

Simple (but long) solar charging question

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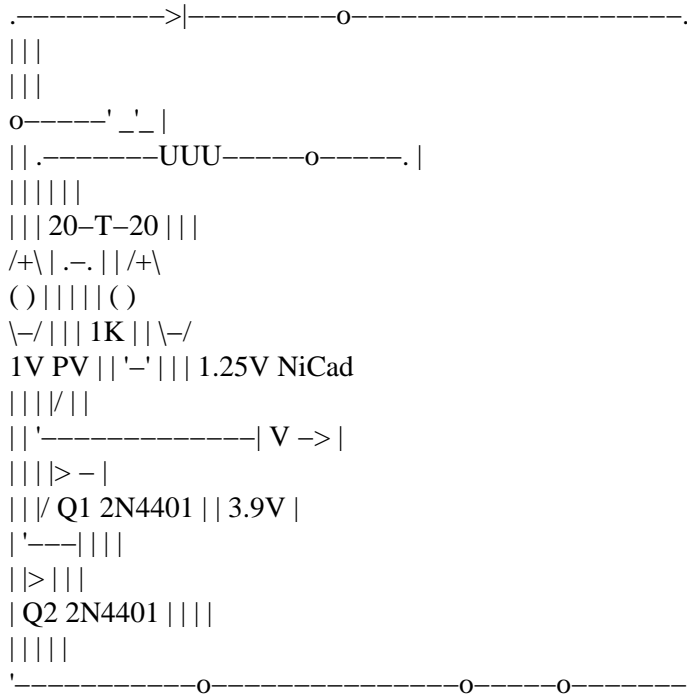
Hi all,

(Just reread and grasped the length of this—sorry. Not looking for specific answers, just insights into things I am perhaps misunderstanding—any pointers to good reading help. :))

Another problem from an experimenting noob.

I have a schematic for a simple solar-recharging garden light. This thing uses a very simple blocking oscillator to power a bright white LED (3.9V) from a 1.25V AA NiCad cell, and works wonderfully.

1N4004



(created by AACircuit v1.28.6 beta 04/19/05 www.tech-chat.de)

Short description: Q1, the 1k resistor, and the inductor form a blocking oscillator which pulses into the ~1.25V from the battery

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into fairly high frequency ~3.5–4V pulses which are sufficient to power a bright white LED. Q2 disables the oscillator when the solar panel hits enough voltage. The 1N4004 prevents the battery from discharging through the solar panel.

Full explanation from someone wiser than I:

[http://www.cappels.org/dproj/ledpage/leddrv.htm#Solar Powered Garden Light](http://www.cappels.org/dproj/ledpage/leddrv.htm#Solar_Powered_Garden_Light)

As I said, it works great—at least, it powers the LED quite nicely from the battery.

Here's the problem—as you see from the schematic, I only have a 1V/400mA solar panel. Sources I have read seem to indicate that you want more voltage from the charging source than the battery can provide in order to charge the battery. Obv