

Fig. 3.4 Power supply component layout

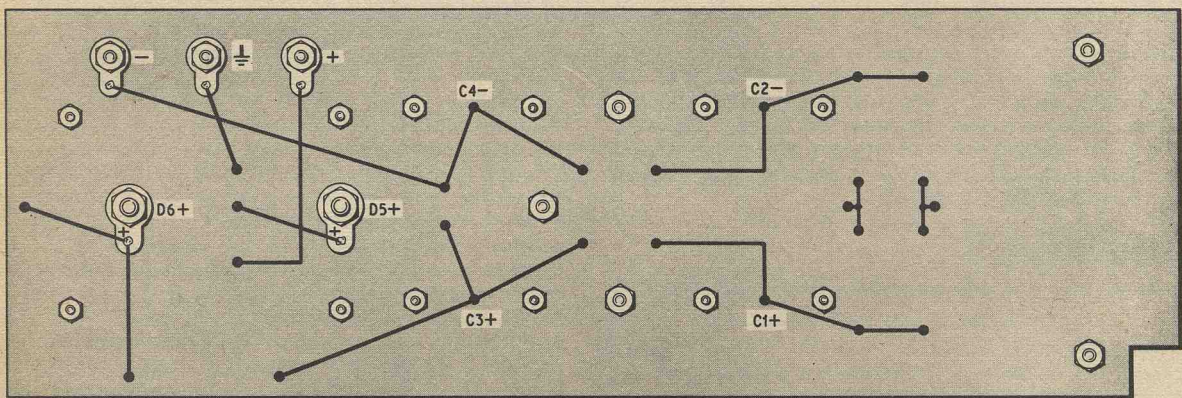


Fig. 3.5 Underside wiring of power supply panel

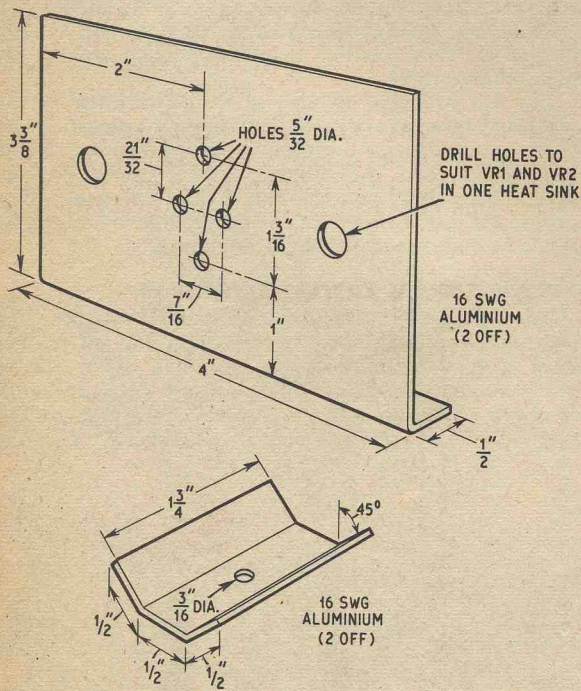


Fig. 3.6. Power supply heat sink details

measured voltage, when passing a current of about 100mA, can fall anywhere within the limits 12.5–17.5V.

If a choice exists, TR1–TR4 can be selected for highest *beta* gain, but matching is not necessary. Collector-emitter leakage currents of TR1 and TR2, with open circuit base, will preferably be below about 200 μ A at normal room temperature.

It is seriously recommended that the reader who intends to build PEAC should adhere closely to the semiconductor types specified here, and not consult other lists of equivalents. A key to transistor and diode connections appears in Fig. 3.3, and this covers all the semiconductors used in PEAC circuits.

Power pack components are assembled on a $\frac{1}{8}$ in or $\frac{1}{4}$ in s.r.b.p. panel measuring 4in \times 12in. The panel sits on the wooden framework at the bottom of the UNIT "A" box. Component layout appears in Fig. 3.4, with the underside wiring in Fig. 3.5. Heat sinks for TR3, TR4, D5, and D6 are made up from 16 s.w.g. aluminium sheet, and measurements are given in Fig. 3.6.

First drill the s.r.b.p. chassis panel to accept hardware and wires, using Fig. 3.5 as a guide. Mount the mains transformer, capacitor clips, power resistors, and the three output terminal screws. Attach the regulator diodes, with their heat sinks and solder tags, to the panel, taking care not to damage the diode top terminals. Bolt TR4, VR1, and VR2 to the appropriate heat sink, solder R9 to TR4 emitter and base pins, and install the assembly on the s.r.b.p. panel. Similarly, bolt TR3 to its heat sink, complete with R8, and fix to panel.