

## Re: power consumption

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**From:** Mac (*foo\_at\_bar.net*)

**Date:** 12/14/04

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On Mon, 13 Dec 2004 20:31:42 -0800, pmm wrote:

> *Hello everyone,*  
> *I am fresher engineer working on the electronics design .*  
> *I have designed a circuit board with a Micro controller, SRAM, a*  
> *MotorDriver on it, and along with some hundreds of discrettes ,now i am*  
> *unable to measure the total power consumption ,any one plz give me the*  
> *idea to mesure it as i need to place a on board power supply .Till now*  
> *i have used a Regulated power supply of the lab,and it is not having*  
> *a provision of displaying current consumption.*  
> *Plz help me with the process to measure the power consumption*  
> *thanks and regards*  
> *pmm*

Well, you seem to understand that all you need to do is measure the current.

An instrument for measuring electrical current is called an ammeter. Most hand-held and bench meters measure Volts, Amps, and a variety of other things. To operate in ammeter mode, you usually have to rearrange the leads on the meter, and select "DC amps" or something similar.

So, you power up the board from your bench supply, with the ammeter in series with the board. First, adjust the bench supply so that the voltage ON THE BOARD is correct. The Voltage at the power supply may be a bit higher than usual, now, because the ammeter has to have a Voltage drop to work. (This means you will need two meters. I hope you have two!)

So once you have the voltage at the right level on the board, record the amps going into it, and you have everything you need. ( $P = VI$ , but I think you know that ;-)

HTH.

--Mac