

Tips to Get More Minutes Per Charge & Extend Your Laptop Battery's Overall Life

Get More Minutes Per Charge

- Upgrade to a newer operating system for maximum battery life per charge.
- Upgrade to SSD (solid state drive), which is designed to enhance performance and use 20% less energy, extending your battery's life.
- Turn off or disable unused ports and components, such as VGA, Ethernet, PCMCIA, USB, and even your wireless if not in use.
- Lower the graphics use by changing the screen resolution and shutting off graphics cards (video cards).
- Create power plans for the various scenarios in which you use it (at the office, on a plane, etc.).
- Hibernate, not standby. Although placing a laptop in standby mode saves some power and enables you to instantly resume where you left off, it doesn't save as much power as the hibernating. Hibernating completely shut itself down, saving maximum energy.
- Don't multi-task. Do one thing at a time when you're trying to conserve your battery, rather than working on a spreadsheet, letting your email run in the background, and listening to music all at once.
- Dim your screen. Turn down the brightness of your screen to save battery life.
- Cut down on programs running in the background, such as a desktop search, a webcam, USB jump drive, or a wireless PC card. Shut down everything that isn't crucial when you're on battery.
- Eject any discs you aren't currently using. Your battery will drain faster if there's a spinning disc in your optical drive such as a game/music CD or DVD movie.

Extend the Overall Battery Life:

- To prevent overheating, use a cooling pad when using a notebook computer on your lap. Avoid propping your laptop on a pillow, blanket, or other soft surface that can heat up or block cooling fans.
- Don't pack your laptop away in a backpack when the battery is still warm, trapping the heat. In addition, If your laptop crashes or refuses to shut off properly, check to ensure your battery doesn't get dangerously hot when packed away in a bag.
- Never store your laptop in a place where the air temperature exceeds 80° F, such as a hot car or an outdoor patio.
- Clean your desk. If you have a dirty desk, the dust can get into the vents and clog the cooling fan which can be difficult to remove. If you try blasting it out with canned air, you run the risk of damaging internal components
- Avoid frequent full discharges because this puts additional strain on the battery. Several partial discharges with frequent recharges are better for lithium-ion than one deep one. Recharging a partially charged lithium-ion does not cause harm because there is no memory. (In this respect, lithium-ion differs from nickel-based batteries). Short battery life in a laptop is mainly caused by heat rather than charge/discharge patterns.
- Batteries with fuel gauge (laptops) should be calibrated by applying a deliberate full discharge once every 30 charges. Running the pack down in the equipment does this. If ignored, the fuel gauge will become increasingly less accurate and in some cases cut off the device prematurely.
- For prolonged storage, keep the battery at a 40% charge level.
- Consider removing the battery from the laptop when running on fixed power.
- Avoid purchasing spare lithium-ion batteries for later use. Observe manufacturing dates, and do not buy old stock, even if clearanced.
- If you have a spare lithium-ion battery, use one to the fullest and keep the other cool by storing in a refrigerator (never the freezer).

To access the power management features on your laptop, simply double-click the battery icon in the lower-right corner of your screen, or go to **Start > Control Panel > Power Options**. Proper power management will help you to strike the ideal performance vs. battery life balance.