DIGITAL BENCHTOP DC POWER SUPPLY

A project report presented in partial fulfillment
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1.1 OBJECTIVES AND OUTLINES

A low-current power supply is a must for testing and experimenting electronics and other related areas.

The main objective of this project is to facilitate the normal procedure of using available dc power supplies. In normal applications, while reading dc voltage, it is necessary to read the current consumption too. Thereby, in order to get the reading, the circuit in testing has to be broken and an ammeter be placed between the power supply and the load circuit and only then, the current output can be obtained.

In this, it is not necessary to do as the above. Instead, by just pushing the pushbutton switch marked "VOLTS / mA" from dc volts to dc mA or vice-versa, the readings of the voltage and current can be obtained, without breaking the circuit.

Although there are other power supplies that offer this kind of extra feature, they are of analog type, i.e using needle meter. But the metod used in this project to read the the meter is through a digital display., which is quite reliable and accurate ±0.1 V or ±1mA. It would be a great advantage for hobbyist, in this case, because it 's like having a second multimeter, for those who has only one multimeter. The power supply is also inexpensive, compared to readily available

commercially, since all of the components used in the circuit are commonly available in the electronics market and cheaply sold. This project can also be called a "junkbox" power supply to some people, because some of them, which are electronic hobbyist, tend to have stocks of electronics components and spare parts of all odds lying around in boxes at home.Thus, since they have all of the components with them, they have called their self-made projects "junkbox" projects.