

## **Battery Tips:**

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### **Right Ways To Charge a Laptop Battery:**

When charging the battery for the first time your computer menon with rechargeable batteries. Simply remove the battery from the computer and repeat the charging procedure.

It is necessary to discharge the battery to 0% before recharging it the first time when you use the battery. If you discharge a new battery till the computer goes to hibernation before recharging, the internal microprocessor of the battery can calculate the capacity more precisely.

Upon initial use (or after a prolonged storage period) the battery may require three to four charge/discharge cycles before achieving maximum capacity. The charging process should last at least around 14 hours.

Do a full cycle (charge and discharge) under protection circuit control during a certain period of time to re-modify battery capacity calculation, but it won't enhance the actual capacity of the battery.

### **Calibrating Your Computer's 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. You should perform this procedure when you first use your computer and then every few months thereafter.

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 laptop. 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.

### **When the battery reaches "empty"**

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.

### **Battery Storage**

Batteries may be damaged if stored for prolonged periods with a closed circuit. If the battery will not be in use for a month or longer, it is recommended that it be removed from the device, fully charged and stored in a cool, dry and clean place. A charged battery will eventually lose its charge if unused. It may therefore be necessary to recharge the battery after a certain storage period. Surely it would be great if you can use the battery once in a month to ensure good storage status.

## **Battery Safety**

1. Do not short-circuit. A short-circuit may cause severe damage to the battery.
2. Do not drop, hit or otherwise abuse the battery as this may result in the exposure of the cell contents, which are corrosive.
3. Do not expose the battery to heat sources and moisture or rain.
4. Keep battery away from fire or other sources of extreme heat.
5. Do not incinerate. Exposure of battery to extreme heat may result in an explosion.
6. Do'n try to disassemble, repair or change the battery pack which would cause over-heating or fire. Corrosive alkaline solutions or other electrolyte leakage would lead to fire or personal injury and death.
7. Don't puncture the battery by sharp materials

## **Calibrating Your Computer's Battery for Best Performance**

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1. Make proper settings for "Power" option: click right key of your mouse in the blank screen, choose "Properties" - "Screen Saver" - "Power" - "Power Schemes" - "Portable", and "When computer is" "Running on batteries", tick "Never" for all options. Under "Alarms" option, don't tick "Low battery alarm" and "Critical battery alarm" functions, and then choose "Apply" and "OK" to save the settings.
2. Disconnect the power adapter and use your battery until laptop shuts down.
3. Plug the power adapter in and fully charge your computer's battery to 100%.

Upon initial use (or after a prolonged storage period) the battery may require three to four charge/discharge cycles before achieving maximum performance. The charging process should last at least around 14 hours.

You have to first discharge your battery until laptop shuts down before you recharge it to 100% for calibration. 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, and open files could be lost.

## **Laptop Battery F.A.Q.**

How long will the new main battery power the laptop?

Why is the battery capacity lowered while left unused?

Should I take off the battery when using AC adaptor?

Will battery life decrease if I charge it when it is not fully discharged?

Battery capacity still shows 0% even after 20 hours of charging, and the laptop immediately shuts down when AC adaptor is unplugged, what's the problem?

The battery is not discharging and laptop immediately shuts down after unplugging AC adaptor when the battery is charged to certain percentage or even 100%, why?

When I charged the battery for the first time, it still showed 30% after hours of charging, why? How can I charge it to 100%?

Why did the laptop show that the battery is fully charged after just 10 minutes of charging?

My Dell laptop could not recognize the battery and showed "the battery is not compatible with this computer model, please put in a Dell battery" and the indicator kept blinking, what's wrong with it?

My laptop immediately shut down when I put in the battery, but it worked well when the battery was taken out, why?

My battery always caused laptop to shut down without enough warnings that it would go to hibernation, it happened several times, and now it can only be used for several minutes after being fully charged, why?

My battery lasted 3 hours for the first time, but it couldn't take charge for the second time, is it faulty?

Whether the battery would cause laptop unable to start up if the battery itself has problems?

**Q: How long will the new main battery power the laptop?**

A: Battery run-time on a laptop is difficult to determine. Actual battery run time depends upon the power demands made by the equipment. The use of the screen, the hard drive and other accessories results in an additional drain upon the battery, effectively reducing its run time. The total run-time of the battery is also dependent upon the design of the equipment.

**Q: Why is the battery capacity lowered while left unused?**

A: Due to influences of ambient humidity and non-absolute insulation environment, batteries have a phenomenon of self-consumption. Dependant upon the quality, the charge would decline around 1% every 3-4 days, so it is quite normal if the charge is not lowered in a major way!

**Q: Should I take off the battery when using AC adaptor?**

A: Usually laptop charging function starts charging when charge is less than 95%, and because natural consumption phenomenon exists, it does not make difference whether to take it off or keep it remain in laptop. But we suggest you keep it inside the laptop, because it could keep the ongoing operations continue and prevent data loss if AC power is abruptly interrupted. If you want to take the battery off, you are suggested putting it in dry and cool place, and remember to cycle the battery at least once a month to keep it active.

**Q: Will battery life decrease if I charge it when it is not fully discharged?**

A: Battery life is calculated by full charge-discharge cycles, Li-ion battery usually has 300-400 cycle life. You don't have to worry about the battery being calculated one more cycle when you just charged a little bit, averagely one more life cycle is only accumulated when you charge it to 80-90%.

**Q: Battery capacity still shows 0% even after 20 hours of charging, and the laptop immediately shuts down when AC adaptor is unplugged, what's the problem?**

A: The first thing you need to do is check the contact between the laptop and battery, because if the contact is not good, even the communication data between them is read, the battery cannot be charged. Since the laptop battery slot may become disfigured after long period of use while the battery plastic casing is designed according to new laptop specification, it would cause contact problems. Under such circumstances, please take off the battery and put it inside the laptop for several times to ensure better contact. When you hear a sound CLICK, it basically means the contact is good. Try more times and the contact problem can be solved, especially for IBM laptops.

**Q: The battery is not discharging and laptop immediately shuts down after unplugging AC adaptor when the battery is charged to certain percentage or even 100%, why?**

A: When such case takes place, please pay attention to your ambient temperature. If you are in somewhere with very high temperature, the battery will automatically protect itself after long time using, and the laptop startup program would stop working. At this moment, please restart your laptop after 1 hour. Another possibility is some problems took place with your laptop during charging process, because laptop charging circuit is easy to cause problems when taking charge. Please try your original battery on the laptop and see if it works.

**Q: When I charged the battery for the first time, it still showed 30% after hours of charging, why? How can I charge it to 100%?**

A: When you face such problem, please turn to the above mentioned battery calibration method. First discharge the battery till laptop shuts down, and then 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.

**Q: Why did the laptop show that the battery is fully charged after just 10 minutes of charging?**

A: It is quite normal for rechargeable battery that the laptop shows it is fully charged after 10 to 15 minutes of charging when you charge the battery for the first time. All you have to do is discharge the battery till laptop shuts down, and then 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, and the battery recalibration process is completed.

**Q: My Dell laptop could not recognize the battery and showed “the battery is not compatible with this computer model, please put in a Dell battery”, and the indicator kept blinking, what’s wrong with it?**

A: It shows the battery compatibility is not good. When it happens, please contact your vendor for a replacement.

**Q: My laptop immediately shut down when I put in the battery, but it worked well when the battery was taken out, why?**

A: It shows the battery is dead and you need to use a new battery, but it is rather rare!

**Q: My battery always caused laptop to shut down without enough warnings that it would go to hibernation, it happened several times, and now it can only be used for several minutes after being fully charged, why?**

A: It was probably caused by the capacity miscalculation of your battery. You are advised to turn to the above mentioned battery calibration method, discharge the battery till laptop shuts down, and then 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, and battery recalibrating process is completed, the battery will be fine.

**Q: My battery lasted 3 hours for the first time, but it couldn’t take charge for the second time, is it faulty?**

A: Your battery might still be fine. Please discharge the battery till laptop shuts down and then 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, and battery recalibrating process is completed, the battery will be fine.

**Q: Whether the battery would cause laptop unable to start up if the battery itself has problems?**

A: Laptop battery can easily cause startup breakdown. When your laptop cannot start up and all indicator lights are off, try to take off the battery and see if you can start up by connecting to AC power source, mostly it can be solved.