

reverse characteristic. The arrangement eliminates the need for a meter series resistor while still giving adequate protection.

In Fig. 6.5b, VR20 is a 3in instrument potentiometer of good linearity. The voltage divider network, composed of R1-R6 and VR1-VR4, taps off four standard voltages from the computer power supply, so that the master potentiometer will measure inputs of 0 to +1V, 0 to -1V, 0 to +10V, and 0 to -10V on its 0-10 scale. The accuracy of the master potentiometer, bearing in mind the 14in scale length, approaches that of a laboratory voltmeter.

FRONT PANEL AND MASTER POTENTIOMETER ASSEMBLY

Mount all sockets, potentiometers VR18-VR20, switches S7-S10, and meter, on the UNIT "B" front panel. Make up an aluminium bracket from the measurements given in Fig. 6.6, and glue it to the front panel, along with the small tag strip, in the position shown in Fig. 6.7. A hot soldering iron applied to the aluminium bracket will solidify the epoxy resin glue in a matter of minutes, sufficient to hold the bracket in place until the joint sets hard.

Rest the front panel inside-out on the UNIT "B" box front, to protect panel markings during assembly. Mount pre-set voltage divider potentiometers VR1-VR4 to the aluminium bracket, and then proceed with the

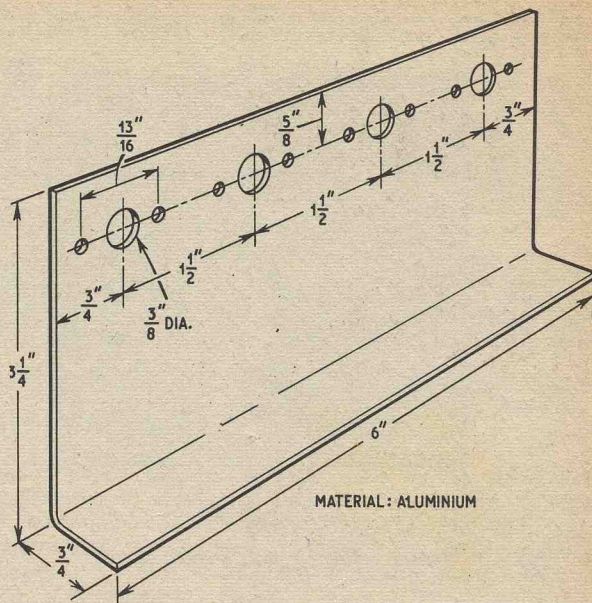


Fig. 6.6. Mounting bracket for pre-set potentiometers

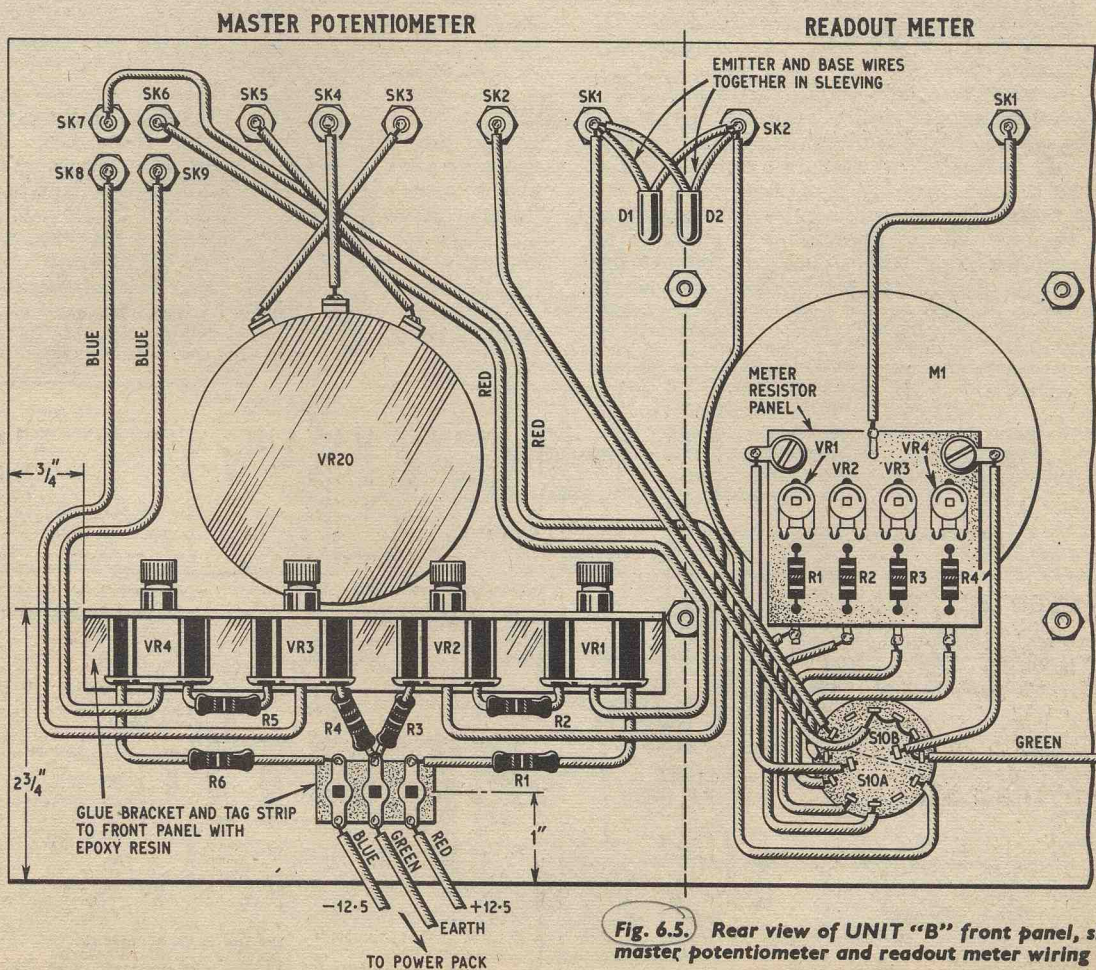


Fig. 6.5. Rear view of UNIT "B" front panel, showing master potentiometer and readout meter wiring

Fig 6.7