

PLANT REGISTERS

OPERATION TESTS

STEP-BY-STEP NO. 1 OFFICES ARRANGED FOR AMA

1. GENERAL

1.01 The tests covered are:

A. Master Timing Trouble Release

Registers: This test checks the operation of the MTTRE and MTTR registers which score when a trouble is encountered in the circuit.

2

B. Transverter First and Second Trial Failure Registers: This test checks the operation of the TTR and TST registers which score when a trouble occurs during a call.

3

C. Recorder Trouble Release Register:

This test checks the operation of the RTR register which scores when the recorder times out due to a trouble condition.

4

D. Trouble Record Register: This test checks the operation of the TRE register which scores when a trouble record is entered.

5

E. Sender Registers: This test checks the operation of the SSR (SSRC when provided) register which scores when a sender does not release in a normal period of time. It also checks the operation of the PDR register which scores when an insufficient number of digits are received.

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F. Identifier Registers: This test checks the operation of the ITR, IST, TH-, H-, T-, and U- registers which score when a trouble occurs during a call.

6

1.02 Operating certain relays in these tests may cause various alarms to register. Care should be taken to insulate the proper terminals, as directed, to prevent these alarms.

1.03 Before starting Test C, which will cause the perforator to register a make-busy entry on the tape, use a red china marking pencil and draw a line across the unperforated tape at the point where it enters the chute. On completion of testing, proceed as follows at the perforator:

(1) Raise slack arm and hook it over catch provided.

(2) Pull back some slack in tape and disengage tape from tape guides.

(3) Using a red china marking pencil, place two large crosses on smooth side of tape over lower of two diamond patterns. The lower diamond pattern is the one farthest from the perforator drum.

(4) Locate red mark placed on tape at start of testing. Mark two large crosses on smooth side of tape so that center of crosses is 4-1/2 inches from red mark in a direction away from perforator drum.

(5) Replace tape in tape guides and remove slack tape arm from catch.

(6) Record on accounting center notification form the recorder group, recorder number, date, time, and a note that the tape was marked with red crosses to indicate that all entries between these crosses should be skipped.

1.04 The traffic department should be notified before starting and after completing these tests, so that any signals caused by performing these tests can be disregarded.

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1.05 Where multiple finders are used, it will be necessary to insert 258C plugs into the make-busy jacks of both the A and B multiple finders in order to busy out a sender.

1.06 Local instructions should be followed with reference to recording and reporting any register operations caused by performing these tests.

1.07 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.

2. APPARATUS

All Tests

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

3. METHOD

STEP	ACTION	VERIFICATION
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A. Master Timing Trouble Release Registers

Caution: Do not perform this test during the 5 minutes before or after any hour.

Master Timing Trouble Release Register — Even

1	At master timing frame— Operate CMBE key.	CMBE lamp lighted.
2	In even master timing circuit— Insulate 3T of T1B relay, 6T of TMR relay.	
3	Manually operate TMR relay momentarily.	MTTRE register scored once.
4	Remove insulating tools from T1B, TMR relays.	
5	Restore CMBE key.	CMBE lamp extinguished.

Tests B and C

2.02 322A (make-busy) plug.

Test C

2.03 Testing cord, 893 cord, 6 feet long, equipped with two 360A tools (1W13B cord), one KS-6278 connecting clip, and one 419A tool (for use in connecting to relay springs and connecting springs together).

2.04 Test receiver, 716C receiver attached to a W2AB cord, equipped with two 360A tools (2W21A cord), one KS-6278 connecting clip, and one 411A tool (for use in checking for absence of ground).

2.05 Testing cord, 893 cord, 6 feet long, equipped with two 360A tools (1W13B cord), one KS-6278 connecting clip, one 639A relay contact connector, and one 651D relay contact connector holder (for use in connecting ground to fixed contact of wire-spring relay).

Tests E and F

2.06 258C (make-busy) plugs, as required.

STEP	ACTION	VERIFICATION
Master Timing Trouble Release Register — Odd		
6	At master timing frame— Operate CMBO key.	CMBO lamp lighted.
7	In odd master timing circuit— Insulate 3T of T1B relay, 6T of TMR relay.	
8	Block operated TMR relay.	MTTRO register scored.
9	In recorder test control circuit— Insulate 7T, 11T of ON relay.	
10	Block operated ON relay.	
11	Block operated RW2 relay.	
12	Remove blocking tool from TMR relay.	MTTRO register scored again.
13	Remove blocking tools from RW2, ON relays.	
14	Remove insulating tools from ON, TMR, T1B relays.	
15	Restore CMBO key.	CMBO lamp extinguished.

B. Transverter First and Second Trial Failure Registers

1	At jack, key, and lamp circuit— Insert make-busy plug into TVMB- jack associated with transverter to be tested.	
2	At transverter circuit— Insulate 10M of TBL relay.	
3	Block operated SC, TBL relays.	
4	Momentarily operate 1TR relay.	TTR register scored once.
5	Momentarily operate 2TR relay.	TST register scored once.
6	Remove blocking tools from SC, TBL relays.	
7	Remove insulating tool from TBL relay.	
8	At jack, key, and lamp circuit— Remove make-busy plug from TVMB- jack.	
9	Repeat Steps 1 through 8 for remaining transverters.	

STEP	ACTION	VERIFICATION
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C. Recorder Trouble Release Register

Caution: Do not make this test if a make-busy plug is in any RTN- jack or, where a trunk transfer circuit is provided, there is a make-busy plug in either RMB-jack.

Note: Before starting this test, and on completion of testing, mark the associated perforator tape as indicated in 1.03.

Regular Recorder

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| 1 | At trouble recorder test frame—
Insert make-busy plug into RTN jack associated with recorder under test. (Refer to 1.02.) | |
| 2 | At recorder circuit—
Insulate 3T of TT1B relay, 12B of TB relay. | |
| 3 | Connect ground to 9T of NS relay. | |
| 4 | Operate ON relay. | In approximately 2.5 seconds—
TE relay operated. |
| 5 | Release ON relay. | RTR register scored. |
| 6 | Remove ground connection from NS relay. | |
| 7 | Operate ON relay. | In approximately 2.5 seconds—
TE relay operated.
RTR register did not score. |
| 8 | Release ON relay. | |
| 9 | Remove insulating tools from TT1B, TB relays. | |
| 10 | Remove make-busy plug from RTN jack.
(Refer to 1.02.) | |

Emergency Recorder

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| 11 | At recorder circuit—
Insulate 3T of TT1B relay, 12B of TB relay. | |
| 12 | Short 1T, 2T springs of RNT relay. | |
| 13 | Operate ON relay. | In approximately 2.5 seconds—
TE relay operated.
RTR register scored. |

STEP	ACTION	VERIFICATION
14	Release ON relay.	
15	Remove short from RNT relay.	
16	Check for absence of ground on 1T of RNT relay.	
17	Momentarily operate NS relay.	Ground absent on 9T of relay while operated.
18	Remove insulating tools from TT1B, TB relays.	
D. Trouble Record Register		
1	At trouble recorder control and test circuit— Block nonoperated TST2 relay.	
2	Momentarily operate TRC relay.	TRE register scored once.
3	Remove blocking tool from TST2 relay.	
E. Sender Registers		
1	At trunk finder-sender connector frame— Insert make-busy plug into make-busy jack of trunk finder circuit associated with the sender under test (1.05).	
2	At miscellaneous circuit— Insert make-busy plug into RLS jack associated with sender under test.	
3	At sender circuit under test— Momentarily operate TM2 relay.	PDR register scored once.
4	Insulate 3T, 4T of ED relay.	
5	Block operated ED relay.	
6	Momentarily operate TML relay.	SSR register scored once.
7a	If office is arranged for separate registration of coin zone stuck senders— Block operated CZ1 relay.	
8a	Momentarily operate TM2 relay.	SSRC register scored once.
9a	Remove blocking tool from CZ1 relay.	

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STEP	ACTION	VERIFICATION
10	Remove blocking tool from ED relay.	
11	Remove insulating tool from ED relay.	
12	At miscellaneous circuit— Remove make-busy plug from RLS jack.	
13	At trunk finder-sender connector frame— Remove make-busy plug.	

F. Identifier Registers

1	At jack, key, and lamp circuit— Insert make-busy plug into TRMB ID- jack associated with identifier to be tested.	
2	At identifier circuit— Block nonoperated TRA relay.	
3	Momentarily operate TR relay.	ITR register scored once.
4a	If second trial feature is provided— At identifier circuit— Block operated 2TR relay.	
5a	Momentarily operate TR relay.	IST register scored once.
6a	Remove blocking tool from 2TR relay.	
7	At identifier circuit— Insulate 1B, 2B, 3B, 4B, 5B, 6B, 3T, 4T, 5T, 6T, 7T, 8T, 9T, 10T of STG relay and 8T, 9T of NC relay.	
8	Block operated STG, NC relays.	
9	Momentarily operate A1 relay.	TH register scored once.
10	Remove blocking tool from NC relay.	
11	Remove insulating tool from NC relay.	
12b	When lines are served which operate a CLR, 2-party message rate or official class register— Insulate 6T, 7T of CT relay.	
13b	Block operated CT relay.	
14b	Momentarily operate A1 relay.	TH register scored once.
15b	Remove blocking tool from CT relay.	

STEP	ACTION	VERIFICATION
16b	Remove insulating tool from CT relay.	
17	Remove blocking tool from STG relay.	
18	Remove insulating tools from STG relay.	
19	Momentarily operate A2 relay.	H register scored once.
20	Momentarily operate A3 relay.	T register scored once.
21	Momentarily operate A4 relay.	U register scored once.
22	Remove blocking tool from TRA relay.	
23	At jack, key, and lamp circuit— Remove make-busy plug from TRMB ID- jack.	