

Re: Charging A Lead Acid Battery

Source: <http://sci.tech-archive.net/Archive/sci.electronics.basics/2008-02/msg00406.html>

- *From:* James Beck <jim@xxxxxxxxxxxxxxxxxxxxxxxxxxxx>
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In article <4b78e703-68e3-4822-b318-a1cd9fb8ff04@e6g2000prf.googlegroups.com>, redbelly98@xxxxxxxx says...

On Feb 13, 9:09 am, James Beck <j...@xxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote:

In article <6194982a-5fc6-406e-b08d-dd15013ba985@y5g2000hsf.googlegroups.com>, redbell...@xxxxxxxx says...

Why is your simple charger so complicated?
Why not use a 12 volt DC
wall transformer and 13 ohm resistor (5
watt)? You get 540mA when the
battery is low at 5 volts, and about 400mA
as the battery voltage
rises to 7 volts.

-Bill

If you forget to turn off a charger like that, it will seriously
overcharge a 6V battery! On the other hand Ed's charger will
not do
that

It won't?
It should continue to charge the battery up to the wall wart voltage,
which is still too high if you leave it plugged in too long.
I would, and do, just use a CV source that is set to the float voltage
of the battery. Pick a regulator that has over temp and current
limiting and let it float.

Jim

Re: Charging A Lead Acid Battery

What about all the voltage drops between the wall wart and battery:

1 to 1.5V drop-out voltage of regulator

1.2–1.3V between regulator "out" and "adj" pins (across 2.5R resistor)

0.6–0.7V diode drop across 1N400x

Mark

Build it and try.

As the current drops I'll bet you don't get the drops you think, especially across the resistor used for the current sense. You are also assuming that the 9V wall wart is regulated. A cheap unregulated wall wart that is a "nominal" 9V under X% of load will usually be quite a bit higher than you expect as the load drops. A CV float charger could be used with any wall wart that is the V drop of the regulator or higher.