TRAFFIC REGISTERS—PART 9
TESTS USING MASTER TEST FRAME
NO. 5 CROSSBAR OFFICES

1. GENERAL

1.01 This section is Part 9 of a series of sections that describe methods for testing traffic registers.

1.02 This section is reissued for the following reasons:

(a) to add tests for peg count of terminating attempts to busy lines, and terminal hunting lines

(b) to change title

(c) to make minor changes as required.

This issue affects Equipment Test Lists.

Since this reissue covers a general revision, arrows ordinarily used to indicate changes have been omitted.

1.03 The tests covered are:

1.04 Table A indicates tests that require action and verification at more than one location.

1.05 *Lettered Steps:* A letter a, b, c, etc, added to a step number in Part 3 or 4 of

TABLE A

ACTION AND/OR VERIFICATION REQUIRED AT:	TESTS						
	A	B	C	D	E	F	G
Traffic Register Cabinet	√	√	√	√	√	√	√
Master Test Frame (MTF)	√	√	√	√	√	√	√
Marker Circuit	—	√	—	√	√	√	√
Traffic Register Circuit	√	√	—	—	—	—	—

√ As required.

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

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

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

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

2. APPARATUS

2.01 The apparatus required for each test is shown 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 2.04 and 2.05 is required when a portable lamp is used to determine register operation.

(b) Two head telephone sets (headsets) 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.

(d) Two 26 cords are required in offices where it is necessary to patch the traffic register to the circuit under test and to patch the traffic register to a battery supply.

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

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

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

2.05 38B lamp socket equipped with a 2Y lamp (required when a portable test lamp is used).

2.06 351C make-busy plug.

2.07 349A make-busy plug.

TABLE B

APPARATUS	TESTS						
	A	B	C	D	E	F	G
Test Circuit (2.02)	√	√	√	√	√	√	√
322A (make-busy) Plug	√	√	√	√	√	√	√
Tool (2.03)	—	√	√	√	√	√	√
Plug (2.06)	—	—	—	—	—	√	√
Plug (2.07)	—	—	—	—	—	√	√

√ As required.

3. PREPARATION

STEP	ACTION	VERIFICATION
All Tests		
1a	If traffic registers are arranged for patching— At traffic register cabinet— Insert cord tip of 26 cord into P_ jack for circuit associated with register to be tested.	
2a	Insert cord tip on other end of 26 cord into black jack associated with register to be tested (black jack is located on mounting plate with register).	
3a	Insert cord tip of 26 cord into red jack on mounting plate with register to be tested.	
4a	Insert cord tip on other end of 26 cord into any S_ jack located at bottom of jack field.	
5b	If traffic registers are arranged for patching and if battery supply for register to be tested is controlled by C- toggle switch— If C- toggle switch is in OFF position— Operate to ON position.	
6c	If traffic registers are not arranged for patching— Determine from local office records, functional designation of peg count BAT key associated with register to be tested.	
7c	Operate BAT key associated with register to be tested.	
8d	If tests are to be performed without portable lamp— Establish talking circuit between frames where test is to be performed and where observations are to be made.	
9e	If tests are to be performed with portable lamp— At frame where action is to be taken— Insert plug of 2W17C cord, equipped with two KS-6278 tools, into SP jack of miscellaneous circuit.	
10e	Determine from circuit drawing of circuit associated with register to be tested, location of terminal on terminal strip at which common lead to traffic register circuit is connected.	

STEP	ACTION	VERIFICATION
11e	Connect one lead of 2W17C cord to terminal on terminal strip determined in Step 10e.	
12e	Connect other lead of 2W17C cord to battery.	
13e	Connect leads of 38B lamp socket to leads of another 2W17C cord equipped with two KS-6278 tools.	
14e	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.	
15e	Place lamp so that it can be easily observed.	
16f	If tests are performed with portable lamp, and circuit associated with register to be tested removes ground from common lead to traffic register circuit to operate register— Observe lamp when register operates.	Lamp extinguished.
17g	If tests are performed with portable lamp, and circuit associated with register to be tested applies ground to common lead to traffic register circuit to operate register— Observe lamp when register operates.	Lamp lighted.
18e	If tests are to be performed with portable lamp— To observe scoring of register when using test lamp, proceed as follows: (a) For first observation of scoring of register, observe that test lamp indicates proper condition on common lead and that register scores as required. (b) For subsequent observations of scoring of same register, observe lamp indications only. *Note:* When the register to be tested scores at timed intervals, the test lamp will not flash with the scoring of the register.	
19	At MTF— Restore all keys and switches.	
20	Momentarily operate RL key.	All lamps extinguished.
21h	If testing traffic registers in 4-wire offices— Operate 4W key.	

STEP	ACTION	VERIFICATION
A.	**Peg Count Register for Completing Marker Seizure (TPC Lead)**	
22	At jack, lamp, and key circuit— Insert make-busy plug into M_MB or M_C_MB jack of combined or completing marker associated with register being tested.	
23	At MTF— Select marker made busy.	
24	Select any class of service except manual and rate treatment as required.	
25	Select any line location.	
26	Select A through G digits for an originating code and any 4 digits.	
27	Select ORIG class of test.	
28	Select OR class of call with translator indication for access to selected route.	
29i	If multilevel preemption route is selected— Select control digits for access to selected route.	
30	Momentarily operate ST key.	At traffic register cabinet— Register scored once.
31	At MTF— Momentarily operate RL key.	All lamps extinguished.
32	At jack, lamp, and key circuit— Remove make-busy plug from M_MB or M_C_MB jack.	
33	At traffic register cabinet— Restore all keys and switches; remove all cords.	
34	At MTF— Restore all keys and switches.	
B.	**Peg Count Register for Total Incoming Calls (TIP and TIPR Lead)**	
	Note: When an office is provided wth registers associated with both nonpaired and paired line link frames, perform this test for both registers.	

STEP	ACTION	VERIFICATION
22	At jack, lamp, and key circuit— Insert make-busy plug into M_MB or M_C_MB jack of combined or completing marker associated with register being tested.	
23	At MTF— Select marker made busy.	
24i	If MT18 relay is provided— At marker frame— Block nonoperated MT18 relay.	
25	At MTF— Select INC class of test.	
26	Select office code and numericals as required for a line on nonpaired line link frame.	
27	Select incoming class of call with translator indication as required for completion to called line.	
28	Select incoming trunk class as required for completion to called line.	
29j	If testing registers in an office with paired line link frame— Select office code and numericals as required for a line on a paired line link frame.	
30	Select trunk link frame.	
31k	If multilevel preemption route is selected— Select control digits for access to selected route.	
32	Momentarily operate ST key.	At traffic register cabinet— Register scored once.
33	At MTF— Momentarily operate RL key.	All lamps extinguished.
34i	If MT18 relay is provided— At marker frame— Remove blocking tool from MT18 relay.	
35	At marker frame— Block nonoperated MT13 relay.	
36	At MTF— Select office code and numericals as required	

STEP	ACTION	VERIFICATION
	for a permanent busy number on a nonpaired line link frame.	
37j	If testing registers in an office with paired line link frames— Select office code and numericals as required for a permanent busy number on a paired line link frame.	
38	Momentarily operate ST key.	At traffic register cabinet— Register scored once.
39	At MTF— Momentarily operate RL key.	All lamps extinguished.
40	Select office code and numericals as required for a permanent overflow number on a nonpaired line link frame.	
41j	If testing registers in an office with paired line link frames— Select office code and numericals as required for a permanent overflow number on a paired line link frame.	
42	Momentarily operate ST key.	At traffic register cabinet— Register scored once.
43	At MTF— Momentarily operate RL key.	All lamps extinguished.
44	At marker frame— Remove blocking tool from MT13 relay.	
45	At jack, lamp, and key circuit— Remove make-busy plug from M_MB or M_C_MB jack.	
46	At traffic register cabinet— Restore all keys and switches; remove all cords.	
47	At MTF— Restore all keys and switches.	
C.	**Peg Count Register for Terminating Completions (TER Lead)**	
22	At jack, lamp, and key circuit— Insert make-busy plug into M_C_MB jack of completing marker associated with register being tested.	

STEP	ACTION	VERIFICATION
23	At MTF— Select marker made busy.	
24	Select ORIG class of call.	
25i	If MT18 is provided— At marker frame— Block nonoperated MT18 relay.	
26	At MTF— Select A through G digits as required to direct call through intraoffice route and any line.	
27	Select any class of service except manual, and rate treatment as required.	
28	Select any line location.	
29	Select OR class of call with LT translator indication.	
30	Momentarily operate ST key.	At traffic register cabinet— Register scored once.
31	At MTF— Momentarily operate RL key.	All lamps extinguished.
32	Restore all keys and switches except marker selection.	
33	Select INC class of call.	
34	Select office code and numericals as required.	
35	Select incoming class of call with translator indication as required for access to office code.	
36	Select incoming trunk class as required for access to office code.	
37	Select trunk link frame.	
38j	If multilevel preemption route is selected— Select control digits for access to selected route.	
39	Momentarily operate ST key.	At traffic register cabinet— Register scored once.
40	At MTF— Momentarily operate RL key.	All lamps extinguished.

STEP	ACTION	VERIFICATION
41i	If MT18 relay is provided— At marker frame— Remove blocking tool from MT18 relay.	
42	At jack, lamp, and key circuit— Remove make-busy plug from M_C_MB jack.	
43	At traffic register cabinet— Restore all keys and switches; remove all cords.	
44	At MTF— Restore all keys and switches.	

D. Peg Count of Terminating Attempts to Busy Lines (IB Lead)

22	At jack, lamp, and key circuit— Insert make-busy plug into M_MB or M_C_MB jack of combined or completing marker associated with register being tested.	
23i	If MT13 relay is provided— At marker frame— Block nonoperated MT13 relay.	
24j	If MT18 relay is provided— At marker frame— Block nonoperated MT18 relay.	
25	At MTF— Select marker made busy.	
26	Select INC class of test.	
27	Select office code and numericals as required for a permanent busy test line on a nonpaired line link frame.	
28	Select incoming class of call with translator indication as required for access to office code.	
29	Select incoming trunk class as required for access to office code.	
30	Select trunk link frame.	
31k	If multilevel preemption route is selected— Select control digits for access to selected route.	

STEP	ACTION	VERIFICATION
32	Momentarily operate ST key.	At traffic register cabinet— Register scored once.
33	At MTF— Momentarily operate RL key.	All lamps extinguished.
34j	If MT18 relay is provided— At marker frame— Remove blocking tool from MT18 relay.	
35i	If MT13 relay is provided— At marker frame— Remove blocking tool from MT13 relay.	
36	At jack, lamp, and key circuit— Remove make-busy plug from M_MB or M_C_MB jack.	
37	At traffic register cabinet— Restore all keys and switches; remove all cords.	
38	At MTF— Restore all keys and switches.	

E. Peg Count of Terminating Attempts to Busy Lines—Paired LLF (IBP Lead)

22	At jack, lamp, and key circuit— Insert make-busy plug into M_MB or M_C_MB jack of combined or completing marker associated with register being tested.	
23i	If MT13 relay is provided— At marker frame— Block nonoperated MT13 relay.	
24j	If MT18 relay is provided— At marker frame— Block nonoperated MT18 relay.	
25	At MTF— Select marker made busy.	
26	Select INC class of test.	
27	Select office code and numericals as required for a permanent busy test line on a paired line link frame.	
28	Select incoming class of call with translator indication as required for access to office code.	

STEP	ACTION	VERIFICATION
29	Select incoming trunk class as required for access to office code.	
30	Select trunk link frame.	
31k	If multilevel preemption route is selected— Select control digits for access to selected route.	
32	Momentarily operate ST key.	At traffic register cabinet— Register scored once.
33	At MTF— Momentarily operate RL key.	All lamps extinguished.
34j	If MT18 relay is provided— At marker frame— Remove blocking tool from MT18 relay.	
35i	If MT13 relay is provided— At marker frame— Remove blocking tool from MT13 relay.	
36	At jack, lamp, and key circuit— Remove make-busy plug from M_MB or M_C_MB jack.	
37	At traffic register cabinet— Restore all keys and switches; remove all cords.	
38	At MTF— Restore all keys and switches.	

F. Peg Count of Terminating Attempts to Terminal Hunting Lines (IH Lead)

22	At jack, lamp, and key circuit— Insert make-busy plug into M_MB or M_C_MB jack of combined or completing marker associated with register being tested.	
23i	If MT18 relay is provided— At marker frame— Block nonoperated MT18 relay.	
24	At MTF— Select marker made busy.	
25	Select INC class of test.	

STEP	ACTION	VERIFICATION
26	Select office code and numericals as required for a terminal hunting line on a nonpaired line link frame.	
27	Select incoming class of call with translator indication as required for access to office code.	
28	Select incoming trunk class as required for access to office code.	
29	Select trunk link frame.	
30j	If multilevel preemption route is selected— Select control digits for access to selected route.	
31	Momentarily operate ST key.	At traffic register cabinet— Register scored once.
32	At MTF— Momentarily operate RL key.	All lamps extinguished.
33i	If MT18 relay is provided— At marker frame— Remove blocking tool from MT18 relay.	
34	At marker frame— Block nonoperated MT13 relay.	
35	At MTF— Operate PBXH key.	
36	Operate S_ key to select line selected in Step 26.	
37	At LLF— Insert 351C plug into line vertical of line location associated with line selected in Step 26.	
38	Momentarily operate ST key.	At traffic register cabinet— Register scored once.
39	At MTF— Momentarily operate RL key.	All lamps extinguished.
40	At LLF— Remove 351C plug from line vertical of line location associated with line selected in Step 26.	

STEP	ACTION	VERIFICATION
41	Insert 349A make-busy plug into JS0 jack on LLF associated with line selected in Step 26.	
42	At MTF— Select channel 0.	
43	Momentarily operate ST key.	At traffic register cabinet— Register scored once.
44	At MTF— Momentarily operate RL key.	All lamps extinguished.
45	At LLF— Remove plug from JS0 jack.	
46	At marker frame— Remove blocking tool from MT13 relay.	
47	At jack, lamp, and key circuit— Remove make-busy plug from M_MB or M_C_MB jack.	
48	At traffic register cabinet— Restore all keys and switches; remove all cords.	
49	At MTF— Restore all keys and switches.	

G. Peg Count of Terminating Attempts to Terminal Hunting Lines—Paired LLF (IHP Lead)

22	At jack, lamp, and key circuit— Insert make-busy plug into M_MB or M_C_MB jack of combined or completing marker associated with register being tested.	
23i	If MT18 relay is provided— At marker frame— Block nonoperated MT18 relay.	
24	At MTF— Select marker made busy.	
25	Select INC class of test.	
26	Select office code and numericals for a terminal hunting line on a paired line link frame.	
27	Select incoming class of call with translator indication as required for access to office code.	

STEP	ACTION	VERIFICATION
28	Select incoming trunk class as required for access to office code.	
29	Select trunk link frame.	
30j	If multilevel preemption route is selected— Select control digits for access to selected route.	
31	Momentarily operate ST key.	At traffic register cabinet— Register scored once.
32	At MTF— Momentarily operate RL key.	All lamps extinguished.
33i	If MT18 relay is provided— At marker frame— Remove blocking tool from MT18 relay.	
34	At marker frame— Block nonoperated MT13 relay.	
35	At MTF— Operate PBXH key.	
36	Operate S_ key to select line selected in Step 26.	
37	At LLF— Insert 351C plug into line vertical of line location associated with line selected in Step 26.	
38	Momentarily operate ST key.	At traffic register cabinet— Register scored once.
39	At MTF— Momentarily operate RL key.	
40	At LLF— Remove 351C plug from line vertical of line location associated with line selected in Step 26.	
41	Insert 349A make-busy plug into JS0 jack on LLF associated with line selected in Step 26.	
42	At MTF— Select channel 0.	
43	Momentarily operate ST key.	At traffic register cabinet— Register scored once.

STEP	ACTION	VERIFICATION
44	At MTF— Momentarily operate RL key.	All lamps extinguished.
45	At LLF— Remove plug from JS0 jack.	
46	At marker frame— Remove blocking tool from MT13 relay.	
47	At jack, lamp, and key circuit— Remove make-busy plug from M_MB or M_C_MB jack.	
48	At traffic register cabinet— Restore all keys and switches; remove all cords.	
49	At MTF— Restore all keys and switches.	