

Dell™ Latitude™ D505L User's Guide

Notes, Notices, and Cautions



NOTE: A NOTE indicates important information that helps you make better use of your computer.



NOTICE: A NOTICE indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.



CAUTION: A CAUTION indicates a potential for property damage, personal injury, or death.

Abbreviations and Acronyms

For a complete list of abbreviations and acronyms, see the [Glossary](#).

If you purchased a Dell™ n Series computer, any references in this document to Microsoft® Windows® operating systems are not applicable.

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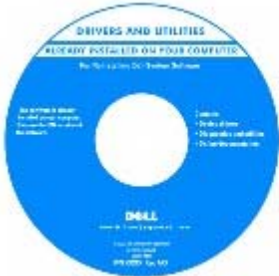
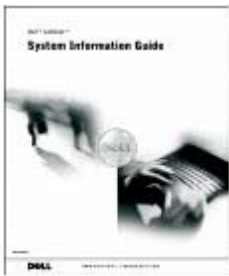

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Model PP10L

September 2003 P/N M1794 Rev. A00

Finding Information for Your Computer

What are you looking for?	Find It Here
<ul style="list-style-type: none"> • A diagnostic program for my computer • Drivers for my computer • My computer documentation • My device documentation 	<p>Drivers and Utilities CD (also known as the ResourceCD)</p> <p>Documentation and drivers are already installed on your computer. You can use the CD to reinstall drivers, run the Dell Diagnostics, or access your documentation.</p> <p>Readme files may be included on your CD to provide last-minute updates about technical changes to your computer or advanced technical-reference material for technicians or experienced users.</p> 
<ul style="list-style-type: none"> • How to set up my computer • Warranty information • Safety instructions 	<p>Dell™ System Information Guide</p>  <p>NOTE: This document is available as a PDF at support.dell.com.</p>
<ul style="list-style-type: none"> • How to remove and replace parts • Technical specifications • How to configure system settings • How to troubleshoot and solve problems 	<p>User's Guide</p> <p><i>Windows XP Help and Support Center</i></p> <ol style="list-style-type: none"> 1. Click the Start button and click Help and Support. 2. Click User's and system guides and click User's guides. <p><i>Microsoft Windows 2000</i></p>  <p>Double-click the User's Guides icon on your desktop.</p>
<ul style="list-style-type: none"> • Service Tag and Express Service 	<p>Service Tag and Microsoft Windows License</p>

<ul style="list-style-type: none"> Code Microsoft Windows License Label 	<p>These labels are located on your computer.</p>  <ul style="list-style-type: none"> Use the Service Tag to identify your computer when you use support.dell.com or contact technical support. Enter the Express Service Code to direct your call when contacting technical support. The Express Service Code is not available in all countries. Use the number on the Microsoft Windows License Label if you reinstall your operating system.
<ul style="list-style-type: none"> Latest drivers for my computer Answers to technical service and support questions Online discussions with other users and technical support Documentation for my computer 	<p>Dell Support Website — support.dell.com</p> <p>The Dell Support website provides several online tools, including:</p> <ul style="list-style-type: none"> Solutions — Troubleshooting hints and tips, articles from technicians, and online courses Community — Online discussion with other Dell customers Upgrades — Upgrade information for components, such as memory, the hard drive, and the operating system Customer Care — Contact information, order status, warranty, and repair information Downloads — Drivers, patches, and software updates Reference — Computer documentation, product specifications, and white papers
<ul style="list-style-type: none"> Service call status and support history Top technical issues for my computer Frequently asked questions File downloads Details on my computer configuration Service contract for my computer 	<p>Dell Premier Support Website — premiersupport.dell.com</p> <p>The Dell Premier Support website is customized for corporate, government, and education customers. This website may not be available in all regions.</p>
<ul style="list-style-type: none"> How to use Windows XP Documentation for my computer Documentation for devices (such as a modem) 	<p>Windows Help and Support Center</p> <ol style="list-style-type: none"> Click the Start button and click Help and Support. Type a word or phrase that describes your problem and click the arrow icon. Click the topic that describes your problem. Follow the instructions on the screen.
<ul style="list-style-type: none"> How to reinstall my operating system 	<p>Operating System CD</p> <p>The operating system is already installed on your computer. To resinstall your operating system, use the Operating System CD. See your <i>User's Guide</i> for operating system reinstallation instructions.</p> <p>After you reinstall your operating system, use the Drivers and Utilities CD to</p>

reinstall drivers for the devices that came with your computer.

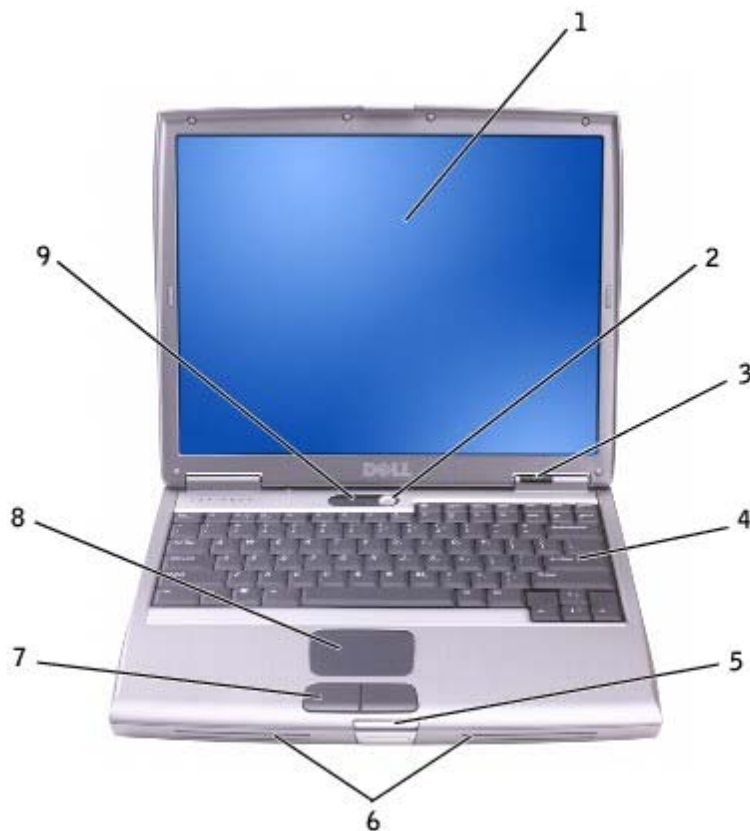


Your operating system [product key](#) label is located on your computer.

About Your Computer

- [Front View](#)
 - [Left View](#)
 - [Right View](#)
 - [Back View](#)
 - [Bottom View](#)
-

Front View



1	display	6	speakers
2	power button	7	touch pad buttons
3	device status lights	8	touch pad
4	keyboard	9	keyboard status lights
5	display latch		

display — For more information about your display, see "[Using the Display](#)."

power button — Press the power button to turn on the computer or exit a [power management mode](#).

➡ **NOTICE:** To avoid losing data, turn off your computer by performing a Microsoft® Windows® operating system shutdown rather than by pressing the power button.

If the computer stops responding, press and hold the power button until the computer turns off completely (which may take several seconds).

device status lights



	Turns on when you turn on the computer and blinks when the computer is in a power management mode.
	Turns on when the computer reads or writes data. ➡ NOTICE: To avoid loss of data, never turn off the computer while the light is flashing.
	Turns on steadily or blinks to indicate battery charge status.
	Turns on when Bluetooth™ is enabled. To enable or disable Bluetooth, press <Fn><F2>. NOTE: Bluetooth is an optional feature on your computer, so the icon turns on only if you ordered Bluetooth with your computer. For more information, see the documentation that came with your Bluetooth wireless technology.


If the computer is connected to an electrical outlet, the light operates as follows:

- Solid green: The battery is charging.
- Flashing green: The battery is almost fully charged.

If the computer is running on a battery, the  light operates as follows:

- Off: The battery is adequately charged (or the computer is turned off).
- Flashing orange: The battery charge is low.

Solid orange: The battery charge is critically low.

keyboard — The keyboard includes a numeric keypad as well as the Windows logo key . For information on supported keyboard shortcuts, see "[Using the Keyboard and Touch Pad](#)."

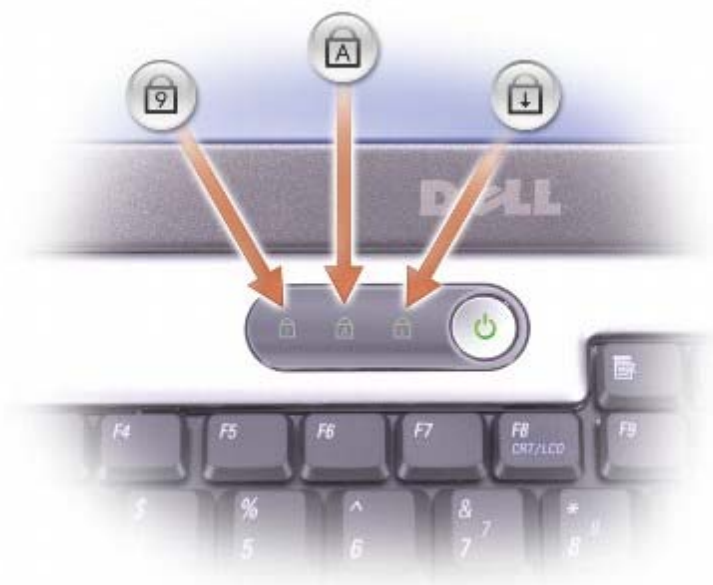
display latch — Keeps the display closed.

speakers — To adjust the volume of the integrated speakers, press the volume control buttons, mute button, or volume-control keyboard shortcuts. For more information, see "[Using the Keyboard and Touch Pad](#)."




touch pad buttons — Provide the functionality of a mouse. See "[Using the Keyboard and Touch Pad](#)" for more information.

touch pad — Provides the functionality of a mouse. See "[Using the Keyboard and Touch Pad](#)" for more information.

keyboard status lights



The green lights located above the keyboard indicate the following:

	Turns on when the numeric keypad is enabled.
	Turns on when the uppercase letter function is enabled.
	Turns on when the scroll lock function is enabled.

Left View



1	air vents (2)	4	infrared sensor
2	IEEE 1394 connector	5	audio connectors (2)
3	PC Card slot	6	security cable slot

air vents — The computer uses an internal fan to create airflow through the vents, which prevents the computer from overheating.



NOTE: The computer turns on the fan when the computer gets hot. Fan noise is normal and does not indicate a problem with the fans or the computer.



CAUTION: Do not block, push objects into, or allow dust to accumulate in the air vents. Do not store your Dell™ computer in a low-airflow environment, such as a closed briefcase, while it is running. Restricting the airflow can damage the computer or cause a fire.

PC Card slot — Supports one PC Card, such as a modem or network adapter. For more information, see "[Using PC Cards](#)."

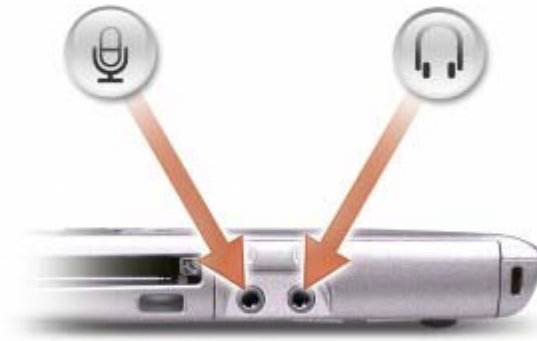
infrared sensor — Lets you transfer files from your computer to another infrared-compatible device without using cable connections.


IEEE 1394 connector —


Use to attach devices supporting IEEE 1394 high-speed transfer rates, such as some digital video cameras.

When you receive your computer, the sensor is disabled. You can use the [system setup program](#) to enable the sensor. For information on transferring data, see Windows *Help*, the [Help and Support Center](#), or the documentation that came with your infrared-compatible device.

audio connectors



Attach a microphone to the  connector.

Attach headphones or speakers to the  connector.

security cable slot — Lets you attach a commercially available antitheft device to the computer. For more information, see the instructions included with the device.

➡ **NOTICE:** Before you buy an antitheft device, ensure that it will work with the security cable slot.



Right View



1	security cable slot
2	module bay
3	device latch release

security cable slot — Lets you attach a commercially available antitheft device to the computer. For more information, see the instructions included with the device.



NOTICE: Before you buy an antitheft device, ensure that it will work with the security cable slot.

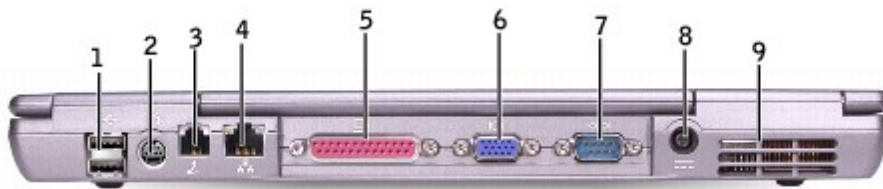


module bay — You can install devices such as an optical drive or a Dell Travellite™ module in the module bay. For more information, see "[Using the Module Bay](#)."

device latch release — Releases the module bay device. See "[Using the Module Bay](#)" for instructions.


Back View

⚠ CAUTION: Do not block, push objects into, or allow dust to accumulate in the air vents. Do not store your computer in a low-airflow environment, such as a closed briefcase, while it is running. Restricting the airflow can damage the computer or cause a fire.




1	USB connectors (2)	6	video connector
2	S-video TV-out connector	7	serial connector
3	modem connector (RJ-11) (optional)	8	AC adapter connector
4	network connector (RJ-45)	9	air vents
5	parallel connector		

USB connectors


	Connect USB devices, such as a mouse, keyboard, or printer. You can also connect the optional floppy drive directly to a USB connector using the optional floppy-drive cable.
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S-video TV-out connector

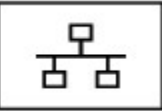
	Connects your computer to a TV. For more information, see " Connecting a Television to the Computer ."
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modem connector (RJ-11) (optional)


	<p>If you ordered the optional internal modem, connect the telephone line to the modem connector.</p> <p>For information on using the modem, see the online modem documentation supplied with your computer. See "Finding Information for Your Computer."</p>
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network connector (RJ-45)


NOTICE: The network connector is slightly larger than the modem connector. To avoid damaging the computer, do not plug a telephone line in to the network connector.

	<p>Connects the computer to a network. The green and yellow lights next to the connector indicate activity for both wired and wireless network communications.</p> <p>For information on using the network adapter, see the device user's guide supplied with your computer. See "Finding Information for Your Computer."</p>
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parallel connector

	<p>Connects a parallel device, such as a printer.</p>
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video connector

	<p>Connects an external monitor. For more information, see "Using the Display."</p>
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serial connector

	<p>Connects serial devices, such as a mouse or handheld device.</p>
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AC adapter connector — Attach an AC adapter to the computer.



The AC adapter converts AC power to the DC power required by the computer. You can connect the AC adapter with your computer turned either on or off.

CAUTION: The AC adapter works with electrical outlets worldwide. However, power connectors and power strips vary among countries. Using an incompatible cable or improperly connecting the cable to the power strip or electrical outlet may cause fire or equipment damage.

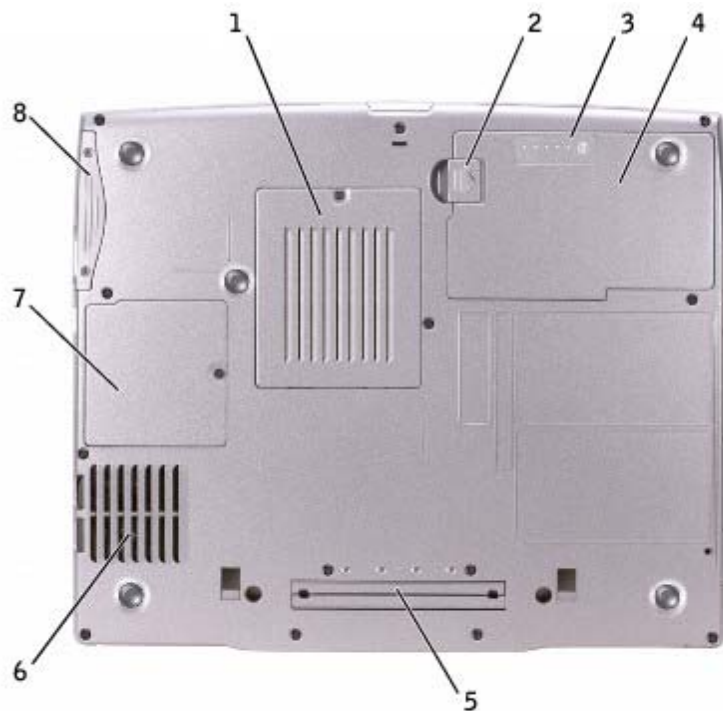
NOTICE: When you disconnect the AC adapter cable from the computer, grasp the connector, not the cable itself, and pull firmly but gently to avoid damaging the cable.

air vents — The computer uses an internal fan to create airflow through the vents, which prevents the computer from overheating.

NOTE: The computer turns on the fan when the computer gets hot. Fan noise is normal and does not indicate a problem with the fan or the computer.

CAUTION: Do not block, push objects into, or allow dust to accumulate in the air vents. Do not store your computer in a low-airflow environment, such as a closed briefcase, while it is running. Restricting the airflow can damage the computer or cause a fire.

Bottom View



1	memory module cover	5	docking device slot
2	battery-bay latch release	6	fan
3	battery charge gauge	7	Mini PCI card cover
4	battery	8	hard drive

memory module cover — Covers the compartment that contains the memory module(s). See "[Adding and Replacing Parts](#)."

battery-bay latch release — Releases the battery. See "[Using a Battery](#)" for instructions.

battery charge gauge — Provides information on the battery charge. See "[Using a Battery](#)."

battery — When a battery is installed, you can use the computer without connecting the computer to an electrical outlet. See "[Using a Battery](#)."

docking device slot — Lets you attach your computer to a docking device. See the documentation that came with your docking device for additional information.

fan — The computer uses an internal fan to create airflow through the vents, which prevents the computer from overheating.



NOTE: The computer turns on the fan when the computer gets hot. Fan noise is normal and does not indicate a problem with the fans or the computer.



CAUTION: Do not block, push objects into, or allow dust to accumulate in the air vents. Do not store your computer in a low- airflow environment, such as a closed briefcase, while it is running. Restricting the airflow can damage the computer or cause a fire.

Mini PCI card cover — Covers the compartment that contains the Mini PCI card. See "[Adding and Replacing Parts](#)."

hard drive — Stores software and data.

About Microsoft® Windows® XP

- [Help and Support Center](#)
 - [Switching to Classic View](#)
 - [Desktop Cleanup Wizard](#)
 - [Files and Settings Transfer Wizard](#)
 - [Program Compatibility Wizard](#)
 - [User Accounts and Fast User Switching](#)
 - [Home and Small Office Networking](#)
 - [Internet Connection Firewall](#)
-

Help and Support Center

The Help and Support Center provides help with the Windows XP operating system and other support and educational tools. To access the Help and Support Center, click the **Start** button and click **Help and Support**.

Switching to Classic View

You may change the appearance of the Control Panel, the **Start** menu, and the Windows desktop to the *classic view* of earlier Windows operating systems.

Control Panel

The Control Panel presents information as task-oriented categories. If you are accustomed to performing a particular task with the icon-oriented classic Control Panel, you can switch to the classic icon view:

1. Click the **Start** button and click **Control Panel**.
2. Click **Switch to Classic View** or **Switch to Category View** in the upper-left area of the **Control Panel** window.

Start Menu

1. Right-click the empty area on the taskbar.
2. Click **Properties**.
3. Click the **Start Menu** tab.

4. Select **Classic Start Menu** and click **OK**.

Window and Button Appearance

1. Right-click anywhere on the main desktop screen and click **Properties**.
 2. Click the **Appearance** tab.
 3. From the **Windows and buttons** drop-down menu, select **Windows Classic style**.
 4. To customize color, font, and other classic desktop options, click **Advanced**.
 5. When you have completed your appearance selections, click **OK**.
-

Desktop Cleanup Wizard

By default, the Desktop Cleanup Wizard moves programs that are not frequently used to a designated folder 7 days after you first start your computer and every 60 days after that. The appearance of the **Start** menu changes as programs are moved.

To turn off the Desktop Cleanup Wizard:

1. Right-click an empty spot on the desktop, and click **Properties**.
2. Click the **Desktop** tab and click **Customize Desktop**.
3. Click **Run Desktop Cleanup Wizard every 60 days** to remove the check mark.
4. Click **OK**.

To run the Desktop Cleanup Wizard at any time:

1. Right-click an empty spot on the desktop, and click **Properties**.
 2. Click the **Desktop** tab and click **Customize Desktop**.
 3. Click **Clean Desktop Now**.
 4. When the Desktop Cleanup Wizard appears, click **Next**.
 5. In the list of shortcuts, deselect any shortcuts you want to leave on the desktop, and then click **Next**.
 6. Click **Finish** to remove the shortcuts and close the wizard.
-

Files and Settings Transfer Wizard

The Files and Settings Transfer Wizard allows you to transfer files and settings from one computer to another (for instance, when upgrading to a new computer), even if the old computer is running an earlier operating system. The time required to collect and transfer data depends on the amount of data collected. Times can vary from just a few minutes to several hours.

You can transfer the data to the new computer over a network or direct serial connection, or you can store it on a removable medium such as a floppy disk or writable CD. If a CD drive is not available, the wizard allows you to create a wizard disk to run on your old computer.

For more information, see the [Help and Support Center](#).

Program Compatibility Wizard

If you encounter problems running a program designed for an earlier Windows operating system, you can use the Program Compatibility Wizard to help resolve the problem. The Program Compatibility Wizard allows you to configure a program to run in an environment closer to that of Windows 95, Windows 98, Windows Millennium Edition (Me), Windows NT® 4.0 with Service Pack 5, or Windows 2000.

If you experience problems with your operating system or other programs after performing an installation, you can use the [system restore](#) feature to return your computer to a previous stable condition.

For more information, see the [Help and Support Center](#).

User Accounts and Fast User Switching

Fast User Switching allows multiple users to access the computer. After you log on to the computer with your specific settings, including the desktop and various programs, other users can log on to the computer without requiring you to first log off. New users log on and switch from your session to their own. New users can run their desktop and programs without interfering with yours. You can switch back to your desktop and programs with the original settings. For more information, see the [Help and Support Center](#).

Special Considerations With Fast User Switching

- Computers with low memory configurations can experience problems. The computer uses memory to keep your programs running in the background while a second user is logged on, which can cause the computer to run slowly. Fast User Switching is off by default on computers with less than 128 MB of RAM.
 - Fast User Switching is disabled in Windows XP Professional when the computer is a member of a computer domain.
-

Home and Small Office Networking

The Network Setup Wizard provides online documentation and support for setting up a home or small office network. The new wizard automatically enables the personal firewall (see "[Internet Connection Firewall](#)").

The Network Setup Wizard includes a checklist and steps to guide you through the process of sharing resources, such as files, printers, or an Internet connection, between computers in a home or small office. For more information, see the [Help and Support Center](#).

Internet Connection Firewall


The Internet Connection Firewall provides basic protection from unauthorized access to the computer while the computer is connected to the Internet. The firewall is automatically enabled when you run the Network Setup Wizard. When the firewall is enabled for a network connection, the firewall icon appears with a red background in the **Network Connections** portion of the Control Panel.

Note that enabling the Internet Connection Firewall does not reduce the need for virus-checking software.

For more information, see the [Help and Support Center](#).

Dell™ QuickSet Features

- [Clicking the QuickSet Icon](#)
- [Double-Clicking the QuickSet Icon](#)
- [Right-Clicking the QuickSet Icon](#)

Dell™ QuickSet runs from the  icon located in the taskbar and functions differently when you click, double-click, or right-click the icon.

Clicking the QuickSet Icon


Click the  icon to perform the following tasks:

- Adjust power management settings using the [Power Management Wizard](#).
 - Adjust the size of icons and toolbars.
 - Select a power scheme that you set in the [Power Management Wizard](#).
 - Turn presentation mode on or off.
-

Double-Clicking the QuickSet Icon

Double-click the  icon to adjust power management settings using the [Power Management Wizard](#).

Right-Clicking the QuickSet Icon

Right-click the  icon to perform the following tasks:

- Enable or disable the [Brightness Meter](#) on the screen.
- Enable or disable the [Volume Meter](#) on the screen.
- Turn [wireless activity](#) on or off.
- View *Dell QuickSet Help*.
- View the version and copyright date of the QuickSet program installed on your computer.


For more information about QuickSet, right-click the  icon in the taskbar and click **Help**.

Using the Keyboard and Touch Pad


- [Numeric Keypad](#)
 - [Keyboard Shortcuts](#)
 - [Touch Pad](#)
 - [Customizing the Touch Pad](#)
-

Numeric Keypad




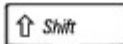




 **NOTE:** When you connect an external keyboard or keypad to the computer, the keypad is disabled.

The numeric keypad functions like the numeric keypad on an external keyboard. Each key on the keypad has multiple functions. The keypad numbers and symbols are marked in blue on the right of the keypad keys. To type a number or symbol, enable the keypad, hold down <Fn> and press the desired key.



- To enable the keypad, press <Num Lk>. The  light indicates that the keypad is active.
 - To disable the keypad, press <Num Lk> again.
-

Keyboard Shortcuts



System Functions

  	Opens the Windows Task Manager window
	Enables and disables the numeric keypad (on an external keyboard only)
 	Enables and disables the scroll lock







Battery

 	Displays the Dell™ QuickSet Battery Meter .
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CD or DVD Tray

 	Ejects the tray out of the drive.
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Display Functions

 	Switches the video image to the next display in the following sequence: the integrated display only, the integrated display and an external CRT monitor simultaneously, an external CRT monitor only, the integrated display and an external DVI monitor simultaneously, and an external DVI monitor only.
 	Increases brightness on the integrated display only (not on an external monitor)
 	Decreases brightness on the integrated display only (not on an external monitor)

Radios (Including Wireless Networking and Bluetooth™)



 	Enables and disables radios, including wireless networking and Bluetooth.
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

Power Management

 	Activates the power management mode of your choice. You can program this keyboard shortcut on the Advanced tab in the Power Options Properties window.
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














Speaker Functions

If no sound comes from the speakers, press <Fn><End> and adjust the volume.

 	Increases the volume of the integrated speakers and external speakers, if attached
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 	Decreases the volume of the integrated speakers and external speakers, if attached
 	Enables and disables the integrated speakers and external speakers, if attached

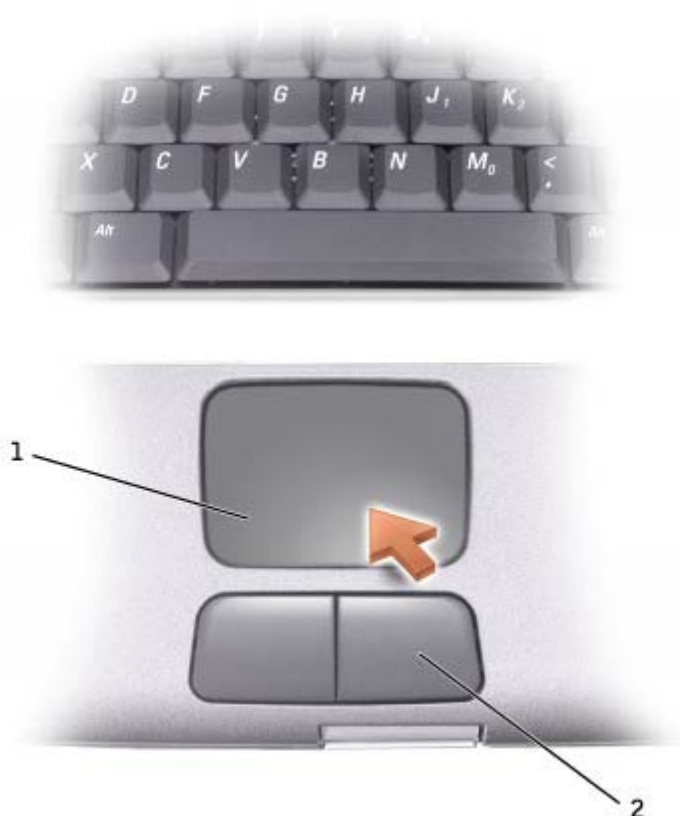
Microsoft® Windows® Logo Key Functions

 	Minimizes all open windows
  	Maximizes all windows
 	Runs Windows Explorer
 	Opens the Run dialog box
 	Opens the Search Results dialog box
  	Opens the Search Results-Computer dialog box (if the computer is connected to a network)
 	Opens the System Properties dialog box

To adjust keyboard operation, such as the character repeat rate, open the Control Panel, and click **Printers and Other Hardware** (*for Windows XP*) or double-click the **Keyboard** icon (*for Windows 2000*).

Touch Pad

The touch pad detects the pressure and movement of your finger to allow you to move the cursor on the display. Use the touch pad and touch pad buttons as you would use a mouse.



1	touch pad
2	touch pad buttons

- To move the cursor, lightly slide your finger over the touch pad.
- To select an object, lightly tap once on the surface of the touch pad or use your thumb to press the left touch-pad button.
- To select and move (or drag) an object, position the cursor on the object and tap down-up-down on the touch pad. On the second down motion, leave your finger on the touch pad and move the selected object by sliding your finger across the surface.
- To double-click an object, position the cursor on the object and then tap twice on the touch pad, or use your thumb to press the left touch-pad button twice.

Customizing the Touch Pad

You can disable the touch pad or adjust its settings by using the **Mouse Properties** window.

1. *In Windows XP*, open the Control Panel, click **Printers and Other Hardware**, and then click **Mouse**.

In Windows 2000, open the Control Panel and double-click the **Mouse** icon.

2. On the **Mouse Properties** window:
 - Click the **Device Select** tab to disable the touch pad.
 - Click the **Pointer** tab to adjust touch pad settings.
3. Select the desired settings and click **Apply**.
4. Click **OK** to save the settings and close the window.

Using the Display

- [Adjusting Brightness](#)
 - [Switching the Video Image](#)
 - [Setting Display Resolution](#)
-



Adjusting Brightness

When the Dell™ computer is running on battery power, you can conserve power by setting the brightness to the lowest comfortable setting using the appropriate [keyboard shortcuts for the display](#).

The Dell QuickSet **Brightness Meter** shows the current brightness setting for the display. Right-click the  icon in the taskbar to enable or disable the **Brightness Meter** on the screen.



1	Brightness Meter
---	-------------------------

-  **NOTE:** By default, the **Brightness Meter** appears in the lower-right corner of the display. You can click and drag the meter to a new location, and the meter subsequently always appears at the new location.
-  **NOTE:** Brightness keyboard shortcuts only affect the display on your portable computer, not monitors that you attach to your portable computer or docking device. If your computer is in **CRT only** mode and you try to change the brightness level, the **Brightness Meter** appears, but the brightness level on the monitor does not change.

You can enable or disable the **Brightness Meter** from the QuickSet taskbar menu. When the meter is enabled, press the following keys to adjust brightness:

- Press <Fn> up-arrow key to increase brightness on the integrated display only (not on an external monitor).
- Press <Fn> down-arrow key to decrease brightness on the integrated display only (not on an external monitor).

For more information about QuickSet, right-click the  icon in the taskbar and click **Help**.

Switching the Video Image

When you start the computer with an external device (such as an external monitor or projector) attached and turned on, the image may appear on either the display or the external device.

Press <Fn><F8> to switch the video image to the integrated display only, the integrated display and an external CRT monitor simultaneously, an external CRT monitor only, the integrated display and external DVI monitor simultaneously, and external DVI monitor only.



NOTE: You cannot use <Fn><F8> to switch the video image between the integrated display and an external S-Video device.

Setting Display Resolution

To display a program at a specific resolution, both the video controller and the display must support the program, and the necessary [video drivers must be installed](#).

Before you change any of the default display settings, make a note of the default settings for future reference.



NOTE: Use only the Dell-installed video drivers, which are designed to offer the best performance with your Dell-installed operating system.

If you choose a resolution or color palette that is higher than the display supports, the settings adjust automatically to the closest possible setting.



NOTE: As the resolution increases, icons and text appear smaller on the screen.

If the video resolution setting is higher than that supported by the display, the computer enters *pan mode*. In pan mode, the screen cannot be completely displayed. For example, the taskbar that usually appears at the bottom of the desktop may no longer be visible. To view the rest of the screen, use the touch pad to pan up, down, left, and right.



NOTICE: You can damage an external monitor by using an unsupported refresh rate. Before adjusting the refresh rate on an external monitor, see the monitor user's guide.

Microsoft® Windows® XP

1. Click the **Start** button and click **Control Panel**.
2. Under **Pick a category**, click **Appearance and Themes**.
3. Under **Pick a task...**, click the area you want to change, or under **or pick a Control Panel icon**, click **Display**.
4. Try different settings for **Color quality** and **Screen resolution**.

Windows 2000

1. Click the **Start** button, point to **Settings**, and then click **Control Panel**.
2. Double-click the **Display** icon and click the **Settings** tab.
3. Try different settings for **Colors** and **Screen area**.

Using a Battery

- [Battery Performance](#)
 - [Checking the Battery Charge](#)
 - [Charging the Battery](#)
 - [Removing a Battery](#)
 - [Removing and Installing a Reserve Battery](#)
 - [Installing a Battery](#)
 - [Storing a Battery](#)
-

Battery Performance



NOTE: Batteries for portable computers are covered under warranty only during the initial 1-year period of the limited warranty for the computer. For more information about the Dell warranty for the computer, see the *System Information Guide* or separate paper warranty document that shipped with your computer.

For optimal computer performance and to help preserve BIOS settings, operate your Dell™ portable computer with the main battery installed at all times. Use a battery to run the computer when the computer is not connected to an electrical outlet. One battery is supplied as standard equipment in the battery bay.



NOTE: For more information on maximizing battery operating time, see "[Power Management](#)."

Battery operating time varies depending on operating conditions. With average usage, you may expect from 3 to 4 hours from a single, fully charged battery. You can install an optional second battery in the module bay to significantly increase operating time. For more information about the second battery, see "[Using the Module Bay](#)."





NOTE: It is recommended that you connect your computer to an electrical outlet when writing to a CD.


Operating time is significantly reduced when you perform operations including, but not limited to, the following:

- Using optical drives, especially DVD and CD-RW drives
- Using wireless communications devices, PC Cards, or USB devices
- Using high-brightness display settings, 3D screen savers, or other power-intensive programs, such as 3D games
- Running the computer in [maximum performance mode](#)


You can [check the battery charge](#) on the bottom of the computer. You can also set power management options to alert you when the [battery charge is low](#).

 **CAUTION:** Using an incompatible battery may increase the risk of fire or explosion. Replace the battery only with a compatible battery purchased from Dell. The lithium-ion battery is designed to work with your Dell™ computer. Do not use a battery from other computers with your computer.

 **CAUTION:** Do not dispose of batteries with household waste. When your battery no longer holds a charge, call your local waste disposal or environmental agency for advice on disposing of a lithium-ion battery. See the battery disposal instructions in your *System Information Guide*.

 **CAUTION:** Misuse of the battery may increase the risk of fire or chemical burn. Do not puncture, incinerate, disassemble, or expose the battery to temperatures above 65°C (149°F). Keep the battery away from children. Handle damaged or leaking batteries with extreme care. Damaged batteries may leak and cause personal injury or equipment damage.

Checking the Battery Charge

The Dell QuickSet battery meter, Microsoft® Windows® power meter window and  icon, the battery charge gauge and health gauge, and the low-battery warning provide information on the battery charge.




For more information about checking the charge on the second battery, see "[Using the Module Bay](#)."

Dell QuickSet Battery Meter

Press <Fn><F3> to display the QuickSet **Battery Meter**.


The **Battery Meter** screen displays status, charge level, and charge completion time for the primary and second batteries in your computer.


The following icons appear in the **Battery Meter** screen:

	<ul style="list-style-type: none"> • The computer is running on battery power. • The battery is discharging or idle.
	<ul style="list-style-type: none"> • The computer is connected to an electrical outlet and running on AC power. • The battery is charging.
	<ul style="list-style-type: none"> • The computer is connected to an electrical outlet and running on AC power. • The battery is discharging, idle, or charging.

For more information about QuickSet, right-click the  icon in the taskbar, and click **Help**.

Microsoft Windows Power Meter

The Windows power meter indicates the remaining battery charge. To check the power meter, double-click the  icon on the taskbar. For more information on the **Power Meter** tab, see "[Power Management](#)."

If the computer is connected to an electrical outlet, a  icon appears.

Charge Gauge

Press the status button on the battery charge gauge to illuminate the charge-level lights. Each light represents approximately 20 percent of the total battery charge. For example, if the battery has 80 percent of its charge remaining, four of the lights are on. If no lights appear, the battery has no charge.



Health Gauge

The battery operating time is largely determined by the number of times it is charged. After hundreds of charge and discharge cycles, batteries lose some charge capacity, or battery health. To check the battery health, press and hold the status button on the battery charge gauge for at least 3 seconds. If no lights appear, the battery is in good condition, and more than 80 percent of its original charge capacity remains. Each light represents incremental degradation. If five lights appear, less than 60 percent of the charge capacity remains, and you should consider replacing the battery. See "[Specifications](#)" for more information about the battery operating time.

Low-Battery Warning



NOTICE: To avoid losing or corrupting data, save your work immediately after a low-battery warning. Then connect the computer to an electrical outlet, or install a second battery in the module bay. If the battery runs completely out of power, hibernate mode begins automatically.

A low-battery warning occurs when the battery charge is approximately 90 percent depleted. The computer beeps once, indicating that minimal battery operating time remains. During that time, the speaker beeps periodically. If two batteries are installed, the low-battery warning means that the combined charge of both batteries is approximately 90 percent depleted. The computer enters hibernate mode when the battery charge is at a critically low level. For more information on low-battery alarms, see "[Power Management](#)."

Charging the Battery



NOTE: The AC adapter charges a completely discharged battery in approximately 1 hour with the

computer turned off. Charge time is longer with the computer turned on. You can leave the battery in the computer as long as you like. The battery internal circuitry prevents the battery from overcharging.

When you connect the computer to an electrical outlet or install a battery while the computer is connected to an electrical outlet, the computer checks the battery charge and temperature. If necessary, the AC adapter then charges the battery and maintains the battery charge.

If the battery is hot from being used in your computer or being in a hot environment, the battery may not charge when you connect the computer to an electrical outlet.

Disconnect the computer from the electrical outlet and allow the computer and the battery to cool to room temperature. Then connect the computer to an electrical outlet to continue charging the battery.

For more information on resolving problems with a battery, see "[Power Problems](#)."

Removing a Battery



CAUTION: Before performing the following procedures, read and follow the safety instructions in the *System Information Guide*.

For more information about removing the second battery, see "[Using the Module Bay](#)."



CAUTION: Before performing these procedures, turn off the computer, disconnect it from the electrical outlet, and disconnect the modem from the telephone wall jack.



NOTICE: If you choose to replace the battery with the computer in [standby mode](#), you have up to 90 seconds to complete the battery replacement before the computer shuts down and loses any unsaved data.

1. Ensure that the computer is turned off, disconnected from an electrical outlet, and disconnected from the telephone wall jack.
2. If the computer is connected to a docking device (docked), undock it. See the documentation that came with your docking device for instructions.
3. Slide and hold the battery-bay latch release on the bottom of the computer, and then remove the battery from the bay.



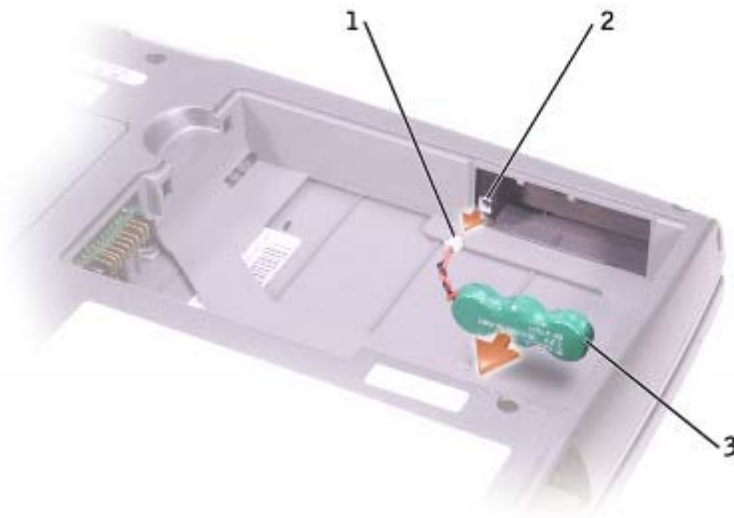
Removing and Installing a Reserve Battery

⚠ CAUTION: Before performing the following procedures, read and follow the safety instructions in the *System Information Guide*.

1. [Remove the battery.](#)
2. Remove the reserve battery cover.



3. Pull the reserve battery out of its compartment, and disconnect the reserve battery cable from the connector.



1	reserve battery cable
2	connector
3	reserve battery

4. Connect the reserve battery cable to the connector in the reserve battery compartment.
5. Place the reserve battery in the compartment, and replace the reserve battery cover.



Installing a Battery



CAUTION: Before performing the following procedures, read and follow the safety instructions in the *System Information Guide*.

Slide the battery into the bay until the latch release clicks.

For more information about installing the second battery, see "[Using the Module Bay](#)."

Storing a Battery

Remove the battery when you store your computer for an extended period of time. A battery discharges during prolonged storage. After a long storage period, [recharge the battery](#) fully before you use it.

Using the Module Bay

- [About the Module Bay](#)
 - [Checking the Charge on the Second Battery](#)
 - [Removing and Installing Devices While the Computer Is Turned Off](#)
 - [Removing and Installing Devices While the Computer Is Running](#)
 - [Using CDs or DVDs](#)
-

About the Module Bay



CAUTION: Before performing any of the following procedures, read and follow the safety instructions in the *System Information Guide*.

You can install devices such as a floppy drive, CD drive, CD-RW drive, DVD drive, CD-RW/DVD drive, DVD+RW, second battery, or second hard drive in the module bay.

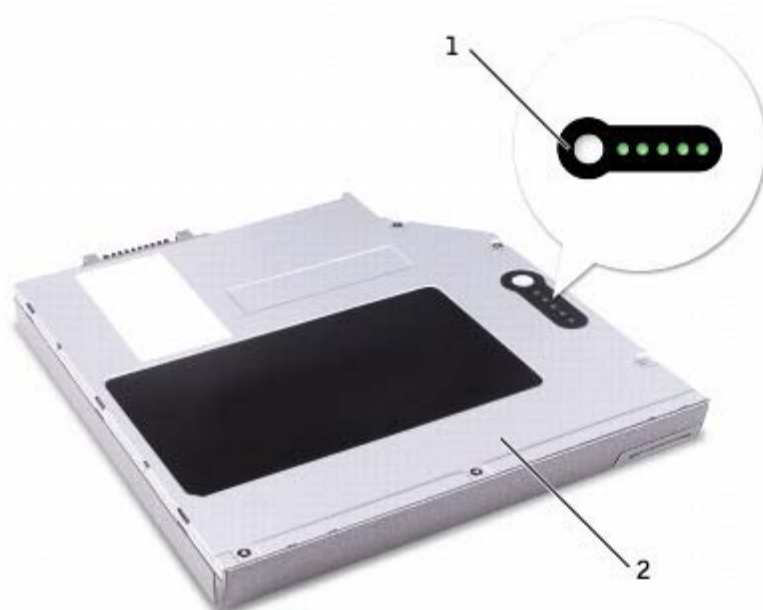


NOTE: You do not need to install the device screw unless you want to secure the module inside the computer for security purposes.

Your Dell™ computer ships with an optical drive installed in the module bay. However, the device screw is not installed in the optical drive but packaged separately. When you install your device in the module bay, you can install the device screw.

Checking the Charge on the Second Battery


Before you install a second battery, press the status button on the battery charge gauge to illuminate the charge level lights. Each light represents approximately 20 percent of the total battery charge. For example, if the battery has 80 percent of its charge remaining, four of the lights are on. If no lights appear, the battery has no charge.




1	status button on the battery charge gauge
2	second battery (bottom)

Removing and Installing Devices While the Computer Is Turned Off


 **CAUTION:** Before performing any of the following procedures, read and follow the safety instructions in the *System Information Guide*.

 **NOTE:** If the device screw is not installed, you can [remove and install devices while the computer is running](#) and connected to a docking device (docked).

Your computer ships with an optical drive installed in the module bay. However, the device screw is not installed in the optical drive but packaged separately. When you install your device in the module bay, you can install the device screw.

 **NOTE:** You do not need to install the device screw unless you want to secure the module inside the computer for security purposes.

If the Device Screw Is Not Installed

 **NOTICE:** To prevent damage to devices, place them in a safe, dry place when they are not installed in the computer. Avoid pressing down on them or placing heavy objects on top of them.

1. Press the device latch release so that the latch release pops out.



1	device latch release
---	----------------------

2. Pull the device by the latch release to remove the device from the module bay.



3. Insert the new device into the bay, push the device until you feel a click, and push the device latch release in so that it is flush with the computer.

If the Device Screw Is Installed

1. Save and close any open files, exit any open programs, and then shut down the computer.
2. If the computer is connected to a docking device (docked), undock it. See the documentation that came with your docking device for instructions.



NOTICE: To prevent damage to devices, place them in a safe, dry place when they are not installed in the computer. Avoid pressing down on them or placing heavy objects on top of them.

3. Close the display and turn the computer over.
4. Use a #1 Phillips screwdriver to remove the device screw from the bottom of the computer.



1	device latch release
---	----------------------

5. Press the device latch release so that the latch release pops out.
6. Pull the device by the latch release to remove the device from the module bay.




7. Insert the new device into the bay, push the device until you feel a click, and push the device latch release in so that it is flush with the computer.
8. Replace the device screw.
9. Turn on the computer.

Removing and Installing Devices While the Computer Is Running

 **CAUTION:** Before performing any of the following procedures, read and follow the safety instructions in the *System Information Guide*.


Your computer ships with an optical drive installed in the module bay. However, the device screw is not installed in the optical drive but packaged separately. When you install your device in the module bay, you can install the device screw.

 **NOTE:** You do not need to install the device screw unless you want to secure the module inside the computer for security purposes.

If the Device Screw Is Not Installed

Microsoft® Windows® XP

1. Double-click the **Safely Remove Hardware** icon on the taskbar.
2. Click **Stop** and wait for the operating system to confirm that the device has stopped.
3. Click the device you want to eject.

 **NOTICE:** To prevent damage to devices, place them in a safe, dry place when they are not installed in the computer. Avoid pressing down on them or placing heavy objects on top of them.

4. Press the device latch release so that the latch release pops out.



1	device latch release
---	----------------------

5. Pull the device by the latch release to remove the device from the module bay.



6. Insert the new device into the bay, push the device until you feel a click, and push the device latch release in so that it is flush with the computer. Windows XP automatically recognizes the new device.
7. If necessary, enter your password to unlock your computer.

Windows 2000

1. Click the **Unplug or Eject Hardware** icon on the taskbar.
2. Click the device you want to eject and click **Stop**.
3. Press the device latch release so that the latch release pops out.



1	device latch release
---	----------------------

4. Pull the device by the latch release to remove the device from the module bay.



5. Insert the new device into the bay, push the device until you feel a click, and push the device latch release in so that it is flush with the computer.
6. When the operating system recognizes the new device, click **Close**.

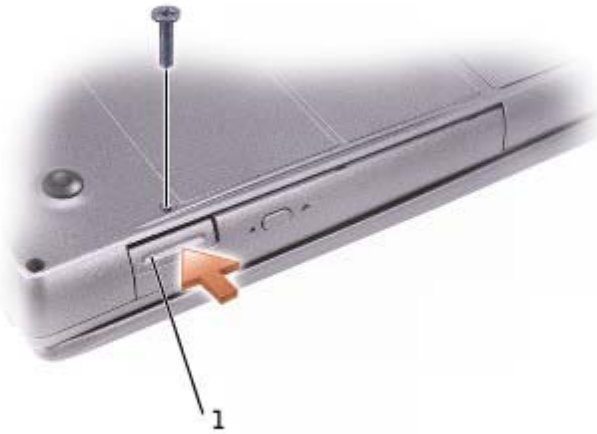
If the Device Screw Is Installed

Windows XP

1. Double-click the **Safely Remove Hardware** icon on the taskbar.
2. Click the device you want to eject.
3. If the computer is connected to a docking device (docked), undock it. See the documentation that came with your docking device for instructions.

➡ **NOTICE:** To prevent damage to devices, place them in a safe, dry place when they are not installed in the computer. Avoid pressing down on them or placing heavy objects on top of them.

4. Use a #1 Phillips screwdriver to remove the device screw from the bottom of the computer.



1	device latch release
---	----------------------

5. Press the device latch release so that the latch release pops out.
6. Pull the device by the latch release to remove the device from the module bay.



7. Insert the new device into the bay, push the device until you feel a click, and push the device latch release in so that it is flush with the computer. Windows XP automatically recognizes the new device.
8. If necessary, enter your password to unlock your computer.

Windows 2000

1. Click the **Unplug or Eject Hardware** icon on the taskbar.
2. Click the device you want to eject and click **Stop**.
3. If the computer is connected to a docking device (docked), undock it. See the documentation that came with your docking device for instructions.

4. Use a #1 Phillips screwdriver to remove the device screw from the bottom of the computer.



1	device latch release
---	----------------------

5. Press the device latch release so that the latch release pops out.
6. Pull the device by the latch release to remove the device from the module bay.



7. Insert the new device into the bay, push the device until you feel a click, and push the device latch release in so that it is flush with the computer.
8. When the operating system recognizes the new device, click **Close**.

Using CDs or DVDs

Using the CD or DVD Tray

➡ **NOTICE:** Do not press down on the drive tray when opening or closing it. Keep the tray closed when you are not using the drive.

➡ **NOTICE:** Do not move the computer while playing CDs or DVDs.

1. Press the eject button on the front of the drive.
2. Pull the tray out.
3. Place the disc, label side up, in the center of the tray.

➡ **NOTICE:** Ensure that you snap the disc onto the spindle. Otherwise you may damage the drive tray, or your CD or DVD will not work properly.

4. Snap the disc onto the spindle.



1	eject button
---	--------------


5. Push the tray back into the drive.

📎 **NOTE:** If you use a module that shipped with another computer, you need to install the drivers and software necessary to play DVDs or write data. For more information, see the *Drivers and Utilities* CD.

You can play a DVD on your computer if the computer shipped with a DVD drive or a CD-RW/DVD combo drive. You can write data to a CD-R/CD-RW on your computer if the computer shipped with a CD-RW or CD-RW/DVD combo drive.


For more information on playing CDs or DVDs, click **Help** on the CD player or DVD player (if available).

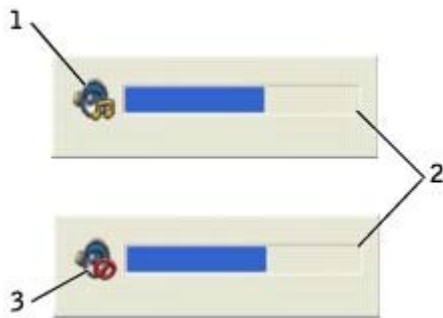
Adjusting the Volume

 **NOTE:** If the speakers are muted, you do not hear the CD or DVD playing.


1. Click the **Start** button, point to **All Programs**→ **Accessories**→ **Entertainment** (or **Multimedia**), and then click **Volume Control**.
2. In the **Volume Control** window, click and drag the bar in the **Volume Control** column and slide the bar up or down to increase or decrease the volume.

For more information on volume control options, click **Help** in the **Volume Control** window.

The **Volume Meter** displays the current volume level, including mute, on your computer. Either right-click the  icon in the taskbar or press the volume control buttons to enable or disable the **Volume Meter** on the screen.



1	volume icon
2	Volume Meter
3	mute icon

 **NOTE:** By default, the **Volume Meter** appears in the lower-right corner of the display. You can click and drag the meter to a new location, and the meter subsequently always appears at the new location.

When the meter is enabled, adjust the volume using the volume control buttons or by pressing the following keys:

- Press <Fn><Page Up> to increase volume.
- Press <Fn><Page Down> to decrease volume.
- Press <Fn><End> to mute volume.

For more information about QuickSet, right-click the  icon in the taskbar, and click **Help**.

Adjusting the Picture

If an error message notifies you that the current resolution and color depth are using too much memory and preventing DVD playback, adjust the display properties.

Windows XP

1. Click the **Start** button and click **Control Panel**.
2. Under **Pick a category**, click **Appearance and Themes**.
3. Under **Pick a task...**, click **Change the screen resolution**.
4. In the **Display Properties** window, click and drag the bar in **Screen resolution** to change the setting to **1024 by 768 pixels**.
5. Under **Color quality**, click the drop-down menu and click **Medium (16 bit)**.
6. Click **OK**.

Windows 2000

1. Click the **Start** button, point to **Settings**, and then click **Control Panel**.
2. Double-click the **Display** icon and click the **Settings** tab.
3. Click and drag the bar in **Screen area** to change the setting to **1024 by 768 pixels**.
4. Under **Color quality**, click the drop-down menu and click **High Color (16 bit)**.
5. Click **Apply**.
6. Click **OK** to save the settings and close the window.

Power Management

- [Power Management Tips](#)
 - [Power Management Wizard](#)
 - [Power Management Modes](#)
 - [Power Options Properties](#)
-

Power Management Tips



NOTE: See "[Using a Battery](#)" for more information on conserving battery power.

- Connect the computer to an electrical outlet when possible because battery life is largely determined by the number of times the battery is charged.
 - Place the computer in [standby mode](#) or [hibernate mode](#) when you leave the computer unattended for long periods of time.
 - To enter a power management mode, close the display or press <Fn><Esc>.
 - To exit a power management mode, press the power button.
-

Power Management Wizard



NOTE: The **Power Management Wizard** is not available if you have restricted access rights.



Click or double-click the icon to open the **Power Management Wizard**.

The first two screens of the wizard—**Welcome** and **What is Power Management?**—describe and define various power management options.



NOTE: On the **What is Power Management?** screen, you can select **Do not show this page again**. When you select this option, the **Welcome** screen also does not appear again.


Use the following screens of the **Power Management Wizard** to set various power management options, including sleep modes, power schemes, and low battery-charge alarms.

Setting Sleep Modes


The screen defines standby and hibernate modes. From the screen you can:

- Set standby-mode password options.
- Enable or disable hibernate mode.
- Select how the computer will respond when you close the display:
 - Choose no action.
 - Enter standby mode.
 - Enter hibernate mode.
- Select how the computer will respond when you press the power button:
 - Choose no action.
 - Enter standby mode.
 - Enter hibernate mode.
 - Shut down the Microsoft® Windows® operating system and turn off the computer.
 - Prompt a user for an action (**Ask me what to do**).
- Select how the computer will respond when you press <Fn><Esc>.
 - Choose no action.
 - Enter standby mode.
 - Enter hibernate mode.
 - Shut down Microsoft Windows and turn off the computer.
 - Prompt a user for an action (**Ask me what to do**).

Selecting a Power Scheme

 **NOTE:** When your computer is running on battery power, the **Network Disabled** power scheme disables your internal network and wireless activity. When your computer is connected to an electrical outlet, the **Network Disabled** power scheme disables only your wireless activity. You must set the power scheme through QuickSet (not Microsoft® Windows®) for **Network Disabled** to work.

The screen allows you to select, create, and edit power scheme settings. In addition, you can delete power schemes that you create, but you cannot delete Dell™ QuickSet predefined power schemes (**Maximum Battery**, **Maximum Performance**, **Presentation**, and **Network Disabled**).

 **NOTE:** QuickSet automatically adds the word (**QuickSet**) after the names of power schemes created using QuickSet.

All QuickSet power schemes are displayed in a drop-down menu near the center of the screen. The power settings for each scheme in the menu are listed below the menu. The power settings are listed separately for when the computer is running on battery or connected to an electrical outlet.

The **Power Management Wizard** also allows you to associate the display brightness level with a power scheme. You must enable brightness-level power schemes through QuickSet in order to set the brightness level.

The display brightness, internal network-card activity, and wireless activity features are not available through the Microsoft® Windows® **Control Panel** power schemes. In order to make use of these value-added features, you must set them through QuickSet power schemes.



NOTE: Brightness shortcut keys only affect the display on your portable computer, not monitors that you attach to your portable computer or docking device. If your computer is in **CRT only** mode and you try to change the brightness level, the **Brightness Meter** appears, but the brightness level on the monitor does not change.

Setting Battery Alarms and Actions

The screen allows you to enable the low-battery and critical-battery alarms and to change settings for the alarms. For example, you can set the low-battery alarm to 20 percent to remind you to save work and switch to AC power, and you can set the critical-battery alarm to 10 percent to enter hibernate mode. From the screen, you can:

- Select whether the alarm will notify you by sound or text.
- Adjust the power level at which you want the alarm to notify you.
- Select how the computer will respond when the alarm notifies you:
 - Choose no action.
 - Enter standby mode.
 - Enter hibernate mode.
 - Shut down Windows and turn off the computer.

Completing the Power Management Wizard

The screen summarizes the QuickSet power scheme, sleep mode, and battery alarm settings for your computer. Review the settings you have selected and click **Finish**.

For more information about QuickSet, right-click the  icon in the taskbar and click **Help**.

Power Management Modes

Standby Mode

Standby mode conserves power by turning off the display and the hard drive after a predetermined period of inactivity (a time-out). When the computer exits standby mode, it returns to the same operating state it was in before entering standby mode.



NOTICE: If your computer loses AC and battery power while in standby mode, it may lose data.

To enter standby mode:

- *In the Microsoft® Windows® XP operating system*, click the **Start** button, click **Turn off computer**,

and then click **Stand by**.

In Windows 2000, click the **Start** button, click **Shutdown**, click **Standby**, and then click **OK**.

or

- Depending on how you set the power management options on the [Advanced tab](#) in the **Power Options Properties** window, use one of the following methods:
 - Close the display.
 - Press <Fn><Esc>.

To exit standby mode, press the power button or open the display depending on how you set the options on the [Advanced tab](#). You cannot make the computer exit standby mode by pressing a key or touching the touch pad.

Hibernate Mode

Hibernate mode conserves power by copying system data to a reserved area on the hard drive and then completely turning off the computer. When the computer exits hibernate mode, it returns to the same operating state it was in before entering hibernate mode.



NOTICE: You cannot remove devices or disconnect your computer from a docking device while your computer is in hibernate mode.

Your computer enters hibernate mode if the battery charge level becomes critically low.

To manually enter hibernate mode:

- *In Windows XP*, click the **Start** button, click **Turn off computer**, press and hold <Shift> key, and then click **Hibernate**.

In Windows 2000, if [hibernate support is enabled](#), click the **Start** button, click **Shutdown**, click **Hibernate**, and then click **OK**.

or

- Depending on how you set the power management options on the [Advanced tab](#) in the **Power Options Properties** window, use one of the following methods to enter hibernate mode:
 - Close the display.
 - Press <Fn><Esc>.



NOTE: Some PC Cards may not operate correctly after the computer exits hibernate mode. [Remove and reinsert the card](#), or simply restart (reboot) your computer.

To exit hibernate mode, press the power button. The computer may take a short time to exit hibernate mode. You cannot make the computer exit hibernate mode by pressing a key or touching the touch pad. For more information on hibernate mode, see the documentation that came with your operating system.

Power Options Properties

The **Power Options Properties** window helps you to manage power consumption and monitor battery charge status. To access the Microsoft Windows **Power Options Properties** window:

- *In Windows XP*, click the **Start** button, click **Control Panel**, click **Performance and Maintenance**, and then click **Power Options**.
- *In Windows 2000*, open the Control Panel and double-click the **Power Options** icon.

Power Schemes Tab

Windows XP controls the performance level of the processor depending on the power scheme you select. You do not need to make any further adjustments to set the performance level. For information on setting processor performance for other operating systems, see "[Intel SpeedStep™ Technology Tab \(for Windows 2000\)](#)."

Each preset power scheme has different time-out settings for entering standby mode, turning off the display, and turning off the hard drive. For more information on power management options, see the [Help and Support Center](#) (Windows *Help* in Windows 2000).

Alarms Tab



NOTE: To enable audible alarms, click each **Alarm Action** button and select **Sound alarm**.

The **Low battery alarm** and **Critical battery alarm** settings alert you with a message when the battery charge falls below a certain percentage. When you receive your computer, the **Low battery alarm** and **Critical battery alarm** check boxes are selected. It is recommended that you continue to use these settings. See "[Using a Battery](#)" for more information on low-battery warnings.

Power Meter Tab

The **Power Meter** tab displays the current power source and amount of battery charge remaining.

Advanced Tab

The **Advanced** tab allows you to:

- Set power icon and [standby mode](#) password options.
- Program the following functions (depending on your operating system):
 - Prompt a user for an action (**Ask me what to do**).
 - Enter standby mode.
 - Enter [hibernate mode](#).
 - Shut down Windows and turn off the computer.
 - Choose no action (**None** or **Do nothing**).

To program these functions, click an option from the corresponding drop-down menu and then click **OK**.

Hibernate Tab

The **Hibernate** tab lets you enable hibernate mode by clicking the **Enable hibernate support** check box.

Intel SpeedStep™ Technology Tab (for Windows 2000)



NOTE: Windows XP controls the performance level of the processor depending on the power scheme that you select. See "[Power Schemes Tab](#)."



NOTE: To use Intel SpeedStep technology, a Windows operating system must be running.

Depending on your operating system and microprocessor, the **Power Options Properties** window includes the **Intel SpeedStep™ technology** tab. Intel SpeedStep technology allows you to set the performance level of the processor according to whether the computer is running on battery or AC power. Depending on your operating system, typical options are:

- **Automatic** — The processor runs at its highest possible speed (Maximum Performance mode) when the computer is running on AC power. When the computer is running on battery power, the processor runs in Battery Optimized mode.
- **Maximum Performance** — The processor runs at its highest possible speed even if the computer is running on battery power.
- **Battery Optimized Performance** — Processor speed is optimized for battery power even if the computer is connected to an electrical outlet.
- **Maximum Battery** — The processor runs at a slower speed to extend battery life.


To change additional Intel SpeedStep options:

1. Click **Advanced** and click one of the following options:
 - **Disable Intel SpeedStep technology control**
 - **Remove flag icon** (from the notification area)
 - **Disable audio notification when performance changes**
2. Click **OK** to accept any changes and click **OK** to close the **Intel SpeedStep™ technology** window.

You can also change the Intel SpeedStep settings by right-clicking the flag icon in the notification area.


Connecting to a Wireless Local Area Network

- [Determining Your Network Type](#)
- [Connecting to a Network in Microsoft® Windows® XP](#)
- [Finalizing Your Network Connection \(Security Settings\)](#)

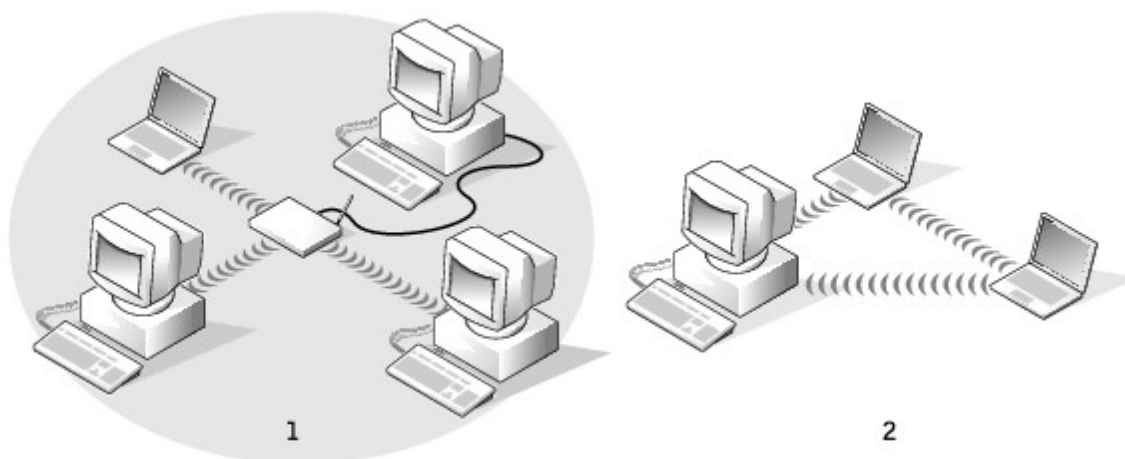
 **NOTE:** These networking instructions do not apply to Bluetooth™ or cellular products.

Before you can connect to a wireless Local Area Network (LAN), you must have specific information about your network. Be sure to get the name of your wireless network along with any special security settings from your network administrator. The settings are unique to your network and cannot be provided by Dell.

Determining Your Network Type

 **NOTE:** Most wireless networks are of the infrastructure type. Consult your network administrator if you are unsure of the type of network you are connecting to.

Wireless networks fall into two categories—infrastructure networks and ad-hoc networks. An infrastructure network uses routers or access points to connect several computers. An ad-hoc network does not use routers or access points and consists of computers that broadcast to one another.



1	infrastructure network
2	Ad-Hoc network

Connecting to a Network in Microsoft® Windows® XP

Your wireless network card requires proper software and drivers in order to connect to a network. The software is pre-installed in the factory. If the software is removed or corrupted, follow the instructions listed in the *User's Guide* for your wireless card. The *User's Guide* is located on your *Drivers and Utilities* CD (that came with your computer) in the "User's Guides-Network User's Guides" category. The *User's Guide* is also available on the Dell Support website at **support.dell.com**.

1. Click the **Start** button, click **Control Panel**, and then click **Switch to Classic View**.
2. Double-click **Network Connections**.
3. Click **Wireless Network Connection**.

The **Wireless Network Connection** icon is highlighted.

4. Under **Network Tasks** in the left-hand pane, click **Change settings of this connection**.

The **Wireless Network Connection Properties** window appears.

5. Select the **Wireless Networks** tab.



NOTE: The names of wireless networks that your computer can detect are listed under **Available Networks**.

6. Click **Add**.

The **Wireless network properties** window appears.

7. Enter the name of your network in the **Network name (SSID)** field.
8. If you are connecting to an ad-hoc network, which does not use any routers or access points, click the check box labeled **This is a computer-to-computer (ad hoc) network; wireless access points are not used**.
9. Click **OK**.

Your new network name appears in the **Preferred networks** area.

Finalizing Your Network Connection (Security Settings)

To finalize your connection, you must change your wireless security settings to match the wireless network you are trying to connect to. Choose one of the following connection options based on the security settings for your network:

- Connecting to a Network without Security-Related Requirements (common for home and small office networks)
- Connecting to a Network with Wi-Fi Protected Access (WPA) Security Requirements
- Connecting to a Network with Wired Equivalent Protocol (WEP) Security Requirements



NOTE: Network security settings are only provided by your network administrator and are unique to

your network. Dell cannot provide this information.

Connecting to a Network Without Security-Related Requirements

1. In the **Preferred networks** area, click the name of your wireless network.
2. Click **Properties**.
3. From the **Network Authentication** drop-down menu, select **Open**.

Earlier versions of the Dell™ wireless software may not contain the drop-down menu. If you are using an earlier version, click to uncheck the **Data encryption (WEP enabled)** check box and go to [step 5](#).

4. From the **Data encryption** drop-down menu, select **Disabled**.



NOTE: Your computer can take up to 1 minute to connect to the network.

5. Click **OK**.

Your network setup is complete.

Connecting to a Network With Wi-Fi Protected Access (WPA) Security Requirements

The following instructions are basic steps for connecting to a WPA network. If your network requires a user name, password, or domain settings, consult the setup instructions in the *User's Guide* for your wireless network card.



NOTE: WPA protocols require that you know the Network Authentication and Data Encryption settings for your wireless network. In addition, your WPA-protected network may require special settings such as a network key, user name, password, and domain name. Be sure to get all necessary WPA settings from your network administrator before continuing.

1. In the **Preferred networks** section, click the name of your wireless network.
2. Click **Properties**.
3. From the **Network Authentication** drop-down menu, select your network authentication type (as provided by the network administrator).

If you do not see the drop-down menu, you must update your wireless software before continuing. Download and install the latest version of your wireless driver software from the Dell Support website at support.dell.com.

4. From the **Data encryption** drop-down menu, select your data encryption type (as provided by the network administrator).
5. If your wireless network requires a key, enter it in the **Network key** field.



NOTE: Your computer can take up to 1 minute to connect to the network.

6. Click **OK**.

Your network setup is complete.

Connecting to a Network With Wired Equivalent Protocol (WEP) Security Requirements

1. In the **Preferred networks** section, click the name of your wireless network.
2. Click **Properties**.
3. From the **Network Authentication** drop-down menu, select **Open**.

Earlier versions of Dell wireless software may not contain the drop-down menus. If you are using an earlier version, click to check the check box labeled **Data encryption (WEP enabled)** and go to [step 5](#).

4. From the **Data encryption** drop-down menu, select **WEP**.
5. If the wireless network does not require a network key (for example, a password), go to [step 8](#).
6. Click to uncheck the check box labeled **The key is provided for me automatically**.
7. Enter the WEP network key, provided by your network administrator, in the **Network key** field.
8. Enter the WEP network key again in the **Confirm network key** field.



NOTE: Your computer can take up to 1 minute to connect to the network.

9. Click **OK**.

Your network setup is complete.

Using PC Cards

- [PC Card Types](#)
- [Extended PC Cards](#)
- [Installing a PC Card](#)
- [Removing a PC Card](#)



CAUTION: Before performing any of the procedures listed below, read and follow the safety instructions in the *System Information Guide*.

PC Card Types

See "[Specifications](#)" for information on supported PC Cards.



NOTE: A PC Card is not a bootable device.

The PC Card slot has one connector that supports a single Type I or Type II card. The PC Card slot supports CardBus technology and extended PC Cards. "Type" of card refers to its thickness, not its functionality.

Extended PC Cards

An extended PC Card (for example, a wireless network adapter) is longer than a standard PC Card and extends outside the computer. Follow these precautions when using extended PC Cards:

- Protect the exposed end of an installed card. Striking the end of the card can damage the system board.
 - Always remove an extended PC Card before you pack the computer in its carrying case.
 - Install an extended card in the upper PC Card connector to allow room for a second PC Card.
-

Installing a PC Card

You can install a PC Card in the computer while the computer is running. The computer automatically detects the card.

PC Cards are generally marked with a symbol (such as a triangle or an arrow) to indicate which end to insert into the slot. The cards are keyed to prevent incorrect insertion. If card orientation is not clear, see the documentation that came with the card.

To install a PC Card:



1. Hold the card with its orientation symbol pointing into the slot and the top side of the card facing up. The latch needs to be in the "in" position before you insert the card.
2. Slide the card into the slot until the card is completely seated in its connector.

If you encounter too much resistance, do not force the card. Check the card orientation and try again.



The computer recognizes most PC Cards and automatically loads the appropriate device driver. If the configuration program tells you to load the manufacturer's drivers, use the floppy disk or CD that came with the PC Card.

Removing a PC Card

 **NOTICE:** Before you remove a PC Card from the computer, click the  icon on the taskbar to select a card and stop it from functioning. If you do not stop the card in the configuration utility, you could lose data. Do not attempt to eject a card by pulling its cable, if one is attached.

1. Press the eject button.



1	eject button
---	--------------

2. Push the eject button a second time.
3. Gently remove the card.



1	eject button
2	PC Card


Traveling With Your Computer



- [Identifying Your Computer](#)
 - [Packing the Computer](#)
 - [Travel Tips](#)
-

Identifying Your Computer


- Attach a name tag or business card to the computer, or use a permanent marker or stencil to write a unique identifying mark (such as your driver's license number) on the computer.
 - Write down your Service Tag and store it in a safe place away from the computer or carrying case. Use the Service Tag if you need to report a loss or theft to law enforcement officials and to Dell.
 - Create a file on the Microsoft® Windows® desktop called **if_found**. Place information such as your name, address, and telephone number in this file.
 - Contact your credit card company and ask if it offers coded identification tags.
-

Packing the Computer


- Remove any external devices attached to the computer and store them in a safe place. Remove any cables attached to installed PC Cards, and [remove any extended PC Cards](#).
 - To make the computer as light as possible, replace any devices installed in the module bay with the Dell TravelLite™ module.
 - Fully charge the main battery and any spare batteries you plan to carry with you.
 - Shut down the computer.
 - Disconnect the AC adapter.
-  **NOTICE:** When the display is closed, extraneous items on the keyboard or palm rest could damage the display.
- Remove any extraneous items, such as paper clips, pens, and paper, from the keyboard and palm rest and close the display.
 - Use the optional Dell™ carrying case to pack the computer and its accessories together safely.
 - Avoid packing the computer with items such as shaving cream, colognes, perfumes, or food.
 - Protect the computer, the batteries, and the hard drive from hazards such as extreme temperatures and overexposure to sunlight, dirt, dust, or liquids.

-  **NOTICE:** If the computer has been exposed to extreme temperatures, allow it to acclimate to room temperature for 1 hour before turning it on.
 - Pack the computer so that it does not slide around in the trunk of your car or in an overhead storage compartment.
 -  **NOTICE:** Do not check the computer as baggage.
-


Travel Tips

-  **NOTICE:** Do not move the computer while using the optical drive. Doing so can result in loss of data.
- Consider disabling wireless activity on your computer to maximize battery operating time. To disable wireless activity, press <Fn><F2>.
- Consider changing your [power management options](#) to maximize battery operating time.
- If you are traveling internationally, carry proof of ownership—or of your right to use the computer if it is company-owned—to speed your passage through customs. Investigate the customs regulations of the countries you plan to visit, and consider acquiring an international carnet (also known as a *merchandise passport*) from your government.
- Ensure that you know which electrical outlets are used in the countries you will visit, and have appropriate power adapters.
- Check with your credit card company for information about the kinds of emergency travel assistance it offers to users of portable computers.

Traveling by Air

- Ensure that you have a charged battery available in case you are asked to turn on the computer.
-  **NOTICE:** Do not walk the computer through a metal detector. Send the computer through an X-ray machine or have it hand inspected.
- Before you use the computer on an airplane, verify that such usage is permitted. Some airlines forbid the use of electronic devices during the flight. All airlines forbid the use of electronic devices during takeoff and landing.

If Your Computer Is Lost or Stolen

- Call a law enforcement agency to report the lost or stolen computer. Include the Service Tag in your description of the computer. Ask that a case number be assigned and write down the number, along with the name, address, and telephone number of the law enforcement agency. If possible, obtain the name of the investigating officer.
-  **NOTE:** If you know where the computer was lost or stolen, call a law enforcement agency in that area. If you do not know, call a law enforcement agency where you live.


- If the computer belongs to a company, notify the security office of the company.
- Contact Dell customer service to report the missing computer. Provide the computer Service Tag, the case number, and the name, address, and telephone number of the law enforcement agency to which you reported the missing computer. If possible, give the name of the investigating officer.

The Dell customer service representative will log your report under the computer Service Tag and flag the computer as missing or stolen. If someone calls Dell for technical assistance and gives your Service Tag, the computer is identified automatically as missing or stolen. The representative will attempt to get the phone number and address of the caller. Dell will then contact the law enforcement agency to which you made the report of the missing computer.


Passwords


- [About Passwords](#)
 - [Using a Primary Password](#)
 - [Using an Administrator Password](#)
 - [Using a Hard Drive Password](#)
 - [Assigning an Asset Tag](#)
-

About Passwords

 **NOTE:** Passwords are disabled when you receive your computer.

A primary password prevents unauthorized access to the computer at start-up. You can use an administrator password instead of the primary password. A hard drive password helps prevent unauthorized access to data on the drive, even when the drive is installed in another computer.

 **NOTE:** Only hard drives purchased from Dell for use with the Dell™ Latitude™ D-Family computers support hard drive passwords.

 **NOTICE:** Passwords provide a high level of security for data in your computer or hard drive. However, they are not foolproof. If you require more security, obtain and use additional forms of protection, such as data encryption programs or PC Cards with encryption features.

If you forget any of your passwords, contact your system administrator or call Dell. For your protection, Dell technical support staff will ask you for proof of your identity to ensure that only an authorized person can use the computer.

The following table identifies types and features of passwords available on your computer.

Type of Password	Features
Primary	<ul style="list-style-type: none">• Protects the computer from unauthorized access
Administrator	<ul style="list-style-type: none">• Gives system administrators or service technicians access to computers for repair or reconfiguration• Allows you to restrict access to the system setup program in the same way a system password restricts access to the computer• Can be used in place of the primary password
Hard drive	<ul style="list-style-type: none">• Helps protect the data on your hard drive or external hard drive (if one is being used) from unauthorized access

Using a Primary Password

The primary password allows you to protect the computer from unauthorized access.

After assigning a primary password, you must enter it each time you turn on your computer. The following message appears each time you turn on the computer:

Please type in the primary or administrator password and press <Enter>.

To continue, enter your password (maximum of eight characters).

If you do not enter a password within 2 minutes, the computer returns to its previous operating state.

If you have assigned an administrator password, you can use it instead of the primary password. The computer does not specifically prompt you for the administrator password.



NOTICE: If you disable the administrator password, the primary password is also disabled.

Using an Administrator Password

The administrator password is designed to give system administrators or service technicians access to computers for repair or reconfiguration. The administrators or technicians can assign identical administrator passwords to groups of computers, allowing you to assign the primary password.

When you set an administrator password, the **Configure Setup** option becomes available in the system setup program. The **Configure Setup** option allows you to restrict access to the system setup program in the same way a primary password restricts access to the computer.

The administrator password can be used in place of the primary password. Whenever you are prompted to enter the primary password, you can enter the administrator password instead.



NOTE: The administrator password provides access to the computer, but it does not provide access to the hard drive when a hard drive password is assigned.

If you forget the primary password and do not have an administrator password assigned, or if you have both a primary and an administrator password assigned but forget them both, contact your system administrator or contact Dell.



NOTICE: If you disable the administrator password, the primary password is also disabled.

Using a Hard Drive Password

The hard drive password helps protect the data on your hard drive from unauthorized access. You can also assign a password for an external hard drive (if one is being used) that can be the same as or different from the password for the primary hard drive.

After assigning a hard drive password, you must enter it each time you turn on the computer and each time you resume normal operation from standby mode.

If the hard drive password is enabled, the following message appears each time you turn on the computer:

```
Please type in the hard-disk drive password and press <Enter>.
```

To continue, enter your password (maximum of eight characters). Press <Esc> to return the computer to its previous operating state.

If you do not enter a password within 2 minutes, the computer returns to its previous operating state.

If you enter the wrong password, the following message appears:

```
Invalid password  
[Press Enter to retry]
```

If the correct password is not entered in three attempts, the computer tries to boot from another bootable device if the **Boot First Device** option in the system setup program is set to allow it. If the **Boot First Device** option is not set to allow booting from another device, the computer returns to the state it was in when you turned it on.

If the hard drive password, the external hard drive password, and the primary password are the same, you are prompted only for the primary password. If the hard drive password is different from the primary password, you are prompted for both. Two different passwords provide greater security.



NOTE: The administrator password provides access to the computer, but it does not provide access to a hard drive that is protected by a hard drive password.

Assigning an Asset Tag

The Asset Tag utility allows you to enter an asset tag that you or your company assigns to the computer. After you enter an asset tag, the tag appears in the system setup screens.

You can also use the Asset Tag utility to enter an owner tag that appears in the system log-on screen with the primary password prompt.



NOTE: The *Drivers and Utilities* CD for your computer is a bootable CD.

Viewing Existing Asset Tag and Service Tag

1. Boot the computer using a bootable floppy disk or CD.
2. Type `cd c:\Dell\Util` and press <Enter>.
3. Type `asset` and press <Enter>.

Assigning an Asset Tag

An asset tag can have up to ten characters; any combination of characters excluding spaces is valid.

1. Boot the computer using a bootable floppy disk or CD.
2. Type `cd c:\dell\util` and press <Enter>.
3. Type `asset` and a space followed by the new asset tag, and press <Enter>.

For example, type the following command line and press <Enter>:

```
asset 1234$ABCD&
```

4. When the computer prompts you to verify the asset tag, type `y` and press <Enter>.

The computer displays the new or modified asset tag and the Service Tag.

Deleting an Asset Tag

1. Boot the computer using a bootable floppy disk or CD.
2. Type `cd c:\dell\util` and press <Enter>.
3. Type `asset /d` and press <Enter>.

Assigning an Owner Tag

An owner tag can have up to 48 characters; any combination of letters, numbers, and spaces is valid.

1. Boot the computer using a bootable floppy disk or CD.
2. Type `cd c:\dell\util` and press <Enter>.
3. Type `asset /o` and a space followed by the new owner tag, and press <Enter>.

For example, type the following command line and press <Enter>:

```
asset /o ABC Company
```

4. When the computer prompts you to verify the owner tag, type `y` and press <Enter>.

The computer displays the new owner tag.

Deleting an Owner Tag



NOTE: For security, you cannot set, change, or delete the owner tag if the primary or administrator passwords are set.

1. Boot the computer using a bootable floppy disk or CD.
2. Type `cd c:\dell\util` and press <Enter>.
3. Type `asset /o /d` and press <Enter>.

Asset Tag Options

To use one of the asset tag options (see the following table):

1. Boot the computer using a bootable floppy disk or CD.
2. Type `cd c:\dell\util` and press <Enter>.
3. Type `asset` and a space followed by the option, and then press <Enter>.

Asset Tag Option	Description
<code>/d</code>	Deletes the asset tag
<code>/o <i>owner tag</i></code>	Specifies a new owner tag
<code>/o /d</code>	Deletes the owner tag
<code>/?</code>	Displays the Asset Tag utility help screen

Solving Problems

- [Power Problems](#)
 - [Error Messages](#)
 - [Video and Display Problems](#)
 - [Sound and Speaker Problems](#)
 - [Printer Problems](#)
 - [Modem and Internet Connection Problems](#)
 - [Touch Pad or Mouse Problems](#)
 - [External Keyboard Problems](#)
 - [Unexpected Characters](#)
 - [Drive Problems](#)
 - [PC Card Problems](#)
 - [Network Problems](#)
 - [General Program Problems](#)
 - [If Your Dell™ Computer Gets Wet](#)
 - [If You Drop or Damage Your Computer](#)
 - [Resolving Other Technical Problems](#)
-

Power Problems

Fill out the [Diagnostics Checklist](#) as you complete these checks.

Check the power light — When the power light is lit or blinking, the computer has power. If the power light is blinking, the computer is in standby mode—press the power button to exit standby mode . If the light is off, press the power button to turn on the computer.
--

Charge the battery — The battery charge may be depleted.

- | |
|---|
| <ol style="list-style-type: none">1. Reinstall the battery.2. Use the AC adapter to connect the computer to an electrical outlet.3. Turn on the computer. |
|---|

Check the battery status light — If the battery status light flashes orange or is a steady

orange the battery charge is low or depleted. Connect the computer to an electrical outlet.

If the battery status light flashes green and orange, the battery is too hot to charge. Shut down the computer, disconnect the computer from the electrical outlet, and then let the battery and computer cool to room temperature.

If the battery status light rapidly flashes orange, the battery may be defective. [Contact Dell](#).

Test the electrical outlet — Ensure that the electrical outlet is working by testing it with another device, such as a lamp.

Check the AC adapter — Check the AC adapter cable connections. If the AC adapter has a light, ensure that the light is on.

Connect the computer directly to an electrical outlet — Bypass power protection devices, power strips, and the extension cable to verify that the computer turns on.

Eliminate possible interference — Turn off nearby fans, fluorescent lights, halogen lamps, or other appliances.

Adjust the power properties — See "[Power Management](#)."

Reseat the memory modules — If the computer power light turns on but the display remains blank, [reseat the memory modules](#).

Error Messages

If the message is not listed, see the documentation for the operating system or the program that was running at the time the message appeared.

Auxiliary device failure — The touch pad or external mouse may be faulty. For an external mouse, check the cable connection. Enable the Pointing Device option in the system setup program. If the problem persists, [contact Dell](#).

Bad command or file name — Ensure that you have spelled the command correctly, put spaces in the proper place, and used the correct pathname.

Cache disabled due to failure — The primary cache internal to the microprocessor has failed. [Contact Dell](#).

CD drive controller failure — The CD drive does not respond to commands from the computer. See "[Drive Problems](#)."

Data error — The floppy or hard drive cannot read the data. See "[Drive Problems](#)."

Decreasing available memory — One or more memory modules may be faulty or improperly seated. Reseat the memory modules and, if necessary, replace them. See "[Memory](#)."

Disk C: failed initialization — The hard drive failed initialization. Run the Hard-Disk Drive tests as described in "[Using the Dell Diagnostics](#)."

Floppy drive 0 seek failure — The system configuration information may not match the hardware configuration. Run the Diskette tests as described in "[Using the Dell Diagnostics](#)."

Diskette read failure — The floppy disk may be defective. If the drive access light turns on, try a different disk. See "[Drive Problems](#)."

Diskette subsystem reset failed — The floppy drive controller may be faulty. Run the

Diskette tests as described in "Using the Dell Diagnostics."
Diskette write-protected — Because the floppy disk is write-protected, the operation cannot be completed. Slide the write-protect notch.
Drive not ready — The operation requires a floppy disk in the drive or a hard drive in the bay before it can continue. Insert a floppy disk, or push the floppy disk all the way into the drive until the eject button pops out. Or, install a hard drive in the hard drive bay.
Error reading PCMCIA card — The computer cannot identify the PC Card. Reinsert the card or try another PC Card.
Extended memory size has changed — The amount of memory recorded in NVRAM does not match the memory installed in the computer. Restart the computer. If the error appears again, contact Dell .
Gate A20 failure — A memory module may be loose. Reinstall the memory modules and, if necessary, replace them.
General failure — The operating system is unable to carry out the command. The message is usually followed by specific information—for example, <i>Printer out of paper</i> . Take the appropriate action.
Hard-disk drive configuration error — The computer cannot identify the drive type. Turn off the computer, remove the hard drive , and boot the computer from a bootable floppy disk or CD. Then turn off the computer, reinstall the hard drive, and restart the computer. Run the Hard-Disk Drive tests as described in " Using the Dell Diagnostics ."
Hard-disk drive controller failure 0 — The hard drive does not respond to commands from the computer. Turn off the computer, remove the hard drive , and boot the computer from a bootable floppy disk or CD. Then turn off the computer, reinstall the hard drive, and restart the computer. If the problem persists, try another drive. Run the Hard-Disk Drive tests as described in " Using the Dell Diagnostics ."
Hard-disk drive failure — The hard drive does not respond to commands from the computer. Turn off the computer, remove the hard drive , and boot the computer from a bootable floppy disk or CD. Then turn off the computer, reinstall the hard drive, and restart the computer. If the problem persists, try another drive. Run the Hard-Disk Drive tests as described in " Using the Dell Diagnostics ."
Hard-disk drive read failure — The hard drive may be defective. Turn off the computer, remove the hard drive , and boot the computer from a bootable floppy disk or CD. Then turn off the computer, reinstall the hard drive, and restart the computer. If the problem persists, try another drive. Run the Hard-Disk Drive tests as described in " Using the Dell Diagnostics ."
Insert bootable media — The operating system is trying to boot to a nonbootable floppy disk or CD. Insert a bootable floppy disk or CD.
Invalid configuration information-please run System Setup Program — The system configuration information does not match the hardware configuration. The message is most likely to occur after a memory module is installed. Correct the appropriate options in the system setup program. See " Using the System Setup Program ."
Keyboard clock line failure — For external keyboards, check the cable connection. Run the Keyboard Controller test as described in " Using the Dell Diagnostics ."
Keyboard controller failure — For external keyboards, check the cable connection. Restart the computer, and avoid touching the keyboard or the mouse during the boot routine. Run the Keyboard Controller test as described in " Using the Dell Diagnostics ."
Keyboard data line failure — For external keyboards, check the cable connection. Run the Keyboard Controller test as described in " Using the Dell Diagnostics ."
Keyboard stuck key failure — For external keyboards or keypads, check the cable

connection. Restart the computer, and avoid touching the keyboard or keys during the boot routine. Run the Stuck Key test as described in "[Using the Dell Diagnostics](#)."

Memory address line failure at address, read value expecting value — A memory module may be faulty or improperly seated. [Reinstall the memory modules](#) and, if necessary, replace them.

Memory allocation error — The software you are attempting to run is conflicting with the operating system, another program, or a utility. Turn off the computer, wait 30 seconds, and then restart it. Try to run the program again. If the error message still appears, see the software documentation.

Memory data line failure at address, read value expecting value — A memory module may be faulty or improperly seated. [Reinstall the memory modules](#) and, if necessary, replace them.

Memory double word logic failure at address, read value expecting value — A memory module may be faulty or improperly seated. [Reinstall the memory modules](#) and, if necessary, replace them.

Memory odd/even logic failure at address, read value expecting value — A memory module may be faulty or improperly seated. [Reinstall the memory modules](#) and, if necessary, replace them.

Memory write/read failure at address, read value expecting value — A memory module may be faulty or improperly seated. [Reinstall the memory modules](#) and, if necessary, replace them.

No boot device available — The computer cannot find the floppy disk or hard drive. If the floppy drive is your boot device, ensure that a bootable floppy disk is in the drive. If the hard drive is your boot device, ensure that the drive is installed, properly seated, and partitioned as a boot device.

No boot sector on hard drive — The operating system may be corrupted. [Contact Dell](#).

No timer tick interrupt — A chip on the system board may be malfunctioning. Run the System Set tests as described in "[Using the Dell Diagnostics](#)."

Non-system disk or disk error — A floppy disk is in the floppy drive. Remove the floppy disk and restart the computer.

Not a boot diskette — The operating system is trying to boot to a nonbootable floppy disk. Insert a bootable floppy disk.

Operating system not found — [Contact Dell](#).

Optional ROM bad checksum — The optional ROM apparently failed. [Contact Dell](#).

A required .DLL file was not found — The program that you are trying to open is missing an essential file. Remove and then reinstall the program.

Microsoft® Windows® XP

1. Click the Start button and click Control Panel.
2. Click Add or Remove Programs.
3. Select the program you want to remove.
4. Click Remove or Change/Remove and follow the prompts on the screen.
5. See the program documentation for installation instructions.

Windows 2000

1. Click the Start button, point to Settings, and then click Control Panel.
2. Double-click the Add/Remove Programs icon.
3. Select the program that you want to remove.

4. Click Change or Remove Programs.
5. See the program documentation for installation instructions.

Sector not found — The operating system cannot locate a sector on the floppy or hard drive. You may have a defective sector or corrupted FAT on the floppy disk or hard drive. Run the Windows error-checking utility to check the file structure on the floppy disk or hard drive. See *Windows Help* for instructions. If a large number of sectors are defective, back up the data (if possible), and then reformat the floppy disk or hard drive.

Seek error — The operating system cannot find a specific track on the floppy disk or hard drive. If the error is on the floppy disk, try another floppy disk.

Shutdown failure — A chip on the system board may be malfunctioning. Run the System Set tests as described in "[Using the Dell Diagnostics](#)."

Time-of-day clock lost power — System configuration settings are corrupted. Connect your computer to an electrical outlet to charge the battery. If the problem persists, try to restore the data by entering the system setup program. Then immediately exit the program. See "[Using the System Setup Program](#)." If the message reappears, [contact Dell](#).

Time-of-day clock stopped — The reserve battery that supports the system configuration settings may require recharging. Connect your computer to an electrical outlet to charge the battery. If the problem persists, [contact Dell](#).

Time-of-day not set-please run the System Setup program — The time or date stored in the system setup program does not match the system clock. Correct the settings for the Date and Time options. See "[Using the System Setup Program](#)."

Timer chip counter 2 failed — A chip on the system board may be malfunctioning. Run the System Set tests as described in "[Using the Dell Diagnostics](#)."

Unexpected interrupt in protected mode — The keyboard controller may be malfunctioning, or a memory module may be loose. Run the System Memory tests and the Keyboard Controller test as described in "[Using the Dell Diagnostics](#)."

x:\ is not accessible. The device is not ready — Insert a disk into the drive and try again.

Warning: Battery is critically low — The [battery is running out of charge](#). Replace the battery, or connect the computer to an electrical outlet. Otherwise, activate [hibernate mode](#) or turn off the computer.

Video and Display Problems

Fill out the [Diagnostics Checklist](#) as you complete these checks.

If the display is blank



NOTE: If you are using a program that requires a higher resolution than your computer supports, it is recommended that you attach an external monitor to your computer.

Check the battery — If you are using a battery to power your computer, the battery charge may be depleted. Connect the computer to an electrical outlet using the AC adapter, and turn on the computer.

Test the electrical outlet — Ensure that the electrical outlet is working by testing it with another device, such as a lamp.

Check the AC adapter — Check the AC adapter cable connections. If the AC adapter has a light, ensure that the light is on.

Connect the computer directly to an electrical outlet — Bypass power protection devices, power strips, and the extension cable to verify that the computer turns on.

Adjust the power properties — Search for the keyword *standby* in Windows *Help* or the Windows Help and Support Center.

Switch the video image — If your computer is attached to an external monitor, press <Fn><F8> to switch the video image to the display.

If the display is difficult to read

Adjust the brightness — See "[Adjusting Brightness](#)" for instructions on adjusting the brightness.

Move the subwoofer away from the computer or monitor — If your external speaker system includes a subwoofer, ensure that the subwoofer is at least 60 cm (2 ft) away from the computer or external monitor.

Eliminate possible interference — Turn off nearby fans, fluorescent lights, halogen lamps, or other appliances.

Rotate the computer to face a different direction — Eliminate sunlight glare, which can cause poor picture quality.

Adjust the Windows display settings —

Windows XP

1. Click the **Start** button and then click **Control Panel**.
2. Click **Appearance and Themes**.
3. Click the area you want to change or click the **Display** icon.
4. Try different settings for **Color quality** and **Screen resolution**.

Windows 2000

1. Click the **Start** button, point to **Settings**, and then click **Control Panel**.
2. Double-click the **Display** icon and click the **Settings** tab.
3. Try different settings for **Colors**, **Screen area**, and **Advanced Settings**.

Run the Video diagnostics tests — If no error message appears and you still have a display problem, but the display is not completely blank, run the **Video** device group in the [Dell Diagnostics](#). Then [contact Dell](#).

See "Error Messages" — If an error message appears, see "[Error Messages](#)."

If only part of the display is readable

Connect an external monitor —

1. Shut down your computer and connect an external monitor to the computer.
2. Turn on the computer and the monitor and adjust the monitor brightness and contrast controls.

If the external monitor works, the computer display or video controller may be defective. [Contact Dell.](#)

Sound and Speaker Problems

Fill out the [Diagnostics Checklist](#) as you complete these checks.

If you have a problem with integrated speakers

Adjust the Windows volume control — Double-click the speaker icon in the lower-right corner of your screen. Ensure that the volume is turned up and that the sound is not muted. Adjust the volume, bass, or treble controls to eliminate distortion.

Adjust the volume using keyboard shortcuts — See "[Using the Keyboard and Touch Pad.](#)" Press <Fn><End> to disable (mute) or reenable the integrated speakers.

Reinstall the sound (audio) driver — See "[Reinstalling Software.](#)"

For Windows 2000 only, ensure that digital audio for the CD drive is enabled —

1. Click the **Start** button, point to **Settings**, and then click **Control Panel**.
2. Double-click the **System** icon.
3. Click the **Hardware** tab.
4. Click **Device Manager**.
5. Double-click **DVD/CD-ROM drives**.
6. Double-click the name of the drive.
7. On the drive **Properties** screen, click the **Properties** tab.
8. Click the box near the bottom of the screen to enable digital audio for your CD or DVD drive.

If you have a problem with external speakers




NOTE: The volume control in some MP3 players overrides the Windows volume setting. If you have been listening to MP3 songs, make sure that you did not turn the player volume down or off.

Check the speaker cable connections — See the setup diagram supplied with the speakers.

Test the electrical outlet — Ensure that the electrical outlet is working by testing it with another device, such as a lamp.

Ensure that the speakers are turned on — See the setup diagram supplied with the speakers.

Adjust the Windows volume control — Double-click the speaker icon in the lower-right corner of your screen. Ensure that the volume is turned up and that the sound is not muted. Adjust the volume, bass, or treble controls to eliminate distortion.

Test the speakers — Plug the speaker audio cable in to the  connector on the computer. Ensure that the headphone volume control is turned up. Play a music CD.

Run the speaker self-test — Some speaker systems have a self-test button on the subwoofer. See the speaker documentation for self-test instructions.

Eliminate possible interference — Turn off nearby fans, fluorescent lights, or halogen lamps to check for interference.

Reinstall the sound (audio) driver — See "[Reinstalling Software](#)."

Run the Misc. PCI Devices diagnostic test — See "[Using the Dell Diagnostics](#)." If the tests complete successfully, the controller is functioning properly.

If the problem persists, or if the tests do not complete successfully, [contact Dell](#).

For Windows 2000 only, ensure that digital audio for the CD drive is enabled —

1. Click the **Start** button, point to **Settings**, and then click **Control Panel**.
2. Double-click the **System** icon.
3. Click the **Hardware** tab.
4. Click **Device Manager**.
5. Double-click **DVD/CD-ROM drives**.
6. Double-click the name of the drive.
7. On the drive **Properties** screen, click the **Properties** tab.
8. Click the box near the bottom of the screen to enable digital audio for your CD or DVD drive.

Printer Problems

Fill out the [Diagnostics Checklist](#) as you perform the various checks.

Check the printer cable connections — Ensure that the printer cable is properly connected to the computer.

Check the printer cable —

1. Shut down the computer and turn off the printer.
2. Swap the printer cable with a cable that you know is working.
3. Turn on the printer and computer, and try again to print.
4. If you print successfully, [contact Dell](#) for assistance in obtaining a new printer cable.

Test the electrical outlet — Ensure that the electrical outlet is working by testing it with another device, such as a lamp.

Ensure that the printer is turned on — See the documentation supplied with the printer.

Verify that Windows recognizes the printer —

Windows XP

1. Click the **Start** button and click **Control Panel**.
2. Click **Printers and Other Hardware**.
3. Click **View installed printers or fax printers**. If the printer model is listed, right-click the printer icon.
4. Click **Properties** and click the **Ports** tab. Ensure that the **Print to the following port (s):** setting is **LPT1 (Printer Port)**.

Windows 2000

1. Click the **Start** button, point to **Settings**, and then click **Printers**.

If the printer model is listed, right-click the printer icon.

2. Click **Properties** and click the **Ports** tab.
3. Ensure that the **Print to the following port:** option is set for your printer type:
 - For a parallel printer: **LPT1 (Printer Port)**
 - For a USB printer: **USB**

Reinstall the printer driver — See "[Reinstalling Software](#)."

Check the printer — Run the printer self-test. If the test does not complete successfully, the printer is probably defective. Contact the printer manufacturer.

Modem and Internet Connection Problems



NOTICE: Connect the modem to an analog telephone wall jack only. Connecting the modem to a digital telephone network may damage the modem.



NOTICE: Modem and network connectors look similar. Do not plug a telephone line in to the network connector.

Fill out the [Diagnostics Checklist](#) as you complete these checks.



NOTE: If you can connect to your Internet service provider (ISP), your modem is functioning properly. If you are sure that your modem is working properly and you still experience problems, contact your ISP.

Check the telephone wall jack — Disconnect the telephone line from the modem and connect it to a telephone. Listen for a dial tone. Ensure that you have touchtone telephone service. Try connecting the modem to a different telephone wall jack.

Slow connection speeds can be caused by telephone noise as well as by telephone line or network conditions. Contact your telephone company or network administrator for more information.

Connect the modem directly to the telephone wall jack — If you have other telephone devices sharing the line, such as an answering machine, fax machine, surge protector, or line splitter, then bypass them and use the telephone line to connect the modem directly to the telephone wall jack.

Check the connection — Verify that the telephone line is connected to the modem.

Check the telephone line — Try using a different telephone line. If you are using a line that is 3 m (10 ft) or more in length, try a shorter one.

Irregular dial tone — If you have voice mail service, you might hear an irregular dial tone when you have messages. Contact your telephone company for instructions on restoring a dial tone.

Turn off call waiting (catch-phone) — See your telephone directory for instructions on deactivating this feature. Then adjust the dial-up networking connection properties.

Windows XP

1. Click the **Start** button and click **Control Panel**.
2. Click **Printers and Other Hardware**, click **Phone and Modem Options**, click the **Dialing Rules** tab, and then click **Edit...**
3. In the **Edit Location** window, ensure that **To disable call waiting, dial:** is checked, and

then select the proper code as listed in your telephone directory.

4. Click **Apply** and click **OK**.
5. Close the **Phone and Modems Options** window.
6. Close the **Control Panel** window.

Windows 2000

1. Click the **Start** button, point to **Settings**, and then click **Control Panel**.
2. Click **Phone and Modem Options**.
3. Click the **Dialing Rules** tab and click **Edit**.
4. Ensure that **To disable call waiting, dial:** is checked, and then select the proper code as listed in your telephone directory.
5. Click **Apply** and click **OK**.
6. Close the **Phone and Modem Options** window.

Verify that the modem is communicating with Windows —

Windows XP

1. Click the **Start** button and click **Control Panel**.
2. Click **Printers and Other Hardware** and click **Phone and Modem Options**.
3. Click the **Modems** tab.
4. Click the COM port for your modem.
5. Click **Properties**, click the **Diagnostics** tab, and then click **Query Modem** to verify that the modem is communicating with Windows.

If all commands receive responses, the modem is operating properly.

Windows 2000

1. Click the **Start** button, point to **Settings**, and then click **Control Panel**.
2. Double-click **Phone and Modem Options**.

If multiple entries for the same modem or modems are listed but not installed, delete the entries, restart the computer, and repeat steps 1 and 2.

3. Click the **Diagnostics** tab.
4. Click the COM port for your modem.
5. Click **Query Modem** to verify that the modem is communicating with Windows.

If all commands receive responses, the modem is operating properly.

Touch Pad or Mouse Problems

Fill out the [Diagnostics Checklist](#) as you perform the various checks.

Check the touch pad settings —

Windows XP

1. Click the **Start** button, click **Control Panel**, and then click **Printers and Other Hardware**.

2. Click **Mouse**.
3. Try adjusting the settings.

Windows 2000

1. Click the **Start** button, point to **Settings**, and then click **Control Panel**.
2. Double-click the **Mouse** icon.
3. Try adjusting the settings.

Check the mouse cable — Shut down the computer. Disconnect the mouse cable, check it for damage, and firmly reconnect the cable.

If you are using a mouse extension cable, disconnect it and connect the mouse directly to the computer.

To verify that the problem is with the mouse, check the touch pad —

1. Shut down the computer.
2. Disconnect the mouse.
3. Turn on the computer.
4. At the Windows desktop, use the touch pad to move the cursor around, select an icon, and open it.

If the touch pad operates correctly, the mouse may be defective.

Check the system setup program settings — Verify that the system setup program lists the correct device for the pointing device option. (The computer automatically recognizes a USB mouse without making any setting adjustments.)

Test the mouse controller — To test the mouse controller (which affects pointer movement) and the operation of the touch pad or mouse buttons, run the Mouse test in the **Pointing Devices** test group in the [Dell Diagnostics](#).

Reinstall the touch pad driver — See "[Reinstalling Software](#)."

External Keyboard Problems

Fill out the [Diagnostics Checklist](#) as you perform the various checks.



NOTE: Use the integrated keyboard when working in MS-DOS® mode or when running the [Dell Diagnostics](#) or the system setup program. When you attach an external keyboard, the integrated keyboard remains fully functional.

Check the keyboard cable — Shut down the computer. Disconnect the keyboard cable and check it for damage, and firmly reconnect the cable.

If you are using a keyboard extension cable, disconnect it and connect the keyboard directly to the computer.

Check the external keyboard —

1. Shut down the computer, wait 1 minute, and turn it on again.
2. Verify that the numbers, capitals, and scroll lock lights on the keyboard blink during the boot routine.

3. From the Windows desktop, click the **Start** button, point to **Programs**, point to **Accessories**, and click **Notepad**.
4. Type some characters on the external keyboard and verify that they appear on the display.

If you cannot verify these steps, you may have a defective external keyboard.

To verify that the problem is with the external keyboard, check the integrated keyboard —

1. Shut down the computer.
2. Disconnect the external keyboard.
3. Turn on the computer.
4. From the Windows desktop, click the **Start** button, point to **Programs**, point to **Accessories**, and click **Notepad**.
5. Type some characters on the external keyboard and verify that they appear on the display.

If the characters appear now but did not with the external keyboard, you may have a defective external keyboard.

Run the keyboard diagnostics tests — Run the PC-AT Compatible Keyboards tests in the [Dell Diagnostics](#). If the tests indicate a defective external keyboard, [contact Dell](#).

Unexpected Characters

Disable the numeric keypad — Press <Num Lk> to disable the numeric keypad if numbers are displayed instead of letters. Verify that the numbers lock light is not lit.

Drive Problems

Fill out the [Diagnostics Checklist](#) as you complete these checks.

If you cannot save a file to a floppy disk drive

Ensure that Windows recognizes the drive — *In Windows XP*, click the **Start** button and click **My Computer**. *In other operating systems*, double-click **My Computer**. If the drive is not listed, perform a full scan with your antivirus software to check for and remove viruses. Viruses can sometimes prevent Windows from recognizing the drive. Insert a bootable disk and restart the computer.

Ensure that the disk is not write-protected — You cannot save data to a write-protected disk.

Try another floppy disk — Insert another disk to eliminate the possibility that the original disk is defective.

Reinstall the drive —

1. Save and close any open files, exit any open programs, and shut down the computer.
2. Remove the drive from the module bay. See [Using the Module Bay](#) for instructions.
3. Reinstall the drive.

4. Turn on the computer.

Clean the drive — See "[Cleaning Your Computer](#)" for instructions.

Check the drive for errors —

- If a drive error message appears, see "[Error Messages](#)" for an explanation.
- Run the Diskette tests as described in "[Using the Dell Diagnostics](#)."

If you cannot play a CD, CD-RW, DVD, or DVD+RW



NOTE: Because of different worldwide file types, not all DVD titles work in all DVD drives.

High-speed CD drive vibration is normal and may cause noise. The noise does not indicate a defect with the drive or the CD.

Ensure that Windows recognizes the drive — In *Windows XP*, click the **Start** button and click **My Computer**. In other operating systems, double-click **My Computer**. If the drive is not listed, perform a full scan with your antivirus software to check for and remove viruses. Viruses can sometimes prevent Windows from recognizing the drive. Insert a bootable disk and restart the computer.

Try another disc — Insert another disc to eliminate the possibility that the original disc is defective.

Adjust the Windows volume control — Double-click the speaker icon in the lower-right corner of your screen. Ensure that the volume is turned up and that the sound is not muted.

Reinstall the drive

1. Save and close any open files, exit any open programs, and shut down the computer.
2. Remove the drive. See "[Using the Module Bay](#)" for instructions.
3. Reinstall the drive.
4. Turn on the computer.

Clean the drive or disc — See "[Cleaning Your Computer](#)" for instructions.

Check the drive for errors

If a drive error message appears, see "[Error Messages](#)" for an explanation.

Run the IDE Drives tests as described in the [Dell Diagnostics](#).

If you cannot eject the CD, CD-RW, DVD, or DVD+RW drive tray

1. Ensure that the computer is turned off.
2. Straighten a paper clip and insert one end into the eject hole at the front of the drive; push firmly until the tray is partially ejected.
3. Gently pull out the tray until it stops.

If you hear an unfamiliar scraping or grinding sound

- Ensure that the sound is not caused by the program that is running.
- Ensure that the disk or disc is inserted properly.

If the CD-RW or DVD+RW drive stops writing

Disable standby or hibernate mode in Windows before writing to a CD-RW — Search for the keyword *standby* or *hibernate* in *Windows Help* or the Windows Help and Support Center.

Change the write speed to a slower rate — See the help files for your CD or DVD creation software.

Exit all other open programs — Exiting all other open programs before writing to the CD-RW or DVD+RW may alleviate the problem.

If you have problems with a hard drive

Allow the computer to cool before turning it on — A hot hard drive may prevent the operating system from starting. Try allowing the computer to return to room temperature before turning it on.

Check the drive for errors —

- Run the Windows error-checking tool:
 1. *In Windows XP*, click the **Start** button and click **My Computer**. *In Windows 2000*, double-click **My Computer**.
 2. Right-click the drive letter (local disk) that you want to scan for errors, and then click **Properties**.
 3. Click the **Tools** tab.
 4. Under **Error-checking**, click **Check Now**.
 5. Click **Start**.
- Run the IDE Drives tests as described in the [Dell Diagnostics](#).

PC Card Problems

Check the PC Card — Ensure that the PC Card is properly inserted into the connector.

Ensure that the card is recognized by Windows — Double-click the **Safely Remove Hardware** (**Unplug or Eject Hardware** in Windows 2000) icon in the Windows taskbar. Ensure that the card is listed.

Run the PC Card diagnostics test — See the documentation that came with the PC Card for instructions if a diagnostics test was provided with the card.

If you have problems with a Dell-provided PC Card — [Contact Dell](#).

If you have problems with a PC Card not provided by Dell — Contact the PC Card manufacturer.

Network Problems

Fill out the [Diagnostics Checklist](#) as you complete these checks.

Check the network cable connector — Ensure that the network cable connector is firmly connected to the connector on the computer and the network wall jack.

Check the network lights on the network connector — Green indicates that the network connection is active. If the status light is not green, try replacing the network cable. Amber indicates that the network adapter driver is loaded and the adapter is detecting activity.

Restart the computer — Try to log on to the network again.

Contact your network administrator — Verify that your network settings are correct and that the network is functioning.

General Program Problems

Fill out the [Diagnostics Checklist](#) as you complete these checks.

A program crashes



NOTE: Software usually includes installation instructions in its documentation or on a floppy disk or CD.

See the software documentation — Many software manufacturers maintain websites with information that may help you solve the problem. Ensure that you properly installed and configured the program. Reinstall the program if necessary.

A program stops responding

End the program

1. Simultaneously press <Ctrl><Shift><Esc>.
2. Click the **Applications** tab, and then select the program that is no longer responding.
3. Click **End Task**.

A solid blue screen appears

Turn the computer off — If the computer does not respond to a keystroke or a proper shutdown, press the power button until the computer turns off. Press the power button again to restart the computer.

Windows XP

The computer restarts.

Windows 2000

The solid blue screen appears because you were not able to perform a proper Windows shutdown. ScanDisk automatically runs during the start-up process. Follow the instructions on

the screen.

Error messages appear

Review "Error Messages" — Look up the message and take the appropriate action. See the software documentation.

Confirm that the problem is software-related — Run the System Board Devices tests in the [Dell Diagnostics](#). If all tests in the device group run successfully, the problem may be software-related. See the software documentation.

If Your Dell™ Computer Gets Wet



CAUTION: Perform this procedure only after you are certain that it is safe to do so. If the computer is connected to an electrical outlet, it is recommended that you turn off AC power at the circuit breaker before attempting to remove the power cables from the electrical outlet. Use the utmost caution when removing wet cables from a live power source.

1. Shut down the computer, disconnect the AC adapter from the computer, and then disconnect the AC adapter from the electrical outlet.
2. Turn off any attached external devices, and disconnect them from their power sources and then from the computer.
3. Ground yourself by touching one of the metal connectors on the back of the computer.
4. Remove the module bay device and any installed PC Cards, and put them in a safe place to dry.
5. Remove the battery.
6. Wipe off the battery and put it in a safe place to dry.
7. [Remove the hard drive](#).
8. [Remove the memory module\(s\)](#).
9. Open the display and place the computer right-side up across two books or similar props to let air circulate all around it. Let the computer dry for at least 24 hours in a dry area at room temperature.



NOTICE: Do not use artificial means, such as a hair dryer or a fan, to speed the drying process.



CAUTION: To help prevent electrical shock, verify that the computer is thoroughly dry before continuing with the rest of this procedure.

10. Ground yourself by touching one of the metal connectors on the back of the computer.
11. Replace the memory module(s), the memory module cover, and the screw(s).
12. Replace the hard drive.
13. Replace the module bay device and any PC Cards you removed.

14. Replace the battery.
15. Turn on the computer and verify that it is working properly.



NOTE: See your *System Information Guide* or separate paper warranty document that shipped with your computer for information on your warranty coverage.

If the computer does not start, or if you cannot identify the damaged components, [contact Dell](#).

If You Drop or Damage Your Computer

1. Save and close any open files, exit any open programs, and shut down the computer.
2. Disconnect the AC adapter from the computer and from the electrical outlet.
3. Turn off any attached external devices, and disconnect them from their power sources and then from the computer.
4. Remove and reinstall the battery.
5. Turn on the computer.



NOTE: See your *System Information Guide* for information on your warranty coverage.

If the computer does not start, or if you cannot identify the damaged components, [contact Dell](#).

Resolving Other Technical Problems

Go to the Dell Support website — Go to **support.dell.com** for help with general usage, installation, and troubleshooting questions. See "[Getting Help](#)" for a description of the hardware and software support provided by Dell.

E-mail Dell — Go to **support.dell.com** and then click **E-Mail Dell** in the **Communicate** list. Send an e-mail message to Dell about your problem; you can expect to receive an e-mail message from Dell within hours. See "[Getting Help](#)" for a description of the hardware and software support provided by Dell.

Contact Dell — If you cannot solve your problem using the Dell Support website (**support.dell.com**) or e-mail service, call Dell for technical assistance. See "[Getting Help](#)" for a description of the hardware and software support provided by Dell.