

SERVICE
1A KEY TELEPHONE SYSTEM
TIE LINE AND CONTROL SERVICES

1. GENERAL

1.01 This section provides connection information for the various key telephone units that furnish tie line and control services for the 1A Key Telephone System. A schematic and connection figure is shown for each key telephone unit. Because of the many configurations of key telephone units possible, no attempt is made to show the various configurations; however, the key telephone units are grouped according to the services they provide.

1.02 This section is reissued to:

- Reinstate 17B KTU and show 17C KTU MD.
- Add 1C KTU which is MD.
- Revise Fig. 2, 8, 10, and 14.

Note: A small quantity of 1C and 17C KTUs have been manufactured. They may be used as direct replacements for 1B and 17B KTUs except that only two 17C KTUs may be used in a 105-type apparatus box.

1.03 This issue of the section is based on the following drawings:

SD-69091-01—Key Telephone System No. 1A, Line and Signaling Circuit

SD-69419-01—Key Telephone System No. 1A, Incoming CO or PBX Line Make Busy Lamp and Key Circuit

SD-69105-01—Key Telephone System No. 1A, Private Line Circuit

SD-69140-01—Key Telephone System No. 1A, Automatic Exclusion Circuit

If this section is to be used with equipment or apparatus reflecting later issues of the drawings,

reference should be made to the SDs and CDs to determine the extent of the changes and the manner in which the section may be affected.

2. CONNECTION INDEX

Tie Line Service

Fig. 1—7A Key Telephone Unit, Private Line Circuit

Fig. 2—1A, 1B and 1C (MD) Key Telephone Units, Hold Circuit

Fig. 3—2A and 12B Key Telephone Units, Battery Feed Circuit

Fig. 4—5A Key Telephone Unit, Auxiliary Hold Circuit

Fig. 5—6B and 6C Key Telephone Units, Supervisory and Busy Lamp Circuit

Fig. 6—10A Key Telephone Unit, Automatic Exclusion Circuit

Fig. 7—14A Key Telephone Unit, Ringup Relay Circuit

Fig. 8—15D Key Telephone Unit, Ringup Relay Circuit (Dual Type)

Fig. 9—16A Key Telephone Unit, Common Audible Control and Lamp Relay Circuit

Fig. 10—17B and 17C (MD) Key Telephone Unit, Switching Relay and Lamp Control Circuit

Fig. 11—18D and 18E Key Telephone Units, Busy and Supervisory Relay Circuits

Fig. 12—19B Key Telephone Unit, Lamp Flashing Circuit

SECTION 518-112-421

Fig. 13—20A Key Telephone Unit, Common Audible Control Circuit

Fig. 14—23A Key Telephone Unit, Noise Suppression Circuit

Fig. 15—25B (Automatic Cutoff Control Circuit) and 26B (Automatic Cutoff Circuit) Key Telephone Units Arranged for Automatic Cutoff of CO, PBX, or Private Line Circuits

Fig. 16—30A Key Telephone Unit, Time-Out Circuit

Fig. 17—31A Key Telephone Unit, Battery Feed Relay Circuit

Fig. 18—33A Key Telephone Unit, Lamp Wink Circuit

Fig. 19—34A Key Telephone Unit, Make Busy Lamp and Key Circuit

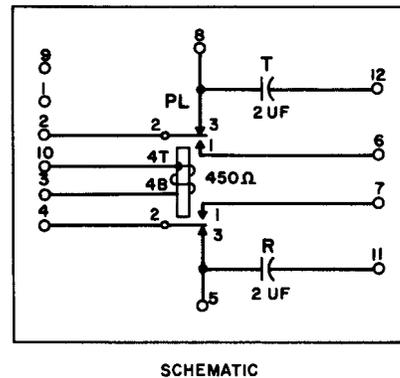
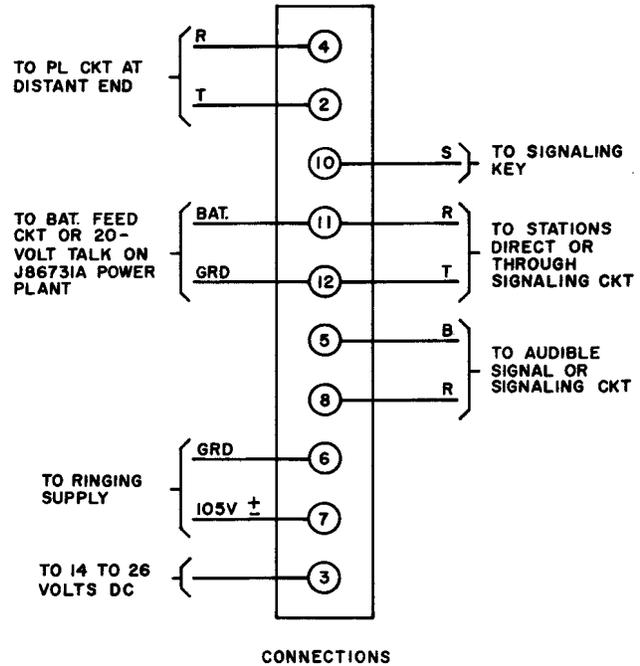
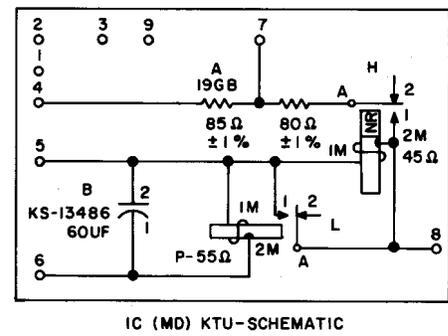
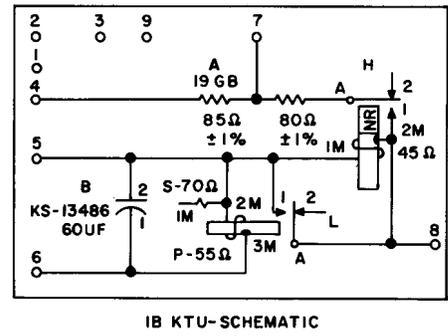
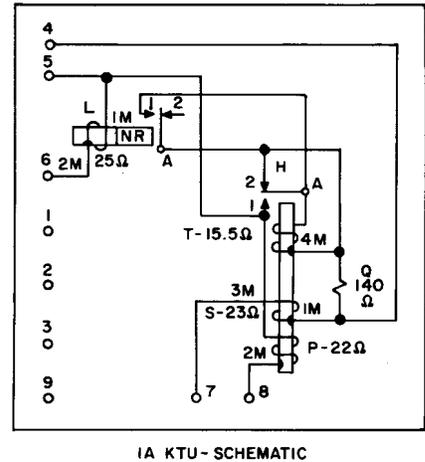
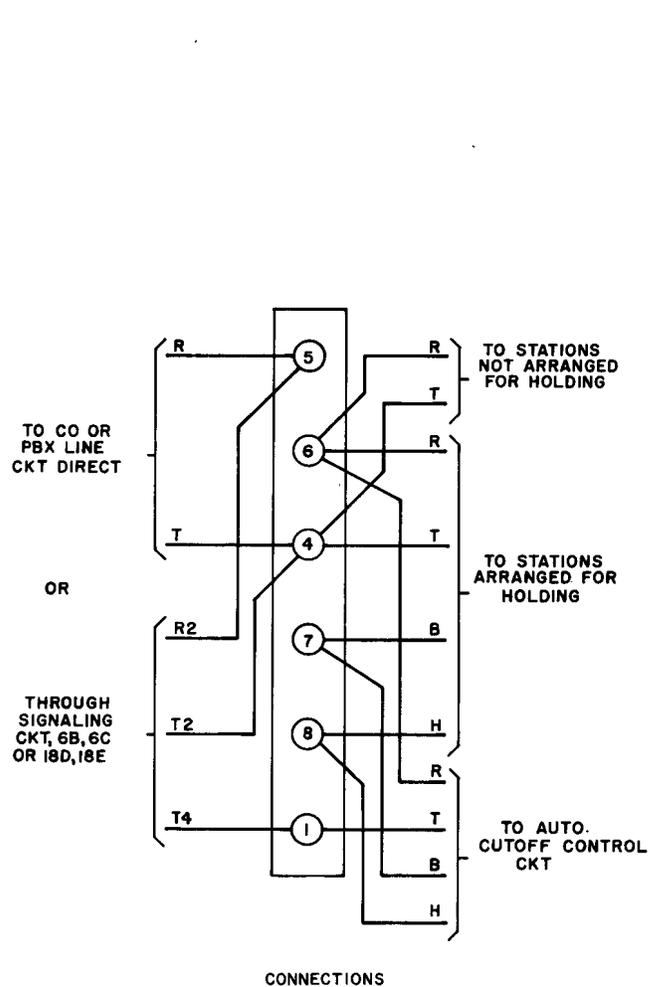


Fig. 1—7A Key Telephone Unit, Private Line Circuit



◆ Fig. 2—1A, 1B, and 1C (MD) Key Telephone Units, Hold Circuit ◆

SECTION 518-112-421

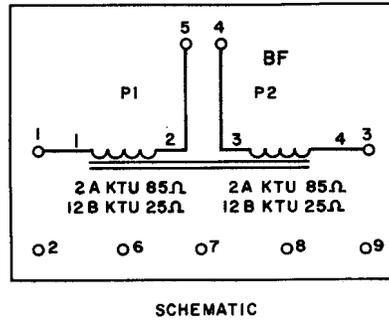
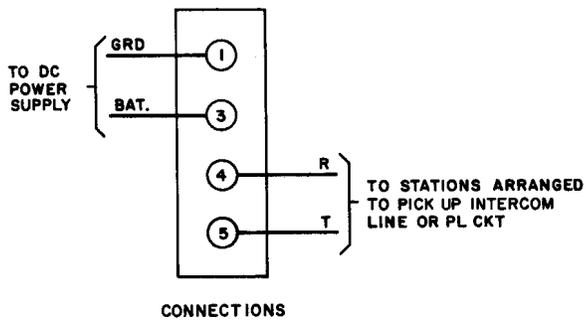


Fig. 3—2A and 12B Key Telephone Units, Battery Feed Circuit

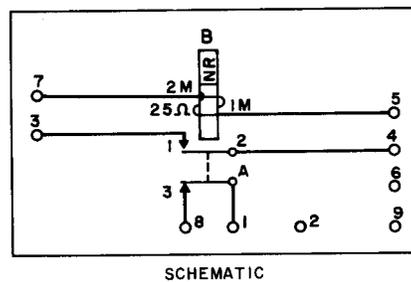
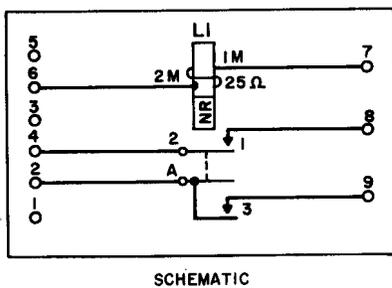
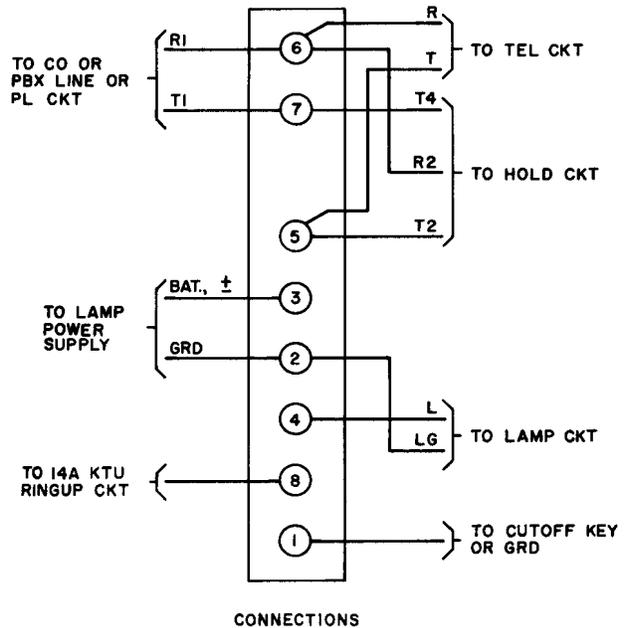
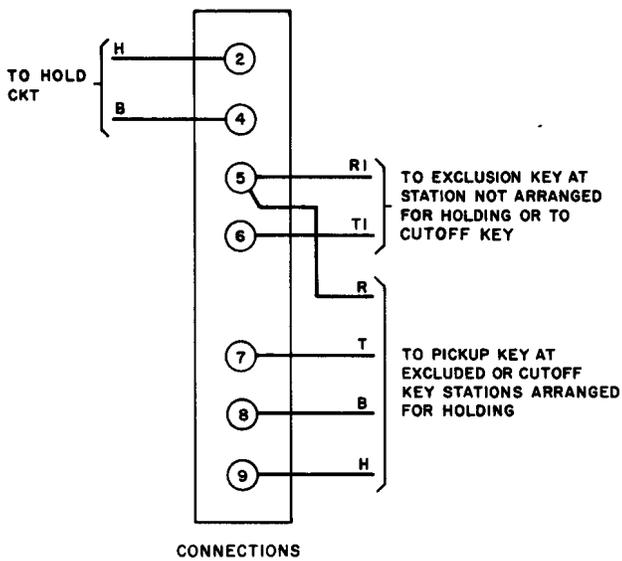


Fig. 4—5A Key Telephone Unit, Auxiliary Hold Circuit

Fig. 5—6B and 6C Key Telephone Units, Supervisory and Busy Lamp Circuit

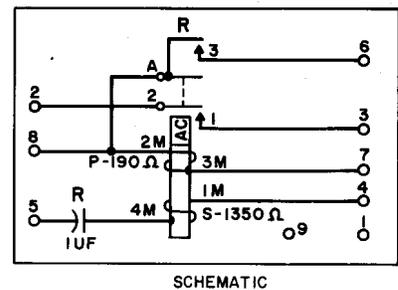
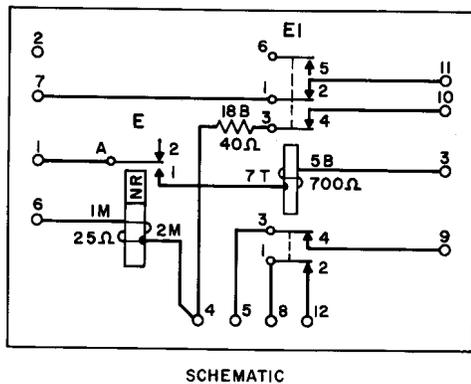
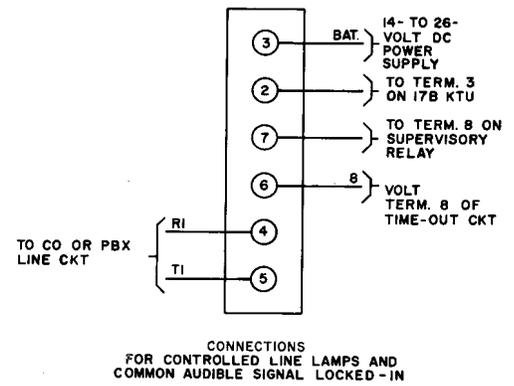
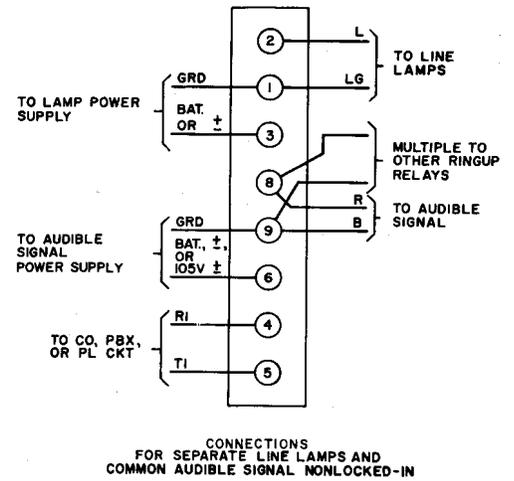
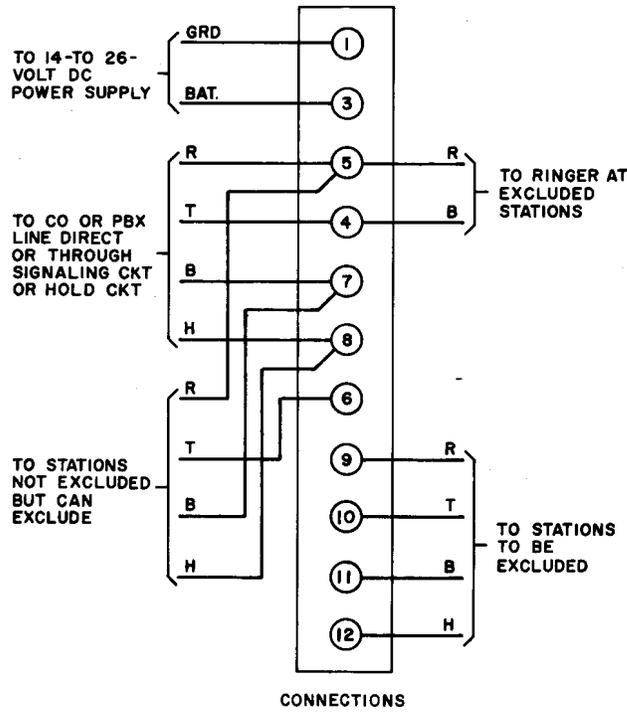
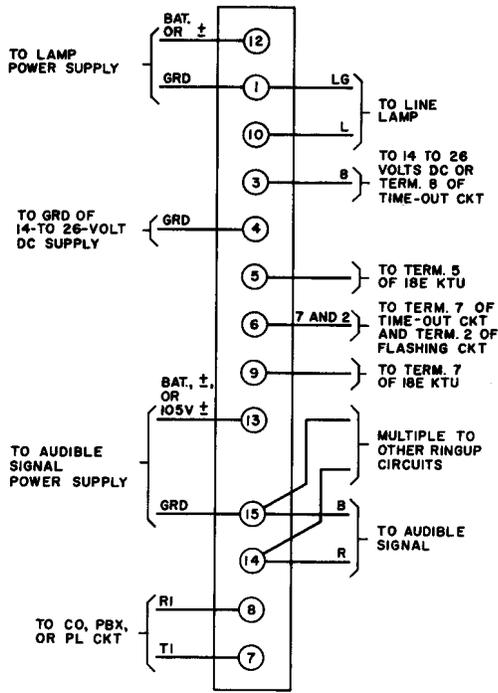


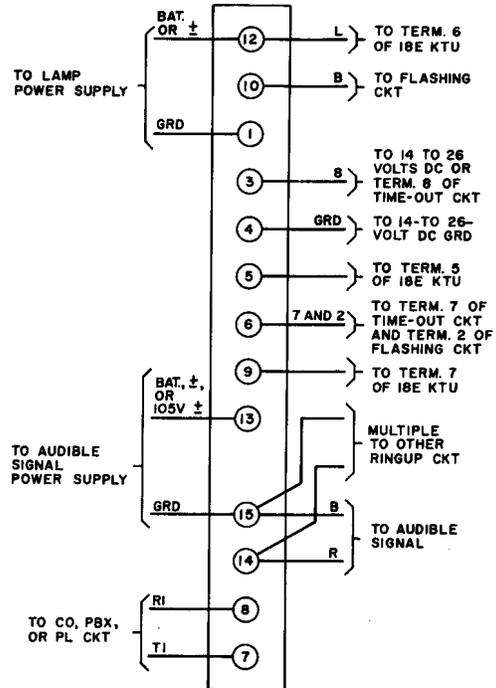
Fig. 6—10A Key Telephone Unit, Automatic Exclusion Circuit

Fig. 7—14A Key Telephone Unit, Ringup Relay Circuit

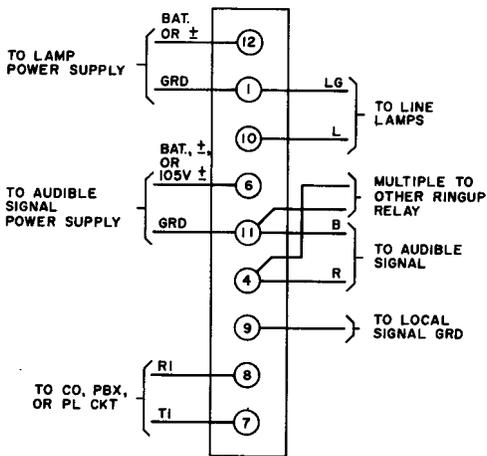
SECTION 518-112-421



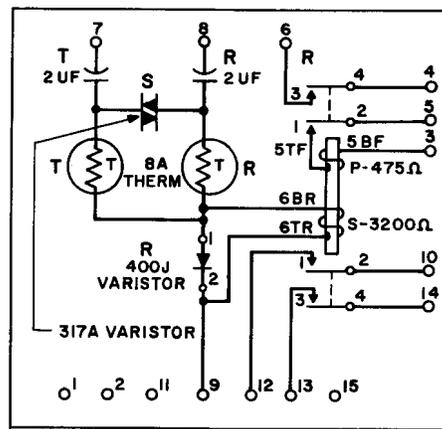
CONNECTIONS FOR CONTROLLED LINE LAMPS AND COMMON AUDIBLE SIGNAL LOCKED-IN



CONNECTIONS FOR CONTROLLED COMBINED LINE AND BUSY LAMPS AND COMMON AUDIBLE SIGNAL



CONNECTIONS FOR SEPARATE LINE LAMPS AND COMMON AUDIBLE SIGNAL NONLOCKED-IN



SCHEMATIC

◆ Fig. 8—15D Key Telephone Unit, Ringup Relay Circuit (Dual Type) ◆

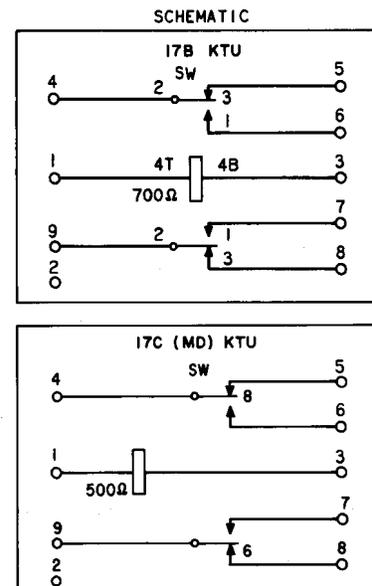
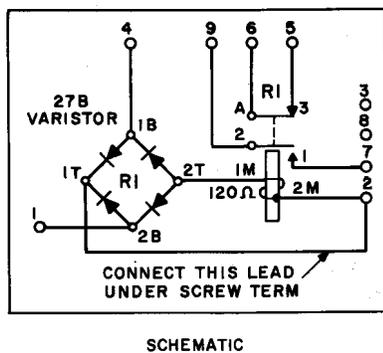
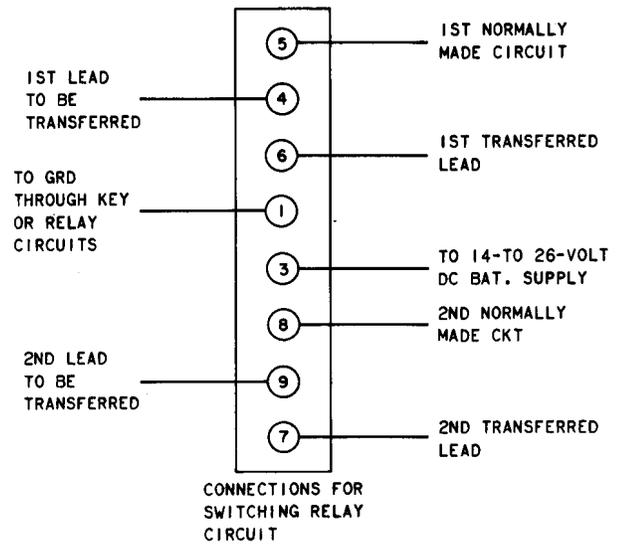
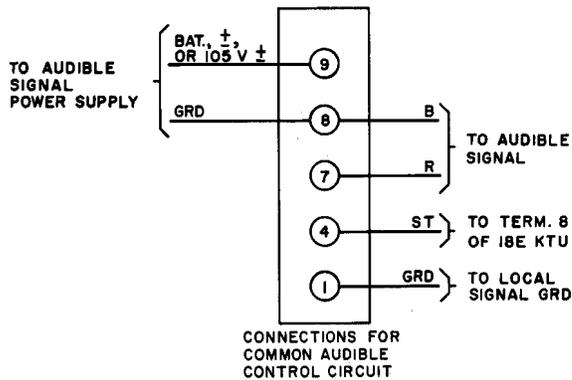
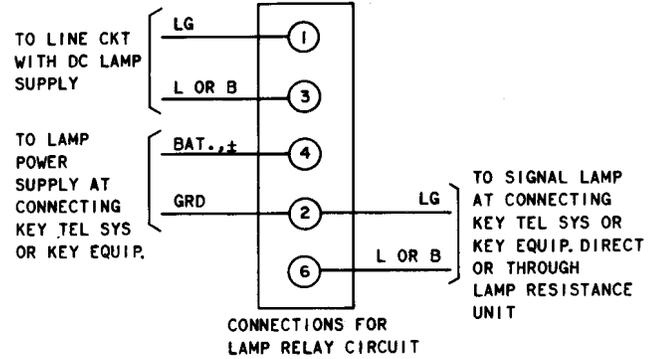
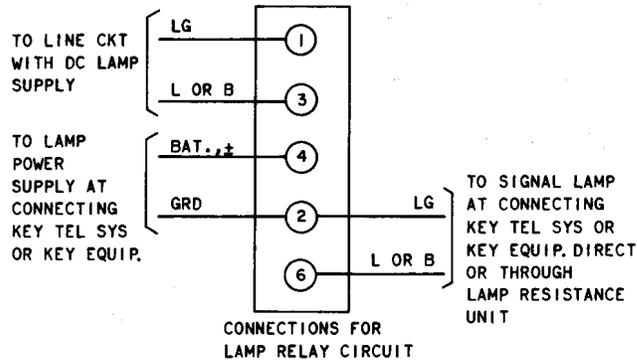


Fig. 9—16A Key Telephone Unit, Common Audible Control and Lamp Relay Circuit

Fig. 10—17B and 17C (MD) Key Telephone Units, Switching Relay and Lamp Control Circuit

SECTION 518-112-421

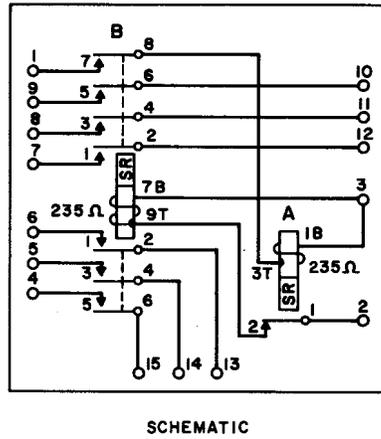
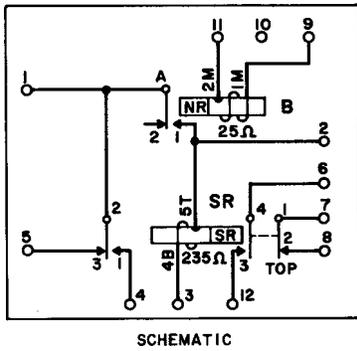
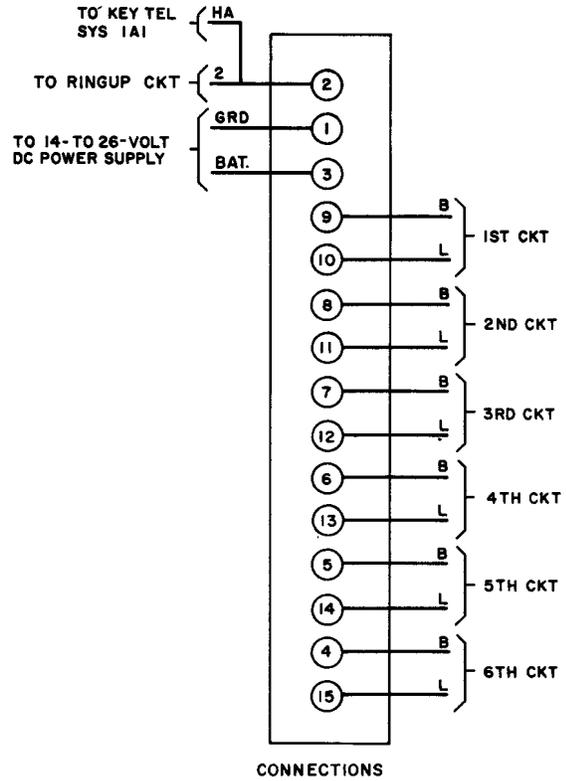
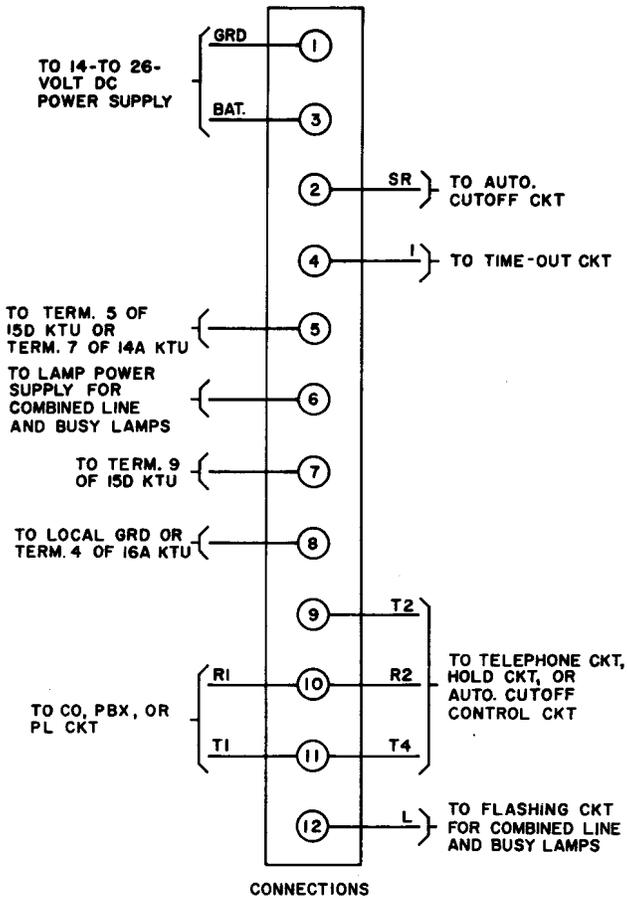


Fig. 11—18D and 18E Key Telephone Units, Busy and Supervisory Relay Circuits

Fig. 12—19B Key Telephone Unit, Lamp Flashing Circuit

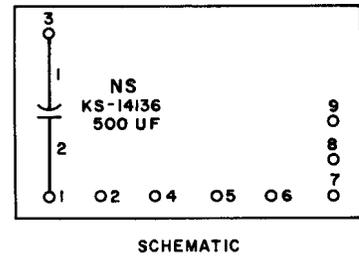
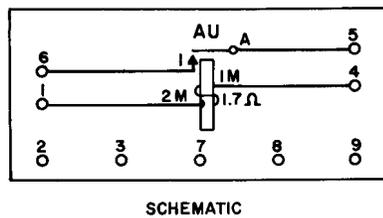
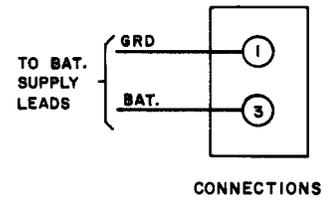
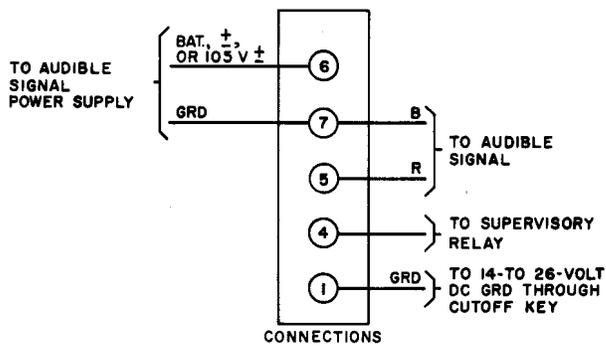
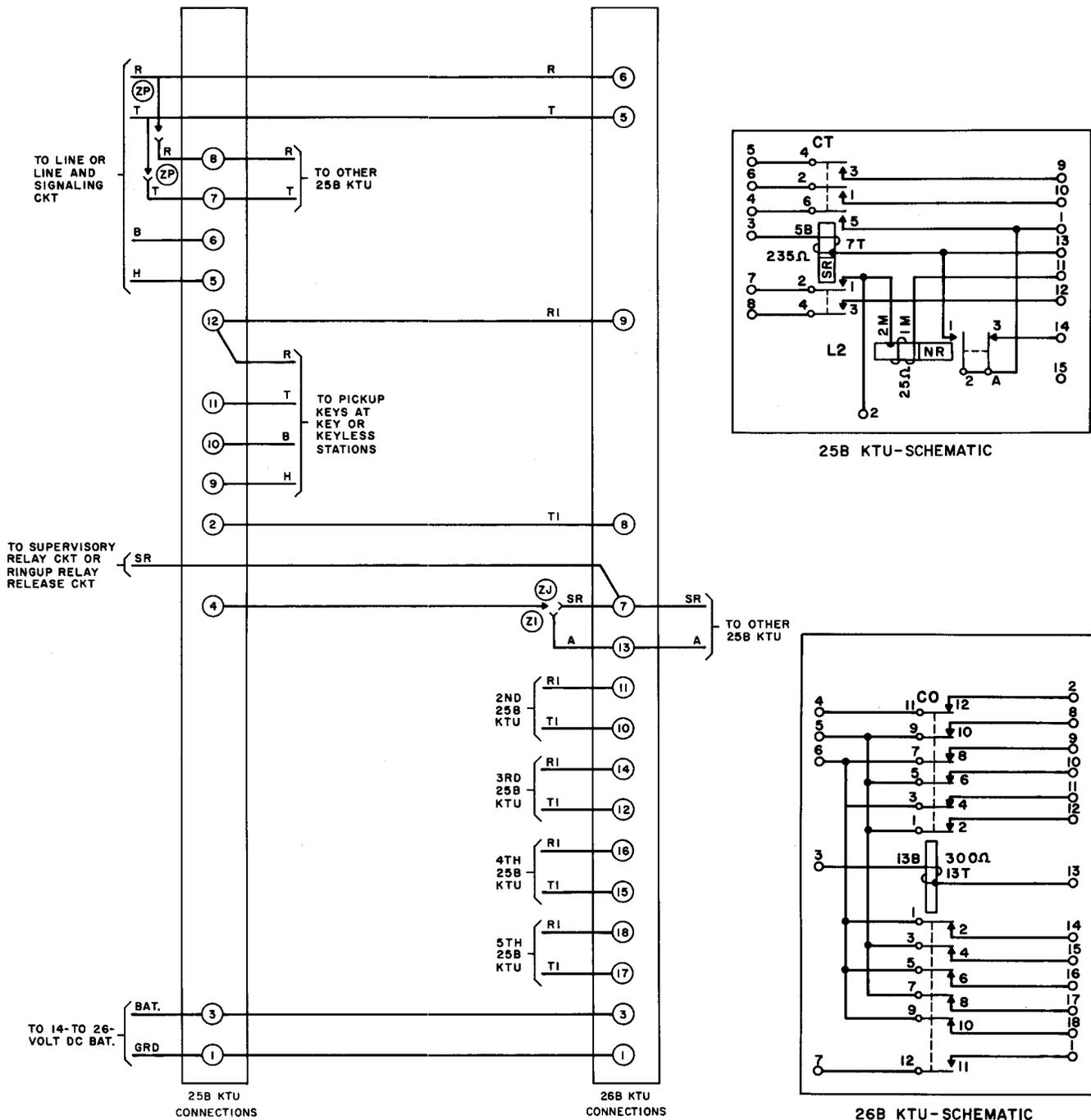


Fig. 13—20A Key Telephone Unit, Common Audible Control Circuit

Fig. 14—23A Key Telephone Unit, Noise Suppression Circuit

SECTION 518-112-421



- NOTES:
1. ZP AND Z1 WIRING FOR STATIONS WHICH CAN CUT OFF OTHER STATIONS.
 2. ZP AND ZJ WIRING FOR STATIONS WHICH CANNOT CUT OFF OTHER STATIONS, BUT CAN BE CUT OFF EXCEPT WHEN ON THE LINE.
 3. ZJ WIRING FOR STATIONS WHICH CANNOT CUT OFF OTHER STATIONS, BUT CAN BE CUT OFF AT ANY TIME.

Fig. 15—25B (Automatic Cutoff Control Circuit) and 26B (Automatic Cutoff Circuit) Key Telephone Units Arranged for Automatic Cutoff of CO, PBX or Private Line Circuits

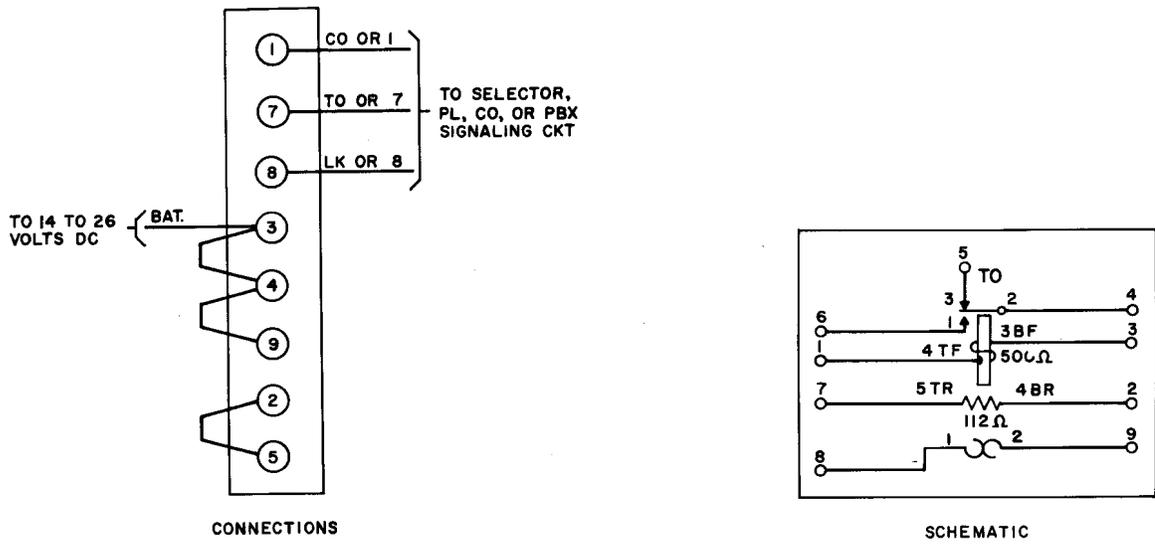


Fig. 16—30A Key Telephone Unit, Time-Out Circuit

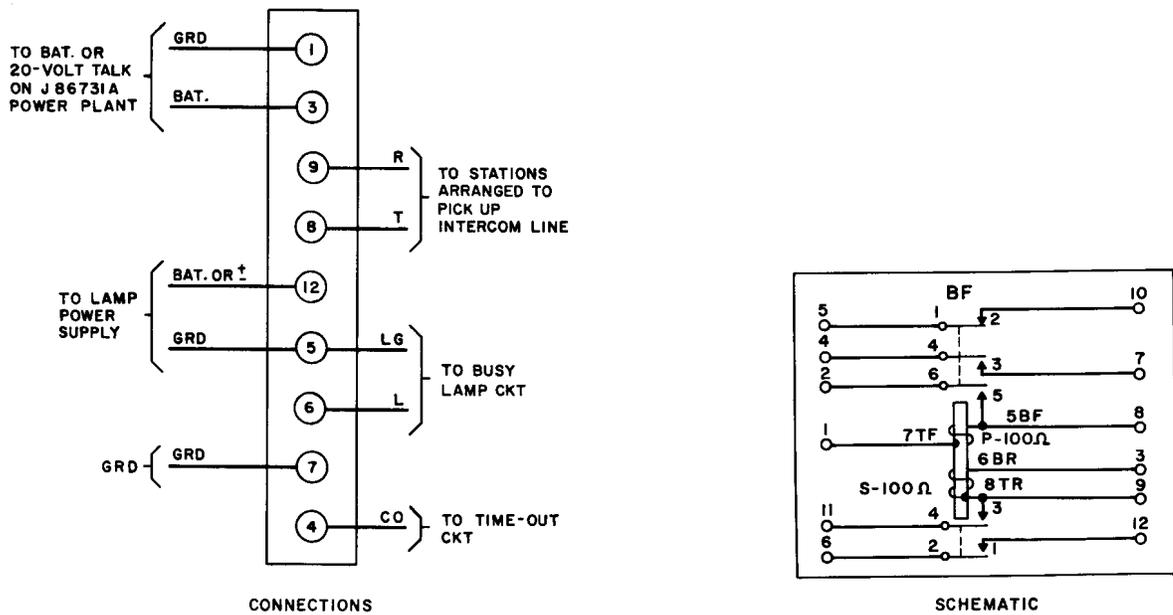


Fig. 17—31A Key Telephone Unit, Battery Feed Relay Circuit

