

PLANT REGISTERS—PART 17
TESTS USING MASTER TEST FRAME
NO. 5 CROSSBAR OFFICES

1. GENERAL

1.01 This section is Part 17 in a series of sections that describe methods for testing plant registers.

1.02 This issue affects Equipment Test Lists.

1.03 The tests covered are:

BS. IDDD Pretranslator (SD-27849-01) First and Second Trial Trouble Registers (IPTR, IPST Registers): This test checks that a plant register operates on first trial service call failures and on second trial service call failures when a trouble record is requested before disconnect.

BT. Automatic Recycle Features of Trunk Test Circuit (SD-25918-01) (ATRO, ATBY, ATAN, ATRF, ATTC Registers): This test checks that a plant register operates when a reorder, busy, announcement, or three audible rings are encountered on automatic recycle tests when the automatic recycle feature is provided. A total count of all calls is also made.

1.04 Plant registers are located either in a self-contained register cabinet and referred to as the plant register circuit or just above the trouble recorder perforator on the master test frame (MTF) trouble recorder bay.

1.05 Table A indicates the tests requiring action and verification at more than one location.

1.06 Lettered Steps: A letter a, b,c, etc, added to a step number in Parts 3 and 4 of this section indicates an action which may or may not be required depending on local conditions. The condition under which a lettered step or a series of lettered steps should be made is given in the ACTION column, and all steps governed by the same condition are designated by the same letter within a test. Where a condition does not apply, all steps designated by that letter should be omitted.

TABLE A

ACTION AND/OR VERIFICATION REQUIRED AT:	TESTS	
	BS	BT
Master Test Frame	✓	✓
Plant Register Circuit	✓	✓
Pretranslator Frame	✓	

✓ As required

1.07 Local instructions should be followed for recording and reporting any register operations caused by performing these tests.

1.08 The manner of selecting some circuits and test conditions at the MTF and its associated circuits varies depending on the apparatus options furnished with these circuits. Therefore, where variable means of selection are provided, precise instructions for the selection of circuits and test conditions are not given. Precise instructions for the use of these variable means are given in Section 218-106-301.

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

2. APPARATUS

2.01 The apparatus required for each test is listed in Table B. The details of each item are covered in the paragraph indicated by the number in parentheses. In addition, the following apparatus may also be required.

(a) Apparatus covered in 2.03 and 2.04 is required when a portable lamp is used to determine register operation.

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- (b) Two head telephone sets are required when a portable lamp is not used.
- (c) A 32A test set is required when the master test frame is controlled from a remote point.

2.02 Master test control circuit SD-25800-01.

2.03 Two testing cords, W2W cords, 10 feet long, each equipped with a 310 plug, two 360-type tools (2W17C cords), two KS-6278 connecting clips, and two 108 cord tips (required when a portable test lamp is used).

2.04 38B lamp socket, equipped with a 2Y lamp (required when a portable test lamp is used).

2.05 When making connections to relays using test cords listed in this section, use as covered in Section 069-131-811.

TABLE B

APPARATUS	TESTS	
	BS	BT
Test Circuit (2.02)	1	1
322A (make-busy) Plug	2	
Cord (2.03)	√	√

√ As required.

3. PREPARATION

STEP	ACTION	VERIFICATION
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All Tests

Note: Refer to 1.08 and 1.09.

- 1a If tests are to be performed without portable test lamp—
Establish talking circuit between frames where test is to be performed and where observations are to be made.
- 2b If tests are to be performed with portable test lamp—

STEP	ACTION	VERIFICATION
	<p>At frame where action is to be taken— Insert plug of 2W17C cord, equipped with two KS-6278 connecting clips, into SP jack of miscellaneous circuit.</p>	
3b	Determine from circuit drawing of circuit associated with register to be tested location of terminal on terminal strip at which plant register circuit is connected.	
4b	Connect one lead of 2W17C cord to terminal on terminal strip associated with plant register being tested.	
5b	Connect other lead of 2W17C cord to battery.	
6b	Connect leads of 38B lamp socket to leads of another 2W17C cord, equipped with two KS-6278 connecting clips.	
7b	Insert plug of this 2W17C cord into any appearance of selected SP jack of miscellaneous circuit close to position where test is to be performed.	
8b	Place portable test lamp so that it can be easily observed.	
9b	<p>If tests are to be performed with portable test lamp— To observe scoring of register when using portable test lamp, proceed as follows: (a) For first observation of scoring of register, observe that portable test lamp indicates proper condition on lead and that register scores as required. (b) For subsequent observations of scoring of same register, observe portable test lamp indications only.</p>	
	<p>Note: When the register to be tested scores at timed intervals, the portable test lamp will flash with the scoring of the register.</p>	
10	At MTF— Restore all keys and switches.	
11	Momentarily operate RL key.	All lamps extinguished.
12c	If testing 4-wire switching systems— Operate 4W key.	

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STEP	ACTION	VERIFICATION
13c	Select control digits.	
Test BT		
14	Operate KY, REP, TLK keys.	
4. METHOD		
BS. IDDD Pretranslator (SD-27849-01) First and Second Trial Trouble Registers (IPTR, IPST Registers)		
14	Insert make-busy plug into PRT-MB jack associated with pretranslator.	
15	Insert make-busy plug into TRMB PRT_ jack associated with pretranslator.	
16	At MTF— Select PTT class of test.	
17	Select pretranslator under test.	
18	Select A_ through C_ digits as required for a working country code.	
19	Operate PRL key.	
20	Momentarily operate ST key.	At plant register circuit— IPTR plant register associated with pretranslator under test scored once.
21	At MTF— Momentarily operate RL key.	All lamps extinguished.
22	Operate TR2 key to simulate second trial call condition.	
23	Momentarily operate ST key.	At plant register circuit— IPST plant register scored once.
24	At MTF— Momentarily operate RL key.	All lamps extinguished.
25	At pretranslator circuit— Remove test connection from TR2 relay.	
26	At MTF— Remove all make-busy plugs.	
27	Repeat Steps 14 through 26 for each pretranslator to be tested for plant register operation.	

STEP	ACTION	VERIFICATION
28	Restore all keys and switches and remove all test cords not required in next test.	
BT. Automatic Recycle Features of Trunk Test Circuit (SD-25918-01) ATRO, ATBY, ATAN, ATRF, ATTC Registers		
ATRO, ATTC Registers		
15	At MTF— Operate PRO key in accordance with Table C.	
16	Select MISC class of test.	
17	Select A, B, and C digits required to direct call to desired route.	
18	Select OR class of call and translator indication, as required, for access to selected route.	
19	Select marker.	
20	Select route advance.	
21	Select a class of service and rate treatment, if required, for access to route selected.	
22	Select D through G digits as required to direct call to desired termination.	
23	Operate GPA/GPB key as required, when selected route is associated with an allotted trunk group.	
24	Momentarily operate ST key.	At plant register circuit— ATRO, ATTC plant registers scored once.
25	At MTF— Momentarily operate RL key.	
26	At MTF— Restore all keys and switches not required for next test.	
ATBY, ATTC Registers		
27	At MTF— Operate PBY key in accordance with Table C	
28	Repeat Steps 16 through 23 as required.	
29	At MTF— Momentarily operate ST key.	At plant register circuit— ATBY, ATTC plant registers scored once.

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STEP	ACTION	VERIFICATION
30	Repeat Steps 25 and 26.	
ATAN, ATTC Registers		
31	At MTF— Operate PANN key in accordance with Table C.	
32	Repeat Steps 16 through 23 as required.	
33	At MTF— Momentarily operate ST key.	At plant register circuit— ATAN, ATTC plant registers scored once.
34	Repeat Steps 25 and 26.	
ATRF, ATTC Registers		
35	At MTF— Operate PTRD key in Table C, according to type of test completion desired.	
36	Repeat Steps 16 through 23 as required.	
37	At MTF— Momentarily operate ST key.	At plant register circuit— ATRF, ATTC plant registers scored once.
38	Repeat Steps 25 and 26.	

TABLE C

KEY	TYPE OF TEST	REGISTER OPERATED
PBY	Complete on busy	ATBY
PRO	Complete on reorder	ATRO
PANN	Complete on announcement	ATAN
PTRD	Complete on third ring	ATRF