

K410A KEY TELEPHONE UNIT
Paging Adapter Circuit for 36A and 601A
Key Telephone Systems

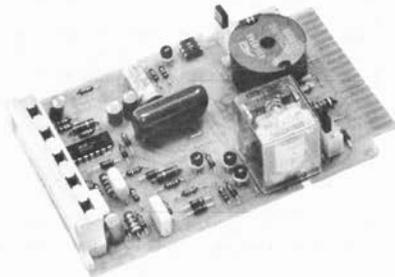


Figure 1.—K410A Key Telephone Unit

1.00 GENERAL

1.01 The K410A Key Telephone Unit (KTU) is a plug-in unit designed for use in a 36A or 601A Key Telephone System (KTS) to provide access to a paging amplifier from intercom stations. The paging circuit is accessed by dialing an assigned intercom number.

1.02 This KSP represents a general revision and is re-issued to include installation of the K410A in a 36A KTS E/W plugs instead of connecting blocks for external connections and to add information on installation in a 601A KTS.

1.03 The paging system is operated at an intercom station by pressing the intercom button on the station set and going off-hook. After receiving a dial tone,* the assigned number can be dialed. Voice paging can then be accomplished via the intercom system and the K410A KTU. When the calling station goes on-hook after paging, the circuit reverts to the idle state.

1.04 The K410A paging access circuit is designed to have the following characteristics:

- (1) Performs all functions from a power supply with a voltage range from -22 Vdc to -26 Vdc.

Optional in a 601A System

- (2) Operates with 100 Vac \pm 30% or 14 Vac \pm 40% signal voltage inputs.
- (3) Permits the transfer of audible communications from input to output (intercom to paging amplifier) at -3.5 dBv to +0.5 dBv.
- (4) Reference frequency is 1 kHz at amplitude of 1.0 Vrms.

(5) Strapping Options:

Option	Strap	Description
W	E to F	Ground switched to pin 16
X	D to E	-24 Vdc switched from pin 18 to 16
V	A to B	18 Vac + 40% signal voltage
U	B to C	100 Vac + 30% signal voltage

- (6) Relay contacts rated at 1 Amp, 28 Vdc.
- (7) Generates an audible tone burst each time paging circuit is activated. Tone burst is heard in handset and paging system.
- (8) Works into an input impedance of from 300 to 1000 ohms. (Paging amplifier should have an impedance of approximately 600 ohms for proper matching.)

1.05 The K410A will plug into any 18 or 20 pin connector having 0.150-inch contact centers. Plugs into same connectors as the K400 line cards.

1.06 Operating environment is as follows:
Temperature: 0° to +55° C.
Humidity: 0% to 90% without condensation.

2.00 INSTALLATION

GENERAL

2.01 The K410A KTU may be inserted into any vacant CO/PBX line card connector, and the paging access circuit may be assigned any available intercom station number.

INSTALLATION IN 36A KSU

Connect Amplifier

2.02 Determine CO/PBX slot to be used and connect CO/PBX Line T and R of that line position on Block A, B, or C to the amplifier inputs. For example, if line position 1 is to be used for the 410A, connect one amplifier input to block A, terminal 1 (T1) and the other to A-2 (R1).

Connect T, R, and RT Leads

2.03 Determine which intercom station number will be used and connect the STATION T, R, and RT terminal of the CO position used to the T, R, and RT terminals on Blocks D, E, or F of the intercom station used. If line position 1 is used for the 401A, and intercom number 25 is assigned to the voice paging feature, connect A-3 to D-17, A-4 to D-18, and A-10 to D-20.

Strap K410A for Proper Options

2.04 Because the 36A intercom uses 105 Vac for intercom signaling, the K410A KTU must be strapped for "Option U".

Install K410A KTU

2.04 Insert the K410A KTU into the CO/PBX line position assigned to it with component side up.

INSTALLATION IN A 601A KSU (ALL BUZZER OR RINGER SIGNALING OR MIXED SYSTEM.)

Connect Amplifier

2.06 Determine CO/PBX slot to be used and connect "COT" and "COR" of that line position to the amplifier inputs.

Connect Intercom "SIG" Leads

2.07 Determine the intercom number to be used for voice paging and connect the corresponding "SIG" clip, on row 40 or 41, to the "RC" clip of the line position used.

NOTE: In a mixed system, an even number must be assigned to voice paging feature.

Connect T, R, and A Leads

2.08 Connect any "T" clip of line position used to any intercom "T" clip on row 42 or 44.

2.09 Connect any "R" clip of line position used to row 30, clip 6, and connect row 31, clip 6, to any intercom "R" clip on row 43 or 45. (A 56-ohm resistor is factory wired between 30-6 and 31-6 clips.)

2.10 Connect any "A" clip of line position used to any clip in column 6, rows 1 through 10. (To simplify trouble-shooting, use clip 1 through 10 that corresponds to "SIG" terminal used. For example, if SIG 8 is used, connect A-lead to clip No. 8, in column six.)

Connect "AG" to "RG"

2.11 Connect "AG" clip to "RG" clip at line position used.

Strap K410A KTU for Proper Options

2.12 Strap the KTU for "Option W".

2.13 If 18 Vac is used for intercom signaling, strap the KTU for "Option V".

2.14 If 105 Vac is used for intercom signaling, strap the KTU for "Option U".

Install K410A KTU

2.15 Insert the K410A KTU into the CO/PBX line position assigned to it, with component side up.

MUSIC MUTING (36A or 601A KSU)

2.16 If the PA system used for voice paging is also used for background music, the music can be muted during paging by connecting one output of the music source to pin 9 of the 410A.

AMPLIFIER SWITCHING, IF USED (36A ONLY)

2.17 Additional connections when switched contacts are used for control of paging amplifier power source are as follows:

(1) If the -24 Vdc on pin 18 of the K410A KTU is used to operate a relay, connect the lead from the relay to terminal 16 of the line position used for the K410A KTU and strap the K410A for option "X". Connect AB to pin 18.

(2) If a separate power supply is to be fed via the contacts, connect one amplifier power lead to the "A" terminal (on station block) for the K410A, connect the other amplifier lead to voltage, and strap the K410A for option "W".

3.00 CIRCUIT CARD DESCRIPTION

COMPONENTS

3.01 Locations of option blocks are shown in figure 3.

SCHEMATIC DIAGRAM

3.02 Figure 4 gives a schematic diagram of the K410A KTU. The diagram shows the terminal points for strapping options; U, V, W, and X.

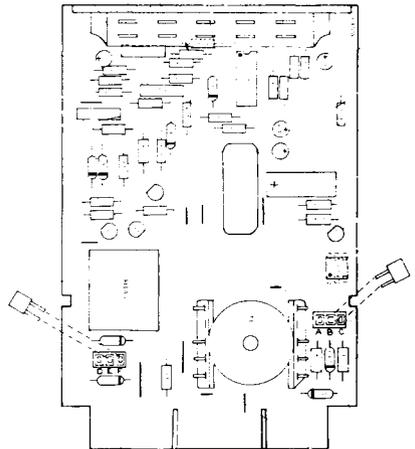
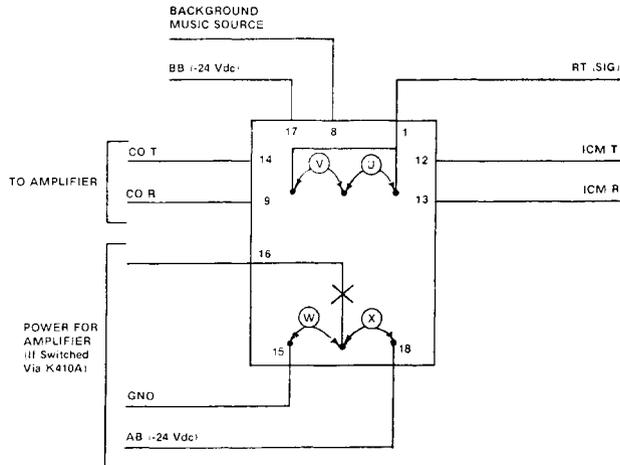


Figure 3. K410A Circuit Card



OPTIONS:
 U-FOR 105 Vac INTERCOM SIGNALING
 V-FOR 10-18 Vac INTERCOM SIGNALING
 W-GROUND SWITCHED TO PIN 16
 X-AB SWITCHED TO PIN 16

Figure 2. K410A KTU Hookup to Intercom

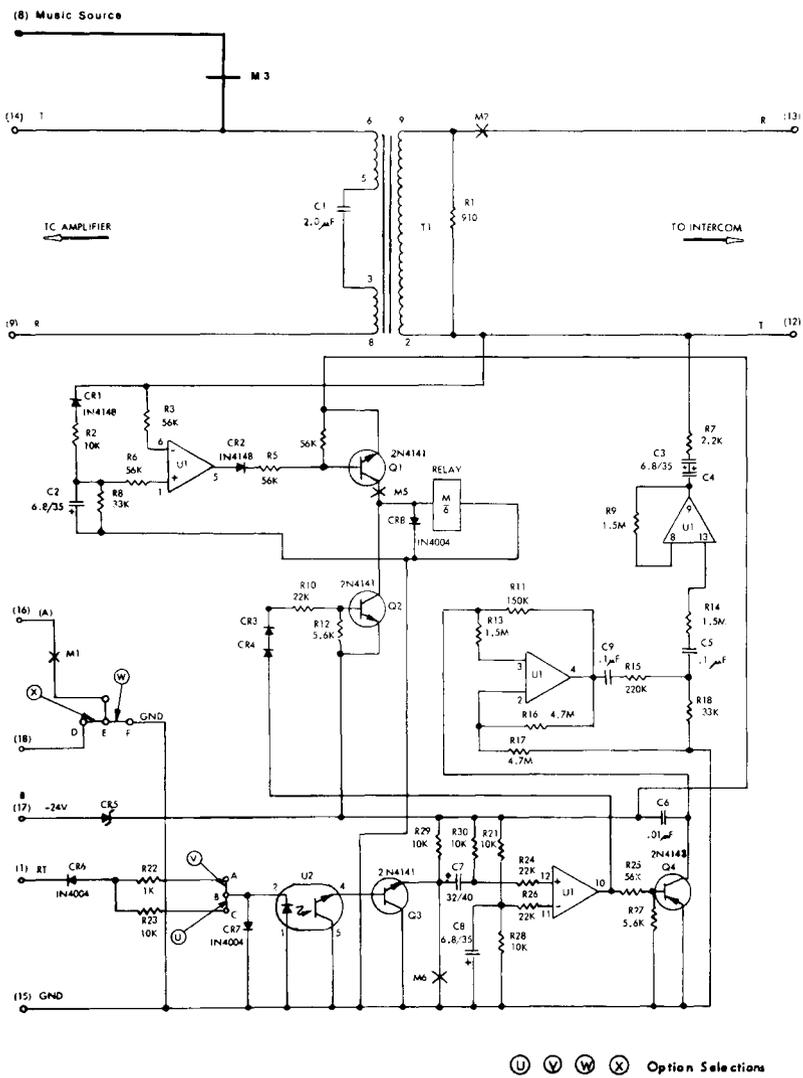


Figure 4. K410A Paging Adapter Circuit, Schematic Diagram

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