

Stabiliser for battery supplies

The accompanying circuit is useful when voltage sensitive devices (such as TTL ICs) must be battery operated. It uses very little power from a good battery, whilst with a flat battery, the output voltage is within 0.1 V of the battery voltage. ZD1 should be selected to obtain approximately the desired output voltage; for fine trimming, R2 may be selected between 470 ohms and 3k3. With the components shown, the output voltage varies less than 2% for

battery voltages from 5V to 8V and output currents from zero to 200 mA. For higher currents, R1 may need to be decreased.

Always use a power transistor for Q2, or it will overheat when the battery is nearly flat. Both Q1 and Q2 should have a current gain of at least 40, while the gain of Q3 should be as high as possible.

You can thank Mr F.C. Gillespie of Findon, S.A., for this neat idea.

