Calibrating your computer's battery for best performance

You can calibrate your iBook, PowerBook, MacBook or MacBook Pro computer's lithium ion battery for best performance.

The battery has an internal microprocessor that provides an estimate of the amount of energy in the battery as it charges and discharges. The battery needs to be recalibrated from time to time to keep the onscreen battery time and percent display accurate. With all iBooks and PowerBook G4 computers except the aluminum PowerBook G4 (15-inch Double-Layer SD), you should perform this procedure when you first use your computer and then every few months thereafter.

iBooks and PowerBook G4s other than the PowerBook G4 (15-inch Double-Layer SD)

1. Plug the power adapter in and fully charge your computer's battery until the battery indicator lights turn off and the adapter plug light goes from amber to green, which indicates that the battery is fully charged.
2. Disconnect the power adapter and use your iBook or PowerBook. When your battery gets low, you will see the low battery warning dialog on the screen. Continue to use your computer until it goes to sleep. At that point the battery has been sufficiently drained for calibration.
3. Connect the power adapter and leave it connected until the battery is fully charged again.

You have to fully charge and then discharge your battery only once to calibrate it. After that, you can connect and disconnect the power adapter when the battery is at any charge level.

Tip: When the battery reaches "empty", the computer is forced into sleep mode. The battery actually keeps back a reserve beyond "empty", to maintain the computer in sleep for a period of time. Once the battery is truly exhausted, the computer is forced to shut down. At this point, any open files could be lost. Therefore, it is important that you find an electrical outlet and connect the adapter before the forced shutdown occurs.

PowerBook G4 (15-inch Double-Layer SD), MacBook (all models), MacBook Pro (all models), and MacBook Pro (17-inch) (all models)

The battery calibration for the PowerBook G4 (15-inch Double-Layer SD) and any model of MacBook or MacBook Pro has been updated because of a new battery released with this computer. With these computers, follow these steps to calibrate your battery:

1. Plug in the power adapter and fully charge your PowerBook's battery until the light ring or LED on the power adapter plug changes to green and the onscreen meter in the menu bar indicates that the battery is fully charged.
2. Allow the battery to rest in the fully charged state for at least two hours. You may use your computer during this time as long as the adapter is plugged in.
3. Disconnect the power adapter with the computer still on and start running the computer off battery power. You may use your computer during this time. When your battery gets low, you will see the low battery warning dialog on the screen.
4. Continue to keep your computer on until it goes to sleep. Save all your work and close all applications when the battery gets very low, before the computer goes to sleep.
5. Turn off the computer or allow it to sleep for five hours or more.
6. Connect the power adapter and leave it connected until the battery is fully charged again.

Tip: When the battery reaches "empty", the computer is forced into sleep mode. The battery actually keeps back a reserve beyond "empty", to maintain the computer in sleep for a period of time. Once the battery is truly exhausted, the computer is forced to shut down. At this point, with the safe sleep function introduced in the PowerBook G4 (15-inch Double-Layer SD) computers, the computer's memory contents have been saved to the hard drive. When power is restored, the computer returns itself to its pre-sleep state using the safe sleep image on the hard drive.