Re: Another Novice Q. − recharging − Volts and Amps

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- *From*: "Tom Biasi" <tombiasi***@optonline.net>
- *Date*: Mon, 23 Jun 2008 19:56:22 −0400

"Kris Krieger" <me@xxxxxxxxxx> wrote in message
news:X9udnZAE58lEr_3VnZ2dnUVZ_jmdnZ2d@xxxxxxxxxxxxxxxx

> "Tom Biasi" <tombiasi***@optonline.net> wrote in
> news:CrydnV3Ospmxm_3VnZ2dnUVZ_vninZ2d@xxxxxxxxxxxx:
>
> > "Kris Krieger" <me@xxxxxxxxxx> wrote in message
> > news:HN6dnUa5Bpt2esLVnZ2dnUVZ_h3inZ2d@xxxxxxxxxxxxxxxx
> >
> > > Apologies in advance if this is a dopey question, but, when it comes
> > > to recharging batteries, and using a solar cell to do that, what I've
> > > been assuming, based on th info that peopl ehere have kindly
> > > provided, and also that I've foind on−line, is that teh mA output of
> > > the solar cells should not exceed 2/10ths to maybe 3/10ths of the
> > > battery's mA rating, and teh voltage produced by the solar cells
> > > should be as close as possible to the total voltage of the battery or
> > > batteries. But I wanted to check whether that assumption is correct,
> > > becasue I think I'm getting closeto getting some parts and trying a
> > > couple of assemblies.
> > >
> > > Thanks In Advance!
> > >
> > > − Kris
> >
> > Hi Kris,
> > Different batteries need different charging conditions.

> Look at the specs for your batteries.
> The charging requirements will be discussed.
> Some batteries may say: Charge at .1c for 10 Hrs.
> This means to charge them at one tenth the AH rating for 10 Hours.
> The VPC (volts per cell) will also be specified.
> For example: NiCads are about 1.2 VPC and can charge at about 1.3−1.5 VPC (follow manufacturers specs) at .1 −.3 c. (again, follow specs.).

Ah, OK, that at least gives me a ballpark figure − thanks :) !

(I do try looking all these things up via Google before posting questions, but often, I don't know the terms that will get me the correct *type* of answer − IOW, if I want info about charging, I don't want to look at endless lists of people selling battery chargers, but the latter is the sort ofthing I've been having to trudge through...so even just getting the right terminology has been a huge help).

> So if you have a 12 volts NiCad pack that would be a 10 cell NiCad battery. If you are using lead acid cells, the numbers are different. Keep in mind that photo cell manufactures inflate their specs by using bright sunlight averages.
>
> Tom

THe Max I'll use will be 4 1.2V NiMH batteries, for small lighting units. What I'm trying to figure out is how to avoid "cooking" the batteries ;) by putting in *too much* voltage, but I also want to take into account the very thing that you mentioned, i.e. the "brightest possible sunlight" rating for the cells.

I had bought some Malibu NiMH batteries at WalMart, but now i'm looking at ordering something more along the lines of Energizers (for example, http://www.rei.com/product/719570?cm_mmc=cse_froogle−_−datafeed−_−product−_−na&mr:trackingCode=B42A264C−BE3F−DD11−98CA−001422107090&mr:referralID=NA or these http://www.circuitcity.com/ssm/Duracell−AA−Rechargeable−Batteries−4−Pack−DC1500B4/sem/rpsm/oid/52666/catOid/0/rpem/ccd/productDetail.do) or one of the other known/name brands, because just today I read some cautions regarding "bargain" batteries.

I at least found some interesting LEDs at http://www.optekinc.com/viewparts.aspx?categoryID=53 , some of them claim to put out 18,000umc average using 20mA and typical "forward" voltage of 3.4, so that I can run off of a reasonable LED driver (considering some Maxim items, or the "Micro−Puck").

> ANyway, I'll look around and see whether ther eis info about recharging.
> THis is good to know because, assuming I can do what i'm intending, and
> call sell the units, I can also incoude costomer info as to the best
> replacement batteries, should replacements be necessary.
>
> Thanks again :)
>
> − Kris

When you search you may try something like "solar battery charging tutorial"
When you add 'tutorial' you will get better hits on your search.
BTW: NiMH have very fussy charging characteristics.

May I suggest deep cycle sealed lead acid.

Tom

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