

DIAL LONG LINE CIRCUITS
2-PARTY MESSAGE RATE
WIRE-SPRING-RELAY TYPE
TESTS USING MASTER TEST FRAME
NO. 5 CROSSBAR OFFICES

1. GENERAL

1.01 This section is reissued for the following reasons:

- (a) To revise Test A to verify that 600-ohm resistance is applied across the tip and ring leads when called customer answers during the ringing interval to prevent false ringing of other customer on the same line.
- (b) To add Test C to provide a standing false ground test for SD-96588-01.
- (c) To make minor changes as required to bring the section up to date.

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

1.02 The tests covered are:

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|---|------|
| A. <i>Terminating Call</i> : This test checks that the circuit closes the talking path and that ringing current on the tip or ring leads from the central office is repeated to the line. | 2 |
| B. <i>Originating Call</i> : This test checks that the circuit repeats the dial pulses received from the tip party and from the ring party. | 5 |
| C. <i>Standing False Ground — Common Systems 2-Party Dial Long Line Circuit SD-96588-01</i> : This test provides a standing false ground test on both tip and ring when in the idle condition. | 5 |

1.03 Local instructions should be followed with reference to notifying customer before performing these tests.

1.04 An assistant is required for Test A.

1.05 Test A requires action and verification at master test frame and relay rack frame. Test B requires action and verification at relay rack and switchboard. Test C requires action and verification at line link frame and relay rack frame.

2. APPARATUS

All Tests

2.01 One 500D-type telephone set (wired as ring party station) and one 500D-type telephone set (wired as tip party station).

2.02 Test cords, two 893 cords, 6 feet long, equipped with two 360A tools (1W13B cords) and two KS-6278 connecting clips (used to ground telephone sets).

2.03 Four 1/8BH resistors (1000 ohms) or equivalent (used to simulate loop resistance).

Test A

2.04 Test cords, two 893 cords, 6 feet long, equipped with two 360A tools, one KS-6278 connecting clip, and one 624B (terminal connector) tool (used to connect tip and ring leads of the telephone sets to terminal strip punchings).

2.05 Test cords, two 893 cords, 6 feet long, equipped with two 360A tools (1W13B cords), one 639A relay contact

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connector tool, and one KS-6278 connecting clip (used to connect tip and ring leads of the telephone sets to relay contacts).

2.06 One 651A tool (relay contact connector holder) (used for connecting to relay contacts).

2.07 Master Test Frame (MTF)

- (a) Master test control circuit (SD-25800-01)
- (b) Master test frame telephone, key, and lamp circuit (SD-25744-01)
- (c) Master test frame voltmeter test circuit (SD-25792-01)

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

Test B

2.09 Test cords, four 893 cords, 6 feet long, equipped with two 360A tools (1W13B cords), one 624B (terminal connector) tool, and one KS-6278 connecting clip (used to connect tip and ring leads to terminal strip punchings).

Tests A and C

2.10 KS-14510L3 meter (portable volt-ohm-milliammeter).

3. METHOD

STEP	ACTION	VERIFICATION
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A. Terminating Call

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|----|--|--|
| 1 | At MDF —
Remove heat coils from protector mounting for cable pair associated with circuit under test. | |
| 2a | If dial long line circuit SD-26129-01 is provided —
At relay rack frame —
Connect tip lead of ring party telephone set through 1000-ohm resistor to terminal 58. | |
| 3a | Connect tip lead of tip party telephone set through 1000-ohm resistor to fixed contact 10 of RT relay. | |
| 4a | Connect ring lead of ring party telephone set through 1000-ohm resistor to fixed contact 6 of RR relay. | |
| 5a | Connect ring lead of tip party telephone set through 1000-ohm resistor to terminal 48. | |
| 6b | If common systems 2-party dial long line SD-96588-01 is provided —
Connect tip lead of tip party telephone set through 1000-ohm resistor to terminal 6 of P jack. | |

STEP	ACTION	VERIFICATION
7b	Connect tip lead of ring party telephone set through 1000-ohm resistor to fixed contact 10 of RR relay.	
8b	Connect ring lead of tip party telephone set through 1000-ohm resistor to fixed contact 10 of RT relay.	
9b	Connect ring lead of ring party telephone set through 1000-ohm resistor to terminal 8 of P jack.	
10	Connect ground leads of tip party and ring party telephone sets to ground terminal on relay rack frame.	
11a	If dial long line circuit SD-26129-01 is provided — Connect red test lead to + jack and black test lead to — jack on KS-14510-L3 meter.	
12a	Connect black test lead of meter to frame ground.	
13a	Connect red test lead of meter to terminal 58.	
14a	Set meter range switch to 300 VOLTS AC scale.	
15	At MTF — Operate IC- (OA, OB, OAT, or OBT) key or IC- (OAT or OBT) and E keys for office designation.	
16	Operate MT0-1 keys to select special marker.	
17	Operate T, LT keys.	
18	Operate A-, B-, C-, D- keys for line number assigned to ring party.	
19	Momentarily operate ST key.	S, LT, MRL lamps lighted.
20	Operate ± key for 2 to 4 seconds.	At relay rack frame — If ring party test — Ringing heard at ring party telephone set. If tip party test — Ringing heard at tip party telephone set.

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STEP	ACTION	VERIFICATION
21c	If ring party test — At relay rack frame — Remove receiver from ring party telephone set during ringing interval.	At MTF — S lamp extinguished. At relay rack frame — Ringing not heard at tip party telephone set. If dial long line circuit SD-26129-01 is provided — RTP relay operated momentarily. When RTP relay operated — Meter momentarily responded to ringing voltage being applied through RTP 600-ohm resistor.
22d	If tip party test — At relay rack frame — Remove receiver from tip party telephone set during ringing interval.	At MTF — S lamp extinguished. At relay rack frame — Ringing not heard at ring party telephone set. If dial long line circuit SD-26129-01 is provided — RTP relay operated momentarily. When RTP relay operated — Meter momentarily responded to ringing voltage being applied through RTP 600-ohm resistor.
23	Talk over connection established from relay rack frame to master test frame.	Transmission satisfactory.
24	At relay rack frame — Replace receiver on switch hook.	
25	At MTF — Momentarily operate RL key.	All lamps extinguished.
26a	If dial long line circuit SD-26129-01 is provided — Remove meter test leads from terminal 58 and frame ground.	
27	At MTF — Operate T1 REV key.	
28	Repeat Steps 18 through 24 selecting a directory number assigned to a tip party associated with dial long line circuit under test.	
29	At MTF — Momentarily operate RL key.	All lamps extinguished.

STEP	ACTION	VERIFICATION
30	Restore all keys.	
31	At relay rack frame — Remove test connections.	
32	At MDF — Replace heat coils on protector mounting.	

B. Originating Call

1	At relay rack frame — Connect tip leads of ring party and tip party telephone sets, each through 1000-ohm resistor, to terminal 58 on unit.	
2	Connect ring leads of ring party and tip party telephone sets, each through 1000-ohm resistor to terminal 48 on unit.	
3	Connect ground leads of tip and ring party telephone sets to ground terminal on relay rack frame.	
4	Remove receiver from ring party switch hook.	Dial tone heard.
5	Dial "zero" operator.	Ringling tone heard. At switchboard — Operator answered.
6	When operator answers — Inform operator that this is a test call.	Verify class of service.
7	Replace receiver on switch hook.	
8	Repeat Steps 4 through 7 for tip party telephone set.	
9	Remove test connections from terminals 58, 48 of unit terminal.	

C. Standing False Ground — Common Systems 2-Party Dial Long Line Circuit SD-96588-01

1	At line link frame — Insulate off-normal contacts of line hold magnet of line under test.	
2	At relay rack frame — Block operated T relay of dial long line circuit under test.	
3	Connect ground to terminal 6 of P jack.	TT relay operated.

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STEP	ACTION	VERIFICATION
4	Measure resistance between terminal 2 of P jack and ground.	Approximately 2400-ohm resistance measured.
5	Remove ground from terminal 6 of P jack and connect to terminal 8 of P jack.	
6	Measure resistance between terminal 2 of P jack and ground.	Approximately 2400-ohm resistance measured.
7	Measure resistance between terminal 1 of P jack and ground.	0-ohm resistance measured.
8	Remove ground from terminal 8 of P jack.	Open circuit indicated between terminal 1 of P jack and ground.
9	Remove blocking tool from T relay.	
10	At line link frame — Remove insulator from off-normal contacts of line hold magnet of line under test.	