How to Save Laptop Battery Power When You Really Need it

You've got a five-hour flight from Los Angeles to New York City, and one battery in your laptop. You've got work to do, DVDs to watch, and games to play. How are you going to get that battery to last? Well, hidden inside (and outside) your computer are lots of tricks to help you.

Dimming Your Screen

Your screen and hard drive use up more battery power than any other parts of your computer. You can dim down your screen to a point where your eyes still feel comfortable but you also save energy. On most laptops, you first dim the screen by holding down the “Fn” key (go ahead and find it because you may never have used it before). Then you look for a key on your laptop that either has a picture of a sun or a half-moon. (On my Sony Vaio that key happens to be F5.) If you find it, go ahead and hit it while still holding down the Fn key. A brightness adjustment box should show up on your screen. If you can't find a key with a sun or half-moon on it, try hitting your various arrow keys while holding down Fn, to see if that works.

Turning Off Your Screen Altogether

If dimming your screen is good for saving battery life, turning it off when you're not using it is even better. To turn off your screen, we're going to have to go into some settings in the Control Panel. You'll soon see these settings are not only good for turning off screens; they perform a whole host of battery saving functions.

Click on Start, then on Control Panel. If your Control Panel is shown in the "Category View", click first on Performance and Maintenance, then on Power Options. If your Control Panel is in Classic View, simply click on the Power Options icon. Next click on the Power Schemes Tab. Underneath where it says Running on Batteries and across from where it says Turn Off Monitor, choose how quickly you'd like your monitor to shut off when you're not actively using it.

That Power Options Properties box we just opened brings us to a whole host of other enticing options we can employ on our cross-country flight!

Choosing a Power Scheme

Windows XP offers two Power Schemes appropriate for laptops on the go. These are Portable/Laptop and Max Battery. They can both be chosen in the Power Schemes tab of the Power Options Properties box. Both power schemes conserve battery power. But Portable laptop adjusts what it conserves to the amount of power you need at the time, while Max Battery is much less flexible. It keeps your computer at a very low constant power rate no matter what you may be doing. So if you are planning on watching a DVD on that flight, which uses a lot of battery power, I don't recommend using the Max Battery power scheme. It might not give you enough power.

Each power scheme also has its own settings for when the monitor and hard disks should be turned off. Remember that both are huge energy hogs, and that both the monitor and hard disk remain on longer under Portable/Laptop than they do under Max Battery.

The power scheme you choose also determines how long the computer will wait to go into Standby mode or Hibernate after remaining idle. Standby conserves energy because it turns off your hard disk and monitor. However, whatever you were working on at the time stays in memory (RAM) instead of being saved safely to your
hard drive. The upside of Standby, though, is that when you press any key your computer will come out of the mode rather quickly.

Hibernation saves even more energy because it saves your work to the hard drive and then shuts your computer down almost all the way. Inherently, of course, this means it takes the computer longer to wake up to its normal state, but when everything does come back on, it looks the same as before. To switch your computer to Standby mode manually, click on Start, then on Turn off Computer, then on Standby. To make your computer Hibernate manually, click on Start and Turn off Computer again, but this time hold down the Shift key down afterward. The Standby key switches to "Hibernate". Click it and your computer will go into Hibernation mode.

Creating Your Own Profiles

Maybe you don't like the two power saving choices Windows gives you. Maybe you want to create custom ones to suit your own needs. You can do that! I created one for "Long Plane Rides". I adjusted the settings in the Power Options Properties box. For instance, I indicated I wanted my monitor to turn off after only 2 minutes of idle time, and my hard disks after 3 minutes. Then I clicked on Save As, named my profile, and clicked OK. Now maybe the battery will last even longer on the flight.

Let's go through some other choices in the Power Options Properties box. Under the Alarm tab, you can check boxes to either be alerted when your battery is low and/or when your battery is critical. You can even use the slider to make your own determination of just what is low and what is critical. Then you can click on Alarm Action to tell your computer to, for instance, sound an alarm or go into Standby mode when those moments are reached.

Under the Advanced tab, you can choose what you want your laptop to do when you close the lid. You can choose it to go into Standby mode, Hibernation, or even do nothing if you wish. You can also choose what you'd like the computer to do when you hit the power button.

If you're interested in using your laptop's Hibernation feature you should check the box under the Hibernation tab that says Enable Hibernation.

Turn Off Wireless Network Card

Your wireless card can also be a drain on your battery's resources, so disable it if you don't need it. (You don't need it obviously on a plane, for instance.) If your laptop has a wireless card, simply take it out. If your laptop has wireless built-in, you can disable it in Windows XP by clicking on Start and going to your Control Panel. In Category View, click on Network and Internet Connections, then Network Connections. In Classic View, simply click on Network Connections. Once you're there, right click on the wireless connection you're using, and click on Disable. You can also disable your wireless network card through the Device Manager. Right click on My Computer and left click on Properties. Click on the Hardware tab and then the Device Manager button. Next, click on the small black cross next to where it says Network Adapters. Locate your wireless network adapter, right click on it, and left click on Disable.

You can also left click on Properties instead (after you right click on your network adapter), click on the Power Management tab, and check the box that says "Allow the computer to turn off this device to save power".

Some newer laptops with the Intel Mobile Pentium® chip have a button somewhere on the laptop itself, for instance on the front, to enable you to easily turn your wireless on or off. You may have to check your laptop's manual to find out if you have a button and if so, where it is.

CPU Throttling

The Intel Mobile Pentium® laptops also sport a feature known as CPU Throttling (and named SpeedStep™ by Intel), that actually slows down your processor when you’re running on the battery. When you’re plugged into your AC, your processor runs full speed ahead. But when you unplug that cord, it shifts into a lower gear. A processor running at a lower speed and using less voltage saves your battery even that much more juice.

So now you have a number of tools to implement in order to save your computer’s precious battery power. But maybe instead on that next long distance flight, you might want to think ahead and book a seat with a power outlet.
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