		160			ITRR											10	0					160	
		161			ITRR			0								10	0					161	
		162			ITRR			0								10	0					162	
		163			ITRR			0								10	0					163	

* Test Circuit for Register and CAMA Sender Circuits SD-25988-01.

TEST CHART

TEST	TEST TITLE	TEST NO.	INCOMING REGISTER GROUP	MASTER TEST FRAME: INC CLASS OF CALL / TCL*	MASTER TEST FRAME: MISCELLANEOUS KEYS AND/OR SWITCHES	TEST SET: DIAL OR KEY DIGITS ON TEST SET: CALLED NUMBER A	B	C	D	E	F	G	H	J	K	TEST SET: PULSING CONT: SPEED PPS DIAL	LOOP COND L SWITCH	TEST SET: MISC KEYS	PRECISION PULSE GENERATOR: PULSING SPEED	% BREAK	TEST NO.	TEST
R	(Cont)	164			ITRR			0								10	0					164	R
		165			ITRR			0								10	0					165	
		166			ITRR			0								10	0					166	
		167			ITRR			0								10	0					167	
		168			ITRR			0								10	0					168	
		169			ITRR			0								10	0					169	
		170			ITRR			0								10	0					170	
		171			ITRR			0								10	0					171	
		172			ITRR			0								10	0					172	
		173			ITRR			0								10	0					173	
		174			ITRR			0								10	0					174	
		175			ITRR			0								10	0					175	
S	Service Codes	176			ITRR	4	1	1								10	0					176	S
	Information	177			ITRR	4	1	1								10	0					177	
		178			ITRR	4	1	1								10	0					178	
		179			ITRR	4	1	1								10	0					179	
	11X§-Service	180			ITRR	1	1									10	0					180	
T	Toll Operator and/or System Codes 1X1§-Type	181			ITRR	1		1								10	0					181	T
		182			ITRR	1		1								10	0					182	
		183			ITRR	1		1								10	0					183	
	1XX§-Type	184			ITRR	1										10	0					184	
		185			ITRR	1										10	0					185	
		186			ITRR	1										10	0					186	
	0XX§-Type	187			ITRR	0										10	0					187	
		188			ITRR	0										10	0					188	
		189			ITRR	0										10	0					189	
	11X§-Type	190			ITRR	1	1									10	0					190	
		191			ITRR	1	1									10	0					191	
	11XX§-Type	192			ITRR	1	1									10	0					192	
		193			ITRR	1	1									10	0					193	
		194			ITRR	1	1									10	0					194	
		195			ITRR	1	1									10	0					195	

* Test Circuit for Register and CAMA Sender Circuits SD-25988-01.
§ X = any number from 0 to 9.

♦ TEST CHART ♦

TEST	TEST TITLE	TEST NO.	INCOMING REGISTER GROUP	MASTER TEST FRAME		TEST SET														GENERATOR PRECISION PULSE		TEST NO.	TEST
				INC CLASS OF CALL	MISCELLANEOUS KEYS AND/OR SWITCHES	DIAL OR KEY DIGITS ON TEST SET										PULSING CONT		MISC KEYS					
						CALLED NUMBER										SPEED	LOOP COND						
				TCL*		A	B	C	D	E	F	G	H	J	K	PPS DIAL	L SWITCH				PULSING SPEED	% BREAK	
U	Pretranslation (SD-27969-01)	196			ITRR											10	0						196	U
		197			ITRR											10	0						197	
		198			ITRR											10	0						198	
		199			ITRR											10	0						199	
		200			ITRR											10	0						200	
		201			ITRR											10	0						201	
		202			ITRR											10	0						202	
		203			ITRR											10	0						203	
		204			ITRR											10	0						204	
		205			ITRR											10	0						205	
		206			ITRR											10	0						206	
		207			ITRR											10	0						207	
		208			ITRR											10	0						208	
		209			ITRR											10	0						209	
		210			ITRR											10	0						210	
		211			ITRR											10	0						211	
		212			ITRR											10	0						212	
		213			ITRR											10	0						213	
V	Pretranslator Guard Control	214										1	2	3	4								214	V
		215										1	2	3	4								215	

* Test Circuit for Register and CAMA Sender Circuits SD-25988-01.