

STATION SYSTEMS
KEY AND TELEPHONE CIRCUIT
FOR ROTARY AND "TOUCH-TONE®" DIAL
10-BUTTON TELEPHONE SETS
830- AND 2830-TYPE TELEPHONE SETS

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<u>1. PURPOSE OF CIRCUIT</u>	1	1.01 This circuit provides for talking, listening, and dialing through pickup keys arranged in a module unit of 10 keys. The pickup keys connect the telephone circuit to the central office, PBX, private, or intercommunicating lines of Key Telephone Systems No. 1A1, 1A2, or 6A. Information is shown for holding one or more lines; for visual signaling with lamps which illuminate the pickup key buttons; for audible signaling with a ringer which may be associated with one of the lines or may be used as a common audible signal; for audible signaling with a buzzer; and for converting pickup keys to signaling keys to be used for individual signaling. Dialing is provided by either TOUCH-TONE or rotary dials. The circuit shows connections for station busy lamp and Speakerphone Systems No. 3A and 4A.
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prevents the operation of two pickup keys at one time.

3. CONNECTION TO LINE CIRCUITS

3.01 Pickup keys can be connected to 1A1 or 1A2 line circuits.

4. CONNECTION TO PRIVATE OR INTERCOMMUNICATING LINES

4.01 Pickup keys to be arranged for pickup or signaling of private or intercommunicating lines may be any key not used for connection to line circuits of Key Telephone System 1A1 or 1A2. Key positions 8 and 9 are dedicated to intercom on the 830DM and 2830DM telephone sets.

5. SIGNALING

VISUAL SIGNALS

5.01 A 10-volt ac lamp is provided for each pickup key arranged to illuminate the key and designation strip. Lamps are controlled by the associated circuits which provide different signals by lighting the lamps steadily or with various interruptions.

AUDIBLE SIGNALS

A. Ringer

5.02 A ringer and capacitor (contained in network) are provided in the set and may be connected for line ringing of any line. The ringer may be connected to common signaling or other ringing circuits as required. Ringer connections are made by connecting the cable leads R or R1, and B or B1 to the desired circuit.

B. Buzzer

5.03 A KS-20419 L1 buzzer is provided to be used as a common signal or as an intercommunicating signal. Supports and screws are provided on the base plate for the mounting of a KS-8109 buzzer when a second buzzer is needed.

SIGNALING KEYS

5.04 All pickup keys can be converted from pickup to signaling or vice versa. The keys are converted from locking to nonlocking by removing a screw detail from the plunger. The spade tipped lead from pin 2 of the associated key plug must be connected to the SG cord lead. Speakerphone cannot be provided when signaling keys are used.

6. DIALS

ROTARY

6.01 A rotary dial is provided on the 830-type telephone set. When operated, the dial opens the telephone set connection to the CO or PBX line in a series of pulses to operate the automatic switching equipment.

TOUCH-TONE

6.02 A TOUCH-TONE dial is provided on the 2830-type telephone set. When operated, the dial provides multifrequency tones to operate the CO or PBX automatic switching equipment.

7. HOLDING

7.01 A hold button is provided for use with the line circuit hold feature. The hold button opens the A lead path to ground to place the line circuit into a hold condition.

8. STATION BUSY LAMP CIRCUIT

8.01 Sets are arranged for operating the station busy lamp circuit. The station busy lamp lights at a distant station when the principal station goes off-hook. Speakerphone cannot be provided when station busy lamp is required.

9. RADIO FREQUENCY NOISE SUPPRESSOR

9.01 A radio frequency suppressor for dial interference is built into the set network.

SECTION III - REFERENCE DATA

1. WORKING LIMITS

None.

2. FUNCTIONAL DESIGNATIONS

None.

3. FUNCTIONS

3.01 Provides a handset and antisidetone transmission circuit connected to a 2-wire common battery line.

3.02 Provides for picking up a maximum of nine lines.

3.03 Provides for operation of holding circuit.

3.04 Provides an audible signal device which can be connected to any line or audible signaling circuit.

3.05 Provides for TOUCH-TONE or rotary dialing.

3.06 Provides keys that may be converted in the field from pickup (locking) to signaling (nonlocking).

3.07 Provides for operation of a station busy lamp.

3.08 Provides for connection to speakerphone equipment.

3.09 Provides lamps to indicate visual signals.

3.10 Provides for connections to line circuits of Key Telephone System 1A1 or 1A2.

4. CONNECTING CIRCUITS

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

- (a) Line and Signaling Circuit - Key Telephone System No. 1A1 - SD-69203-01.
- (b) Key Telephone System No. 1A2 - CO and PBX (400D) Line Circuit - SD-69513-01.
- (c) Key Telephone System No. 1A2 - CO and PBX (400G) Line Circuit - SD-69651-01.

- (d) Key Telephone System No. 1A2 - CO and PBX (400H) Line Circuit - SD-69942-01.
- (e) Intercommunicating Line Circuit 2-Wire Selective Signaling for Key Telephone System No. 6A - SD-69268-01.
- (f) Station Busy Lamp Circuit - SD-69580-01.
- (g) Telephone and Speakerphone Circuit of Speakerphone Systems No. 3A and 3B - SD-69403-01; and No. 4A - SD-69909-01.

5. MANUFACTURING TESTING REQUIREMENTS

5.01 These key telephone systems shall be capable of performing all the functions specified in 3. FUNCTIONS.

BELL TELEPHONE LABORATORIES, INCORPORATED

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