

SENDER ATTACHMENT DELAY RECORDER

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1. GENERAL INFORMATION

- 1.1 This section describes a method of testing the sender attachment delay recorder circuit, SD-96531-01.
- 1.2 This circuit is arranged for use in both crossbar tandem and 4A toll offices.

2. RECORDS AND REQUIREMENTS

- 2.1 Records: SD-4-1313 and SD-4-1315 trouble records shall be used for recording these tests. See Handbook 50, Section 3 for details.
- 2.2 Requirements: The tests in this section cover the major functional features of the circuit as specified in the circuit description sheets.

3. TEST EQUIPMENT

3.1 Test Sets

<u>Amt</u>	<u>ITE</u>	<u>Description</u>
1	4442	Volt-Ohmmeter

4. FUSING

- 4.1 Using the volt-ohmmeter, check each fuse post for absence of battery and ground.
- 4.2 Using fuses of correct type as indicated by the circuit drawing and fuse panel designations, install fuses one at a time. Check that each fuse post is free from crosses with other unfused posts on the fuse panel and is associated with the correct equipment as shown on SD-96531-01-G1, CAD 1.

5. TRUNK CIRCUIT TEST

- 5.1 On the miscellaneous terminal strip for 4A toll, using ITE-4442 volt-ohmmeter, check for the following:

<u>Desig.</u>	<u>Term.</u>	<u>Condition</u>
KT	23	300 Ohm Ground
KR	34	300 Ohm Ground
KT1	35	300 Ohm Ground
KR1	36	300 Ohm Ground

- 5.2 On the miscellaneous terminal strip for crossbar tandem, using the volt-ohmmeter, check for the following:

<u>Desig.</u>	<u>Term.</u>	<u>Condition</u>
R	36	Ground
T	37	6500 Ohm Batt.

6. SCANNING CONTROL

- 6.01 Step DCO and DC1 selectors off normal manually and check that they restore to normal.
- 6.02 Operate 3S and ST keys. Check that 0 select magnet and 0 hold magnet of the first switch operate and close cross-points for the first trunk. The circuit will advance at 4 second intervals operating hold magnets 1 to 9 in turn, with select magnet 0 operated. Verify lamps SAD and ON light on unit. Lamp SAD lights at traffic supervisory rack and lamp RSAD lights at remote location.
- 6.03 The circuit will continue to advance moving to select magnets 1 to 9 in turn, and operating hold magnets 0 to 9 with each select magnet operated.

- 6.04 If the recorder is arranged to SCAN a maximum of 200 sender link frames, the circuit will advance from crosspoint 99 on the first switch to crosspoint 00 on the second switch and will continue to advance as outlined in Paragraphs 6.02 and 6.03.
- 6.05 At any point during the test in Paragraph 6.03, operate 3S or 7S and ST keys. Check that the circuit will repeat tests at 4 or 8 second intervals through the same crosspoints.
- 6.06 Repeat tests in Paragraph 6.02 with 7S key operated instead of 3S key.
- 6.07 Repeat tests in Paragraph 6.02 operating key SAD at traffic supervisory rack instead of key ST.
- 6.08 Repeat tests in Paragraph 6.02 operating key RST at the remote location instead of key ST.
- 6.09 Repeat tests in Paragraph 6.02 operating key STH instead of key ST.
- 6.10 Momentarily operate key RN, located on the sender attachment delay recorder relay equipment frame. This will restore the recorder to normal if the SAD and ST keys are both normal. If either, the SAD or ST keys are operated when the RN key is operated the recorder will recycle and resume sender bids on the first assigned crosspoint.

7. ALARMS

7.1 Integrity Alarms

Test No.	Block Relay	Results	
		Relay	Lamp
1	RG operated	CB Operates Minor Alm	SS on
2	CK operated operate AR key	CB releases	SS out
3	CB nonoperated SS1 operated		SS on
4	SS1' operated operate AR key		SS out
5	SS1' nonoperated		SS on
6	H9A operated operate AR key	SS out	
7	SS1' operated		SS on
8	SS1' nonoperated operate AR key		SS out

Test No.	Block Relay	Results	
		Relay	Lamp
9	SS2 operated		SS on
10	SS2 nonoperated operate AR key		SS out
11	Repeat steps 9 and 10 for SS3 to SS8 relays.		
12	Remove block from CK, CB,SS1',H9A, all SS- relays	CB operates	SS on
13	CK1 operated operate AR key	CB releases	SS out
14	HSA operated, SN operated HSO operated		HS on
15	HSO releases operate AR key		HS out
16	HS1 operated		HS on
17	HS1 nonoperated operate AR key		HS out
18	Repeat steps 16 and 17 for HS2 to HS8 relays		
19	Remove block from HSO. Block SN non-operated		
20	Operate 3S and ST keys		SN on after 3 to 7 seconds
21	Release 3S and ST keys. Operate AR key.		SN out
22	Remove blocking tools and release relays SN, RG, CK1 and HSA.		

7.2 Delay Alarms

- 7.21 Set DAO tens switch to position 0 and DAO units switch to position 1. Block normal CO relay.
- 7.22 Operate 3S and ST keys. Check that DCO selector steps to position 1 and OGD and ON lamps light on unit. Lamp OGD lights at traffic supervisory rack and lamp ROGD lights at remote position.
- 7.23 Restore ST and 3S keys and DAO tens and units switches to OFF position.

- 7.24 Repeat test of Paragraph 7.22 operating keys STH(B option) and 35. Verify same results as Paragraph 7.22.
- 7.25 Set DA1 tens switch to position 0 and DA1 units switch to position 1.
- 7.26 Operate 3S and ST keys. Check that DC1 selector steps to position 1, and 1GD and ON lamps light on unit. Lamp 1GD lights at traffic supervisory rack and lamp R1GD lights at remote position.
- 7.27 Restore ST and 3S keys and DA1 tens and units switches of OFF position. Remove block from CO relay.
- 7.3 Common Alarms
- 7.31 *Manually operate in turn relays ALS, AL2, A3 and if F option is specified OATA.*
- NOTE: Release each audible and visual alarm by operating the AR key.*
- 7.32 *Verify relay CB operates with each operated relay, and that aisle and main aisle pilots light and minor alarm sounds.*
- 7.33 Block ALS relay operated. Momentarily operate AG key. Check that alarms are silenced and AG lamp lights.
- 7.34 Release ALS relay.
- 7.35 Close contacts 10 and 10M of relay RG1 and verify relay ALS does not operate.
- 7.36 Operate ST key and verify relay ALS operates.
- 7.37 Release ST key and operate STH key. Verify relay ALS is not operated.
- 7.38 Release contacts of relay RG1 and restore STH key to normal.
8. REGISTERS
- 8.1 PEG Count
- 8.11 Momentarily ground, one at a time, terminals 00 to 31 on the PCR terminal strip which are connected to registers on the traffic register rack. Check that the correct register operates.
- 8.12 Momentarily ground, in turn, terminals 57, 58 and 59 on the miscellaneous terminal strip and verify that the corresponding TPC- register scores at the traffic register rack.
- 8.2 Delay Count
- 8.21 Momentarily ground, one at a time, terminals 00 to 31 on the DCR terminal strip which are connected to registers on the traffic register rack. Check that the correct register operates.
- 8.22 Momentarily ground, in turn, terminals 54, 55 and 56 on the miscellaneous terminal strip and verify that the corresponding TDC- register scores at the traffic register rack.
9. OVERALL TIMER
- 9.1 Block relay STA operated.
- 9.2 Verify the OAT relay operates and approximately 30 seconds later the OATA relay operates. A major alarm will sound and the aisle and main aisle pilot lamps will light.
- 9.3 Release relay STA.

Lines presented in Script indicate new or changed information.

Manager, Crossbar Product Engineering
Control Center

Reason for Reissue:
To change Paragraph 7.31.