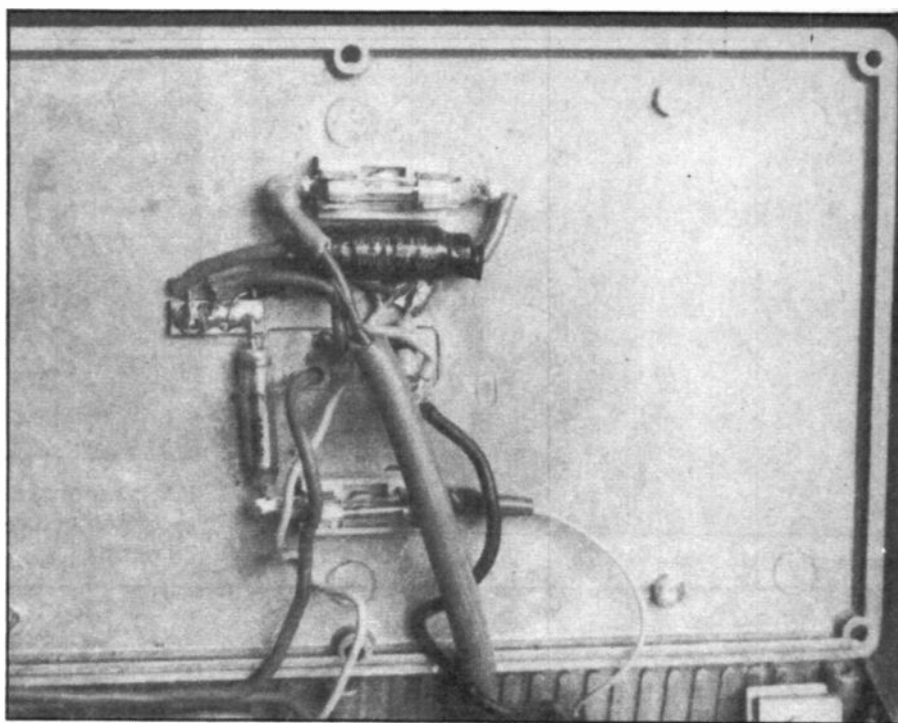


Construction

The prototype was built into a diecast box 192mm x 113mm x 61mm, with a heat sink mounted on the lid for IC1. The rectifier diodes, IC2 and Q1 are all bolted to the bottom of the box for heat sink-ing. Each of these items should be smeared with silicone grease. Note that IC2 must be fitted with an insulating mica washer to isolate it from the box, and be secured with a nylon nut and bolt. The transformer should be mounted using the neoprene washers supplied with it. Take care that the securing bolt only contacts the box at the lower end — as it could otherwise form a short-circuit single turn on the transformer. The RF chokes L1 and L2 should be of very low DC resistance, so that the supply regulation is not impaired. All low voltage wiring should be of thick cable (such as is used for wiring house ring mains). The components fixed in the lid are either wired direct to the pins of IC1 (R3,4, C5,6), taking care not to overheat the IC, or are fixed to small pieces of printed circuit board laminate 'super-glued' to the inside of the lid. The lead from R6 and F3 to the rig should be terminated in a plug to match the transceiver power socket.

In use, this unit has been able to power a Trio 2300 and a Wood and Douglas PA, giving about 15W, without a noticeable rise in temperature. On-air reports indicate that no noise is generated by the PSU. It should be noted that the nicads should not be left on indefinite charge — but charged for the normal 10-15 hours. This section could, if wished, be omitted, of course.



Lid of PSU (note pads of copper laminate super-glued to lid).

Table 1 — Zener diode and Resistor values for various output voltages.

Voltage out (V)	R3	R4	Z1
6	1k5	7k5	6V8
9	2k4	3k0	10V
12	5k1	3k6	13V
13.8	6k8	3k9	15V

Table 2 — Charging current for various nicad cells

Cell type	Charging current (mA)	R6
AA	45	120R
C	180	27R
D	350	15R
PP3	15	360R

