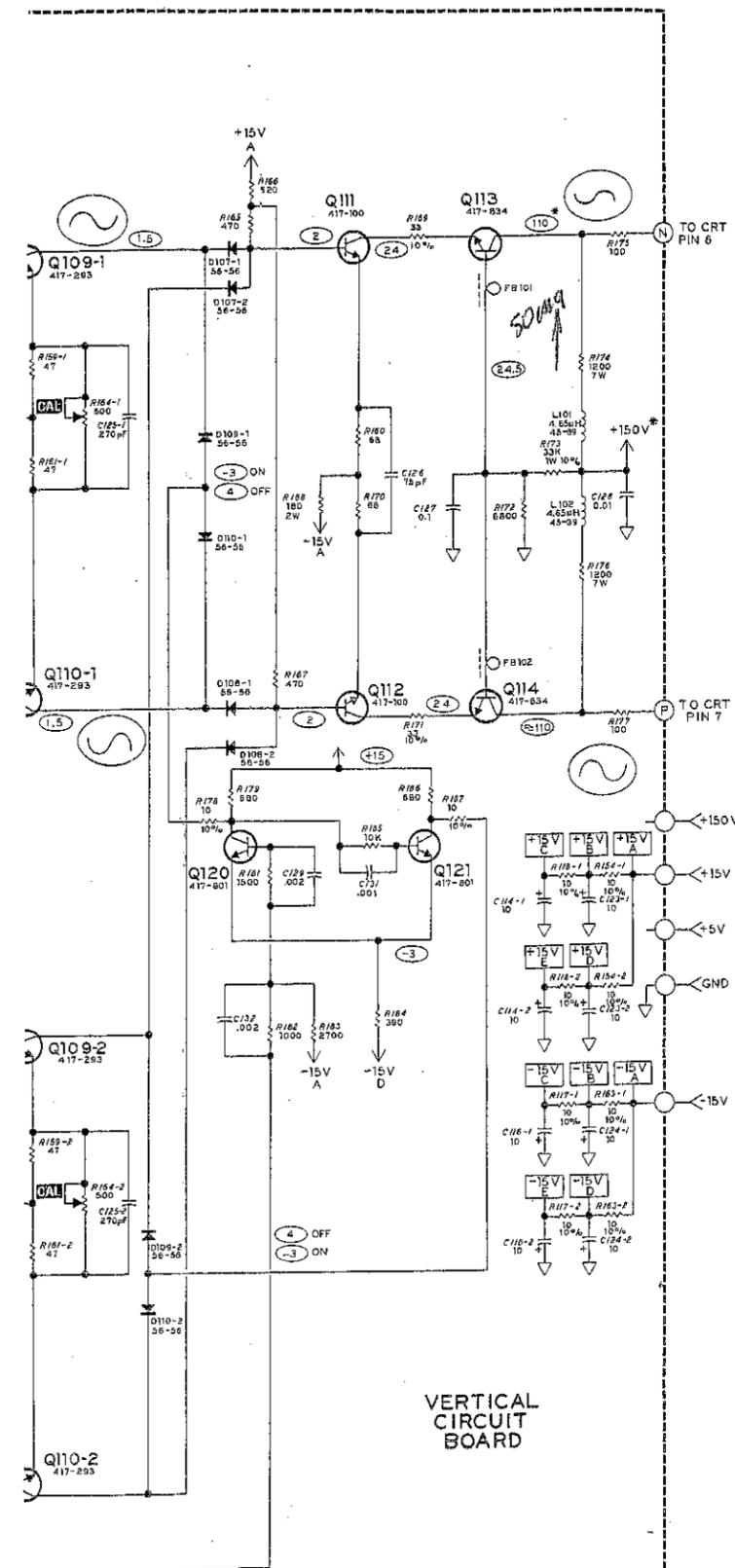


## SCHEMATIC OF THE HEATHKIT® DUAL TRACE OSCILLOSCOPE MODEL 10-4550/SO-4550

### NOTES:

1. ALL CAPACITOR VALUES ARE IN  $\mu\text{F}$  UNLESS OTHERWISE SPECIFIED.
  2. ON THE VERTICAL CIRCUIT BOARD, THE WATTAGE VALUES OF 1/8-WATT AND 1/4-WATT RESISTORS ARE NOT MARKED. ALL OTHER RESISTORS ARE 1/2 WATT, 5% UNLESS MARKED OTHERWISE. RESISTOR VALUES ARE IN OHMS (K=1,000; M=1,000,000).
  3. ○ INDICATES A LETTERED WIRE CONNECTION ON A CIRCUIT BOARD.
  4. ≡ INDICATES CHASSIS GROUND.
  5. ▽ INDICATES CIRCUIT BOARD GROUND.
  6. ● INDICATES A PART MOUNTED ON THE CHASSIS, ALTHOUGH ITS LOCATION IN THE SCHEMATIC SUGGESTS ANOTHER LOCATION.
  7. CIRCUIT COMPONENT NUMBERS ARE IN THE FOLLOWING GROUPS:
    - 1 - 99 PARTS ON CHASSIS.
    - 100 - 199 PARTS ON THE VERTICAL CIRCUIT BOARD.
    - 200 - 299 PARTS ON THE HORIZONTAL CIRCUIT BOARD.
    - 300 - 399 PARTS ON THE LOW VOLTAGE CIRCUIT BOARD.
    - 400 - 499 PARTS ON THE HIGH VOLTAGE CIRCUIT BOARD.
  8. ○ INDICATES A DC VOLTAGE MEASURED FROM THE POINT INDICATED TO GROUND WITH THE VERTICAL AMPLIFIERS BALANCED, THE TIME/CM SWITCH IN THE EXT POSITION, AND THE HORIZONTAL POSITION CONTROL CENTERED. VOLTAGE MAY VARY  $\pm 20\%$ .
  9. TRANSISTOR TRANSISTOR LOGIC (TTL) LEVELS ARE AS FOLLOWS: A LOGIC 0, OR LOW, IS  $< 0.8$  VOLTS. A LOGIC 1, OR HIGH, IS  $> 2.0$  VOLTS BUT  $< 5.5$  VOLTS.
  10. ◄ THIS SYMBOL INDICATES A LINE THAT CONTINUES. TO FIND THE CONTINUED PORTION, LAY A STRAIGHT EDGE ON THE LINE THAT THE SYMBOL IS ON.
  11. CRT UNBLANKED - DEPENDS ON POSITION OF INTENSITY CONTROL.
  12. CRT BLANKED.
  13. ONLY IN DUAL TRACE CHOPPED MODE DURING SWEEP OR EXT-X DUAL TRACE OPERATION.
  14. UNIT NOT SWEEPING. SPOT CENTERED HORIZONTALLY.
- \* DEPENDS ON LINE VOLTAGE.  
HD - HOLD OFF (INCLUDES RETRACE).



### HIGH VOLTAGE CIRCUIT BOARD

