

CIRCUIT TESTS FOR SECRETARIAL ANSWERING SERVICE

557A PBX

1. GENERAL

1.01 This section describes a method of testing the operating features of the 557A PBX when used for telephone secretarial answering service.

1.02 This section replaces information formerly covered in Section 536-570-660. For circuit tests of the 557A PBX when used as a manual PBX, refer to the 534 and 536 series Bell System Practices.

1.03 The tests covered are:

A. Secretarial Line: This test checks the mechanical and electrical connections between the tip and ring of the jacks associated with secretarial lines arranged for secrecy and nonsecrecy.

B. Line Relay and Line Lamp with Nonlocking Lamp Arranged for Secrecy: This test checks the nonlocking lamp feature of a secretarial line circuit arranged for secrecy.

C. Line Relay and Line Lamp Arranged for Locked-in Line Signal Without Secrecy: This test checks the locked-in lamp feature of a secretarial line arranged for nonsecrecy.

D. Applique Circuit Providing Locked-in Line Signal: This test checks the applique circuit which provides a locked-in line signal.

E. Applique Circuit Providing Secrecy: This test checks the applique circuit which provides secrecy.

F. Station Line Lamp, Line Relay, and Line Jacks for Cutouts: This test checks the operation of the line lamp and line relay associated with the station line circuit, and the mechanical and electrical connections between the tip and ring of the station line jack.

G. Attendant Telephone and Dial Circuit: See Section 536-490-507.

H. Cord Circuits: See Section 536-490-525.

I. Central Office Trunks: See Section 536-490-665.

J. Miscellaneous Circuits—Ring, Battery, Auxiliary Signal, Grouping, Fuse and Power Alarms: See Section 536-490-600.

K. Manual Conference Circuits: See Section 534-420-510 and 534-420-511.

1.04 Ground for the tests may be obtained by connection to the metal framework of the switchboard.

1.05 The test receiver should be kept away from the ear to avoid the effect of clicks.

1.06 Lettered Steps: A letter a, b, c, etc, added to a step number in Part 3 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

Tests A and F

2.01 Test receiver, 716C receiver, or equivalent, attached to a W2AB cord equipped with two 360A tools (2W21A cord) and two KS-6278 tools, or equivalent.

2.02 Test plug (123B gauge) connected to a P3A cord equipped with three KS-6780 connecting clips or one 360A tool, one 360B tool, one 360C tool, and three KS-6478 connecting clips, or equivalent.

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Tests B, C, D, E, and F

2.03 Testing cord, 893 cord, equipped with two 360A tools (1W13B cord), one KS-6278 connecting clip, and one 419A tool, or equivalent.

Tests G, H, I, J, and K

2.04 The apparatus required for performing the tests is listed in the applicable Bell System Practice section (see 1.03).

3. METHOD

STEP	ACTION	VERIFICATION
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A. Secretarial Line

Jack Test—Secretarial Line Arranged for Secrecy

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| 1 | At an idle secretarial line circuit arranged for secrecy—
Block nonoperated R relay. | |
| 2 | At switchboard—
Insert test plug into jack associated with secretarial line circuit under test. | |
| 3 | Connect sleeve and ring clips of test plug cord together. | |
| 4 | At test receiver—
Connect one clip of test receiver to the tip lead of test plug cord. | |
| 5 | At test receiver—
Connect other clip of test receiver to ground. | Click heard in test receiver. |
| 6 | At secretarial line circuit under test—
Grasp test plug and cord at the plug end, and while applying a sideward pressure away from the center of the jack, rotate plug and cord through a complete circle with a cranking motion sufficient to take up the play between the jack and plug. | At test receiver—
No cutouts heard. |
| 7 | Remove test plug from jack. | |
| 8 | At secretarial line circuit under test—
Remove blocking tool from R relay. | |

Jack Test—Secretarial Line Arranged for Nonsecrecy

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| 9 | At an idle secretarial line circuit arranged for nonsecrecy—
Disconnect tip and ring leads from central office. | |
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STEP	ACTION	VERIFICATION
10	At switchboard— Insert test plug into jack associated with secretarial line circuit under test.	
11	Connect sleeve and ring clips of test plug cord together.	
12	At test receiver— Connect one clip of test receiver to the tip lead of test plug cord.	
13	At test receiver— Connect other clip of test receiver to ground.	
14	At secretarial line circuit under test— Grasp test plug and cord at the plug end, and while applying a sideward pressure away from the center of the jack, rotate plug and cord through a complete circle with a cranking motion sufficient to take up the play between the jack and plug.	At test receiver— No cutouts heard.
15	Remove test plug from jack.	
16	At secretarial line circuit under test— Reconnect tip and ring leads to central office.	
B. Line Relay and Line Lamp with Nonlocking Lamp Arranged for Secrecy		
1a	If ringing current is ac-dc or negative superimposed— At idle secretarial line circuit selected for test— Connect clip of test cord to battery.	
2b	If ringing current is ac only or positive superimposed— At idle secretarial line circuit selected for test— Connect clip of test cord to ground.	
3	At idle secretarial line circuit selected for test— Momentarily touch 419A tool of test cord to contact 2B of R relay.	R relay operated and released as 419A tool is applied and removed.
4	At idle secretarial line circuit selected for test— Connect 419A tool of test cord to contact 2B of R relay.	R relay operated. At switchboard— Line lamp associated with secretarial line circuit under test lighted. Panel lamp lighted.

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STEP	ACTION	VERIFICATION
5	At switchboard— Insert plug of a TRUNK AND STATION cord into jack associated with lighted line lamp.	Line and panel lamps extinguished. If secretarial line connected to subscriber line on fully bridged basis— Dial tone heard.
6	At secretarial line circuit under test— Remove 419A tool of test cord from contact 2B of R relay.	R relay remains operated.
7	At switchboard— Speak into attendant telephone set.	Sidetone heard in headset.
8	At switchboard— Remove TRUNK AND STATION cord from jack.	At secretarial line circuit under test— R relay released.
9a	If ringing current is ac-dc or negative superimposed— At secretarial line circuit under test— Disconnect test cord from battery.	
10b	If ringing current is ac only or positive superimposed— At secretarial line circuit under test— Disconnect test cord from ground.	
C. Line Relay and Line Lamp Arranged for Locked-in Line Signal Without Secrecy		
1a	If ringing current is ac-dc or negative superimposed— At idle secretarial line circuit selected for test— Connect clip of test cord to battery.	
2b	If ringing current is ac only or positive superimposed— At idle secretarial line circuit selected for test— Connect clip of test cord to ground.	
3	At idle secretarial line circuit selected for test— Momentarily touch 419A tool of test cord to contact 2B of R relay.	R relay operated and remains operated. At switchboard— Line lamp associated with secretarial line circuit lighted. Panel lamp lighted.
4	At switchboard— Insert plug of a TRUNK AND STATION cord into jack associated with lighted line lamp.	At secretarial line circuit under test— R relay released. At switchboard— Line and panel lamps extinguished. If secretarial line connected to subscriber line

STEP	ACTION	VERIFICATION
		on fully bridged basis— Dial tone heard.
5	At secretarial line circuit under test— Momentarily touch 419A tool of test cord to contact 2B of R relay.	At switchboard— Line lamp associated with secretarial line under test momentarily lighted.
6	At switchboard— Speak into attendant telephone set.	Sidetone heard in headset.
7	At switchboard— Remove TRUNK AND STATION cord from jack.	
8a	If ringing current is ac-dc or negative superimposed— At secretarial line circuit under test— Disconnect test cord from battery.	
9b	If ringing current is ac only or positive superimposed— At secretarial line circuit under test— Disconnect test cord from ground.	
D. Applique Circuit Providing Locked-in Line Signal		
1a	If ringing current is ac-dc or negative superimposed— At idle applique circuit selected for test— Connect clip of test cord to battery.	
2b	If ringing current is ac only or positive superimposed— At idle applique circuit selected for test— Connect clip of test cord to ground.	
3	At applique circuit under test— Momentarily touch 419A tool of test cord to contact 2B of R relay.	R relay operated and released. At switchboard— Line lamp associated with secretarial line circuit lighted. Panel lamp lighted.
4	At switchboard— Insert plug of a TRUNK AND STATION cord into jack associated with lighted line lamp.	At applique circuit under test— R relay released. At switchboard— Line and panel lamps extinguished. If secretarial line connected to subscriber line on fully bridged basis— Dial tone heard.
5	At switchboard— Speak into attendant telephone set.	Sidetone heard in headset.

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STEP	ACTION	VERIFICATION
6	At switchboard— Remove TRUNK AND STATION cord from jack.	
7a	If ringing current is ac-dc or negative superimposed— At idle applique circuit selected for test— Disconnect test cord from battery.	
8b	If ringing current is ac only or positive superimposed— At idle applique circuit selected for test— Disconnect test cord from ground.	
E. Applique Circuit Providing Secrecy		
1a	If ringing current is ac-dc or negative superimposed— At idle applique circuit selected for test— Connect clip of test cord to battery.	
2b	If ringing current is ac only or positive superimposed— At idle applique circuit selected for test— Connect clip of test cord to ground.	
3	At idle applique circuit under test— Connect 419A tool of test cord to contact 2B of R relay.	R relay operated. At switchboard— Line lamp associated with secretarial line circuit lighted. Panel lamp lighted.
4	At switchboard— Insert plug of a TRUNK AND STATION cord into jack associated with lighted line lamp.	Line and panel lamps extinguished. If secretarial line connected to subscriber line on fully bridged basis— Dial tone heard.
5	At applique circuit under test— Remove 419A tool of test cord from contact 2B of R relay.	R relay released.
6	At switchboard— Speak into attendant telephone set.	Sidetone heard in headset.
7	At switchboard— Remove TRUNK AND STATION cord from jack.	
8a	If ringing current is ac-dc or negative superimposed— At applique circuit under test— Disconnect test cord from battery.	

STEP	ACTION	VERIFICATION
9b	If ringing current is ac only or positive superimposed— At applique circuit under test— Disconnect test cord from ground.	
F. Station Line Lamp, Line Relay, and Line Jacks for Cutouts		
1	At idle station line circuit selected for test— Short-circuit tip and ring leads.	If line relay provided— L relay operated. At switchboard— Line lamp associated with station line circuit under test lighted.
2	At switchboard— Insert test plug into jack associated with lighted station line lamp.	Line lamp associated with station line circuit under test extinguished. If line relay provided— L relay released.
3	At switchboard— Connect the tip lead of test plug to ground.	
4	Connect the ring lead of test plug to one clip of test receiver.	
5	Connect other clip of test receiver to the sleeve of a TRUNK AND STATION cord.	Click heard in receiver.
6	At station line circuit under test— Grasp test plug and cord at the plug end, and while applying a sideward pressure away from the center of the jack, rotate plug and cord through a complete circle with a cranking motion sufficient to take up the play between the jack and plug.	At test receiver— No cutouts heard.
7	Remove clip of test receiver from sleeve of TRUNK AND STATION cord.	
8	Remove test plug from jack.	
9	Remove short from tip and ring leads of station line under test.	
10	Repeat Steps 1 through 9 until all station lines have been tested.	

