

KEY SERVICE UNITS 501 AND 502 TYPES
 IDENTIFICATION AND INSTALLATION

1.00 IDENTIFICATION

1.01 The 501- and 502-series key service units replace equivalent service feature 301- and 302-type key service units. They are designed primarily to receive miniature relay 1A2 key telephone system line circuit (400A KTU) and manual intercom (401 A KTU) plug-in printed circuit cards. This section is being reissued to correct Fig. 2.

1.02 In some cases the added line capacity obtainable in the new units will permit their use instead of some of the 311-type key service units.

1.03 The 500-series key service units are factory assembled and wired to provide the following features:

- Line pickup and hold.
- Manual intercom with busy lamp.
- Common audible signaling of central office or PBX line.

- Flashing line lamp (central office or PBX line only).
- Winking (or steady) hold lamp indications.
- 9-Station (selector-only) dial intercom service.
- Individual line time-out with optional short or extended release time interval.

1.04 Table A provides a key reference for individual KSU packaged arrangements.

1.05 Depending on the particular KSU code ordered, these packages may be either wall or floor mounted. Except for the 400A and 401A KTUs, these packages consist of:

- 177A Backboard
- 31B Apparatus Mounting
- 116A Cover

TABLE A

500-SERIES KEY SERVICE UNITS

Package Designation	9-Station Dial Intercom 207C KTU	Power Plant J86731D2, List 1	116A Cover	ED-69462 Floor Stand (with cover)	1-66B1-25 1-66B3-50 Conn Blocks	A75A Conn Cable	31B App Mtg	177A Back-Board	KS-19175, L1 Interrupter
501A1					●		●	●	●
501A1D	●				●		●	●	●
501A2			●		●		●	●	●
501A2D	●		●		●		●	●	●
501A3				●	●		●	●	●
501A3D	●			●	●		●	●	●
501A4		●		●	●		●	●	●
501A4D	●	●		●	●		●	●	●
502A3D	●			●	●	●	●	●	●
502A4D	●	●		●	●	●	●	●	●

- 66-Type Connecting Blocks
- KS-19175, List 1 Interrupter
- 207C KTU (as required)
- J86731D2, List 1 Power Plant (as required)
- ED-69462-50 Floor Stand Arrangement (as required)

1.06 All key service units are supplied from the factory with the KS-19175, List 1 interrupter in place.

1.07 Line circuit (400A KTU) and manual intercom (401A KTU) plug-in cards are ordered and installed separately, as required, by the service order.

1.08 The prewired package capacity, at the connecting blocks, is 1 to 6 central office or PBX lines, plus dial intercom (optional).

1.09 When manual intercom service is to be furnished, the total line capacity is reduced by one for each 401A KTU installed. Unlike present 2-wire manual intercom requiring T and R leads only, the new 401A KTU requires T, R, A, and A1 leads.

1.10 Spare mounting space in the lower half of the KSU 31B apparatus mounting can be used for installing additional miscellaneous angle-bracket or panel-type key telephone units.

1.11 Their interconnection with the basic package circuit and terminating cables must be via screw terminals on the added miscellaneous key telephone units.

1.12 Preprinted aluminum foil pressure-sensitive tapes are provided on each 66-type connecting block to designate service feature leads and wiring connections of these key service units.

1.13 Refer to section entitled Equipment Cabinets and Apparatus Mountings, Installation for mounting these packages.

1.14 Two 66-type connecting blocks are mounted on the 177A backboard

behind the gate of the 31B apparatus mounting as follows:

- Block A (lefthand) is a 6-clip 66B1-25 block on which terminate the T, R, A, A1, LG, and L leads for six central office or PBX (or manual intercom) lines. T, R, LG, and L leads for dial intercom line service also terminate on this block.

- The right hand connecting block, 66B3-50, is electrically divided into a left-hand (Block C) and a right-hand (Block D) section. Three clips per row per section are supplied instead of the full width six clips per row as Block A. Dial intercom audible signal leads and various audible signal ringer control option leads terminate on the left portion (Block C), while incoming central office or PBX line, power supply, and interrupter leads for connecting to external circuits terminate on the right portion (Block D).

1.15 For connections refer to section entitled Key Service Units, 501 and 502 Types, Connection.

1.16 The two 502-series key service units include a length of A75A connector cable, factory terminated on the 66-type connecting blocks. Telephone sets may be plugged in these packages directly or extended by use of connector cables and/or adapters.

1.17 In these packages, and other than the KS-19175, List 1 interrupter, there is no common equipment such as the 232B KTU of the 300-series key service unit.

1.18 Wiring options are furnished per line card (400A KTU) to give the following circuit options:

- Wink-hold (as wired by the factory) vs steady hold lamp.
- Common audible (as connected by the factory) vs separate line ringer signaling.
- Short duration time-out (as furnished by the factory) of locked-in line

signals when associated in machine ringing central office or PBX trunks, or extended duration time-out option for use when 400A KTU is involved on manual ring PBX lines.

2.00 INSTALLATION

2.01 Mount equipment in accordance with existing practices.

2.02 Add individual line circuit cards as required by service order. Before inserting the line cards into the connector board, change wiring options on the 400A KTU if necessary (Fig. 1).



The plug-ended card is treated with a lubricant to assist in inserting or removing it. Do not wipe off this lubricant.

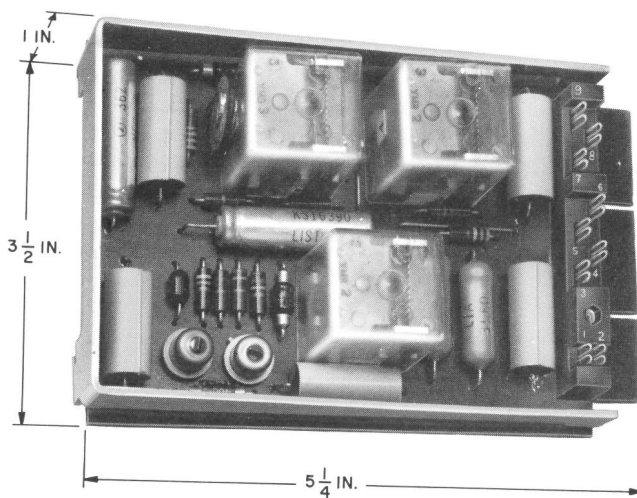


Fig. 1 - 400A Line Circuit Card

2.03 Plug-in components should be fully seated in their receptacles to ensure reliable contact. Grasp card as shown in Fig. 2. Use a vertical rocking motion with enough force exerted to seat the card fully.

2.04 Place additional station cable and wire in accordance with accepted practice.

2.05 Cables and wire may enter the package from top or bottom. Dress cables along the sides of 66-type connecting blocks.

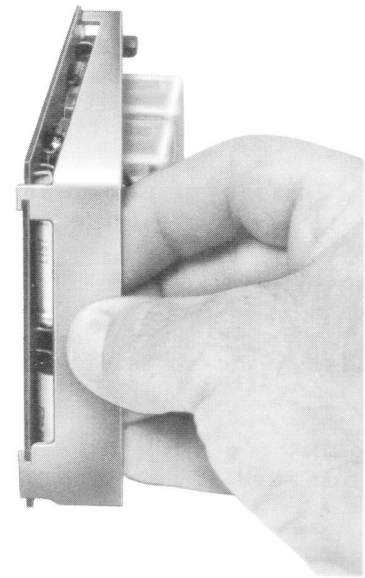


Fig. 2 - Method of Insertion

2.06 Using a 714 tool terminate wires on clip from left to right in succession on blocks A and C and from right to left on block D.

2.07 Connect to an external power source if power is not supplied as part of the package.

2.08 It is recommended that only one 501- or 502-type key service unit be supplied from one 101G (or equivalent) 2-amp power plant.

2.09 Ground the power plant in accordance with sections entitled Station Systems, Power Supply; and section entitled Protector and Signaling Grounds.

3.00 STATION APPARATUS

3.01 Connections of 400-, 500-, and 600-series key telephone sets, and externally mounted keys, are made in accordance with their respective connection practice.

3.02 Telephone sets wired for A lead control must be used with the 1A2 key telephone system 501- and 502-series key service units.

Final Check

3.03 Upon completion of key system unit package installation, check to assure that all features of the system are being provided properly at all stations involved.