

## EXTENDING YOUR LAPTOP'S BATTERY LIFE

It's important to understand what drains the most power in your laptop. In modern laptops, the monitor consumes about 43 per cent of normal operating power. Inside the unit, the video, graphics, audio, math coprocessor, etc. eat another 22 per cent. The central processing unit accounts for 9 per cent of power consumption, while a graphics processor takes another 8 per cent. The hard drive takes only 5 per cent, and network adapters consume only 4 per cent. **So obviously, power conservation efforts should focus first on the monitor.**

### HOW TO TWEAK YOUR SETTINGS TO SAVE THE BATTERY POWER.

1. Windows has a **Power Options** section in the Control Panel that can help you optimize your laptop's performance with regard to the trade-off with power consumption. You can use one of the pre-defined Power Plans that will be activated depending on whether you're operating on battery or wall power. The plans control how bright the display is; when to turn off the display during periods of inactivity; when to turn off the hard drive to save power; and what CPU performance level to use when on battery power. Tweaking these plans to fit your computing habits and performance needs can extend battery life significantly.
2. You can also **manually adjust the display brightness** to suit the environment; you don't really need the brightest setting in a dim family room or den. On most laptops, you can change the screen brightness by holding down the **Fn** button and pressing one of the function keys on the top row of the keyboard. On a Toshiba laptop, for example, Fn+F6 reduces the brightness, and Fn+F7 will make it brighter. On Lenovo laptops, it's the Fn key plus the up arrow and down arrow. When power is low, turn it down as much as possible.
3. To further stretch your battery time, **avoid video games, listening to music, watching videos** (especially high-resolution videos) and other graphics-intensive applications while on battery.
4. **Turn off the wifi adapter** if you don't need to access the Internet.
5. Don't try to charge your smart phone via the laptop's USB, if your computer's battery life is dwindling.

### TO FULLY DISCHARGE OR NOT TO FULLY DISCHARGE YOUR BATTERY?

Every battery wears out eventually. The number of times you can recharge a battery depends on many factors, but just a couple of rules will help maximize your battery's service life.

1. **The old rule was to fully discharge your battery deliberately. Old nickel-cadmium (NiCd) and Nickel Metal Hydrid (NiMh) batteries suffered from “memory effect” and had to be fully discharged from time to time. However, the newer lithium-ion (Li-ion) batteries' life spans are actually shortened by full discharges. Don't let your battery drain completely. Recharge your battery fully. If a battery is repeatedly only partially recharged before being used, it may never again be able to hold a full charge.**
2. Is it still a good idea to store your battery outside the laptop if you don't plan to use it away from an electrical outlet? The answer is “yes” for no other reason than the battery is generating heat, the major enemy of a computer and its component parts.

When your battery will no longer hold sufficient charge to get you through the day, it's time to buy a new one. Consider extended-life batteries with more cells (and weight), and look into refurbished laptop batteries that can save you 50 per cent or more vs. the cost of brand-new ones.