

## 112A KEY EQUIPMENT

### IDENTIFICATION

#### 1.00 INTRODUCTION

1.01 This section covers the description and use of the 112A key equipment which is designed to meet the telephone requirements for the air defense network of the United States.

1.02 The 112A key equipment is designed to permit answering, originating, monitoring, or holding calls on groups of lines which may include central office lines, PBX extensions, 1A1 key equipment lines, automatic tie lines, radio circuits, etc.

1.03 The key and lamp unit assembly is arranged for terminating a maximum of 18 telephone circuits or 18 radio circuits.

#### 2.00 GENERAL

2.01 Each console position requires the installation of from one to three 6-line key units assembled in a single operating unit. An originating key unit must be employed with each key unit assembly where telephone circuits are terminated.

2.02 The originating key unit contains 6-line pickup keys and the face equipment which is common to the assembly, such as the hold, release, transfer and monitor keys.

2.03 The supplementary key unit contains 6-line pickup keys.

2.04 The 700-type key units are arranged for flush mounting in a vertical position in a panel or in the face of a non-Bell System console (see Fig. 1); or they may be mounted horizontally in an apparatus case for surface mounting on tables or desks (see Fig. 2).

2.05 On adjacent flush-mounted 700-type key units, latch bars are fastened together by means of a P-10C067 link so that when a key or keys in the assembly are operated, they restore to normal any previously operated key or keys. The 700-type key units mounted in an apparatus case are fastened together by two P-10C929 couplings. A brass bushing is used to join their linkage arrangements. It is possible to lock down as many as four keys simultaneously on any of the key units.

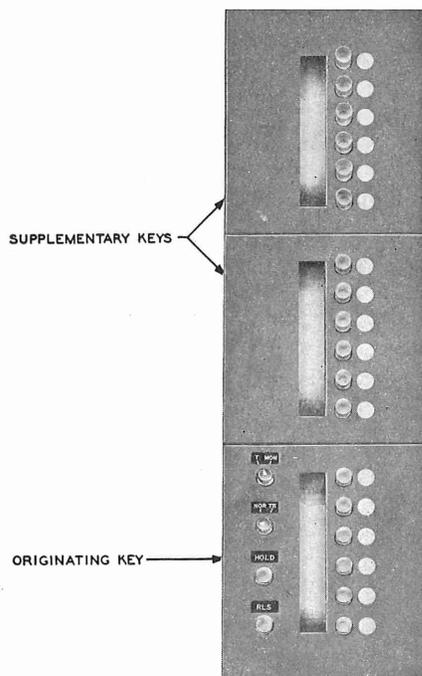


FIG. 1—700-TYPE KEY UNITS—FLUSH MOUNTED

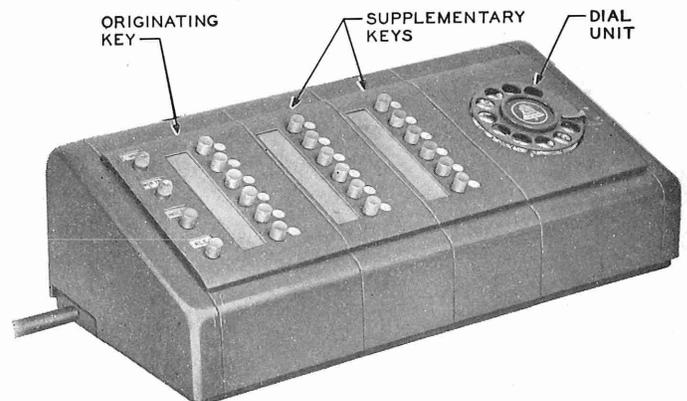


FIG. 2—700-TYPE KEY UNITS—SURFACE MOUNTED

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- 2.06** The 700B- and C-type keys are provided with lamp sockets in order to illuminate the designation strip. However, at this time faceplates are not available to accommodate the lamps.
- 2.07** A framework is used for mounting key units flush in a console. The framework is available for one, three, or four key units. When not fully equipped, blank faceplates are used to fill up the remainder of the framework.
- 2.08** The 700-type flush mounted key units are equipped with a plug and jack arrangement to facilitate their rapid interchange for maintenance reasons.
- 2.09** Radio circuits employ supplementary key units only. Radio circuits are not placed on the same key unit assembly as telephone circuits.
- 2.10** An attendant's telephone and key circuit is employed for use on either the telephone or radio circuits.
- 2.11** The relay equipment for the various circuits is furnished as a unit for mounting in an equipment room.
- 3.00 OPERATING FEATURES**
- 3.01** The functions of the 112A key equipment are to provide appropriate terminations for the following types of service.
- 3.02 Alternate Line Transfer Circuit.** On a voice circuit when regular line facilities between the terminating points are not serviceable, this circuit provides a means to restore service by transferring the line circuits at each termination to alternate line facilities.
- 3.03 Automatic Ringdown Circuit.** This circuit provides for terminating a 2-wire private line at the attendant's position of the 112A key equipment or at a telephone set of the 1A1 key telephone system.
- 3.04 Channel Assignment Switching Circuit.** This circuit provides for interconnection of any radio channel relay equipment to any team of two positions or to an individual position by means of a control key.
- 3.05 Executive Calling System Arranged for Use with 112A Key Equipment.** This circuit provides executive calling intercommunication facilities to a maximum of 18 codes which are associated with the 112A key equipment.
- 3.06 Flashing Circuit.** This circuit provides for flashing visual signals on incoming calls and winking on holding.
- 3.07 Interposition Line Circuit.** This circuit provides intercommunicating facilities between attendants at the 112A key equipment positions.
- 3.08 Line to Loudspeaker Circuit.** This circuit provides a means for an attendant at a 112A key equipment position to establish a connection with a local line terminating in a loudspeaker only. Also, it provides means for connecting to a maximum of three lines simultaneously.
- 3.09 Maintenance Line and Station Circuit.** This circuit provides a 2-wire line circuit to a PBX with termination in a telephone set control station and multiple jack stations.
- 3.10 PBX or Central Office Lines**
- 3.11 PBX Line and Signaling Circuit.** This circuit provides for terminating a PBX line and signaling circuit at attendants' positions of 112A key equipment or at a telephone set of the 1A1 key system.
- 3.12 Position Buzzer Power Circuit.** This circuit supplies proper ac power to operate the buzzer.
- 3.13 Radio Channel and Site Selection Circuit.** This circuit provides for the connection of any position to any channel and any site by means of a control key.
- 3.14 Radio Monitor Circuit.** This circuit provides for continuous monitoring on emergency and common channels.
- 3.15 Radio Patch and Test Panel Circuit.** This circuit provides for the following functions:
- Means for disconnecting 2-way lines from their normally associated radio equipment and patching them by means of patch cords to spare radio equipment.
  - Patching the radio circuits to an alternate location.
  - Monitoring on the radio circuits and the trunk lines.
  - Talking on the radio transmitter or talking to a 112A key equipment position.

- Remotely selecting a radio channel by means of a remote channel switch.
- Rerouting the radio circuits by means of a route transfer switch.

**3.16 Radio Supervisory Panel Circuit.** This circuit provides a means for the customer to monitor and test on lines to air-ground radio, and to supervise the maintenance and trouble-reporting on these lines.

**3.17 Selective Signaling Line Circuit.** This circuit provides a 2-wire private line with selective signaling.

**3.18 Station Line Circuits**

- SD-69283-01 provides for connecting 112A key equipment to any one of nine one-way signaling, 2-way talking station line circuits by means of a dial selector.
- SD-69284-01 provides for connecting 112A key equipment to any one of nine 2-way signaling, 2-way talking station line circuits by means of a dial selector.

**3.19 Tie Line Circuit.** This circuit provides for selecting any one of nine tie lines from either of two associated line pickup keys by dialing a single digit code.

**4.00 POWER**

**4.01** The power supply for the 112A key equipment is obtained from power plants, located on the premises, serving other types of telephone equipment.

**5.00 DRAWINGS**

**5.01** For convenience, the various drawings covering circuits for the 112A key equipment are listed as follows:

CIRCUITS	SCHEMATIC DRAWING NUMBER
Alternate Line Transfer Circuit . . .	SD-69277-01
Attendant's Telephone and Key Circuit . . . . .	SD-69261-01
Channel Assignment Switching Circuit	SD-69272-01
Executive Calling System . . . . .	SD-69236-01
Flashing Circuit . . . . .	SD-69266-01
Interposition Line Circuit . . . . .	SD-69262-01
Line to Loudspeaker Circuit . . . . .	SD-69274-01
Maintenance Line and Station Circuit	SD-69267-01
PBX Line and Signaling Circuit . . .	SD-69263-01
Position Buzzer Power Circuit . . .	SD-69273-01
Radio Channel and Site Selection Circuit . . . . .	SD-69268-01
Radio Monitor Circuit . . . . .	SD-69289-01
Radio Patch and Test Panel Circuit .	SD-69279-01
Radio Supervisory Panel . . . . .	SD-69278-01
Remote Station Telephone and Key Circuits . . . . .	SD-69291-01
Ringdown Line Circuit . . . . .	SD-69264-01
Selective Signaling Line Circuit . . .	SD-69265-01
Separately Mounted Keys . . . . .	SD-69290-01
Station Line Circuit . . . . .	SD-69283-01
Station Line Circuit . . . . .	SD-69284-01
Tie Line Circuit . . . . .	SD-69285-01
Two-Wire Private Line and Station Circuit . . . . .	SD-69292-01