

P.B.X. SYSTEMS
NO. 755A
STATION CIRCUIT
WITH EMERGENCY TRANSFER KEY
AND CONTROL KEY CIRCUIT

CHANGES

B. CHANGES IN APPARATUS

B.1	Superseded	Superseded By
	566FB Tel. Set - Fig. 12	566MB Tel. Set - Fig. 16

D. DESCRIPTION OF CIRCUIT CHANGES

D.1 The use of Fig. 12 is rated Mfr. Disc. superseded by Fig. 16 to provide a combined Tel. Set with or without connection to the speakerphone system No. 1A.

D.2 Note 104 is changed to include Fig. 16 with the 566MB Tel. Set.

D.3 Fig. 16 is added to Note 103 and to the options Used Table.

D.4 Notes 109 and 110 are added.

All other headings under Changes, no change

1. PURPOSE OF CIRCUIT

1.1 This circuit shows the station equipment for the No. 755A PBX.

2. WORKING LIMITS

2.1 None.

3. FUNCTIONS

3.1 To provide a telephone equipped with keys or keys and lamps for connecting to any one of three or four central office trunks, a key for applying a holding condition to any one of the trunks, and a key for connecting the station to a local intercommunicating line.

3.2 To provide an audible signal to indicate an incoming local call or an incoming central office call when the station is conditioned for emergency service.

3.3 To provide means for connecting keyless stations to trunks.

3.4 To provide a dial by means of which any local station can effect a connection with any other local station or

with an outside subscriber if in a dial central office area.

3.5 To provide for the use of a dry battery talking supply and a hand generator in order to provide for emergency service to a magneto central office when the auxiliary two-way ringdown manual trunk is located at the PBX.

3.6 Provide for controlling the ringdown of a ringdown tie trunk at any key station.

4. CONNECTION CIRCUITS

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

4.1 No. 755A PBX Trunk Circuit -
SD-66503-01.

4.2 No. 755A PBX Line, Line Switch and Call Allotter Circuit - SD-66504-01.

4.3 Standard Central Office Line Circuits - SD-32133-01.

4.4 Standard Two-Way Ringdown Manual Trunk Circuit to Magneto Central Office - SD-66408-01.

4.5 No. 755A PBX Ringdown Tie Trunk Circuit - SD-66605-01.

DESCRIPTION OF OPERATION

5. LOCAL CALLS

Stations equipped with handsets as shown in Figs. 1, 11, 12, 15 or 16 have six keys located in the handset base, designated on the drawing (H), (TK1), (TK2), (TK3), (TK4) and (L). Stations equipped with wall sets as shown in Figs. 2 and with handsets as shown in Figs. 3 and 8 will have auxiliary keys and are arranged in the same order as are the keys in the handset base. Fig. 9 also provides for handsets with keys located in the handset base but only provides for three trunks designated 1, 2 and 3.

To make a local call, the (L) key is operated and the receiver removed from the switchhook. Dial tone will be heard in the receiver as an indication that dialing may proceed. Incoming calls will be indicated by the ringing of the Bell in the subset. In answering, the (L) key must be depressed.

6. TRUNK CALLS

6.1 Outgoing

To make a call to central office, one of the trunk keys (TK1), (TK2), (TK3), or (TK4) is depressed and the receiver removed from the switchhook. This will connect the station to the central office line unless the line is busy or restricted to the calling station. If the trunk chosen is busy and the station calling is arranged for lockout service, a busy tone will be heard in the receiver. On a station arranged for restricted service on a central office trunk. Busy tone will be transmitted to the station on all attempted originating calls on the trunk.

6.2 Incoming

An incoming call will be indicated by the ringing of a bell and the flashing of a lamp (when provided) in the trunk circuit or in the telephone sets. These signals are distinctive, in order to indicate on which trunk the call is being made. To answer the call, the trunk key (TK1), (TK2), (TK3) or (TK4) according to the trunk signal operated, must be depressed and the receiver removed from the switchhook.

7. TRANSFERRED CALLS

To transfer a trunk call, either incoming or outgoing the (H) key is depressed for a short interval which releases the operated trunk key. The station to which the call is to be transferred may then be called locally by depressing the (L) key and dialing. The station called must then be informed to which trunk the call is connected. To connect to the trunk, the called station must then operate the proper trunk key (TK1), (TK2), (TK3) or (TK4).

8. TRUNK CALLS TO KEYLESS STATIONS

Trunk calls can be transferred to keyless stations by means of the control key Fig. 4. When this key is operated while the key station is connected to a trunk, the desired keyless station line is also connected to the same trunk if the receiver is off the switchhook. It is then held to the trunk under control of the keyless station switchhook. The control key is a nonlocking key and is restored to normal as soon as the keyless station is connected to the trunk. The key station is then free to answer or originate trunk or local calls.

9. EMERGENCY SERVICE TO CENTRAL OFFICE

9.1 Common Battery Central Office or Magneto Central Office When Auxiliary Two-Way Ringdown Manual Trunk is Located at Central Office

A key station may be arranged for emergency service to a central office by equipping it with an emergency transfer key Fig. 5. With the key normal, incoming and outgoing central office calls are handled in the normal manner through one of the PBX trunks. When the emergency transfer key is operated, however, the trunk is disconnected and the station is connected directly to the central office line, thereby enabling the station to function as a common battery subscriber's line for receiving and originating central office calls. It is unnecessary to operate any of the trunk keys at the station in order to receive or originate central office calls, when the emergency transfer key is operated.

9.2 Magneto Central Office When the Auxiliary Two-Way Ringdown Manual Trunk is Located at the PBX

The emergency transfer key and talking battery supply circuit Fig. 6 is provided only when emergency service to a magneto central office is required and the auxiliary two-way ringdown manual trunk is located at the PBX. With the key normal, incoming and outgoing central office calls are handled in the normal manner through one of the PBX trunks and an auxiliary two-way ringdown manual trunk to the magneto central office. When the emergency transfer key is operated, however, the PBX trunk and auxiliary two-way manual trunk are disconnected and the station is connected to the magneto central office line through the emergency transfer and talking battery supply circuit. The hand generator of the 299F subset will be connected across the line and is used to ringdown the line signal at the magneto central office. On incoming calls the bell in the station subset will ring directly from the magneto central office. It is unnecessary to operate any of the trunk keys at the station in order to receive or originate central office calls, when the emergency transfer key is operated.

10. PICKING UP CALLS OF OTHER STATIONS OR A CENTRAL OFFICE LINE NOT ASSOCIATED WITH THE SWITCHING EQUIPMENT OF THE PBX

When a key station is required to pick up local calls of another station two methods are used. The first in which Fig. 7 is used requires the operation of the (PU) key which operates a relay in the line, line switch and call allotter circuit. This relay connects the station to the line

circuit of the other station or a central office line not associated with the switching equipment of the PBX. With this first method it is necessary to have the local (L) key operated as the (PU) key is a non-locking key and when it is released after the station is connected to the other stations line circuit this (L) key will hold the connection.

With the other method a spare trunk key is used to operate the relay for performing the above function.

11. TIE TRUNK CALLS

Connections to tie trunk are made the same as connection to central office trunks excepting that the operation of the (RING) key Fig. 10 is required which controls the ringing in the tie trunk. When the (RING) key is operated a relay in the tie trunk operates connecting ringing current to the line for signalling the distant PBX. Any of the trunk keys can be used for tie trunk use. The trunk key associated with the tie trunk must be operated and the receiver must be off the switch block when the (RING) key is operated otherwise the relay in the tie trunk which connects ringing current to the line will not operate.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT. 2325-VDM-EWO-NP

P.B.X. SYSTEMS
NO. 755A
STATION CIRCUIT
WITH EMERGENCY TRANSFER KEY
AND CONTROL KEY CIRCUIT

CHANGES

B. CHANGES IN APPARATUS

B.1	Superseded	Superseded By
	6017C Key (PU)	551A Key (PU)
	6017C Key (RING)	551A Key (RING)

D. DESCRIPTION OF CIRCUIT CHANGES

- D.1 "Z" wiring and apparatus is designated and noted A&M only, superseded by "Y" wiring and apparatus which is added.
- D.2 "X" wiring and apparatus is designated and noted A&M only, superseded by "W" wiring and apparatus which is added.
- D.3 "V" option is designated for wiring in Fig. 11, and noted Mfr. Disc., and is superseded by "T" wiring which is added.
- D.4 Options used table is added.
- D.5 Note 103 is changed to add reference to T, V, W, X, Y & Z options.

All other headings under Changes, no change.

1. PURPOSE OF CIRCUIT

- 1.1 This circuit shows the station equipment for the No. 755A P.B.X.

2. WORKING LIMITS

- 2.1 None.

3. FUNCTIONS

- 3.1 To provide a telephone equipped with keys or keys and lamps for connecting to any one of three or four central office trunks, a key for applying a holding condition to any one of the trunks, and a key for connecting the station to a local intercommunicating line.
- 3.2 To provide an audible signal to indicate an incoming local call or an incoming central office call when the station is conditioned for emergency service.
- 3.3 To provide means for connecting keyless stations to trunks.
- 3.4 To provide a dial by means of which any local station can effect a connection with any other local station or with an outside subscriber if in a dial central office area.
- 3.5 To provide for the use of a dry battery talking supply and a hand generator in order to provide for emergency service to a magneto central office when the auxiliary two-way ringdown manual trunk is located at the P.B.X.
- 3.6 Provide for controlling the ringing of a ringdown tie trunk at any key station.

4. CONNECTING CIRCUITS

When this circuit is listed on a key sheet the connecting information shown thereon shall be followed.

- 4.1 No. 755A P.B.X. Trunk Circuit - SD-66503-01.
- 4.2 No. 755A P.B.X. Line, Line Switch and Call Allotter Circuit - SD-66504-01.
- 4.3 Standard Central Office Line Circuits - SD-32133-01.
- 4.4 Standard Two-Way Ringdown Manual Trunk Circuit to Magneto Central Office - SD-66408-01.
- 4.5 No. 755A P.B.X. Ringdown Tie Trunk Circuit - SD-66605-01.

DESCRIPTION OF OPERATION

5. LOCAL CALLS

Stations equipped with handsets as shown in Figs. 1 or 11 have six keys located in the handset

base, designated on the drawing (H), (TKL), (TK2), (TK3), (TK4) and (L). Stations equipped with wall sets as shown in Fig. 2 and with handsets as shown in Figs. 3 and 8 will have auxiliary keys and are arranged in the same order as are the keys in the handset base. Fig. 9 also provides for handsets with keys located in the handset base but only provides for three trunks designated 1, 2 and 3. To make a local call, the (L) key is operated and the receiver removed from the switchhook. Dial tone will be heard in the receiver as an indication that dialing may proceed. Incoming calls will be indicated by the ringing of the bell in the subset. In answering, the (L) key must be depressed.

6. TRUNK CALLS

6.1 Outgoing

To make a call to central office, one of the trunk keys (TK1), (TK2), (TK3), or (TK4) is depressed and the receiver removed from the switchhook. This will connect the station to the central office line unless the line is busy or restricted to the calling station. If the trunk chosen is busy and the station calling is arranged for lockout service, a busy tone will be heard in the receiver. On a station arranged for restricted service on a central office trunk, busy tone will be transmitted to the station on all attempted originating calls on the trunk.

6.2 Incoming

An incoming call will be indicated by the ringing of a bell and the flashing of a lamp (when provided) in the trunk circuit or in the telephone sets. These signals are distinctive, in order to indicate on which trunk the call is being made. To answer the call, the trunk key (TK1), (TK2), (TK3) or (TK4) according to the trunk signal operated, must be depressed and the receiver removed from the switchhook.

7. TRANSFERRED CALLS

To transfer a trunk call, either incoming or outgoing the (H) key is depressed for a short

interval which releases the operated trunk key. The station to which the call is to be transferred may then be called locally by depressing the (L) key and dialing. The station called must then be informed to which trunk the call is connected. To connect to the trunk, the called station must then operate the proper trunk key (TK1), (TK2), (TK3) or (TK4).

8. TRUNK CALLS TO KEYLESS STATIONS

Trunk calls can be transferred to keyless stations by means of the control key Fig. 4. When this key is operated while the key station is connected to a trunk, the desired keyless station line is also connected to the same trunk, if the receiver is off the switchhook. It is then held to the trunk under control of the keyless station switchhook. The control key is a nonlocking key and is restored to normal as soon as the keyless station is connected to the trunk. The key station is then free to answer or originate trunk or local calls.

9. EMERGENCY SERVICE TO CENTRAL OFFICE

9.1 Common Battery Central Office or Magneto Central Office When Auxiliary Two-Way Ringdown Manual Trunk is Located at Central Office.

A key station may be arranged for emergency service to a central office by equipping it with an emergency transfer key Fig. 5. With the key normal, incoming and outgoing central office calls are handled in the normal manner through one of the P.B.X. trunks. When the emergency transfer key is operated, however, the trunk is disconnected and the station is connected directly to the central office line, thereby enabling the station to function as a common battery subscriber's line for receiving and originating central office calls. It is unnecessary to operate any of the trunk keys at the station in order to receive or originate central office calls, when the emergency transfer key is operated.

9.2 Magneto Central Office When the Auxiliary Two-Way Ringdown Manual Trunk is Located at the P.B.X.

The emergency transfer key and talking battery supply circuit Fig. 6 is provided only when emergency service to a magneto central office is required and the auxiliary two-way ringdown manual trunk is located at the P.B.X. With the key

normal, incoming and outgoing central office calls are handled in the normal manner through one of the P.B.X. trunks and an auxiliary two-way ring-down manual trunk to the magneto central office. When the emergency transfer key is operated, however, the P.B.X. trunk and auxiliary two-way manual trunk are disconnected and the station is connected to the magneto central office line thru the emergency transfer and talking battery supply circuit. The hand generator of the 299F subset will be connected across the line and is used to ringdown the line signal at the magneto central office. On incoming calls the bell in the station subset will ring directly from the magneto Central Office. It is unnecessary to operate any of the trunk keys at the station in order to receive or originate central office calls, when the emergency transfer key is operated.

10. PICKING UP CALLS OF OTHER STATIONS OR A CENTRAL OFFICE LINE NOT ASSOCIATED WITH THE SWITCHING EQUIPMENT OF THE PBX

When a key station is required to pick up local calls of another station two methods are used. The first in which Fig. 7 is used requires the operation of the (PU) key which operates a relay in the line, line switch and call allotter circuit. This relay connects the station to the line circuit of the other station or a central office line not associated with the switching equipment of the PBX. With this first method it is necessary to have the local (L) key operated as the (PU) key is a nonlocking key and when it is released after the station is connected to the other station line circuit this (L) key will hold the connection.

With the other method a spare trunk key is used to operate the relay for performing the above function.

11. TIE TRUNK CALLS

Connections to tie trunk are made the same as connection to central office trunks excepting that the operation of the (RING) key Fig. 10 is required which controls the ringing in the tie trunk. When the (RING) key is operated a relay

in the tie trunk operates connecting ringing current to the line for signaling the distant P.B.X. Any of the trunk keys can be used for tie trunk use. The trunk key associated with the tie trunk must be operated and the receiver must be off the switch block when the (RING) key is operated otherwise the relay in the tie trunk which connects ringing current to the line will not operate.

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