

COIN SUPERVISORY LINK CONTROLLER

TESTS

NO. 1 CROSSBAR OFFICES

1. GENERAL

1.01 This section describes a method of testing coin supervisory link controller circuits.

1.02 This section is reissued to include a test of the major alarm circuit and bring the section up to date. Since this is a general revision, the arrows ordinarily used to indicate changes have been omitted.

1.03 The tests and features covered are:

(A) Minor Alarm: This test checks the operation of the minor alarm circuit in the event of a sleeve lead continuity failure. It also checks for a double connection after crosspoints are closed.

(B) Regular and Reserve Feature: This test checks that the link controller will select a coin supervisory circuit subgroup containing two or more idle circuits. It also checks the operation of the reserve test feature to allow selection of a subgroup containing only one idle coin supervisory circuit.

(C) False Start: This test checks the release feature of a controller circuit in the event ground is falsely removed from the start lead.

(D) Controller Circuit Make Busy: This test checks the make-busy features of the controller circuit.

(E) Hold Jack Feature: This test checks that when a call encounters trouble, a plug in the hold jack will prevent the release of the controller and cause a minor alarm.

(F) All Subgroup Links Busy: This test checks the operation of a minor alarm if all links in a subgroup test busy to both A and B controllers.

(G) Coin Supervisory Trunk Group Busy: This test checks that the controller circuit recognizes a trunk group busy condition and will not attempt to make a selection within the busy group.

(H) Coin Supervisory Group Busy Signal: This test checks the operation of the group busy signal at the sender make-busy frame.

(I) Coin Supervisory Load Alarm: This test checks the operation of the audible and visual alarm in case all coin supervisory circuits are busy. It also checks the operation of the coin supervisory release circuit.

(J) Major Alarm: This test checks the operation of the major alarm circuit when both A and B controllers have operated their minor alarm circuits. This test can be made only where this option is provided.

1.04 Lettered Steps: The letters a, b, c, etc, are added to a step number to indicate that the step covers an action which may or may not be required depending on local conditions. The conditions under which a lettered step or series of steps should be made are given in the action column, all steps governed by the same condition are designated by the same letter. Where a condition does not apply the associated steps should be omitted.

1.05 The tests covered in this section should be made during periods of light traffic.

1.06 An assistant will be required for Tests (A) and (H), inclusive.

2. APPARATUS

2.01 The apparatus required for each test described in this section is shown on the following chart.

Apparatus	No. Required for Test									
	(A)	(B)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(C)
No. 322A Plug (Make-Busy)										*
No. 349A Plug (Make-Busy)		*	2	1		1	*			
No. 508A Tool (Armature Blocking Tool)	1	4		1	2					2
Operator Telephone Set	2	2	2	2	2	2	2			
Stop Watch KS-3008 (or equivalent)	1			1	1	1				
Dist. Junct. Test Frame SD-25158-01	1	1	1	1	1	1				

* Indicates plugs as required.

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3. PREPARATION

PREPARATION FOR TESTS (A), (B), (C), (D), (E), (F), AND (G)

<u>STEP</u>	<u>ACTION</u>	<u>VERIFICATION</u>
1	Establish talking connection between coin supervisory link controller frame and district junctor test frame.	
2	At the district junctor test frame - Operate DSC and REP keys.	

PREPARATION FOR TESTS (A), (B), (C), (D), AND (E)

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|---|---|--|
| 3 | Connect district junctor test frame to a coin district junctor circuit having preference for the controller circuit under test. | |
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PREPARATION FOR TESTS (F) AND (G)

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|---|---|--|
| 3 | Connect district junctor test frame to a coin district junctor circuit appearing in the trunk group under test and having preference for the controller circuit to be tested. | |
|---|---|--|

PREPARATION FOR TEST (H)

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|---|---|--|
| 1 | Establish talking connection between sender make-busy frame and miscellaneous frame on which appear coin supervisory circuits to be tested. | |
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4. METHOD

<u>STEP</u>	<u>ACTION</u>	<u>VERIFICATION</u>
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(A) Minor Alarm

Continuity Failure

4	Block nonoperated SA relay of controller under test.	
5	At district junctor test frame - Operate ST key.	Within 5 to 12 seconds after operation of SS relay in controller - AL lamp at controller frame lights. White aisle pilot lamp lights. Minor alarm operates. Controller is released and connection is completed through mate controller.
6	Remove blocking tool from SA relay.	
7	Operate AR key at controller frame.	Visual and audible alarms retire.
8	Restore ST key.	

<u>STEP</u>	<u>ACTION</u>	<u>VERIFICATION</u>
<u>Double Connection Test</u>		
<u>Caution: This test should be made when there are no service calls in the link switch under test since the operation of the LR relay mutilates any calls connected through this secondary link switch.</u>		
9	Block nonoperated TST relay of the controller.	
10	Operate ST key.	Within 5 to 12 seconds after operation of SS relay in controller - AL lamp lights. White aisle pilot lamp lights. Minor alarm operates. LR relay operates and restores controller to normal.
11	Remove blocking tool from TST relay.	
12	Operate AR key.	Visual and audible alarms retire.
13	Restore ST key.	
14	At district junctor test frame - Operate RN key.	At district junctor test frame - N lamp lights.
15	Release RN key.	N lamp extinguished.
16	Repeat Steps 3 to 15 for mate controller.	
<u>(B) Regular and Reserve Feature</u>		
4a	If office has total of 10 or more coin supervisory circuits - Block operated three of the four GB relays in controller.	
5a	Insert a No. 349A plug in HD jack at controller frame.	
6a	Block nonoperated RT relay of controller.	
7a	At the miscellaneous frame on which coin supervisory circuits appear - Insert No. 349A plugs in MB jacks of all but two coin supervisory circuits in subgroup associated with GB relay not blocked operated.	
8a	At district junctor test frame - Operate ST key.	SGO-3 relay associated with GB relay not blocked operated should operate. Connection is completed through controller to coin supervisory circuit.
9a	Restore ST key.	

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<u>STEP</u>	<u>ACTION</u>	<u>VERIFICATION</u>
10a	Insert a No. 349A plug in one of two remaining MB jacks of the coin supervisory circuit subgroup.	
11a	Operate ST key.	No SGO-3 relay should operate.
12a	Remove blocking tool from RT relay.	SGO-3 relay associated with GB relay not blocked operated should operate. Connection is completed through controller to coin supervisory circuit.
13a	Restore ST key.	
14a	Insert a No. 349A plug in remaining MB jack of coin supervisory circuit subgroup.	
15a	Operate ST key.	No SGO-3 relay in controller should operate.
16a	Remove No. 349A plug from HD jack.	Connection should be completed through mate controller to coin supervisory circuit.
17a	Restore ST key.	
18a	Proceed as outlined in Steps 4a to 17a with another GB relay left nonoperated until all four GB relays and their associated circuits have been tested.	
19a	Remove blocking tools from GB relays.	
20a	Remove No. 349A plugs from MB jacks of coin supervisory circuits.	
21	Block nonoperated SS and PF relays of controller circuit.	
22	Insert a No. 349A plug in HD jack.	
23	At district junctor test frame - Operate ST key.	All four SGO-3 relays operate. Only one LL relay operates.
24	Remove blocking tools from SS and PF relays.	Connection is completed through controller to coin supervisory circuit.
25	Restore ST key.	
26	At district junctor test frame - Operate RN key.	At district junctor test frame - N lamp lights.
27	Release RN key.	N lamp extinguished.
28	Remove No. 349A plug from HD jack.	
29	Repeat Steps 3 to 28 for mate controller.	

<u>STEP</u>	<u>ACTION</u>	<u>VERIFICATION</u>
<u>(C) False Start</u>		
4	Block nonoperated TS relay of controller circuit.	
5	At district junctor test frame - Operate ST key.	Approximately 0.4 to 1.3 seconds after call enters controller, RL relay operates and releases controller circuit.
6	Remove blocking tool from TS relay.	
7	Restore ST key.	
8	At district junctor test frame - Operate RN key.	At district junctor test frame - N lamp lights.
9	Release RN key.	N lamp extinguished.
10	Repeat Steps 3 to 9 for mate controller.	

(D) Controller Circuit Make Busy

4	At coin supervisory controller frame - Insert a No. 349A plug in MB jack of controller.	
5	At district junctor test frame - Operate ST key.	Connection should complete through mate controller.
6	Restore ST key.	
7	At district junctor test frame - Operate RN key.	At district junctor test frame - N lamp lights.
8	Release RN key.	N lamp extinguished.
9	Remove No. 349A plug from MB jack.	
10	Repeat Steps 3 to 9 for mate controller.	
11a	If controllers are arranged to cancel MB feature when plugs are inserted in MB jacks of both controllers - Insert No. 349A plugs in MB jacks of both associated controllers.	At controller frame - BA relay operates and restores both controllers to service. AL lamps light. White aisle pilot lamp lights. Minor alarm operates.
12a	Remove No. 349A plugs from MB jacks.	BA relay releases. Visual and audible alarms retire.

(E) Hold Jack Feature

4	Insert a No. 349A plug in HD jack of controller.	
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<u>STEP</u>	<u>ACTION</u>	<u>VERIFICATION</u>
5	Block nonoperated SA relay of controller.	
6	At district junctor test frame - Operate ST key.	After an interval of from 5 to 12 seconds - AL lamp lights. White aisle pilot lamp lights. Minor alarm operates.
7	Remove blocking tool from SA relay.	Connection is completed through controller.
8	Remove No. 349A plug from HD jack.	
9	Operate AR key at controller frame.	Visual and audible alarms retire.
10	Restore ST key.	
11	At district junctor test frame - Operate RN key.	At district junctor test frame - N lamp lights.
12	Release RN key.	N lamp extinguished.
13	Repeat Steps 3 to 12 for mate controller.	

(F) All Subgroup Links Busy

4	Block nonoperated the AG relay in A controller and BG relay in B controller associated with the same subgroup of links.	
5	At district junctor test frame - Operate ST key.	Within 5 to 12 seconds after operation of the G relay in controller circuit - GO-9 lamp lights at controller frame. White aisle pilot lamp lights. AL lamp lights. Minor alarm operates.
6	Restore ST key.	
7	At district junctor test frame - Operate RN key.	At district junctor test frame - N lamp lights.
8	Release RN key.	N lamp extinguished.
9	Operate AR and GR keys at controller frame.	Visual and audible alarms retire.
10	Proceed as outlined in Steps 3 to 9 for each of the other subgroups of links.	
11	Repeat Steps 3 to 10 for mate controller.	

(G) Coin Supervisory Trunk Group Busy

4	At controller frame - Insert a No. 349A plug in GB jack associated with first group of coin district junctors.	
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<u>STEP</u>	<u>ACTION</u>	<u>VERIFICATION</u>
5	At district junctor test frame - Operate ST key.	Within 5 to 12 seconds after operation of the G relay in controller circuit - GO-9 lamp lights. AL lamp lights. White aisle pilot lamp lights. Minor alarm operates. Connection should not complete through either A or B controller.
6	Remove No. 349A plug from GB jack.	Connection completes through controller circuit.
7	Restore ST key.	
8	At district junctor test frame - Operate RN key.	At district junctor test frame - N lamp lights.
9	Release RN key.	N lamp extinguished.
10	Operate GR and AR keys at controller frame.	Visual and audible alarms retire.
11	Proceed as outlined in Steps 3 to 10 for each group of coin districts having access to the controller under test.	
12	Repeat Steps 3 to 11 for mate controller.	

(H) Coin Supervisory Group Busy Signal

2	At miscellaneous frame - Insert No. 349A plugs in MB jacks of all coin supervisory circuits in a subgroup.	At sender make-busy frame - GB lamp associated with subgroup made busy will light.
3	Remove one No. 349A plug from a MB jack.	GB lamp is extinguished.
4	Reinsert the No. 349A plug removed in Step 3.	GB lamp is relighted.
5	Proceed as outlined in Steps 3 and 4, removing and replacing each MB plug until each coin supervisory circuit in the subgroup has been checked.	
6	Remove No. 349A plugs from MB jacks restoring subgroup to service.	
7	Repeat Steps 2 to 6 for each subgroup of coin supervisory circuits.	

(I) Coin Supervisory Load Alarm

Caution: This test should be performed as rapidly as possible since no coin calls can be handled while all coin supervisory circuits are made busy.

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<u>STEP</u>	<u>ACTION</u>	<u>VERIFICATION</u>
1	At sender make-busy frame - Insert No. 322A plugs in GB jacks of all coin supervisory circuit subgroups.	At sender make-busy frame - CB lamp lights. Minor alarm operates. White aisle pilot lamp lights. Main aisle pilot lamp lights.
2	Remove No. 322A plugs from GB jacks.	
3	Operate ASB key at sender make-busy frame.	CB lamp is extinguished. Audible and visual alarms retire. At sender make-busy frame - CC lamp lights (remains lighted for period of 6 to 8 minutes).

(J) Major Alarm

1	Block AL relay operated in both A and B controller circuits.	AL lamp lights at both controllers. White aisle pilot lamp lights. Major alarm operates.
2	Remove blocking tools from AL relays of both controller circuits.	Major alarm retires. Visual alarms retire.