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How do I supply power through the GPIO?

I have seen some examples of people powering their Raspberry Pis by wiring a DC "barrel plug" style power supply to the 5V and GND GPIO
pins.

What considerations should be taken when doing something like this? Do I need to add any protective components or will any decent 5V
power supply with a high enough current be fine for long term use and not destroy my Raspberry Pi?

gpio

edited Aug 16 '12 at 10:42	asked Aug 16 '12 at 9:00
Alex Chamberlain **10.7k** 9 56 108	BitBobBang **406** 1 5 3

Do you have a picture of the power brick you want to use? or any other specifications of it? – ppumkin Aug 16 '12 at
10:36

Since ppumkin has seen fit to ask the question on EE Stackexchange, there should be a link to that:
electronics.stackexchange.com/questions/38077/… – Chris Stratton Aug 16 '12 at 14:46

I disagree with cross posting this to EE. – Alex Chamberlain Aug 16 '12 at 18:10

@AlexChamberlain Agreed. That was strange behavior. ppumkin, why not encourage BitBobBang to ask EE?
– Jivings Aug 17 '12 at 20:58

8 Answers

By the looks of the schematic the GPIO pins are connected to **+5v Rail**;

I have copied part of the input schematic on the USB power. In this sub section the +5v
supplied from the USB connector is filtered to give a nice stable 5v supply to the 5v0 Rail.
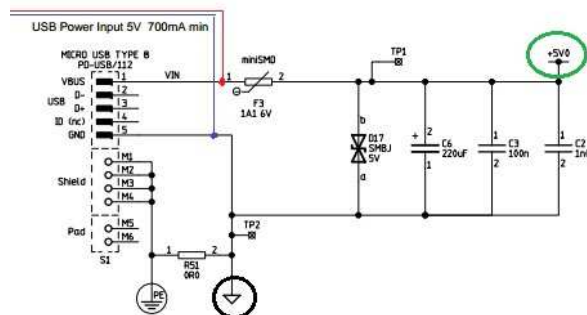
By studying the schematic you come to realise there are 3 more voltages (4 in total) used on
the Pi.

- 5.0v; HDMI (self protected)(now I know why my active HDMI to VGA works OK)
- 3.3v; BCM and LAN IC's
- 2.5v; DAC
- 1.8v; BCM(RAM) and LAN

This sub circuit which is connected to the 5v0 rail has 3 voltage regulators with their own filter
capacitors.