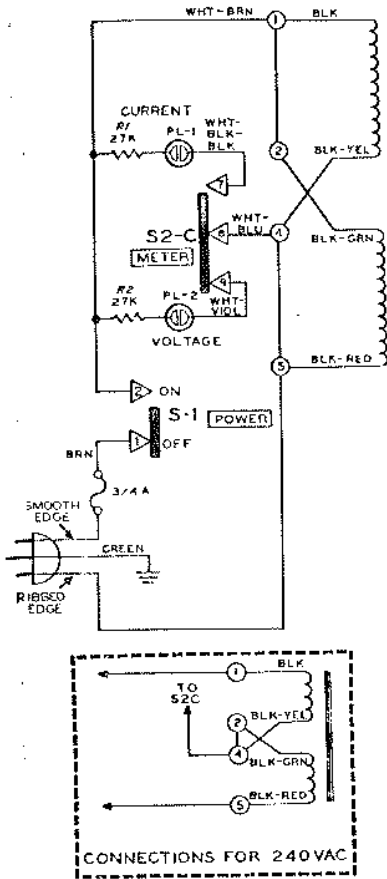


NOTE: TRANSFORMER LEAD NUMBERS REFER TO THE LUGS OF TERMINAL STRIP AB IN THE MANUAL.

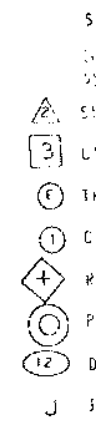


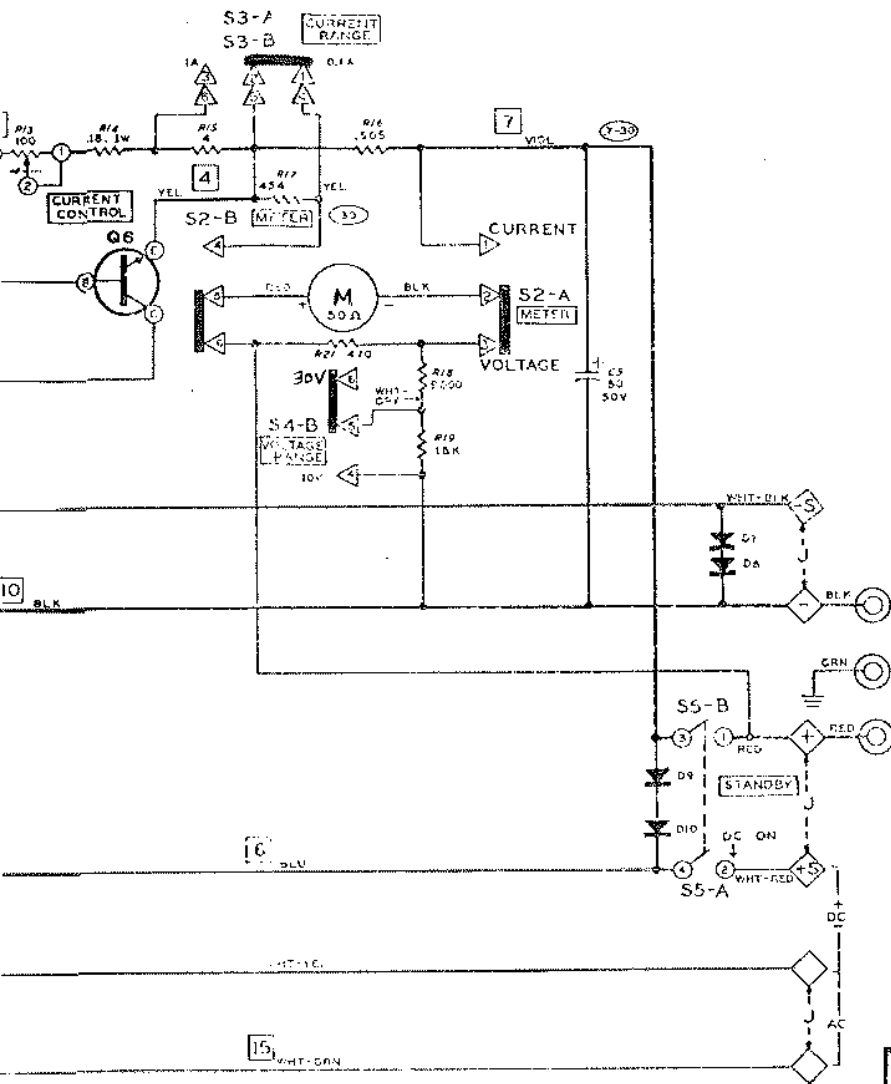
SCHEMATIC OF THE HEATHKIT®

1-30V DC REGULATED POWER SUPPLY MODEL IP-28

NOTES:

1. RESISTOR VALUES ARE IN OHMS (K=1,000). RESISTORS ARE 1/2 WATT UNLESS OTHERWISE MARKED.
2. CAPACITOR VALUES ARE IN MICROFARADS (μF). CAPACITOR WORKING VOLTAGES ARE INDICATED.
3. THE CROSS-ARROW ON A CONTROL ARM SYMBOL INDICATES CLOCKWISE ROTATION OF CONTROL.
4.
 - a. DC VOLTAGE MEASUREMENTS TAKEN WITH A HIGH IMPEDANCE VOLTMETER. VOLTAGES MAY VARY ±10%.
 - b. ALL VOLTAGES WERE MEASURED WITH:
 - (1) NO LOAD ON THE OUTPUT TERMINALS AND 115 VAC, 60HZ, ON THE POWER TRANSFORMER PRIMARY.
 - (2) THE VOLTAGE CONTROL AND THE CURRENT CONTROL FULLY CLOCKWISE AND THE VOLTAGE RANGE SWITCH IN THE 30V POSITION.
 - c. WHERE TWO VOLTAGES ARE SHOWN, THE CIRCUIT VOLTAGE DEPENDS UPON THE SETTINGS OF THE VOLTAGE RANGE SWITCH (S-4) AND THE VOLTAGE CONTROL (R7).





| SWITCH | SHOWN IN POSITION |
|--------|-------------------|
| S1 | OFF |
| S2 | VOLTAGE |
| S3 | 0.1A |
| S4 | 10V |
| S5 | STANDBY |

IT UNLESS
ING
CLOCKWISE
VOLTMETER.
ON THE
CLOCKWISE
PENDS
D THE

SPECIAL SYMBOLS

(Numbers or letters within symbol outlines will vary.)

- SLIDE SWITCH TERMINAL
- CIRCUIT BOARD NUMBERED HOLES
- TRANSISTOR TERMINAL
- CONTROL OR SWITCH TERMINAL
- REAR APRON TERMINAL STRIP
- PANEL BINDING POST
- DC VOLTAGE FROM POINT SHOWN TO BLACK BINDING POST.
- JUNCTION CONNECTION ON REAR APRON

| PART NO. | COMPONENT | MAY BE REPLACED WITH | BASE DIAGRAM |
|----------|-----------------------------|----------------------|--------------|
| 417-201 | Q1, Q2 | 2N3906 | |
| 417-102 | Q3 | 2N3055 | |
| 417-109 | Q4 | 2N3566 | |
| 417-94 | Q5, Q6 | 2N3416 | |
| 57-27 | D1, D2, D3, D7, D8, D9, D10 | SILICON, 600 PIV. 1A | |
| 56-13 | D4 | 56 V ZENER, 1W | |
| 56-55 | D5 | 36 V ZENER, 1W | |
| 56-26 | D6 | 1N191 | |