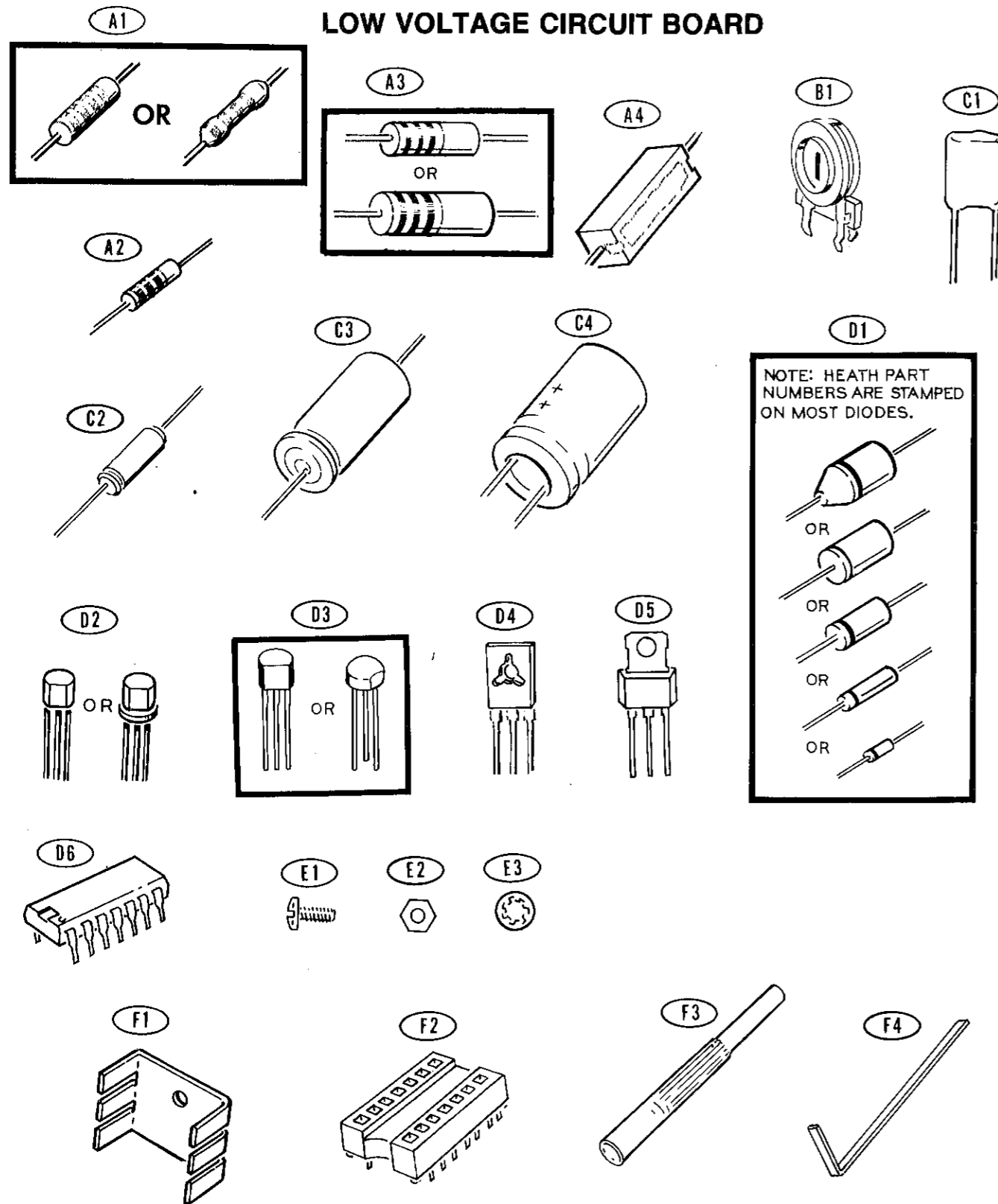


ILLUSTRATION BOOKLET

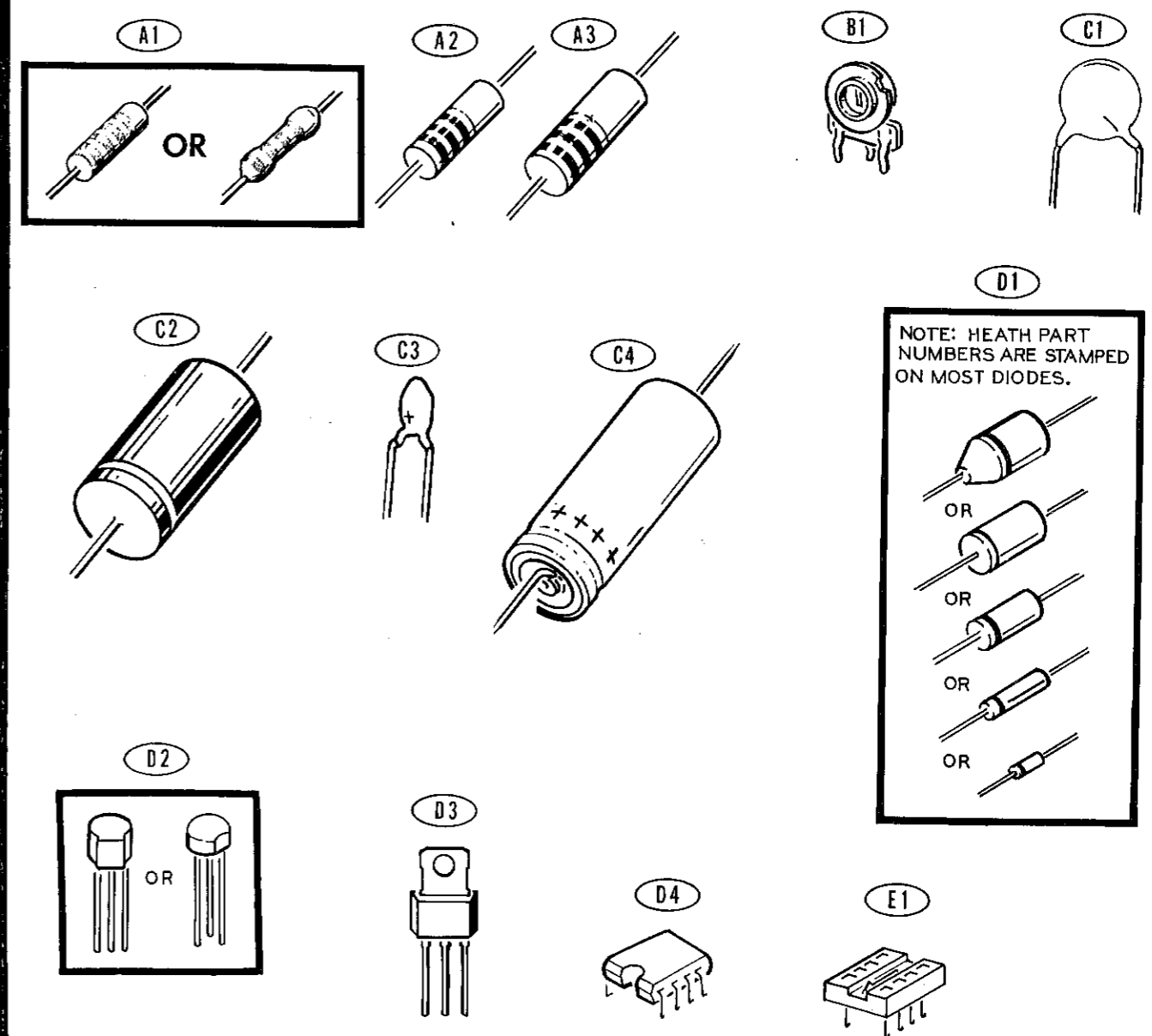
Part of 595-2012-01

PARTS PICTORIAL

LOW VOLTAGE CIRCUIT BOARD



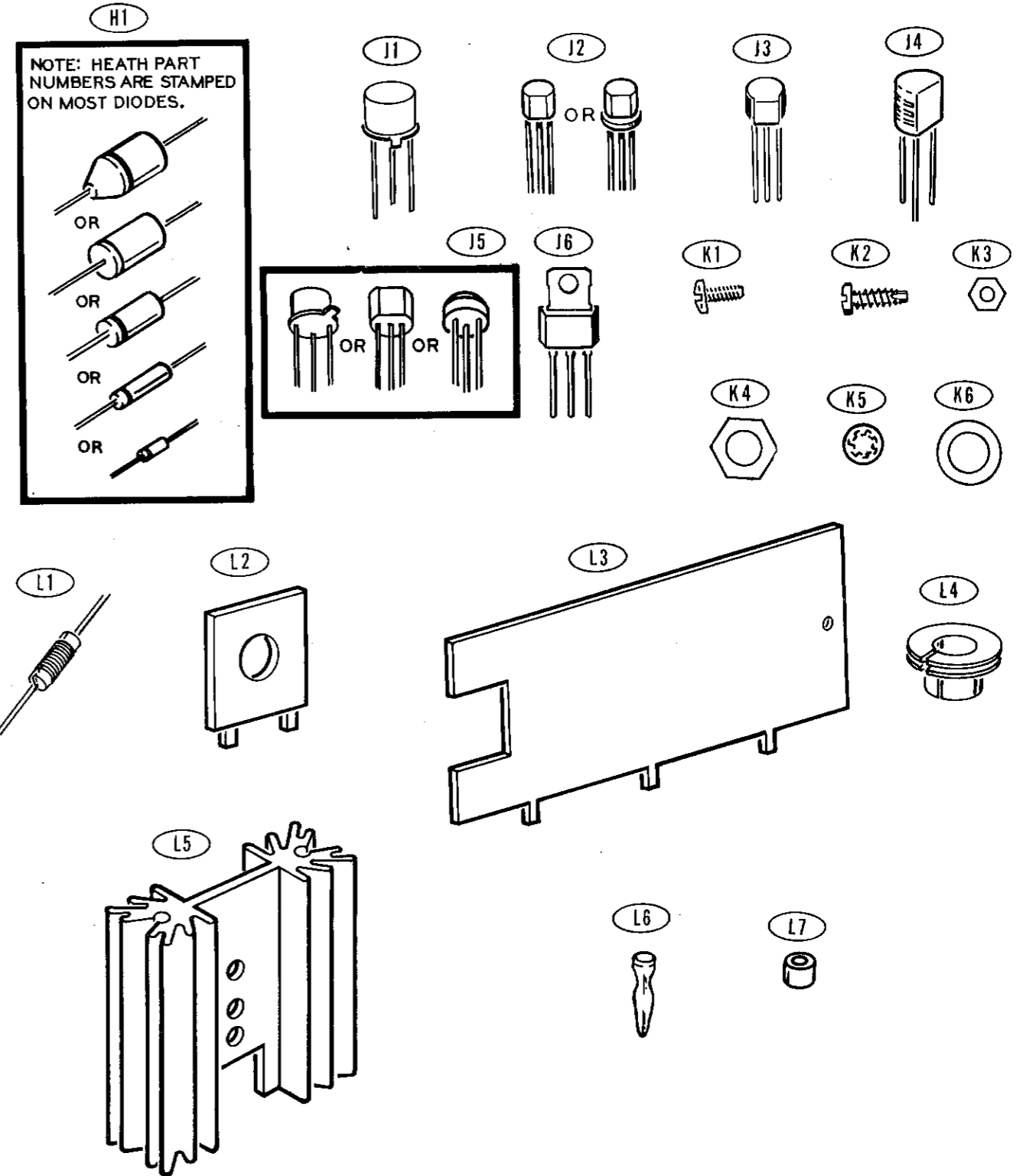
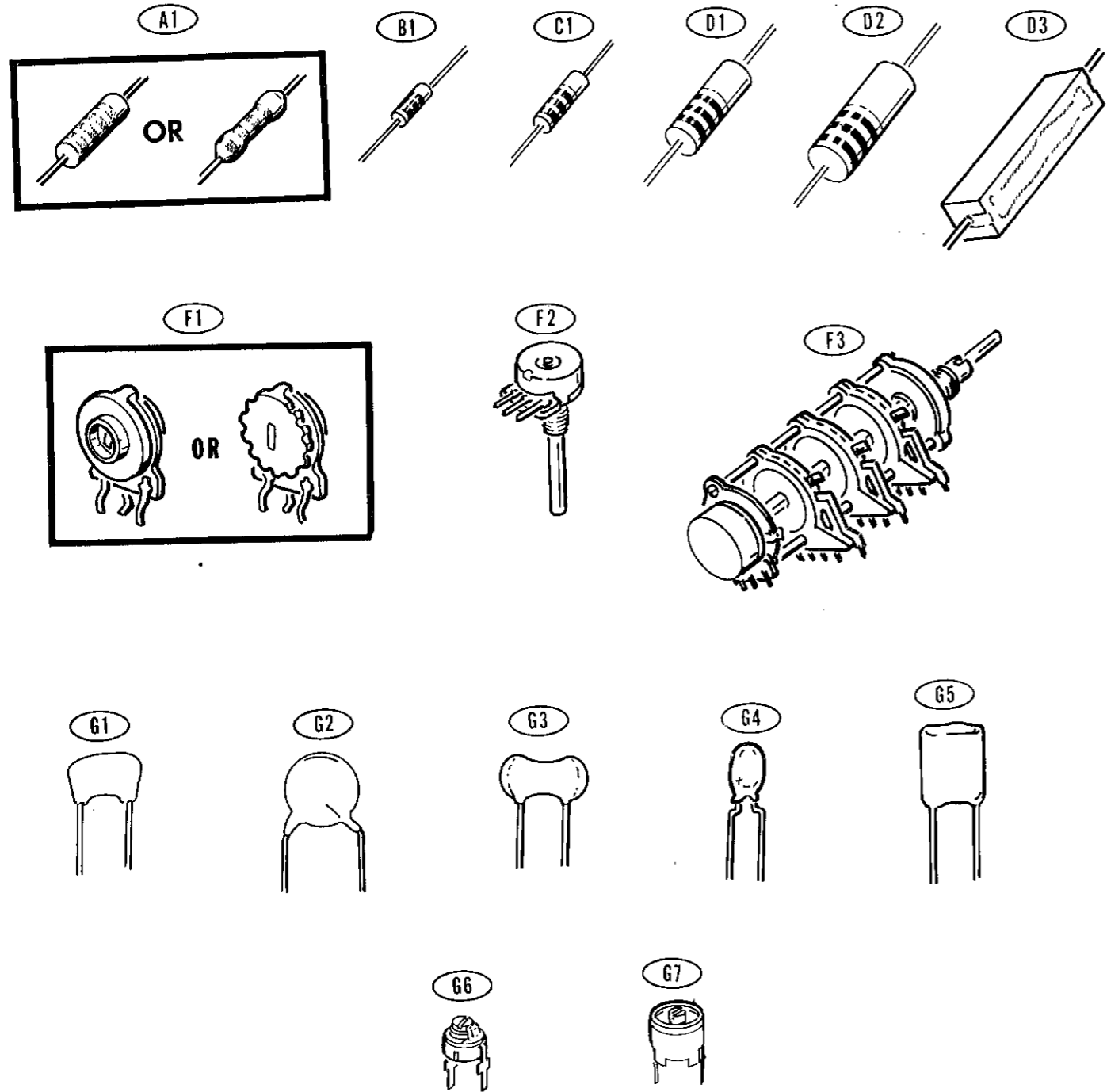
HIGH VOLTAGE CIRCUIT BOARD



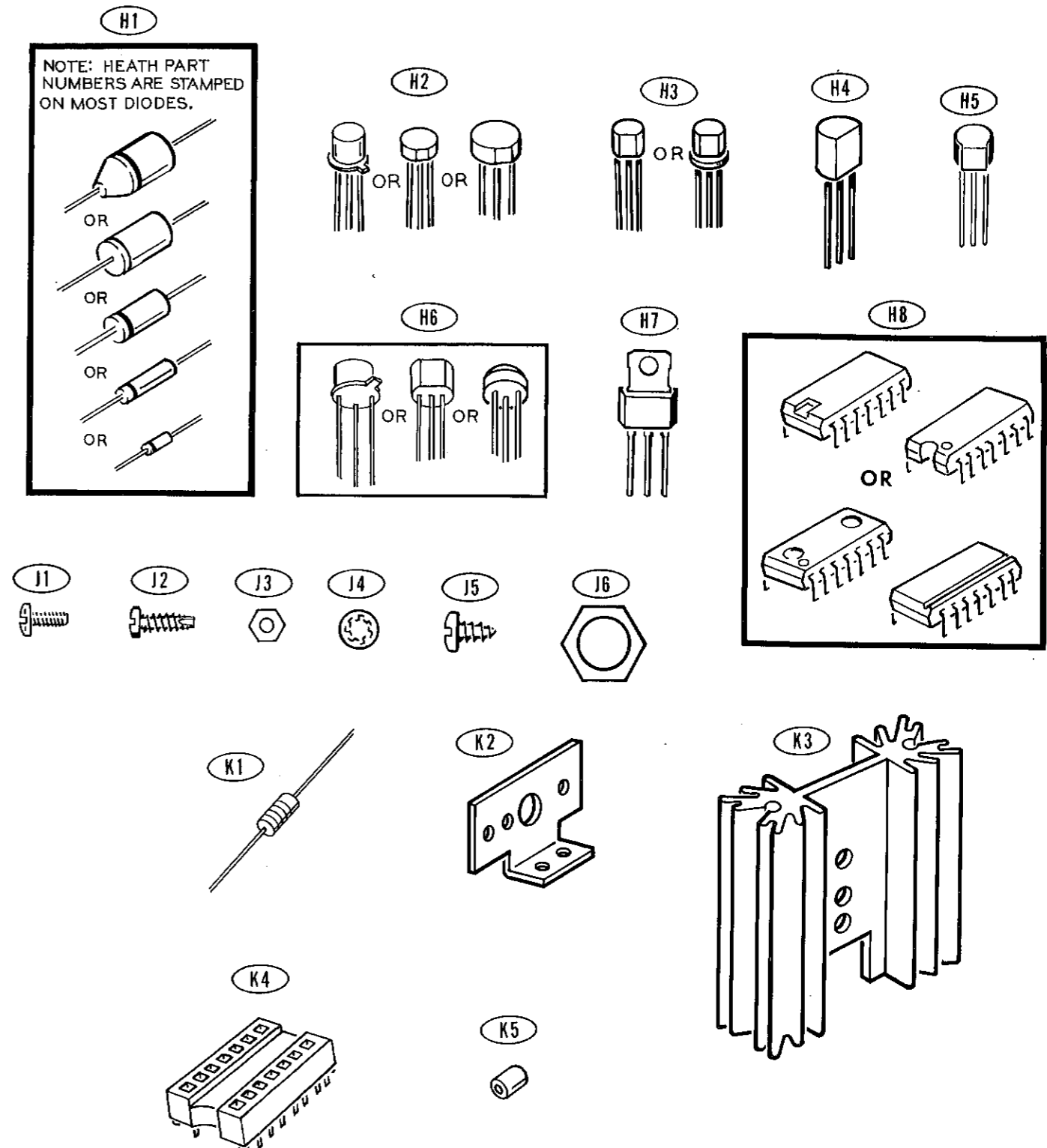
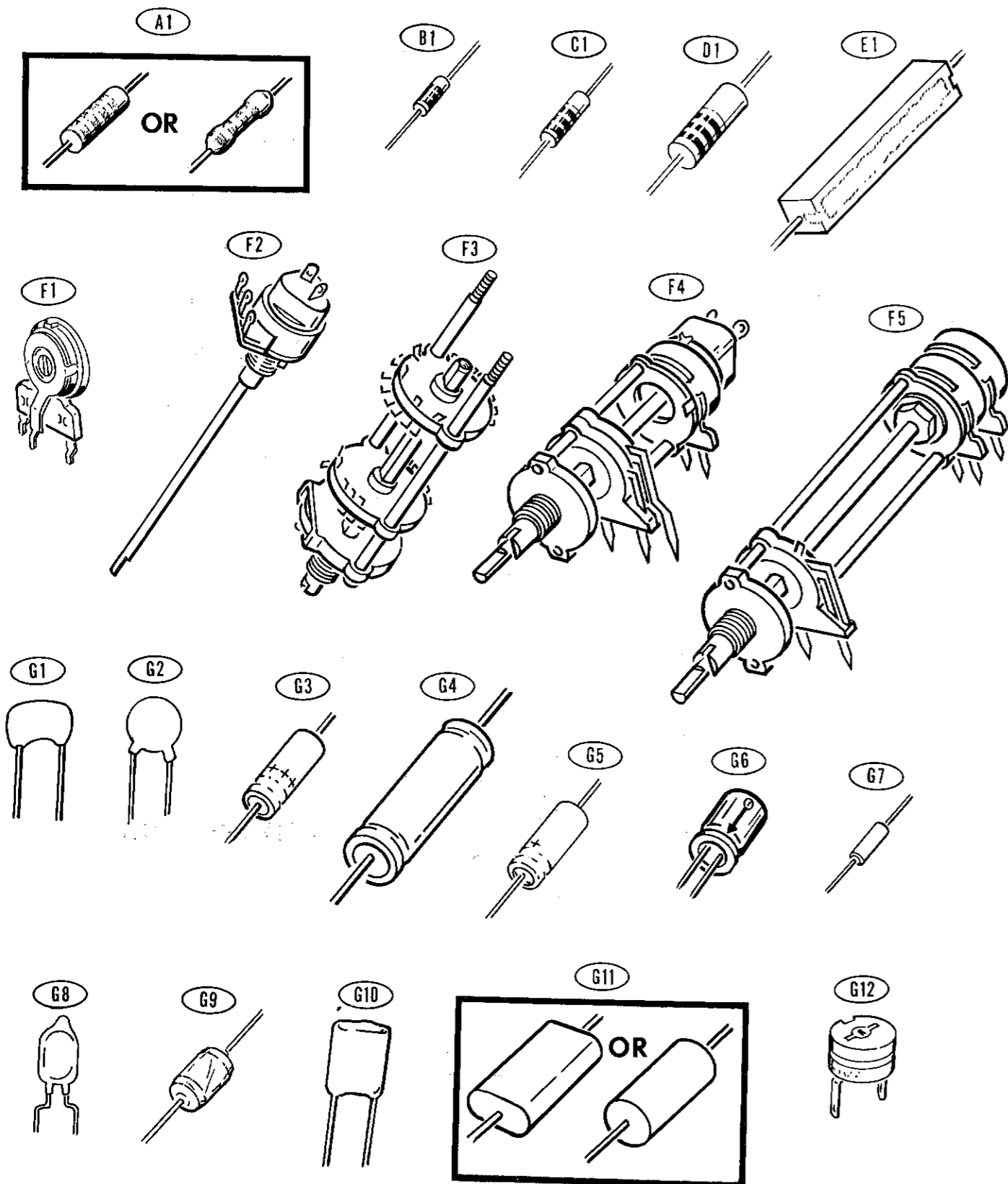
Model IO-4555

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VERTICAL CIRCUIT BOARD



HORIZONTAL CIRCUIT BOARD



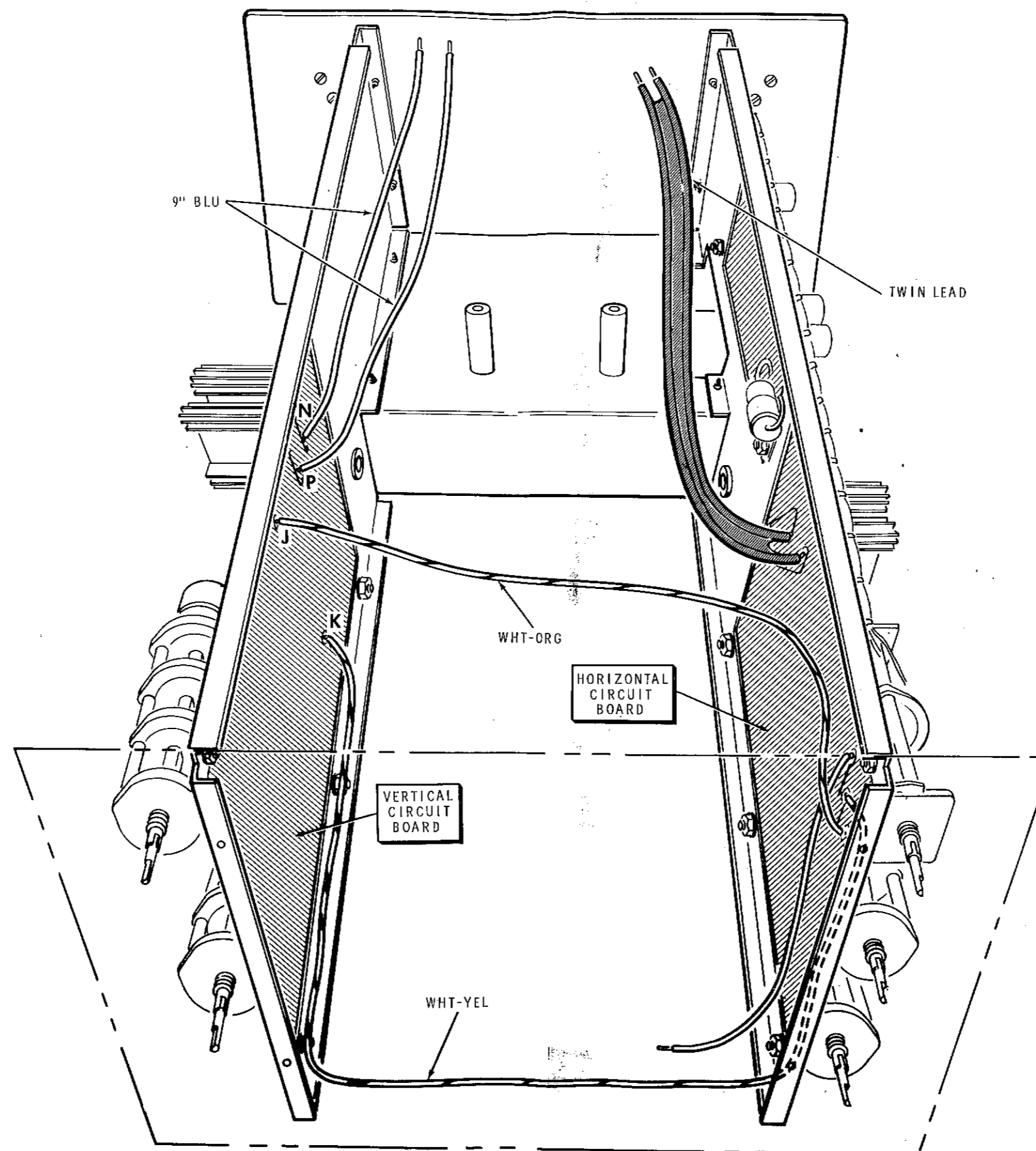
CHASSIS ASSEMBLY

This diagram illustrates the assembly of a chassis, showing various components and their interconnections. The components are labeled as follows:

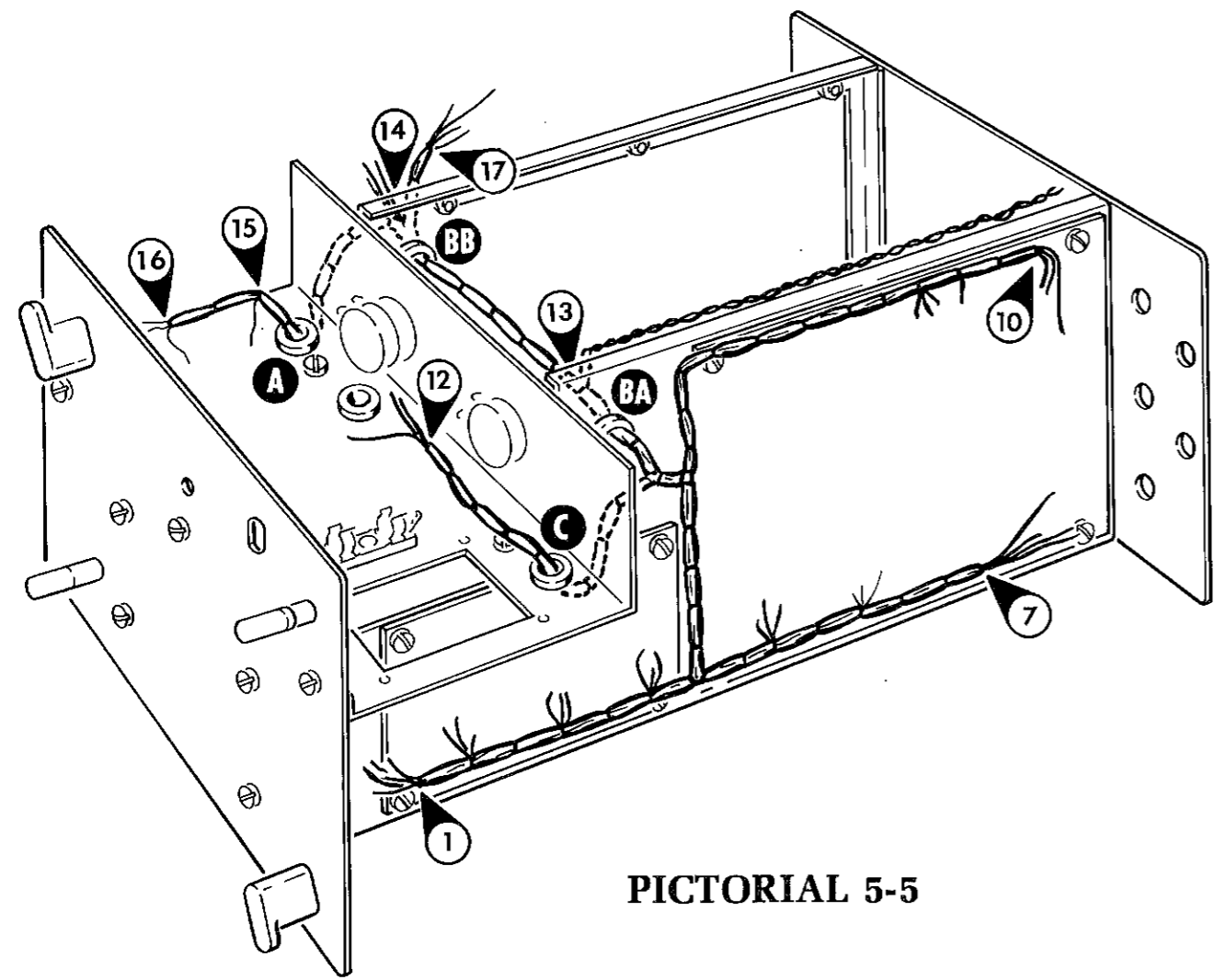
- A1:** Two types of resistors, one with a zigzag pattern and one with a solid body.
- A2:** A resistor with a zigzag pattern.
- A3:** Two types of resistors, one with a zigzag pattern and one with a solid body.
- A4:** A cylindrical component with multiple pins.
- A5:** A cylindrical component with multiple pins and a central screw.
- A6:** A cylindrical component with multiple pins.
- A7:** A cylindrical component with a single pin.
- A8:** A large cylindrical component with a flange and multiple pins.
- B1:** A rectangular component with a central slot and multiple pins.
- B2:** A small rectangular component with multiple pins.
- B3:** A long, thin rectangular component.
- B4:** A conical component.
- B5:** A circular component with a flange.
- B6:** A component with a central pin and a flange.
- B7:** A component with a central pin and a flange.
- C1:** A screw.
- C2:** A screw.
- C3:** A screw.
- C4:** A hex nut.
- C5:** A hex nut.
- C6:** A hex nut.
- C7:** A screw.
- C8:** A screw.
- C9:** A hex nut.
- C10:** A hex nut.
- C11:** A hex nut.
- C12:** A hex nut.
- C13:** A screw.
- C14:** A screw.
- C15:** A screw.
- C16:** A screw.
- C17:** A screw.
- C18:** A screw.
- C19:** A screw.
- C20:** A screw.
- C21:** A screw.
- C22:** A hex nut.
- C23:** A hex nut.
- C24:** A hex nut.
- C25:** A hex nut.
- C26:** A screw.
- C27:** A screw.
- C28:** A hex nut.
- C29:** A hex nut.
- C30:** A hex nut.
- C31:** A screw.
- C32:** A hex nut.
- C33:** A hex nut.
- C34:** A hex nut.
- C35:** A hex nut.
- C36:** A hex nut.
- C37:** A large cylindrical component.



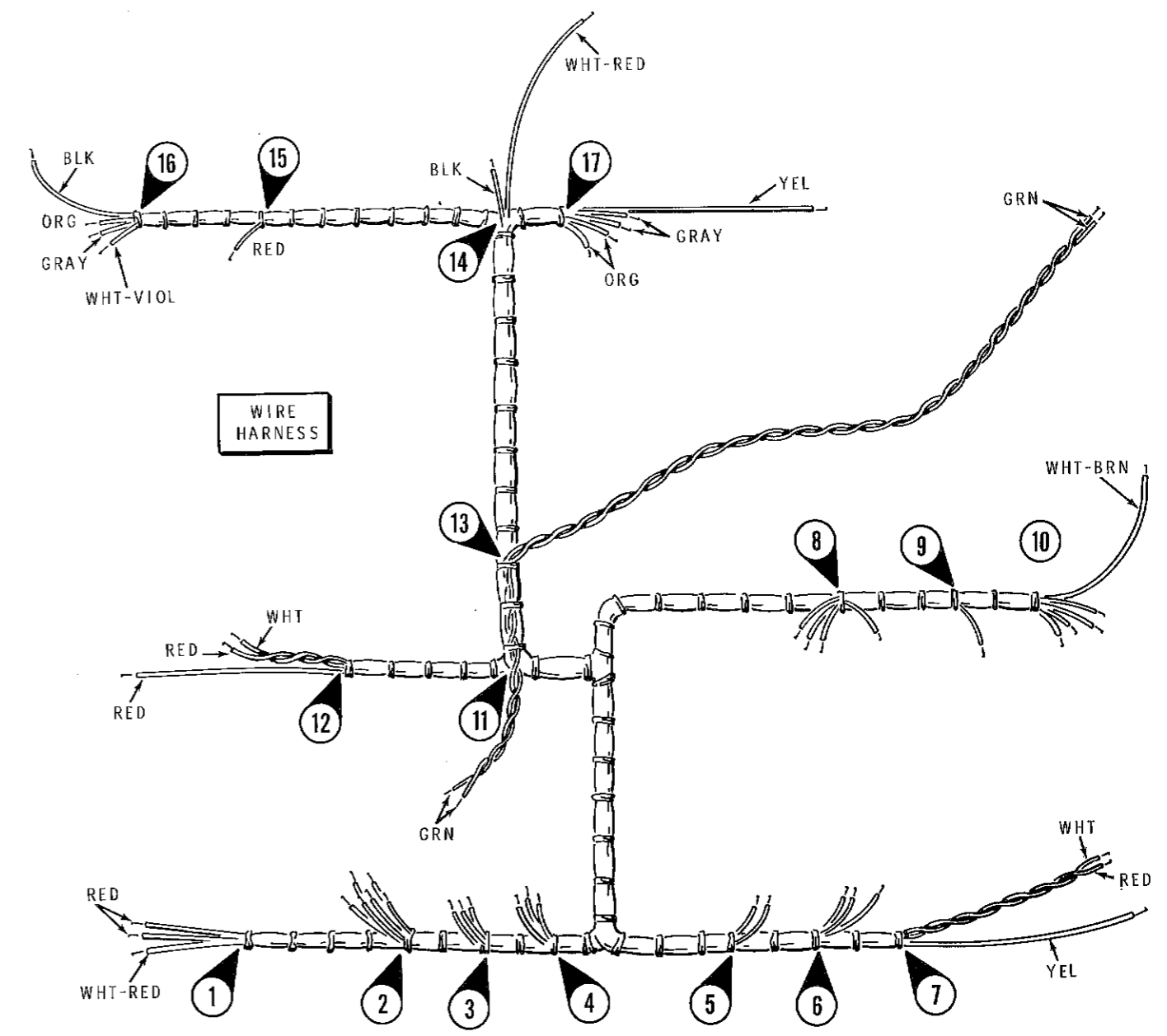




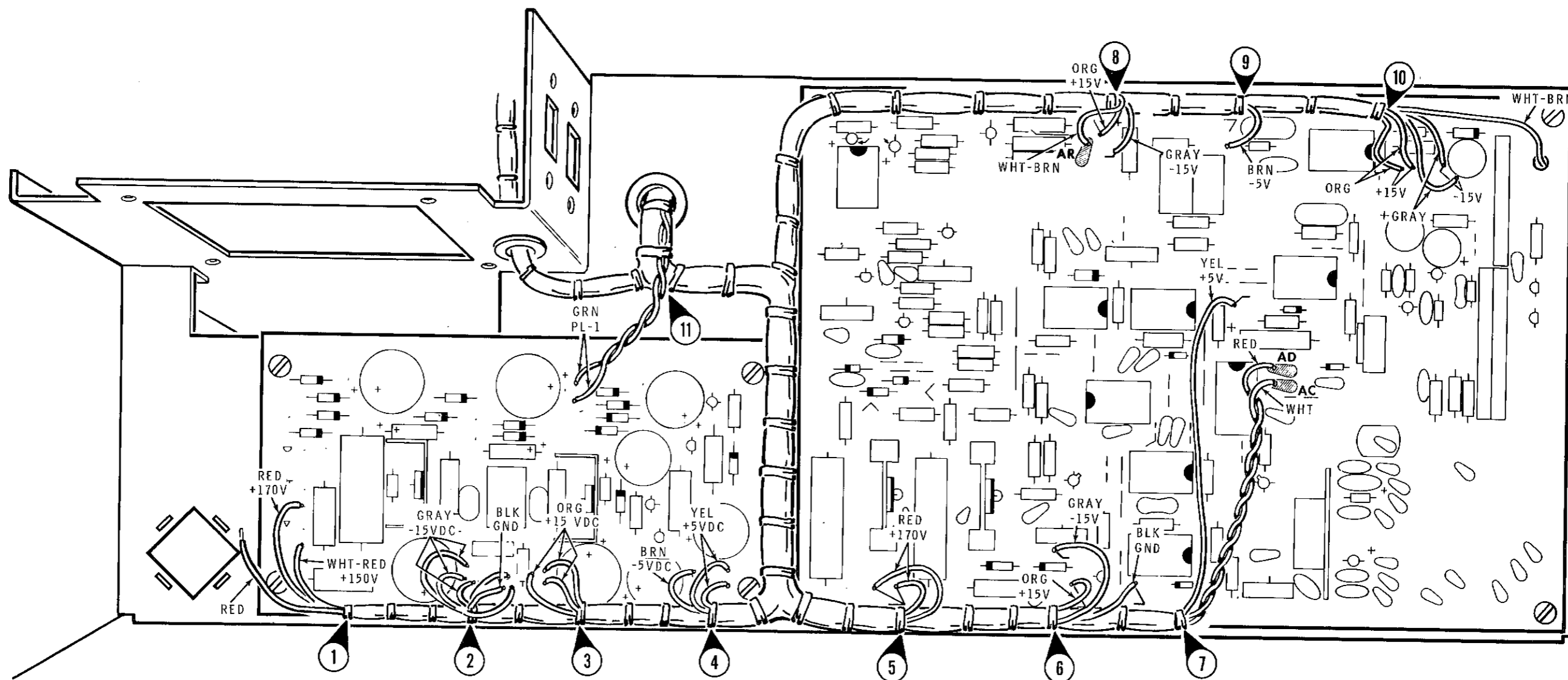
PICTORIAL 5-4



PICTORIAL 5-5



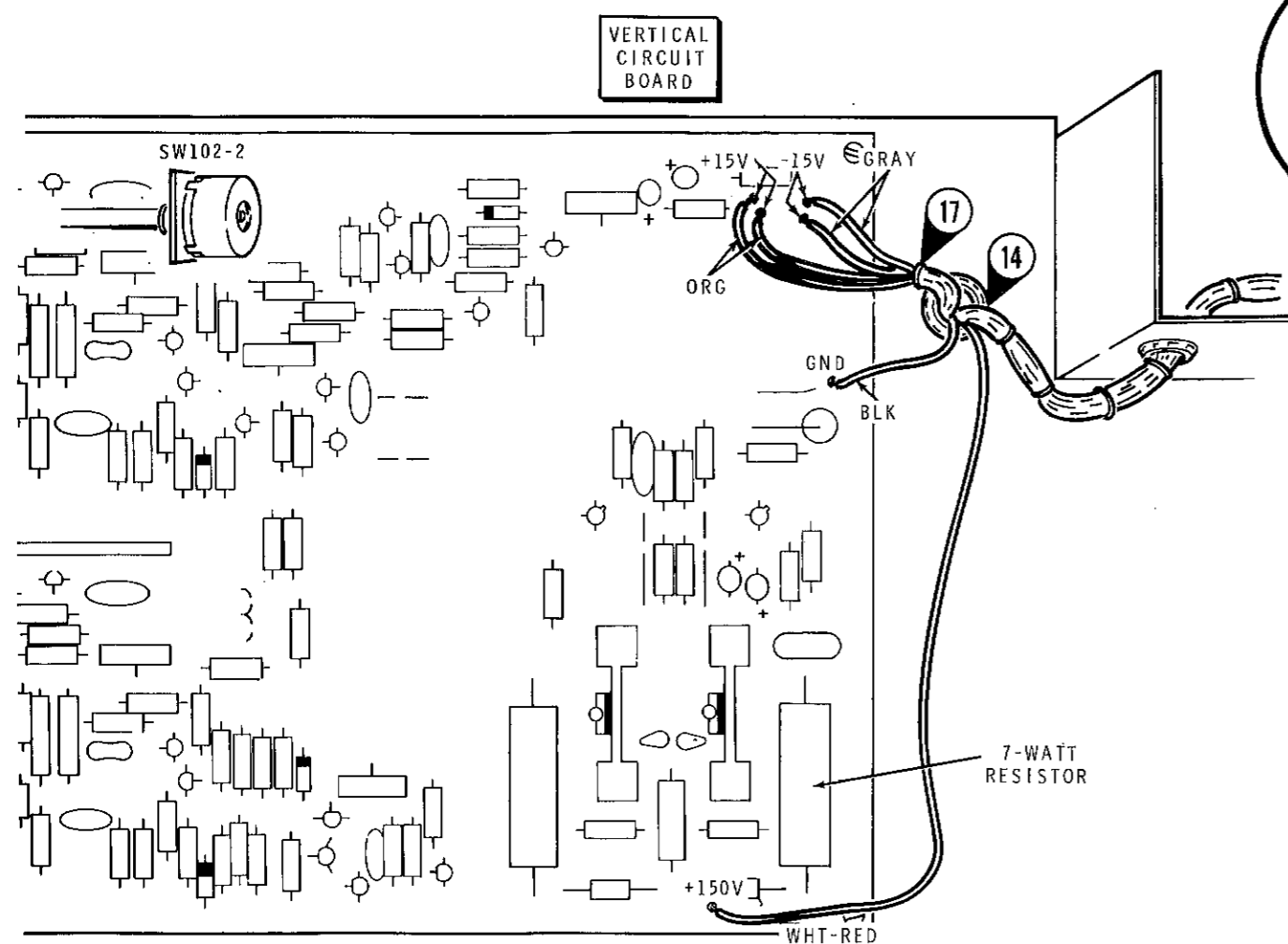
Detail 5-5A



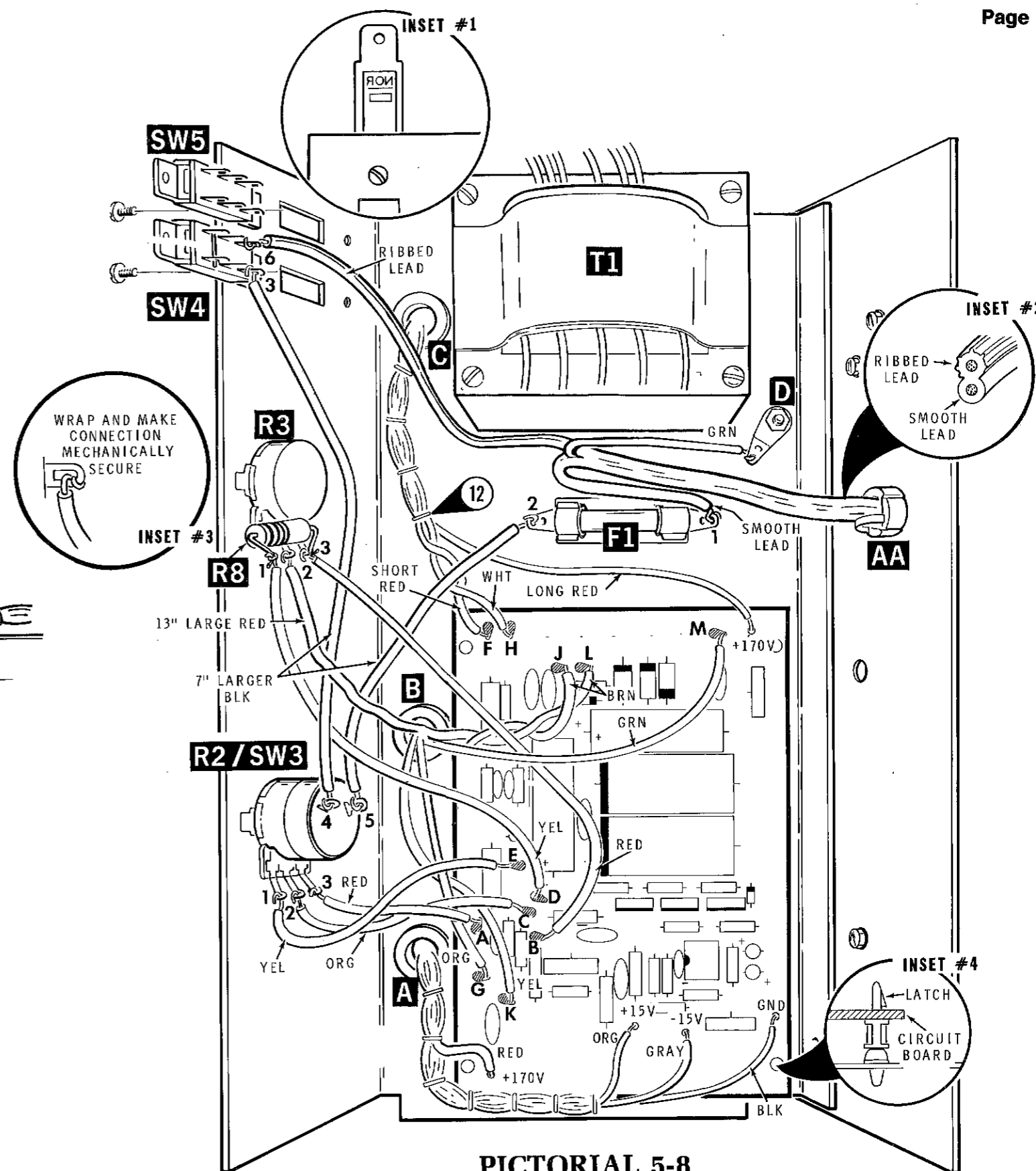
LOW VOLTAGE
CIRCUIT BOARD

HORIZONTAL
CIRCUIT BOARD

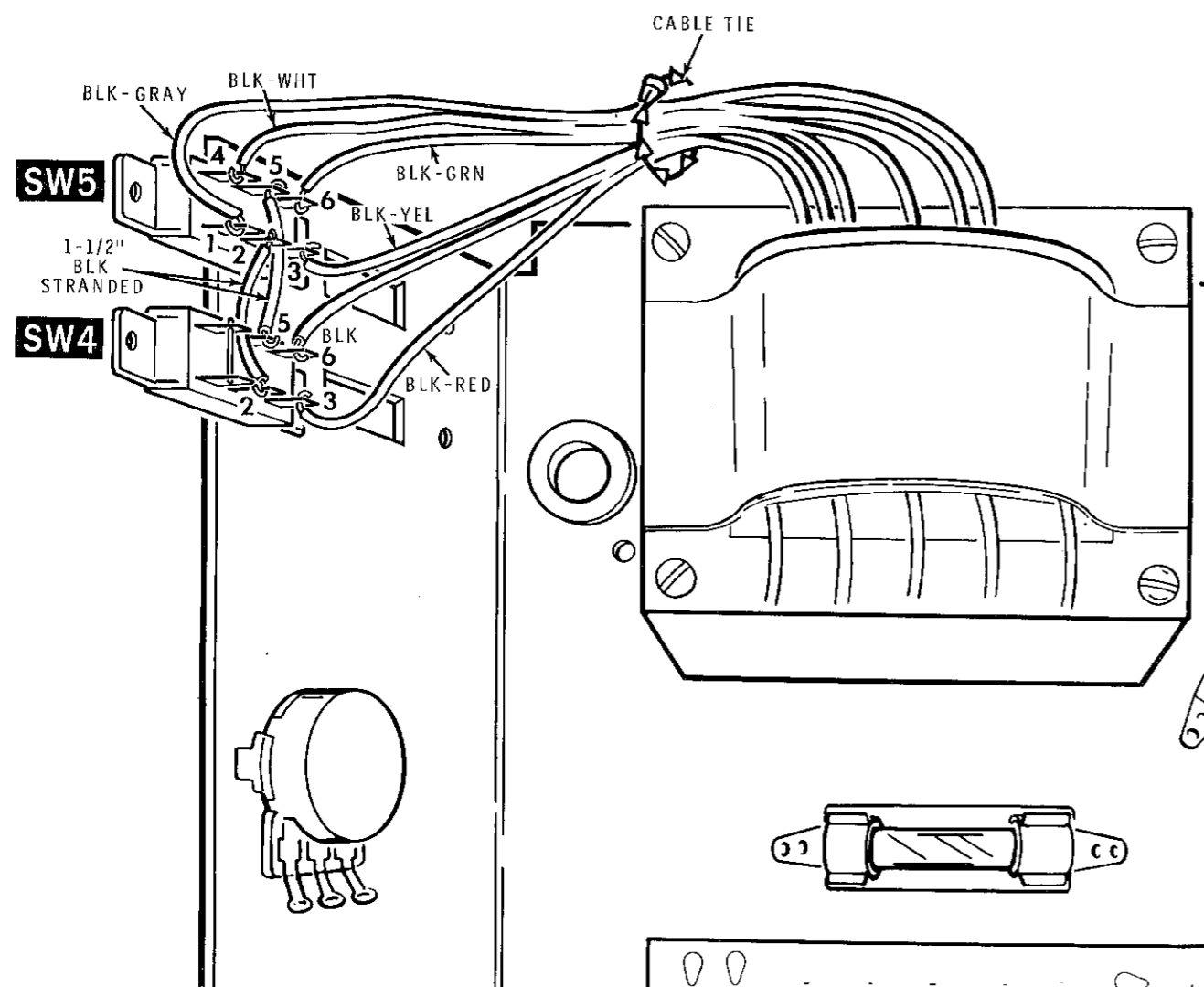
PICTORIAL 5-6



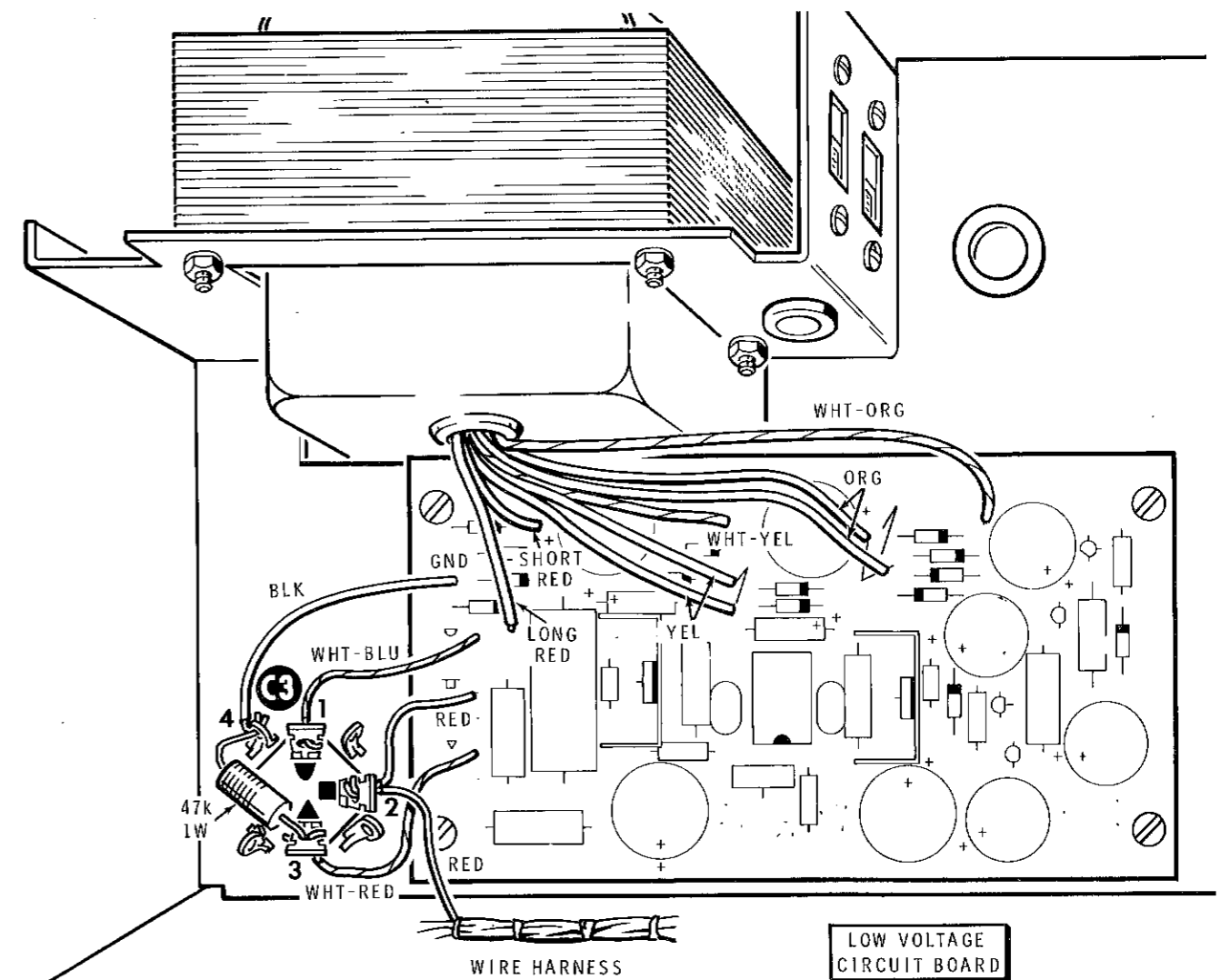
PICTORIAL 5-7



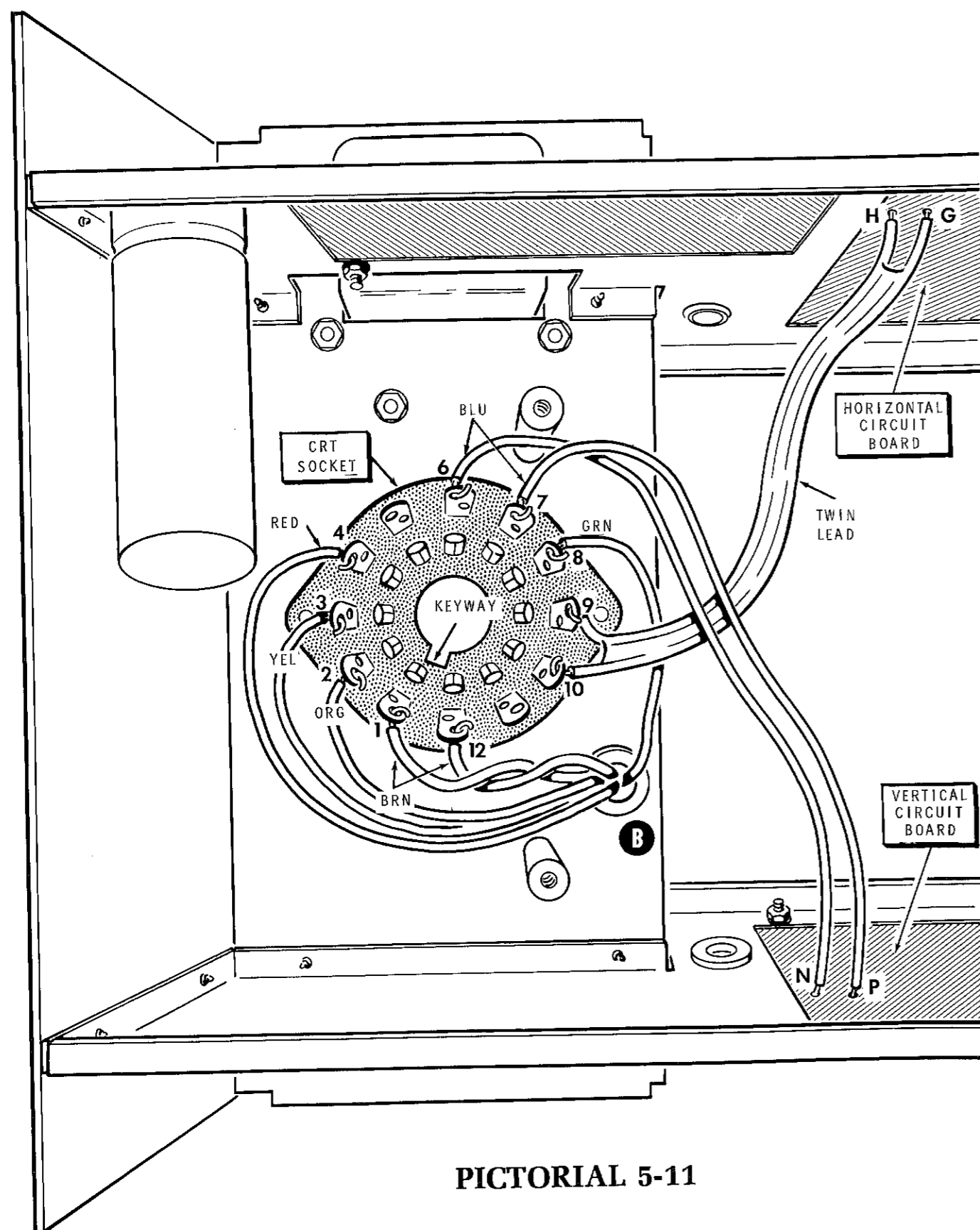
PICTORIAL 5-8



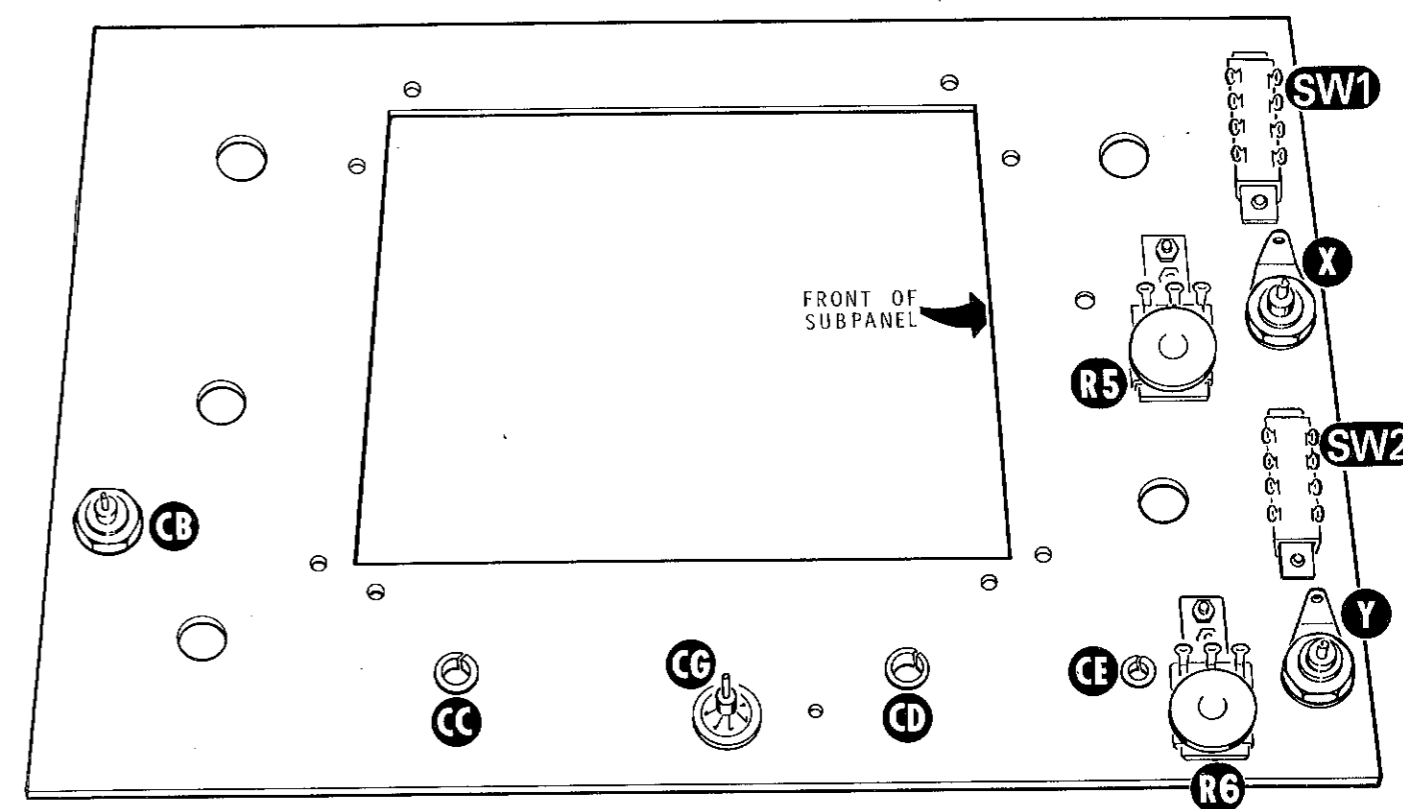
PICTORIAL 5-9



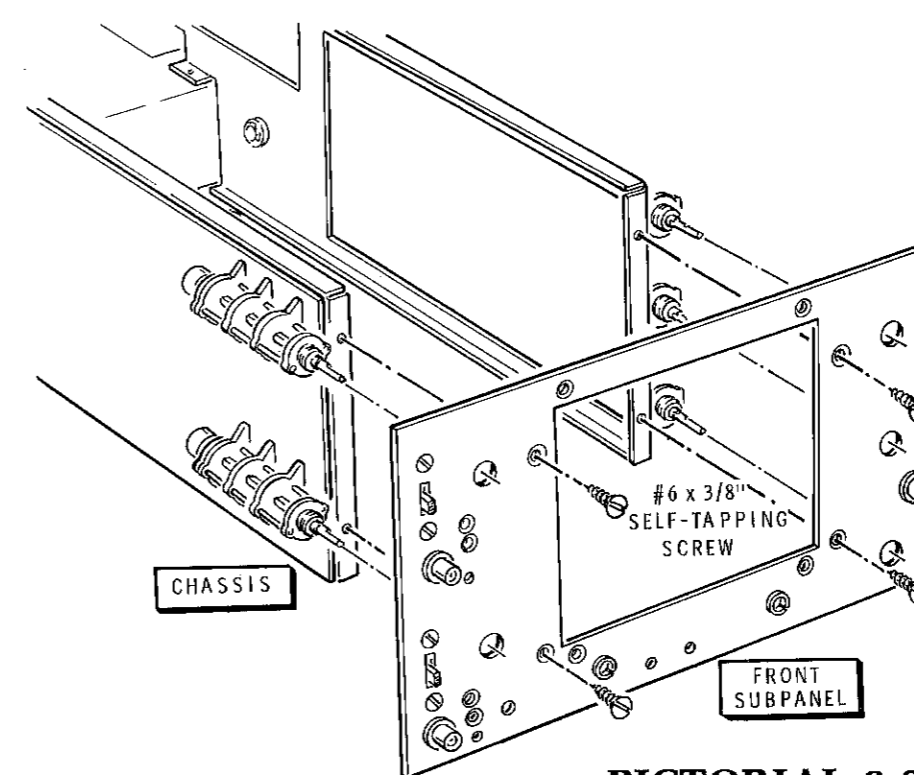
PICTORIAL 5-10



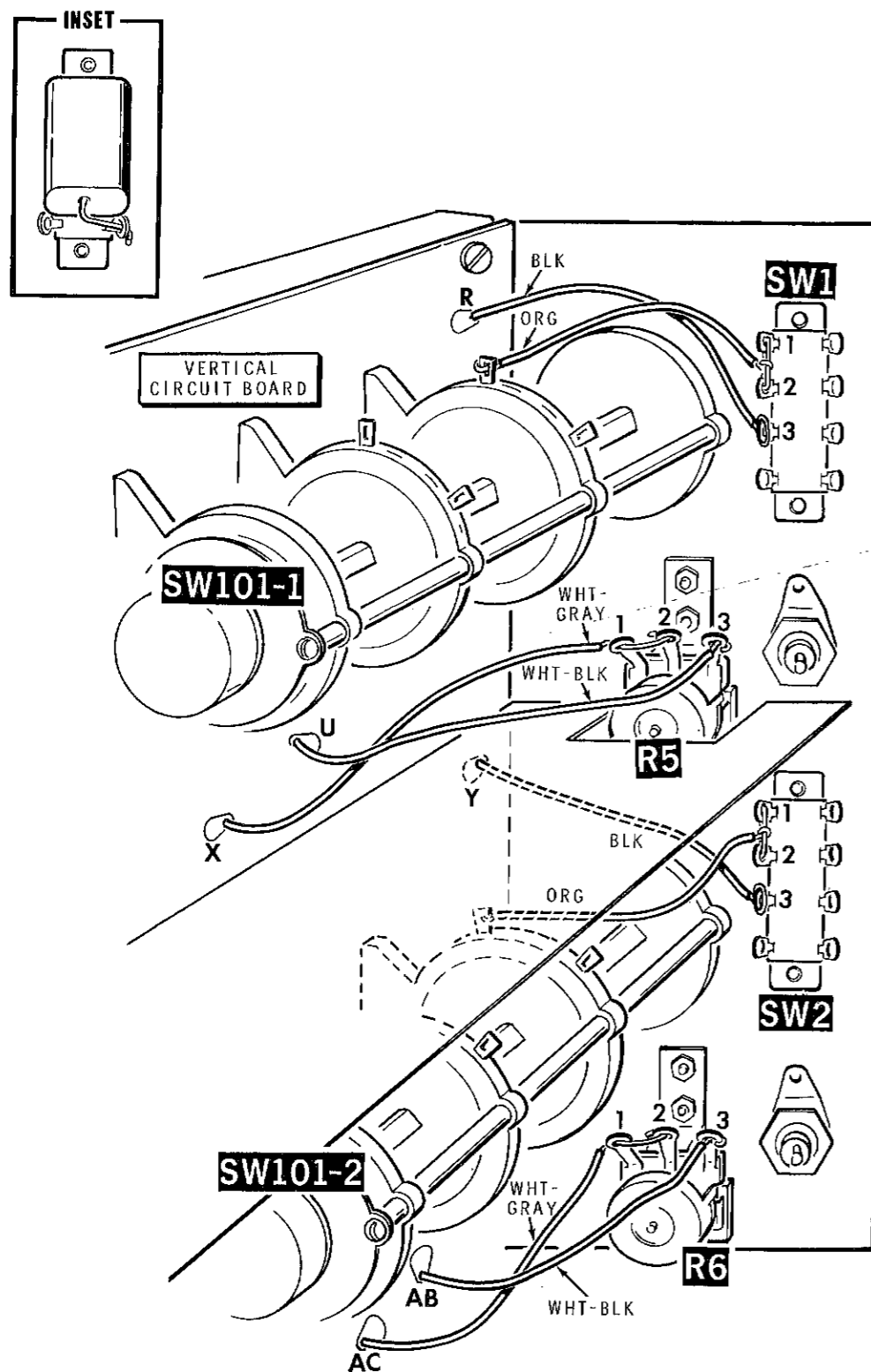
PICTORIAL 5-11



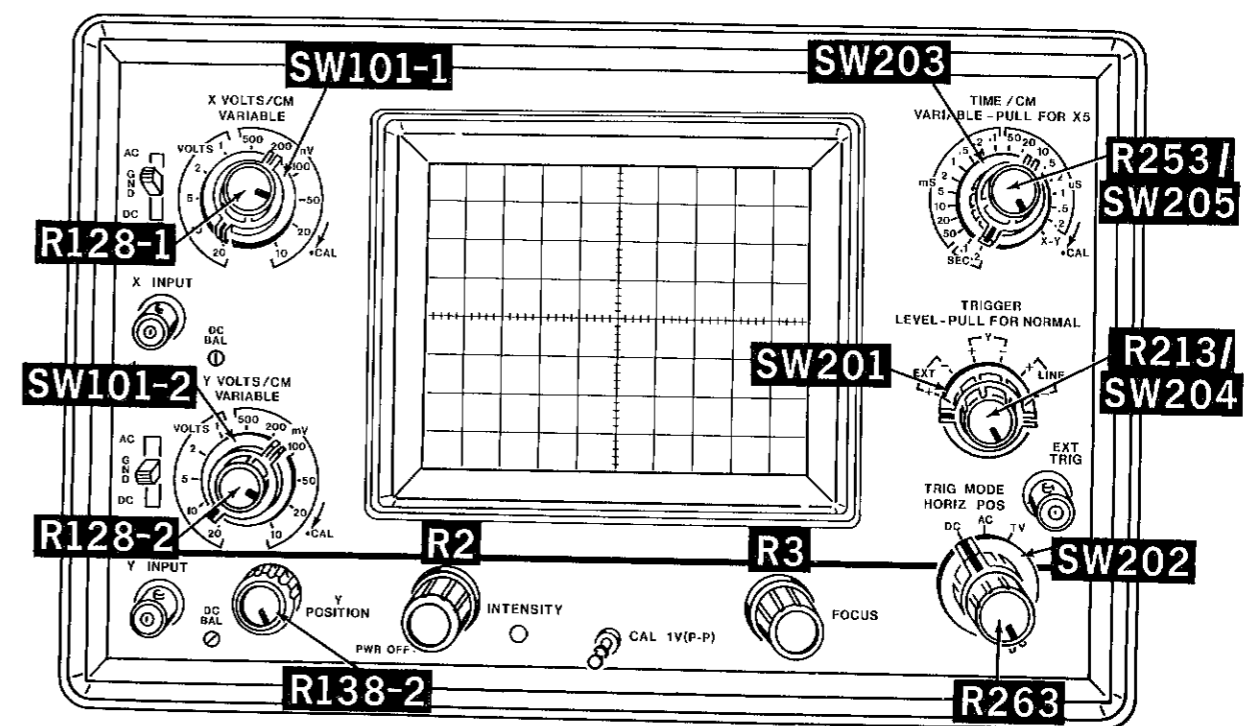
PICTORIAL 6-1



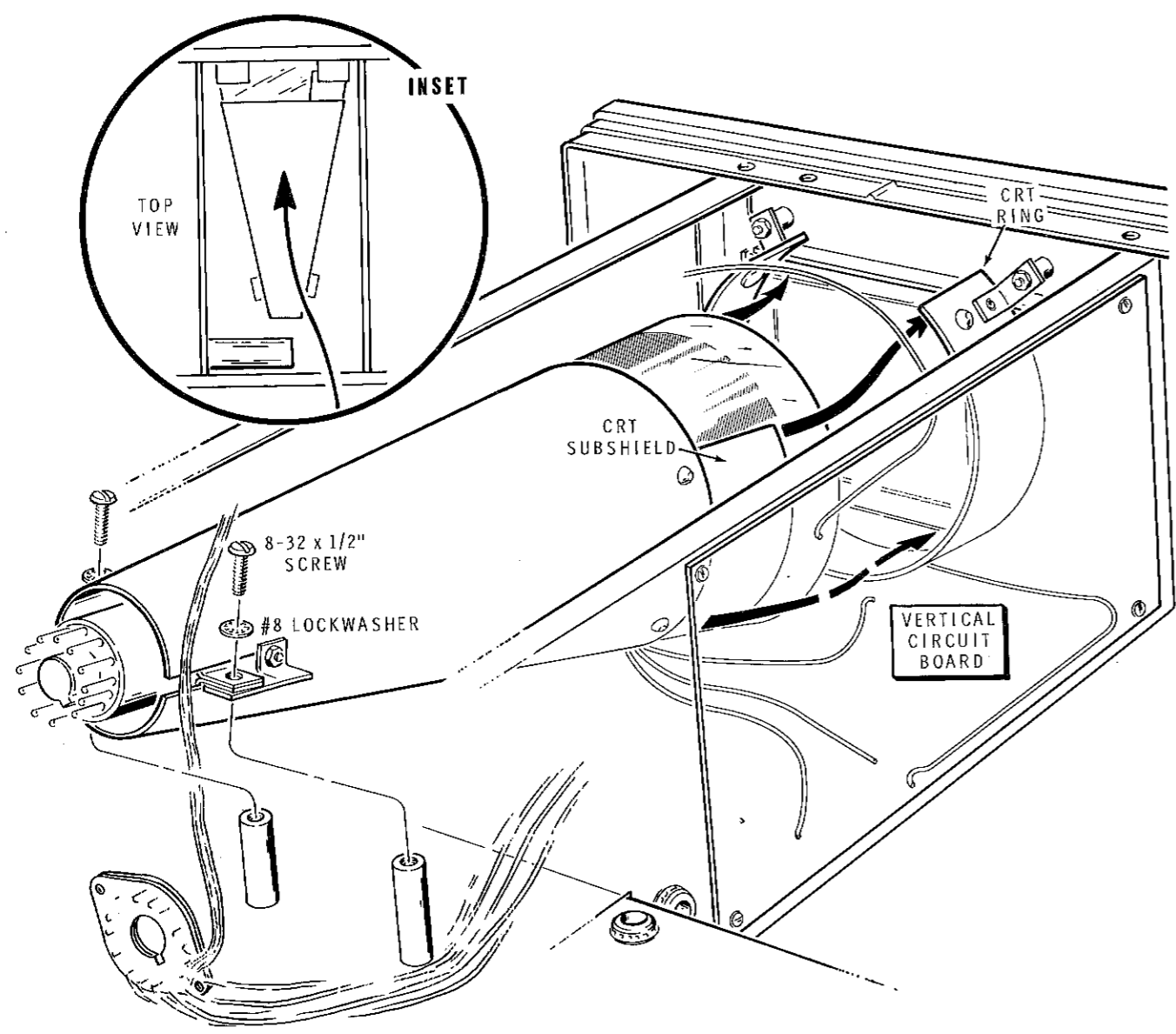
PICTORIAL 6-3



PICTORIAL 6-5

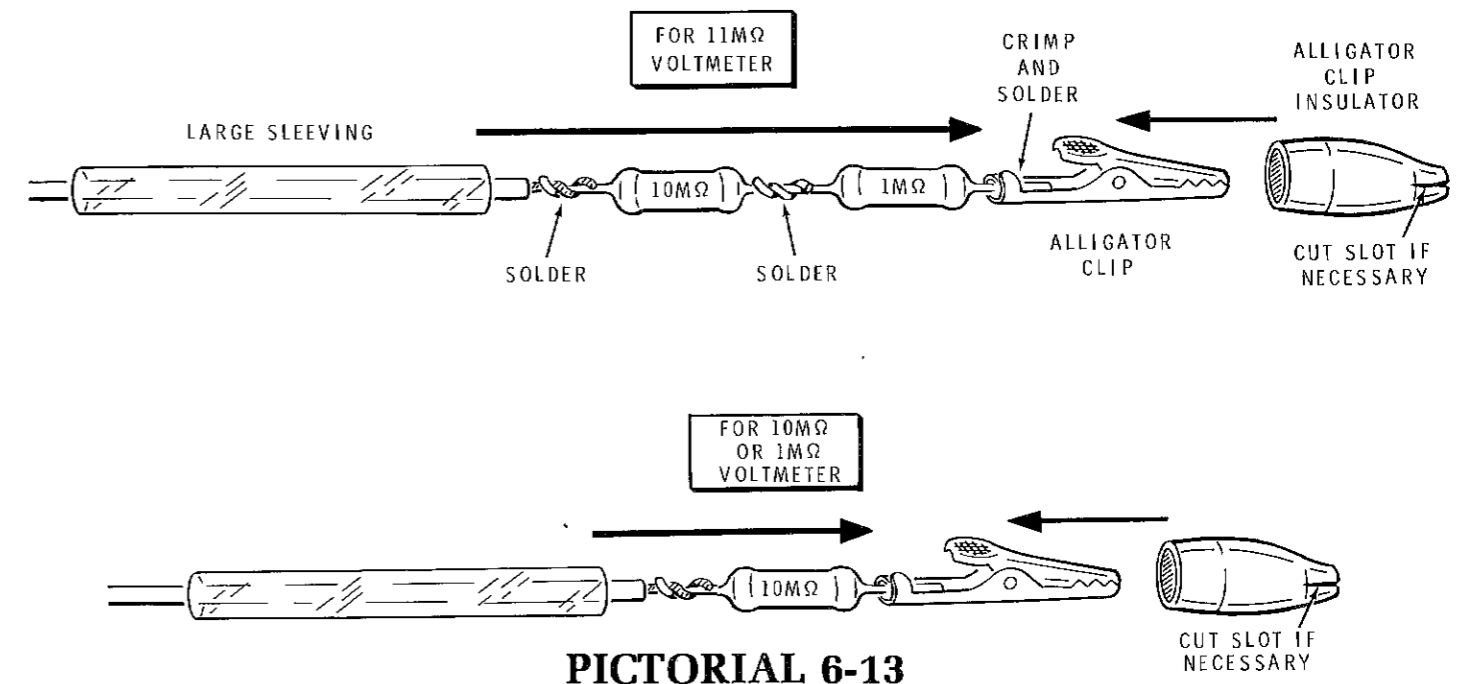


PICTORIAL 6-10

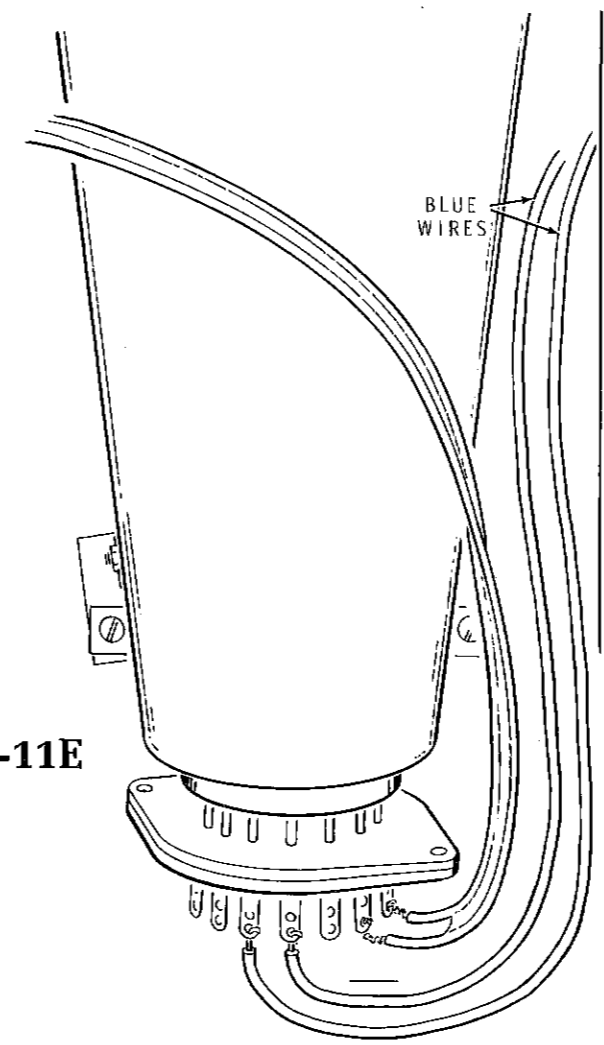


PICTORIAL 6-11

Detail 6-11E



PICTORIAL 6-13



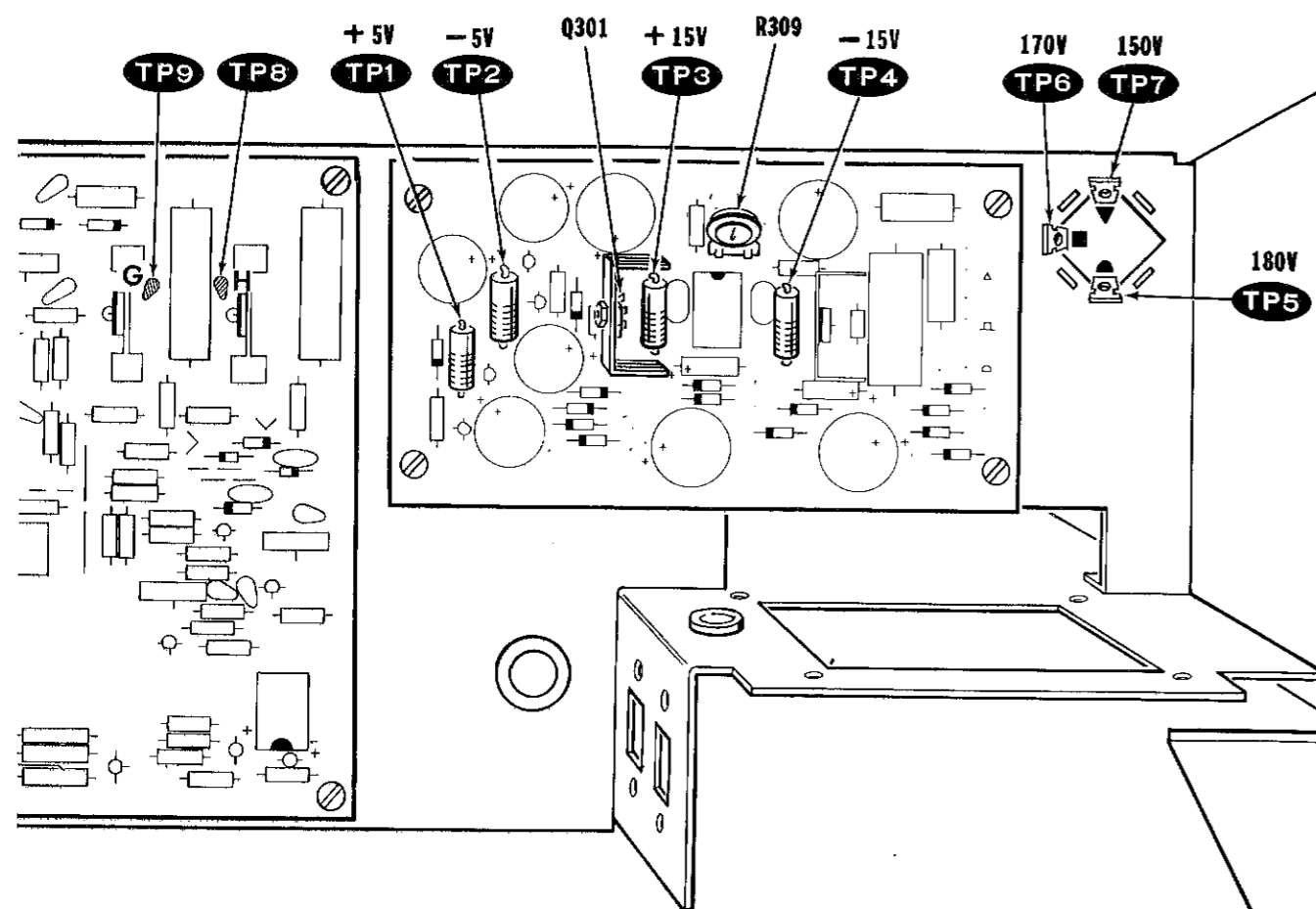


Figure 1-1

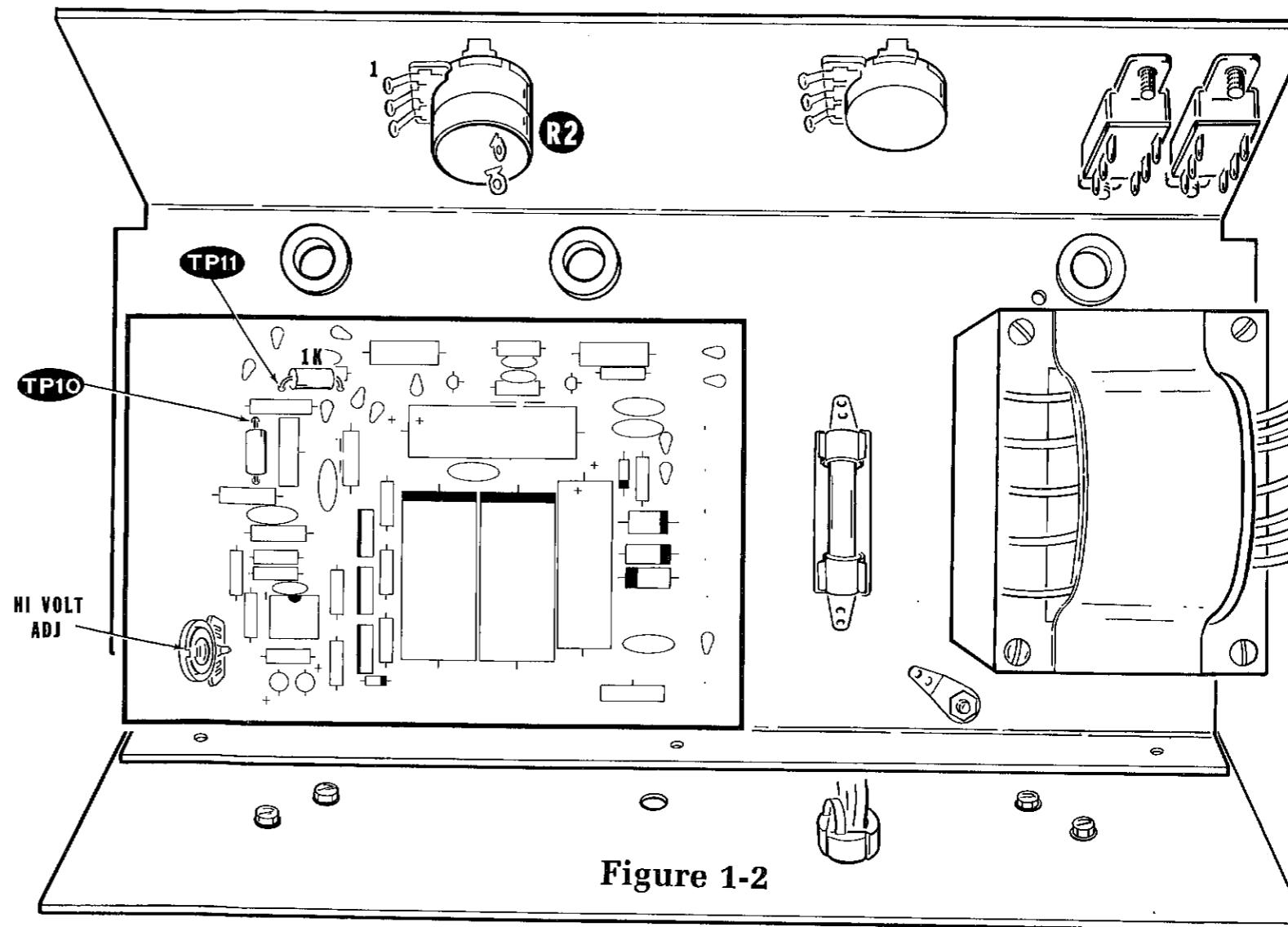


Figure 1-2

Channel X

AC-GND-DC (input switch) SW1 — In the AC position, this switch blocks the DC level of the input signal so that only the AC component is displayed. In the GND position, the input is disconnected and the horizontal amplifier input is grounded. Use this position when you wish to set the trace at a desired position without disconnecting the input signal. In the DC position, both the DC and AC components of the input signal are displayed.

Channel X

DC BAL (R5) — This is not an operating control. It should be used as directed in the "Operation" section of this Manual.

Channel X

INPUT — This is the X input connector during X-Y operation.

Channel Y

VOLTS/CM (SW101-2) — Each position of this attenuator switch is marked for the number of volts (peak-to-peak) required to produce a pattern one centimeter high on the graticule.

Channel Y

VARIABLE (R128-2) — This control is normally operated in its fully clockwise (CAL) position where the VOLTS/CM switch positions are calibrated. Vertical gain decreases as the control is turned counterclockwise, permitting the vertical trace size to be adjusted. However, the display is then uncalibrated.

Channel Y

AC-GND-DC (input switch) SW2 — In the AC position, this switch blocks the DC level of the input signal so that only the AC component is displayed. In the GND position, the input is disconnected and the vertical amplifier input is grounded. Use this position when you wish to set the baseline (trace) at a desired position without disconnecting the input signal. In the DC position, both the DC and AC components of the input signal are displayed.

Channel Y

INPUT — This is the Y input connector. It is also the Y input connector during X-Y operation.

Channel Y

DC BAL (R6) — This is not an operating control. It should be used as directed in the "Operation" section of this Manual.

Channel Y

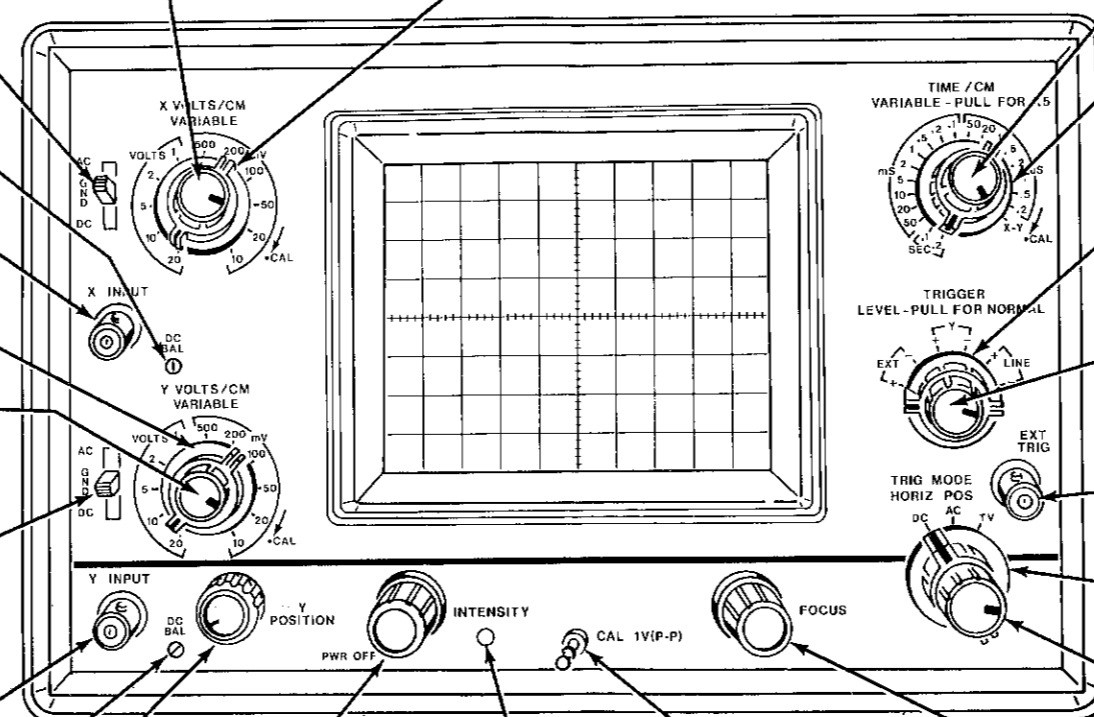
POSITION (R138-2) — This control positions the trace vertically on the screen.

Channel X

VARIABLE (R128-1) — This control is normally operated in its fully clockwise (CAL) position where the VOLTS/CM switch positions are calibrated. Horizontal gain decreases as the control is turned counterclockwise, permitting the horizontal trace size to be adjusted. However, the display is then uncalibrated.

Channel X

VOLTS/CM (SW101-1) — Each position of this attenuator switch is marked for the number of volts (peak-to-peak) required to produce a pattern one centimeter wide on the graticule.



VARIABLE-PULL FOR X5 (R253/SW205) — Provides a continuous adjustment of the sweep time between time base ranges. When pulled out, the sweep speed is effectively multiplied by 5.

TIME/CM (SW203) — The time required for the beam to sweep one centimeter is determined by the TIME/CM switch when the VARIABLE control is fully clockwise (CAL). This switch also selects X-Y operation.

TRIG (SW201) — This control selects the source and polarity of the triggering signal:

EXT (+/-) — Triggers on a signal applied from an external source.

Y (+/-) — Triggers on a signal from Channel Y.

Line (+/-) — Trigger signal is a portion of the 60 Hz line frequency.

LEVEL (R213/SW204) — Adjusts the trigger circuit so the sweep can be started at any position on the input signal waveform. The sweep can be started on either a positive or negative slope, depending on the position of the TRIG switch. When the TRIG MODE switch is in the DC position, this control selects the position on the graticule where triggering will occur. In its in position (AUTO), the trigger circuits are in the automatic mode. A base line will always be present in the absence of a trigger signal.

EXT TRIG Input — An external signal can be applied through this connector to trigger the sweep circuits when the TRIG switch is in the EXT position.

TRIG MODE (SW202) — The DC position couples the trigger signals directly to the trigger circuits. This allows the sweep to be triggered from DC level changes or very low frequency AC signals. In the AC position, the DC component of the trigger signal is blocked so that only the AC component of the signal reaches the trigger circuits. The TV position cuts off unwanted high frequency signals so you can lock onto TV vertical frame signals.

HORIZ POS (R263A/B) — Positions the trace horizontally on the screen. This is a two-speed control. Turn it just past the desired point, and then turn it back slightly to use the two-speed feature.

FOCUS (R3) — Varies the shape and size of the beam striking the face of the CRT. Adjust for the sharpest display.

INTENSITY (R2/SW3) — Clockwise rotation increases the brightness of the display. Adjust as necessary for your room-lighting conditions. Refocusing may be necessary when the intensity is changed. CAUTION: Do not allow a bright spot to remain on the screen as it could damage the CRT. Switch SW3 turns the Oscilloscope on and off.

POWER INDICATOR (PL1) — Glows when AC power is turned on.

CAL — This 1 volt (peak-to-peak) square wave signal (approximately 1000 Hz) can be used to periodically check vertical calibration. The rise time of this signal allows it to be used for oscilloscope probe compensation.

Figure 1-4

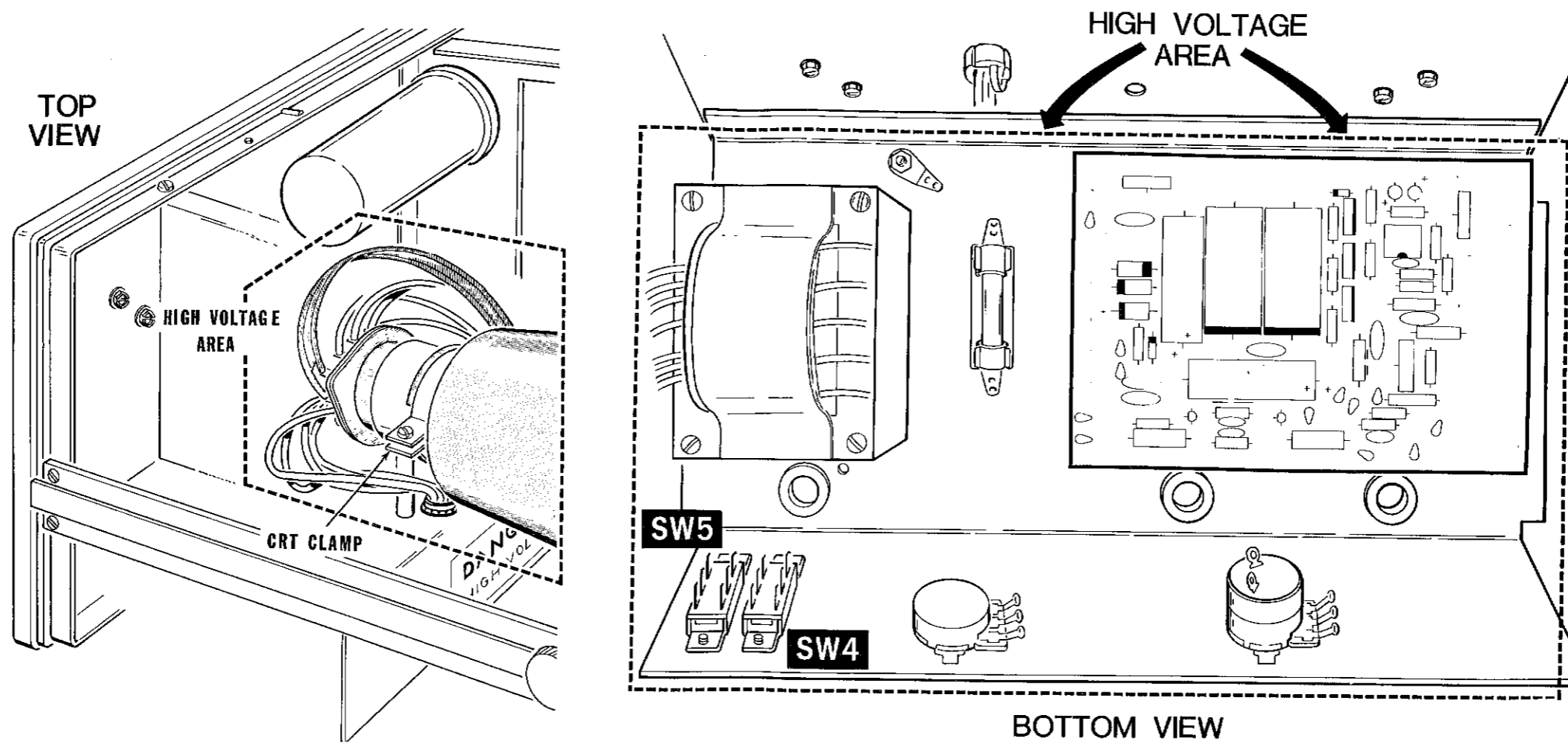


Figure 1-5

