

CIRCUIT DESCRIPTION

1 1



CD-66414-01
ISSUE 5D
APPENDIX 9D
DWG ISSUE 28D
DISTN CODE 3J07

PBX SYSTEMS
NO. 701A OR 711A
STATION LINE CIRCUIT
FOR INDIVIDUAL, 2 PARTY SELECTIVE
OR 4 PARTY SEMI-SELECTIVE LINES
WITH OR WITHOUT RESTRICTED SERVICE

CHANGES

D. Description of Changes

D.1 This circuit is rated Mfr Disc.

BELL TELEPHONE LABORATORIES, INCORPORATED
DEPT 3224-RCL-RVL

Printed in U.S.A.

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CIRCUIT DESCRIPTION

CD-66414-01
ISSUE 5D
APPENDIX 8D
DWG ISSUE 27D

PBX SYSTEMS
NO. 701A OR 711A
STATION LINE CIRCUIT
FOR INDIVIDUAL, 2 PARTY SELECTIVE
OR 4 PARTY SEMI-SELECTIVE LINES
WITH OR WITHOUT RESTRICTED SERVICE

CHANGES

D. Description of Changes

- D.1 Option M is rated Mfr Disc; option K is added and rated A&M Only to move the connection (lead CO) to the CO diode in Fig. 5 to the CO relay side of options T and J (line access for TOUCH-TONE®).
- D.2 Circuit Notes 109 and 110 are removed and Equipment Note 215 is modified to cover the application of Fig. 5 and option K.
- D.3 CADs K, L, and M are modified to add option K.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT 3224-GLH-RVL

PBX SYSTEMS
NO. 701A OR 711A
STATION LINE CIRCUIT
FOR INDIVIDUAL, 2 PARTY SELECTIVE
OR 3 PARTY SEMI-SELECTIVE LINES
WITH OR WITHOUT RESTRICTED SERVICE

CHANGES

D. Description of Changes

- D.1 This change is made to reduce voltage transients present on lead SL due to the release of relay CO.
- D.2 This change is required in all installations in which this circuit has an appearance at a 608A or 608D switchboard.
- D.3 Fig. 5 and option M are added to provide connection from Fig. 1 of this circuit to a transient suppression circuit. The transient suppression circuit consisting of a 446P diode is shown as Fig. 6 of SD-66715-01.
- D.4 Notes 103 and 105 are modified to reflect this change.
- D.5 Notes 109, 110, and 215 are added to explain fusing, wiring, and equipment arrangements for the transient suppression circuit.
- D.6 CADs per Fig. K, L, and M are modified to show connecting information.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT 3223-JLF-PLS

PBX SYSTEMS
NO. 701A OR 711A
STATION LINE CIRCUIT
FOR INDIVIDUAL, 2 PARTY SELECTIVE
OR 4 PARTY SEMI-SELECTIVE LINES
WITH OR WITHOUT RESTRICTED SERVICE

CHANGES

D. Description of Changes

- D.1 Station line leads T and R and connector bank lead S are referenced to the test connector bank when it is required to provide remote testing and/or denial of busy verification or testing to busy data stations.
- D.2 Note 107 is added to explain the cross-connect information.
- D.3 Reference to note 213 (equipment information for PBX-ANI) is added to Fig. 1 and note 103.
- D.4 Note 108 is added to detail the method of cancellation of station restriction of outgoing central office calls.

F. Changes in CD Sections

- F.1 The following circuit is added to SECTION III under 4. Connecting Circuits:

Test Connector Circuit - SD-65951-01.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT 3223-JLF-FLS

250

CIRCUIT DESCRIPTION

CD-66014-C1
ISSUE 50
APPENDIX 5L
DWG ISSUE 24D

PBX SYSTEMS
NO. 701A OR 711A
STATION LINE CIRCUIT
FOR INDIVIDUAL, 2 PARTY SELECTIVE
OR 4 PARTY SEMI-SELECTIVE LINES
WITH OR WITHOUT RESTRICTED SERVICE

CHANGES

D. Description of Changes

D.1 Option Q is designated and option N is added to provide optional line restriction under control of the station restriction circuit.

D.2 Fig. V and Note 214 are added.

F. Changes in CD Sections

F.1 The following information is added to DESCRIPTION OF OPERATION:

8. STATION RESTRICTION

8.01 When the station restriction circuit is operated, ground is removed from the line relay and calls can not be originated.

BELL TELEPHONE LABORATORIES, INCORPORATED

(WECO 2120HW-BWP-WHK)
DEPT 5337-LAH

PEX SYSTEMS
NO. 701A OR 711A
STATION LINE CIRCUIT
FOR INDIVIDUAL, 2 PARTY SELECTIVE
OR 4 PARTY SEMI-SELECTIVE LINES
WITH OR WITHOUT RESTRICTED SERVICE

CHANGES

D. Description of Changes

- D.1 Station restriction circuit connecting information is added.
- D.2 Notes 212 and 213 are added.
- D.3 Figures K, L and M are revised and Figure U is added.

F. Changes in CD Sections

- F.1 The following circuit is added to part 4. CONNECTING CIRCUITS:
 - 4.09 Station Restriction Circuit - SD-5E012-01.

BELL TELEPHONE LABORATORIES, INCORPORATED

(WECO 7120HW-RWH-JGW)
DEPT 5337-RAV

CIRCUIT DESCRIPTION

CD-66414-01
ISSUE 5D
APPENDIX 3D
DWC ISSUE 22D

PBX SYSTEMS
NO. 701A OR 711A
STATION LINE CIRCUIT
FOR INDIVIDUAL, 2 PARTY SELECTIVE
OR 4 PARTY SEMISELECTIVE LINES
WITH OR WITHOUT RESTRICTED SERVICE

CHANGES

D. Description of Changes

- D.1 Notes 103 and 105 are revised and Note 211 is added.
- D.2 Lead P-- is added with option R for automatic number identification.
- D.3 CAD Figures K, L and M are revised.

F. Changes in CD Sections

- F.1 The following circuit is added to Part 4, CONNECTING CIRCUITS;
 - 4.06 Automatic Number Identification Circuit - SD-1E007-01.

BELL TELEPHONE LABORATORIES, INCORPORATED

(WECO 7760HW-AELK-JGW)
DEPT 5337-RAV

116²
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PBX SYSTEMS
NO. 701A OR 711A
STATION LINE CIRCUIT
FOR INDIVIDUAL, 2-PARTY SELECTIVE
OR 4-PARTY SEMISELECTIVE LINES
WITH OR WITHOUT RESTRICTED SERVICE

CHANGES

D. Description of Changes

- D.1 In Fig. K, S and T options were formerly shown in the
S lead by error.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT 5332-HFH-JJH

PBX SYSTEMS
NO. 701A OR 711A
STATION LINE CIRCUIT
FOR INDIVIDUAL, 2 PARTY SELECTIVE
OR 4 PARTY SEMI SELECTIVE LINES
WITH OR WITHOUT RESTRICTED SERVICE

CHANGES

D. DESCRIPTION OF CHANGES

- D.1 Options S and T added.
- D.2 Note 4 in Circuit Requirement Table added, and Notes 103 and 105 corrected to reflect option changes.
- D.3 Note 106 added.
- D.4 Connecting information for Station Access Circuit, SD-66885-01 added.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT 5332-HVM-JJM

PBX SYSTEMS
NO. 701A OR 711A
STATION LINE CIRCUIT
FOR INDIVIDUAL, 2 PARTY SELECTIVE
OR 4 PARTY SEMI-SELECTIVE LINES
WITH OR WITHOUT RESTRICTED SERVICE
NO. 552A, 552D, 605A, 606B, 607A, 607B
OR 608A
JACK CIRCUIT

CHANGES

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 In Figure 1, Option V is designated and Option W is added as a means to connect this circuit to the Aux. or Mon. & Tst. line circuit of the group alerting system.

D.2 Circuit Notes 103 and 105 are reissued to reflect Issue 19-D.

All other headings under changes, no change.

1. PURPOSE OF CIRCUIT

1.1 This circuit is used to establish a connection between a PBX station and a line finder, a connector, an attendant or a tie trunk.

2. WORKING LIMITS

	Adjust- ment "A"	Adjust- ment "B"
2.1 Maximum external	400Ω	600Ω
2.2 Minimum insulation resistance, manual panel and crossbar step-by-step	20,000Ω	30,000Ω

3. FUNCTIONS

- 3.1 To start a line finder hunting for this line when the receiver is removed from the hook at the station.
- 3.2 To connect the station through to the line finder when the line finder seizes this line.
- 3.3 To connect the station through to a connector on an incoming call.
- 3.4 To connect the station through to the attendant on a call from the manual board.
- 3.5 To make the connector multiple and attendant jack busy when the line finder seizes this line on an outgoing call.

- 3.6 To make the attendant jack busy on an incoming call from a connector.
- 3.7 To make the connector banks busy on an outgoing call from the attendant.
- 3.8 To provide means for furnishing 2- or 4-party service.
- 3.9 To connect the tie trunk through to the line finder when the line finder seizes this line.

4. CONNECTING CIRCUITS

- 4.1 Auxiliary Line Circuit - 4-party semiselective (SD-66333-01)
 - 4.2 Cord Circuit (SD-66193-01)*
 - 4.3 Line Finder Circuit (SD-66410-01)*
 - 4.4 Connector Circuit (SD-66049-01)*
 - 4.5 Tie Trunk Circuit (SD-66025-01)*
 - 4.6 Message Waiting Service Key Interrupter and Power Circuit (SD-65784-01)
 - 4.7 Group Alerting Auxiliary Line Circuit (SD-95834-01)
- *Typical

DESCRIPTION OF OPERATION

5. OUTGOING CALLS

When the receiver is removed from the switchhook at the calling station or the tie trunk seizes the line the (L) relay operates through the (S) and (T) windings. The (L) relay closes through the "G" lead to the line finder and if restricted service is provided places a ground on the tip side of the line to the line finder. The (L) relay also closes the circuit of the (P) and (S) windings of the (CO) relay in series with the (P) winding of itself to the (S) or (Sl) conductors of the line finder. When the line finder attaches itself to this line the (CO) relay operates, opens the "G" lead to the line finder, places a ground on the sleeve of the

multiple jacks, locks through its (P) winding to the (S) or (Sl) conductor and finally releases the (L) relay. The (L) relay released, removes ground from the (T) or (Tl) conductors and partially opens the "G" lead to the line finder. When the (CO) relay operates it short circuits the (P) winding of the (L) relay which is done to insure that the cutoff relay will lock up before the (L) relay releases. The sleeve of the connector bank is made busy as soon as the line finder attaches itself to the line.

6. INCOMING CALLS FROM ATTENDANT

When the attendant completes a call by inserting the plug of a cord into the jack, the cutoff relay is operated through its (P) winding and a busy

potential is connected to the sleeve of the connector multiple banks for busy test purposes. The cutoff relay closes through the tip and ring of the line to the station. When the plug is removed from the jack the circuit is restored to normal.

7. INCOMING CALLS FROM CONNECTOR

When this line is seized by a connector the (CO) relay operates over the sleeve through its (P) winding. The (CO) relay places a ground on the sleeve of the manual jacks, Figure 2, for busy test purposes and closes through the tip and ring conductors to the station. Figure 3-Ground is placed on the sleeve of the connector banks. When the connector releases the circuit restores to normal.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT. 2233-WVS-PWS-IX

