

**STATION LINE CIRCUITS  
MANUAL AND DIAL  
OPERATION TESTS  
606B, 607A AND 607B PBX**

**1. GENERAL**

1.01 This section describes a method of testing manual and dial station line circuits of the Nos. 606B, 607A and 607B P B X 's.

1.02 The tests covered are:

(A) **Line Relay and Cut-off Relay (Dial Station Line Circuit SD-66414-01)**

This test checks the operation and release of the line relay and cut-off relay. It also checks the continuity of the talking connection between the dial P B X and the manual switchboard.

(B) **Line Lamp, Line Relay and Cut-off Relay (Manual Station Line Convertible to Dial SD-66414-02)**

This test checks the lighting of the line lamp and the operation and release of the line and cut-off relays. It also checks the continuity of the talking connection between the dial P B X and the manual switchboard.

(C) **Line Lamp, Line Relay and Cut-off Relay (Manual Station Lines SD-65673-01 and SD-66652-01)**

This test checks the lighting of the line lamp and the operation and release of the line and cut-off relays.

(D) **Station Line Jack Cut-outs—D-C Click Method**

This test checks the reliability of contact between the cord circuit plug and the jack springs, using a d-c method.

(E) **Station Line Jack Cut-outs—A-C Continuity Method**

This test check the reliability of contact between the cord circuit plug and the jack springs, using an a-c tone method.

1.03 Tests (A), (C), (D) and (E) specify that before tests are made, a busy test should be made on the line to prevent interference with subscriber's use of the line. The busy test is made by touching the tip of an idle front cord to the sleeve of the station line jack under test. A click in the attendant receiver indicates that the line is busy.

1.04 Tests (A) and (B) require an assistant (P B X attendant if available) at the manual switchboard.

1.05 The receiver of the dial hand test set should be held slightly away from the ear while testing.

**2. APPARATUS**

**All Tests**

2.01 No. 1011G dial hand test set equipped with a No. 2W37A cord assembly, consisting of a W2DB Cord, a No. 471A jack, and two No. 2 test clips per AT&T Co. Spec No. 6928, or equivalent.

**Test (C)**

2.02 No. 2Y lamp in a No. 38B lamp socket.

2.03 WIU Cord, 1 foot 8 inches long, or equivalent.

**Tests (C) and (D)**

2.04 Test plug—No. 113B gauge equipped with an S3A cord. This test plug and cord also form part of the test cord assembly used in test (E).

**Test (E)**

2.05 Test cord assembly, fig. 1 (To be made up locally).

2.06 Test circuit SD-66240-01 (for making a-c continuity tests).

2.07 Test receiver—No. 716E or No. 528 receiver attached to an R2CU cord, 6 feet long, equipped with a No. 309 plug (2W29A cord) (for detecting jack cut-outs).

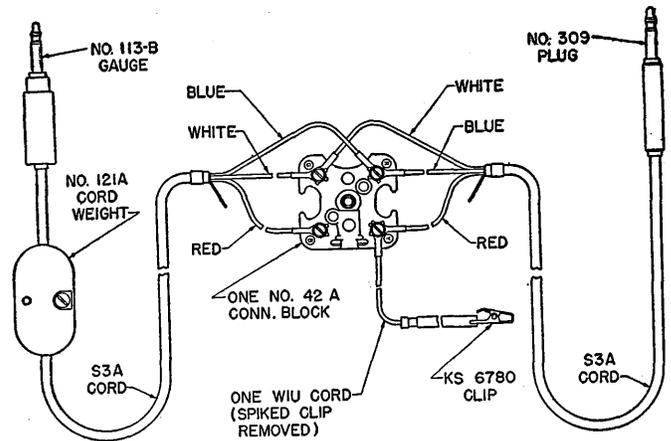


FIG. 1

**3. METHOD**

Step	Action	Verification
<b>(A) Line Relay and Cut-Off Relay (Dial Station Line Circuit SD-66414-01)</b>		
1	Operate switch of dial hand test set to MON	
2	At terminal strip on distributing frame or line relay rack— Connect clips of dial hand test set to T and R punchings of station line under test	
3	If no conversation is heard on line— Operate switch to TALK	Dial tone heard
4	Operate switch to MON	Dial tone cuts off after about 1 second
5	Arrange for following to be done by P B X attendant at a multiple jack appearance in switchboard— Make busy test on line. If not busy, insert an idle rear cord in station jack, operate TALK AND DIAL key, and talk on line	
6	When voice of P B X attendant is heard— Operate switch to TALK, and talk to attendant	Dial tone not heard Transmission satisfactory
7	Request P B X attendant to disconnect, make busy test on line, reconnect to line and talk. Operate switch to MON	

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<u>Step</u>	<u>Action</u>	<u>Verification</u>	<u>Step</u>	<u>Action</u>	<u>Verification</u>
8	When attendant's voice is heard— Operate switch to TALK and obtain result of busy test from attendant	Line did not test busy	8	Disconnect cord from key cam, and connect it to ring of front plug of spare cord circuit	
9	Operate switch to MON		9	Touch tip of test plug to jack sleeve of line under test	2Y test lamp does not light
10	Repeat steps 5 to 9 for each multiple jack appearance		10	Insert test plug into jack	2Y test lamp lights. If manual station line circuit has line relay with one winding only (SD65673-01)— Line lamp does not light. If manual station line circuit has line relay with two windings (SD66652-01)— Line lamp lights
11	Disconnect dial hand test set from T and R punchings				
12	Repeat steps 1 to 11 for each station line to be tested				
<b>(B) Line Lamp, Line Relay and Cut-Off Relay (Manual Station Line Convertible to Dial SD-66414-02)</b>					
1	Operate switch of dial hand test set to MON				
2	At terminal strip on distributing frame or line relay rack— Connect clips of test set to T and R punchings of station line under test		11	Disconnect test plug from jack and repeat steps 9 and 10 at each jack appearance	
3	If no conversation is heard on line— Operate switch to TALK and then to MON a few times, ending at TALK	P B X attendant answers. Check with attendant that line lamp flashed, and was retired when plug was inserted in jack	12	Repeat steps 9, 10 and 11 for each station line to be tested	
4	Request P B X attendant to: remove plug from jack, check that line lamp lights and then reinsert plug in jack	Check with attendant that line lamp lighted when plug was removed from jack	13	Remove all test connections	
5	Operate switch to MON		14	Connect one clip of dial hand test set to tip cord of test plug, and other clip of set to ring cord of test plug	
6	Arrange for the P B X attendant to come in on each line jack appearance in turn, when signaled, and repeat steps 3 to 5 for each such appearance		15	Make busy test on station line under test	
7	Disconnect dial hand test set from T and R punchings.		16	If line is not busy— Insert test plug into station line jack	Line lamp lights
8	Repeat steps 1 to 7 for each station line to be tested		17	Momentarily insert spare rear cord into associated multiple jack	Line lamp goes out when plug is inserted and lights again when plug is withdrawn
<b>(C) Line Lamp, Line Relay and Cut-Off Relay (Manual Station Lines, SD-65673-01 and SD-66652-01)</b>					
1	Connect tip cord of test plug to one terminal of No. 38B lamp socket		18	Repeat step 17 at all multiple jack appearances	
2	Connect other terminal of lamp socket to ground at a key cam, using a WIU cord		19	Repeat steps 17 and 18 for all station lines to be tested	
3	Make busy test on station line under test		20	Remove all test connections	
4	If line is not busy— Insert test plug in jack of line under test just far enough for tip of plug to make contact with ring spring of jack	Line lamp of line under test lights			
5	Fully insert plug in jack	Line lamp goes out			
6	Disconnect plug from jack and repeat steps 3, 4 and 5 for each jack appearance				
7	Repeat steps 3 to 6 for each station line to be tested				
<b>(D) Station Line Jack Cut-Outs—(D-C Click Method)</b>					
1	Connect one clip of dial hand test set to tip cord of test plug and other clip of set to ring cord of test plug		1	Connect one clip of dial hand test set to tip cord of test plug and other clip of set to ring cord of test plug	
2	Make busy test on station line under test		2	Make busy test on station line under test	
3	If line is not busy— Insert spare rear cord into station line jack		3	If line is not busy— Insert spare rear cord into station line jack	
4	Insert test plug into associated multiple jack		4	Insert test plug into associated multiple jack	
5	Grasp plug at cord end and rotate plug one revolution while applying sideward pressure		5	Grasp plug at cord end and rotate plug one revolution while applying sideward pressure	No clicks heard in test set receiver
6	Repeat steps 4 and 5 for each multiple jack		6	Repeat steps 4 and 5 for each multiple jack	
7	Repeat steps 2 to 6 for each station line to be tested		7	Repeat steps 2 to 6 for each station line to be tested	
8	When tests are completed— Remove all test connections		8	When tests are completed— Remove all test connections	

<u>Step</u>	<u>Action</u>	<u>Verification</u>	<u>Step</u>	<u>Action</u>	<u>Verification</u>
<b>(E) Station Line Jack Cut-Outs—A-C Continuity Method</b>			6	If line is idle— Insert associated idle rear cord of step 4 into a multiple jack of line under test	
1	Insert No. 309 plug of test cord assembly into CON FRONT jack of test line circuit		7	Insert test plug of test cord assembly in jack under test	
2	Connect No. 309 plug sleeve cord to ground at a key cam		8	Rotate plug one revolution while applying sideward pressure	No clicks or changes in volume heard in test receiver
3	Insert plug of test receiver into REC jack of test line circuit	Slight tone or no tone heard in test receiver	9	Repeat steps 7 and 8 until all multiple jacks have been tested	
4	Insert idle front cord into CON REAR jack of test line circuit		10	Repeat steps 5 to 8 for all lines to be tested	
5	Make busy test on line		11	When all station lines have been tested— Remove test connections	