

NOTICE

NOT FOR USE OR
DISCLOSURE OUTSIDE
THE BELL SYSTEM
EXCEPT UNDER
WRITTEN AGREEMENT

CIRCUIT DESCRIPTION

CD-65747-01
ISSUE 7D
- APPENDIX 2D
DWG ISSUE 12D

PBX SYSTEMS
NO. 558A SYSTEM, 756A,
800A, 801A, 812A PBX
OR
SWITCHING SYSTEM NO. 400
LOUDSPEAKER PAGING TRUNK
CIRCUIT

CHANGES

D. Description of Changes

- D.1 The rating of this circuit is changed to A&M Only for the 558A System and the 756A and 800A PBX.
- D.2 The title of circuit is changed to remove the 802A PBX and to add the 812A PBX.
- D.3 Connecting information is added showing this circuit connecting to the new 28A coupler and the 812A PBX.

F. Changes in CD Section

- F.1 In SECTION III, add the following to 4. CONNECTING CIRCUITS:
 - (j) No. 812A PBX Attendant Console - SD-1E390-01
 - (k) No. 812A PBX Auxiliary Trunk Circuit - SD-1E408-01
 - (l) No. 812A PBX Page Answer Trunk Circuit - SD-1E416-01
 - (m) No. 28A Coupler - SD-1E297-01

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT 3223-GLH-FKB

CIRCUIT DESCRIPTION

CD-65747-01
ISSUE 7D
APPENDIX 1D
DWG ISSUE 11D

PBX SYSTEMS
NO. 558A SYSTEM, 756A,
800A, 801A, 802A PBX
OR
SWITCHING SYSTEM NO. 400
LOUD SPEAKER PAGING TRUNK
CIRCUIT

CHANGES

D. Description of Changes

D.1 The rating of this circuit is changed from AT&TCo
Standard to AT&TCo Standard, A&M Only for 756A
PBX.

BELL TELEPHONE LABORATORIES, INCORPORATED
DEPT 3224-WVS-RVL

Rec'd 8-7-71

CIRCUIT DESCRIPTION

CD-65747-01
ISSUE 7D
DWG ISSUE 10D

PBX SYSTEMS
NO. 558A SYSTEM, 756A,
800A, 801A, 802A PBX
OR
SWITCHING SYSTEM NO. 400
LOUDSPEAKER PAGING TRUNK
CIRCUIT

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SECTION II - DETAILED DESCRIPTION

1. SEIZURE OF LOUDSPEAKER PAGING TRUNK

SEIZURE BY 756A STATION (DIAL SELECTED)

1.01 If a station desires to be connected to the paging trunk, it originates a call and dials the code assigned to the paging trunk (80 through 89). The marker functions to connect the calling station to the paging trunk on a trunk class basis (without a junctor). The paging trunk provides talking battery for the calling station and a connection to the input of the paging amplifier. A busy lamp is provided at the 756A attendant position equipment and is lighted whenever the trunk is busy.

1.02 The paging trunk is connected to a converted station line circuit (stations 20 through 29 converted to 80 through 89) so it can be used for dial selected calls. This provides the necessary path for the marker to connect any calling station to the paging trunk via a link circuit.

1.03 When this circuit is seized, the loop of the calling station is extended through a link and a converted station line circuit via leads T2 and R2, operating relay A.

1.04 Relay A operated:

- (a) Extends ground to lead S2.
- (b) Lights the lamp associated with the paging trunk at the 6-button key telephone set, console, or 608D cord switchboard.
- (c) Supplies battery to the isolation amplifier (if provided).
- (d) With option G, disconnects lead COE1 from lead R, switching off the external input.
- (e) With option J, removes the idle line termination from the input of the paging amplifier.

SECTION I - GENERAL DESCRIPTION

1. PURPOSE OF CIRCUIT

1.01 The purpose of this circuit is to provide a paging trunk circuit that may be dial selected by a 756A station line circuit. It may also be manually selected by a PBX attendant using a console equipped with a paging trunk pickup key, a cord switchboard arranged with a jack appearance, or an attendant being seized by a 2-way auxiliary trunk circuit.

(f) With option E, connects the ring conductor of the paging amplifier to lead R1 of the isolation amplifier (App Fig. 3).

(g) With option F, connects the ring conductor of the paging amplifier input to lead R2 via capacitor R.

(h) Connects lead COE3 to lead COE4, switching on the paging amplifier.

1.05 The calling station now is connected to the input of the paging amplifier through capacitors T and R.

SEIZURE BY ATTENDANT

1.06 When a console or 6-button key telephone set is used as an attendant position, the circuit is seized by operating the pickup key associated with the paging trunk. (The pickup key must have the tip and ring leads cabled.)

1.07 The pickup key operated:

(a) Provides a direct connection to the paging trunk.

(b) Connects the attendant's telephone circuit to the tip and ring of the paging trunk causing the A relay to operate.

1.08 The functions of relay A operated work similarly to those described in 1.04 except that no station line is connected (through a link) to the circuit.

1.09 An attendant may override a busy condition when a station or another attendant is connected to the paging trunk by operating the associated pickup key.

1.10 When a 608D cord switchboard is used as an attendant position, this circuit is seized by either operating a paging key, or by inserting a cord into the jack associated with the loudspeaker paging trunk.

1.11 Operating the pickup key, or insertion of the plug into the jack assigned to loudspeaker paging, connects the attendant's telephone circuit to the trunk and causes the operation of relay A as described in 1.04.

Note: The paging key must be depressed and held by the attendant while using the paging trunk.

SEIZURE BY 2-WAY AUXILIARY TRUNK

1.12 The seizure of this circuit by the 2-way auxiliary trunk circuit connects or loops to leads T2 and R2 to operate

relay A. Relay A operated connects ground to lead S2 to hold the supervision of the trunk circuit.

2. RELEASE OF LOUDSPEAKER PAGING TRUNK

2.01 If the trunk is dial selected by a station and the calling party hangs up, the loop is opened thereby releasing relay A.

2.02 Relay A released:

(a) Removes ground from lead S2.

(b) Removes battery from leads SL1, SL2, SL3, and BL1 to extinguish the lamp associated with the paging trunk at the 6-button key telephone set, console, and 608D cord switchboard.

(c) Removes battery from the isolation amplifier (if provided).

(d) With option G, connects lead COE1 to lead R switching on the external input source.

(e) With option J, connects the idle line termination (A resistor) across leads T and R to the input of the paging amplifier.

(f) With option E, disconnects the ring conductor of the paging amplifier from lead R1 of the isolation amplifier (App Fig. 3).

(g) Disconnects the ring conductor of the calling station from the input of the paging amplifier.

(h) Disconnects lead COE3 from COE4, switching off the paging amplifier.

2.03 The circuit is now at normal.

2.04 Relay A, releasing on disconnect when the trunk is manually selected or selected by a 2-way auxiliary trunk performs all the functions described above except that release of the station line circuit is not involved.

3. MISCELLANEOUS

3.01 A 33L varistor (option T) is connected across the paging amplifier input to reduce a click on disconnect.

3.02 The isolation amplifier is provided optionally to prevent 2-way transmission through the paging trunk. Operation of relay A supplies battery to operate the amplifier. Resistor FB is set at 30 ohms to limit the amplifier gain to unity.

SECTION III - REFERENCE DATA

1. WORKING LIMITS

- 1.01 Maximum circuit loop is 1885 ohms.
- 1.02 Voltage limits are 45 to 52 volts.

2. FUNCTIONAL DESIGNATIONS

None.

3. FUNCTIONS

- 3.01 To recognize seizure when either dial or manually selected.
- 3.02 If dial selected, to provide a holding ground for the associated line circuit.
- 3.03 To light a busy lamp at the attendant position(s) when seized.
- 3.04 To remove an idle line termination from the amplifier input terminals or, to remove external source from amplifier input terminals.
- 3.05 To make itself busy to the marker when seized.
- 3.06 To couple the calling station and/or attendant into the paging amplifier.
- 3.07 To release on disconnect and to remove the busy condition when it releases.
- 3.08 To provide for the attendant to override a busy condition.
- 3.09 To switch off paging amplifier on disconnection.

4. CONNECTING CIRCUITS

- 4.01 When this circuit is listed on a key-sheet the connecting information thereon is to be followed.
 - (a) No. 756A PBX Line, Link, and Marker Circuit - SD-65741-01.
 - (b) No. 800A PBX 2-Way Auxiliary Trunk Circuit - SD-1E027-01.
 - (c) No. 400 Switching System Line, Link, and Connector Circuit - SD-69469-01.

- (d) Any paging amplifier circuit.
- (e) Any tape, tuner, or other audio source.
- (f) No. 558A System Circuit Schematic - SD-5E060-01.
- (g) No. 800A PBX 2-Way Auxiliary Trunk Circuit - SD-1E319-01.
- (h) No. 801A PBX Attendant Console Circuit - SD-1E322-01.
- (i) No. 802A PBX Attendant Console Circuit - SD-1E274-01.

5. MANUFACTURING TESTING REQUIREMENTS

- 5.01 The loudspeaker paging trunk shall be capable of performing all the service functions specified in this circuit description, and meeting all the requirements of the Circuit Requirement tables.

6. ALARM INFORMATION

- 6.01 An operated fuse alarm is indicated by a major alarm at the plant service center (if alarm transmitting features are provided). In any case, a visual signal at the attendant's position and in the alarm transfer and test circuit are indicated. Replace the fuse to restore the circuit, extinguish the alarm lamp, and silence the alarm at the plant service center.

7. TAKING EQUIPMENT OUT OF SERVICE

- 7.01 In order to take a loudspeaker paging trunk out of service it is necessary to block the A relay unoperated.

SECTION IV - REASONS FOR REISSUE

D. Description of Changes

- D.1 Circuit Note 102 is revised to add reference to the No. 558A, 801A, and 802A PBXs.
- D.2 In FS1, connecting information is added for the 558A, 801A, and 802A PBXs.
- D.3 The title is changed to add the 558A, 801A, and 802A PBXs.