

**MULTIFREQUENCY INCOMING REGISTERS SD-25730-01 AND SD-26042-01
TESTS
USING TEST SET SD-25676-01 (J24756B)
NO. 5 CROSSBAR OFFICES**

1. GENERAL

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1.01 This section describes a method of testing multifrequency incoming registers and associated signal receiving circuits 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.

D. Three-Frequency Digit: This test checks that the register sends a reorder signal to the marker whenever a three-frequency digit is received. **7**

1.02 This section is reissued for the following reasons:

E. Modulation Products: This test checks that the register is not unduly sensitive. **7**

- (a) To revise Tests C, H and P for clarification.
- (b) To revise Table B.
- (c) To make other minor changes as required.

F. Twist: This test determines if a receiver will record on both frequencies of a signal in which the levels of the two frequencies differ. **8**

This reissue does not affect Equipment Test Lists.

1.03 The tests covered are:

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A. Registration: This test checks translation and registration of digits pulsed. **4**

G. Link Release: This test checks the ability of the register to cause a trouble release when linkage is not established within 1/2 second. **9**

B. Special Call: This test checks the ability of the register to select a special marker when required. **5**

H. Abandoned Call: This test checks the ability of the register to release on abandoned calls. **9**

C. Single-Frequency Digit: This test checks the ability of a wire-spring-relay type register to advance on a single frequency and that a nonwire-spring-relay type register does not advance on a single frequency. **6**

I. 11 Foreign Area Directing Code: This test checks the ability of the register to handle the 11 code before the digit A is pulsed on tandem calls. **10**

J. Delay for Start Signal-Nonwire-Spring-Relay Type Registers: This test checks that a start signal is sent before a marker is called in by the register. **10**

K. Reorder Request: This test checks that the register sends a reorder signal to the marker whenever the

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number of digits received does not match the class of information.	11
L. Trouble Release: This test checks the ability of the register to release when a trouble release signal is given by the marker.	14
M. Common Alarm Timing: This test checks the overall timing of the register and that the common alarm circuit functions within the required timing intervals.	14
N. Double Connection: This test checks that the register recognizes a double connection at the incoming register link switch.	15
O. RV Timer: This test checks the timing interval of the RV timer.	16
P. Precision Pulsing Test (3A Pulse Generating Test Set): This test checks the ability of the register and signal receiver to function properly on a signal of controlled level and duration. ♦The pulse connector tests are in Sections 179-612-701 and 179-612-702.♦ °	16
P.1 Precision Pulsing Test (4A Signaling Test Set): This test checks the ability of the register and signal receiver to function properly on a signal of controlled level and duration. ♦The pulse connector tests are in Section 179-612-701 and 179-612-702.♦ .	18
Q. Slow Pulsing Test: This test checks that the register records a single digit on long pulses.	20
R. Centrex Attendant Class Calls: This test checks the ability of the register to recognize centrex attendant class calls and to ground the required class and translator leads to the marker.	21
S. Centrex Transfer Class Calls: This test checks the ability of the register to recognize centrex transfer	

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class calls and to ground the required class lead to the marker.	22
T. Interchangeable NPA Code Translation: This test checks the ability of the register to recognize interchangeable NPA codes and to ground the required translator leads to the marker.	22
1.04 Tests A through M and Tests P through T, unless otherwise specified in this section, are made with the test set circuit for register and CAMA sender circuits (test set) located at the master test frame. For trouble locating purposes, the test set may be located at the register frame and the operated or released ON relay in the register under test should be substituted for the verifications of the lighted or extinguished IRON lamp, respectively.	
1.05 If the office is equipped with both automatic monitor and test circuit for register and CAMA sender circuits and the STT/STM key of the automatic monitor is operated while a test by the test set circuit is in progress, the circuit will release as if the RL key had been operated.	
1.06 Where incoming register SD-25730-01 is not arranged to receive a variable number of digits (Option YZ provided), the ST key should not be operated.	
1.07 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.	
1.08 The location statement, At MTF—, is used to refer to all apparatus located on the four basic bays of the MTF.	
1.09 If all other registers in the group become busy during the test, the traffic register associated with the GB lead will score. If the register times out during a toll or centrex attendant	

trunk class test and the register has not received all digits, the traffic register associated with either the PD or the PS lead will score. Local instructions should be followed with reference to recording and reporting any of these register operations.

1.10 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, such as DT, ORIG, ITDO, ITNP, OGT, etc.

2. APPARATUS

Tests A Through M and P Through T

- 2.01 Test circuit for register and CAMA sender circuits SD-25988-01.
- 2.02 Test set circuit for register and CAMA sender circuits (test set) SD-25676-01.
- 2.03 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 set to IRT jack of test set circuit).

Test M

2.04 KS-3008 stopwatch or equivalent.

Tests M and N

2.05 322A (make-busy) plug.

3. PREPARATION

STEP

ACTION

VERIFICATION

Tests A Through M and P Through T

- 1 At MTF—
Operate IRG, IR switches to select register group and register.
- 2 At test set—
Patch IRT connector to IRT jack on MTF or to IRT jack on incoming register frame.
- 3 Operate MF key.
- 4 Set L switch to OFF.

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

Test N

2.07 Testing cord, 893 cord, 6 feet long, equipped with two 360A tools (1W13B cord), one KS-6278 connecting clip, one 607A tool (for connecting to winding terminal of U-type relays), and one 624B tool (for connecting to terminals of 251-type terminal strips).

Test O

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

Tests P, P.1

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

Test P

2.10 3A pulse generating test set J94732A and power supply unit J94732B (SD-95686-01).

Test P.1

2.11 4A signaling test set J94743A and loop unit J94743AB (SD-1C244-01).

STEP	ACTION	VERIFICATION
Test P		
5	Prepare 3A pulse generating test set as outlined in the section titled 3A Pulse Generating Test Set Description and Operation.	
6	Patch MF jack on test set to OUTPUT NCP jack on 3A pulse generating test set.	

Test P.1

- | | | |
|---|--|--|
| 7 | Prepare 4A signaling test set as outlined in the section titled 4A Signaling Test Set Description and Operation. | |
| 8 | Patch MF jack on test set to SR jack on 4A signaling test set loop interface unit. | |

4. METHOD

STEP	ACTION	VERIFICATION
A. Registration		
5	At MTF— Set MF switch to MAX L.	
6	Set TCL switch to select trunk class requiring maximum number of digits equipped in register.	
7	Operate ITRR key.	
8	At test set— Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
9	At test set— Momentarily operate KP key.	
10	Key required number of digits in accordance with Table A.	
11	Momentarily operate ST key (refer to 1.06).	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. Keyed number perforated. If register is located in a 2-wire, 4-wire office— 2W perforated.
12	At test set— Momentarily operate RL key.	All lamps extinguished.

STEP	ACTION	VERIFICATION
13	At MTF— Restore ITRR key.	
14a	If no other tests are to be performed— Restore test equipment.	

B. Special Call

5	At MTF— Set MF switch to MAX L.	
6a	If nonwideband test— Set TCL switch to select special trunk class (OAS, OBS, or ABS).	
7b	If wideband test— Set TCL switch to select wideband incoming trunk class.	
8	Operate ITRR key.	
9	At test set— Momentarily operate STT key.	
10	At test set— Momentarily operate KP key.	
11	Key required number of digits.	
12	Momentarily operate ST key (refer to 1.06).	

RR lamp lighted.
At MTF—
IRT, IRON lamps lighted.

RR lamp extinguished.
At MTF—
IRON lamp extinguished.
Trouble record taken.
If nonwideband test—
Keyed number and SPL designation perforated.
If wideband test—
Keyed number, marker 0 or 1 designations perforated.

TABLE A

REGULAR TEST CALL	DIGIT KEYS OPERATED									
	A	B	C	D	E	F	G	H	J	K
1	7	3	0	1	6	7	3	0	1	6
2	3	0	1	6	7	3	0	1	6	7
3	0	1	6	7	3	0	1	6	7	3

STEP	ACTION	VERIFICATION
13	At test set— Momentarily operate RL key.	All lamps extinguished.
14	At MTF— Restore ITRR key.	
15c	If no other tests are to be performed— Restore test equipment.	
C. Single-Frequency Digit		
5	At MTF— Set MF switch to ◀MIN L.▶	
6	Set TCL switch for trunk class requiring maximum number of digits equipped in register.	
7	Operate ITRR key.	
8	At test set— Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
9	At test set— Momentarily operate KP key.	
10	Key required number of digits replacing operation of any one of the digit keys except last digit with momentary operation of SF-IA key. Digit following operation of SF-IA key should not be 2, 3, 6, or 9.	
11	Momentarily operate ST key (refer to 1.06).	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. If register is wire-spring-relay type— Card should show single 2 in position of digit replaced by SF-IA key. If register is nonwire-spring-relay type— Card should show 3-out-of-5 registration in position of digit replaced by SF-IA key and single seven in position of last digit register.
12	At test set— Momentarily operate RL key.	All lamps extinguished.
13	At MTF— Restore ITRR key.	

STEP	ACTION	VERIFICATION
14a	If no other tests are to be performed— Restore test equipment.	
D. Three-Frequency Digit		
5	At MTF— Set MF switch to MPT.	
6	Set TCL switch to select local trunk class.	
7	Operate ITRR key.	
8	At test set— Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
9	At test set— Momentarily operate KP key.	
10	Momentarily operate 0, 1 keys simultaneously.	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. RO designation perforated.
11	At test set— Momentarily operate RL key.	All lamps extinguished.
12	At MTF— Restore ITRR key.	
13a	If no other tests are to be performed— Restore test equipment.	

E. Modulation Products

5	At MTF— Set MF switch to MPT.	
6	Set TCL switch to select trunk class requiring maximum number of digits equipped in register.	
7	Operate ITRR key.	
8	At test set— Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
9	At test set— Momentarily operate KP key.	

STEP	ACTION	VERIFICATION
10	Key number including digits 0, 1, 2, 3, 5, 6, 9.	
11	Momentarily operate ST key (refer to 1.06). <i>Note:</i> If trouble card shows an RO punch, a third frequency was registered falsely.	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. Keyed number perforated.
12	At test set— Momentarily operate RL key. <i>Note:</i> If the first test does not include all of the above digits, repeat Steps 8 through 12 until each of the above digits has been sent at least once.	All lamps extinguished.
13	At MTF— Restore ITRR key.	
14a	If no other tests are to be performed— Restore test equipment.	

F. Twist

5	At MTF— Set MF switch to TWT.	
6	Set TCL switch to select local trunk class.	
7	Operate ITRR key.	
8	At test set— Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
9	At test set— Momentarily operate KP key.	
10	Key sevens for required number of digits.	
11	Momentarily operate ST key (refer to 1.06).	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. Keyed number perforated.
12	At test set— Momentarily operate RL key.	All lamps extinguished.
13	At MTF— Restore ITRR key.	

STEP	ACTION	VERIFICATION
14a	If no other tests are to be performed— Restore test equipment.	
G. Link Release		
5	At MTF— Set MF switch to MAX L.	
6	Set TCL switch to OFF.	
7	Operate ITRR key.	
8a	If CLRR key is provided on MTF jack, lamp, and key circuit— Release CLRR key if operated.	
9	At test set— Momentarily operate STT key.	IRT lamp lighted. At MTF— IRON lamp lighted. IRON lamp extinguished in 1/2 second. Trouble record taken. DCK, LR designations perforated. FR, CN, RG designations identify register under test.
10	At test set— Momentarily operate RL key.	All lamps extinguished.
11	At MTF— Restore ITRR key.	
12b	If no other tests are to be performed— Restore test equipment.	
H. Abandoned Call		
5	At MTF— Set MF switch to MAX L.	
6	Set TCL switch to select local trunk class.	
7	At test set— Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
8	At test set— Momentarily operate RL key.	RR lamp extinguished. At MTF— All lamps extinguished.
9a	If no other tests are to be performed— Restore test equipment.	

STEP	ACTION	VERIFICATION
I. 11 Foreign Area Directing Code		
5	At MTF— Set MF switch to MAX L.	
6	Set TCL switch to select tandem trunk class using 11 foreign area directing codes.	
7	Operate ITRR key.	
8	At test set— Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
9	At test set— Momentarily operate KP key.	
10	Key 11 directing code and required digits.	
11	Momentarily operate ST key (refer to 1.06).	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. Keyed number perforated.
12	At test set— Momentarily operate RL key.	All lamps extinguished.
13	At MTF— Restore ITRR key.	
14a	If no other tests are to be performed— Restore test equipment.	
J. Delay for Start Signal—Nonwire-Spring-Relay Type Registers		
5	At MTF— Set MF switch to MAX L.	
6	Set TCL switch to select local trunk class.	
7	At test set— Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
8	At test set— Momentarily operate KP key.	
9a	If start pulse is not required— Key required number of digits for trunk class and wait 2 to 3 seconds (refer to 1.06).	RR lamp remains lighted.

STEP	ACTION	VERIFICATION
10b	If start pulse is required— Key required number of digits for trunk class and wait 2 to 3 seconds; momentarily operate ST key.	RR lamp remains lighted for 2 to 3 seconds, then extinguished. At MTF— IRON lamp extinguished.
11	At test set— Momentarily operate RL key.	All lamps extinguished.
12a	At MTF— If no other tests are to be performed— Restore test equipment.	
K. Reorder Request		
<i>Note:</i> For each of the equipped trunk classes determine the minimum, lowest exact, and highest exact number of digits capable of being received without reorder treatment.		
5	At MTF— Set MF switch to MAX L.	
6	Operate ITRR key.	
7	Set TCL switch to select trunk class to be tested.	
8	At test set— Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
9	At test set— Momentarily operate KP key.	
10	Key one less than the lowest "exact number of digits" for trunk class.	
11	Momentarily operate ST key.	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. RO designation perforated.
12	At test set— Momentarily operate RL key.	All lamps extinguished.
13	Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
14	At test set— Momentarily operate KP key.	

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STEP	ACTION	VERIFICATION
15	Key lowest "exact number of digits" for trunk class.	
16	Momentarily operate ST key.	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. RO designation not perforated.
17	At test set— Momentarily operate RL key.	All lamps extinguished.
18a	If trunk class being tested is arranged for highest "exact number of digits" without reorder treatment— Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
19a	At test set— Momentarily operate KP key.	
20a	Key one less than the highest "exact number of digits" for trunk class.	
21a	Momentarily operate ST key (refer to 1.06).	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. RO designation perforated.
22a	Momentarily operate RL key.	All lamps extinguished.
23a	Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
24a	At test set— Momentarily operate KP key.	
25a	Key highest "exact number of digits" for trunk class.	
26a	Momentarily operate ST key (refer to 1.06).	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. RO designation not perforated.
27a	At test set— Momentarily operate RL key.	All lamps extinguished.
28b	If trunk class being tested is arranged for "minimum number of digits" without reorder	RR lamp lighted. At MTF—

STEP	ACTION	VERIFICATION
	treatment— Momentarily operate STT key.	IRT, IRON lamps lighted.
29b	At test set— Momentarily operate KP key.	
30b	Key one less than the “minimum number of digits” for trunk class.	
31b	Momentarily operate ST key.	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. RO designation perforated.
32b	At test set— Momentarily operate RL key.	All lamps extinguished.
33b	Momentarily operate STT key.	RR lamps lighted. At MTF— IRT, IRON lamps lighted.
34b	At test set— Momentarily operate KP key.	
35b	Key “minimum number of digits” for trunk class.	
36b	Momentarily operate ST key (refer to 1.06).	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. RO designation not perforated.
37b	At test set— Momentarily operate RL key.	All lamps extinguished.
38	Repeat Steps 7 through 37b as required for each equipped trunk class.	
39	With TCL switch set to any trunk class— Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
40	At test set— Momentarily operate KP key.	
41	Momentarily reoperate KP key.	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. RO designation perforated.

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STEP	ACTION	VERIFICATION
42	At test set— Momentarily operate RL key.	All lamps extinguished.
43	At MTF— Restore ITRR key.	
44c	If no other tests are to be performed— Restore test equipment.	

L. Trouble Release

5	At MTF— Set MF switch to MAX L.	
6	Set TCL switch to select local trunk class.	
7	Operate IRBT key.	
8	At test set— Momentarily operate STT key.	RR lamp lighted. At MTF— RR lamp lighted.
9	At test set— Momentarily operate KP key.	
10	Key required number of digits.	
11	Momentarily operate ST key.	At MTF— IRON lamp extinguished. No trouble record taken.
12	At test set— Momentarily operate RL key.	All lamps extinguished.
13	At MTF— Restore IRBT key.	
14a	If no other tests are to be performed— Restore test equipment.	

M. Common Alarm Timing

5	At MTF— Insert make-busy plug in IRMB jack.	
6	Set MF switch to MAX L.	
7	Operate H key.	
8	Set TCL switch to select local trunk class.	

STEP	ACTION	VERIFICATION
9a	If register under test is nonwire-spring-relay type— At register circuit— Insulate 3 and 4B of M relay.	
10b	If register under test is wire-spring-relay type— At register circuit— Insulate 8M of M relay.	
11	At test set— Momentarily operate STT key; <i>start timing</i> .	RR lamp lighted. At MTF— IRT, IRON lamps lighted. In 20 to 32 seconds— At test set— RR lamp extinguished. At jack, lamp, and key circuit— 40 to 64 seconds after STT key is operated— TO lamp associated with register under test lighted.
12	At MTF— Remove plug from IRMB jack.	In 10 to 15 seconds— R-S-TOA lamp lighted. Major alarm sounds.
		Note: If the R-S-TOA lamp is lighted in less than 10 to 15 seconds, it may be necessary to repeat the test as another circuit may have seized the common alarm circuit.
13	Insert make-busy plug in IRMB jack.	
14	At register circuit— Remove insulator from M relay.	
15	At test set— Momentarily operate RL key.	All lamps extinguished.
16	At MTF— Restore H key.	
17	At MTF— Remove plug from IRMB jack.	
18c	If no other tests are to be performed— Restore test equipment.	
N. Double Connection		
1	At MTF— Insert make-busy plug in IRMB jack of register under test.	

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STEP	ACTION	VERIFICATION
2a	If register under test is nonwire-spring-relay type— At register circuit— Insulate 1 and 2T, 2 and 3B of MRL relay.	
3a	Ground top winding terminal of H relay.	H relay operated.
4b	If register under test is wire-spring-relay type— At register circuit— Insulate 7B, 8B of MRL relay.	
5b	Ground terminal 16 on terminal strip D.	H relay operated.
6	Manually operate and hold ON relay.	TC1, TC2 relays operated within 1/2 second. DCK relay not operated.
7	Release ON relay.	
8	Remove ground from winding on terminal strip.	H relay released.
9	Block operated H relay.	
10	Manually operate ON relay.	DCK relay operated.
11	Release ON relay.	
12	Remove blocking tool from H relay.	
13	Remove insulators from MRL relay.	
14	At MTF— Remove plug from IRMB jack.	
15c	If no other tests are to be performed— Restore test equipment.	

O. RV Timing

- 1 Measure RV timing interval by using circuit requirement table and J24753A timing test set.
- 2a If no other tests are to be performed—
Restore test equipment.

P. Precision Pulsing Test (3A Generating Test Set)

- 7 At pulse generating test set—
Adjust settings for 9.1 pulses per second at

STEP	ACTION	VERIFICATION
	42.5 percent break with LOOP key in OPEN position.	
8	Set PULSE SEL switch to SINGLE TRAIN.	
9	Set PULSES PER TRAIN switch to 1.	
10	At MTF— Set MF switch to MAX L.	
11	Set TCL switch to select local trunk class.	
12	Operate ITRR key.	
13	At test set (register)— Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
14	At test set (register)— Operate and hold KP key.	
15	At pulse generating test set— Momentarily operate TRAIN CONTROL key to PULSE.	
16	At test set (register)— Release KP key.	
17	At pulse generating test set— Operate LOOP key to CLOSED.	
18	At test set (register)— Key zeros for required number of digits.	
19	Momentarily operate ST key (refer to 1.06).	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. Keyed number perforated.
20	At test set (register)— Momentarily operate RL key.	All lamps extinguished.
21	At pulse generating test set— Adjust settings for 10 pulses per second at 34 percent break; set PULSE PER TRAIN switch for required number of digits.	
22	At test set (register)— Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.

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STEP	ACTION	VERIFICATION
23	At test set (register)— Momentarily operate KP key.	
24	At pulse generating test set— Operate LOOP key to OPEN.	
25	At test set (register)— Key and hold a zero.	
26	At pulse generating test set— Momentarily operate TRAIN CONTROL key to PULSE to generate the first digit.	
27	Repeat Step 26 as required to generate the remaining number of digits.	Observe that train of pulses have been sent on COUNTER tube.
28	At test set (register)— Release zero key.	
29	At pulse generating test set— Operate LOOP key to CLOSED.	
30	At test set (register)— Momentarily operate ST key.	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. Keyed number perforated.
31	At test set (register)— Momentarily operate RL key.	All lamps extinguished.
32	At pulse generating test set— Adjust settings for 10 pulses per second at 66 percent break.	
33	Repeat Steps 22 through 31.	
34	At test set (register)— Restore all keys and switches not required in next test.	
35	At MTF— Restore all keys and switches not required in next test.	
36	Remove all patching cords from test sets.	
P.1 Precision Pulsing Test (4A Signaling Test Set)		
9	At signaling test set—main module— Adjust settings for 9.1 pulses per second at 42.5 percent break.	

STEP	ACTION	VERIFICATION
10	Operate GEN SUPV key to OFF HK.	
11	At signaling test set—loop interface unit— Set FUNCTION switch to SR.	
12	At MTF— Set MF switch to MAX L.	
13	Set TCL switch to select local trunk class.	
14	Operate ITRR key.	
15	At test set (register)— Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
16	At test set (register)— Operate and hold KP key.	
17	At signaling test set—main module— Momentarily operate keyset 1 key.	
18	At test set (register)— Release KP key.	
19	At signaling test set—main module— Operate GEN SUPV key to ON HK.	
20	At test set (register)— Key zeros for required number of digits.	
21	Momentarily operate ST key (refer to 1.06).	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. Keyed number perforated.
22	At test set (register)— Momentarily operate RL key.	All lamps extinguished.
23	At signaling test set—main module— Adjust settings for 10 pulses per second at 34 percent break.	
24	At test set (register)— Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
25	At test set (register)— Momentarily operate KP key.	

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STEP	ACTION	VERIFICATION
26	At signaling test set—main module— Operate GEN SUPV key to OFF HK.	
27	At test set (register)— Key and hold a zero.	
28	At signaling test set—main module— Momentarily operate keyset 1 key to generate the first digit.	
29	Repeat Step 28 as required to generate the remaining number of digits.	
30	At test set (register)— Release zero key.	
31	At signaling test set— Operate GEN SUPV key to ON HK.	
32	At test set (register)— Momentarily operate ST key.	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. Keyed number perforated.
33	At test set (register)— Momentarily operate RL key.	All lamps extinguished.
34	At signaling test set—main module— Adjust settings for 10 pulses per second at 66 percent break.	
35	Repeat Steps 24 through 33.	
36	At test set (register)— Restore all keys and switches not required in next test.	
37	At MTF— Restore all keys and switches not required in next test.	
38	Remove all patching cords from test sets.	
Q. Slow Pulsing Test		
5	At MTF— Set MF switch to MAX L.	
6	Set TCL switch to select local trunk class.	
7	Operate ITRR key.	

STEP	ACTION	VERIFICATION
8	At test set— Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
9	At test set— Operate KP key for approximately 1/2 second.	
10	Key required number of digits as indicated in Table A in Test A for first regular test call holding key operated for about 1/2 second for each digit.	
11	Operate ST key for about 1/2 second (refer to 1.06).	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. Keyed number perforated.
12	At test set— Momentarily operate RL key.	All lamps extinguished.
13	Repeat Steps 8 through 12 for regular test calls 2, 3.	
14	At MTF— Restore ITRR key.	
15a	If no other tests are to be performed— Restore test equipment.	
R. Centrex Attendant Class Call		
5	At MTF— Set MF switch to MAX L.	
6	Set TCL switch to select centrex attendant trunk class.	
7	Operate ITRR key.	
8	At test set— Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
9	At test set— Momentarily operate KP key.	
10	Key A_ through E_ keys as required.	
11	Momentarily operate ST key.	RR lamp extinguished. At MTF— IRON lamp extinguished.

STEP	ACTION	VERIFICATION
		Trouble record taken. Keyed number, trunk frame number, ATT, FVD class designations perforated.
12	At test set— Momentarily operate RL key.	All lamps extinguished.
13	At MTF— Restore ITRR key.	
14a	If no other tests are to be performed— Restore test equipment.	

S. Centrex Transfer Class Call

5	At MTF— Set TCL switch to select centrex transfer class.	
6	Operate ITRR key.	
7	At test set— Momentarily operate STT key.	IRT lamp lighted. At MTF— IRON lamp lighted. IRON lamp extinguished in 1/2 second. Trouble record taken. Trunk frame number, TRF class designation perforated.
8	At test set— Momentarily operate RL key.	All lamps extinguished.
9	At MTF— Restore ITRR key.	
10a	If no other tests are to be performed— Restore test equipment.	

T. Interchangeable NPA Code Translation

5	At MTF— Set MF switch to MAX L.	
6	Set TCL switch as follows: Table B—Test Calls 1, 2, and 3 Select trunk class representing a 10-digit call (foreign area).	
7	Operate ITRR key.	

STEP	ACTION	VERIFICATION
8	At test set— Momentarily operate STT key.	RR lamp lighted. At MTF— IRT, IRON lamps lighted.
9	At test set— Momentarily operate KP key.	
10	Key digits in accordance with Table B.	
11	Momentarily operate ST key.	RR lamp extinguished. At MTF— IRON lamp extinguished. Trouble record taken. Tests 1, 2: LT perforated. Test 3: TT perforated.
12	At test set— Momentarily operate RL key.	All lamps extinguished.
13	At MTF— Restore ITRR key.	
14a	If no other tests are to be performed— Restore test equipment.	

TABLE B

TEST CALL	DIGIT KEYS OPERATED									
	A	B	C	D	E	F	G	H	J	K
1	0	X	X	X	X	X	X	X	X	X
2	1	X	X	X	X	X	X	X	X	X
3	N	X	X	X	X	X	X	X	X	X

Note 1: N = any digit 2 through 9.

Note 2: X = any digit 0 through 9.