

AUDIBLE AND VISUAL SIGNALING USING 227A KEY TELEPHONE UNIT

1.00 GENERAL

1.01 The 227A KTU is a panel-type mounted unit. It is the same size as a 202-type KTU requiring seven 7/16-inch modules on a mounting bar. Three wire spring relays designed to operate on 14 to 26 volts dc are used in this unit. The relays are wired independently of each other. This permits a wide variety of applications. In use it is similar to and in many cases replaces the 17B KTU. It was designed to be a visual signal control, audible signal control, and switching relay on all systems. (See Fig. 1.)

1.02 Fig. 2 shows four 400A varistors, factory wired to provide four CA1 leads. It also shows arrangement of 400A varistors placed by installer for additional control leads.

2.00 CONNECTIONS

2.01 The CA or CA1 leads may connect to the following:

- Line or signal circuit through contacts on the ringup or signal relay.
- External mounted keys.
- Keys in telephone set.
- Intercommunicating pickup keys at key stations arranged with private lines.
- Key equipment No. 101A or 101B.



Connect CA1 leads through 400A varistors when an audible signal is common to more than one group of line or signal circuits. This prevents false operation of other audible signals not common to the same group of line or signal circuits.



CA leads may multiple to other CA leads, and CA1 leads may multiple to other CA1 leads if they are common to the same line or signal circuit.

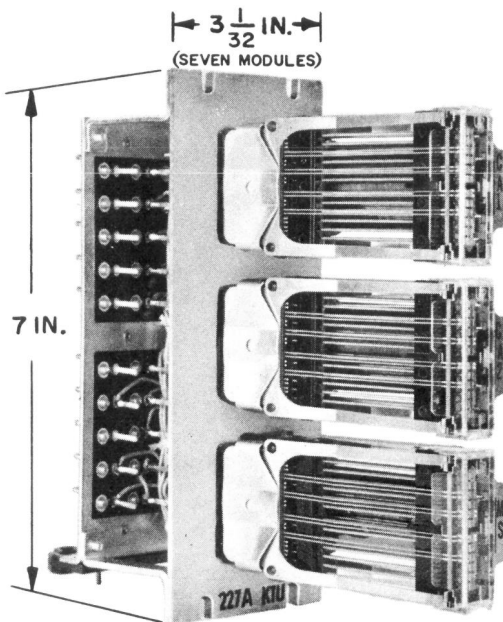


Fig. 1 — 227A KTU — Front View

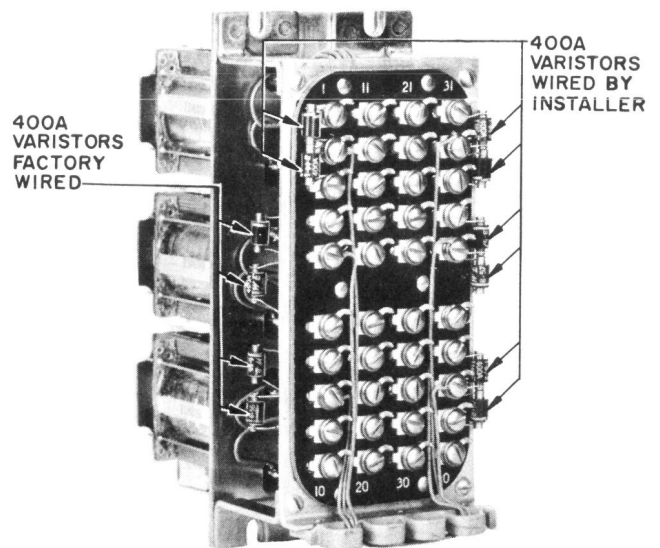
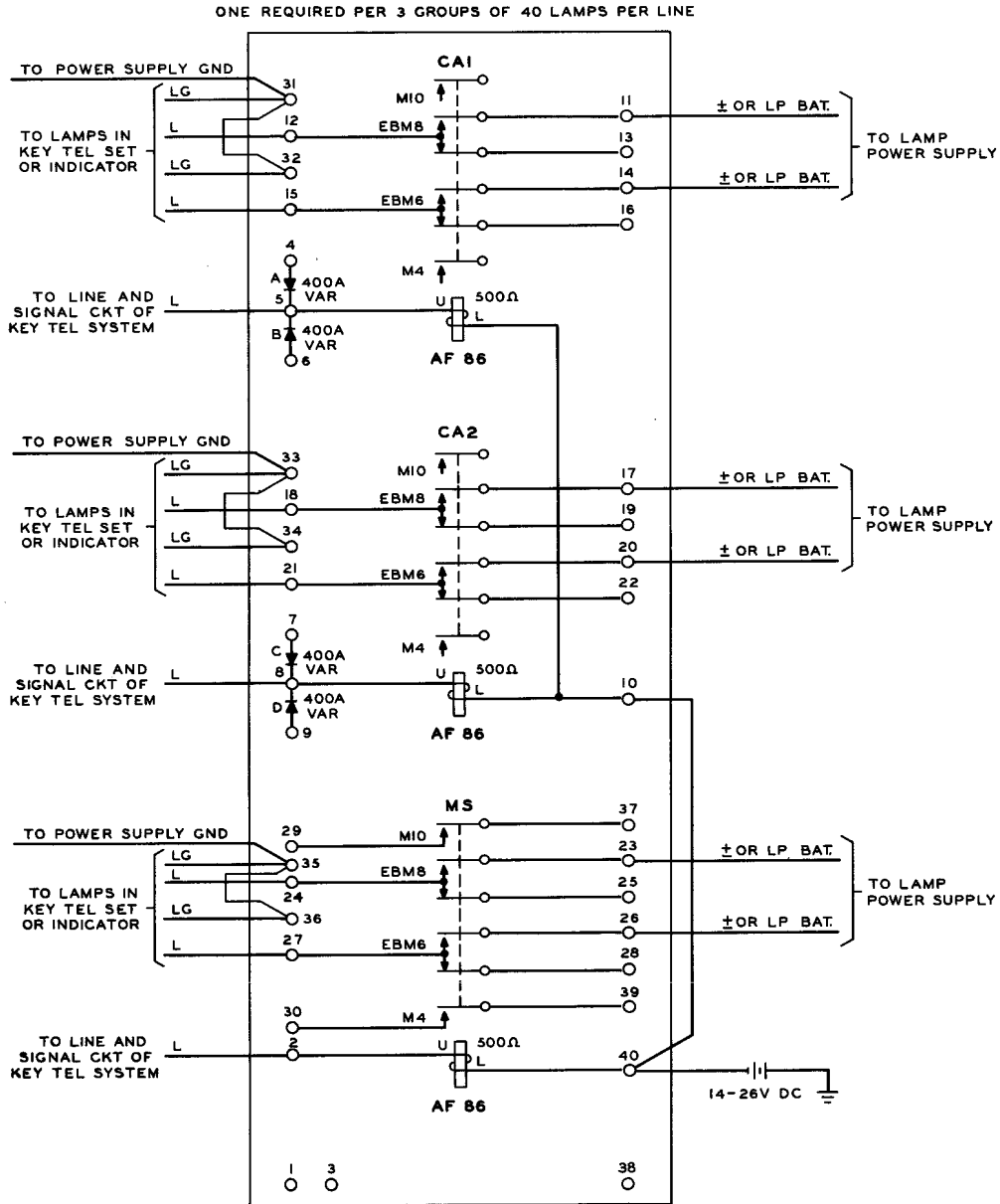


Fig. 2 — 227A KTU — Rear View

2.02 Fig. 3 is used in any system when additional lamps over the maximum permitted for a given circuit are required. By using one or more 227A KTU, the number of lamps can be increased to meet any service requirement.



NOTES:

1. CONNECT ALL LAMPS ASSOCIATED WITH THE LINE TO THIS FIGURE.
2. CONNECT RELAY GROUND TO TERMINALS DESIGNATED LAMP BATTERY ON LINE AND SIGNAL CIRCUIT.
3. CONNECT L LEAD OF 227A KTU TO L LEAD OF LINE AND SIGNAL CIRCUIT.
4. MAXIMUM 20 LAMPS PER L LEAD.



Fig. 3 — 227A KTU — Auxiliary Lamp Relay Circuit

2.03 Fig. 4 provides a flexible arrangement for using the same audible signal as a line signal and common signal. A common audible signal may be associated with one or more groups of line or signal circuits. One line or signal circuit may operate one or more audible signals. It may also be used to operate two or more signals which require different operating voltages.

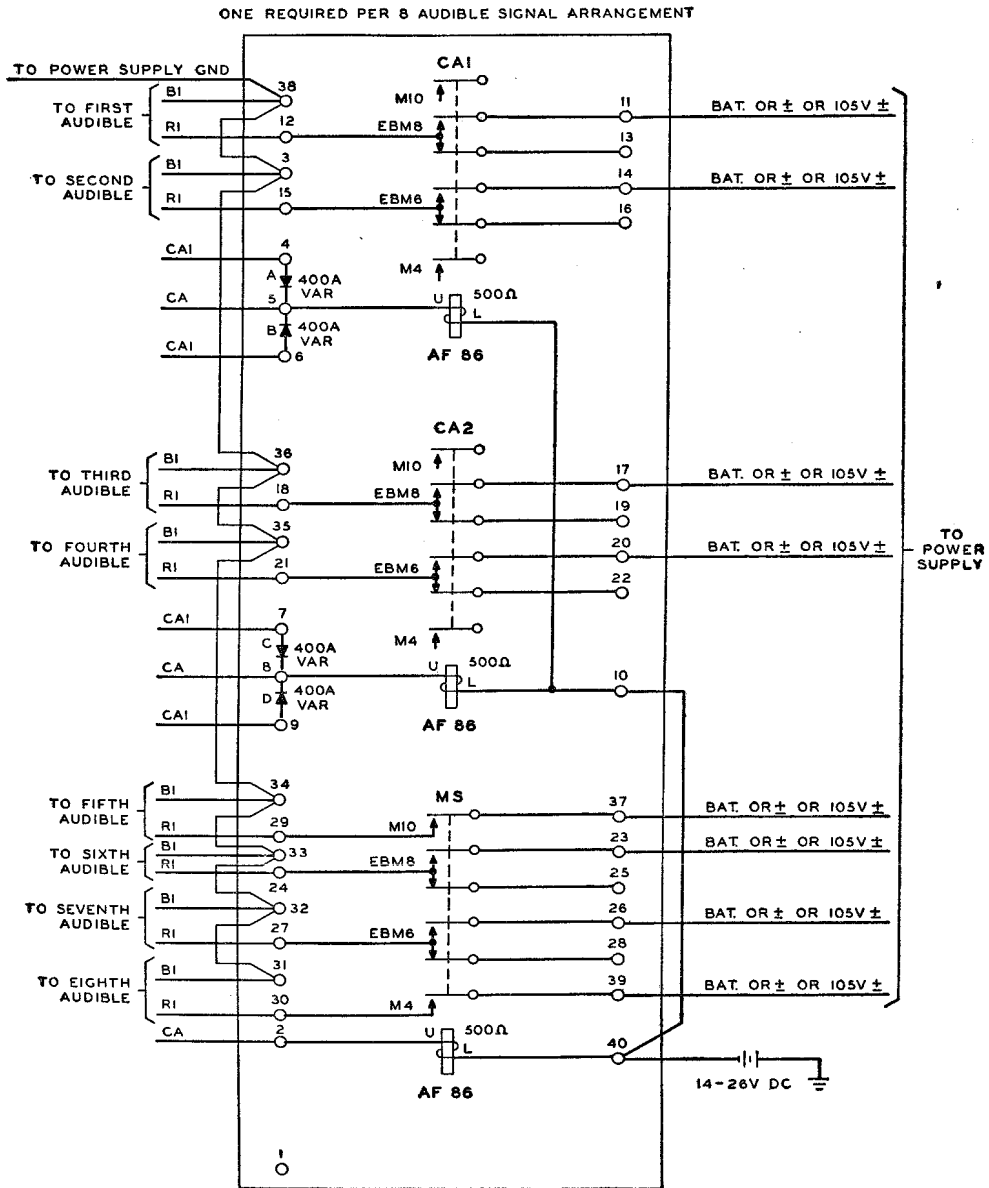


Fig. 4 - 227A KTU - Multisignal Control Circuit for Buzzers, Bells, or Ringers

2.04 A power failure feature is provided in Fig. 5. Common or line signals with capacitors are connected to the tip and ring of central office, PBX, or private line while relays are unoperated.

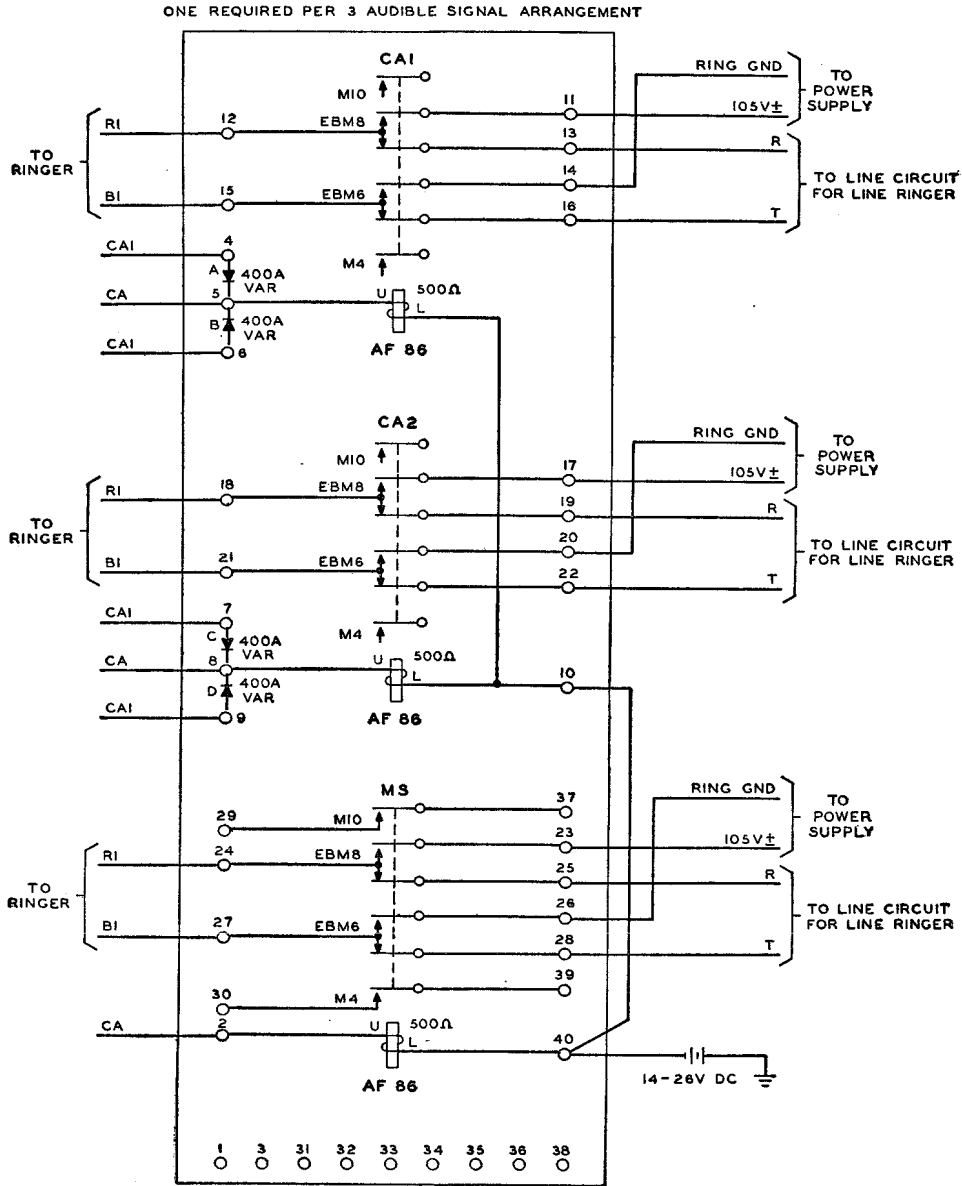


Fig. 5 — 227A KTU — Multisignal Control Circuit for Ringers

2.05 An arrangement for common audible or station audible signal for 6A key telephone system is shown in Fig. 6.

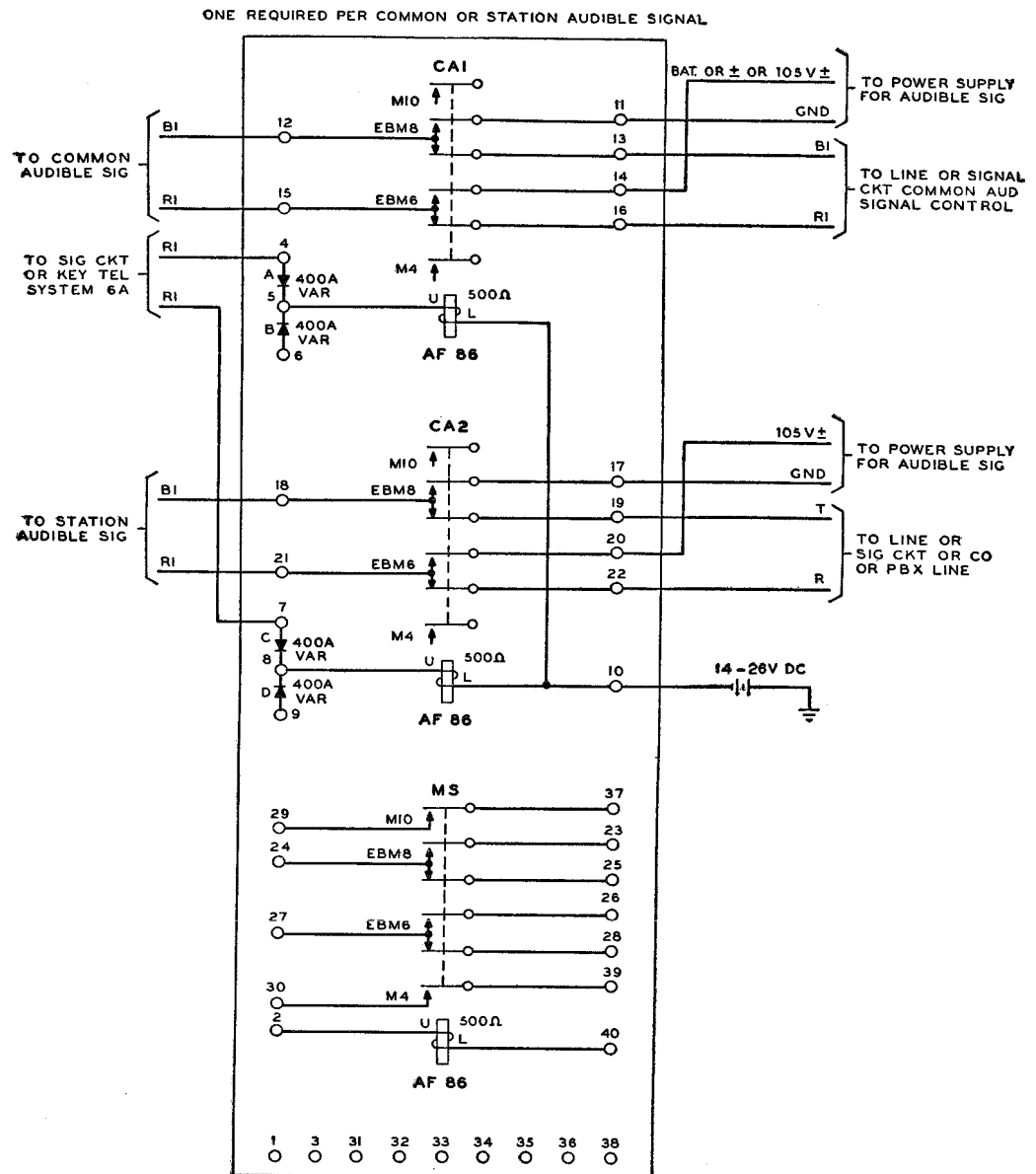


Fig. 6 — 227A KTU — Common Audible or Station Audible for 6A Key Telephone System

2.06 Fig. 7 and 8 provide for the combination of an audible signal with a locked-in visual signal. The locked-in visual signal can be released by manual operation of a SHUNT DOWN key at the called station.

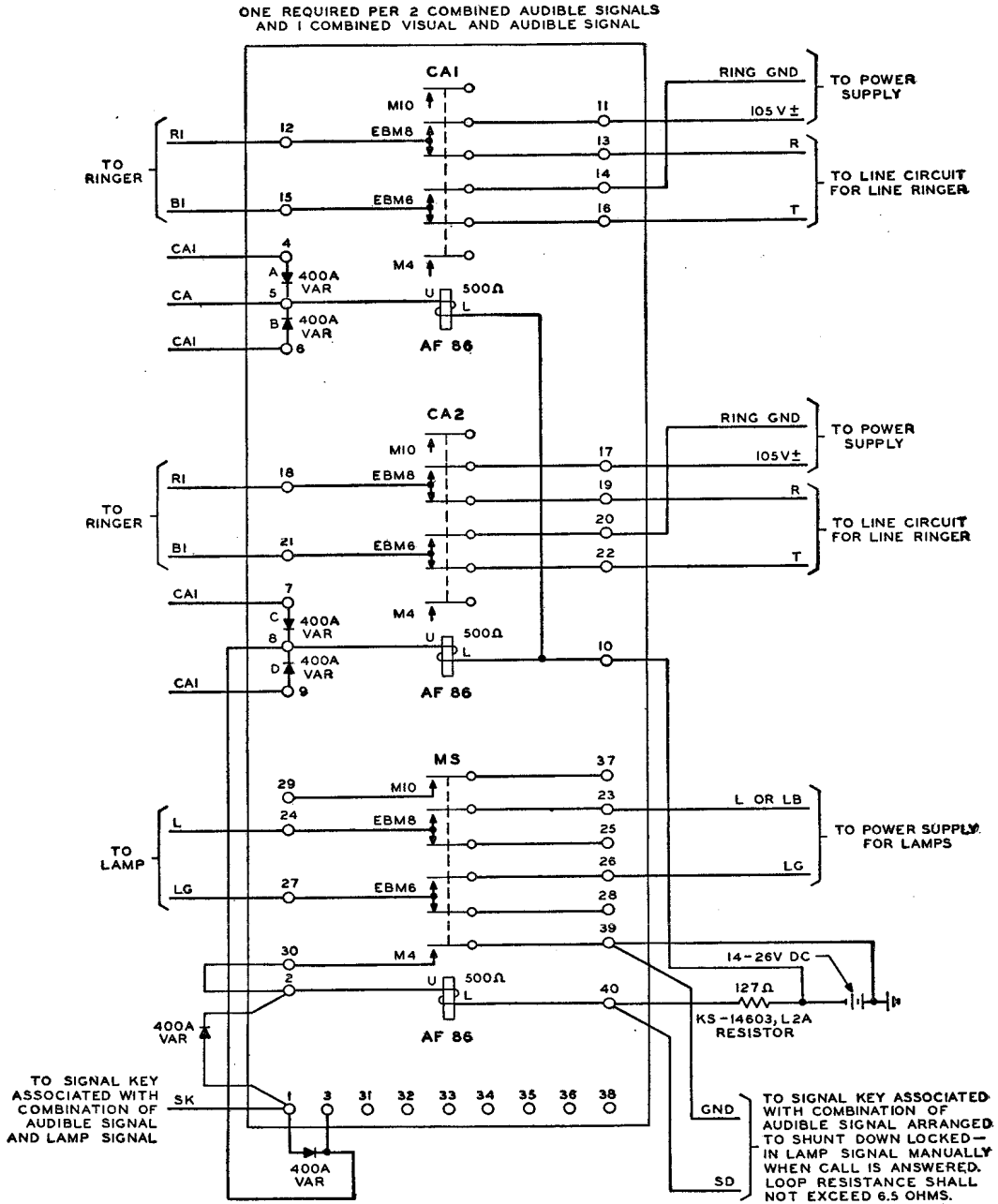


Fig. 7 - 227A KTU - Multisignal Control Circuit for Ringers Arranged for Combination of Audible Signal and Visual Signal

2.07 An audible signal associated with a locked-in visual signal is shown in Fig. 8. The audible signal can be operated directly by the signal key, option X, or through the CA2 relay, option W.

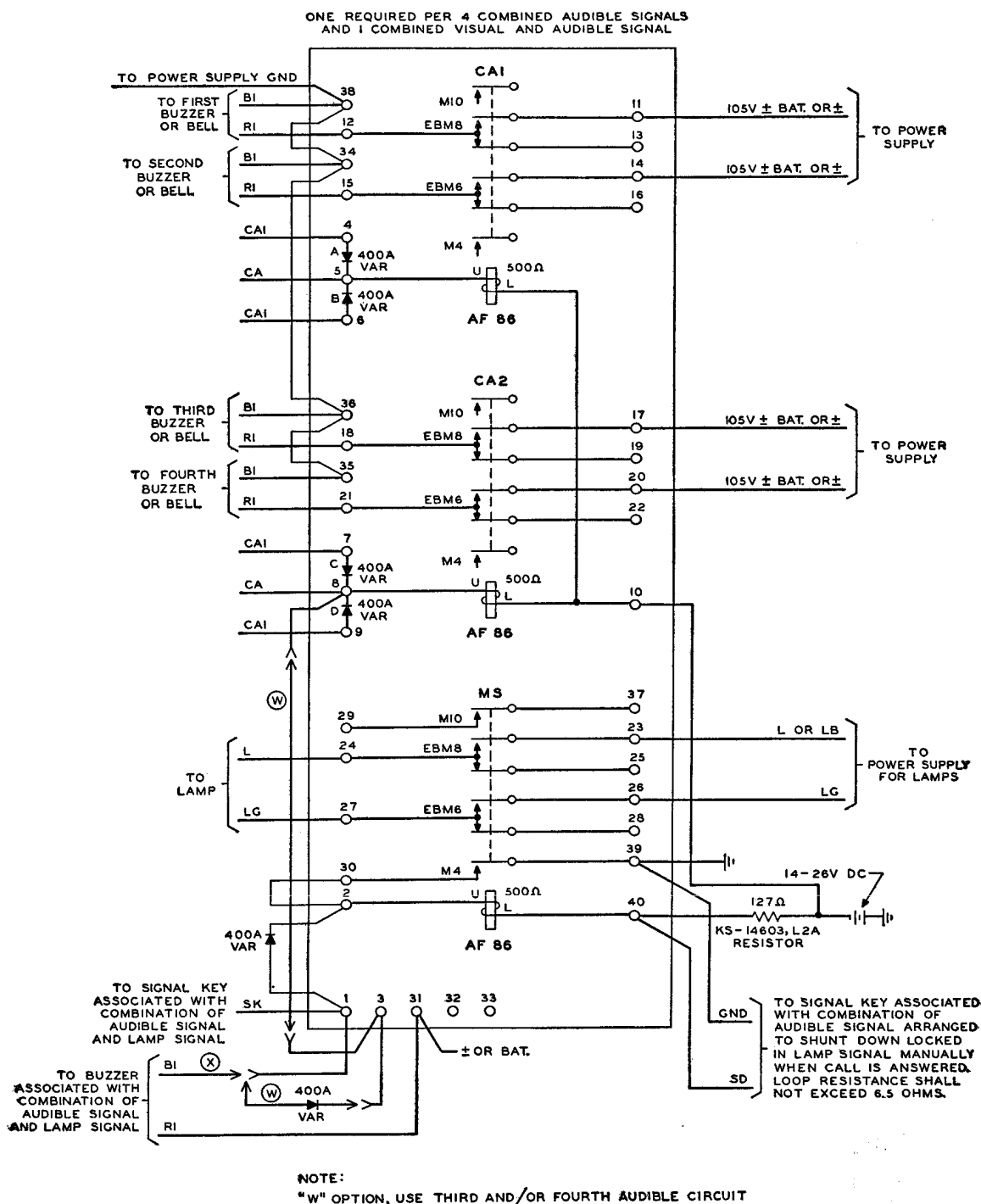
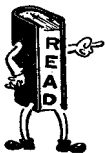
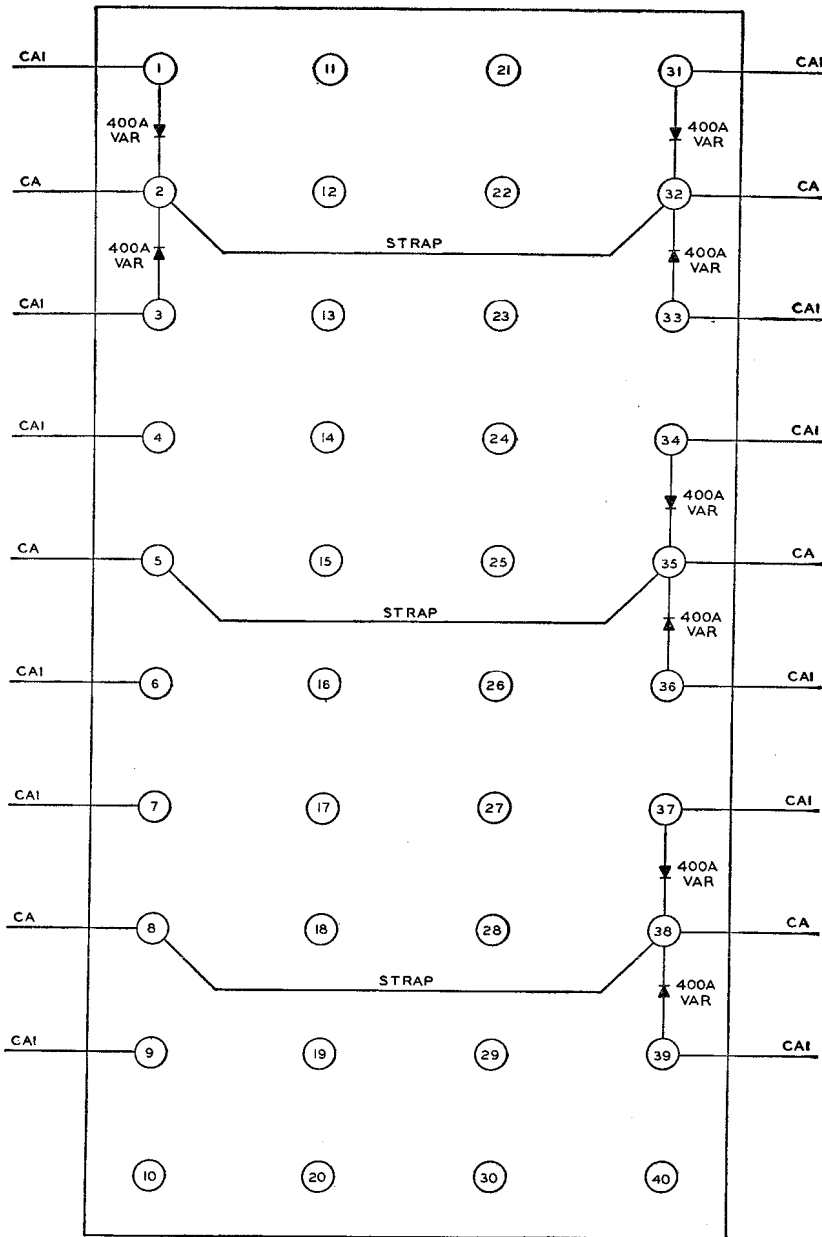


Fig. 8 – 227A KTU – Multisignal Control Circuit for Buzzers or Bells Arranged for Combination of Audible Signals With Visual Signal

- 2.08 Fig. 9 shows the connection of 400A varistors for additional CA1 leads.
- 2.09 These figures are examples of uses for the 227A KTU. Additional information and connections may be found on SD-69294-01.



- NOTES:
1. DO NOT USE TERMINALS 29 AND 30 FOR ANY CONNECTIONS.
 2. NEGATIVE END OF 400A VARISTOR STRAP TO OPERATING LEAD OF RELAY.

Fig. 9 – 227A KTU – Varistor Mounting