



## VAIO Notebook Computer Batteries - Notes on Use

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### VAIO notebook computer battery run time

The length of time a battery can power your VAIO® notebook computer before needing to be recharged depends on many factors. In general, notebook computers with the faster processors, larger displays, better graphic display hardware, and faster optical drives have shorter battery run times than computers with more modest performance specifications.

#### Some Factors affecting battery run time

Battery run time is affected by processor usage, hard disk drive and optical drive use, the brightness setting of the LCD screen, and wireless activity. Other factors affecting battery run time include:


- ❑ When a notebook computer is used continuously for a long time, heat builds up in the computer, causing the fan to run more and use more power.
- ❑ Larger LCD screens typically require more power than smaller LCD screens.
- ❑ Connecting peripheral devices such as USB devices or PC Cards requires more power from a notebook computer.
- ❑ Connecting disk drives, such as a floppy disk drives and optical drives (CD or DVD drives), requires more power from a notebook computer.
- ❑ Auto-save features of software products such as Microsoft® Word can reduce the usable run time of batteries by keeping the hard disk drive from shutting down. Reducing the frequency of auto-saves can improve the usable length of a battery charge by allowing the computer's hard disk drive to shut down for longer intervals.

#### Saving battery power when not using your computer

- ❑ **Put your computer into Standby mode.** When you temporarily leave your desk, put your computer into Standby mode. Standby is a power saving mode that retains the computer's current working state. To put your computer into Standby mode, click **Start**, click **Power Options**, and click **Standby**. Or press and hold the **FN** key, and press the **ESC** key.
- ❑ **Put your computer into Hibernate mode.** When you will not be using your computer for a while, put your computer into Hibernate mode. Hibernate is a power saving mode that shuts down the computer




after saving its current work state to the hard disk drive. To put your computer into Hibernate mode, press and hold the **FN** key, and press the **F12** key.

 Returning to the previous work state of your computer from Standby mode is faster than returning from Hibernate mode. Returning from Hibernate mode is faster than if you had completely shut down the computer.

- Disconnect unused peripheral devices.** Unplug the connector of unused peripheral devices from your computer to eliminate their use of your computer's battery power.
- Turn down the computer's audio volume.** Turning down or turning off the speakers or headphone volume can reduce power consumption. For more information about setting audio volume, refer to the VAIO® notebook User Guide on your computer.
- Turn down the computer monitor brightness.** Reducing the brightness of the computer screen or attached monitor can reduce power consumption.

### Optimizing battery use of VAIO computers containing VAIO Power Management software

On VAIO® computer models that include VAIO Power Management software, you can select and customize a variety of predefined power management profiles for different computer use situations, including VAIO Maximum Battery, VAIO Ultimate Battery, Home/Office Desk, Presentation, and Minimal Power Management.

 To change your selected power management scheme, you must be logged on to your computer using an account with Administrator privileges.

VAIO Power Management offers several options that can increase the run time of your battery:

- To get the longest battery run time, select either the **VAIO Maximum Battery** or the **VAIO Ultimate Battery** profile. These profiles provide maximum power conservation and turn off many devices you may not need. (The **VAIO Ultimate Battery** profile may not be available on all VAIO computer models.)

To select the **VAIO Maximum Battery** or the **VAIO Ultimate Battery** profile:

- 1 Click **Start** on the Windows® taskbar, and click **Control Panel**.
- 2 Click **Performance and Maintenance**, and click **Power Options**  
The **Power Options Properties** window appears.
- 3 Click the **Power Schemes** tab, and select your desired profile from the **Power schemes** list.
- 4 Click **OK**.

- Decrease the brightness of your LCD computer screen.** Select a lower LCD brightness level for the **LCD Brightness** setting in VAIO Power Management. The smaller the level number selected for **LCD Brightness**, the less bright the screen, and the longer the battery lasts.

LCD brightness also can be adjusted on most VAIO notebook computers by pressing and holding the **FN** key and pressing the **F5** or **F6** key. This feature may be indicated by icons on the appropriate keys on your VAIO notebook computer keyboard.

For more information about VAIO Power Management software and power management profiles, refer to the **Using power schemes** section of your VAIO User Guide. To access the User Guide, click **Start** on the Windows® taskbar, click **Help and Support**, and click **VAIO User Guide**.

## Using the battery

Depending upon your VAIO® notebook computer model, your computer can use one or two batteries to provide power when AC power is not available. Spare batteries are available for purchase separately. The battery supplied with your computer is not fully charged at the time of purchase.



For safety reasons, some VAIO® notebook computer models include utility software that verifies that the battery in use is a genuine Sony battery. If a third-party battery is detected, the following pop-up message appears:

This battery cannot be used with your computer. Please use only genuine Sony batteries compatible with this computer.  
Click 'OK' to put your computer into Hibernate mode. When your computer hibernates, remove the battery, and insert a genuine Sony battery.

If you encounter such a message, follow the on-screen instruction to replace the third-party battery with a genuine Sony battery.

### **Inserting and removing the battery**

For information about inserting and removing the battery of your VAIO® notebook computer, refer to the online User Guide available on your computer.

To view the online User Guide:

- 1 Click **Start** on the Windows® taskbar, and click **Help and Support**.
- 2 In the **Help and Support** window, click **VAIO User Guide**.

### **Charging the battery**

To charge your VAIO® computer's battery, proceed as follows:

- 1 Connect the AC adapter to the computer.
- 2 Connect the AC adapter into an AC power outlet.
- 3 Insert the battery.
- 4 Slide the battery lock key.

### **General notes on battery charging**

- Keep the battery in the computer when running on AC power. The battery continues to charge while you are using the computer.
- If the battery level falls below 10%, either attach the AC adapter to recharge the battery or shut down your computer and insert a fully charged battery.
- The battery supplied with your computer is a lithium ion battery and can be recharged any time. Charging a partially discharged battery does not affect battery life.
- The battery indicator light is on when you are running on battery power. When the battery power is nearly depleted, both the battery and power indicators start flashing.
- Some software applications and some peripheral devices can prevent your computer from entering Hibernate mode even when battery power is low. To avoid loss of data when using battery power, save your data frequently, and manually activate a power management mode, such as Standby or Hibernate, when you feel battery power is running low, or attach the AC adapter.
- When the computer is directly connected to AC power and has a battery inserted in the battery bay, it uses power from the AC outlet. (If the battery is not fully charged, however, the battery will charge while you work from AC power.)



## Battery indicator light explanation

Depending upon your VAIO® notebook computer model, your computer has one or two battery indicator lights. The table below explains the meanings of the battery indicator lights' various states:

Solid on	Running on battery power
Single blink	Battery is running low
Double blink	Battery is charging
Off	Running on AC power

## Disposing of lithium ion batteries

- Dispose of used batteries promptly and properly. In some regions, the disposal of lithium ion batteries in household or business waste may be prohibited. For information regarding the recycling of rechargeable batteries in the U.S., contact the Rechargeable Battery Recycling Corporation at (800) 822-8837, or visit <http://www.rbrc.org/>.
- Do not handle damaged or leaking lithium ion batteries. Dispose of them promptly and properly.
- There is a danger of explosion if the battery is replaced with an incorrect battery. Replace only with the same or equivalent type of genuine Sony battery.
- The battery used in this device may present a fire or chemical burn hazard if mistreated. Do not disassemble, expose to heat above 60°C (140°F), or incinerate.
- Keep away from children.

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For additional information regarding battery safety, refer to the printed material that came with your VAIO computer.