

## Re: Using a lower-current adaptor with my laptop

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Date: Mon, 7 Jun 2004 07:41:08 -0600

eug k wrote:

> hi,  
>  
> *I'm after a smaller/lighter adaptor for my thinkpad. The  
> laptop is rated at 16V, 3.36A. There's one that I'm  
> looking at that is rated at 16V, 2.2A. It also looks  
> a fair bit smaller. What I'm wondering is, can I safely  
> use it with my laptop?*  
>  
> *I get about three hours use on a 3.1AH battery, so the  
> actual current consumption is nowhere near 3.36A I'm  
> assuming. It also takes quite a long time to recharge,  
> so the charging current can't be too high either.  
> Apart from the coax power plug which may be different, is  
> there anything i'm missing out?*  
>  
> *it's a thinkpad 240x, the adaptor's for another thinkpad.*  
>  
>  
> *thanks!*

The average power requirement is, with certainty, less than the peak power requirement. For example, if you are doing something as simple as defragmenting the HD, the power required during the defrag can be several multiples of the average power. Burning CDs is another heavy power consuming process. Only you can determine what the peak power requirement might be. Operating with an AC adapter that is rated too close to the average power requirement leaves little surplus for supplying the peak power. If the AC adapter is operated in excess of its capacity, the voltage drops and all manner of potential problems can be proposed: HD write failure, memory read/write failures, CPU auto-shutdown, overheating from reduced fan speed, adapter overheat/auto shutdown, etc. OTOH, depending on your computing habits, none of the above might apply.

Q