

CIRCUIT DESCRIPTION

CD-65745-01
ISSUE 5AC
APPENDIX 1D
DWG ISSUE 6D

PBX SYSTEMS
NO. 756A
DIAL CONFERENCE CIRCUIT
ARRANGED FOR A
MAXIMUM OF 5
SIMULTANEOUS CONNECTIONS

CHANGES

D. Description of Changes

D.1 Contacts 4 and 5 of relay RVD and contacts 8 and 9 of relay RVE are redesignated EMB to correct an error in the drawing.

D.2 The circuit is rerated A&M Only.

F. Changes in CD Section

F.1 None.

BELL TELEPHONE LABORATORIES, INCORPORATED

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

PEX SYSTEMS
NO. 756A
DIAL CONFERENCE CIRCUIT
ARRANGED FOR A
MAXIMUM OF 5
SIMULTANEOUS CONNECTIONS

SECTION I - GENERAL DESCRIPTION

1. GENERAL METHOD OF OPERATION

This circuit provides a means for connecting three stations and two trunks, four stations and one trunk or five stations together in a conference connection. This circuit may be reached from any station or tie trunk assigned to a station line circuit by dialing the conference circuit station code. A central office trunk or tie trunk which is incoming only to the attendant may be connected to this circuit by the attendant dialing the conference circuit trunk code. In response to the dialed number, the dial pulse register and the marker circuit function to connect each station and trunk to a different appearance of the conference circuit. As each calling party is connected to this circuit, a talking path is established to all others already connected.

A conference circuit may be connected in the PBX to terminal groups 80-84 or 85-89. Terminals 80, 81 and 82 or 85, 86, and 87 are for stations only. Terminals 83 and 84 or 88 and 89 are for trunks or stations. To reach this circuit a station only has to dial 80 or 85 and the attendant dials 83 or 88 for trunk connections. If more than three stations dial 80 or 85, the fourth and fifth stations will be connected to the trunk appearances of the conference circuit and all others will receive busy tone. If the attendant connects more than two trunks by dialing 83 or 88, only two trunks will be connected and the others will receive busy tone. If the attendant connects a trunk by dialing a station code 80 or 85 instead of the trunk code 83 or 88, the trunk will be connected to a station appearance and the most favorable transmission will not be obtained. The transmission circuits for station lines are in series and those for trunks are in parallel to equalize the transmission. As each station or trunk disconnects, it will be released from the conference circuit.

SECTION II - DETAILED DESCRIPTION

1. STATION LINE TO CONFERENCE CIRCUIT

When a station line desires to be connected to the conference circuit, the user dials 80 or 85 depending on which code is assigned to the conference circuit. The

dial pulse register recognizes the dialed code as a tie trunk code and signals the marker to connect the station line to the appropriate trunk. The marker circuit tests the terminals of the conference circuit and connects the station to terminal 80, 81, 82, 83, or 84 or to terminal 85, 86, 87, 88, or 89 in that order of preference. If terminal 80 is busy the connection will be made to 81 and so on. (Hunting feature FS2.)

When the marker operates the hold magnet associated with the conference circuit terminal, the station loop is closed to relay A, B, C, D, or E. Relays A, B, and C are arranged to operate reversing relay RV thus reverse the battery and ground on trunk terminals 83, 84, 88, or 89, which provides reverse battery supervision to connected trunks.

If "W" option is provided, operation of reverse relays RVD and RVE is delayed until corresponding D and E relays operate over the closed loop of the connecting trunk.

When any of relays A, B, C, D, or E are operated, ground is closed to the sleeve lead to hold the connection and the shunt is removed from across the talking path. All connected stations or trunks, talk together through coils A, B, and C. Relays A, B, C, D, and E supply talking battery to the calling circuits.

2. TRUNK TO CONFERENCE CIRCUIT

When a trunk is to be connected to the conference circuit, the attendant dials 83 or 88 depending on which code is assigned to the conference circuit. The dial pulse register and marker operate as in 1. to connect the trunk to the conference circuit. The marker strapping (FS2) allows a call directed to terminal 83 to be connected to either 83 or 84, but not to 80, 81, or 82. Likewise a call directed to terminal 88 may be connected to either 88 or 89, but not to terminals 85, 86, or 87. Varistors DCA and DCB block the current flow so that when either relay U3 or U4 is energized, relays U0, U1, and U2 cannot operate. The same thing is true of relays U5, U6, U7, U8, and U9.

When the marker operates the hold magnet associated with the conference circuit terminal, a loop is closed to relay D or E which operates. Relay D or E closes

ground to the sleeve lead to hold the connection and opens the shunt across the talking circuit. Later when any station terminal A, B, or C is seized, relay RV will operate and reverse the battery and ground on both trunk terminals to give answered supervision to the connected trunk.

3. DISCONNECTION

When a station line or a trunk disconnects after being connected to the conference circuit, relay A, B, C, D, or E releases. Relay A, B, and C releasing release relay RV which takes the reverse battery condition from trunk terminals D and E to give disconnect supervision to the connected trunk. The relay released also removes ground from the "S" lead allowing the connection to release and restoring the shunt across the conference appearance.

SECTION III - REFERENCE DATA

1. WORKING LIMITS

None.

2. FUNCTIONAL DESIGNATIONS

None.

3. FUNCTIONS

The functions of this circuit are:

- (a) To supply talking battery to the calling station line or trunk.
- (b) To hold the connection under control of the calling party.
- (c) To release the connection when the calling party disconnects.
- (d) To provide a conference transmission circuit.
- (e) To provide reverse battery supervision to connected trunks.

4. CONNECTING CIRCUITS

When this circuit is listed on a key-sheet the information thereon is to be followed.

- (a) Line, Link and Marker Circuit - SD-65741-01.

5. MANUFACTURING TESTING REQUIREMENTS

The dial conference circuit shall be capable of performing all of the functions specified in this circuit description, and meeting all the requirements of the circuit requirements table.

6. TAKING EQUIPMENT OUT OF SERVICE

This circuit may be taken out of service by shorting the No. 8 make and insulating the No. 8 break of the L- relay associated with the branch to be taken out of service.

SECTION IV - REASONS FOR REISSUE

B. CHANGES IN APPARATUS

B.1 Superseded Superseded By

RV	RVD,E
AF-120	AK-30
Relay	Relay

B.2 Added:

RVD,E	RVD,E
420G	185A
Diode	Network

D. DESCRIPTION OF CHANGES

D.1 Option "W" has been provided in this issue to delay the reversal to a connecting trunk until the D or E relays have operated. This option is necessary to make the conference circuit compatible with Line, Link and Marker Circuit (SD-65741-01) in which "YC" option is provided.

D.2 Option "X" is rated Mfr Disc. and is replaced by option "W".

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT 5332-JDS-HFH