

COMBINED MARKER CIRCUITS—PART 1
TESTS USING MASTER TEST FRAME
NO. 5 CROSSBAR OFFICES

1. GENERAL

PAGE

1.01 This section is Part 1 of a series of sections for testing combined and completing markers. The tests in this section apply only to the dial tone functions of a combined marker SD-25550-01. If testing wire-spring or nonwire-spring relay type dial tone markers, refer to Section 218-120-501.

cross-detection feature of the marker.

5

D. Manual Originating Feature:

This test checks that the marker can serve calls originated by a customer having manual service.

6

1.02 This section is reissued for the following reasons:

1.04 Tests A, B, and C require actions and verifications at the master test frame (MTF) and marker frame.

- (a) To clarify the use of this section in 1.01.
- (b) To exclude under verification in all tests, reference to "class of test" lamps.
- (c) To make minor changes as required.

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

This issue does not affect Equipment Test Lists.

1.03 The tests covered are:

PAGE

A. Vertical Group, Horizontal Group, and Vertical File Identification—Preference and Lockout Features:

This test checks proper stepping of sequence control. It also checks line identification, preference, and lockout for each position of sequence circuit by simulating two customers originating a call at the same time.

2

B. Service Observing Feature:

This test checks that the marker recognizes a calling line that is on service observing.

4

C. Crossed Line Hold Magnet Check Feature—XLH Relay:

This test checks the line hold magnet

1.06 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.

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

1.08 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

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SECTION 218-122-501

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, INC, OR, SDR, IR, MISC, IAO, MLV, LT, IMS, PTT, TVT, ATNT, and IMT.♦

2. APPARATUS

All Tests

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

3. METHOD

STEP	ACTION	VERIFICATION
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Note: Refer to 1.06 and 1.07

A. Vertical Group, Horizontal Group, and Vertical File Identification—Preference and Lockout Features

- | | | |
|-----|---|-------------------------|
| 1 | At MTF—
Restore all keys and switches. | |
| 2 | Momentarily operate RL key. | All lamps extinguished. |
| 3 | Insert make-busy plug into MMB_ jack of marker under test. | |
| 4 | Select marker under test. | |
| 5 | Select DT class of test. | |
| 6 | Select line link frame 00. | |
| 7 | Determine from office records type (or types) of originating register groups served by line link frames; also determine vertical group pattern in case of mixed line link frames. | |
| 8 | Select originating register group. | |
| 9a | If P & LO key is provided—
Operate P & LO key. | |
| 10a | Select top vertical group in appropriate VG_ column for Test Call 1 using Table A. | |
| 11a | Select top horizontal group and vertical file for Test Call 1 using Table A. | |

Tests A, B, C

2.02 322A (make-busy) plugs as required.

Test A

2.03 32A test set.

Tests B, C

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

STEP	ACTION	VERIFICATION
12b	If P & LO key is not provided— Select two vertical groups in appropriate VG_ column for Test Call 1 using Table A.	
13b	Select two horizontal groups and vertical files for Test Call 1 using Table A.	
14c	If marker SQ0 relay is operated— Proceed to Step 19.	
15d	If marker SQ0 relay is not operated— At marker frame— Insert plug of 32A test set into RC jack.	
16d	Momentarily operate white (ST) button.	
17d	Momentarily operate red (RL) button.	
18d	Repeat Steps 16d and 17d until SQ0 relay is operated.	
19	At MTF— Operate TR2, REC keys.	
20	Momentarily operate ST key.	TC1, MRL lamps lighted. Trouble record taken. VG_, HG_, VF_ designations perforated as indicated by arrow in TROUBLE RECORDER CARD INDICATION column for Test Call 1 in Table A.
21	Momentarily operate RL key.	All lamps extinguished.
22	Repeat Steps 8 through 21 for Test Calls 2 through 11 applying reference to appropriately operated SQ_ relay.	
23	Restore TR2 key.	
24	Restore vertical group, horizontal group, vertical file selected.	
25a	If P & LO key is provided— Select VG2, HG9, VF4.	
26b	If P & LO key is not provided— Select VG0, VG2, HG9, VF4.	
27	Momentarily operate ST key.	TC1, MRL lamps lighted. Trouble record taken. VG2, HG9, VF4 designations perforated.

SECTION 218-122-501

STEP	ACTION	VERIFICATION
28	Momentarily operate RL key.	All lamps extinguished.
29	Restore all keys and switches.	
30	Remove make-busy plug from MMB_ jack.	
31	At marker frame— Remove plug of 32A test set from RC jack.	
B. Service Observing Feature		
1	At MTF— Restore all keys and switches.	
2	Momentarily operate RL key.	All lamps extinguished.
3	Insert make-busy plug into MMB_ jack of marker under test.	
4	Select marker under test.	
5	Select DT class of test.	
6	Determine from office records type (or types) of originating register groups served by line link frames; also determine vertical group pattern in case of mixed line link frames.	
7	Select originating register group.	
8	Select line location for any line with originating service, having access to register group selected.	
9	Operate OBS, REC keys.	
10	Momentarily operate ST key.	◆CK,◆ TC1, MRL lamps lighted. Trouble record taken. OBS1, OBS2 designations perforated.
11	Momentarily operate RL key.	All lamps extinguished.
12	At marker frame— Block nonoperated OBS2 relay.	
13	At MTF— Restore REC key.	
14	Momentarily operate ST key.	◆CK,◆ TC1, MRL lamps lighted. Trouble record taken. OBS1 designation perforated. OBS2 designation not perforated.

STEP	ACTION	VERIFICATION
15	Momentarily operate RL key.	All lamps extinguished.
16	Restore all keys and switches.	
17	At marker frame— Remove blocking tool from OBS2 relay.	
18	At MTF— Remove make-busy plug from MMB_ jack.	

C. Crossed Line Hold Magnet Check Feature—XLH Relay

1	At MTF— Restore all keys and switches.	
2	Momentarily operate RL key.	All lamps extinguished.
3	Insert make-busy plug into MMB_ jack of marker under test.	
4	Select marker under test.	
5	Select DT class of test.	
6	Determine from office records type (or types) of originating register groups served by line link frames; also determine vertical group pattern in case of mixed line link frames.	
7	Select originating register group.	
8	Select line location for any line with originating service having access to register group selected.	
9	Operate XLH key.	
10	Momentarily operate ST key.	TC1, MRL lamp lighted. Trouble record taken. XLH designation perforated.
11	Momentarily operate RL key.	All lamps extinguished.
12a	If HTR key is provided— Operate HTR key.	
13b	If HTR key is not provided— At marker frame— Block nonoperated HTT relay.	
14b	Block operated HTR relay.	

SECTION 218-122-501

STEP	ACTION	VERIFICATION
15	At MTF— Operate REC key.	
16	Momentarily operate ST key.	TC1, MRL lamps lighted. Trouble record taken. HTR designation perforated. XLH designation not perforated.
17	Momentarily operate RL key.	All lamps extinguished.
18	Restore all keys and switches.	
19b	If HTR key is not provided— At marker frame— Remove blocking tools from HTT, HTR relays.	
20	At MTF— Remove make-busy plug from MMB_ jack.	
D. Manual Originating Feature		
1	At MTF— Restore all keys and switches.	
2	Momentarily operate RL key.	All lamps extinguished.
3	Select marker under test.	
4	Select DT class of test.	
5	Determine from office records type (or types) of originating register groups served by line link frames; also determine vertical group pattern in case of mixed line link frames.	
6	Select originating register group.	
7	Select line location for any line with manual class of service.	
8	Operate REC key.	
9	Momentarily operate ST key.	TC1, MRL lamps lighted. Trouble record taken. MAN designation perforated.
10	Momentarily operate RL key.	All lamps extinguished.
11	Restore all keys and switches.	

TABLE A

TEST CALL	SQ-RELAY OPERATED	TROUBLE RECORDER CARD INDICATION	MAX VERTICAL GROUPS PROVIDED								HORIZONTAL GROUP HG-	VERTICAL FILE VF-	
			6	7	8	9	10	11	12				
			VG-										
1	SQ0	→	0	0	0	0	0	0	0	0	0	0	
			5	5	5	5	5	5	5	5			5
2	SQ1	→	1	1	1	1	1	1	1	1	1	1	1
			5	5	5	5	5	5	5	5	5		
3	SQ2	→	3	3	3	3	3	3	3	3	3	2	2
			5	5	5	5	5	5	5	5	5		
4	SQ3	→	4	4	4	4	4	4	4	4	4	3	3
			5	5	5	5	5	5	5	5	5		
5	SQ4	→	5	6	6	6	6	6	6	6	6	4	4
			2	5	5	5	5	5	5	5	5		
6	SQ5	→	5	5	5	5	5	5	5	5	5	5	0
			2	2	2	2	2	2	10	11	4		
7	SQ6	→	2	2	2	2	2	2	10	10	6	1	
			5	5	5	5	5	5	5	5			5
8	SQ7	→	1	1	7	7	7	7	7	7	7	7	2
			5	5	5	5	5	5	5	5	5		
9	SQ8	→	3	3	3	8	8	8	8	8	8	8	3
			5	5	5	5	5	5	5	5	5		
10	SQ9	→	4	4	4	4	9	9	9	9	9	9	4
			5	5	5	5	5	5	5	5	5		
11	SQ0	→									9	4	