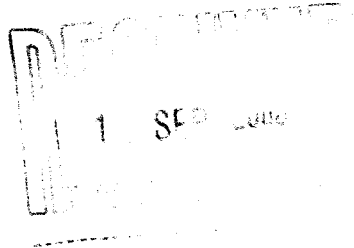


M. Purnell
28, Edinburgh Road
Little Lever
BOLTON
BL3 1TG
Tel: 01204 792295

Mr J Lamb
Viamed Limited
15, Station Road
Cross Hills
Keighley
West Yorkshire
BD20 7DT



Dear John,

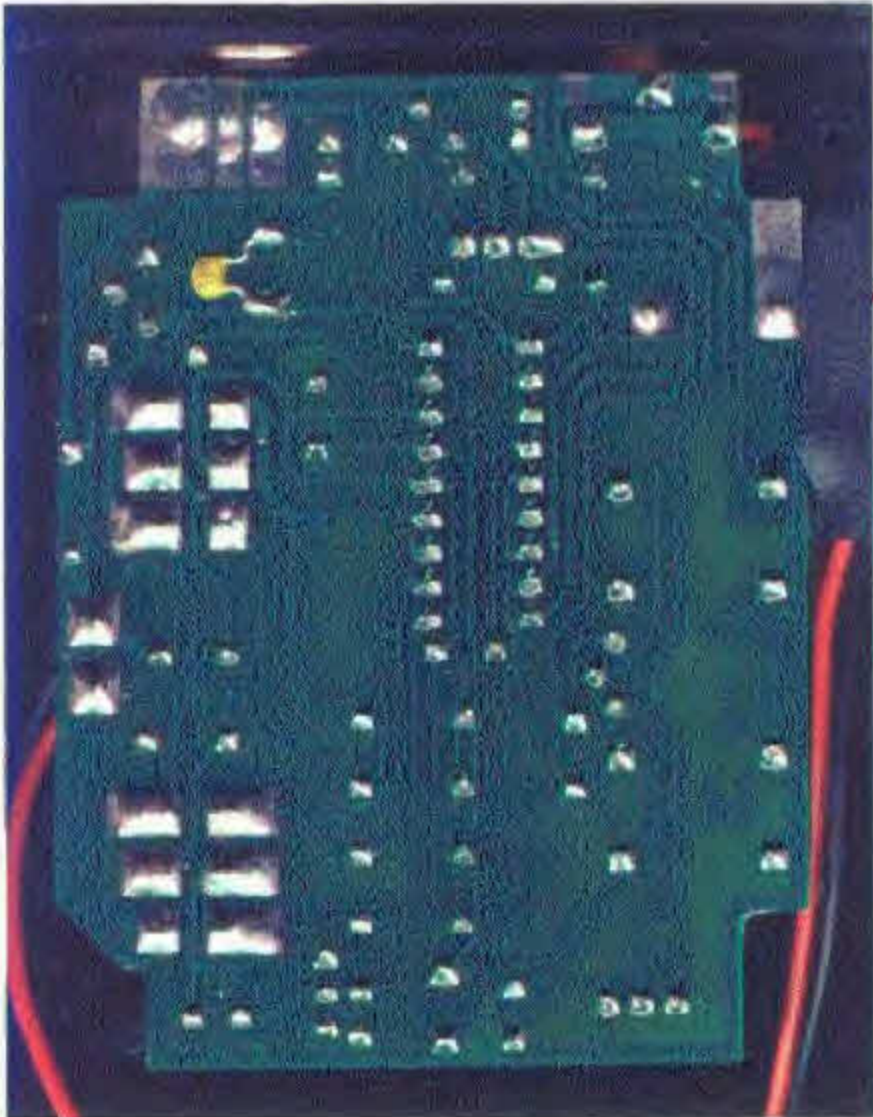
please find enclosed details of a minor addition to the Microstim DB. The prototypes did not exhibit a phenomenon which appeared on production and can be attributed to different chips having slightly different sensitivities.

Audio occurs by feeding back a fraction of the output pulse across a 3.9V zener diode in series with the patient. I.e. no patient load - no feedback and hence no audio. However, it was noted that a minority of stimulators produced an audio noise although the device was open circuit. Investigation showed that an open circuit spike was enough to trigger the audio input. A small capacitor 4.7nF, the same value as C4 (DB15), was placed across the zener diode and the problem disappeared. Both the first and the second batch of 25 (under completion) have had the capacitor added by soldering it onto the back of the circuit board. Although it looks perfectly professional, if you thought necessary, a small modification could be done to the circuit board when a new batch of boards is ordered from the suppliers. The addition is not a product change as all production has the capacitor. The only change is an additional capacitor (C1) on the circuit diagram.

Enclosed is the modified circuit diagram and layout together with a photo of the present location of the capacitor. A proposed modification to the circuit board which is two pads next to the zener diode is also enclosed if required.

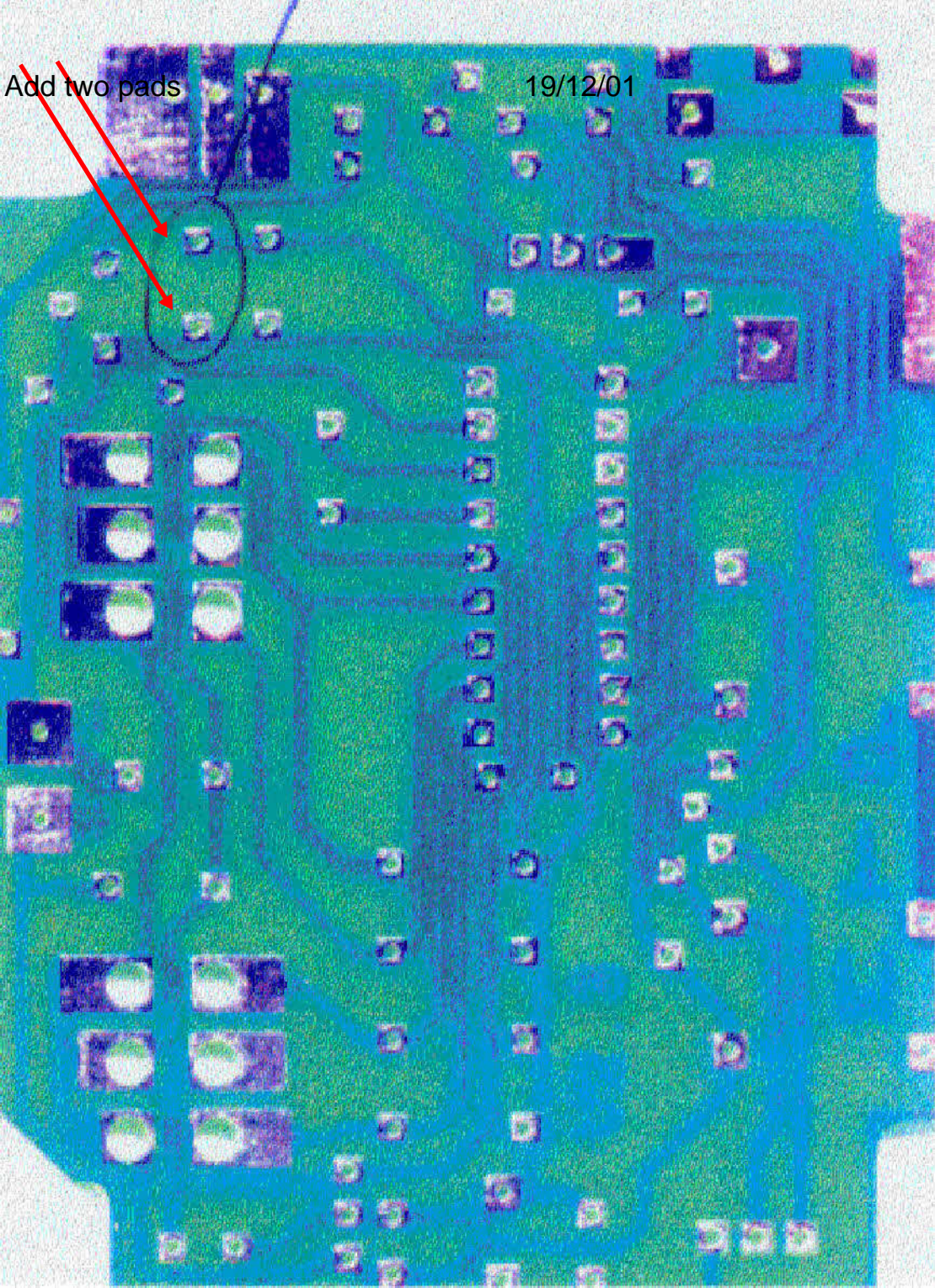
Regards,

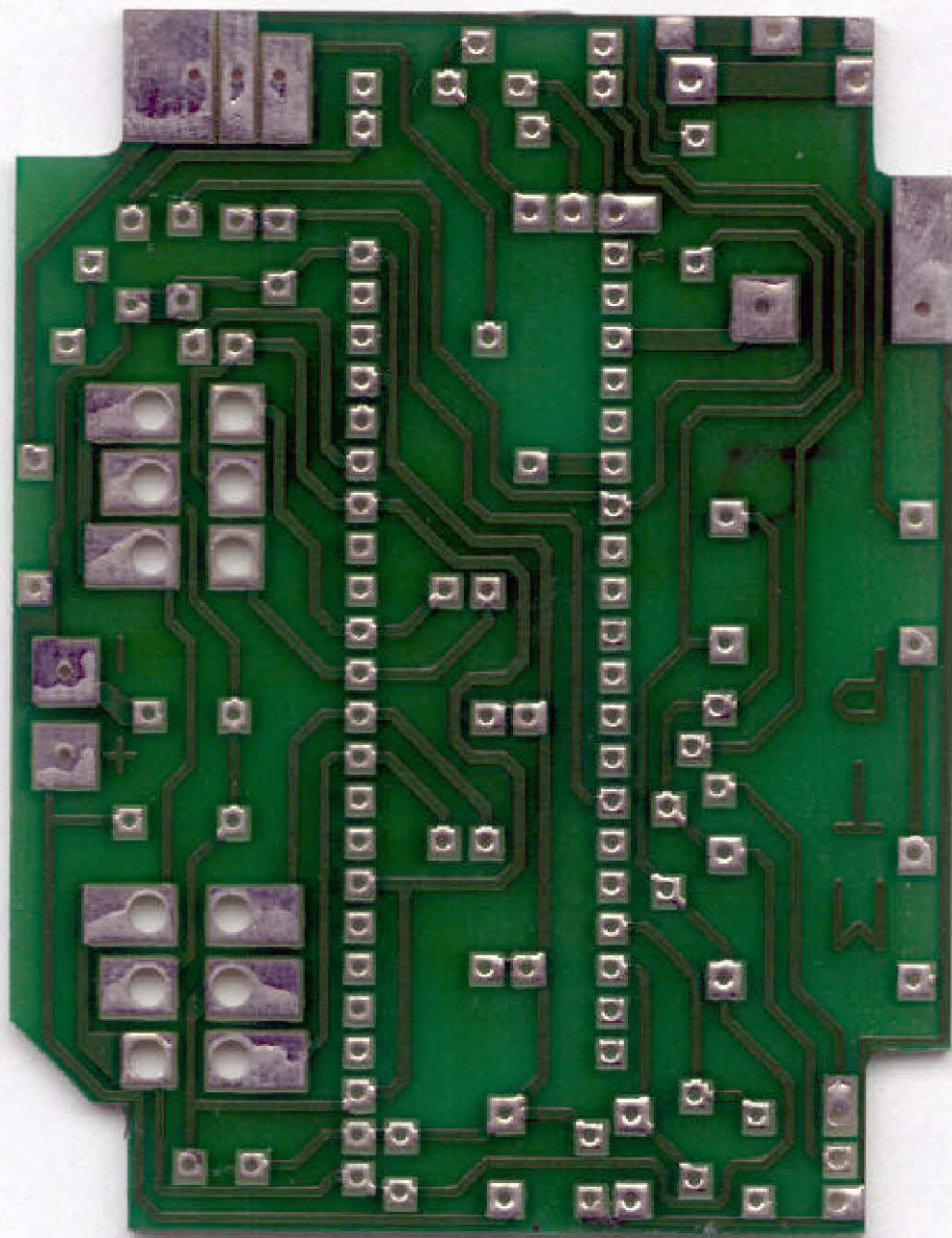
M. Purnell



Add two pads

19/12/01



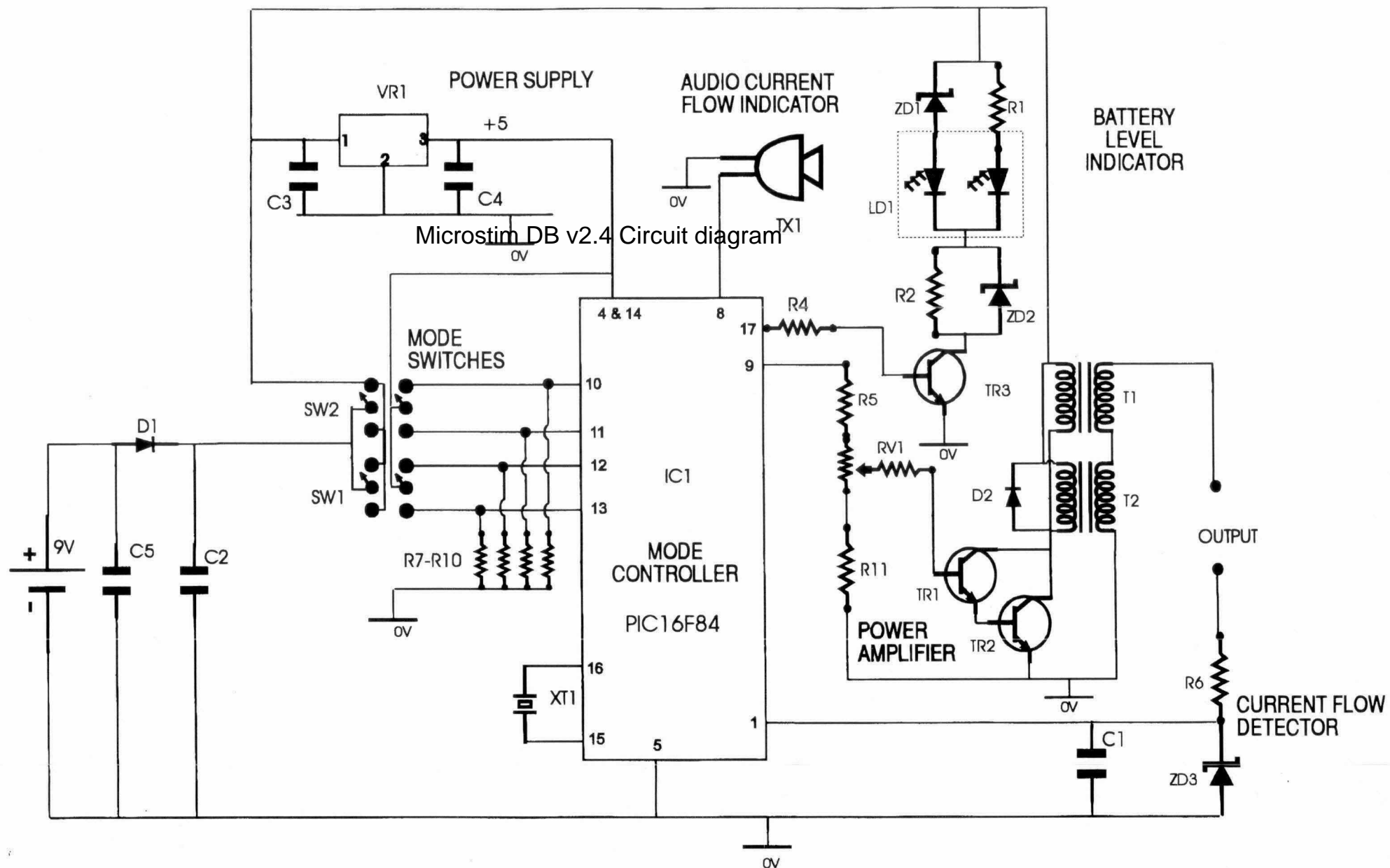


Micro Thin DB v2.4 PCB track layout

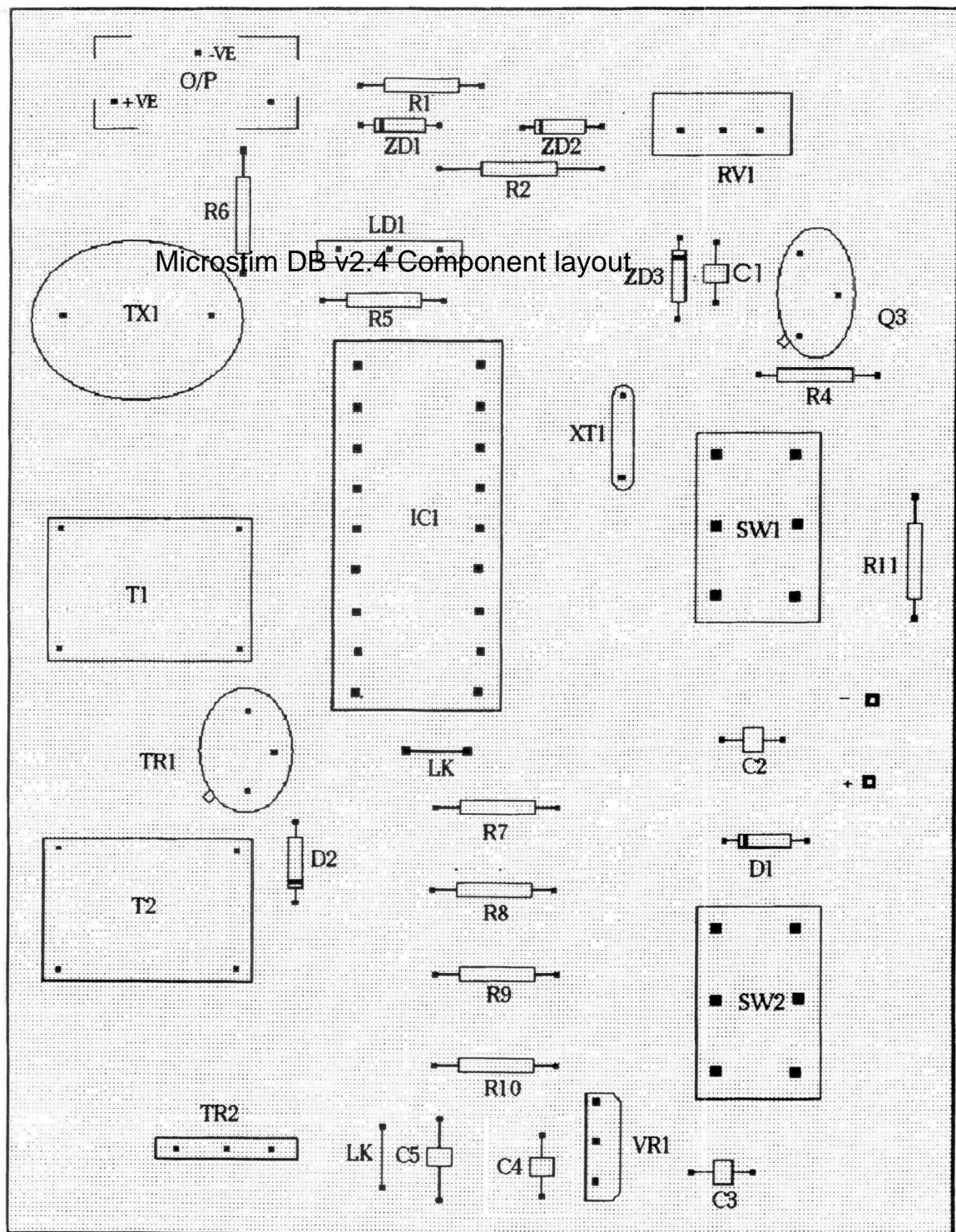
DB11

V2.4

Σ I - 0



MICROSTIM DB



MICROSTIM DB COMPONENT LAYOUT (PIC 16F84)