

Sedan

CIRCUIT DESCRIPTION
STATION APPARATUS DEVELOPMENT DEPT.
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STATION SYSTEMS
KEY TELEPHONE SYSTEM NO. 1A
KEY AND TELEPHONE CIRCUIT
WITH SEPARATELY-MOUNTED KEYS
ARRANGED FOR PICKUP,
CUTOFF, AND SIGNALING

0. CHANGES

0.1 CHANGED AND ADDED FUNCTIONS

None.

0.2 CHANGES IN APPARATUS

Added:

6017E key

0.3 CHANGES IN CIRCUIT REQUIREMENTS
(Not Associated with 0.2 Above)

None.

0.4 DESCRIPTION OF CIRCUIT CHANGES

(a) Fig. 5 was added to provide a 3-line pickup key.

(b) Fig. 1 has been changed to provide for connection to Fig. 5.

1. PURPOSE OF CIRCUIT

This circuit provides a means for associating the talking and dialing circuit of a station with a number of central office, PBX, private, or intercommunicating lines of a No. 1A key telephone system by means of pickup keys mounted separately from the telephone. It also provides for excluding other stations and cutting off other stations, extension ringers or a listening-in set, and for signaling intercommunicating stations.

STA. SYS.
KEY TEL. SYS. NO. 1A
KEY AND TEL. CKT.
WITH SEPARATELY-MOUNTED KEYS
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2. WORKING LIMITS

None.

3. FUNCTIONS

On central office or PBX lines the circuit provides for:

- (a) Picking up any one of a maximum of six central office or PBX lines.
- (b) An audible signal on incoming calls.
- (c) A cutoff key which may be used for disconnecting an extension station or an extension ringer from a given line, and when desired, connects the ringer in the set to the line. It is also used to disconnect a listening-in set.
- (d) Picking up an intercommunicating station.
- (e) Signaling an intercommunicating station.
- (f) Picking up a private line.
- (g) Signaling a private line station.

4. CONNECTING CIRCUITS

When this circuit is listed in the keysheet, the connecting information thereon is to be followed. The following are typical connecting circuits:

- (a) Line and signaling circuit of a No. 1A key telephone system.
- (b) Key telephone circuits of the No. 1A key telephone system.

5. DESCRIPTION OF OPERATION

5.1 ANSWERING OR ORIGINATING A CALL

To answer or originate a call, the pickup key associated with the desired line must be operated. With the pickup key operated and the handset removed from the mounting, the station is connected to the central office, PBX, private, or intercommunicating line in the usual manner. When originating a call on an intercommunicating or private line, it will be necessary to operate the signaling key to signal the called party except when the intercommunicating automatic signaling circuit is used.

5.2 LINE OR COMMON RINGER CONNECTIONS

The ringer in the subscriber set may be used either as a line ringer or a common ringer. When it is used as a line ringer, it will operate on all incoming calls on the line with which the ringer is associated when ringing current is applied to the line at the central office or PBX. When it is used as a common ringer, it will operate when ringing current is applied to any line at the central office or PBX with which the common ringer is associated.

5.3 INTERCOMMUNICATING SIGNALING

The intercommunicating signaling arrangement of the No. 1A key telephone system provides for both code and selective signaling. When code signaling alone is employed, the operation of the signal key will operate all the buzzers of the system directly. When selective signaling alone is employed, a separately-mounted 549A key or equivalent is required, and the operation of any signal key will operate the desired buzzer. When both code and selective signaling are required at any station, it will be necessary to provide a relay shown on the line and signaling circuit which will operate whenever a signaling key is operated to operate the buzzers on a code-signaling basis. The operation of a signaling key to signal on a selective basis is provided for by connecting the signaling leads directly to the buzzer leads without operating the relay. When the intercommunicating automatic signaling circuit is used in connection with an intercommunicating line, the buzzer at the called station operates when the handset at the calling station is removed from the mounting.

5.4 CUTOFF OR TRANSFER KEY

The cutoff key can only be associated with one line, but provision is made to wire it to any desired line. It is used for disconnecting an extension station or an extension ringer from a given line and, when desired, connects the ringer in the set to the line. It is also used to disconnect a listening-in set.

5.5 SELECTION OF KEY TYPE

The table under note 107 provides the information necessary for selecting the proper key required for a given type of service. It also provides the information required to make the necessary connections to secure certain optional features.

The table shows the key top diagram of all the different types of keys and their code numbers.

BELL TELEPHONE LABORATORIES, INC.

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