Re: best protocol for carging a Laptop Battery

Source:
http://www.tech−archive.net/Archive/WinXP/microsoft.public.windowsxp.hardware/2008−06/msg00671.html

- *From*: "M.I.5¾" <no.one@xxxxxxxxxxxxxxxxxxxxxx>
- *Date*: Mon, 23 Jun 2008 08:35:32 +0100

"JohnO" <johno@!NOOSPAM!heathkit.com> wrote in message
news:Oikr5ns0IHA.2084@xxxxxxxxxxxxxxxxxxxxxx

> "M.I.5¾" <no.one@xxxxxxxxxxxxxxxxxxxxx> wrote in message
> news:485b5330$1_1@xxxxxxxxxxxxxxxxxxxxxxx
>
> > "JohnO" <johno@!NOOSPAM!heathkit.com> wrote in message
> > news:OtlZAWk0IHA.1772@xxxxxxxxxxxxxxxxxxxxx
> >
> > > "Rahul" <nospam@xxxxxxxxxxxxxx> wrote in message
> > > news:Xns9AC25C0ABF7016650A1FC0D7811DDBC81@xxxxxxxxxxxxxxx
> > >
> > > I just bought a new LiIon Laptop battery for
> > > my Dell Inspirion E1505
> > > (dual
> > > boot WinXP and Fedora).
> > >
> > > I gave it my initial 10 hour charge. Now
> > > what? I started using it but
> > > should I continue using it till the battery is
> > > drained and then
> > > recharge?
> > > Or should I only drain it partially? If it is not
> > > drained fully how
> > > will
> > > the Laptop learn (callibrate) itself to what
> > > the new capacity is?
> > >
> > > Or is it recommended that I only partially
> > > discharge it? What's best
> > > for
> > > the battery life?
> > >
> > > Another point: How many times should I

> cycle it this way? In the long
> term
> should I always wait for a full discharge; or
> can I charge it up from a
> partially−discharged state or does it not
> matter?
>
> I've gogled this but recieve conflicting
> advice.
>
> −−
> Rahul

> What was good for Nicad and NiMH is not good for Li−Ion.
> That first
> discharge/charge cycle trains the charging circuits, it doesn't
> do
> anything good for the battery.
>
> Beyond that, keep it charged,

> Why? I often hear this but when this advise is trotted out, the adviser doesn't actually know the answer. It's rubbish of course.

> don't run it to zero if you dont have to.

> Why? Same as last answer. There is no evidence that fully discharging a battery does it any harm. Overdischarging is dangerous, but the monitor circuits won't let you get even close to this condition.

> Recharging them from zero often (usually) results in heating up. Maybe with proper airflow and an open design a full discharge/recharge regimen isn't any issue, but in a real−world portable device it definitely matters. Smaller recharges equal less heat. Your advice about removing the pack when on AC kinda plays into that. Plus a lot of charging systems are stupid.

Lithium−ion batteries have an efficiency of nearly 99% and as such generate (as near as makes no difference) no heat of their own while charging. This is true as long as the charging is carried out correctly. Removal of the battery while running on AC has nothing to do with internal heat from the battery (as many suggest), but heating of the battery by other parts of the laptop (such as CPU, GPU, hard drive and so on). Li−ion battery charging systems are never stupid. They have to be designed to fairly rigid and

close tolerance specifications. Lithium−ion batteries can be extremely dangerous if they are not charged and discharged properly, but if the charger and protection circuits are properly designed, this won't be a problem.

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