

2- AND 4-PARTY REVERTING CALL SELECTORS
OPERATION TESTS
USING DIAL HAND TEST SET AND TEST CIRCUIT SD-30998-01
STEP-BY-STEP SYSTEMS

1. GENERAL

1.01 This section describes a method of testing the operating features of 2- and 4-party reverting call selectors arranged for semiselective and full selective service, using test circuit SD-30998-01 in the step-by-step offices arranged for extended range subscriber lines. It also indicates the key operation required in order to apply the adjust values of resistance to the trip relays in offices equipped with test circuits arranged for making ac adjustments.

1.02 This section is reissued to incorporate material from the addendum in its proper location. In this process marginal arrows have been omitted.

1.03 The tests covered are:

A. **2- and 4-Party Reverting Call Selectors — Semiselective-Type Offices:** This test checks that the proper number of rings are given for the code dialed and that the trip relay is correctly adjusted.

B. **2- and 4-Party Reverting Call Selectors — Full Selective-Type Offices:** This test checks that the proper number of rings are given for the code dialed and that the trip relay is correctly adjusted.

C. **2-Party Message Rate Station Restrictive Feature Test — Semiselective- and Full Selective-Type Offices:** This test checks that selectors arranged for restricted calls will not cut through and produce ringing.

1.04 Tests A and B are made from the test jack of the selector under test. Test C is made from the test jack of a service code selector immediately preceding the reverting call selectors.

1.05 When performing Test A or B, operate the reverting call interrupter transfer key and make sufficient tests to assure that both the regular and the emergency interrupter circuits are in satisfactory operating condition.

1.06 In Tests A and B, the pretrip test is always made when ringing on the ring side of the line. This is necessary to avoid pretripping due to a 1500-ohm tip ground in the test circuit.

1.07 If office ringing codes differ from those shown in the tables in Tests A and B, select test codes consistent with those shown in the various method steps.

1.08 All jacks, keys, and lamps are located on test circuit, unless otherwise specified.

1.09 Local instructions should be followed with reference to recording any traffic register operations caused by performing these tests.

1.10 In Test C, reverting call service may be temporarily denied until one or more reverting call selectors are restored to normal.

1.11 *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.

1.12 The test equipment specified in this section is designed to apply proper marginal tests (simulated critical circuit conditions) when the circuit under test and the test equipment have an applied voltage of 48.5 to 50. In those offices where power plants are normally operated at more than 50 volts, the battery voltage should be reduced and maintained within the required limits while the tests are being made.

2. APPARATUS

All Tests

2.01 No. 1011G Dial Handset, equipped with a W2CL Cord, a No. 471A Jack and a No. 240A Plug (2W39A Cord) (or equivalent).

Tests A and B

2.02 Test Circuit SD-30998-01.

2.03 Patching Cord — P3H Cord, 10 feet long, equipped with a No. 310 Plug and a No. 240A Plug (3P2A Cord).

Test C

2.04 Test Receiver — No. 716E (or equivalent) Receiver attached to a W2AB Cord equipped with two No. 360A Tools (2W21A Cord), a KS-6278 Tool, and a No. 411A Tool.

3. PREPARATION

STEP	ACTION	VERIFICATION
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Tests A and B

- 1 Connect handset to DL jack, then operate dial hand test set switch to MON position
- 2 With all keys of the test circuit normal, insert the No. 310 plug of the patching cord into the TST jack

4. METHOD

A. 2- and 4-Party Reverting Call Selectors — Semiselective-Type Offices

The test codes used in making these tests and the corresponding ringing codes are listed in the following table:

Test Code	Number of Rings	
	Ring	Tip
*1	1	1
3	2	1
4	1	2
6	2	2
*7	1	—
*8	—	1
9	2	—
0	—	2

*These are the only codes used in 2-party offices

- 3 Insert the No. 240A plug of the patching cord into test jack of selector to be tested
- 4 Operate handset switch to TALK position
- 5 Dial a code which gives longest ring on ring side of line

SL lamp does not light

Note: If SL lamp lights, proceed to another selector or delay test until lamp is extinguished.

SL lamp lights

Note: Ordinarily this will be code 7. See table above showing typical codes and rings.

STEP	ACTION	VERIFICATION
6	Operate handset switch to MON position	Test circuit lamp lights (or bell rings) to indicate code dialed <i>Note:</i> Check that the first audible ring is a full code ring in order to test the pickup feature.
7	Operate and restore PT key during a ringing interval	Lamp indication (or ringing) continues
8	Operate and restore TP key during a silent interval	Selector releases SL lamp extinguished
9	Operate handset switch to TALK position	SL lamp lights
10	Dial code 1, 3, 4 or 6	Selector steps to terminal dialed
11	Operate handset switch to MON position	Test circuit lamp lights (or bell rings) to indicate code dialed <i>Note:</i> When using test code 3 or 4, the initial ring of the one-ring code may be shorter than normal, but a full code ring should be obtained on any 2-ring code.
12	Operate and restore TP key during a ringing interval	Selector releases SL lamp extinguished
13	Repeat Steps 9 through 12 using code 8, 9 or 0 in Step 10 <i>Note:</i> It is important that each switch be tested on one of the first four and one of the last four test codes shown in table above.	
14a	If adjust key is provided and trip relay is to be checked for adjust values — Operate ADJ key <i>Note:</i> Operation of adjust key provides the trip and pretrip adjust values of resistance to the trip relays in order to check the mechanical adjustment. Where a relay fails to meet test requirements as in Steps 4 through 12, an attempt should be made to meet the pretrip (adjust) test in the ringing interval and the trip (adjust) test in both ringing and silent intervals. However, if a switch meets the pretrip and either trip (adjust) test, it may be considered satisfactory.	
15a	Repeat Steps 4 through 12	
16a	Restore ADJ key to normal	
17	Operate handset switch to TALK position	SL lamp lights
18	Dial nonworking code ()	Selector steps to terminal dialed

STEP	ACTION	VERIFICATION
19	Operate handset switch to MON position	Selector releases SL lamp extinguished
20	Remove No. 240A plug from selector test jack	
21	Repeat Steps 3 through 20 for other reverting call switches to be tested using a different code in Steps 10 and 13 on successive switches until all codes have been tested	
	<i>Note:</i> If necessary, use switches already tested to complete test of all codes. Sufficient tests should be made using the emergency interrupter to assure its satisfactory operating condition.	
22	If no further tests are to be made → Remove all test connections	

B. 2- and 4-Party Reverting Call Selectors — Full Selective-Type Offices

Typical test codes and the corresponding ringing codes are listed in the following table:

TEST CODE	RING	TIP
1	IR—	IR—
2	IR—IR+	
3	IR+	IR—
4	IR—	IR+
5		IR—IR+
6	IR+	IR+
7	IR—	
8		IR—
9	IR+	
0		IR+

Note: Before proceeding with tests, compare the above table with office records to determine if any differences exist.

3	Operate SUP key	
4	Insert the No. 240A plug of patching cord into test jack of selector to be tested	SL lamp does not light <i>Note:</i> If SL lamp lights, proceed to another selector or delay test until lamp is extinguished.
5	Operate handset switch to TALK position	SL lamp lights
6	Dial code 7 (if equipped), otherwise dial code 2	Selector steps to terminal dialed
7	Operate handset switch to MON position	Test lamp lights (or bell rings) to indicate code dialed (See table)
8	Operate and restore PT key during a ringing interval	Lamp indication (or ringing) continues

STEP	ACTION	VERIFICATION
9	Operate and restore TP key during a ringing interval	Selector releases SL lamp extinguished
10	Operate handset switch to TALK position	SL lamp lights
11	Dial code 8 (if equipped), otherwise dial code 1	Selector steps to terminal dialed
12	Operate handset switch to MON position	Test lamp lights (or bell rings) to indicate code dialed (See table)
13a	If 67-volt trip battery is used — Operate T key	
14	Operate and restore TP key during silent interval	Selector releases SL lamp extinguished
15b	If adjust key is provided and trip relay is to be checked for adjust values — Operate ADJ key and proceed with Step 16c or 17a as required <i>Note:</i> Operation of adjust key provides the trip and pretrip adjust values of resistance to the trip relays in order to check the mechanical adjustment. Where a relay fails to meet test requirements as in Steps 5 through 14, an attempt should be made to meet the pretrip (adjust) test in the ringing interval and the trip (adjust) test in both ringing and silent intervals. However, if a switch meets the pretrip and either trip (adjust) test, it may be considered satisfactory.	
16c	If 48-volt trip battery is used — Repeat Steps 5 through 12 and 14	
17a	If 67-volt trip battery is used — Repeat Steps 5 through 14 substituting PT key for TP key in Step 14	
18b	If adjust key is provided — Restore ADJ key to normal	
19d	If the office is equipped with a nonworking code — Operate handset switch to TALK position	SL lamp lights
20d	Dial nonworking code ()	
21d	Operate handset switch to MON position	Selector releases SL lamp extinguished
22	Remove No. 240A plug from selector test jack	
23	Repeat Steps 4 through 22 for other reverting call switches to be tested using a different code in Step 11 on successive switches until all codes have been tested	

STEP	ACTION	VERIFICATION
	<i>Note:</i> If necessary, use switches already tested to complete test of all codes. Sufficient tests should be made using the emergency interrupter to assure its satisfactory operating condition.	
24	If no further tests are to be made — Remove all test connections	
C. 2-Party Message Rate Station Restrictive Feature Test — Semiselective- and Full Selective-Type Offices		
1	Connect the handset plug to a normal service code selector test jack immediately preceding the reverting call selectors	
2	Operate the handset switch to TALK position — Dial the level leading to the reverting call selectors	Selector steps to level dialed
3	Dial the last digit of a reverting call code	
4	Remove the handset plug from selector test jack	Selector does not release
5	Repeat tests outlined in Steps 1 to 4 until all reverting call selectors have been dialed	
6	Apply 48-volt battery through test receiver to C lead wiper cord terminal of each service code selector test jack	Each selector releases as battery is applied
7	Remove No. 240A plug from selector test jack	