

SAGE DATA TRANSMISSION SYSTEMS — PRIVATE SERVICE SYSTEMS
AIR-GROUND VOICE COMMUNICATION SYSTEM
DUAL FACILITY TRUNKS
OVER-ALL TESTS

1. GENERAL

1.01 This section describes methods of making over-all tests of dual-facility trunk circuits from the air-ground testboard at a direction center or tandem point, using test circuit SD-1G033-01. These tests check a dual facility from the drop side of the trunk equipment at the direction center, or tandem point to either the drop side of the trunk equipment at the radio site, or to the radio patch and test panel at the radio side transmitter building.

1.02 Two over-all tests are described. One test is made from the air-ground testboard at the direction center or tandem point to the air-ground testboard at the radio site. The other test is made from the air-ground testboard at the direction center or tandem point to the radio patch and test panel at the radio site transmitter building. The test procedure to follow depends upon whether the air-ground testboard at the site is attended. If it is desired to test the transfer signal simplex circuit and radio alarm circuit of SD-95805-01, Test B shall be used.

1.03 The tests covered are:

A. Over-all Test - Direction Center or Tandem Point to Radio Site Air-ground Testboard: This test checks the transmission of push-to-talk and codan signals over both toll circuits of a dual facility automatic throw-over when either of the two lines fail, and throw-over in response to a line transfer signal. The test is made from the air-ground testboard at the direction center or tandem point to the air-ground testboard at the radio site.

B. Over-all Test - Direction Center or Tandem Point to Radio Patch and Test Panel at Radio Site Transmitter Building: This test checks the same features as Test A above, and in addition, checks the signal leads between the telephone

building and transmitter building, and the transfer signal simplex and radio alarm circuits at the transmitter building. The test is made from the air-ground testboard at the direction center or tandem point to the radio patch and test panel at the radio site transmitter building. An assistant is required at the latter point.

1.04 It will be necessary to use the order wire to the radio site testboard or radio patch and test panel. In Test A, the direction center or tandem point testboard may talk to the radio site over the dual-facility channel being tested by operating the TEST TALK key, and having the site testboard insert the 4-wire cord in the TRK jacks of the circuit under test and operate the 4-wire TALK key. The direction center or tandem point must operate the PT key to talk and release the PT key to listen to the distant end.

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

2. APPARATUS

2.01 No. 258D dummy plug.

2.02 Test circuit, SD-1G033-01 (for air-ground testboard located at direction center or test point).

2.03 Test circuit, SD-1G034-01 (for air-ground testboard located at radio site).

2.04 No. P6E cord, 2 feet 6 inches long, equipped with No. 338A plugs (for radio patch and test panel located at radio site transmitter).

SECTION 314-555-501

3. PREPARATION

<u>STEP</u>	<u>ACTION</u>	<u>VERIFICATION</u>
<u>All Tests</u>		
1	Obtain release of channel to be tested	
2	At air-ground testboard - Insert OT1 or OT2 cord in TST jack of trunk to be tested	
3	Operate CLOSED third A key for test of trunks 1 through 11 or CLOSED third B key for test of trunks 12 through 22	

4. METHOD

<u>STEP</u>	<u>ACTION</u>	<u>VERIFICATION</u>
<u>A. Over-all Test - Direction Center or Tandem Point to Radio Site Air-ground Testboard</u>		
4	At radio site air-ground testboard - Insert OT1 or OT2 cord into PT C TRK jack of trunk being tested	
5	At direction center or tandem point testboard - Operate TTR key momentarily	Like-designated SW lamps lit at each end
6	Operate PT key	At radio site testboard - PT lamp lights
7	Release PT key	PT lamp extinguished
8	At radio site testboard - Operate COD key	At direction center or tandem point - COD, CD, CT lamps light
9	Release COD key	COD, CD, CT lamps extinguished
10	At direction center or tandem point and radio site - Note whether trunk switching SW relay is in A or B route position by observing SWA, SWB lamps for trunk under test	Like-designated SW lamps lit at each end
11	At direction center or tandem point testboard - Operate TTR key momentarily	Note trunk transfer at both ends, indicated by change in SW lamps, lit
12	Repeat Steps 6 through 9	
13	At direction center or tandem point testboard - Insert dummy plug into LINE TRANS jack corresponding to SW lamp lit	STA lamp lights if plug is inserted in A LINE TRANS jack STB lamp lights if plug is inserted in B LINE TRANS jack Change in SW lamp lit at each end STA, STB lamps at air-ground testboard indicate "no tone" failures on "regular," "alternate" toll lines, respectively
14	Remove dummy plug from LINE TRANS jack	STA or STB lamp extinguished No change in SWA or SWB lamps
15	Repeat Steps 11, 13, 14	
16	At direction center or tandem point - Operate TTR key momentarily	Change in SW lamps lit at each end
17	At both ends - Remove test cords from trunk jacks At direction center - Release CLOSED third key	

<u>STEP</u>	<u>ACTION</u>	<u>VERIFICATION</u>
<u>B. Over-all Test - Direction Center or Tandem Point to Radio Patch and Test Panel at Radio Site Transmitter Building</u>		
4	At radio patch and test panel at radio site transmitter building, using P6E cord equipped with No. 338A plugs - Patch from CHAN A, B jacks of channel under test to SIG TEST A, B jacks	
5	At direction center or tandem point testboard - Operate TTR key momentarily	
6	At radio patch and test panel at radio site transmitter building - Operate AR key momentarily to silence buzzer	
7a	If testing from direction center - Operate PT key	CR, CD, CT lamps light
8b	If testing from tandem point - Operate PT key	COD, CD, CT lamps light
9	Release PT key	CR or COD, CD, CT lamps extinguished
10	At direction center or tandem point - Note whether trunk switching relay is in A or B position by observing SWA, SWB lamps for trunk under test	
11	Operate TTR key momentarily	At direction center or tandem point - Note change in SW lamp lit At radio patch and test panel at radio site transmitter building - LTR lamp lights, buzzer sounds
12	At radio patch and test panel at radio site transmitter building - Operate AR key momentarily to silence buzzer, extinguish LTR lamp	
13	Repeat Steps 7 through 9	
14	At direction center or tandem point testboard - Insert dummy plug in LINE TRANS jack corresponding to SW lamp lit	STA lamp lights if plug inserted in A LINE TRANS jack STB lamp lights if plug inserted in B LINE TRANS jack Change in SW lamp lit
15	Remove dummy plug from LINE TRANS jack	STA or STB lamp extinguished No change in SWA or SWB lamps
16	Repeat Steps 11, 14, 15	
17	Operate TTR key momentarily	Note change in SW lamp lit At radio patch and test panel at radio site transmitter building - LTR lamp lights, buzzer sounds
18	At radio patch and test panel at radio site transmitter building - Operate AR key	
19	At direction center or tandem point - Remove test cord, release CLOSED third key At radio patch and test panel at radio site transmitter building - Remove patch cord from CHAN, SIG TST jacks	