

**OPERATION TESTS
COIN ZONE DIALING
SAMPLING CIRCUIT
DS-25026-01**

1. GENERAL

1.01 This section describes a method of making tests of the coin zone dialing sampling circuit DS-25026-01.

1.02 It is reissued to:

- Update the format to conform to Pacific Bell Standards.
- Include the appropriate legend on Page 1 in accordance with System Instruction (SI) 178.

Note: Marginal arrows used to denote changes are omitted.

1.03 This circuit provides a marker feature enabling the equipment to make an Automatic Message Accounting (AMA) record of a percentage of dialed coin zone calls for the purpose of Division of Revenue studies.

Note: The percentage of calls recorded is predetermined by cross-connections within the sampling circuit.

1.04 The tests covered are:

- A — Counter Test: This test checks the counting sequence of the counters.
- B — AMA Verification: This test verifies that sampled dialed coin zone calls are AMA recorded.

2. APPARATUS

2.01 Test receiver 716C (used to check for presence or absence of battery or ground).

2.02 One-conductor cords with clips on both ends (for use in applying ground to terminal or making temporary cross-connections).

2.03 Make-busy plug.

3. PREPARATION

STEP	ACTION	VERIFICATION
All Tests		
1	Insert make-busy plug into MMB-jack of comp. marker being tested.	Marker made busy to service calls.
<p><i>Note:</i> On completion of tests, verify sampling circuit cross-connections are connected for sampling required.</p>		

NOTICE

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4. METHOD

A. Counter Test

STEP	ACTION	VERIFICATION
2	Temporarily strap terminal 1 and 16 of the top unit Terminal strip (TS)	
3	Block operated CZ or CZT relay of marker under test.	CZSW relay operates in the sampling circuit.
4	Remove temporary strap placed in step 2 and release CZ or CZT relay blocked operated in step 3.	CZSW relay releases.
5	Using a one conductor cord connected to ground, alternately apply and remove ground to terminal 16 of the top unit TS. <i>Stop</i> when ground is detected on terminal 12 of the top unit TS.	Using test receiver connected to test bat., check for presence of ground on terminal 12 top unit TS.
6	Apply ground to terminal 16 top unit TS.	Ground present on terminals 12 top unit and 16 bottom unit TS.
7	Remove ground from terminal 16 top unit TS.	Ground removed from terminals 12 top unit and 16 bot. unit TS.
8	Apply and remove ground on terminal 16 top unit TS ten times, testing terminals 12 top unit and 16 bot. unit for ground each application and removal.	No ground present first eight times. Terminal 12 top unit grounded on ninth removal. Terminals 12 top unit and 16 bot. unit grounded on tenth application. No ground present on tenth removal.

Note: Steps 5-8 tests the operation of the units counter UCTR.

9	Temporarily strap the terminals — 3 bot. unit and 12 top unit.	
10	Alternately apply and remove ground to terminal 16 bot. unit TS. <i>Stop</i> when ground is detected on terminal 13 top unit TS.	Ground present on terminal 13 top unit TS.
11	Apply ground to terminal 16 bot. unit TS.	Ground present on terminals 13 top unit and 15 bot. unit TS.
12	Remove ground from terminal 16 bot. unit TS.	Ground removed from terminals 13 top unit and 15 bot. unit TS.

STEP	ACTION	VERIFICATION
13	Apply and remove ground on terminal 16 bot. unit TS ten times. Test terminals 13 top unit and 15 bot. unit for ground with each application and removal.	No ground present first eight times. Terminal 13 top unit grounded on ninth removal. Terminals 13 top unit and 15 bot. unit grounded on tenth application. No ground present on tenth removal.

Note: Steps 7-13 tests the operation of the tens counter TCTR.

14	Temporarily strap terminals 12 and 13 top unit TS.	
15	Alternately apply and remove ground to terminal 15 bot. unit TS. <i>Stop</i> when ground is detected on terminal 14 top unit TS.	Ground present on terminal 14 top unit TS.
16	Apply ground to terminal 15 bot. unit TS.	Ground present on terminals 14 top unit and 14 bot. unit terminal strip.
17	Remove ground from terminal 15 bot. unit TS.	Ground removed from terminals 14 top unit and 14 bot. unit TS.
18	Apply and remove ground on terminal 15 bot. unit TS ten times. Test terminals 14 top unit and 14 bot. unit for ground with each application and removal.	No ground present first eight times. Terminal 14 top unit grounded on ninth removal. Terminals 14 top unit and 14 bot. unit grounded on tenth application. No ground present on tenth removal.

Note: Steps 15-18 tests the operation of the hundreds counter HCTR.

19	Remove temporary straps placed in steps 9 and 14. Remove cord connected to ground.	All temporary straps and test cords removed.
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Note: If option C per Issue 3 of DS-25026-01 (the Sigma Cycloswitch-THCTR) is equipped, proceed with step 20. If not equipped, advance to step 25.

20	Ground terminal 15 of the top unit terminal strip.	Test for ground on terminals 2-11 of top unit TS. None should be grounded.
21	Apply ground to terminal 13 of bot. unit terminal strip.	Ground present on one of the terminals 2-11 of top unit TS.
22	Remove ground from terminal 13 of the bot. unit TS.	Ground removed from terminal grounded in step 17 and no ground present on all other terminals 2-11.

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STEP	ACTION	VERIFICATION
<p><i>Note:</i> The Sigma Cycloswitch moves 18 degrees each time ground is applied to its primary winding (terminal 13) and moves another 18 degrees when ground is removed.</p>		
23	<p>Alternately apply and remove ground to terminal 13 of the bot. unit TS. Test for ground at succeeding terminal 2-11 when ground is applied to terminal 13 unit all terminals 2-11 are tested.</p>	<p>Ground present on succeeding terminal when ground applied to terminal 13. No ground present on terminals 2-11 top unit TS when ground removed from terminal 13 bot. unit TS.</p>
24	<p>Remove ground from terminal 15 of the top unit TS.</p>	

B. AMA Verification

STEP	ACTION	VERIFICATION
25	<p>Strap terminals 1 and 16 of the top unit terminal strip.</p>	<p>CZSW relay operates on each dialed coin zone test call.</p>
26	<p>At Master Test Frame — Restore all keys to normal; set switches to OFF.</p>	
27	<p>Operate RL key momentarily.</p>	<p>All lamps extinguished.</p>
28	<p>Operate A-through K-keys, as required, to direct call to selected outgoing route.</p>	
29	<p>Operate OGT, REC, KY, GPA/GPB, TLK CN keys.</p>	
30	<p>Operate MT- key or set MT switch to select marker under test.</p>	
31	<p>Operate CST-, CSU- and CRU-, CSGA, CSGB, CGB (if provided) keys, for coin class of service, as required.</p>	
32	<p>Operate ST key momentarily.</p>	<p>OGT, as lamps light, trouble record taken FS-, TS-, TG-, TB-, LC-, LV-, FAK/FBK designations perforated should give location of coin zone trunk.</p>

STEP	ACTION	VERIFICATION
33	Check cards for AMA designations.	CP-, MB-, RN-, DL-, CL-, AR-, BR-, CR-, DSG-, AMA designations perforated as required. AMA Record required. IE, T-, U-, RN- lamps light. Coin return required when operator answers. CR lamp lights momentarily. CND lamp lights. At switchboard Zone lamp lights for termination selected.
34	Inform operator that test call is in progress; request ring-back.	Ring-back received.
35	Operate RL key momentarily.	All lamps extinguished.
36	Remove strap from terminal 1 and 16 of the top unit terminal strip.	CZSW relay operates on sampled dialed coin zone call only.
37	Operate ST key momentarily.	Same verification as step 28 except non-AMA. No AMA designations perforated.
38	Operate RL key momentarily.	All lamps extinguished.
39	Restore all keys; set switches to OFF.	
40	Remove make-busy plug from M-MB-jack of marker tested.	Marker restored to service.

Note: Repeat tests on next marker equipped until all markers are tested.