

At right is an interior view of the prototype, together with the power supply and input wiring details.

washer is necessary to isolate the metal of the transistor from the heatsink. No bush is necessary as the body of the transistor has an integral plastic bush.

The LED modules are wired to the PC boards with tinned copper wire and this method is shown on the exploded diagram. The wires are fed into the holes on the modules from the rear of the PC board or the side opposite the LEDs. These are soldered in place and bent upward for 15mm and then bent outward. These wires are then soldered to the copper pads on each PC board.

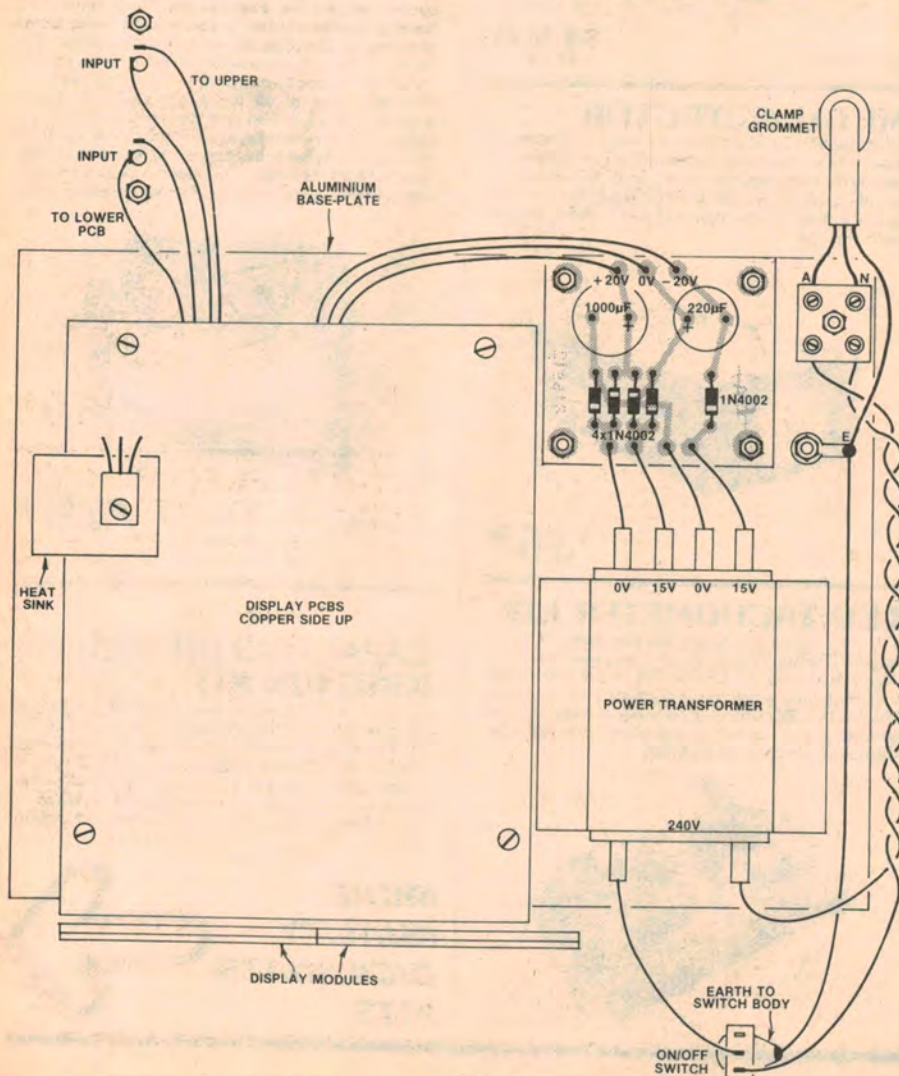
The spacers can be connected to the top display PC board; the screws to connect them to the PC board should be longer than the spacer so that there is enough thread to screw into the second spacer below the second PC board.

Before actually screwing the second lower PC board to the first PC board, wire the interconnecting wires between the two PC boards and bring wires out from the top PC board for the power supply. With the lower spacers on the lower PC board, the system can be put aside and the power supply assembled.

An aluminium baseplate measuring 180 x 130mm is used to support the transformer and PC boards. This is to keep all the mounting screws within the case, effectively insulating the screws which cannot be earthed to the plastic case. This baseplate is affixed to the base of the case with self tapping screws. A longer screw is used to support the terminal strip. Holes can be drilled in the baseplate for the transformer, small power supply PC board, earth screw and self tapping mounting screws.

The slots for the display LEDs can now be drilled and filed on the front panel as well as the hole for the on/off switch. At the rear panel, holes can be drilled for the RCA panel sockets and cord grip grommet. The entire unit can be assembled and the wiring completed. Note the extra earth lug on the switch body.

The Scotchcal label can be applied to the front panel. Be careful to place it square on; once the label touches the



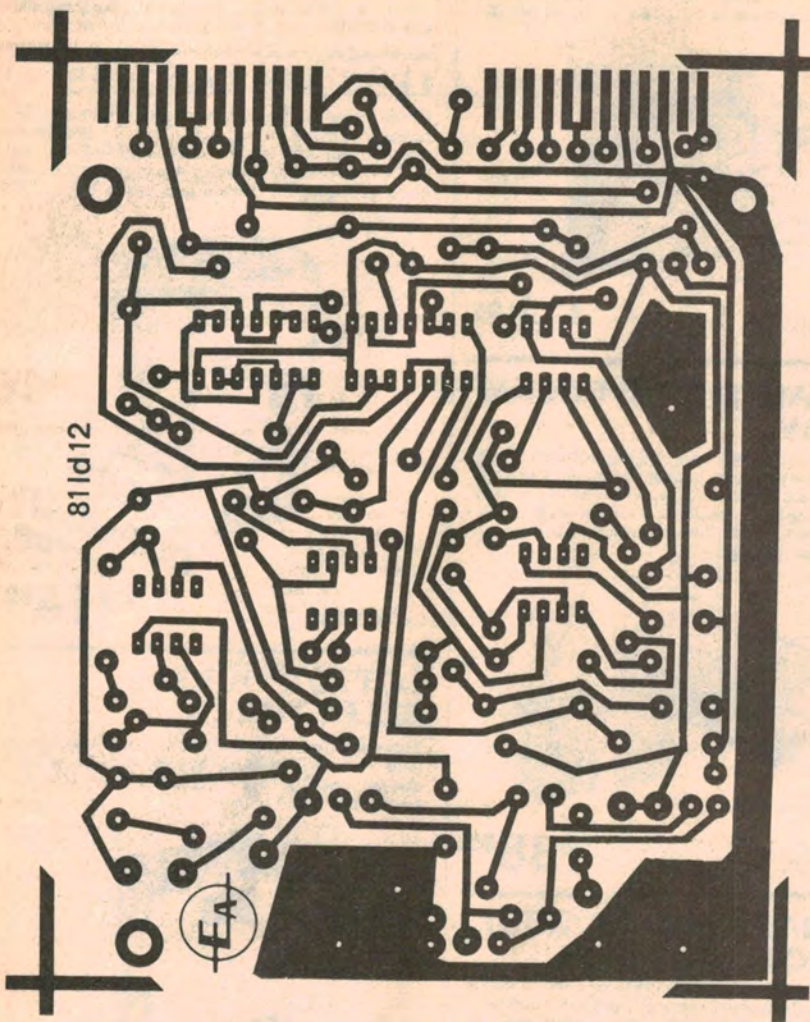
We estimate the cost of parts is

\$37

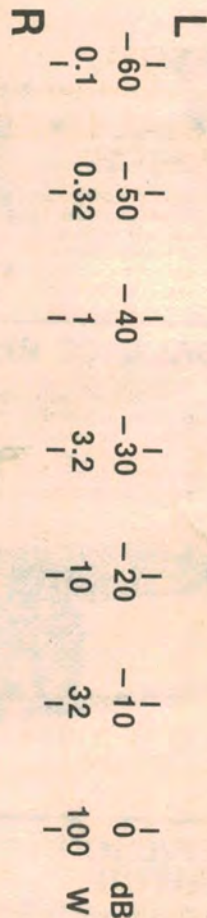
for one display board and

\$110

for a stereo unit complete with power supply and PacTec case.



EA PEAK/AVERAGE SIGNAL LEVEL MONITOR

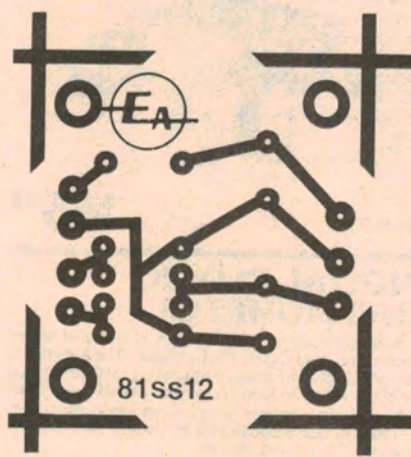


front panel it cannot be removed without buckling the Scotchcal. Cut the previously prepared holes through the Scotchcal with a sharp utility knife (such as the Stanley brand).

At this stage the offset voltage adjustments can be made. Short the signal inputs and turn up the trimpot closest to the display modules until the two lowest LEDs light. This trimpot controls the offset associated with IC4. By turning the trimpot associated with IC3 (adjacent to the IC4 trimpot) it should now be possible to adjust this until the peak and average indications on the display overlap. This causes the upper LED to be brighter than the lower LED. Now turn down the IC4 trimpot until both LEDs are extinguished. The same procedure should be followed with the second module.

With a program signal applied the LEDs should display a bar and a peak single LED which travels ahead of the main average signal level bar. The sensitivity can be adjusted with the trimpot associated with the op amp, IC1, at the opposite side of the PC board to the offset trimmers.

Actual-size artworks for the two PCBs and the front panel.



When all the checks and adjustments have been completed, the display modules can be affixed to the front panel with a few judicious dabs of a suitable epoxy adhesive.

If it is decided that the displays are to be fitted within an existing piece of equipment, the main PC boards can be

located at another position, perhaps in a separate housing. The PC boards and the display modules can then be interconnected with rainbow cable. Make sure that the decoupling capacitor for VLED on each display module is bypassed with the 10 μ F capacitor on the module rather than the main PC board.