COMPAQ

Hardware and Software Guide

Compaq Notebook Series

Document Part Number: 375422-001

March 2005

This guide explains how to identify, access, and use most of the hardware and software features available on your notebook.

© Copyright 2005 Hewlett-Packard Development Company, L.P.

Microsoft and Windows are U.S. registered trademarks of Microsoft Corporation. SD Logo is a trademark of its proprietor. Bluetooth is a trademark owned by its proprietor and used by Hewlett-Packard Company under license.

The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Hardware and Software Guide
Compaq Notebook Series
First Edition March 2005
Reference Number: V4000
Document Part Number: 375422-001

Contents

1 Component ID

Top Components 1–1
Keys 1–1
TouchPad 1–3
Power Controls 1–4
Buttons 1–5
Lights 1–6
Wireless Antennae (Select Models Only). 1–7
Front Components 1–8
Speakers and Display Release Button 1–8
Lights 1–9
Left-Side Components 1–10
Ports and Jacks 1–10
Media and Memory Card Slots. 1–12
Right-Side Components 1–13
Bottom Components 1–15
Mini PCI and Memory Module Compartment 1–15
Bays, Battery Latch and Vents 1–16
Additional Hardware Components. 1–17
Additional Components 1–18
Optical Discs. 1–18
Labels 1–18

2 Power

Power Sources 2–2
Standby and Hibernation 2–3
Standby 2–3
Hibernation 2–4
Initiating Standby, Hibernation or Shutdown 2–5
Default Power Settings. 2–7
Turning the Notebook On or Off 2–7
Initiating or Resuming from Standby 2–8
Initiating or Restoring from Hibernation 2–9
Emergency Shutdown Procedures 2–10
Power Options 2–10
Using Power Schemes 2–10
Setting a Standby Password 2–11
Setting Other Power Preferences 2–11
Processor Performance Controls (Select Models Only) 2–13
Battery Pack 2–15
Charging a Battery Pack 2–15
Monitoring the Charge in a Battery Pack 2–16
Low-Battery Conditions 2–17
Calibrating a Battery Pack 2–19
Conserving Battery Pack Power 2–22
Replacing a Battery Pack 2–24
Storing a Battery Pack 2–26
Disposing of a Used Battery Pack 2–27

3 Keyboard and TouchPad

TouchPad 3–1
TouchPad Components 3–1
Using the TouchPad 3–3
Setting TouchPad Preferences 3–4

Hotkeys 3–5
Identifying Hotkeys 3–5
Hotkey Quick Reference. 3–6
Hotkey Procedures 3–7
Using Hotkey Commands. 3–7
Keypads 3–14
Using an Embedded Numeric Keypad 3–14
Switching the Functions of Keypad Keys. 3–15
Using an External Numeric Keypad. 3–15

4 Multimedia

Audio Features 4–1
Adjusting the Volume. 4–1
Using the Audio-In (Microphone) Jack 4–2
Using the Audio-Out (Headphone) Jack. 4–2
Connecting the Audio-Out (Headphone) Jack 4–3
Video Features 4–4
Connecting an S-Video Device. 4–4
Displaying a Video Image 4–6
Multimedia Software 4–6
Observing the Copyright Warning 4–7
Installing Software 4–8
Enabling AutoPlay 4–8
Changing DVD Region Settings. 4–9

5 Drives

Drive Care 5–2
Removing the Primary Hard Drive 5–3
Reinstalling the Primary Hard Drive 5–5
Removing an Optical Disc (Without Power) 5–7
Displaying Optical Disc Contents 5–8
Avoiding Standby or Hibernation 5–8

6 PC Cards and ExpressCards

What Is a PC Card? 6–1
Inserting a PC Card 6–2
Removing a PC Card 6–4
What Is an ExpressCard? 6–5
Configuring an ExpressCard 6–6
Inserting an ExpressCard 6–6
Removing an ExpressCard 6–8

7 Digital Memory Cards (Select Models Only)

Using Digital Media 7–1
Inserting Digital Cards 7–2
Removing Digital Cards 7–3
Disabling or Restarting Digital Cards 7–4

8 Memory Modules

What Is a Memory Module? 8–1
Replacing a Memory Module 8–2
Hibernation File 8–6

9 USB Devices

What Is USB? 9–1
Using USB Devices 9–2
Operating System and Software 9–2

10 Modem and Networking

Internal Modem 10–1
Connecting a Modem Cable 10–2
Using a Country-Specific Modem Cable Adapter 10–3
Modem Region Selection 10–4

Preinstalled Communication Software. 10–7
Network Cable 10–7

11 Wireless (Select Models Only)

Wireless Local Area Network (Select Models Only) . 11–3
Setting Up a WLAN in Your Home 11–5
Using a WLAN Connection 11–6
Using Wireless Security Features. 11–7
Installing Wireless Software (Optional) 11–7
Troubleshooting Devices 11–9
Bluetooth (Select Models Only) 11–10
Device Power States. 11–12
Turning On the Devices 11–14
Turning Off and Disabling the Devices 11–15

12 Security

Security Features 12–1
Security Preferences in the Setup Utility 12–2
QuickLock 12–3
Passwords. 12–3
Compaq and Windows Passwords 12–4
Compaq and Windows Password Guidelines. 12–5
Compaq Administrator Password 12–6
Setting Compaq Administrator Passwords 12–7
Entering Compaq Administrator Passwords. 12–8
Power-On Passwords 12–8
Setting Power-On Passwords 12–8
Entering Power-On Passwords 12–9
Device Security 12–10
Antivirus Software 12–11
Critical Security Updates for Windows XP 12–12
Firewall Software. 12–13
Optional Security Cable 12–14

13 Setup Utility

Opening the Setup Utility 13–2
Changing the Language of the Setup Utility 13–2
Navigating and Selecting in the Setup Utility 13–3
Displaying System Information 13–3
Restoring Default Settings in the Setup Utility 13–4
Using Advanced Setup Utility Features. 13–4
Closing the Setup Utility 13–5

14 Software Updates and Recoveries

Software Updates 14–1
Preparing for a Software Update 14–2
Downloading and Installing an Update 14–4
System Restore Points 14–8
Setting a Restore Point 14–8
Restoring to a Restore Point 14–9
Repairing or Reinstalling Applications 14–9
Reinstalling Applications from Your Hard Drive 14–10
Reinstalling Applications from Discs 14–10
Repairing the Operating System 14–11
Reinstalling the Operating System. 14–12
Reinstalling Device Drivers and Other Software. . . . 14–13
Updating Reinstalled Software 14–14
Installing a Retail Version of an Operating System 14–14

15 Notebook Care

Temperature 15–2
Keyboard 15–3
Display 15–4
TouchPad 15–4

16 Travel and Shipping

Preparation for Travel and Shipping 16–1
Tips for Traveling with Your Notebook 16–1

17 Specifications

Operating Environment 17–1
Rated Input Power 17–2
Expansion Port Input/Output Signals (Select Models Only) 17–3

Index

1

Component ID

Top Components

Keys

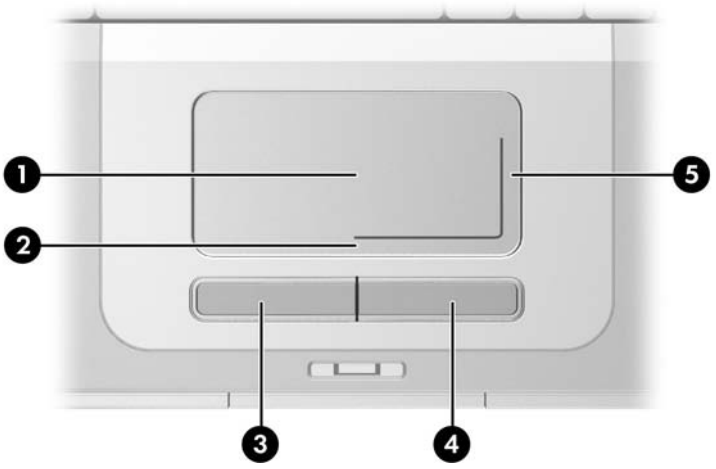
Component	Description
❶ Function keys (12)*	Perform system and application tasks. When combined with **fn,** function keys perform additional tasks as hotkeys.
❷ Windows logo key	Displays the Microsoft® Windows® Start menu.

(Continued)

Component	Description
❸ **fn** key*	Combines with other keys to perform system tasks as hotkeys. For example, pressing **fn+f7** decreases screen brightness.
❹ Embedded numeric keypad keys (15)	Can be used like the keys on an external numeric keypad.
❺ Windows applications key	Displays a shortcut menu for items beneath the pointer.

*For more information about hotkeys, refer to "Hotkeys" in Chapter 3, "Keyboard and TouchPad."

TouchPad



Component		Description
❶	TouchPad*	Moves the pointer.
❷	TouchPad horizontal scroll zone*	Scrolls left or right.
❸	Left TouchPad button*	Functions like the left button on an external mouse.
❹	Right TouchPad button*	Functions like the right button on an external mouse.
❺	TouchPad vertical scroll zone*	Scrolls up or down.

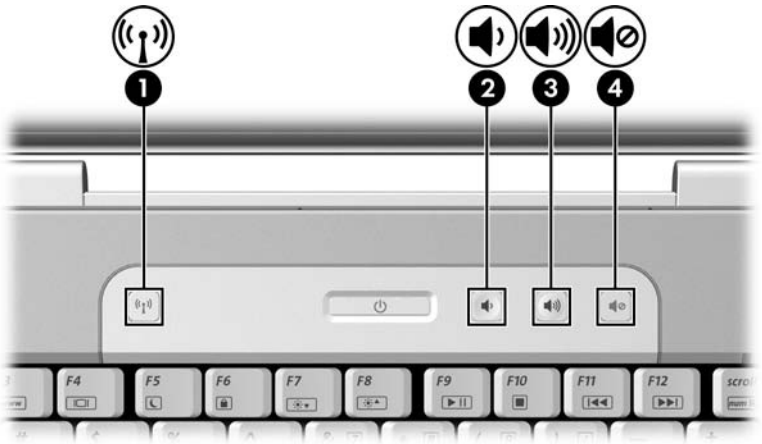
*This table describes default settings. For information about changing the functions of these TouchPad components, refer to "Setting TouchPad Preferences" in Chapter 3, "Keyboard and TouchPad."

Power Controls

Component	Description
❶ Power/standby button*	When the notebook is ■ Off, press to start the notebook. ■ On, briefly press to initiate hibernation. ■ In standby, briefly press to resume from standby. ■ In hibernation, briefly press to restore from hibernation. ✎ If the system has stopped responding and Windows shutdown procedures cannot be used, press and hold for at least 5 seconds to turn off the notebook.
❷ Display switch*	Initiates standby when the notebook is closed.

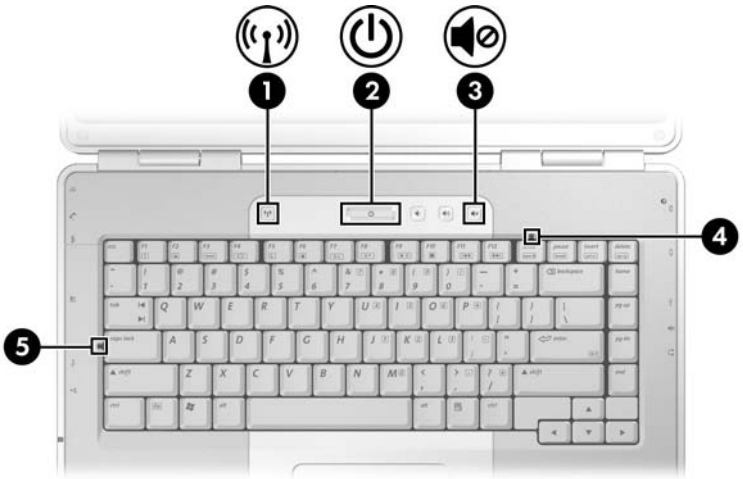
*This table describes default settings. For information about changing the function of the display switch or power/standby button, refer to "Setting Other Power Preferences" in Chapter 2, "Power."

Buttons



Component		Description
❶	Wireless button (select models only)	Turns the wireless functionality on or off, but does not create a wireless connection. ✎ To establish a wireless connection, a wireless network must already be set up. For more information, refer to Chapter 11, "Wireless (Select Models Only)."
❷	Volume down button	Decreases system volume.
❸	Volume up button	Increases system volume.
❹	Volume mute button	Mutes or restores volume.

Lights



Component		Description
❶	Wireless light (select models only)	On: One or more internal wireless devices have been turned on. To establish a wireless connection, a wireless network must already be set up. For more information, refer to Chapter 11, "Wireless (Select Models Only)."
❷	Power/standby light	On: Notebook is turned on. Blinking: Notebook is in standby. Off: Notebook is off or in hibernation.
❸	Mute light	On: Volume is muted.
❹	Num lock light	On: Num lock or the embedded numeric keypad is on.
❺	Caps lock light	On: Caps lock is on.

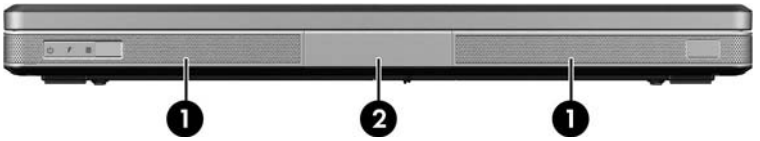
Wireless Antennae (Select Models Only)

Component	Description
Antennae (2)*	Send and receive wireless device signals. ⚠ **Exposure to Radio Frequency Radiation.** The radiated output power of this device is below the FCC radio frequency exposure limits. Nevertheless, the device should be used in such a manner that the potential for human contact during normal operation is minimized. To avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antennae should be not less than 20 cm (8 inches) during normal operation, including when the notebook display is closed. ✎ To establish a wireless connection, a wireless network must already be set up. For more information, refer to Chapter 11, "Wireless (Select Models Only)."

*The antennae are not visible from the outside of the notebook. For optimal transmission, keep the areas immediately around the antennae free from obstructions

Front Components

Speakers and Display Release Button



Component		Description
1	Stereo speakers (2)	Produce stereo sound.
2	Display release button	Opens the notebook.

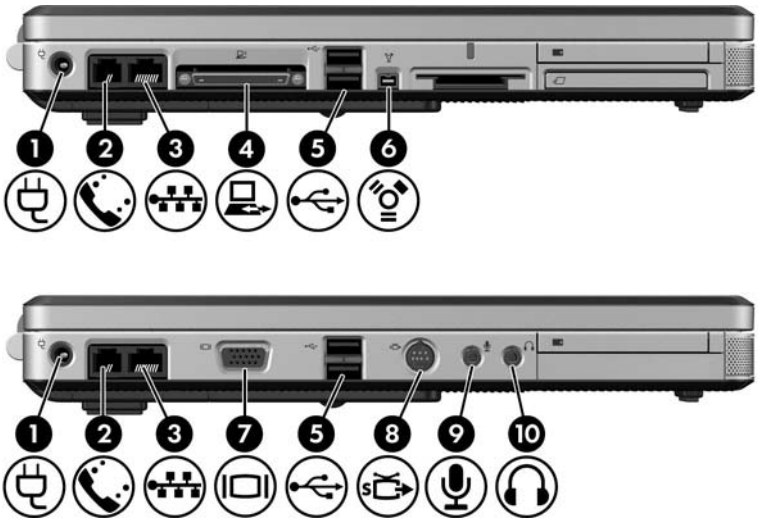
Lights

Component		Description
❶	Power/standby light	On: Notebook is turned on. Blinking: Notebook is in standby. Off: Notebook is off or in hibernation.
❷	Battery light	On: The battery pack is charging. Blinking: The battery pack has reached a low-battery condition. Off: The battery pack is fully charged or not inserted.
❸	IDE (Integrated Drive Electronics) drive light	On or blinking: The internal hard drive or an optical drive is being accessed.

Left-Side Components

Ports and Jacks

Depending on your notebook model, component locations may vary. Refer to the following illustrations.



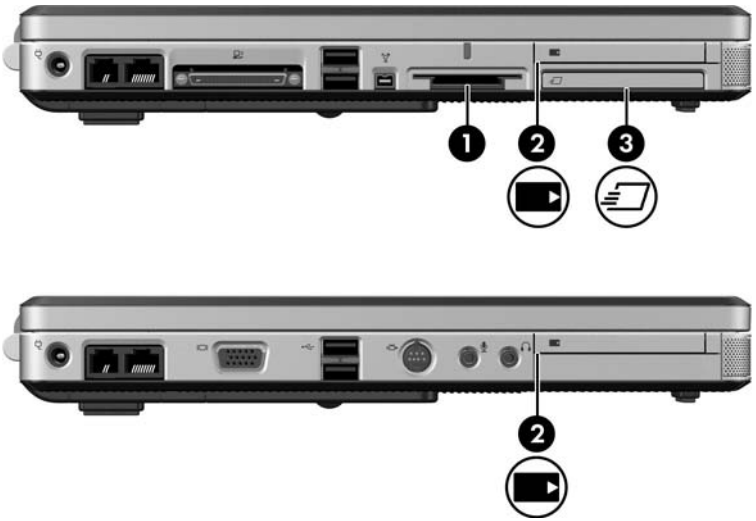
Component		Description
❶	Power connector	Connects the AC adapter cable.
❷	RJ-11 (modem) jack	Connects the modem cable.
❸	RJ-45 (network) jack	Connects a network cable (not included).

(Continued)

Component		Description
❹	Expansion port 2 (select models only)	Connects the notebook to an optional docking device. ✎ The notebook has only one expansion port. The term *expansion port 2* describes the type of expansion port. ✎ For expansion port signal information, refer to "Expansion Port Input/Output Signals (Select Models Only)" in Chapter 17, "Specifications."
❺	USB ports	Connect optional USB devices. ✎ Number of USB ports vary by model.
❻	1394 port (4-pin)	Connects an optional 1394a device such as a scanner, a digital camera, or a digital camcorder.
❼	External monitor port	Connects an optional VGA monitor or projector.
❽	S-Video-out jack	Connects an optional S-Video device, such as a television, VCR, or video capture card.
❾	Audio-in (microphone) jack	Connects an optional stereo microphone.
❿	Audio-out (headphone) jack	Connects an optional headphone or powered stereo speakers. Also connects the audio function of an audio/video device such as a television or VCR.

Media and Memory Card Slots

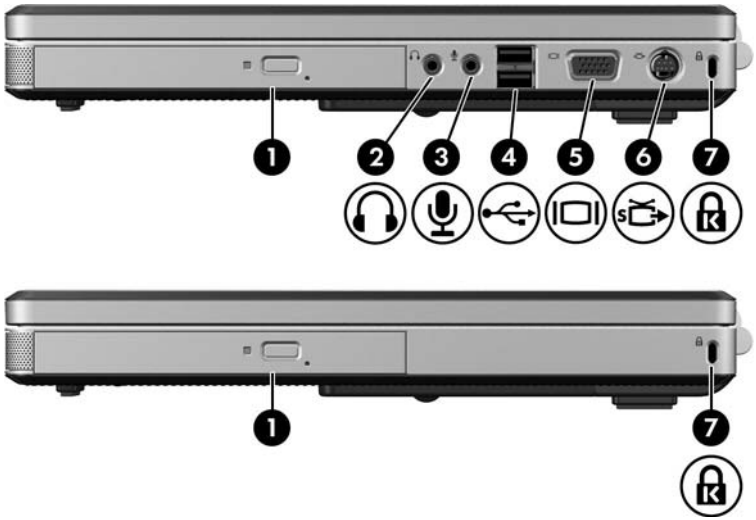
Depending on your notebook model, component locations may vary. Refer to the following illustrations.



Component		Description
❶	Memory Reader (select models only)	Supports the following optional digital cards: SD (Secure Digital) Memory Card, SD I/O Card, Memory Stick, Memory Stick Pro, MultiMediaCard, xD-Picture Card, and SmartMedia.
❷	PC Card slot	In Windows, supports an optional Type I or Type II 32-bit (CardBus) or 16-bit PC Card.
❸	ExpressCard slot (select models only)	Supports an optional ExpressCard.

Right-Side Components

Depending on your notebook model, component locations may vary. Refer to the following illustrations.



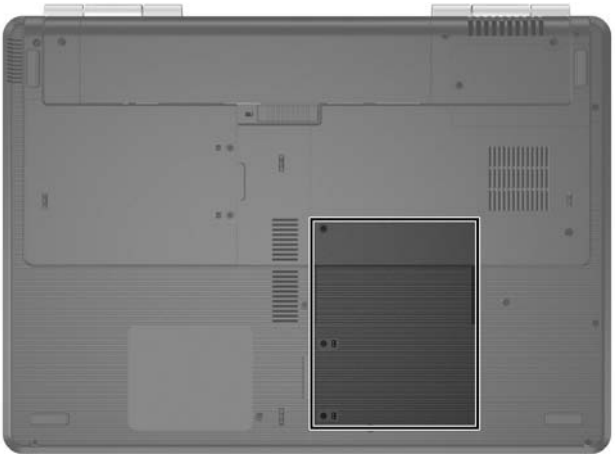
Component		Description
❶	Optical drive	Supports an optical disc, such as a CD or DVD.
❷	Audio-out (headphone) jack	Connects an optional headphone or powered stereo speakers. Also connects the audio function of an audio/video device, such as a television or VCR.
❸	Audio-in (microphone) jack	Connects an optional stereo microphone.
❹	USB ports	Connect optional USB devices. ✎ Number of USB ports vary by model.

(Continued)

Component		Description
❺	Monitor port	Connects an optional VGA monitor or projector.
❻	S-Video-out jack	Connects the video function of an optional S-Video device, such as a television, VCR, or video capture card.
❼	Security cable slot	Attaches an optional security cable to the notebook. ✎ The purpose of security solutions is to act as a deterrent. These solutions do not prevent the product from being mishandled or stolen.

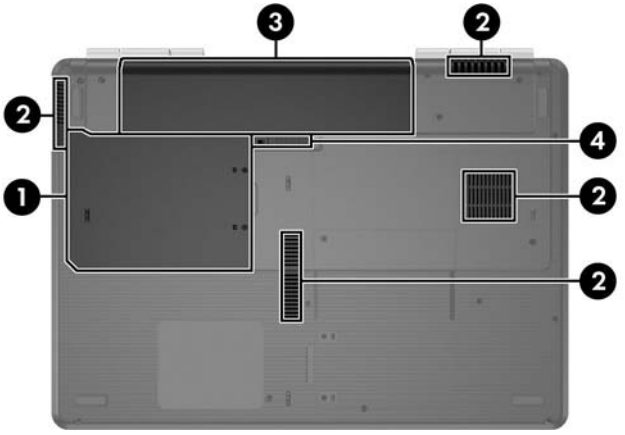
Bottom Components

Mini PCI and Memory Module Compartment



Component	Description
Mini PCI and memory module compartment	■ Holds an optional wireless LAN device (select models only). △ To prevent an unresponsive system and the display of a warning message, install only a Mini PCI device authorized for use in your notebook by the governmental agency that regulates wireless devices in your country. If you install an unauthorized device and then receive a warning message, remove the device to restore notebook functionality. Then contact Customer Care. ■ Contains 2 memory module slots that support replaceable memory modules. The number of preinstalled memory modules varies by notebook model.

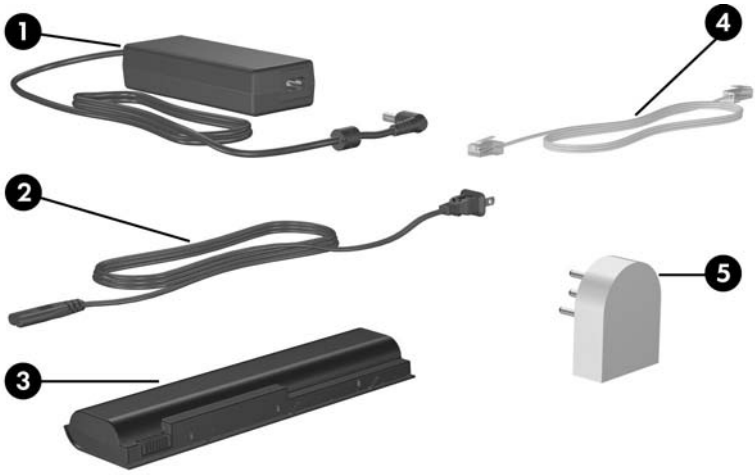
Bays, Battery Latch and Vents



Component		Description
❶	Hard drive bay	Holds the internal hard drive.
❷	Vents (4)	Provide airflow to cool internal components. △ To prevent overheating, do not obstruct vents. Do not allow a hard surface, such as a printer, or a soft surface, such as pillows or thick rugs or clothing, to block airflow.
❸	Battery bay	Holds a battery pack.
❹	Battery pack release latch	Releases a battery pack from the battery bay.

Additional Hardware Components

The following illustration and table identify and describe the additional equipment that is included with the notebook.



Component		Description
❶	AC adapter	Converts AC power to DC power.
❷	Power cord*	Connects an AC adapter to an AC outlet.
❸	Battery pack	Powers the notebook when the notebook is not connected to external power.
❹	Modem cable*	Connects a modem to an RJ-11 telephone jack or to a country-specific modem adapter.
❺	Country-specific modem adapter (included by region as required)*	Adapts the modem cable to a non-RJ-11 telephone jack.

*Power cords, modem cables, and modem adapters vary in appearance by region and country.

Additional Components

Optical Discs

Software on optical discs, such as CDs or DVDs, is included with all notebook models.

- The software packaged in the "Required for Setup" bag is not preinstalled on your notebook. Depending on how you want to use your notebook, you might want to install some or all of these applications.
- The software packaged in the "Save for Later" bag is preinstalled or preloaded on your notebook. The software discs are provided in case you ever need to repair or reinstall this software.

Labels

The labels affixed to the notebook provide information you might need when you troubleshoot system problems or travel internationally with the notebook.

- Service Tag—Provides the product name, product number (P/N), and serial number (S/N) of your notebook. You might need the product number and the serial number when you contact Customer Care. The Service Tag label is affixed to the bottom of the notebook. To display the information on the Service Tag on your screen, select **Start > Help and Support.**
- Microsoft Certificate of Authenticity—Contains the Microsoft Windows Product Key. You might need the Product Key to update or troubleshoot the operating system. This certificate is affixed to the bottom of the notebook.
- Regulatory label—Provides regulatory information about the notebook. The Regulatory label is affixed to the inside of the battery bay.

- Modem Approval label—Provides regulatory information about the modem and lists the agency approval markings required by some of the countries in which the modem has been approved for use. You might need this information when traveling internationally. The Modem Approval label is affixed to the inside of the Mini PCI and memory module compartment cover.
- Wireless certification labels—Some notebook models include an optional WLAN device and/or an optional Bluetooth® device. If your notebook model includes one or more wireless devices, a certificate providing regulatory information about each device and the approval markings of some of the countries in which the device has been approved for use is included with your notebook.You might need this information when traveling internationally. Wireless certification labels are affixed to the inside of the Mini PCI and memory module compartment cover.

2

Power

WARNING: To reduce the risk of electric shock or damage to your equipment:

- Plug the power cord into an AC outlet that is easily accessible at all times.
- Disconnect power from the notebook by unplugging the power cord from the AC outlet (not by unplugging the power cord from the notebook).
- If provided with a 3-pin attachment plug on your power cord, plug the cord into a grounded (earthed) 3-pin outlet. Do not disable the power cord grounding pin; for example, by attaching a 2-pin adapter. The grounding pin is an important safety feature. It is possible to receive an electric shock from a system that is not properly grounded.

For the locations and descriptions of power components mentioned in this chapter, refer to Chapter 1, "Component ID."

Power Sources

The notebook can run on internal or external AC power. The following table indicates the best power sources for common tasks.

Task	Recommended Power Source
Work in most software applications	■ Charged battery pack in the notebook ■ External power supplied through one of the following devices: ❒ AC adapter ❒ Optional AC adapter ❒ Optional docking device ❒ Optional automobile or aircraft adapter
Charge or calibrate a battery pack in the notebook	External power supplied through one of the following devices: ■ AC adapter ■ Optional AC adapter ■ Optional docking device ■ Optional automobile or aircraft adapter
Install or modify system software or write to a disc	External power supplied through ■ AC adapter ■ Optional AC adapter ■ Optional docking device

Standby and Hibernation

Standby and hibernation are energy-saving features that conserve power and reduce startup time. They can be initiated by you or by the system. For details about when to use each setting, refer to "Initiating Standby, Hibernation or Shutdown," later in this chapter.

Standby

CAUTION: To avoid a complete battery discharge, do not leave your notebook in standby for extended periods. Connect the notebook to an external power source.

Standby reduces power to system components that are not in use. When standby is initiated, your work is saved in random access memory (RAM) and the screen is cleared. When you resume from standby, your work returns to the screen where you left off.

- Saving your work before initiating standby is not usually necessary, but is a recommended precaution.
- When the notebook is in standby, the power/standby lights on the power/standby button and on the front of the notebook blink.

Hibernation

CAUTION: If the configuration of the notebook is changed during hibernation, resuming from hibernation may not be possible. When the notebook is in hibernation:

- Do not connect or disconnect the notebook from a docking device.
- Do not add or remove memory modules.
- Do not insert or remove any hard drives.
- Do not connect or disconnect external devices.
- Do not insert or remove a PC Card, ExpressCard, or a digital card, such as a Secure Digital (SD) Card.

Hibernation saves your work to a hibernation file on the hard drive, and then shuts down the notebook. When you restore from hibernation, your work returns to the screen where you left off. If a power-on password has been set, the password must be entered to restore from hibernation.

You can disable hibernation. However, if hibernation is disabled, and the system reaches a low-battery condition, the system will not automatically save your work while power is on or when standby has been initiated.

In the Power Options window, hibernation is not displayed as an option if it has been disabled. You must enable hibernation in order to select it in the Power Options window. To verify that hibernation is enabled:

1. Select **Start > Control Panel > Performance and Maintenance > Power Options > Hibernate** tab.
2. Make sure that the **Enable hibernate support** check box is selected.

Initiating Standby, Hibernation or Shutdown

The following sections explain when to initiate standby or hibernation and when to shut down your notebook.

When You Leave Your Work

- Initiating standby clears the screen and uses less power than leaving the notebook on. Your work returns instantly to the screen when you resume from standby.
- Initiating hibernation clears the screen, saves your work to the hard drive, and uses much less power than standby.
- Shutting down the notebook and removing the battery pack is recommended to extend the life of the battery pack when the notebook will be disconnected from external power for an extended period. For details on battery pack storage, refer to "Storing a Battery Pack," later in this chapter.

When the Power Supply Is Uncertain

Make sure that hibernation remains enabled, especially if you are operating the notebook on battery power and do not have access to an external power supply. If the battery pack fails, hibernation saves your work to a hibernation file and shuts down the notebook.

If you pause your work when the power supply is uncertain, do one of the following:

- Initiate hibernation.
- Shut down the notebook.
- Save your work, and then initiate standby.

When Using Infrared Communication or Drive Media

CAUTION: Do not initiate standby or hibernation while using drive media. Doing so may result in possible video and audio degradation and loss of audio or video playback functionality.

Standby and hibernation interfere with the use of infrared and Bluetooth communication and drive media. Note the following guidelines:

- If the notebook is in standby or hibernation, you cannot initiate an infrared or Bluetooth® transmission.
- If standby or hibernation is accidentally initiated while a drive medium (such as a diskette, CD, or DVD) is in use:
  - Your playback may be interrupted.
  - You may see a warning message: "Putting the computer into hibernation or standby may stop the playback. Do you want to continue?" Select **No.**
  - You may need to restart the playback to resume audio and video.

Default Power Settings

The following tables describe the factory power settings on the notebook. You can change many of these settings according to your preference. For more information on changing power settings, refer to "Power Options," later in this chapter.

Turning the Notebook On or Off

Task	Procedure	Results
Turn on the notebook.	Press the power/standby button.	■ The power/standby light is turned on. ■ The Windows operating system loads.
Shut down the notebook.*	1. Save your work and close all open applications. 2. Select **Start > Turn Off Computer > Turn Off.***	■ The power/standby light is turned off. ■ The Windows operating system shuts down. ■ The notebook is turned off.

*If the system is unresponsive and you are unable to shut down the notebook with this procedure, refer to "Emergency Shutdown Procedures," later in this chapter.

Initiating or Resuming from Standby

Task	Procedure	Result
Initiate standby	With the notebook on, use one of the following procedures: ■ Press the **fn+f5** hotkey. ■ Close the notebook display. ■ Select **Start > Turn Off Computer > Stand By.**	■ The power/standby light blinks. ■ The screen is cleared.
Allow the system to initiate standby.	No action is required. The system initiates standby ■ After 10 minutes of inactivity while running on battery power. ■ After 25 minutes of inactivity while running on external power.	■ The power/standby light blinks. ■ The screen is cleared.
Resume from standby.	Use one of the following procedures: ■ Briefly press the power/standby button. ■ Use the TouchPad or press a TouchPad button. ■ Press any key on the keyboard. ■ Open the display if standby was initiated by closing the notebook.	■ The power/standby light is turned on. ■ Your work returns to the screen.

Initiating or Restoring from Hibernation

Task	Procedure	Result
Initiate hibernation.	With the notebook on, use one of the following procedures: ■ Briefly press the power/standby button. ■ Select **Start > Shut Down > Hibernate.** (If the Hibernate option is not displayed, press and hold **shift.**)	■ The power/standby light is turned off. ■ The screen is cleared.
Allow the system to initiate hibernation	No action is required. If the notebook is running on battery power and hibernation is enabled, the system initiates hibernation after 30 minutes of notebook inactivity or when the battery pack reaches a critical low-battery condition. ✎ If the notebook is connected to external power, the system does not initiate hibernation.	■ The power/standby light is turned off. ■ The screen is cleared.
Restore from hibernation.	Use one of the following procedures: ■ Briefly press the power/standby button. ■ If the system initiated hibernation because of a critical low-battery condition, connect external power or insert a charged battery pack before you press the power/standby button.	■ The power/standby light is turned on. ■ Your work is returned to the screen.

Emergency Shutdown Procedures

CAUTION: Emergency shutdown procedures result in the loss of unsaved data.

If the notebook is unresponsive and you are unable to use normal shutdown procedures, try the following emergency procedures in the sequence provided:

- Press **ctrl+alt+delete.** Select **Shut Down > Turn Off.**
- Press and hold the power/standby button for at least 5 seconds.
- Disconnect the notebook from external power and remove the battery pack. For more information about removing and storing the battery pack, refer to the "Storing a Battery Pack" section in this chapter.

Power Options

Using Power Schemes

A power scheme controls the amount of power the notebook uses while running on external power or on a battery pack, and also sets the notebook to initiate standby or hibernation after a period of inactivity you specify.

To select a preset power scheme or create a custom power scheme:

1. Select **Start > Control Panel > Performance and Maintenance > Power Options > Power Schemes** tab.
2. Follow the instructions on the screen.

Setting a Standby Password

You can add a security feature that prompts you for your Microsoft® Windows® user password when the notebook resumes from standby.

To set a password prompt:

1. Select **Start > Control Panel > Performance and Maintenance > Power Options > Advanced** tab.
2. Select the check box **Prompt for password when the computer resumes from standby.**
3. Select **OK.**

For information about other passwords and security features, refer to Chapter 12, "Security."

Setting Other Power Preferences

You can change the function of the power/standby button, the **fn+f5** hotkey, and the display switch.

At the default settings for the **fn+f5** hotkey, power/standby button, and display switch, when the notebook is on:

- Briefly pressing the power/standby button initiates hibernation.
- Pressing the **fn+f5** hotkey, called the *sleep button* in a Windows operating system, initiates standby.
- Closing the notebook presses the display switch, which turns off the display.

To change the function of the power/standby button, the **fn+f5** hotkey, or the display switch:

1. Select **Start > Control Panel > Performance and Maintenance > Power Options > Advanced** tab.
   - ❏ To change the function of the display switch when you close the display, select a function from the drop-down list for **When I close the lid of my portable computer.** (The function of the display switch when you *open* the display is unaffected by these settings. When you open the display while the notebook is in standby, the display switch turns on the notebook.)
   - ❏ To change the function of the power/standby button, select a function from the drop-down list for **When I press the power button on my computer.**
   - ❏ To change the function of the **fn+f5** hotkey, select a function from the drop-down list for **When I press the sleep button on my computer.**
2. Select **OK.**

The hibernate function is available in the power button, sleep button, and display switch drop-down lists only if hibernation is enabled. If the Hibernate function is not available on these lists:

1. Select **Start > Control Panel > Performance and Maintenance > Power Options > Hibernate** tab.
2. Select the **Enable hibernation** check box.
3. Select **OK.**

Processor Performance Controls (Select Models Only)

On select notebook models, Windows XP supports software that enables you to control processor performance. The central processing unit (CPU) speed can be set for optimal performance or for optimal power conservation.

For example, the software can be set to trigger an automatic change in processor speed when the power source changes from external power to battery pack power, or when the notebook use changes between active and idle.

Processor performance controls are managed in the Power Options window.

To access Windows XP processor performance controls:

» Select **Start > Control Panel > Performance and Maintenance > Power Options > Power Schemes** tab.

The power scheme you select determines how the processor performs when the notebook is connected to external power or running on battery power. Each power scheme for external power or battery power sets a specific processor state.

Different states may be used, depending on whether the notebook is running on external or battery power. After a power scheme has been set, no other intervention is required to control the performance of your notebook processor. The following table describes the processor performance on external and battery power for the available power schemes.

Power Scheme	Processor Performance While on External Power	Processor Performance While on Battery Power
Home/Office Desk	Always runs at the highest performance state.	Performance state is determined based on CPU demand.
Portable/Laptop	Performance state is determined based on CPU demand.	Performance state is determined based on CPU demand.
Presentation	Performance state is determined based on CPU demand.	Runs at the lowest possible performance state.
Always On	Always runs at the highest performance state.	Always runs at the highest performance state.
Minimal Power Management	Performance state is determined based on CPU demand.	Performance state is determined based on CPU demand.
Max Battery	Performance state is determined based on CPU demand.	Runs at the lowest possible performance state.

Battery Pack

Charging a Battery Pack

To prolong battery life and optimize the accuracy of battery charge displays:

- If you are charging a *new* battery pack:
  - ❏ Charge the battery pack while the notebook is connected to external power through the AC adapter.
  - ❏ When you charge the battery pack, charge it fully.
- If you are charging an *in-use* battery pack:
  - ❏ Allow the battery pack to discharge to about 10 percent of a full charge through normal use before charging it.
  - ❏ When you charge the battery pack, charge it fully.

A battery pack inserted in the notebook charges whenever the notebook is connected to external power through an AC adapter or through an optional docking device or an optional automobile or aircraft adapter.

A battery pack inserted in the notebook charges whether the notebook is off or in use, but the battery pack charges faster while the notebook is off. Charging may take longer if a battery pack is new, has been unused for 2 weeks or more, or is much warmer or cooler than room temperature.

The battery light displays charge status as follows:

- On: The battery pack is charging.
- Blinking: The battery pack has reached a low-battery condition and is not charging.
- Off: The battery pack is fully charged or not installed.

For information about determining the amount of charge in a battery pack, refer to "Monitoring the Charge in a Battery Pack" in this chapter.

Monitoring the Charge in a Battery Pack

Obtaining Accurate Charge Reports

To increase the accuracy of battery charge reports:

- Allow a battery pack to discharge to about 10 percent of a full charge through normal use before charging it.
- When you charge a battery pack, charge it fully. The charge in even a new battery pack may be reported inaccurately until the battery pack has been fully charged at least once.
- If a battery pack has been unused for one month or more, calibrate the battery pack instead of simply charging it.

For information about battery calibration, refer to "Calibrating a Battery Pack," later in this chapter.

Displaying Charge Reports

To display battery charge information on the screen in Windows, use the Windows Power Meter feature.

To access the Windows Power Meter display:

- Select **Start > Control Panel > Performance and Maintenance > Power Options > Power Meter** tab.

– or –

- Double-click the **Power Meter** icon, which is displayed by default in the taskbar. To display the Power Meter icon if the default setting has been changed:

  a. Select **Start > Control Panel > Performance and Maintenance > Power Options > Advanced** tab.

  b. Select the **Always show** icon on the taskbar check box.

  c. Select **OK.**

Power Meter displays battery status in both percentage and time:

- The percentage indicates the amount of charge remaining in the battery pack.
- The time indicates the approximate running time remaining on the battery pack *if the battery pack continues to provide power at the current level.* For example, the time remaining will decrease if you start playing a DVD and will increase if you stop playing a DVD.

Low-Battery Conditions

Identifying Low-Battery Conditions

When a battery pack that is the only power source for the notebook reaches a *low-battery condition,* a text warning message is displayed, and the battery light blinks.

If a low-battery condition is not resolved and the amount of charge remaining in the battery pack continues to drop, the notebook eventually enters a *critical low-battery condition.*

When the notebook enters a critical low-battery condition:

- If hibernation is enabled, the system initiates hibernation. Unsaved work may be lost.
- If hibernation is disabled, the notebook remains briefly in standby, and then shuts down. All unsaved work is lost.

Hibernation is enabled by default. To verify that hibernation is enabled:

1. Select **Start > Control Panel > Performance and Maintenance > Power Options > Hibernate** tab.
2. Be sure the **Enable hibernation** check box is selected.

Resolving Low-Battery Conditions

CAUTION: If the notebook has reached a critical low-battery condition and has begun to initiate hibernation, do not restore power until the power/standby light turns off.

To resolve a low-battery condition:

- If external power is available, connect the notebook to the external power source.
- If a charged battery pack is available, turn off the notebook or initiate hibernation, insert the charged battery pack, and then turn on the notebook.
- If no power source is available, save your work. Then initiate hibernation or shut down the notebook.

Calibrating a Battery Pack

When to Calibrate

Even if a battery pack is heavily used, calibration should be necessary only once a month. You do not have to calibrate a new battery pack before first use.

Calibration does not usually increase battery run time, but it can increase the accuracy of battery charge displays, especially under the following conditions:

- When the battery pack has been unused for one month or more.
- When the notebook has been running primarily on external power (and rarely on battery power) for more than one month.
- When battery charge displays report large changes in the percentage of power remaining within 2 minutes. For example, if the Power Meter displays 20 percent of a full charge remaining and then less than 2 minutes later displays only 5 percent of a full charge remaining, the rapid drop in charge remaining indicates that the battery pack needs calibration.

  For more information about battery charge displays, refer to "Monitoring the Charge in a Battery Pack," earlier in this chapter.

How to Calibrate

To calibrate a battery pack, you must fully charge, fully discharge, and then fully recharge the battery pack.

Charging the Battery Pack

Charge the battery pack while the notebook is on. To charge the battery pack:

1. Insert the battery pack into the notebook.
2. Connect the notebook to external power through the AC adapter or an optional automobile or aircraft adapter. (The notebook battery light is on as the battery pack charges.)
3. Leave the notebook connected to external power until the battery pack is fully charged. (The notebook battery light is turned off.)

Discharging the Battery Pack

CAUTION: To prevent loss of work, save your work before beginning an unattended discharge procedure.

The notebook must remain on throughout the discharge process. The battery pack can discharge whether or not you are using the notebook, but the battery pack will discharge faster if the notebook is in use.

If you use the notebook occasionally during the discharge process described below and have set energy-saving timeouts, expect the following performance from your system during the discharge:

- Any unsaved work from your current session will be lost when the battery pack is fully discharged and the notebook is shut down.
- The system will not turn off a connected optional monitor.

- The system will not decrease hard drive speed while the notebook is idle.
- System-initiated standby will not occur.

To fully discharge the battery pack:

1. Disable hibernation. To disable hibernation:
   a. Select **Start > Control Panel > Performance and Maintenance > Power Options > Hibernate** tab.
   b. Clear the **Enable hibernation** check box.
2. Select **Start > Control Panel > Performance and Maintenance > Power Options > Power Schemes** tab.
3. Record all settings in the **Plugged in** column and all settings in the **Running on batteries** column, so you can reset them after calibration.
4. Use the drop-down lists to set each item in both columns to **Never.**
5. Select **OK.**
6. Disconnect the notebook from the external power source, but do *not* turn off the notebook.
7. Run the notebook on battery power until the battery pack is fully discharged. When the battery pack is fully discharged, the notebook is shut down.

Recharging the Battery Pack

CAUTION: After calibrating the battery pack, reenable hibernation. Failure to reenable hibernation may result in a complete battery drain and potential data loss. To reenable hibernation:

1. Select **Start > Settings > Control Panel > Performance and Maintenance > Power Options > Hibernate** tab.
2. Select the **Enable hibernation** check box.
3. Select **Apply.**

To recharge the battery pack:

1. Connect the notebook to external power and maintain the connection until the battery pack is fully recharged and the battery light is turned off.

   You can use the notebook while the battery pack is recharging, but the battery pack will charge faster if the notebook is turned off.

2. If the notebook is turned off, turn on the notebook after the battery pack is fully charged and the battery light is off.
3. Select **Start > Control Panel > Performance and Maintenance > Power Options > Power Schemes** tab.
4. Reenter the settings you recorded earlier for the items in the **Plugged in** column and the **Running on batteries** column.
5. Select **OK.**

Conserving Battery Pack Power

Using the following battery conservation settings and procedures extends the time that a battery pack can run the notebook from a single charge.

Conserving Power as You Work

To conserve power as you work:

- Prevent devices you are not using from drawing power from the notebook. For example:
  - ❏ Turn off wireless connections and exit modem applications when you are not using them.
  - ❏ Disconnect any external devices from the notebook that are not plugged into an external power source.
  - ❏ Stop or remove an inserted PC Card or ExpressCard.
  - ❏ Disable or remove an inserted digital card.
  - ❏ Turn off a device connected to the S-Video-out jack.
- Use optional, externally powered speakers instead of the internal speakers whenever possible. When you must use the internal speakers, minimize system volume. Volume can be adjusted with the volume buttons.
- Minimize screen brightness. To decrease screen brightness, press the **fn+f7** hotkey. To increase screen brightness, press the **fn+f8** hotkey.
- If you leave your work, initiate standby or hibernation, or shut down the notebook.

Selecting Power Conservation Settings

To set the notebook to use less power in Windows:

- Select a short wait for the screen saver and select a screen saver with minimal graphics and motion.

  To access screen saver settings:

  » Select **Start > Control Panel > Appearance and Themes > Choose a Screensaver**.
- Through the operating system, select a power scheme with low-power-use settings. Refer to "Using Power Schemes," earlier in this chapter.

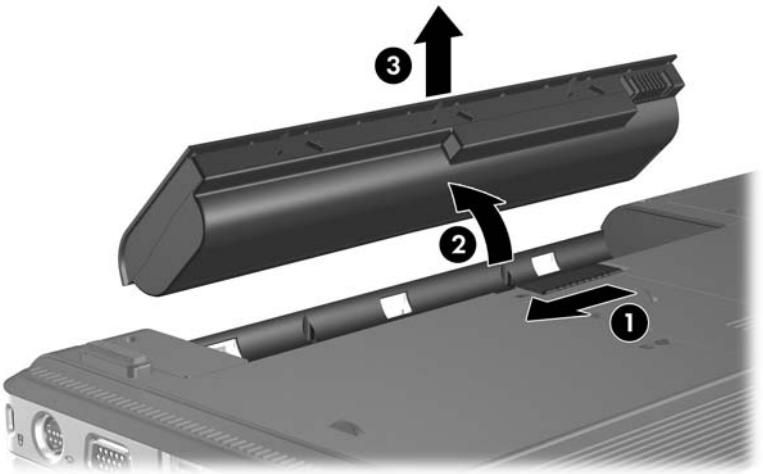
Replacing a Battery Pack

CAUTION: To prevent loss of work when removing a battery pack that is the only power source, turn off the notebook or initiate hibernation. (If you initiate hibernation, do not begin the following procedure until the power/standby lights are turned off, indicating that hibernation is complete.)

Removing a Battery Pack

To remove a battery pack:

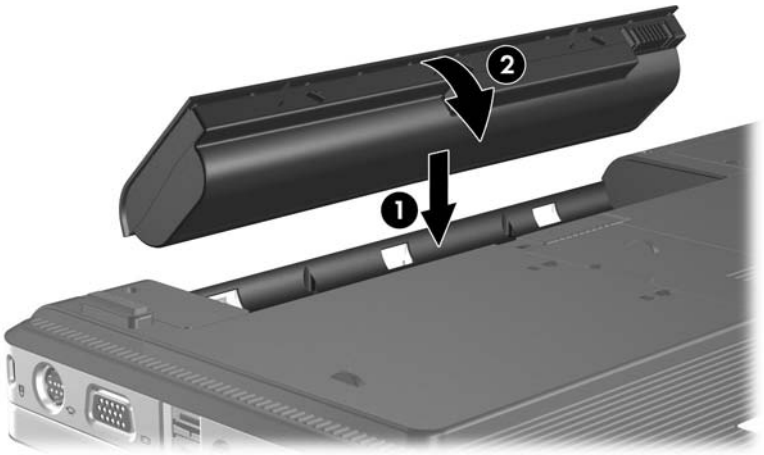
1. Turn the notebook upside down.
2. Slide the battery release latch ❶ to release the battery pack.
3. Pivot the battery pack away from the notebook ❷ and remove it from the battery bay ❸.



Inserting a Battery Pack

To insert a battery pack:

1. Turn the notebook upside down.
2. Insert the battery pack ❶ into the battery bay and rotate it ❷ until it is seated.



Storing a Battery Pack

CAUTION: To prevent damage to a battery pack, do not expose it to high temperatures for extended periods of time.

If a notebook will be unused and unplugged for more than 2 weeks, remove any battery packs and store them separately.

High temperatures accelerate the self-discharge rate of a stored battery pack. To prolong the charge of a stored battery pack, store it in a cool, dry place.

Use the following table to estimate how long you can safely store a battery pack. The storage times provided are based on a battery pack that contains 50 percent of a full charge. A fully charged battery pack can be safely stored for longer periods; a battery pack containing a lower charge can be safely stored for less time.

Calibrate a battery pack that has been stored for one month or more before using it.

Temperature Range °F	Temperature Range °C	Safe Storage Time
115° to 140°	46° to 60°	Less than 1 month
79° to 113°	26° to 45°	No more than 3 months
32° to 77°	0° to 25°	1 year

Disposing of a Used Battery Pack

WARNING: To reduce the risk of fire or burns, do not disassemble, crush, or puncture a battery pack; short the external contacts on a battery pack; or dispose of a battery pack in fire or water. Do not expose a battery pack to high temperatures above 60°C (140°F). Replace only with the battery pack approved for this notebook.

When a battery pack has reached the end of its useful life, do not dispose of the battery pack in general household waste. Follow the local laws and regulations in your area for computer battery pack disposal.

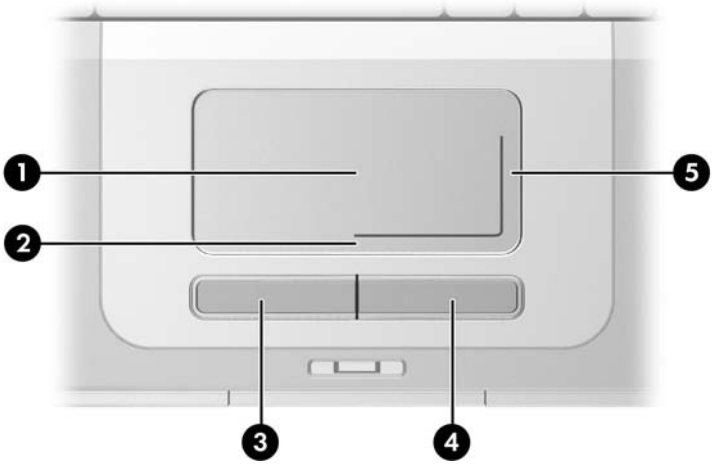
In Europe, dispose of or recycle battery packs by using the public collection system or by returning them to HP, your service partner, or their agents.

3

Keyboard and TouchPad

TouchPad

TouchPad Components



Component		Description
❶	TouchPad*	Moves the pointer.
❷	TouchPad horizontal scroll zone	Scrolls left or right.

(Continued)

Component		Description
❸	Left TouchPad button*	Functions like the left button on an external mouse.
❹	Right TouchPad button	Functions like the right button on an external mouse.
❺	TouchPad vertical scroll zone*	Scrolls up or down.

*This table describes default settings. For information about changing the functions of these TouchPad components, refer to "Setting TouchPad Preferences," later in this chapter.

Using the TouchPad

In Windows the TouchPad provides the navigation, selection, and scroll functions of an optional external mouse.

- To move the pointer, slide your finger across the TouchPad surface in the direction you want to move the pointer.
- To execute the click functions of the left or right button on an external mouse, press the left or right TouchPad button.
- To scroll, slide your finger along a scroll zone in the direction you want to scroll. Sliding your finger from the TouchPad region to a scroll zone without first lifting your finger from the TouchPad region will not activate the scrolling region.

The TouchPad is enabled when the notebook is turned on. If you work with keystrokes rather than mouse actions, you may prefer to disable the TouchPad to prevent accidental TouchPad activity.

Setting TouchPad Preferences

Mouse Properties in Windows enables you to customize settings for pointing devices, including:

- Enabling or disabling a pointing device (enabled by default).
- TouchPad tapping, which enables you to tap the TouchPad once to select an object or twice to double-click an object (enabled by default).
- Edge motion, which enables you to continue to scroll even though your finger has reached the edge of the TouchPad (disabled by default).
- Palm Check, which helps prevent moving the pointer unintentionally if your palms contact the TouchPad as you type (disabled by default).

Other features, such as mouse speed preferences and mouse trails, are also found in the Mouse Properties window.

To access Mouse Properties:

» Select **Start > Control Panel > Printers and Other Hardware > Mouse**.

In the TouchPad Properties window you can access additional TouchPad preferences.

Hotkeys

Identifying Hotkeys

Hotkeys are preset combinations of the **fn** key ❷ with one of the following keys: **esc** key ❶, function keys ❸, **backspace** key ❹, **enter** key ❺, and **end** key ❻.

The icons on the **f1** through **f12** function keys represent their hotkey functions.

The functions of all hotkeys are described in the following sections.

Hotkey Quick Reference

The following table identifies the default hotkey functions.

The function of the **fn+f5** hotkey can be changed. For instructions, refer to "Setting Other Power Preferences" in Chapter 2, "Power."

Default Function	Hotkey
Opens Help and Support Center.	**fn+f1**
Opens print options window.	**fn+f2**
Opens default Internet browser.	**fn+f3**
Switches the image among displays.	**fn+f4**
Initiates standby.	**fn+f5**
Initiates QuickLock.	**fn+f6**
Decreases screen brightness.	**fn+f7**
Increases screen brightness.	**fn+f8**
Plays, pauses, or resumes an audio CD or DVD.	**fn+f9**
Stops an audio CD or DVD.	**fn+f10**
Plays the previous track or chapter on an audio CD or DVD.	**fn+f11**
Plays the next track or chapter on an audio CD or DVD.	**fn+f12**
Navigates back in an application	**fn+backspace**
Selects an option on the screen.	**fn+enter**
Displays system information.*	**fn+esc**
*To clear the information display, press **esc**.	

Hotkey Procedures

Using Hotkeys on the Internal Keyboard

To use a hotkey command on the notebook keyboard, use either of the following procedures:

- Briefly press **fn,** and then briefly press the second key of the hotkey command.
- Press and hold down **fn,** briefly press the second key of the hotkey command, and then release both keys at the same time.

Using Hotkeys on an External Keyboard

To use a hotkey command on an external keyboard, press the **scroll lock** key twice, then the second key only of the hotkey combination. For example, to use the **fn+f7** command on an external keyboard, press **scroll lock+scroll lock+f7.**

Using Hotkey Commands

Open Help and Support Center (fn+f1)

The **fn+f1** hotkey opens the Help and Support Center.

In addition to providing information about your Windows operating system, the Help and Support Center provides

- Information about your notebook, such as model and serial number, installed software, hardware components, and specifications.
- Answers to questions about using your notebook.
- Tutorials to help you learn to use notebook and Windows features.
- Updates for your Windows operating system, drivers, and the software provided on your notebook.

- Checkups for notebook functionality.
- Automated and interactive troubleshooting, repair solutions, and system recovery procedures.
- Links to Compaq support specialists.

In Windows, you can also access the Help and Support Center by selecting **Start > Help and Support.**

Open Print Window (fn+f2)

The **fn+f2** hotkey opens the print options window of the active Windows application.

Open Web Browser (fn+f3)

The **fn+f3** hotkey opens your Web browser.

- Until you have set up your Internet or network services, the **fn+f3** hotkey opens the Windows Internet Connection wizard. For information about using the wizard and other Internet connection methods, refer to the printed *Getting Started* guide included with your notebook.
- After you have set up your Internet or network services and your Web browser home page, you can use the **fn+f3** hotkey to quickly access your home page and the Internet.

Switch Image (fn+f4)

The **fn+f4** hotkey switches the image among display devices connected to the system. For example, if a monitor is connected to the notebook through the monitor port, each time you press the **fn+f4** hotkey the image switches among the notebook display, the monitor display, and a simultaneous display on both the notebook and the monitor.

Most external monitors receive video information from the notebook using the external VGA video standard. The **fn+f4** hotkey can also toggle images among other devices receiving video information from the notebook.

The following video transmission types, with examples of devices that use them, are supported by the **fn+f4** hotkey:

- LCD (notebook display)
- External VGA (most external monitors)
- S-Video (televisions, camcorders, VCRs, and video capture boards with S-Video-in jacks)
- Composite video (televisions, camcorders, VCRs, and video capture boards with composite video-in jacks)

Composite video can be connected to the notebook only when it is connected to an optional docking device.

Initiate Standby (fn+f5)

The **fn+f5** hotkey is set by default to initiate standby.

When standby is initiated, your work is saved in random access memory (RAM), the screen is cleared, and power is conserved. When the notebook is in standby, the power/standby lights blink.

- To initiate standby, the notebook must be on. If the notebook is in hibernation, you must restore from hibernation before you can initiate standby.
- To resume from standby, briefly press the power/standby button, use the TouchPad, press any key on the keyboard, or press the music button, DVD button, or a TouchPad button. To restore from hibernation, briefly press the power/standby button.

The function of the **fn+f5** hotkey can be changed. For example, you can set the **fn+f5** hotkey to initiate hibernation instead of standby. In all Windows operating system windows, references to the *sleep button* apply to the **fn+f5** hotkey.

For information about changing the function of the **fn+f5** hotkey, refer to "Setting Other Power Preferences" in Chapter 2, "Power."

For more information about using standby and hibernation, refer to Chapter 2, "Power."

Initiate QuickLock (fn+f6)

In Windows the **fn+f6** hotkey initiates the QuickLock security feature.

QuickLock protects your work by displaying the operating system Log On window. While the Log On window is displayed, the notebook cannot be accessed until a Windows user password or a Windows administrator password is entered.

Before you can use QuickLock, you must set a Windows user password or a Windows administrator password. For instructions, refer to the Help and Support Center. To access the Help and Support Center, press the **fn+f1** hotkey or select **Start > Help and Support.**

To use QuickLock, press **fn+f6** to display the Log On window and lock the notebook. Then follow the instructions on the screen to enter your Windows user password or your Windows administrator password and access the notebook.

For information about combining Windows passwords with Compaq passwords, refer to "Passwords" in Chapter 12, "Security."

Decrease Brightness (fn+f7)

The **fn+f7** hotkey decreases the brightness of the notebook screen. The longer you hold down the **fn+f7** hotkey, the more the screen dims. Decreasing screen brightness conserves power.

To increase screen brightness, press the **fn+f8** hotkey.

Increase Brightness (fn+f8)

The **fn+f8** hotkey increases the brightness of the notebook screen. The longer you hold down the **fn+f8** hotkey, the more the screen brightens.

To decrease screen brightness, press the **fn+f7** hotkey.

Media Activity Hotkeys (fn+f9 through fn+f12)

The 4 left-hand buttons control media activity. The 3 right-hand buttons control volume.

The following 4 media activity hotkeys can be used to control the play of an audio CD or a DVD.

To control the play of a video CD in Windows, use the media activity controls in your Windows video CD player application.

In Windows, you can also control the play of an audio CD, a DVD, a video CD, or an MP3 file by using the media activity buttons on your notebook.

Play, Pause or Resume an Audio CD or a DVD (fn+f9)

- If the audio CD or the DVD is not playing, press the **fn+f9** hotkey to begin or resume the play.
- If the audio CD or the DVD is playing, press the **fn+f9** hotkey to pause the play.

Stop an Audio CD or a DVD (fn+f10)

The **fn+f10** hotkey stops the play of an audio CD or a DVD.

You must stop a CD or DVD that is playing before you can remove it from the optical drive.

Play Previous Track or Chapter of an Audio CD or a DVD (fn+f11)

The **fn+f11** hotkey plays the previous track of an audio CD or the previous chapter of a DVD that is playing.

Play Next Track or Chapter of an Audio CD or a DVD (fn+f12)

The **fn+f12** hotkey plays the next track of an audio CD or the next chapter of a DVD that is playing.

Navigate Back (fn+backspace)

In Windows, the **fn+backspace** hotkey navigates backward in the current application. It has the same function as the **alt**+left arrow Windows hotkey.

Select an Item on the Screen (fn+enter)

The **fn+enter** hotkey selects items on the screen. Press the **fn+enter** hotkey once to make a selection.

Display System Information (fn+esc)

The **fn+esc** hotkey displays information about system hardware components and software version numbers.

In the **fn+esc** display, the version of the system BIOS (basic input-output system) is displayed as the BIOS date. On some notebook models, the BIOS date is displayed in decimal format. The BIOS date is sometimes called the *system ROM version number*.

For information about updating the system ROM, refer to Chapter 8, "Memory Modules."

Keypads

Using an Embedded Numeric Keypad

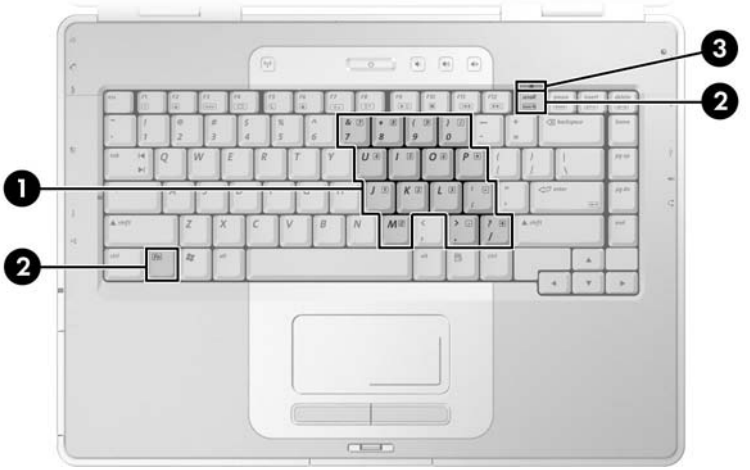
The 15 keys of the embedded numeric keypad ❶ can be used like the keys on an external numeric keypad. When the embedded numeric keypad is turned on, each key on the keypad performs the function indicated by the icon in the upper-right corner of the key.

The embedded numeric keypad cannot be used while an external numeric keypad is connected to the notebook.

To turn the keypad on:

» Press **fn+num lk** ❷. The num lock light ❸ is turned on.

To turn the embedded numeric keypad off, press **fn+num lk** again.



Switching the Functions of Keypad Keys

You can temporarily switch the functions of an embedded numeric keypad key between its standard function and its keypad function.

- To use a key on the keypad as a keypad key while the keypad is turned off, press and hold **fn** while pressing the key.
- To use a key on the keypad as a standard key while the keypad is turned on:
  - ❏ Press and hold **fn** to type with the key in lowercase.
  - ❏ Press and hold **fn+shift** to type with the key in uppercase.

Releasing **fn** returns a keypad key to its set function. For example, a keypad key returns to its keypad function if the keypad is turned on or to its standard function if the keypad is turned off.

Using an External Numeric Keypad

The embedded numeric keypad cannot be turned on while an optional external numeric keypad is connected to the notebook.

Most keys on most external numeric keypads function differently when num lock mode is on than when num lock mode is off. For example:

- When num lock mode is on, most keypad keys type numbers.
- When num lock mode is off, most keypad keys function like the arrow, page up, or page down keys.

Turning Num Lock Mode On and Off As You Work

To turn num lock mode on or off on an external numeric keypad as you work, press the **num lk** key on the external numeric keypad, not on the notebook.

- When an external numeric keypad is turned on and is in num lock mode, the num lock light on the notebook is on.
- When an external numeric keypad is turned off or is turned on with num lock mode turned off, the num lock light on the notebook is off.

4

Multimedia

Audio Features

Adjusting the Volume

To adjust volume, use the volume buttons on the notebook.

Component		Description
	Volume down button	Press to decrease volume.
	Volume up button	Press to increase volume.
	Volume mute button	Press to mute volume. The mute light is turned on. ✎ To restore volume, press the volume down, volume up, or volume mute button.

You can also adjust volume by using the volume control software available in the Windows operating system and in some Windows multimedia applications.

The volume mute button on the notebook overrides all software volume settings.

To access the Windows volume controls:

» Select **Start > Control Panel > Sounds, Speech, and Audio Devices > Sounds and Audio Devices > Volume** tab.

Using the Audio-In (Microphone) Jack

The audio-in (microphone) jack connects an optional stereo microphone.

It is recommended that you use an electret condenser microphone with a 3.5-mm plug. If you connect a dynamic microphone, the recommended sensitivity may not be achieved.

Depending on your notebook model, the location of the audio-in (microphone) jack varies.

Using the Audio-Out (Headphone) Jack

WARNING: To reduce the risk of personal injury, adjust the volume before putting on headphones.

CAUTION: To prevent possible damage to an external device, do not plug a monaural (single sound channel) plug into an audio-out jack.

Connecting the Audio-Out (Headphone) Jack

An audio-out jack, sometimes called a *headphone* jack, connects optional headphones or externally powered stereo speakers. An audio-out jack is also used to connect the audio functions of an audio/video device such as a television or VCR. The notebook is set by default to transmit *analog* audio signals through the audio-out (headphone) jack.

The notebook can also transmit *S/PDIF* digital audio signals through the audio-out jacks. To transmit S/PDIF signals to an external device, the system must include an optional docking device.

When any device is connected to an audio-out jack, the internal speakers are disabled.

When you connect a device to an audio-out jack, use only a 3.5-mm plug.

The location of the audio-out (headphone) jack varies, depending on your notebook model.

Video Features

Connecting an S-Video Device

Connecting the Audio

The S-Video-out jack supports video signals only.

If you are setting up a configuration that combines audio and video functions, such as playing a DVD movie on your notebook and displaying it on your television, you need a standard 3.5-mm audio cable, available from most computer or electronics retailers.

Plug one end of the audio cable into an audio-out (headphone) jack on the notebook. Plug the other end of the cable into the audio-in jack on the external device.

For more information about the notebook audio-out jacks and about the types of devices that can be connected to them, refer to "Using the Audio-Out (Headphone) Jack," earlier in this chapter.

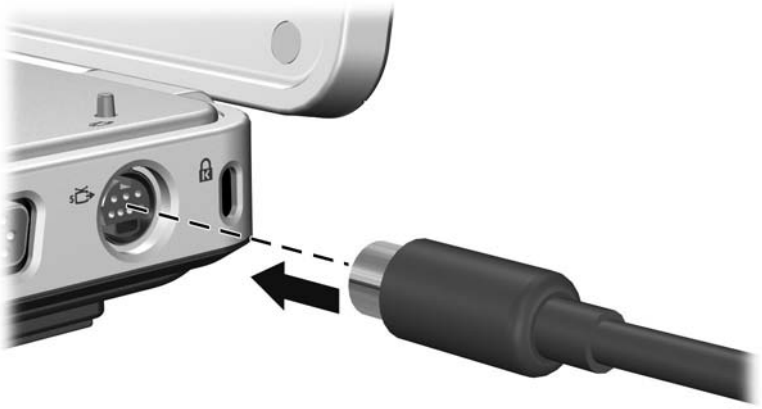
Connecting the Video

To transmit video signals through the S-Video-out jack, you need a standard S-Video cable, available from most computer or electronics retailers.

To connect the S-Video cable:

1. Plug either end of the S-Video cable into the notebook S-Video-out jack, illustrated below.
2. Plug the other end of the cable into the S-Video-in jack on the external device.

Depending on your notebook model, the location of the S-Video-out jack will vary.



Displaying a Video Image

To display a video image, both the notebook and the video device must be turned on.

Switch the image between the notebook display and the video device display by repeatedly pressing the **fn+f4** hotkey. Pressing the **fn+f4** hotkey switches the image among the notebook display, any connected displays, and simultaneous display.

The notebook can transmit composite video signals to an external device only when an optional docking device is connected to the notebook.

Multimedia Software

The multimedia software included with your notebook is determined by your region and notebook model.

The following list describes the capabilities of some of the multimedia software that may be included with your notebook.

- Windows Media Player—Plays audio CDs and DVDs, and copies audio and data CDs. It also plays common audio and video file types, such as MP3, WMA, AVI, MPG, and WMV. This software is included with the Windows operating system.
- InterVideo WinDVD—Plays video CDs and DVD movies. This software is preinstalled on select notebooks. You can also obtain this software by any of the following methods:
  - ❏ Install WinDVD from the *Driver Recovery* disc provided with most notebooks.
  - ❏ If you do not have the *Driver Recovery* disc, contact Customer Care for a copy of the restore solution for you notebook.

    Download the software from the Compaq Web site: http://www.compaq.com

- InterVideo WinDVD Creator Plus—Provides the ability to create, edit, and burn movies to a DVD or video CD. This software is located on the *InterVideo WinDVD Creator* CD, included with select notebooks.
- Sonic RecordNow!—Enables you to create copies of data and audio CDs and DVDs, and create personalized audio CDs and DVDs. RecordNow! is preinstalled on select notebooks.

For more information about using multimedia software, refer to the online Help for the software.

Your notebook may include additional multimedia software. Be sure to explore

- Your desktop icons.
- The software listed at **Start > All Programs.**
- The preloaded items that may be available at **Start > All Programs > SW Setup.**

Observing the Copyright Warning

It is a criminal offense, under applicable copyright laws, to make unauthorized copies of copyright-protected material, including computer programs, films, broadcasts, and sound recordings. This notebook should not be used for such purposes.

Installing Software

To install software included with the notebook from a CD:

1. Connect the notebook to a reliable electrical outlet.
2. Close any open applications.
3. Insert a software CD into the optical drive.
   - ❏ If Autorun is enabled an installation wizard is displayed.
   - ❏ If Autorun is disabled, select **Start > Run.** Enter

     x:\setup.exe

     where *x* is your CD drive designation

     and then select **OK.**
4. When the installation wizard is displayed, follow the installation instructions on the screen.
5. Restart the notebook if prompted.

Repeat the installation procedure for all software you want to install.

WinDVD Creator has special drive requirements for proper installation. To install WinDVD Creator, refer to the instructions provided with the *InterVideo WinDVD Creator* CD.

Enabling AutoPlay

AutoPlay is an option in Windows that turns the Autorun feature on or off. Autorun starts a program or plays a title on a disc as soon as it is inserted into the drive and the drive door is closed. By default, AutoPlay is enabled on the notebook.

To disable AutoPlay or to enable AutoPlay if the feature has been turned off, refer to your operating system documentation or visit the Microsoft Web site at http://www.microsoft.com.

Changing DVD Region Settings

CAUTION: The region settings on your DVD drive can only be changed 5 times.

- The region setting you select the fifth time becomes the permanent region setting on the DVD drive.
- The number of allowable region changes remaining on the drive is displayed in the Remaining Times Until Permanent field in the WinDVD window. The number in the field includes the fifth and permanent change.

Most DVDs that contain copyrighted files also contain region codes. The region codes help protect copyrights internationally.

You can play a DVD containing a region code only if the region code on the DVD matches the region setting on your DVD drive.

If the region code on a DVD does not match the region setting on your drive, a "Playback Of Content From This Region Is Not Permitted" message is displayed when you insert the DVD. To play the DVD, you must change the region setting on your DVD drive. DVD region settings can be changed through the operating system or through some DVD players.

Using the Operating System

To change settings through the operating system:

1. Open Device Manager by selecting **Start > My Computer.** Right-click in the window and select **Properties > Hardware** tab **> Device Manager.**
2. Select **DVD/CD-ROM drives,** right-click the DVD drive for which you want to change region settings, and then select **Properties.**
3. Make the desired changes on the DVD **Region** tab.
4. Select **OK.**
5. For additional information, refer to the Windows operating system Help and Support.

Using WinDVD

To change the region settings on a drive using WinDVD:

1. Open WinDVD through one of the following methods:
   - ❏ Select the WinDVD Player icon in the notification area, at the far right of the taskbar.
   - ❏ Select **Start > (All) Programs > InterVideo WinDVD > InterVideo WinDVD.**
2. Right-click the WinDVD player window.
3. Select **Setup.**
4. Select the button for the region.
5. Select **OK.**

Using Other DVD Software

To change region settings on a drive using a DVD player other then WinDVD, refer to the documentation provided with the player.

5

Drives

CAUTION: To reduce the risk of critical data loss, initiate standby before you move the notebook or an optional external hard drive from one location to another. To initiate standby, select **Start > Turn Off Computer > Standby.** For more information on initiating and resuming from standby, refer to Chapter 2, "Power."

Removable drives enable you to store and access data.

A USB drive can be added by connecting the drive to a USB port on the notebook or on an optional docking device. For information about connecting a USB drive, refer to the "Using USB Devices" section in Chapter 9.

Drive Care

Drives are fragile notebook components that must be handled with care. The following cautions apply to all drives. Additional cautions are included with the procedures to which they apply.

CAUTION: To prevent loss or damage to the notebook or a drive:

- Handle a drive carefully. Do not drop it.
- Excessive force can damage drive connectors. When you insert a drive, use only enough force to seat the drive.
- Do not spray a drive with cleaning fluid or other liquid or expose it to temperature extremes.
- Do not remove the primary hard drive (the hard drive in the hard drive bay) except for repair or replacement.
- Electrostatic discharge can damage electronic components. To prevent electrostatic damage to the notebook or a drive:
  - ❏ Discharge yourself from static electricity before handling a drive by touching a grounded metal object
  - ❏ Avoid touching the connectors on a drive.

  For more information about preventing electrostatic damage, refer to the *Regulatory and Safety Notices* guide.
- Avoid exposing a drive or a diskette to devices with magnetic fields. Security devices with magnetic fields include airport walk-through devices and security wands. The airport security devices that check carry-on luggage, usually while it is placed on a conveyor belt, use x-rays instead of magnetism and will not damage a drive or a diskette.
- If you mail a drive, ship it in packaging that protects it from shock, vibration, temperature, and high humidity. Label the package "FRAGILE."

Airport security devices that check carry-on luggage placed on a conveyor belt use x-rays instead of magnetism and will not damage a hard drive.

Removing the Primary Hard Drive

CAUTION: To prevent system lockup and loss of information:

- Shut down the notebook before removing the hard drive from the hard drive bay. Do not remove the hard drive while the notebook is on, in standby or in hibernation.
- If you are not sure whether the notebook is in hibernation, turn the notebook on by pressing the power/standby button. Then shut down the notebook through the operating system.

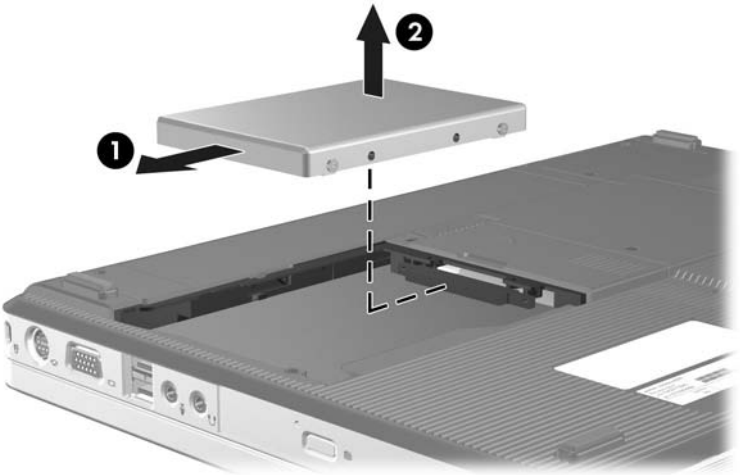
The hard drive that is in the hard drive bay is the *primary* hard drive. Remove it only after the notebook is properly shut down.

To remove the primary hard drive:

1. Save your work and close any open applications.
2. Shut down the notebook and close the display.
3. Turn the notebook upside down.
4. Loosen the screws in the hard drive bay cover.

5. Lift the hard drive bay cover ❶ and remove it from the notebook ❷.

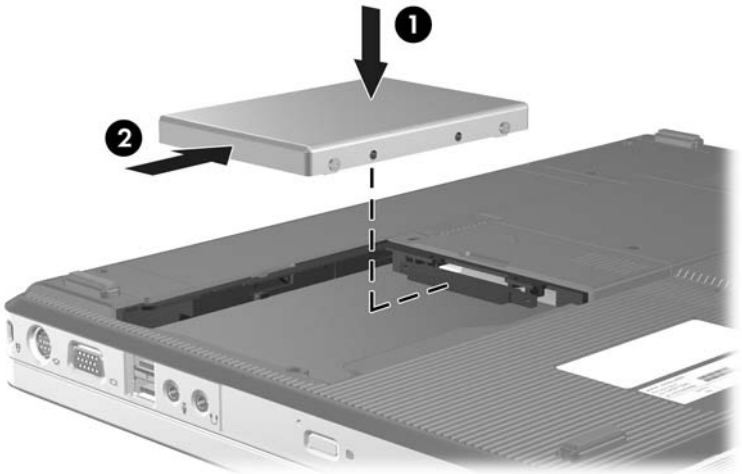
6. Slide the hard drive toward the edge of the notebook to release it ❶.
7. Remove the hard drive ❷.



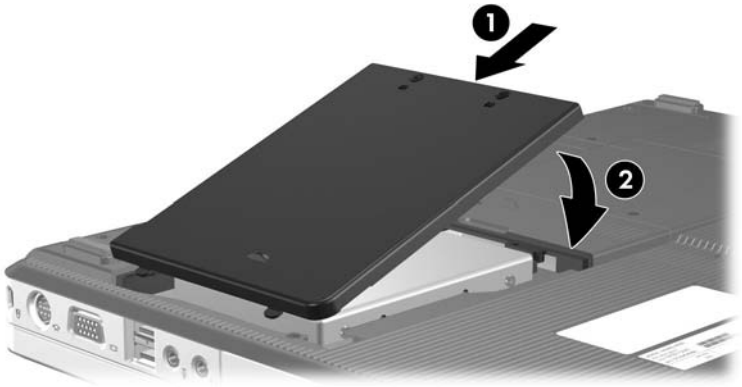
Reinstalling the Primary Hard Drive

To reinstall the primary hard drive:

1. Lower the hard drive into the hard drive bay ❶.
2. Slide the hard drive away from the edge of the notebook until it is fully seated ❷.



3. Align the tabs on the hard drive cover with the slots on the notebook ❶ and press the hard drive cover down until it snaps into place ❷.

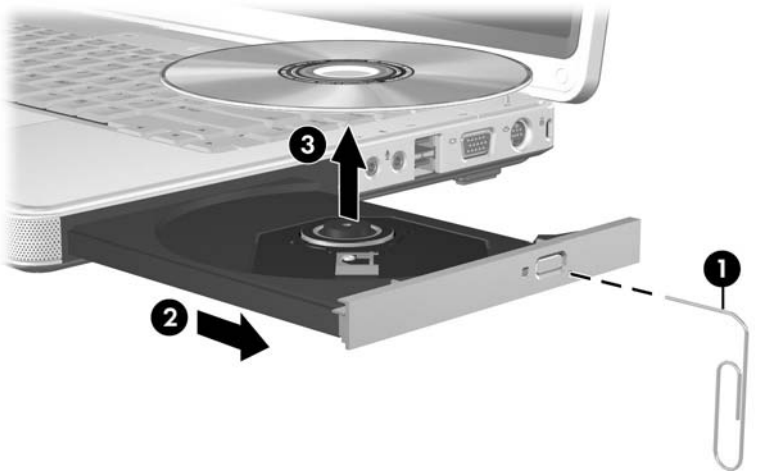


4. Tighten the screws on the hard drive bay cover.

Removing an Optical Disc (Without Power)

To remove an optical disc when power is unavailable:

1. Insert the end of a paper clip into the release access in the front bezel of the drive ❶.
2. Press gently on the paper clip until the media tray is released, and then pull out the tray until it is fully extended ❷.
3. Remove the disc from the tray by gently pressing down on the spindle while lifting the outer edges of the disc ❸. Handle the disc by the edges, not the flat surfaces. If the media tray is not fully extended, tilt the disc as you remove it. To protect the disc, place it in a protective case



4. Close the media tray.

Displaying Optical Disc Contents

When an optical disc is inserted into a drive and Autorun is enabled, the contents of the disc display on the screen.

To display the contents of a disc when Autorun is not enabled:

1. Click **Start > Run,** and then type

   x:

   where *x* = the designation of the drive containing the disc.

2. Press **enter.**

Avoiding Standby or Hibernation

CAUTION: To prevent possible video degradation and loss of audio or video playback functionality, do not initiate standby or hibernation while playing any type of media.

If standby or hibernation is accidentally initiated while a drive medium (such as a CD, CD-RW, or DVD) is in use, the following results may occur:

- Your playback may be interrupted.
- You may see the following warning: "Putting the computer into hibernation or standby may stop the playback. Do you want to continue?" Select **No.**

Resume from hibernation or standby by pressing the power/standby button. Audio or video may resume or you may need to restart the medium.

6

PC Cards and ExpressCards

What Is a PC Card?

CAUTION: If you install software or enablers provided by a PC Card manufacturer, you may not be able to use other PC Cards. If you are instructed by the documentation included with your PC Card to install device drivers:

- Install only the device drivers for your operating system.
- Do not install other software, such as card services, socket services, or enablers, that may also be supplied by the PC Card manufacturer.

A PC Card is a credit card-sized accessory designed to conform to the standard specifications of the Personal Computer Memory Card International Association (PCMCIA).

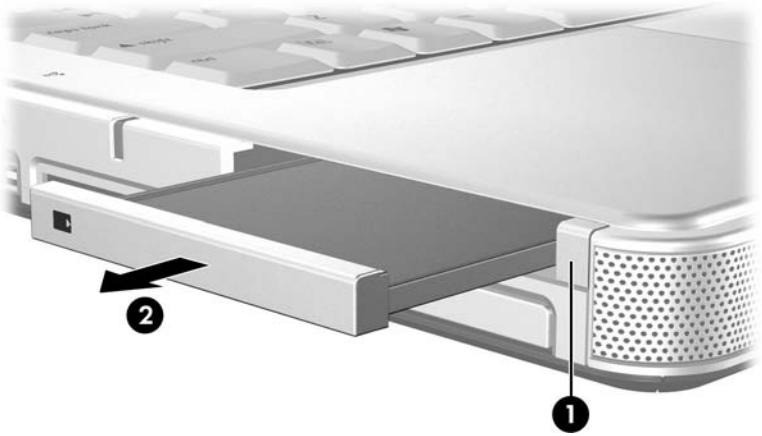
- The notebook supports 32-bit (CardBus) and 16-bit PC Cards.
- The notebook is equipped with one PC Card slot, and it supports 2 Type I cards or 2 Type II cards.
- Zoomed video PC Cards are not supported.
- 12-V PC Cards are not supported.

Inserting a PC Card

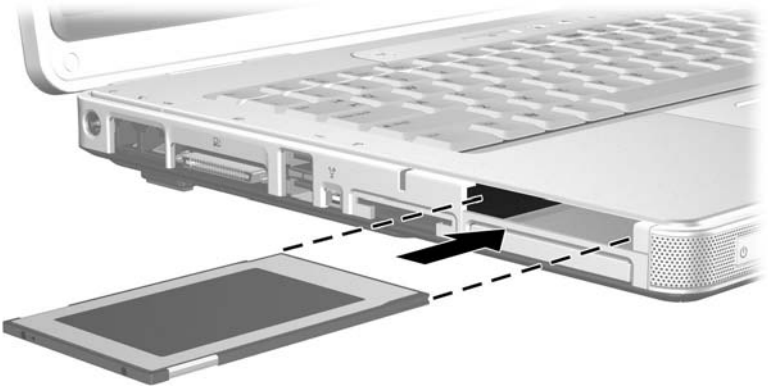
CAUTION: To prevent damage to the connectors:

- Use minimal pressure when inserting a PC Card into a PC Card slot.
- Do not move or transport the notebook while a PC Card is inserted.

1. Press the PC Card eject button ❶, and then remove the PC Card cover ❷.



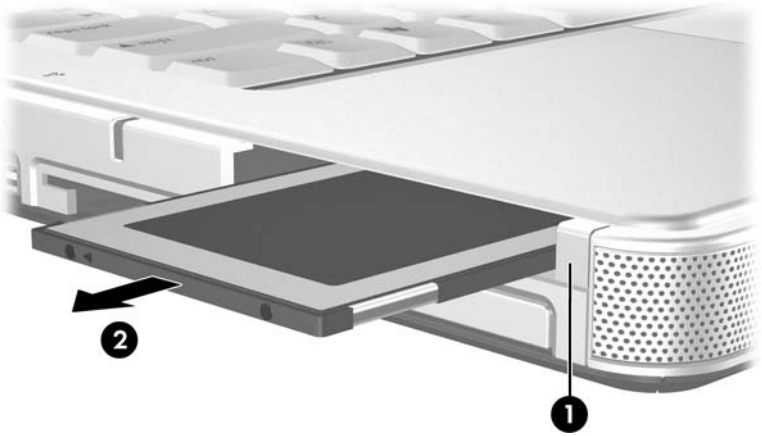
2. Hold the PC Card label-side up with the connector facing the notebook.
3. Gently slide the card into the slot until the card is seated. The operating system will issue a sound to indicate that a device has been detected.



Removing a PC Card

CAUTION: To prevent loss of work or an unresponsive system, stop the PC Card before removing it.

1. Stop the PC Card by selecting the **Safely Remove Hardware** icon in the notification area at the far right of the taskbar, and then selecting the PC Card. (To display the Safely Remove Hardware icon, select Show Hidden Icons on the taskbar.)
2. Press the PC Card eject button ❶. (This action extends the button into position for releasing the PC Card.)
3. Gently slide out the card ❷.



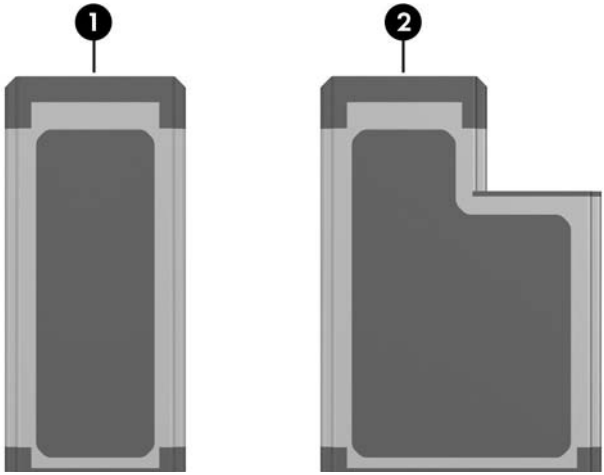
4. Replace the PC Card cover if you are not inserting another PC Card.

An inserted PC Card uses power even when not in use. To conserve power, stop or remove a PC Card when you are not using it.

What Is an ExpressCard?

The ExpressCard is a next-generation PC Card with higher performance and scalability and is designed to conform to the standard specifications of the PCMCIA.

To support a broad range of applications, ExpressCards come in 2 sizes: ExpressCard/34 and ExpressCard/54. The ExpressCard slot on your notebook supports one ExpressCard, which may be either size.



Component	
1	ExpressCard/34
2	ExpressCard/54

Configuring an ExpressCard

CAUTION: If you install all of the software or any of the enablers provided by an ExpressCard manufacturer, you may not be able to use other ExpressCards. If you are instructed by the documentation included with your ExpressCard to install device drivers:

- Install only the device drivers for your operating system.
- Do not install other software, such as card services, socket services, or enablers, that may also be supplied by the ExpressCard manufacturer.

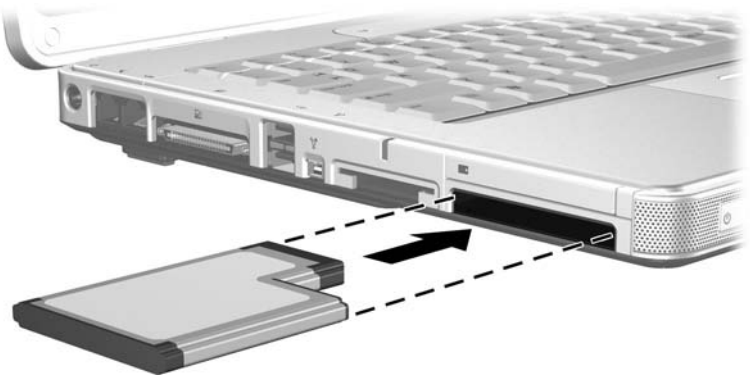
Inserting an ExpressCard

CAUTION: To prevent damage to the ExpressCard connectors:

- Use minimal force when inserting an ExpressCard into the ExpressCard slot.
- Do not move or transport the notebook while an ExpressCard is inserted.

1. Firmly press and quickly release the ExpressCard cover to eject it ❶.
2. Slide the ExpressCard cover out of the slot ❷.

3. Hold the ExpressCard label-side up with the connectors facing the notebook.
4. Gently slide the card into the slot until the card is seated.

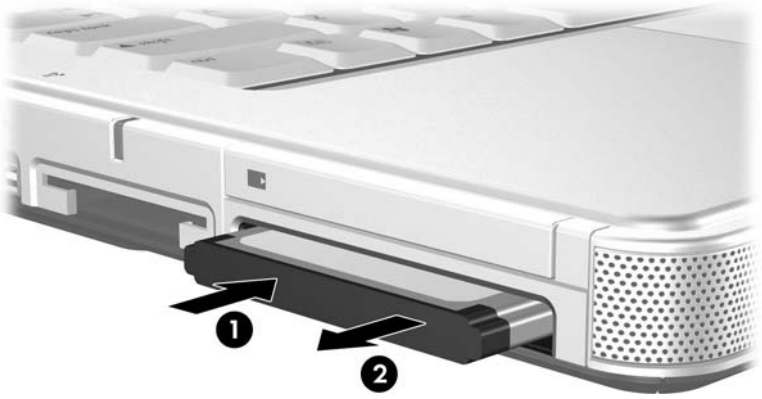


Removing an ExpressCard

CAUTION: To prevent loss of work or an unresponsive system, stop the ExpressCard before removing it.

Stopping an ExpressCard, even if it is not in use, conserves power.

1. Close all applications and complete all activities that are supported by the ExpressCard.
2. To stop an ExpressCard, select the **Safely Remove Hardware** icon on the taskbar, and then select the ExpressCard. (To display the Safely Remove Hardware icon on the taskbar, click the arrow icon for Show Hidden Icons.)
3. Gently press and quickly release the ExpressCard to eject it ❶.
4. Slide the ExpressCard out of the slot ❷.



5. Replace the ExpressCard cover if you are not inserting another ExpressCard.

7

Digital Memory Cards (Select Models Only)

Using Digital Media

The Memory Reader supports the following digital media formats:

- Secure Digital (SD) Memory Card (SD Card)
- Secure Digital Input/Output (SD I/O)
- MultiMediaCard (MMC)
- Memory Stick (MS)
- Memory Stick Pro (MSP)
- SmartMedia (SM)
- xD-Picture Card (XD)

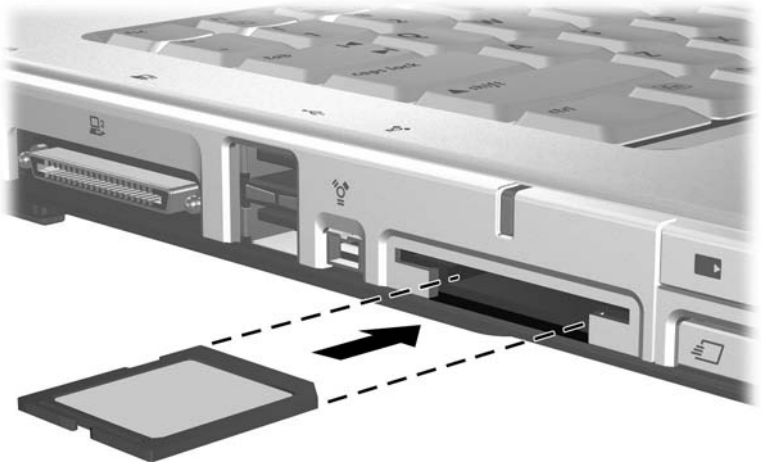
Digital memory cards provide secure data storage and convenient data sharing. SD I/O cards provide extended input/output functions, such as wireless LAN and digital TV tuner devices. These cards are often used with digital media-equipped cameras and PDAs as well as other notebooks.

Inserting Digital Cards

CAUTION: To prevent damage to the digital card connectors:

- Use minimal force when inserting a digital card into a Memory Reader.
- Do not move or transport the notebook while digital cards are inserted.

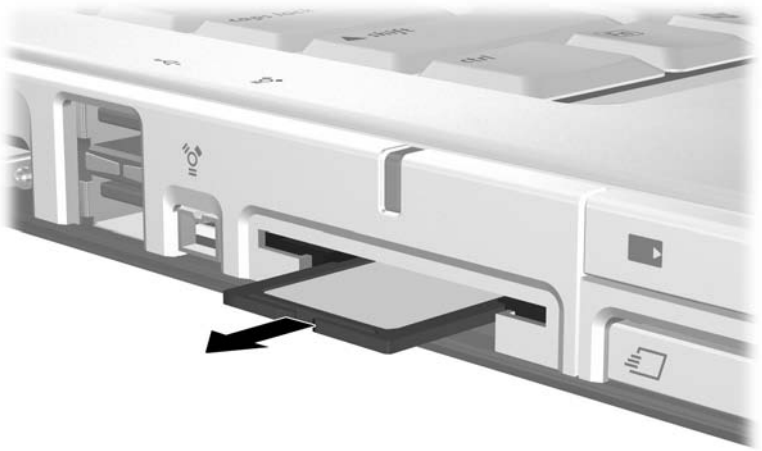
1. Hold the card label-side up with the connectors facing the notebook.
2. Gently slide the card into the Memory Reader until the card is seated. (The card will extend slightly beyond the edge of the notebook.)



Removing Digital Cards

To remove a digital card:

1. Complete all activities that are supported by the card (such as a data transfer) and close all applications.
2. To stop a digital card, select the **Safely Remove Hardware** icon on the taskbar, and then select the digital card. (To display the Safely Remove Hardware icon on the taskbar, click the arrow icon for Show Hidden Icons.)
3. Slide the card out of the slot.



Disabling or Restarting Digital Cards

An inserted digital card uses power even when the card is not in use. Disabling the card conserves power.

To disable an inserted digital card:

» Select the **My Computer** icon on the Windows desktop, right-click the drive assigned to the card, and then select **Eject.** (The card is stopped but is not released from the Memory Reader.)

To restart the card, remove and then reinsert it. For instructions, refer to "Inserting Digital Cards" and "Removing Digital Cards," earlier in this chapter.

8

Memory Modules

What Is a Memory Module?

WARNING: Failure to unplug the power cord and remove all battery packs before installing a memory module can damage the equipment and expose you to the risk of electrical shock.

CAUTION: Electrostatic discharge (ESD) can damage electronic components. Before beginning any procedure, ensure that you are discharged of static electricity by touching a grounded metal object. For more information, refer to the *Regulatory and Safety Notices* guide.

The notebook has one memory module compartment, located on the bottom of the notebook.

You can increase the amount of RAM (random access memory) in the notebook with an approved optional memory module.

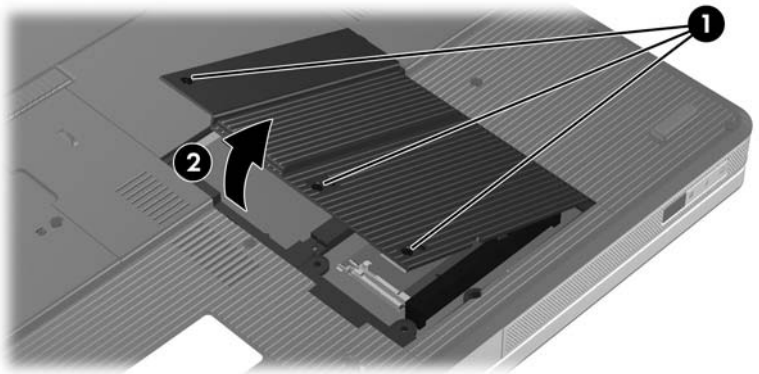
Each notebook memory module slot supports one 256-MB, 512-MB, 1024-MB, or 2048-MB DDR2 SODIMM memory module.

Some notebook models are shipped with one of the 2 memory module slots vacant. On other models the memory module slot may contain a preinstalled memory module that can be replaced at any time.

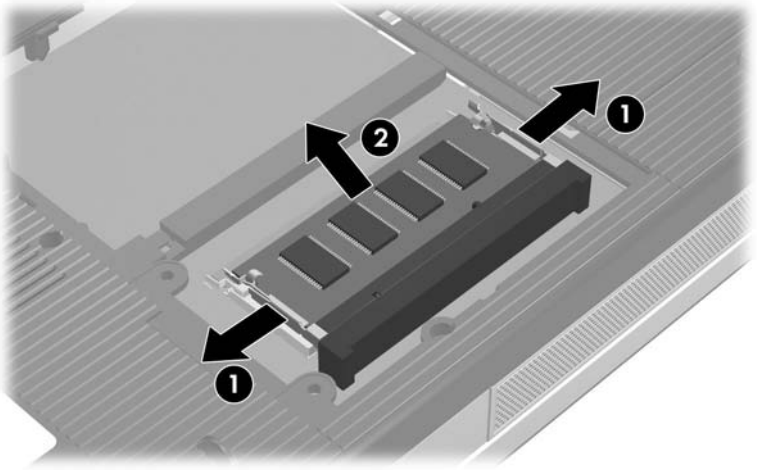
Replacing a Memory Module

To replace a memory module:

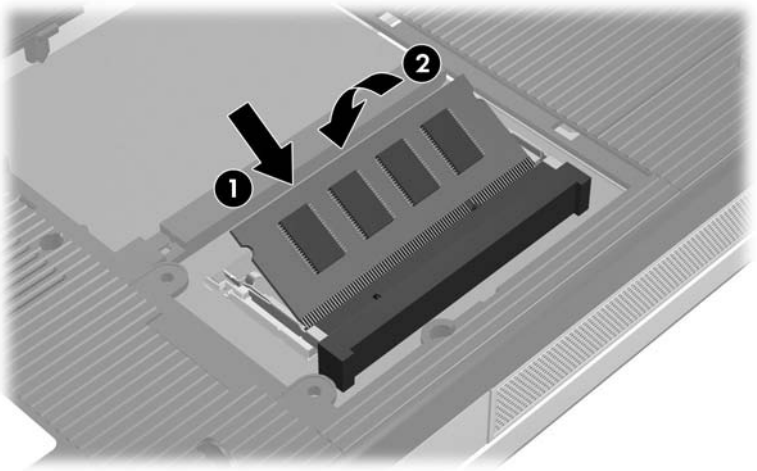
1. Shut down the notebook. (If you are not sure whether the notebook is off or in hibernation, turn the notebook on by pressing the power/standby button. Then shut down the notebook through the operating system.)
2. Disconnect all external devices connected to the notebook.
3. Disconnect the power cord.
4. Remove any battery packs from the notebook.
5. Loosen the memory module cover screws ❶.
6. Lift the memory module cover away from the notebook ❷.



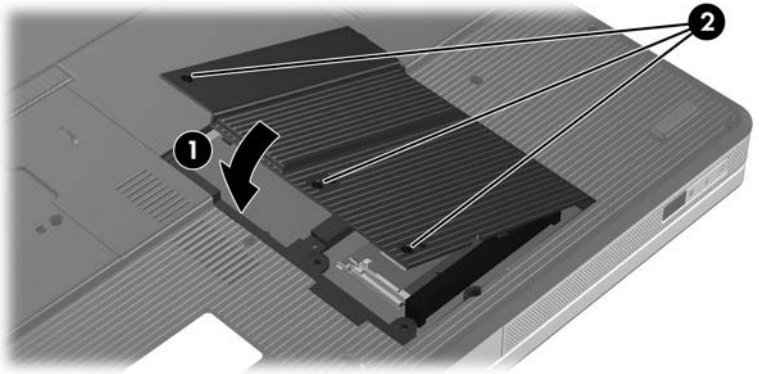
7. If there is a memory module in the memory module slot, remove it:
   a. Pull away the retention clips on each side of the module ❶. (The module tilts upward.)
   b. Grasp the edges of the module and gently pull the module out of the memory module slot ❷. To protect a memory module after removal, place it in an electrostatic-safe container.



8. Insert the new memory module:
   a. Align the keyed (notched) edge of the module with the tabbed area in the memory module slot.
   b. With the module at a 45-degree angle from the surface of the memory module compartment, press the module into the memory module slot until it is seated ❶.
   c. Press the module downward until the retention clips snap into place ❷.



9. Replace the memory module cover ❶ and tighten the memory module cover screws ❷.



Hibernation File

When random access memory (RAM) increases, the operating system increases the hard drive space reserved for the hibernation file.

If you experience problems with hibernation after increasing memory, verify that your hard drive has enough free space to accommodate a larger hibernation file.

- To display the amount of RAM in the system:
  - ❑ Select **Start > Control Panel > Performance and Maintenance > System > General** tab.

  – or –

  - ❑ Press **fn+esc.**
- To display the amount of free space on your hard drive:
  a. Double-click the **My Computer** icon on the desktop.
  b. Select your hard drive. Information about the space on the drive is displayed in a status bar at the bottom of the window.
- To display the amount of space required by the hibernation file:

  Select **Start > Control Panel > Performance and Maintenance > Power Options > Hibernate** tab.

9

USB Devices

What Is USB?

Universal Serial Bus (USB) is a hardware interface that can be used to connect external devices, such as a USB keyboard, mouse, drive, printer, scanner, or hub, to the notebook.

Depending on model, the notebook has 2 or 4 standard USB connectors that support USB 1.1 and USB 2.0 devices.

Using USB Devices

To use a USB device:

» Plug the device into one of the USB ports on your notebook.

USB hubs can be connected to a USB port on the notebook or on an optional docking device. Hubs can support several USB devices.

- Powered hubs must be connected to external power.
- Unpowered hubs must be connected either to a USB port on the notebook or to a port on a powered hub.

Operating System and Software

A USB device functions in the same way as a comparable non-USB device, with one exception. By default, USB devices do not function unless an operating system that supports USB is installed in the notebook.

Some USB devices may require additional support software, which is usually included with the device. For more information and software installation instructions, refer to the documentation included with the device.

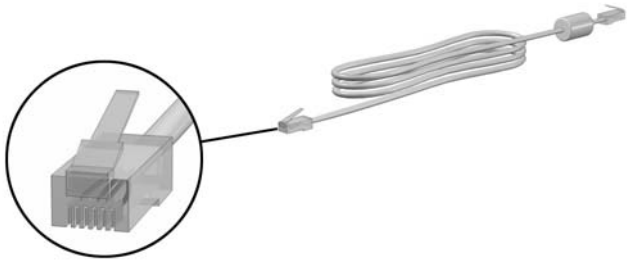
10

Modem and Networking

Internal Modem

WARNING: Connecting the notebook to a digital PBX system line can permanently damage the modem. Jacks for digital PBX systems may resemble analog telephone jacks, but are not compatible with the modem. Immediately disconnect your modem cable if you accidentally connect it to a digital PBX system line.

A modem cable, which has a 6-pin RJ-11 connector at each end, must be connected to an analog telephone line. In some countries, a country-specific modem adapter is required.

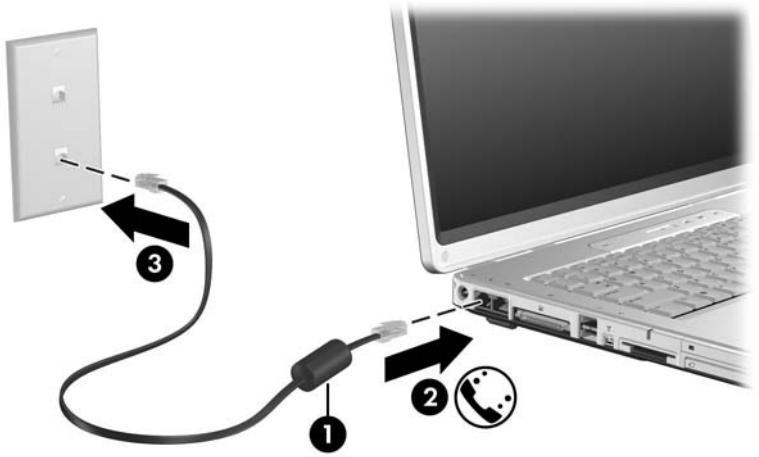


Connecting a Modem Cable

To connect a modem cable:

WARNING: To avoid the risk of electrical shock, fire, or damage to the equipment, do not plug a modem cable into the network jack.

1. If the modem cable contains noise suppression circuitry ❶, which prevents interference from TV and radio reception, orient the circuitry end of the cable toward the notebook.
2. Plug the modem cable into the modem jack ❷ on the notebook.
3. Plug the other end of the modem cable into the RJ-11 telephone jack ❸.



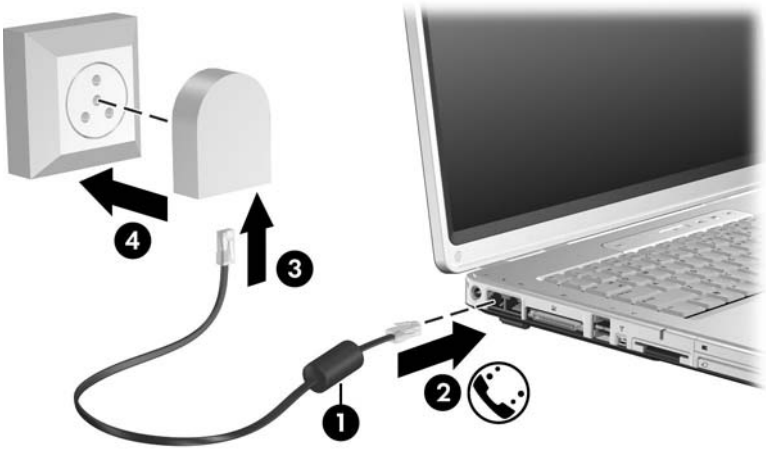
Using a Country-Specific Modem Cable Adapter

Telephone jacks vary by country and region. To connect the modem to an analog telephone line that does not have an RJ-11 telephone jack:

WARNING: To avoid the risk of electrical shock, fire, or damage to the equipment, do not plug a modem cable into the network jack.

1. If the modem cable contains noise suppression circuitry ❶, which prevents interference from TV and radio reception, orient the circuitry end of the cable toward the notebook.
2. Plug the modem cable into the modem jack ❷ on the notebook.
3. Plug the other end of the modem cable ❸ into the country-specific modem adapter.
4. Plug the country-specific modem adapter ❹ into the telephone jack.

Telephone jacks and adapters vary by region.



Modem Region Selection

Viewing the Current Regional Selection

To see the current regional setting for your modem:

1. Select **Start > Control Panel > Date, Time, Language, and Regional Options > Regional & Language Options**.
2. Under **Location,** view your present location.

Adding New Locations When Traveling

CAUTION: Do not delete your current modem region settings. To enable modem use in other countries, while preserving your home country configuration, add a new configuration for each location in which you will use the modem.

CAUTION: Selecting a country other than the one in which the notebook is located may cause your modem to be configured in a way that violates the telecommunications regulations or laws of that country. In addition, your modem may not function properly if the correct country selection is not made.

The internal modem is configured to meet only the operating standards in the country where you purchased the notebook. When traveling internationally, you can add new location configurations that comply with standards in other countries.

To add a new country location:

1. Select **Start > Control Panel > Network and Internet Connections > Phone and Modem Options > Dialing Rules** tab.
2. Select the **New** button and assign a name (home, work, etc.) to the location.
3. Select the country/region from the drop-down list.

   ✎ The drop-down list may include countries not supported by the modem. Unless you select a supported country, the country selection will default to USA or UK.

4. Select **OK > OK**.

Solving Travel Connection Problems

If you experience connection problems while using the modem outside your home country, the following suggestions may help:

- **Check the telephone line type.**

  The modem requires an analog, not a digital, telephone line. A line described as a PBX line is usually a digital line. A telephone line described as a data line, fax machine line, modem line, or standard telephone line is probably an analog line.

- **Check the tone or pulse dialing settings.**

  Dial a few digits on the telephone and listen for clicks (pulses) or tones. Then

  1. Select **Start > Control Panel > Network and Internet Connections > Phone and Modem Options > Dialing Rules** tab.
  2. Select your location and then select **Edit.**
  3. Select either **Tone** or **Pulse,** depending on what you heard on the line.
  4. Select **OK > OK.**

- **Check the telephone number you are dialing and the response of the remote modem.**

  Dial the telephone number on the telephone, wait for the remote modem to answer, and then hang up.

- **Set the modem to ignore dial tones.**

  If the modem receives a dial tone it does not recognize, it will not dial and will display a No Dial Tone error message. Use the following procedures to set the modem to ignore all dial tones before dialing:

  1. Select **Start > Control Panel > Network and Internet Connections > Phone and Modem Options** > **Modems** tab.
  2. Select your modem > **Properties > Modem** tab.
  3. Clear the **Wait for Dial Tone Before Dialing** check box.

  If you continue to receive the No Dial Tone error message after clearing the check box:

  1. Select **Start > Control Panel > Network and Internet Connections >Phone and Modem Options > Dialing Rules** tab.
  2. Select your location > **Edit.**
  3. Select the country/region from the drop-down list.
  4. Select **Apply > OK.**
  5. Select the **Modems** tab.
  6. Select your modem > **Properties.**
  7. Clear the **Wait for Dial Tone Before Dialing** check box.

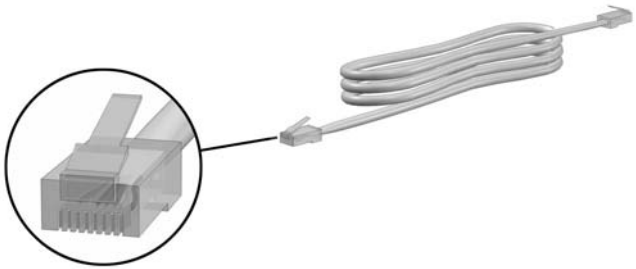
Preinstalled Communication Software

To use preinstalled modem software for terminal emulation and data transfer:

1. Select **Start > All Programs > Accessories > Communications.**
2. Select the appropriate fax or terminal emulation program or Internet connection wizard.

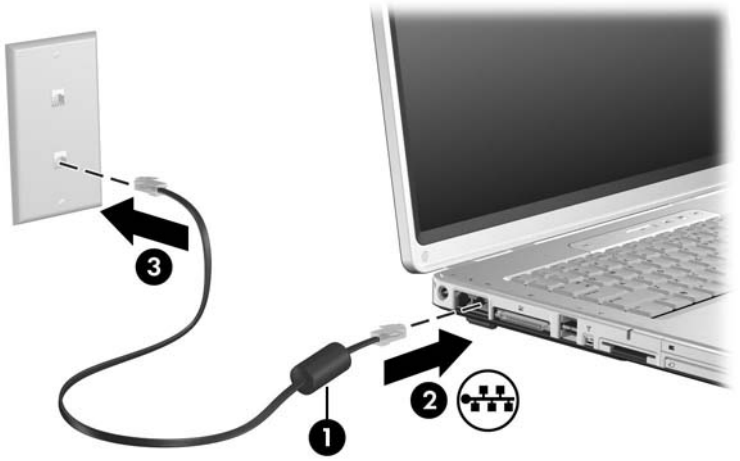
Network Cable

A network cable (not included) has an 8-pin RJ-45 connector at each end.



To connect a network cable:

1. If the network cable contains noise suppression circuitry ❶, which prevents interference from TV and radio reception, orient the circuitry end of the cable toward the notebook.
2. Plug the network cable into the network jack ❷ on the notebook.
3. Plug the other end of the cable into an RJ-45 wall jack ❸.



11

Wireless (Select Models Only)

If your notebook is equipped with an integrated wireless device such as 802.11 or Bluetooth wireless devices, you have a wireless notebook.

- An 802.11 wireless notebook can connect to wireless networks in corporate offices, your home, and public places. Wireless networks include wireless local area networks (WLANs) or "hotspots." Hotspots are wireless access points available in public places, such as airports, restaurants, coffee shops, hotels, and universities.
- A Bluetooth wireless notebook can connect to other Bluetooth wireless-enabled devices using a wireless personal area network (PAN).

Your notebook has a button that may be used to enable and disable the 802.11 and Bluetooth wireless devices and an associated light to indicate the state of the wireless devices. The following illustration shows the wireless button and light.

In addition to the wireless button and light, your notebook may have a software utility, Wireless Assistant (select models only), that enables you to control your wireless devices. Wireless Assistant is a software utility that enables you to turn on and off the 802.11 and Bluetooth wireless devices individually. For more information on using Wireless Assistant, refer to "Device Power States," later in this chapter.

Wireless Local Area Network (Select Models Only)

With the 802.11 wireless device, you can access a wireless local area network (WLAN), which is composed of other computers and accessories linked by a wireless router or a wireless access point.

- A large scale WLAN, such as a corporate WLAN or public WLAN hotspot, typically uses wireless access points, that can handle a large number of computers and accessories and can separate critical network functions.
- A home or small office WLAN typically uses a wireless router, which enables several wireless and wired computers to share an Internet connection, a printer, and files without additional pieces of hardware or software. *Wireless access point* and *wireless router* are often used interchangeably.

Notebooks with 802.11 WLAN devices may support one or more of 3 IEEE physical layer standards:

- 802.11a
- 802.11b
- 802.11g

There are 3 popular implementations of WLAN adapters:

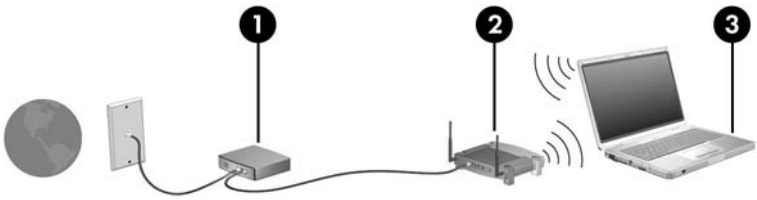
- 802.11b only
- 802.11b/g
- 802.11a/b/g

802.11b, the first popular WLAN standard, supports data rates of up to 11 Mbps and operates at a frequency of 2.4 GHz. 802.11g, which came later, also operates at 2.4 GHz but supports data rates of up to 54 Mbps. An 802.11g WLAN device is backward compatible with 802.11b devices, so they can operate on the same network. 802.11a supports data rates of up to 54 Mbps but operates at a frequency of 5 GHz. 802.11a is not compatible with 802.11b and 802.11g. For information on identifying the type of device in your notebook, refer to "Identifying a WLAN Device," later in this chapter.

Setting Up a WLAN in Your Home

To set up a WLAN and connect to the Internet in your home, you need the following equipment. The illustration below shows an example of a completed wireless network installation that is connected to the Internet. This wireless network includes

- An optional broadband modem (either DSL or cable) and high-speed Internet service purchased from an Internet service provider (ISP) ❶.
- An optional wireless router (purchased separately) ❷.
- Your wireless notebook ❸.



As this network grows, additional wireless and wired computers can be connected to the network to access the Internet.

If you need technical assistance to install your WLAN, contact the router manufacturer or your ISP.

Using a WLAN Connection

To use a WLAN connection:

- Verify that all drivers required by the 802.11 wireless device are installed and that the 802.11 wireless device is correctly configured.

  ✎ If you are using an integrated 802.11 wireless device, all required drivers are installed and the adapter is preconfigured and ready for use.

- If you are using an integrated 802.11 wireless device, verify that the 802.11 wireless device is turned on. When the 802.11 wireless device is turned on, the wireless light is turned on. If the wireless light is off, turn on the 802.11 wireless device. Refer to "Device Power States," later in this chapter.
- For your home WLAN, verify that your router is correctly configured. For instructions, refer to your router documentation.

✎ Functional range for subsequent WLAN connections vary, depending on your notebook WLAN implementation, router manufacturer, and interference from varying types of walls and other electronic devices.

For more information about using a WLAN connection:

- Refer to information from your ISP and the documentation included with your wireless router and other WLAN equipment.
- Access the information and Web site links provided at **Start > Help and Support.**
- Refer to the documentation included with your notebook.

Using Wireless Security Features

When you set up your own WLAN or access an existing WLAN, always ensure that security features are protecting the WLAN. If you do not enable security on your WLAN, an unauthorized wireless user can access your notebook data and use your Internet connection without your knowledge.

The most common security levels are Wi-Fi Protected Access (WPA)-Personal and Wired Equivalent Privacy (WEP). In addition to enabling WPA-Personal or WEP security encryption on the router, you may want to use one or more of the following security measures:

- Change the default network name (SSID) and password.
- Use a firewall.
- Set security on your Web browser.
- Enable MAC address filtering on the router.

Installing Wireless Software (Optional)

Microsoft Windows XP supports WLAN configuration with the Zero Client Configuration feature. A separate WLAN configuration utility is provided and must be installed if you plan to use Cisco Compatible Extensions. Cisco Compatible Extensions enable wireless devices to use Cicso-based WLANs.

Identifying a WLAN Device

To install WLAN software for an integrated 802.11 wireless device, you need to know the name of the integrated 802.11 wireless device on your notebook. To identify an integrated 802.11 wireless device:

1. Display the names of all the 802.11 wireless devices on your notebook:
   a. Select **Start > My Computer.**
   b. Right-click in the My Computer window.
   c. Select **Properties > Hardware** tab **> Device Manager > Network Adapters.**
2. Identify the 802.11 wireless device from the list that is displayed:
   - ❏ The listing for an 802.11 wireless device includes the term *wireless LAN, WLAN,* or *802.11.*
   - ❏ If no 802.11 wireless device is listed, either your notebook does not have an integrated 802.11 wireless device, or the driver for the 802.11 wireless device is not properly installed.

Accessing WLAN Software and Documentation

Your WLAN software is preloaded on your notebook and is available in the Software Setup utility.

To install the WLAN software:

» Select **Start > All Programs > Software Setup,** and then follow the instructions on the screen. (When you are prompted to select the software you want to install, select or clear the corresponding check boxes.)

The WLAN software is also available as a SoftPaq at the Compaq Web site. To access, download, and install the SoftPaq, use either of the following procedures:

- Select **Start > Help and Support.**

– or –

- Visit the Compaq Web site at http://www.compaq.com:
  a. Select **Software and Driver Downloads.**
  b. Enter your computer model information, and then follow the instructions provided at the Web site.

WLAN software is provided in the Network category. To access model information about your computer, refer to the serial number label. The serial number label is on the bottom of the notebook.

To access documentation for your WLAN software:

1. Install the WLAN software as instructed earlier in this chapter.
2. Open the utility.
3. Select **Help** on the menu bar.

Troubleshooting Devices

For more troubleshooting information, refer to the documentation included with your notebook.

Bluetooth (Select Models Only)

The Bluetooth device provides short-range wireless communications that replace the physical cable connections that traditionally link electronic devices such as

- Network access points.
- Computers (desktop, notebook, PDA).
- Phones (cellular, cordless, smart phone).
- Imaging devices (printer, camera).
- Audio devices (headset, speakers).

The devices are represented in the Bluetooth for Windows software by graphical icons that resemble their physical features, which makes them easily recognizable and distinguishes them from other classes of devices.

The Bluetooth for Windows software provides the following functions:

- Personal Information Management (PIM) item transfer—Sends and receives information files such as business cards, calendar items, notes, and message items to and from another Bluetooth computer or device.
- PIM synchronization—Synchronizes PIM data between a computer, PDA, or cell phone using Bluetooth.
- File Transfer—Sends and receives files to and from another Bluetooth computer.
- Network access (Personal Area Networking Profile)—Enables 2 or more Bluetooth devices to form an ad-hoc (peer-to-peer) network. Provides a mechanism that enables a Bluetooth device to access a remote network through a network access point. The network access points can be traditional LAN data access points or group ad-hoc networks that represent a set of devices that are attached only to one another.
- Dial-up networking—Connects Bluetooth devices to the Internet.

- Bluetooth serial port—Transfers data over the Bluetooth link using a virtual COM port.
- Hands-Free—Enables a vehicle-embedded, hands-free unit or a notebook serving as a hands-free unit to establish a wireless connection to a cellular phone and to act as the Bluetooth cellular phone audio input and output mechanism.
- Basic imaging—Provides a wireless connection between a Bluetooth-enabled camera and other Bluetooth devices. The camera can be controlled remotely by a notebook, and images can be transferred from a camera to be stored on a computer or to be printed.
- Human interface device—Provides a wireless connection to other Bluetooth devices, such as keyboards, pointing devices, gaming devices, and remote monitoring devices.
- Fax—Provides a Bluetooth connection that enables a notebook to send or receive a fax message using a Bluetooth cellular phone or modem.
- Headset—Provides a wireless connection between a headset and a notebook or cellular phone. The headset acts as the device's audio input and output mechanism and increases mobility.

Device Power States

The wireless button enables and disables 802.11 wireless and Bluetooth devices in conjunction with Wireless Assistant (select models only). By default, the 802.11 wireless and Bluetooth devices and wireless light are turned on when you turn on the notebook.

Turning on a wireless device does not automatically create a WLAN or connect you to a WLAN. For information on setting up a WLAN refer to "Wireless Local Area Network (Select Models Only)," earlier in this chapter.

The 802.11 wireless and Bluetooth devices have 2 power states:

- Enabled
- Disabled

You can enable and disable the wireless devices with the wireless button. When the wireless devices are enabled with the wireless button, you can use Wireless Assistant (select models only) to turn on and off the devices individually. When the wireless devices are disabled, you must enable them before you can turn them on or off with Wireless Assistant.

To view the state of your wireless devices, place the cursor over the Wireless Assistant icon in the notification area (at the far right of the taskbar), or open Wireless Assistant by double-clicking the icon in the notification area. Wireless Assistant displays the status of the devices as on, off, or disabled.

For more information about Wireless Assistant:

1. Open Wireless Assistant by double-clicking the icon in the notification area.
2. Select the **Help** button.

Turning On the Devices

If	And	Then
■ Wireless Assistant (select models only) shows that both WLAN and Bluetooth are off ■ Wireless light is off	You want to turn on either or both devices	1. Right-click the **Wireless Assistant** icon in the notification area. 2. Select the device or devices you want to turn on. ✎ If the wireless devices are turned off, pressing the wireless button disables both devices. The button does not turn on the devices.
■ Wireless Assistant shows that both WLAN and Bluetooth are disabled* ■ Wireless light is off	You want to turn on either or both devices	1. Press the wireless button. (The devices return to their previous on or off state.) 2. If the wireless devices are turned off, right-click the **Wireless Assistant** icon in the notification area. 3. Select the device or devices you want to turn on.
■ Wireless Assistant shows that one device is on and the other device is off ■ Wireless light is on	You want to turn on either or both devices	1. Right-click the **Wireless Assistant** icon in the notification area. 2. Select the device or devices you want to turn on.

*If the wireless devices are not both on when you disable the devices, pressing the wireless button again returns the devices to their previous on or off state. Pressing the button does not turn on both devices.

✎ If you want your wireless devices to be turned on when you turn on your notebook, you must turn them on before you shut down or restart.

Turning Off and Disabling the Devices

If	And	Then
■ Wireless Assistant (select models only) shows that both WLAN and Bluetooth are on ■ Wireless light is on	You want to disable both devices	Press the wireless button.
	You want to turn off either or both devices	1. Right-click the **Wireless Assistant** icon in the notification area. 2. Select the device or devices you want to turn off.
■ Wireless Assistant shows that both WLAN and Bluetooth are off ■ Wireless light is off	You want to disable both devices	Press the wireless button.
■ Wireless Assistant shows that one device is on and the other device is off* ■ Wireless light is on	You want to disable both devices	Press the wireless button.
	You want to turn off both devices.	1. Right-click the **Wireless Assistant** icon in the notification area. 2. Select the device or devices you want to turn off.

*If the wireless devices are not both on when you disable the devices, pressing the wireless button again returns the devices to their previous on or off state. Pressing the button does not turn on both devices.

12

Security

Security Features

Security solutions are designed to act as deterrents. These deterrents may not prevent a product from being mishandled or stolen.

The security features provided with the notebook can protect the notebook, personal information, and data from a variety of risks. Depending on your environment, some security features may be unnecessary. It is recommended that you follow the procedures in this chapter for using

- Antivirus software
- Windows updates
- Firewall software

In addition to the Windows operating system security measures, the following table may help you decide which other security features to use.

Most of these security features can be configured in the Setup utility. For more information, refer to Chapter 13, "Setup Utility," in this guide.

To Protect Against	Use This Security Feature
Unauthorized use of the notebook	■ Quick Lock ■ Power-on password*
Unauthorized access to the Setup utility (**f10**)	Compaq administrator password*
Unauthorized startup from a CD or a diskette	Device Security*
Unauthorized access to data	■ Compaq administrator password* ■ Firewall software ■ Windows updates
Unauthorized access to the BIOS settings and other system identification information	Compaq administrator password*
Unauthorized removal of the notebook	Security cable slot (used with an optional security cable) For more information on the security cable slot, refer to the "Optional Security Cable" section in this chapter.

*This security feature is configured in the Setup utility. The Setup utility is a non-Windows utility accessed by pressing **f10** when the notebook is started or restarted. The procedures for using the Setup utility to set specific security preferences are provided in this chapter. For information about displaying system information and using other Setup utilities, refer to Chapter 13, "Setup Utility."

Security Preferences in the Setup Utility

Most security preferences are set in Setup utility. Because the Setup utility is a non-Windows utility, it does not support the pointing devices on your notebook. When using the Setup utility, you must use the keys on your notebook to navigate and make selections.

For more information, refer to Chapter 13, "Setup Utility," in this guide.

QuickLock

The **fn+f6** hotkey initiates the operating system QuickLock security feature.

QuickLock protects your notebook by displaying the operating system log-on screen. While the log-on screen is displayed, the notebook cannot be accessed until a Windows user password or Windows administrator password is entered.

Before you can use the QuickLock feature, you must set a Windows user password or Windows administrator password. For instructions, refer to the Help and Support Center by selecting **Start > Help and Support.**

- To initiate QuickLock, press **fn+f6.**
- To exit QuickLock, enter your Windows user password or Windows administrator password.

Passwords

Most security features use passwords. Whenever you set a password, write down the password and store it in a secure location away from the notebook.

- If you forget your power-on password and your Compaq administrator password, you cannot start up the notebook or restore from hibernation. Call Customer Care or your service partner for additional information.
- If you forget your Compaq administrator password, you will not be able to access the Setup utility.

Compaq and Windows Passwords

Compaq security features and Windows operating system security features work independently from one another. For example, a device disabled in the Setup utility cannot be enabled in Windows.

Some password options are provided by your Compaq software, and others are provided by your operating system. Compaq passwords and Windows passwords are also independent of one another. The following table lists the different passwords used by Compaq and Windows and describes their functions. For additional information about Windows passwords, such as screen-saver passwords, select **Start > Help and Support.**

Compaq Passwords	**Function**
Compaq administrator password	Protects access to the Setup utility.
Power-on password	Used to access the notebook during startup and when you restart the notebook.
Windows Passwords	**Function**
Administrator password*	Protects Windows administrator-level access to notebook contents.
User password*	Protects access to a Windows user account. To protect access to notebook contents when the notebook is resumed from standby, you can set a password prompt to display. Refer to "Setting a Standby Password" in Chapter 2.

*For information about setting a Windows administrator password or a Windows user password, select **Start > Help and Support.**

Compaq and Windows Password Guidelines

Compaq and Windows passwords are not interchangeable. You must use a Compaq password at a Compaq password prompt and a Windows password at a Windows password prompt. For example:

- If a power-on password is set, the power-on password (not a Windows password) must be entered when the notebook starts up or restores from hibernation.
- If you set Windows to prompt for a password before resuming from standby, a Windows password (not a power-on password) must be entered to resume from standby.

The same word or series of letters or numbers used for a Compaq password can be used for another Compaq password or for a Windows password, with the following considerations:

- The text of Compaq passwords can be any combination of up to 8 letters and numbers and is not case sensitive.
- A Compaq password must be set and entered with the same type of keys. For example, a Compaq password set with keyboard number keys will not be recognized if it is entered with keypad number keys.

  For information about the keypad, refer to "Keypads" in Chapter 3.

Although you can use the same text for various passwords, Compaq passwords and Windows passwords function independently. Even if you plan to use the same text for a Compaq password and a Windows password, you must set the Compaq password in the Setup utility and the Windows password in your operating system.

Although their names are similar, a Compaq administrator password and a Windows administrator password have different functions. For example, a Windows administrator password cannot be used to access the Setup utility, and a Compaq administrator password cannot provide administrator-level access to your notebook contents. You can, however, use the same text for both passwords.

Compaq Administrator Password

The Compaq administrator password protects the configuration settings and system identification information in the Setup utility. After this password is set, it must be entered to access the Setup utility.

The Compaq administrator password

- Is not interchangeable with a Windows administrator password, although both can use the same word or series of letters, or numbers.
- Does not display as it is set, entered, changed, or deleted.
- Must be set and entered with the same type keys. For example, a Compaq administrator password set with keyboard number keys will not be recognized if you enter it with embedded numeric keypad number keys.
- Can include any combination of up to 8 letters and numbers and is not case sensitive.

Setting Compaq Administrator Passwords

A Compaq administrator password is set, changed, or deleted in the Setup utility.

To manage the password:

1. Shut down the notebook. If you are not sure whether the notebook is off or in hibernation, turn the notebook on by pressing the power button, and then shut down the notebook through the operating system.
2. Be sure that the hard drive is inserted into the notebook (not into an optional docking device or external MultiBay).
3. Open the Setup utility by turning on or restarting the notebook. Press **f10** while Setup message is displayed in the lower-left corner of the screen.
4. Use the arrow keys to select **Security > Administrator Password,** and then press **enter.**
   - ❏ To set a Compaq administrator password, type your password in the **Enter New Password** and **Confirm New Password** fields, and then press **enter.**
   - ❏ To change a Compaq administrator password, type your current password in the **Enter Current Password** field, type the new password in the **Enter New Password** and **Confirm New Password** fields, and then press **enter.**
   - ❏ To delete a Compaq administrator password, type your current password in the **Enter Password** field, press **enter** 3 times, and then press **f10.**
5. To save your preferences and exit the Setup utility, press **f10,** and then follow the instructions on the screen.

Your preferences are set when you exit the Setup utility and take effect when the notebook restarts.

Entering Compaq Administrator Passwords

At the Enter SETUP Password prompt, type your Compaq administrator password with the same keys you used to set the password, and then press **enter.** After 3 unsuccessful attempts to enter the Compaq administrator password, you must restart the notebook and try again.

Power-On Passwords

A power-on password prevents unauthorized use of the notebook. After this password is set, it must be entered each time the notebook is turned on or restarted. A power-on password

- Does not display as it is set, entered, changed, or deleted.
- Must be set and entered with the same type keys. For example, a power-on password set with keyboard number keys will not be recognized if you enter it with embedded numeric keypad number keys.
- Can include any combination of up to 8 letters and numbers and is not case sensitive.

Setting Power-On Passwords

A power-on password is set, changed, or deleted in the Setup utility.

To manage the password:

1. Shut down the notebook. If you are not sure whether the notebook is off or in hibernation, turn the notebook on by pressing the power button, and then shut down the notebook through the operating system.
2. Be sure that the hard drive is inserted into the notebook (not into an optional docking device or external MultiBay).

3. Open the Setup utility by turning on or restarting the notebook. Press **f10** while Setup message is displayed in the lower-left corner of the screen.
4. Use the arrow keys to select **Security > Power-On password,** and then press **enter.**
   - ❏ To set a power-on password, type the password in the **Enter New Password** and **Confirm New Password** fields, and then press **enter.**
   - ❏ To change a power-on password, type the current password in the **Enter Current Password** field, type the new password in the **Enter New Password** and **Confirm New Password** fields, and then press **enter.**
   - ❏ To delete a power-on password, type the current password in the Enter Current Password field, press **enter** 3 times, and then press **f10.**
5. To save your preferences and exit the Setup utility, press **f10,** and then follow the instructions on the screen.

Your preferences are set when you exit the Setup utility and take effect when the notebook restarts.

Entering Power-On Passwords

At the power-on password prompt, type your password, and then press **enter.** After 3 unsuccessful attempts to enter the password, you must restart the notebook and try again.

Device Security

From the Setup utility Device Security menu, you can disable the ability of the notebook to start from a CD or a diskette drive.

To disable or reenable notebook capabilities in the Setup utility:

1. Shut down the notebook. If you are not sure whether the notebook is off or in hibernation, turn the notebook on by pressing the power button, and then shut down the notebook through the operating system.
2. Be sure that the hard drive is inserted into the notebook (not into an optional docking device or external MultiBay).
3. Open the Setup utility by turning on or restarting the notebook. Press **f10** while Setup message is displayed in the lower-left corner of the screen.
4. Select **Security > Device Security,** and then enter your preferences.
5. Use the arrow keys to select an item. Then:
   - ❏ To disable an item, press **f5** or **f6** to toggle the field for the item to **Disable,** and then press **enter.**
   - ❏ To reenble an item, press **f5** or **f6** to toggle the field for the item to **Enable,** and then press **enter.**
6. When a confirmation prompt with your preference selected is displayed, press **enter** to save your preference.
7. To save your preferences and exit the Setup utility, press **f10,** and then follow the instructions on the screen.

Your preferences are set when you exit the Setup utility and take effect when the notebook restarts.

Antivirus Software

When you use the notebook for e-mail, network, or Internet access, you expose the notebook to computer viruses. Computer viruses can disable your operating system, applications, or utilities or cause them to function abnormally.

Antivirus software can detect most viruses, destroy them, and in most cases, repair damage they have caused. To provide protection against newly discovered viruses, antivirus software must be updated.

Norton AntiVirus is preinstalled on the notebook. For information about using and updating the Norton AntiVirus software:

» Select **Start > All Programs > Norton AntiVirus >Help and Support.**

For more information about computer viruses:

1. Select **Start > Help and Support.**
2. Type viruses into the **Search** field.
3. Press **enter.**

Critical Security Updates for Windows XP

CAUTION: Because new computer viruses are being detected all the time, it is recommended that you install all critical updates as soon as you receive an alert from Microsoft. You should also run Windows Update on a monthly basis to install the latest recommended updates from Microsoft.

A *Critical Security Updates for Windows XP* disc may have been included with your notebook to provide additional updates delivered after the computer was configured. Throughout the life of the computer, Microsoft will continue to update the operating system and make these updates available on their Web site.

To update your system using the *Critical Security Updates for Windows XP* disc:

1. Insert the disc into the drive. (The disc automatically runs the installation application.)
2. Follow the on-screen instructions to install all updates. (This may take a few minutes.)
3. Remove the disc.

Firewall Software

When you use the notebook for e-mail, network, or Internet access, it is possible for unauthorized persons to obtain information about you, your notebook, and your data. Firewalls monitor all incoming and outgoing traffic on your computer by including features such as logging and reporting, automatic alarms, and user interfaces for configuring the firewall. To protect your privacy, it is recommended that you use firewall software.

Your notebook comes with preinstalled firewall software. Refer to the online Help in the firewall software application for additional information.

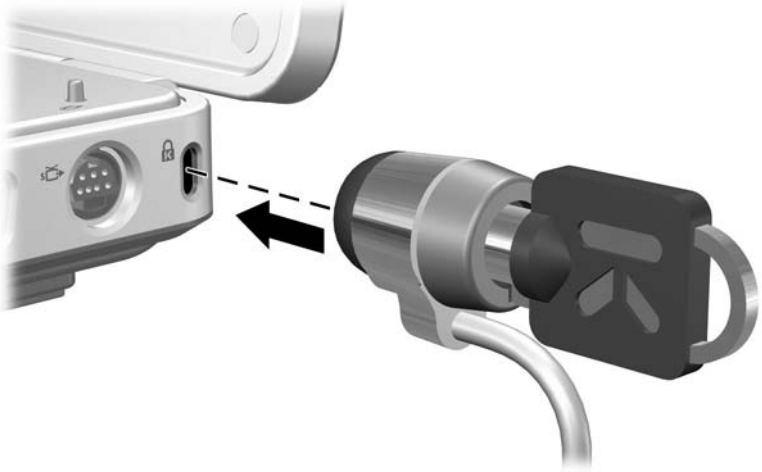
Under some circumstances a firewall can block access to Internet games, interfere with printer or file sharing on a network, or block authorized e-mail attachments. To temporarily solve the problem, disable the firewall, perform the task that is interfering with the firewall, and then reenable the firewall. To permanently resolve the problem, reconfigure the firewall.

Optional Security Cable

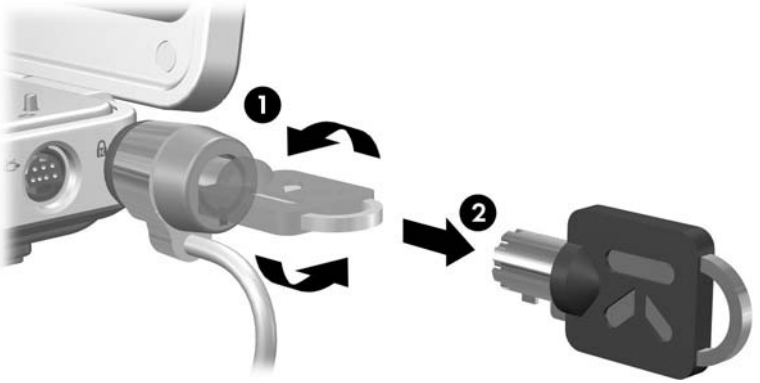
Security solutions are designed to act as deterrents. These deterrents may not prevent a product from being mishandled or stolen.

To install a security cable:

1. Loop the security cable around a secured object.
2. Insert the cable lock into the security cable slot.



3. Turn the key counterclockwise ❶, remove the key ❷, and keep it in a safe location.



13

Setup Utility

The Setup utility is a ROM-based information and customization utility that can be used even when your Windows operating system is not working or will not load.

The utility reports information about the notebook and provides settings for startup, security, and other preferences.

Step-by-step instructions for setting specific preferences are included by topic earlier in this guide. For example, procedures for setting security preferences are provided in Chapter 12, "Security."

Opening the Setup Utility

To open the Setup utility:

1. Turn on or restart the notebook in Windows.
2. Before Windows opens and while the "Press <F10> to enter setup" prompt is displayed in the lower-left corner of the screen, press **f10.**

Changing the Language of the Setup Utility

The following procedure explains how to change the language of the Setup utility.

1. To open the Setup utility, turn on or restart the notebook in Windows, and then press **f10** while the prompt, "Press <F10> to enter setup," is displayed in the lower-left corner of the screen.
2. Use the arrow keys to select the **Advanced** menu.
3. Press **f5** or **f6** (or use the arrow keys) to select a language, and then press **enter.**
4. When a confirmation prompt with your preference selected is displayed, press **enter** to save your preference.
5. To save your preferences and exit the Setup utility, press **f10** and then follow the instructions on the screen.

Your preferences are in effect when the notebook restarts in Windows.

Navigating and Selecting in the Setup Utility

Because the Setup utility is not Windows-based, it does not support the TouchPad. Navigation and selection are by keystroke.

- To choose a menu or a menu item, use the arrow keys.
- To choose an item in a drop-down list or to toggle a field, for example an Enable/Disable field, use either the arrow keys or **f5** or **f6**.
- To select an item, press **enter.**
- To close a text box or return to the menu display, press **esc.**

To display additional navigation and selection information while the Setup utility is open, press **f1.**

Displaying System Information

The following procedure explains how to display system information in the Setup utility.

1. To open the Setup utility, turn on or restart the notebook in Windows, and then press **f10** while the prompt, "Press <F10> to enter setup," is displayed in the lower-left corner of the screen.
2. Access the system information on the Main and Advanced menus.
   - ❏ To display most of the system information available in the Setup utility, use the arrow keys to select the **Main** menu.
   - ❏ To display video memory information, use the arrow keys to select the **Advanced** menu.
3. To close the Setup utility without changing any settings, use the arrow keys to select the **Exit menu > Exit Discarding Changes,** and then press **enter.** (The notebook restarts in Windows.)

Restoring Default Settings in the Setup Utility

The following procedure explains how to restore the Setup utility default settings.

1. To open the Setup utility, turn on or restart the notebook in Windows, and then press **f10** while the prompt, "Press <F10> to enter setup," is displayed in the lower-left corner of the screen.
2. Use the arrow keys to select **Exit > Load Setup Defaults.**
3. When the Setup Confirmation is displayed, press **enter** to save your preferences.
4. To save your preferences and exit the Setup utility, press **f10,** and then follow the instructions on the screen.

The Setup utility default settings are set when you exit the Setup utility and are in effect when the notebook restarts. Identification information, including ROM version information, is retained.

Using Advanced Setup Utility Features

This guide describes the Setup utility features recommended for all users. For more information about the Setup utility features recommended for advanced users only, refer to the Help and Support Center, which is accessible only when the notebook is in Windows. To access the Help and Support Center, select **Start > Help and Support.**

The Setup utility features available for advanced users include a hard drive self-test, a Network Service Boot, and settings for boot order preferences.

The "<F12> to boot from LAN" message that is displayed in the lower-left corner of the screen each time the notebook is started or restarted in Windows or restored from hibernation is the prompt for a Network Service Boot.

The "Press <ESC> to change boot order" message that is displayed in the lower-left corner of the screen each time the notebook is started or restarted in Windows or restored from hibernation is the prompt to change the boot order.

Closing the Setup Utility

You can close the Setup utility with or without saving changes.

- To close the Setup utility and save your changes from the current session, use either of the following procedures:
  - ❑ Press **f10,** and then follow the instructions on the screen.

  – or –

  - ❑ If the Setup utility menus are not visible, press **esc** to return to the menu display. Then use arrow keys to select the **Exit** menu > **Exit Saving Changes,** and then press **enter.**

  When you use the **f10** procedure, you are offered an option to return to the Setup utility. When you use the Exit Saving Changes procedure, the Setup utility closes when you press **enter.**
- To close the Setup utility without saving your changes from the current session:

  If the Setup utility menus are not visible, press **esc** to return to the menu display. Then use arrow keys to select the **Exit** menu > **Exit Discarding Changes,** and then press **enter.**

After the Setup utility closes, the notebook restarts in Windows.

14

Software Updates and Recoveries

Software Updates

For optimal notebook performance and to make sure your notebook remains compatible with changing technologies, install the latest versions of the software provided with your notebook as they become available.

You may find that the easiest way to update the software provided with your notebook is to use the software update links provided at **Start > Help and Support.**

If you prefer to work from more detailed instructions, the information in the following sections will help you to

- Prepare for updates.
- Access updates at the Compaq Web site.
- Download and install updates.

Preparing for a Software Update

If your notebook connects to a network, consult with your network administrator before installing any software updates, particularly a ROM update.

It is also recommended that you set a restore point before beginning a software update. For instructions, refer to "System Restore Points," later in this chapter.

To prepare for any software update, you need to identify your notebook type, series or family, and model. To prepare for a ROM (read-only memory) update, you need to identify the ROM version currently installed on the notebook. Refer to the following sections for information on how to access notebook product and ROM information.

The notebook ROM stores the BIOS (basic input/output system). The BIOS determines how the notebook hardware interacts with the operating system and external devices and also supports such notebook services as time and date.

Accessing Notebook Product Information

To access the updates for your notebook, you will need the following information:

- The product *category* is Notebook.
- The product *family name* and *series number* are printed on the display bezel.
- More complete *model* information is provided on the serial number label on the bottom of the notebook.

The product name, notebook model, and notebook serial number are also displayed in the same section of the Setup utility that displays ROM information, as described in the following section.

Accessing Notebook ROM Information

To determine whether an available ROM update is a later ROM version than the ROM version currently installed on the notebook, you need to know the version of the currently installed ROM.

To view the ROM version of your notebook:

» Press **fn+esc.**

When viewing system information, the system BIOS date is the version number of the system ROM. The BIOS date may display in a decimal format, such as 10/19/2003 F.07.

ROM information can also be displayed in the Setup utility.

1. Open the Setup utility. To open the Setup utility, turn on or restart the notebook.
2. Before Windows opens and while the "Press <F10> to enter setup" prompt is displayed in the lower-left section of the screen, press **f10.**
3. If the Setup utility does not open with system information displayed, use the arrow keys to select the **Main** menu. (When the Main menu is selected, ROM and other system information is displayed.)
4. To close the Setup utility without changing any settings, use the arrow keys to select **Exit > Exit Discarding Changes,** and then press **enter.** (The notebook restarts in Windows.)

For more information about using the Setup utility, refer to Chapter 13, "Setup Utility."

Downloading and Installing an Update

Most software at the Compaq Web site is packaged in compressed files called *SoftPaqs*. Some ROM updates may be packaged in compressed files called *ROMPaqs*.

Most download packages contain a file named Readme.txt. A Readme.txt file contains detailed descriptive, installation, and troubleshooting information about the download. The Readme.txt files included with ROMPaqs are in English only.

The following sections provide instructions for downloading and installing

- A ROM update.
- A SoftPaq containing an update other than a ROM update—for example, an application update.

Downloading and Installing a ROM Update

CAUTION: To prevent serious damage to the notebook or an unsuccessful installation, download and install a ROM update only while the notebook is connected to reliable external power using the AC adapter. (Do not download or install a ROM update while the notebook is connected to an oprional docking device or running on battery power.) During the download and installation:

- Do not unplug the notebook from the electrical outlet.
- Do not shut down the notebook or initiate standby or hibernation.
- Do not insert, remove, connect, or disconnect any device, cable, or cord.

Downloading a ROM Update:

1. Access the page at the Compaq Web site that provides software for your notebook:

   ❏ Select **Start > Help and Support,** and then select a software update link.

   – or –

   ❏ Visit the Compaq Web Site:

   http://www.compaq.com/consumersupport

2. Follow the instructions on the screen to identify your notebook and access the ROM update you want to download.
3. At the download area:

   a. Record the date, name, or other identifier of any ROM update that is later than the ROM currently installed on your notebook. (You may need this information to locate the update later, after it has been downloaded to the hard drive.)

   b. Record the path to the default or custom location on the hard drive to which the ROM package will download. (You may need to access the ROM package after it has been downloaded.)

   c. Follow the online instructions to download your selection to the hard drive.

Installing a ROM Update

ROM installation procedures vary. Follow any instructions that are displayed on the screen after the download is complete. If no instructions are displayed:

1. Open Windows Explorer. To open Windows Explorer from the Start button, select **Start > All Programs > Accessories > Windows Explorer.**
2. In the left pane of the Windows Explorer window, select **My Computer** and then your hard drive designation. (The hard drive designation is typically Local Disk C.) Then follow the path you recorded earlier to the folder on your hard drive that contains the update.
3. To begin the installation, open the folder, and then double-click the file with an.exe extension—for example, Filename.exe. (The ROM update installation begins.)
4. To complete the installation, follow the instructions on the screen.

After a message on the screen reports a successful installation, you can delete the downloaded file from the destination folder.

Downloading and Installing a Non-ROM SoftPaq

To update software other than the ROM—for example, an application update:

1. Access the page at the Compaq Web site that provides software for your notebook:
   - ❏ Select **Start > Help and Support,** and then select a software update link.

   – or –

   - ❏ Visit the Compaq Web site:

     http://www.compaq.com/consumersupport/

2. Follow the instructions on the screen to identify your notebook and access the SoftPaq you want to download.
3. At the download area:
   a. Write down the date, name, or other identifier of the SoftPaq you plan to download. (You may need this information to locate the update later, after it has been downloaded to the hard drive.)
   b. Follow the online instructions to download the SoftPaq to the hard drive.
4. When the download is complete, open Windows Explorer. To open Windows Explorer from the Start button, select **Start > All Programs > Accessories > Windows Explorer.**
5. In the left pane of the Windows Explorer window, select **My Computer** and then your hard drive designation (which is typically Local Disk C).
6. Select the SWSetup folder, which is the destination folder for most downloads from the Compaq Web site. If you don't see the download in the SWSetup folder, look in the My Documents folder.
7. In the destination folder, select the name or number of the software package you have downloaded.
8. Select the file that includes an.exe extension—for example, Filename.exe. (The installation begins.)
9. To complete the installation, follow the instructions on the screen.

After a message on the screen reports a successful installation, you can delete the downloaded file from the destination folder.

System Restore Points

System restore is an operating system feature that enables you to undo harmful changes to your notebook software by restoring your software to an earlier time, called a *restore point,* when your software was functioning optimally.

Restore points are restorable, benchmark "snapshots" of your software, driver, and operating system files. The notebook sets restore points at regular intervals and may set additional restore points whenever you change your personal settings or add software or hardware.

Manually setting additional restore points provides additional protection for your system files and settings. It is recommended that you manually set restore points

- Before you add or extensively modify software or hardware.
- Periodically, whenever the system is performing optimally.

Restoring to any restore point does not affect your data files. For example, restoring your system software to an earlier time will not affect documents or e-mails that you saved after that time. All System Restore procedures are reversible.

Setting a Restore Point

To set a system restore point manually:

1. Select **Start > Help and Support > System Restore.**
2. Select **Create a restore point,** and then follow the instructions on the screen.

Restoring to a Restore Point

To restore the notebook to a restore point:

1. Make sure the notebook is connected to a reliable AC outlet through the AC adapter.
2. Select **Start > Help and Support > System Restore.**
3. Select **Restore my computer to an earlier time,** and then follow the instructions on the screen.

Repairing or Reinstalling Applications

All applications preinstalled or preloaded on your notebook can be repaired or reinstalled by using the *Software Recovery* disc.

If you have not reinstalled your operating system, some applications preloaded on your notebook, such as those available in the Software Setup utility, can also be repaired or reinstalled from your hard drive.

The application reinstallation process repairs or replaces corrupted system files within the application and reinstalls deleted system files within the application.

- In most cases: If the application you are repairing or reinstalling is still installed on your notebook, the reinstallation process does not affect your settings within the application.
- In all cases: If an application has been deleted from your notebook, the reinstallation process reinstalls the application or utility to the factory image.

Reinstalling Applications from Your Hard Drive

To reinstall a preloaded application or utility from your hard drive:

» Select **Start > All Programs > Software Setup,** and then follow the instructions on the screen. (When you are prompted to select the software you want to reinstall, select or clear the appropriate check boxes.)

Reinstalling Applications from Discs

To reinstall applications from discs:

1. Insert the disc into the optical drive
   - ❏ If Autorun is enabled an installation wizard is displayed.
   - ❏ If Autorun is disabled, select **Start > Run.** Enter:

     x:/setup.exe

     where *x* is your CD drive designation

     and then select **OK.**
2. When the installation wizard is displayed, follow the installation instructions on the screen.
3. Restart the notebook if prompted.

Repairing the Operating System

To attempt an operating system repair without deleting your personal data, use the *Operating System* disc that was shipped with the notebook:

1. Connect the notebook to a power outlet through the AC adapter and turn on the notebook.
2. Immediately insert the *Operating System* disc into the notebook.
3. Shut down the notebook using the standard shutdown procedure for your operating system.

   ✎ If you are unable to shut down the notebook using the operating system, press and hold the power button for 5 seconds.

4. Press the power button again to start the notebook.
5. When prompted, press any key to boot from the disc. (After a few minutes, the Welcome to Setup screen is displayed.)

   ✎ On the Welcome to Setup screen do *not* press **R** (step 8 in this procedure) until you have completed steps 6 and 7.

6. Press **enter** to continue. (A Licensing Agreement screen is displayed.)
7. Press **f8** to accept the agreement and continue. (The Setup window is displayed.)
8. Press **R** to repair the selected Windows installation. (The repair process begins. This process may take up to 2 hours to complete. The notebook restarts in Windows after the process is complete.)

Reinstalling the Operating System

CAUTION: To prevent the loss of all of your personal data, back up your data before reinstalling the operating system. Personal data and any software you have installed on the notebook will be lost during the operating system reinstallation process.

During the reinstallation, you may be prompted for your Product Key. Your Product Key is provided on the Microsoft Certificate of Authenticity label affixedto the bottom of the notebook

If other recovery efforts do not successfully repair the operating system, you can reinstall it.

To reinstall the operating system:

1. Connect the notebook to a power outlet through the AC adapter and turn on the notebook.
2. Immediately insert the *Operating System* disc into the notebook.
3. Shut down the notebook using the standard shutdown procedure for your operating system.

   If you are unable to shut down the notebook using the operating system, press and hold the power button for 5 seconds.

4. Press the power button again to start the notebook.
5. When prompted, press any key to boot from the disc. (After a few minutes, the Welcome to Setup screen is displayed.)
6. Press **enter** to continue. (A Licensing Agreement screen is displayed.)
7. Press **f8** to accept the agreement and continue. (The Setup window is displayed.)

8. Press **esc** to continue installing a new copy of the operating system instead of repairing it.
9. Press **enter** to set up the operating system.
10. Press **C** to continue setup using this partition.
11. Select **Format the partition using the NTFS file system (Quick)** and press **enter.**

CAUTION: Formatting a drive deletes all current files.

12. Press **F** to format the drive. The reinstallation process begins. This process takes 1 to 2 hours to complete. The notebook restarts in Windows when the process is complete.

Reinstalling Device Drivers and Other Software

After the operating system installation process is complete, you must reinstall drivers.

To reinstall drivers, use the *Driver Recovery* disc included with the notebook:

1. While running Windows, insert the *Driver Recovery* disc into the optical drive.

   If you do not have Autorun enabled, select **Start > Run.** Then type D:\SWSETUP\APPINSTL\SETUP.EXE (where D indicates the optical drive).

2. Follow the on-screen instructions for installing the drivers.

After the drivers are reinstalled, you must reinstall any software you added to the notebook. Follow the installation instructions provided with the software.

Updating Reinstalled Software

It is strongly recommended that you update all reinstalled software.

Depending on the settings you used on your former configuration, some software may have been updated without your knowledge.

Use the following update procedures as soon as your notebook is connected to the Internet.

- To update your operating system and the software included on your notebook, select **Start > Help and Support.**
- To update software that was not provided on your notebook, follow the instructions included with the software. Many applications include an update feature that you can access from a Help button or menu item within the application.

Installing a Retail Version of an Operating System

CAUTION: To prevent the loss of notebook operating system enhancements, do not install a retail version of an operating system. In some cases, the loss of enhancements may result in an unresponsive system.

The operating system that was shipped on your notebook and on the *Operating System* disc included with your notebook is enhanced for Compaq notebooks. The enhancements add power and security features and provide supplementary support for external devices such as drives and PC Cards.

The functionality of your notebook was tested for use with the operating system provided with your notebook.

15

Notebook Care

WARNING: Always disconnect the notebook from the wall outlet and disconnect external devices before attempting to clean your notebook or any of its components.

WARNING: Do not spray liquids on your notebook, display, or keyboard. Liquids and household solvents can permanently damage your notebook's finish and interior components.

Your notebook is designed as a durable product. To maintain its performance and promote longevity, follow these guidelines:

- Carry and store your notebook in a portable carrying case.

  To prevent possible damage to the display, do not place anything on top of the notebook even when it is in the carrying case.

- Keep liquids and excessive moisture away from your notebook and keyboard to prevent costly repairs.

  To reduce the risk of electric shock or damage to internal components, do not allow liquids to drip onto the notebook keyboard.

- Avoid exposing your notebook to direct sunlight, extreme temperatures, or ultraviolet light for extended periods of time.

- Use your notebook only on a solid, flat surface. Make sure that the vents, which cool internal components, are unobstructed.

  ⚠ To prevent overheating, do not obstruct the vents. Do not allow a hard surface, such as an adjoining optional printer, or a soft surface, such as fabric or carpet, to block the airflow.

- If the notebook will be unused for a week or more, turn it off.
- If the notebook will be disconnected from external power for more than 2 weeks:
  - ❏ Shut down the notebook.
  - ❏ Remove all battery packs and store them in a cool, dry place.

Temperature

⚠ **WARNING:** The notebook is designed to run demanding applications at full power. As a result of increased power consumption, it is normal for the notebook to feel warm or hot when used continuously. To avoid potential discomfort or burns, do not block the air vents or use the notebook on your lap for extended periods. The notebook complies with the user-accessible surface temperature limits defined by the International Standard for Safety of Information Technology Equipment (IEC 60950).

Keyboard

CAUTION: Do not use liquids of any kind on the keyboard, because they may permanently damage your keyboard. Do not use a regular vacuum cleaner to clean the keyboard, because you may deposit normal household debris on the surfaces, rather than remove it.

Clean the keyboard regularly to prevent keys from sticking and to remove dust, lint, and particles that can become trapped beneath the keys. Ideally, use a can of compressed air with a straw extension to blow air in and around the keys.

Display

CAUTION: Never spray water, cleaning fluids, or chemicals on the screen. Doing so can permanently damage your notebook.

To remove smudges and lint, frequently clean your display with a soft, damp, lint-free cloth. If the screen requires additional cleaning, use an antistatic screen cleaner or premoistened antistatic wipes.

TouchPad

Grease and dirt on the TouchPad can cause your cursor to jump around on the display screen. To avoid this, wash hands frequently when using the notebook and clean the TouchPad with a damp cloth.

16

Travel and Shipping

Preparation for Travel and Shipping

To prepare the notebook for shipping or traveling:

1. Back up your work.
2. Remove all CDs, DVDs, diskettes, discs, PC Cards, ExpressCards, and digital cards.
3. Turn off and disconnect all external devices.
4. Turn off the notebook.
5. If the notebook will be disconnected from an external power source for more than 2 weeks, remove all battery packs and store them in a cool, dry place.
6. If you are shipping the notebook, place it in the original packing box or similar protective packaging and label the package as "FRAGILE."

Tips for Traveling with Your Notebook

- Take a backup of your work with you. Keep the backup separate from the notebook.
- When traveling by air, carry your notebook as hand baggage. Do not check it in with the rest of your luggage.

- Do not expose the notebook or diskettes to a magnetic security detector.
  - ❏ The security device that examines carry-on items placed on a conveyor belt uses x-rays and is safe for the notebook and diskettes.
  - ❏ The walk-through security device and the handheld security wands are magnetic and may damage the notebook or diskettes.
- If you plan to use the notebook during a flight, check with the airline in advance. In-flight notebook use is at the discretion of the airline.
- If your notebook has a GSM (Global System for Mobile Communication) or GPRS (General Packet Radio Service) device, you must turn off the device before boarding and keep it turned off if you plan to use your notebook during the flight.
- If you are traveling internationally:
  - ❏ Consult a service partner or Customer Care about power cord and adapter requirements for each location in which you plan to use the notebook. (Voltage, frequency, and plug configurations vary.) Refer to either your warranty documentation or the *Worldwide Telephone Numbers* booklet (English only) to contact Customer Care for help and support.

    ⚠ To reduce the risk of electric shock, fire, or damage to the equipment, do not attempt to power the notebook with a voltage converter kit sold for appliances.

  - ❏ Check the computer-related customs regulations for each country on your itinerary.

17

Specifications

Operating Environment

The operating environment information in the following table might be helpful if you plan to use or transport the notebook in extreme environments.

Factor	Metric	U.S.
Temperature		
Operating	10°C to 35°C	50°F to 95°F
Nonoperating	-20°C to 60°C	-4°F to 140°F
Relative humidity (noncondensing)		
Operating	10% to 90%	10% to 90%
Nonoperating	5% to 95%	5% to 95%
Maximum altitude (unpressurized)		
Operating (14.7 to 10.1 psia)	-15 m to 3,048 m	-50 ft to 10,000 ft
Nonoperating (14.7 to 4.4 psia)	-15 m to 12,192 m	-50 ft to 40,000 ft

Rated Input Power

The power information in this section might be helpful if you plan to travel internationally with the notebook.

The notebook operates on DC power, which can be supplied by an AC or a DC power source. Although the notebook can be powered from a stand-alone DC power source, it is strongly recommended that the notebook be powered only with an AC adapter or DC power cord supplied with or approved for your notebook.

The notebook is capable of accepting DC power within the following specifications.

Input Power	Rating
Operating voltage	18.5 V dc @ 3.5 A - 65 W
Operating current	3.5 A

This product is designed for IT power systems in Norway with phase-to-phase voltage not exceeding 230 Vrms.

Expansion Port Input/Output Signals (Select Models Only)

The expansion port signal information in this section may be helpful if you plan to use an optional notebook docking device that connects to the expansion port 2 on your notebook (select models only).

For the location of the expansion port 2, refer to "Left-Side Components" in Chapter 1, "Component ID."

If your notebook has an expansion port 2, it has only one expansion port. The term *expansion port 2* describes the type of expansion port.

The following table identifies the input and output signals supported by the expansion port 2 (select models only) on your notebook.

Not all docking devices will support these features.

Feature	Support
USB 2.0	Yes
10/100 Ethernet	Yes
Gigabit Ethernet	No
IEEE 1394 (4-pin port)	Yes
Consumer IR (for optional remote control only)	No
Power inputs	65 W
Composite video	Yes
S-Video	Yes
Component video	Yes (select models only)
S/PDIF audio	Yes
DVI	No
Headphone/speaker audio-out	Yes
Microphone audio-in	Yes

Index

1394 port 1–11

A

AC adapter 1–17
adapter, modem 10–3
administrative password. *See* passwords
administrator password 12–4
aircraft adapter 2–15
airport security devices 5–2, 16–2
altitude specifications 17–1
antennae, wireless 1–7
antivirus software 12–11
applications key, Windows 1–2
applications, reinstalling or repairing 1–18
applications. *See* software; software updates
audio-in jack
  identifying 1–11, 1–13
  using 4–2
audio-out jack
  identifying 1–11, 1–13
  using 4–3
automobile adapter 2–15
AutoPlay 4–8
autorun 4–8

B

battery bay 1–16
battery light
  displaying charge status 2–15, 2–17
  identifying 1–9
battery pack
  acceptable temperature ranges 2–26
  calibrating 2–19
  charging 2–15
  conserving power 2–22
  disposing of 2–27
  identifying 1–17
  inserting 2–25
  low-battery conditions 2–17
  monitoring charge 2–16
  recharging 2–22
  removing 2–24
  storing 2–26
battery pack release latch 1–16, 2–24

bays
battery 1–16
hard drive 1–16
See also compartments
BIOS (basic input/output system) 14–2
See also ROM
BIOS information, displaying 12–2, 14–3
BIOS version 14–3
Bluetooth
interference with standby and hibernation 2–6
overview 11–1, 11–10
software 11–10
Bluetooth label 1–19
boot order preferences 13–4
buttons
display release 1–8
mute 1–5
power/standby 1–4, 2–12
TouchPad 1–3, 3–2
volume 1–5, 4–1
wireless 1–5, 11–2, 11–12
See also battery pack release latch; display switch; keys

C

cable lock, security 1–14
cables
audio 4–4
modem 1–17, 10–1
network 1–10, 10–7
S-Video 4–4
See also power cord
calibration, battery 2–19
caps lock light 1–6
card and socket services, PC Card 6–1, 6–6
card. *See* PC Card; Secure Digital (SD) Memory Card
carrying notebook 15–1
CD drive. *See* optical drives
CDs
audio hotkeys 3–11
displaying contents 5–8
removing 5–7
Certificate of Authenticity label 1–18
cleaning notebook 15–1, 15–3
Compaq password 12–4
Compaq password guidelines 12–5
compartments
memory module 1–15
Mini PCI 1–15
See also bays
component video 17–4
composite video 3–9, 17–4
compressed air 15–3
Computer Setup, setting security preferences 12–2
connection problems, modem 10–5
connector, power 1–10
See also jacks; ports
conservation, power 2–22
consumer IR 17–4
copyright warning 4–7
cord, power 1–17, 2–1
See also cables

country-specific modem adapter 1–17, 10–3
critical low-battery condition 2–17
Customer Care 1–18, 16–2

D

device disabling 12–10
device security 12–10
dial tones 10–6
dialing settings 10–5
digital cards
  disabling 7–4
  inserting 7–2
  Memory Stick (MS) 7–1
  Memory Stick Pro (MSP) 7–1
  MultiMediaCard (MMC) 7–1
  removing 7–3
  restarting 7–4
  Secure Digital (SD) Memory Card 7–1
  Secure Digital Input/Output (SD I/O) 7–1
  SmartMedia (SM) card 7–1
  supported 1–12
  xD-Picture Card (XD) 7–1
display
  cleaning 15–4
  controlling brightness 3–11
  switching image 3–8
  See also display switch
display release button 1–8
display switch
  identifying 1–4
  setting preferences 2–12
drive media
  airport security effects 5–2
  interference with hibernation and standby 2–6
drivers
  PC Card 6–1
  reinstalling or repairing 1–18
  retail operating systems 14–14
  wireless devices 11–6
drives
  affected by airport security 5–2
  caring for 5–2
  optical 1–13
  shipping 5–2
  See also CDs; DVDs; hard drives; optical drives
DVD region settings 4–9
DVDs
  displaying contents 5–8
  hotkeys 3–11
  removing 5–7
DVI 17–4

E

electric shock warning 2–1
electrostatic discharge (ESD) 5–2
emergency shutdown procedures 2–10

enablers, PC Card 6–1, 6–6
environmental specifications 17–1
ESD (electrostatic discharge) 5–2
expansion port 2 17–3
ExpressCard
  configuring 6–6
  identifying 6–5
  inserting 6–6
  removing 6–8
ExpressCard slot 1–12
  inserting ExpressCard 6–6
  removing ExpressCard 6–8
ExpressCard slot cover 6–6
external monitor port 1–11, 1–14
external numeric keypad 3–15

F

firewall software 12–13
flash memory card. *See* digital cards
fn key 1–2
function keys 3–5

G

GPRS (General Packet Radio Service) devices 16–2
GSM (Global System for Mobile Communication) devices 16–2

H

hard drive bay, identifying 1–16
hard drives
  installing primary 5–3
  self-test 13–4
headphone jack
  identifying 1–11, 1–13
  using 4–3
headphones 4–3
Help and Support Center 3–7
  See also technical support
hibernation
  caution 2–4
  disabling 2–4
  enabling 2–4
  file space requirements for 8–6
  initiated during critical low-battery condition 2–17
  initiating 2–5, 2–9
  interference 2–6
  overview 2–4
  restoring from 2–9
  setting preferences 2–10
hibernation file 2–4
hotkey commands
  access Help and Support Center 3–7
  control media activity (play, pause, stop, etc.) 3–11
  decrease display brightness 3–11
  display system information 3–13, 14–3
  increase display brightness 3–11

initiate QuickLock 3–10
initiate standby 2–8, 2–11
open Internet Explorer 3–8
open print options window 3–8
Quick Reference 3–6
switch image 3–8
hotkeys
identifying 3–5
identifying function keys 1–1
procedures 3–7
Quick Reference 3–6
using with external keyboard 3–7
hotspots 11–1
hub, USB 9–2
humidity specifications 17–1

I

IDE (Integrated Drive Electronics) drive light 1–9
identifying components
bottom 1–15
front 1–8
left-side 1–10
right-side 1–13
top 1–1
infrared communication interference 2–6
installing CD and DVD software 4–8
Internet Connection Wizard 3–8
Internet Explorer 3–8

J

jacks
audio-in (microphone) 1–11, 1–13, 4–2
audio-out (headphone) 1–11, 1–13, 4–3
RJ-11 (modem) 1–10, 10–2
RJ-45 (network) 1–10, 10–7
S-Video-out 1–11, 1–14, 4–4
See also connector, power; ports

K

keyboard, cleaning 15–3
keyboard, external 3–7, 9–2
keypad, embedded
identifying 1–2
using 3–14
keypad, external 3–15
keys
embedded keypad 1–2, 3–15
fn 1–2
function (**f1, f2,** etc.) 1–1
hotkeys 3–5
num lock 3–14
scroll lock 3–7
shift 2–9, 3–15
Windows applications 1–2
Windows logo 1–1
See also buttons; display switch

L

labels 1–18
  Microsoft Certificate of Authenticity 1–18
  Service Tag 1–18
  wireless certification 1–19
  WLAN 1–19
language, changing in Setup utility 13–2
latch, battery pack release 1–16
  See also buttons; display switch
lights
  battery 1–9, 2–15, 2–17
  caps lock 1–6
  IDE drive 1–9
  mute 1–6
  num lock 1–6, 3–14
  power button 1–6
  power/standby 1–6, 1–9
  wireless 1–6, 11–2, 11–12
lock, security cable 1–14, 12–14
low-battery condition 2–17

M

media. *See* drive media
memory modules
  adding 8–2
  overview 8–1
  supported 8–1
Memory Reader 1–12
Memory Stick (MS) 7–1
Memory Stick Pro (MSP) 7–1
memory, displaying amount of 3–7
microphone 4–2
microphone jack
  identifying 1–11, 1–13
  using 4–2
Microsoft Certificate of Authenticity label 1–18
Mini PCI compartment 1–15
model number 14–2
model, identifying notebook 3–7
modem
  connecting 10–2
  connection problems 10–5
  country-specific adapter 1–17, 10–3
  dial tones 10–6
  noise supression circuitry 10–2, 10–3
  software 10–7
modem adapter 10–1
Modem Approval label 1–19
modem cable 1–17, 10–1
modem jack
  connecting 10–2
  identifying 1–10
monitor port, external 1–11, 1–14
monitor, switching image 3–8
mouse properties 3–4
MultiMediaCard (MMC) 7–1
mute button 1–5
mute light 1–6

N

network cable 1–10
network jack
  connecting 10–7
  identifying 1–10
Network Service Boot 13–4
Norton AntiVirus 12–11
notebook model, family, type, and serial number 3–7
notebook product information 14–2
num lock key 3–14
num lock light 1–6, 3–14
numeric keypad. *See* keypad, external; keypad, embedded

O

opening the notebook 1–8
operating environment specifications 17–1
operating system
  installing retail version 14–14
  passwords 12–4
  Product Key 1–18
  reinstalling 14–11
  repairing 14–11
  security 12–1
  System Restore 14–8
operating system, Windows, reinstalling or repairing 1–18
optical drives
  identifying 1–13
  removing disc 5–7

P

passwords
  Compaq 12–4
  Compaq guidelines 12–5
  forgetting 12–3
  power-on 12–4, 12–8
  QuickLock 3–10
  standby 2–11
  using 12–3
  Windows administrator 3–10
  Windows guidelines 12–5
  Windows user 3–10
passwords, coordinating 12–5
PC Card
  enablers and card and socket services 6–1
  inserting 6–2
  removing 6–4
  stopping 6–4, 6–8, 7–3
PC Card slot 1–12
pointing device 3–3
pointing device preferences 3–4
ports
  1394 1–11
  expansion port 2 1–11
  external monitor 1–11, 1–14
  monitor 3–8
  USB 1–11, 1–13
  See also connector, power; consumer IR; jacks

power
AC adapter 1–17
connecting 2–1
conserving 2–22
disconnecting 2–1
schemes 2–13
selecting a source 2–2
setting preferences 2–10
travelling tips 16–2
See also battery pack; hibernation; shutdown procedures; standby
power connector 1–10
power cord 1–17, 2–1
See also cables
Power Meter 2–16
power schemes 2–10
power settings 2–7
power/standby button
changing function 2–12
identifying 1–4
setting preferences 2–12
power/standby light 1–6, 1–9
power-on password 12–4, 12–8
product information 14–2
Product Key 1–18
product name and number, notebook 1–18, 3–7
projector
connecting 1–11, 1–14
switching image 3–8

Q

QuickLock 3–10
QuickLock hotkey 12–3

R

RAM (random access memory) 8–1, 8–6
rated input power specifications 17–2
recovery discs 14–9
region settings, DVD 4–9
regulatory information
Modem Approval label 1–19
Regulatory label 1–18
wireless certification labels 1–19
Regulatory label 1–18
release latch, battery pack 1–16, 2–24
restore point 14–8
RJ-11 (modem) jack
connecting 10–2
identifying 1–10
RJ-45 (network) jack
connecting 10–7
identifying 1–10
ROM
defined 14–2
determining current version of 14–3
downloading and installing 14–4
updates for 14–4
version of 14–3
ROM updates 14–4
ROMPaqs 14–4

S

S/PDIF audio 17–4

scroll lock key 3–7
scroll zone, TouchPad 1–3, 3–2
scrolling preferences 3–4
Secure Digital (SD) Memory Card 7–1
Secure Digital Input/Output (SD I/O) 7–1
security cable lock, connecting 12–14
security cable slot 1–14
security features 12–1
security features on notebook, Computer Setup 12–2
security password 2–11
serial number 1–18, 3–7, 14–2
series, notebook 14–2
Service Tag 1–18
Setup utility
  changing language 13–2
  closing 13–5
  default settings 13–4
  navigating 13–3
  opening 13–2
  overview 13–1
  restoring default settings 13–4
  setting security preferences 12–2
shift key
  hibernation function 2–9
  keypad function 3–15
shipping 16–1
shortcut menu 1–2
shutdown 2–5, 2–7, 2–10
signals supported 17–4
sleep button 2–11, 3–10
slots
  ExpressCard 1–12
  memory module 8–1
  PC Card 1–12
  SD Card 7–1
  security cable 1–14
SmartMedia (SM) card 7–1
socket services
  ExpressCard 6–6
  PC Card 6–1
SoftPaqs 11–9, 14–4, 14–6
software
  antivirus 12–11
  Bluetooth 11–10
  firewall 12–2, 12–13
  Internet Connection Wizard 3–8
  modem 10–7
  Power Meter 2–16
  recommended power sources 2–2
  reinstalling or repairing 1–18, 14–9, 14–11
  ROMPaq 14–4
  security features 12–1
  Setup utility 13–1
  SoftPaq 14–4
  System Restore 14–8
  updating 14–2
  WLAN 11–8
software updates
  overview
  preparing for 14–2

speakers
external 4–3
internal 1–8
specifications
operating environment 17–1
rated input power 17–2
SSID 11–7
standby
caution 2–3
initiated during critical low-battery condition 2–17
initiating 2–5, 2–8
interference 2–6
overview 2–3
power/standby light 1–9
resuming from 2–8
setting preferences 2–10
stereo speakers
external 4–3
internal 1–8
storing notebook 15–1
S-Video devices, connecting 4–4
S-Video support 17–4
S-Video-out jack 1–11, 1–14
switch, display
identifying 1–4
settings 2–12
system information 13–3, 14–3
System Restore 14–8
system restore points 14–8

T

technical support 1–18, 16–2
See also Help and Support Center
telephone line type 10–5
television
connecting audio 4–3
connecting video 4–5
temperature
battery pack 2–26
specifications 15–2, 17–1
terminal emulation 10–7
TouchPad
cleaning 15–4
enabling tapping 3–4
identifying 1–3, 3–1
TouchPad buttons 1–3, 3–2
TouchPad scroll zone 1–3, 3–2
traveling 16–1
traveling with the notebook
environmental specifications 17–2
Modem Approval label 1–19
wireless certification labels 1–19
troubleshooting
travel connection problems 10–5
WLANs 11–9
turning off notebook 2–7
turning on notebook 2–7
tutorials 3–7

U

updates, software 14–14
USB devices 9–1, 9–2
USB hubs 9–2
USB ports 1–11, 1–13, 9–2
user passwords. *See* passwords

V

VCR
  connecting audio 4–3
  connecting video 4–4
vents 1–16
video devices, connecting 4–4
viruses, antivirus software 12–11
voltage converter kit 16–2
volume buttons 1–5, 4–1
volume, adjusting 4–1

W

Wi-Fi Protected Access (WPA)-Personal 11–7
Windows administrator password. *See* passwords
Windows applications key 1–2
Windows firewall 12–2
Windows logo key 1–1
Windows password guidelines 12–5
Windows Start menu 1–1
Windows user password. *See* passwords
Wired Equivalent Privacy (WEP) 11–7
wireless
  documentation 11–8
  overview 11–1
  security 11–7
wireless antennae 1–7
Wireless Assistant 11–2, 11–13
wireless button 1–5, 11–2, 11–12
wireless certification label 1–19
wireless devices
  disabling 11–15
  drivers 11–6
  identifying 11–8
  Mini PCI compartment 1–15
  power states 11–12
  turning off 11–15
  turning on 11–14
wireless light 1–6, 11–2, 11–12
WLAN adapters 11–4
WLAN label 1–19
WLAN software 11–8
WLANs
  documentation 11–8
  identifying devices 11–7
  overview 11–3
  security 11–7
  setting up 11–5
  troubleshooting 11–9
  using 11–6

X

xD-Picture Card (XD) 1–12, 7–1