

Re: USB power supply for charging

# Re: USB power supply for charging

---

*Source:* <http://sci.tech-archive.net/Archive/sci.electronics.design/2008-11/msg01794.html>

---

- *From:* Mike V <[mike@invalid](mailto:mike@invalid)>
  - *Date:* Tue, 11 Nov 2008 21:58:26 +0000
- 

On Tue, 11 Nov 2008 12:52:17 -0800 (PST), mpm <[mpmillard@xxxxxxx](mailto:mpmillard@xxxxxxx)> wrote:

On Nov 11, 1:35?pm, "Paul Hovnanian P.E." <[p...@xxxxxxxxxxxxxx](mailto:p...@xxxxxxxxxxxxxx)> wrote:

Mike V wrote:

I've been asked to add 2 USB power outputs to a product to allow ipods, phones, cameras etc to be charged.

Sounds easy. USB specs 5V, 500mA max per output. So the obvious solution is a 5V 1A regulator driving 2 USB connectors in parallel.

But is it that easy? Do USB peripherals need to talk to the power supply?

Yes. A USB slave must negotiate with the power supply to draw any more than a small amount of power. Some USB loads ignore the spec. Some will operate in low power mode if the power supply does not adhere to the protocol (a dumb 5V wall wart for example).

iPods will refuse to charge at all (at least my Nano won't).

Do the outputs need to be independant:? What else don't I know? ?I'm getting concerned about the unknown unknowns.

Re: USB power supply for charging

Yes. Each USB host port will handle its own power handshaking.

Any useful thoughts welcome.

<http://en.wikipedia.org/wiki/USB#Power>

--

Paul Hovnanian ?p...@xxxxxxxxxxxxxx

---

Have gnu, will travel.

Damn.

That answers the question I had about whether I could just cobble up a small power supply to charge the iPod rather than plunk down \$35 for one at the big box stores....

I was hoping to just cut an old USB cord and attach it to a regulated supply.

If I understand the above correctly, the iPod Nano will not charge because it did not enumerate on the USB? Is that right?

I thought USB devices could still pull some decent current even when not enumerated. And that assumes a compliant controller (which my regulator most certainly would not be).

I'd have to drag the book out – I know it's not much, but might be enough juice to keep the batteries up for long trips in the car?

I've put it off because the longest trip I generally make is a 5-hour trip to Mom's, and the iPod keeps up pretty good. It definitely requires recharging (and new podcasts!) for the trip home, though.

Actually, that brings up another issue. Eventually I expect the iPod battery to weaken & die. I suppose you can get replacements installed. But what I really need is one of those programs where you can back the entire device up to a hard drive. If anyone knows a particularly useful program that's worth the money, please post it here or email me. Thanks.

–mpm

–mpm

Still googling. But I read that biasing the 2 data pins to 2.5V with 47k resistors makes the Ipod work.

I'll test this as soon as I can borrow the kids Ipods.

Re: USB power supply for charging

Re: USB power supply for charging