

## 405A KEY TELEPHONE UNIT

### IDENTIFICATION, INSTALLATION, CONNECTIONS, AND MAINTENANCE

#### 1. GENERAL

**1.01** The 405A key telephone unit (KTU) provides a circuit for the selective privacy feature of a 1A1 or 1A2 key telephone system.

**1.02** The 405A KTU provides two separate circuits which allow the exclusion of a station or stations from either of two CO or PBX lines associated with the unit. The system can be expanded in multiples of two lines to accommodate any number of CO or PBX line circuits.

**1.03** Circuit control is initiated by a common control key at a master station. Additional exclusion circuits controlled by supplementary control stations may succeed a master control station.



*Do not connect common control keys in parallel with exclusion circuits.*

**1.04** Each KTU circuit provides means to supply a visual signal which can indicate when the exclusion circuit has been operated. The associated lamp may be located at the control station or at any other location desiring the visual signal.

**1.05** The circuit control key may be:

- *an exclusion key* associated with a telephone set switch hook plunger, D-specification Kit of Parts, eg, or
- *a locking key* (turnbutton or cutoff) of a multibutton telephone set or externally mounted key, or
- *a nonlocking (pushbutton) key*, externally mounted or as a signaling or converted pickup button in a telephone set.

**1.06** With exclusion key pull-up, or nonlocking key pushbutton control provisions, the selective privacy condition releases automatically when the control station handset is placed on-hook.

**1.07** When a turnbutton or 2-position locking-type key is used for control, the exclusion condition is temporarily cancelled upon handset hangup; but is immediately reactivated if the control station reconnects to a 405A KTU-equipped line without having manually restored the control key to its nonoperated position.

**1.08** The circuit is arranged so that an exclusion condition will be released when the control station places the call on HOLD. In this circumstance, the call is accessible to subordinate stations on the line. However, if the control station selects the same line again, with its control key still operated, subordinate stations will be excluded immediately.

**1.09** An added feature of the 405A KTU circuits formerly not available with single line exclusion, is the ability to use a 3A speakerphone system at the control station location.

#### 2. IDENTIFICATION

**2.01** The 405A KTU is a 20-contact plug-in type epoxy-coated metal board. The circuit is transistorized and includes resistors, diodes, varistors, and miniature relays. Printed wiring electrically connects the components on the board.

**2.02** The printed wiring is extended to the plug-end of the board. The plug-end allows the unit to be mounted into a connector which has a matching contact arrangement.

TABLE A

KEY STATION	CONTROL KEY	CONNECT GRD LEAD TO
600-Type Set	Nonlocking, locking, or turn	Spare terminal. Strap spare terminal to G with M1W cord.
500-Type Set	Nonlocking, locking, or turn	N, except 544A, 565A, and 565G, connect to M.
	Exclusion	1B
400-Type Set	Nonlocking, locking, or turn	N
6020-Type Key	Nonlocking, locking, or turn	A
6040-Type Key	Nonlocking, locking, or turn	N, except 6040B and 6041B, connect to M.
6050-Type Key	Nonlocking, locking, or turn	3

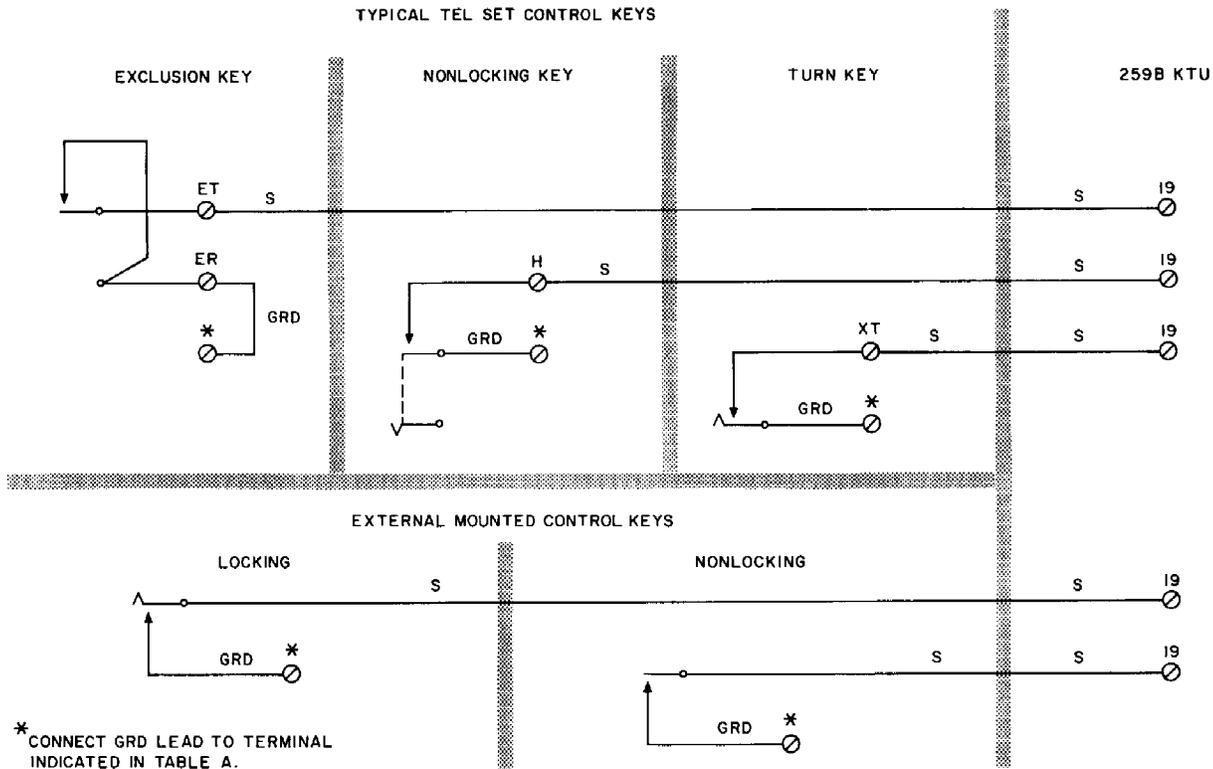


Fig. 1 — Typical Connections For Various Control Keys

### 3. INSTALLATION

**3.01** Install the 405A KTU by inserting the plug-end of the board into a compatible 20-contact connector. The 259B KTU provides two connectors suitable for installing one or two 405A KTUs in a system.

*Note:* Exercise care when inserting the 405A KTU into its mounting receptacle to avoid damage to the printed wiring and other circuit components.

### 4. CONNECTIONS

**4.01** Table A and Fig. 1 show various types of key connections required to control the exclusion circuit.

**4.02** Connect the 405A KTU as shown in Fig. 2. The figure shows the connections required when using the 259B KTU adapter.

**4.03** Use option Z (Fig. 2) when a nonlocking key is used to control the exclusion circuit.

### 5. MAINTENANCE

**5.01** If trouble is encountered within a circuit, interchange the 405A KTU with a unit known to be working properly. If the KTU is proved defective, replace it with a good unit.

*Note:* Exercise care when inserting or removing the KTU to avoid damage to the printed wiring and other circuit components.

**5.02** When a functional schematic or a description of circuit operation is required to assist in overall circuit trouble shooting, refer to SD- and CD-69489-01.

**5.03** Ensure proper protection for the KTU by placing it within a blister pack and overpacking, if necessary, when in storage or being transported.

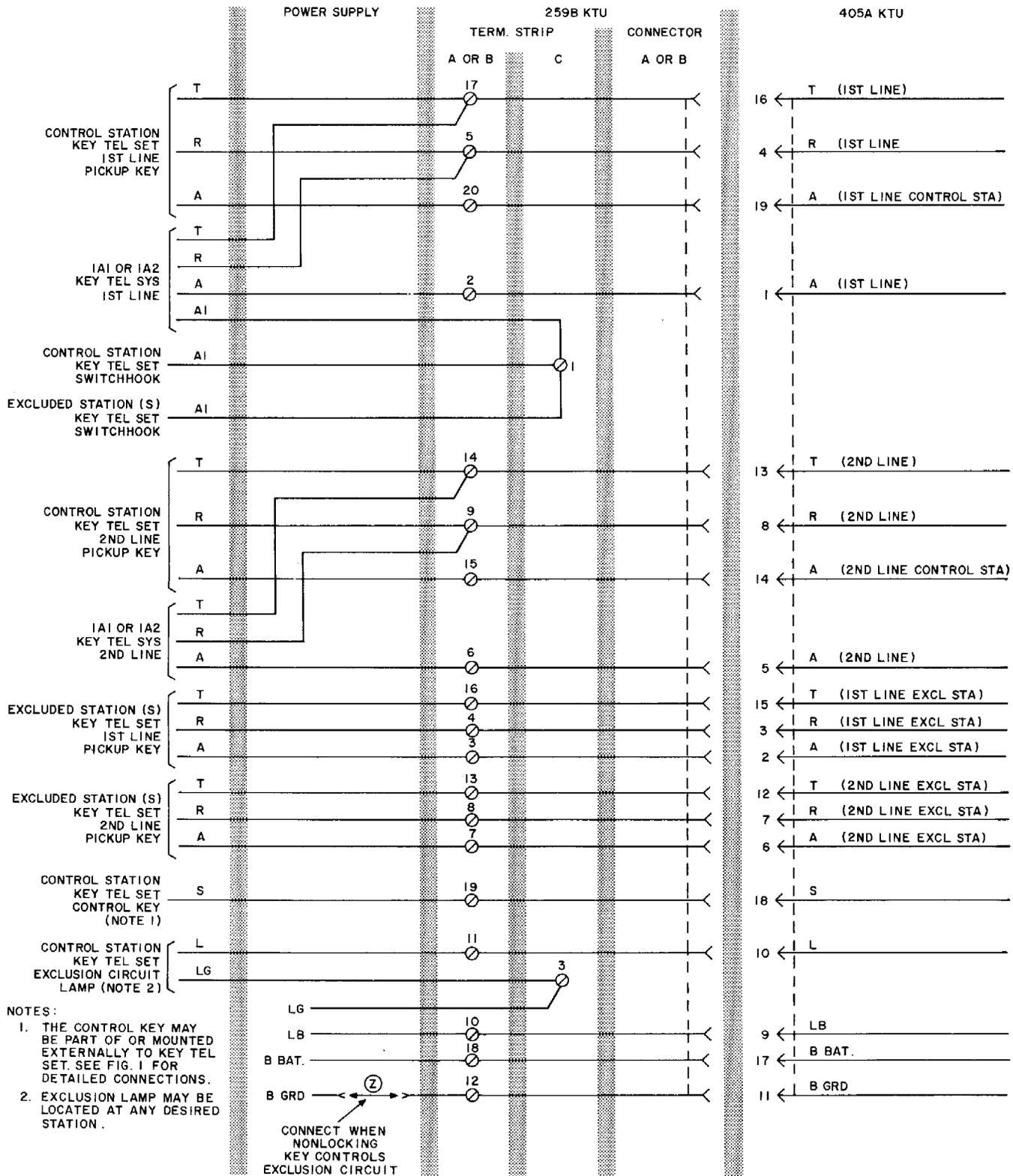


Fig. 2 — Connections for 405A KTU