

P.B.X. SYSTEMS
NO. 552-D, ~~552-E~~, 605-A OR 701-A
STATION LINE CIRCUIT
FOR MULTIPLE SWITCHBOARD
WITH OR WITHOUT LINE RELAY

CHANGES

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 The connecting information for leads on punchings Nos. 33, 43, 55 and 1 in cabling figure 51 is changed from "1 lead per section" to "1 lead per strip of jacks"

All other headings, no change.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT. 2725-WVS-HHA-B4

CIRCUIT DESCRIPTION
TELEGRAPH, SIGNALING AND
SPECIAL SYSTEMS DEVELOPMENT DEPARTMENT

CD-66020-01
Issue 1
Appendix 11-D
Dwg. Issue 12-D

P.B.I. SYSTEMS
NO. 552-D, 552-E, 605-A or 701-A
STATION LINE CIRCUIT
FOR MULTIPLE SWITCHBOARD
WITH OR WITHOUT LINE RELAY

CHANGES

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 This circuit is rated A&M Only for the
701A PBX.

All other headings, no change.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT. 2714-WVS-HHA-MF

P.B.X. SYSTEMS
NO. 552D, 552E, 605A or 701A
STATION LINE CIRCUIT
FOR MULTIPLE SWITCHBOARD
WITH OR WITHOUT LINE RELAY

CHANGES

D. DESCRIPTION OF CIRCUIT CHANGES

- D.1 The title was changed to include the 552E P.B.X.
- D.2 Circuit requirements title box was changed to include the 552D and 552E P.B.X.'s.

D.3 Circuit notes 101 and 102 and working limits chart were revised, to change the upper voltage limits from 50 Volts to 52 Volts.

D.4 Fig. 53 was added to the circuit.

D.5 Reference to the 552E P.B.X was added to note 201.

All other headings, no change.

BELL TELEPHONE LABORATORIES, INC.

DEPT. 3310-WCB-RLI-S2

PBX SYSTEMS
NO. 552-D, 605-A OR 701-A
STATION LINE CIRCUIT
FOR MULTIPLE SWITCHBOARD
WITH OR WITHOUT LINE RELAY

CHANGES

D. DESCRIPTION OF CIRCUIT CHANGES

- D.1 Fig. 52 and Note 201 added to provide cross connection information needed for use with the 740E PBX.
- D.2 Fig. Nos. 1 and 51 added to existing figures.

All other headings, no change.

BELL TELEPHONE LABORATORIES, INC.

DEPT. 3320-LAH-RCD-NM

P.B.X. SYSTEMS
NO. 605A OR 701A
STATION LINE CIRCUIT
FOR MULTIPLE SWITCHBOARD
WITH OR WITHOUT LINE RELAY

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 The circuit was reissued to show
2T and 2Y lamps superseded by
K2 and C2 lamps respectively for "Y"
wiring only.

D.2 In the feature or option table
under heading "Station Line Cir-
cuits with Line Relays" "Tungsten Lamps
Max. 4" removed.

All other headings, No Change.

BELL TELEPHONE LABORATORIES, INC.

DEPT. 5330-JBD-WLF

P.B.X. SYSTEMS
NO. 605A OR 701-A
STATION LINE CIRCUIT
FOR MULTIPLE SWITCHBOARD
WITH OR WITHOUT LINE RELAY

CHANGES

B. CHANGES IN APPARATUS

B.1 Superseded Superseded By
"Z" - 2T Lamp "U" - K2 Lamp
"W" - 2Y Lamp "V" - C2 Lamp

D. DESCRIPTION OF CIRCUIT CHANGES

- D.1 Circuit reissued to show 2T and 2Y lamps superseded by K2 and C2 lamps respectively.
- D.2 Rearranged circuit notes.

2. WORKING LIMITS

2.1 "Y" Wiring

Max. Ext. ckt. Loop 2150 ohms
Min. Ins. Res. 20000 ohms

*"X" Wiring

Voltage Range	Type of Lamps	No. of Lamps	Max. Ext. Ckt. Loop
32-46 V	K2	1	750w
32-46 V	K2	2	400w
32-46 V	K2	3	260w
32-46 V	K2	4	240w
44-50 V	C2	1	750w
44-50 V	C2	2	515w
44-50 V	C2	3	330w
44-50 V	C2	4	240w
32-46 V	2T	1	125w
44-50 V	2Y	1	125w

*Min. Ins. Res. - Limited by night alarm or buzzer circuit.

All other headings, No change.

BELL TELEPHONE LABORATORIES, INC.

DEPT. 3330

JBD)
WLF)RK

CIRCUIT DESCRIPTION
SYSTEMS DEVELOPMENT DEPARTMENT
PRINTED IN U.S.A.

CD-66020-01
Issue 1
Appendix 6-D
November 16, 1932
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P.B.X. SYSTEMS
NO. 605A OR 701A
STATION LINE CIRCUITS
FOR MULTIPLE SWITCHBOARD
WITH OR WITHOUT LINE RELAY

CHANGES

C. CHANGES IN CIRCUIT REQUIREMENTS OTHER THAN THOSE APPLYING
TO ADDED OR REMOVED APPARATUS

C.1 The operate test value for relay (L) was changed from
.0115 amp. to .0078 amp.

C.2 Test note 3 was added.

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 The working limits when relay (L) is equipped are increased
from 750 ohms to 2150 ohms.

All other headings, No Change.

BELL TELEPHONE LABORATORIES, INC.

DEPT. 332

JBD)SC
WLF)

CIRCUIT DESCRIPTION
AMERICAN TELEPHONE & TELEGRAPH CO.
DEPT. OF DEVELOPMENT & RESEARCH
BELL TELEPHONE LABORATORIES, INC.
PRINTED IN U.S.A.

CD-66020-01
Issue 1, App. 5-A
May 19, 1931
(2 Pages) Page 1

P.B.X. SYSTEMS
NO. 605-A OR 701-A
STATION LINE CIRCUIT
FOR MULTIPLE SWITCHBOARD
WITH OR WITHOUT LINE RELAY

CHANGES

A. CHANGED AND ADDED FUNCTIONS

A.1 No change.

B. CHANGES IN APPARATUS

B.1 No change.

C. CHANGES IN CIRCUIT REQUIREMENTS OTHER THAN THOSE APPLYING TO
ADDED OR REMOVED APPARATUS

C.1 The operate readjust value for the R603 (L) relay that was shown in error as .074 ampere on Issue 5-D has been correctly shown as .0074 ampere.

C.2 The reference to Test Note 2 at the release requirements for the R603 (L) relay has been removed.

C.3 Test Note 2 has been changed to refer to Issue 5-D instead of Issue 2-D.

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 Circuit Note 102 (A) has been changed to refer to a maximum external circuit loop resistance greater than 125w and not greater than 400w, instead of greater than 125 w and not greater than 400w, to agree with the increased working limits for the (L) relay as provided on Issue 5-D

DEVELOPMENT

1. PURPOSE OF CIRCUIT

1.1 No change

2. WORKING LIMITS

2.1 No change.

OPERATION

3. FUNCTIONS

3.1 No change.

4. CONNECTING CIRCUITS

4.1 No change.

AMERICAN TELEPHONE & TELEGRAPH CO.
DEPT. OF DEVELOPMENT & RESEARCH
BELL TELEPHONE LABORATORIES, INC.

DEPT. 332-A

DMH) SC
WHM)

CIRCUIT DESCRIPTION
AMERICAN TELEPHONE & TELEGRAPH CO.
DEPT. OF DEVELOPMENT & RESEARCH
BELL TELEPHONE LABORATORIES, INC.
PRINTED IN U.S.A.

CD-66020-01
Issue 1
Appendix 4-D
August 29, 1930
(2 Pages) Page 1

P.B.X. SYSTEMS
NO. 605-A or 701-A
STATION LINE CIRCUIT
FOR MULTIPLE SWITCHBOARD
WITH OR WITHOUT LINE RELAY

CHANGES

A. CHANGED AND ADDED FUNCTIONS

A.1 No change.

B. CHANGES IN APPARATUS

B.1 No change.

C. CHANGES IN CIRCUIT REQUIREMENTS OTHER THAN THOSE APPLYING TO
ADDED OR REMOVED APPARATUS

C.1 The operate test value for relay (L) was changed from
.014 ampere to .0115 ampere.

C.2 Test note 2 was added.

C.3 The P.B.X. number was changed from 650-A to 60t-A

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 The working limits when relay (L) is equipped are in-
creased from 400 to 750 ohms.

D.2 The electrical requirement for relay (L) was changed
to permit the increase in the working limits.

DEVELOPMENT

1. PURPOSE OF CIRCUIT

1.1 No change.

2. WORKING LIMITS

	With (L) Relay	Without (L) Relay
Max. Ext. Ckt. Loop	750 Ohms	125 ohms
Min. Ins. Resistance	20000 "	*

*Limited by night alarm.

OPERATION

3. FUNCTIONS

3.1 No change.

4. CONNECTING CIRCUITS

4.1 No change.

DETAILED DESCRIPTION

No change.

AMERICAN TELEPHONE & TELEGRAPH CO.
DEPT. OF DEVELOPMENT & RESEARCH
BELL TELEPHONE LABORATORIES, INC

DEPT. 332-A

LJB)
WHM)SC

CIRCUIT DESCRIPTION
AMERICAN TELEPHONE & TELEGRAPH CO.,
DEPT. OF DEVELOPMENT & RESEARCH
BELL TELEPHONE LABORATORIES, INC.,
PRINTED IN U.S.A.

CD-66020-01
Issue 1
Appendix 3-D
April 16, 1929
(2 Pages) Page 1

PBX SYSTEM
NO. 605-A OR 701-A
STATION LINE CIRCUIT
FOR MULTIPLE SWITCHBOARD
WITH OR WITHOUT LINE RELAY

CHANGES

A. CHANGED AND ADDED FUNCTIONS

A.1 None.

B. CHANGES IN APPARATUS

B.1 None.

C. CHANGES IN CIRCUIT REQUIREMENTS OTHER THAN THOSE APPLYING
TO ADDED OR REMOVED APPARATUS

C.1 None.

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 Circuit note 104 was changed from "Provide only one line lamp per circuit" to "Provide one line lamp per circuit with 'X' wiring provide not more than four line lamps per circuit with 'Y' wiring and apparatus".

DEVELOPMENT

1. PURPOSE OF CIRCUIT

1.1 No change.

2. WORKING LIMITS

2.1 No change.

OPERATION

3. FUNCTION

3.1 No change.

4. CONNECTING CIRCUITS

4.1 No change.

DETAILED DESCRIPTION

5. No change.

AMERICAN TELEPHONE & TELEGRAPH CO.,
DEPT. OF DEVELOPMENT & RESEARCH,
BELL TELEPHONE LABORATORIES, INC.

DEPT. 332-A

LJB)sc
WEM)

CHANGES IN CIRCUIT REQUIREMENTS OTHER THAN REPAIRING
TO BE MADE OR REMOVED APPARATUS

DESCRIPTION OF CIRCUIT CHANGES

D.1. Circuit note 104 was changed from "provide only one
line jump per circuit" to "provide one line jump
per circuit with Y wiring provided not more than
four line jumps per circuit with Y wiring and
specify Y."

DEVELOPMENT

1. PURPOSE OF CIRCUIT

3.1. No change.

2. WORKING LIMITS

3.1. No change.

CIRCUIT DESCRIPTION
AMERICAN TELEPHONE & TELEGRAPH CO.,
DEPT. OF DEVELOPMENT & RESEARCH
BELL TELEPHONE LABORATORIES, INC.
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Issue 1 App. 2-D
November 2, 1928
(2 Pages) Page 1

P.B.X. SYSTEMS
No. 605-A OR 701-A
STATION LINE CIRCUIT
FOR MULTIPLE SWITCHBOARD
WITH OR WITHOUT LINE RELAY

CHANGES

A. CHANGED AND ADDED FUNCTIONS

A.1 No change.

B. CHANGES IN APPARATUS

B.1 No change.

C. CHANGES IN CIRCUIT REQUIREMENTS OTHER THAN THOSE APPLYING
TO ADDED OR REMOVED APPARATUS

C.1 No change.

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 Rating changed from Provisional to Provisional Standard.

D.2 Reference in the current drain data, to the 600-A
P.B.X. changed to 605-A P.B.X.

DEVELOPMENT

1. PURPOSE OF CIRCUIT

1.1 No change

2. WORKING LIMITS

2.1 No change.

OPERATION

3. FUNCTIONS

3.1 No change.

4. CONNECTING CIRCUITS

4.1 No change.

AMERICAN TELEPHONE & TELEGRAPH CO.
DEPT. OF DEVELOPMENT & RESEARCH.
BELL TELEPHONE LABORATORIES, INC.

DEPT. 332-C

MAR)
WHM) SC

CIRCUIT DESCRIPTION
AMERICAN TELEPHONE & TELEGRAPH CO.,
DEPT. OF DEVELOPMENT & RESEARCH
BELL TELEPHONE LABORATORIES, INC.
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Issue 1
Appendix 1-A
June 8, 1928

PBX SYSTEMS
NO. 605-A OR 701-A
STATION LINE CIRCUIT
FOR MULTIPLE SWITCHBOARD
WITH OR WITHOUT LINE RELAY

CHANGES

A. CHANGED AND ADDED FUNCTIONS

A.1 None

B. CHANGES IN APPARATUS

B.1 None

C. CHANGES IN CIRCUIT REQUIREMENTS OTHER THAN THOSE APPLYING
TO ADDED OR REMOVED APPARATUS

C.1 None

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 The power punchings were added/

D.2 The current drain data were added.

DEVELOPMENT

1. PURPOSE OF CIRCUIT

1.1 No change.

2. WORKING LIMITS

2.1 No change

OPERATION

3. FUNCTIONS

3.1 No change.

4. CONNECTING CIRCUITS

4.1 No change.

AMERICAN TELEPHONE & TELEGRAPH CO.
DEPT. OF DEVELOPMENT & RESEARCH
BELL TELEPHONE LABORATORIES, INC.

DEPT. 332-A

GVK) SC
WHM)

CIRCUIT DESCRIPTION
AMERICAN TELEPHONE AND TELEGRAPH CO.
DEPT. OF DEVELOPMENT AND RESEARCH
BELL TELEPHONE LABORATORIES, INC.
PRINTED IN U.S.A.

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Issue 1
July 29, 1927
(2 Pages) Page 1

P.B.X. SYSTEMS
NO. 605-A OR 701-A
STATION LINE CIRCUIT
FOR MULTIPLE SWITCHBOARD
WITH OR WITHOUT LINE RELAY

DEVELOPMENT

1. PURPOSE OF CIRCUIT

- 1.1 This circuit is used to establish connections between a P.B.X. station and the attendant.

2. WORKING LIMITS

- 2.1 Minimum insulation resistance when (L) relay is used 20000 ohms.
- 2.2 Maximum external circuit loop when (L) relay is not used 125 Ohms.

OPERATION

3. FUNCTIONS

- 3.1 To light a line signal when thereceiver at the calling station is removed from the switchhook.
- 3.2 To extinguish the line lamp when the attendant inserts a plug in the jack associated with the lighted line lamp.

- 3.3 To supply ground to the sleeve of the jack for busy test purposes when the attendant inserts a plug in the line jack.

4. CONNECTING CIRCUITS

- 4.1 Standard PBX sub-station.
- 4.2 PBX cord circuit.
- 4.3 Night alarm circuit.

DETAILED DESCRIPTION

5. INCOMING CALLS - "Y" WIRING - When the receiver is removed from the switchhook at the calling station the (L) relay operates over the station line loop lighting the line lamp. When the attendant answers the call by inserting the plug of the cord into the jack associated with the lighted line lamp battery and ground are disconnected from the line, the (L) relay is released and ground is connected to the sleeve of the jack for busy test purposes. The (L) relay released extinguishes the lighted line lamp.

6. INCOMING CALLS - "X" WIRING - When the receiver is removed from the switchhook at the calling station the line lamp lights over the station line loop. When the attendant answers the call by inserting the plug of the cord into the jack associated with the lighted line lamp battery and ground are disconnected from the line, the lighted line lamp is extinguished and ground is connected to the sleeve of the jack for busy test purposes.

7. OUTGOING CALLS - When the attendant originates a call by insetting the plug of the cord into the jack, the line lamp is prevented from lighting and ground is connected to the sleeve of the jack for busy test purposes. When the plug of the cord is removed from the jack the circuit is restored to normal.

AMERICAN TELEPHONE & TELEGRAPH CO.
DEPT. OF DEVELOPMENT AND RESEARCH.
BELL TELEPHONE LABORATORIES, INC.

FAB)
WEM) SC