

### Hardware Guide Evo Notebook N200 Series

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This guide identifies computer hardware features and provides procedures for using them. It also includes instructions for setting up the computer, information about connecting external devices, and computer specifications. © 2001 Compaq Computer Corporation

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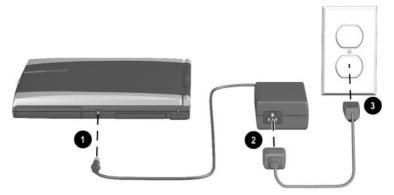
# Hardware and Software Setup

# Setting Up the Hardware

| CAUTION: Setup must begin with connecting the computer to AC power<br>To prevent file corruption, possible damage to components, and ensure<br>that correct device drivers load:   |  |  |  |
|--|--|--|--|
| Allow sufficient air circulation around the computer and the<br>AC Adapter during use and while charging the battery pack to<br>ensure adequate cooling of the device. Prevent direct exposure<br>to radiant heat sources. |  |  |  |
| Run the computer during setup on external AC power, not on battery power.  |  |  |  |
| Do not set up the computer while it is docked in an optional<br>Mobile Expansion Unit.   |  |  |  |
|  |  |  |  |

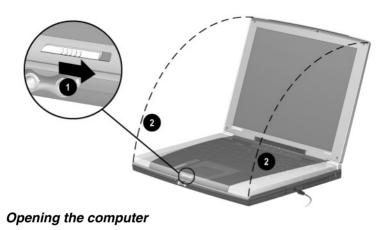
1. Place the computer on a flat surface near an electrical outlet, then connect the computer to external AC power.

Plug the AC Adapter cable into the DC power connector **1** on the right side of the computer. Plug the power cord into the AC Adapter **2** and into an electrical outlet **3**. (Power cords and outlets vary by country.)



Connecting the computer to external power

Open the computer by sliding the display release latch to the right ① and raising the display ②.



Hardware Guide

3. Turn on the computer by sliding and releasing the power switch **①**.



#### Turning on the computer

When hardware setup is complete:

- The power/suspend light **2** is on because the computer is on.
- The battery light ③ is on because the battery pack is charging. The battery pack began to charge as soon as the computer was connected to external power. The battery light remains on while the battery pack is charging and turns off when the battery pack is fully charged.
- You are prompted to begin software setup.

# Setting Up the Software

The initial setup prompt appears on the screen when the computer is turned on.

Before responding to the initial setup prompt and proceeding through the online instructions, read the following setup information:



**CAUTION:** To prevent file corruption and ensure that the correct device drivers install during initial setup:

- Do not unplug the computer from the electrical outlet.
- Do not shut down the computer.
- Once you begin initial software setup, you must complete the entire process. Setup time varies by computer configuration.
- If you are prompted to select a language or operating system, choose carefully.
  - □ The languages and operating system that you do not choose will be deleted from the system and cannot be restored during initial setup.
  - □ An operating system available during initial setup is enhanced by Compaq. When an operating system is deleted, the enhancements are also deleted.
- During the setup process, you must accept the End User License Agreement to continue.

### **Installing Optional Applications**

You can install third-party applications or preloaded Compaq utilities at any time after initial setup is complete.

- To install a third-party application, refer to the documentation included with the application.
- To install a preloaded Compaq utility, select the Setup Compaq Software icon on the Desktop, then follow the instructions on the screen.

If the icon does not display on the Desktop after initial setup is complete, select Start > Run. On the command line, type:

C:\cpqapps\setup.exe preload

To display descriptions and space requirements of preloaded Compaq utilities without installing them, select the Setup Compaq Software icon on the Desktop, then select Next. After viewing the utility information, select Cancel, then select Exit Setup.

### After Software Setup

After the initial setup is complete, you may want to:

■ Calibrate the battery pack.

Although you can use a new battery pack that has been fully charged to run the computer, the amount of charge in the battery pack may not be reported accurately until the battery pack has been calibrated. For calibration information and instructions, refer on this CD to the *Utilities* guide, "Power Management" section.

■ Set the power switch, suspend button, or display switch to initiate Hibernation.

Hibernation is an energy-saving feature and safeguard that saves all information in RAM (random access memory) to a hibernation file on the hard drive, then shuts down the computer. When you exit Hibernation, your work returns to the screen where you left off. To replace a battery pack that is the sole power source, you must either initiate Hibernation or shut down the computer.

Although Hibernation can be initiated from the Microsoft Windows 2000 Professional operating system Shut Down menu, it may be more convenient in either the Windows 2000 Professional or the Microsoft Windows XP Professional operating system to initiate it from a button or switch. For more information about using Hibernation, refer on this CD to the *Utilities* guide, "Power Management" section, "Setting Power Procedure Preferences."

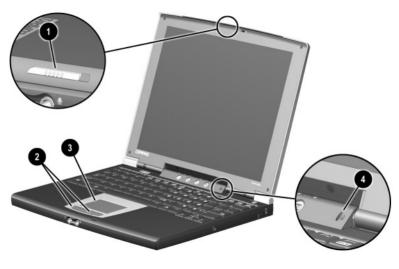
Read suggestions for creating a safe and comfortable work environment. Ergonomic and safety information about the computer is provided on this CD in the Safety & Comfort Guide.

 $\sum$  WARNING: To reduce the risk of personal injury, electric shock, fire, or damage to the equipment:

- Do not disable the power cord grounding plug. It is an important safety feature.
- Plug the equipment into a grounded (earthed) electrical outlet that is easily accessible at all times.
- Do not place anything on power cords or cables. Arrange them so that no one may accidentally step on or trip over them.
- Disconnect power from the equipment by unplugging the power cord from the electrical outlet.
- Do not pull on a cord or cable. When unplugging from the electrical outlet, grasp the cord by the plug.

# A Look at the Computer

# TouchPad, Display Release Latch, and Microphone



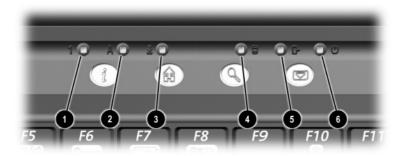
Display release latch

Opens the computer.

- Left and right TouchPad buttons
   Function like the left and right buttons on an external mouse.
- **③** TouchPad Moves the pointer, selects, and activates.
- 4 Microphone

Inputs single-channel sound.

# **Top Components: Lights**



| 0 | Num lock light         | On: Num lock is on or the embedded numeric keypad is enabled.  |
|---|------------------------|--|
| 0 | Caps lock light        | On: Caps lock is on.   |
| 6 | Scroll lock light      | On: Scroll lock is on.   |
| 4 | Drive light            | On: The primary hard drive or any drive in an optional Mobile Expansion Unit is being accessed.  |
| 6 | Battery light          | On: A battery pack is charging.<br>Blinking: A battery pack that is the only<br>available power source has reached a<br>low-battery condition.   |
| 6 | Power/suspend<br>light | On: Power is turned on.<br>Blinking: Computer is in Suspend <sup>*</sup><br>The power/suspend light also blinks when a<br>battery pack that is the only available power<br>source reaches a critical low-battery condition<br>while Hibernation is disabled. |

<sup>\*</sup>In Windows XP Professional and Windows 2000 Professional, the term *Standby* replaces the term *Suspend*.

# **Top Components: Power Controls**





0

• Power switch\*

Suspend button\*

Turns the computer on or off or exits Suspend or Hibernation.\*\*

When slid while pressing the suspend button<sup>\*</sup>, resets the computer.

- Turns on the computer if it is off.
- Initiates and exits Suspend.\*†
- When pressed while sliding the power switch, resets the computer.

6 Display switch

Turns off the computer display if the computer is closed while it is on.<sup>†</sup>

<sup>\*</sup>In Windows XP Professional and Windows 2000 Professional, the term sleep button replaces the term suspend button, and the term Standby replaces the term Suspend.

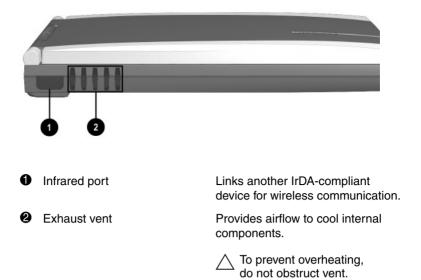
<sup>†</sup>This table describes default settings. Different settings can be selected. For more information about optional power settings, refer on this CD to the Utilities guide, "Power Management" section, "Setting Power Procedure Preferences"

# **Top Components: Keys and Buttons**

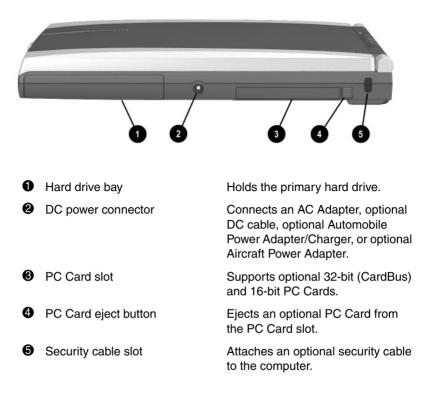


| 0 | Easy Access<br>Buttons (4) | Programmable buttons that provide quick<br>access to Internet or network destinations or<br>to software applications or data files in the<br>system. |
|---|----------------------------|--|
| 0 | Function keys              | Execute system and application commands. Used with <b>Fn</b> key, execute hotkey commands.   |
| € | Windows logo key           | Displays Windows Start menu.   |
| 4 | <b>Fn</b> key              | Combines with other keys to execute system commands.   |
| 6 | Applications key           | Displays shortcut menu for item beneath the pointer.   |

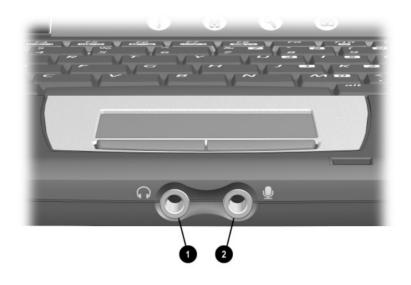
# Left Side Components



# **Right Side Components**



## **Front Panel Components**





• Stereo speaker/headphone (line-out) jack

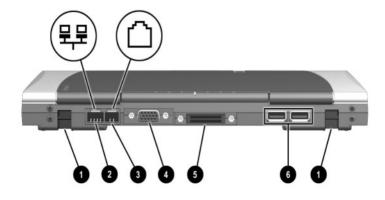


Microphone jack

Connects optional, powered stereo speakers, headphones, headset, or television audio.

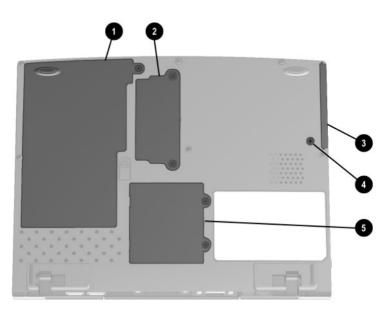
Connects an optional single sound channel microphone.

# **Rear Panel Components**



| 0 | External battery pack connectors (2) | Connect an optional external battery pack.   |
|---|--------------------------------------|--|
| 2 | RJ-45 jack                           | Connects an optional network cable.  |
|   |                                      | The RJ-45 jack functions<br>only when a network<br>interface card (NIC) is<br>installed in the computer. |
| 0 | RJ-11 jack                           | Connects the modem cable.<br>(A modem cable is included with<br>internal modem models.)                  |
|   |                                      | The RJ-11 jack functions<br>only when an internal<br>modem is installed in the<br>computer.              |
| 4 | External monitor connector           | Connects an optional external monitor or desktop projector.  |
| 6 | Mobile Expansion Unit connector      | Connects the computer to an optional Mobile Expansion Unit.  |
| 6 | USB connectors (2)                   | Connect optional USB devices.  |

# Bottom Components: Bays and Compartments





- Battery bay
- Memory expansion compartment
- Hard drive bay
- Hard drive bay retaining screw
- Mini PCI (personal computer interface) compartment

Holds the primary battery pack.

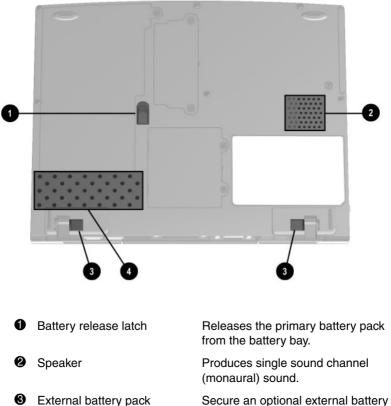
Contains 1 memory expansion slot, which supports a memory expansion board providing up to 128 megabytes of RAM (random access memory).

Holds the primary hard drive.

Secures the primary hard drive in the hard drive bay.

Holds the combination modem/NIC (network interface card).

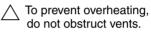
# Bottom Components: Speaker, Latches, and Vents



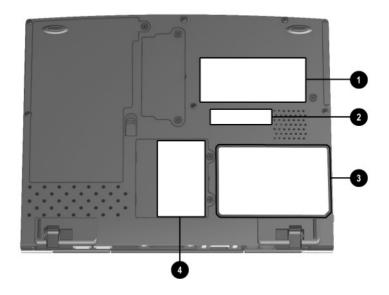
 External battery pack Sec security latches (2) pack

Intake vents

pack to the computer. Allow airflow to cool internal components.



# **Bottom Components: Labels**





• Certificate of Authenticity label



2 Serial number



4 Modem agency approvals label (internal modem models only)

Contains your Product Key number. You may need this number to update or troubleshoot your operating svstem.

Identifies the computer. You will need this number if you call Compag customer support.

Provides regulatory information about the computer.

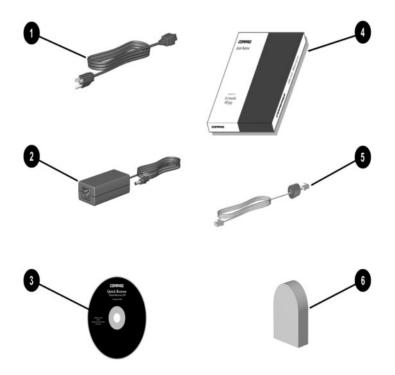
Lists the countries in which the modem has been approved for use. You may need this information to use the modem while traveling.

# **Additional Standard Components**

The components included with the computer vary by geographical region and the computer hardware configuration ordered.

The following illustration and table identify the standard external components included with most computer models.

This illustration does not include printed documentation or such components as the hard drive and primary battery pack, which ship inside computer bays identified in previous sections.

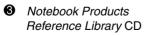


Identifying additional standard components

### Additional Standard Components and their Functions



2 AC Adapter



Connects the AC Adapter to an AC electrical outlet

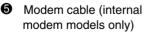
Converts AC power to DC power.

Contains the following guides:

- Hardware Guide -
- l Itilities -
- Modem and Networking
- Modem Commands
- Maintenance. Shipping and Travel
- Troubleshooting
- Regulatory and Safety Notices
- Safetv & Comfort Guide
- All guides on the *Notebook* Products Reference Library CD are available on the Compag Web site at http://www.compag.com/support.



OuickBestore kit



**6** Country-specific modem adapter (included with internal modem models by region as required)

Contains the preloaded and preinstalled software on the computer.

Connects the modem to an RJ-11 telephone jack or to a country-specific modem adapter.

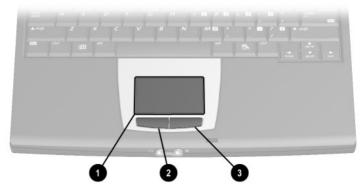
Adapts the modem cable to a non-RJ-11 telephone iack.

# **Keyboard and Pointing Device**

# **Using the TouchPad**

Use the TouchPad **1** and the left **2** and right **3** TouchPad buttons to perform mouse functions with any software that supports a Windows-compatible mouse.

- To move the pointer, slide your finger across the TouchPad surface in the direction you want to move the cursor.
- Use the left and right TouchPad buttons as you would the left and right buttons on an external mouse.



Identifying TouchPad components

The TouchPad is supported by the mouse software in your operating system. To access the custom settings available in this software:

- In Windows XP Professional, select Start > Control Panel > Printers and Other Hardware > Mouse icon.
- In Windows 2000 Professional, select Start > Settings > Control Panel > Mouse.

# **Using Hotkeys**

A hotkey is a preset combination of the **Fn** key ① and a function key ② that accesses or executes a system function. The icons on the function keys **F4** to **F9** and **F11** represent the hotkey functions available on the computer.



Identifying hotkeys

# **Hotkey Quick Reference**

| Function                            | Hotkey | Return to Original State |
|-------------------------------------|--------|--------------------------|
| Switch display and image.           | Fn+F4  | Fn+F4                    |
| Adjust system volume.               | Fn+F5  | Fn+F5                    |
| Initiate QuickLock.*                | Fn+F6  | Enter power-on password  |
| Set power conservation level.       | Fn+F7  | Fn+F7                    |
| Display battery charge information. | Fn+F8  | Fn+F8                    |
| Decrease screen brightness.         | Fn+F9  | Fn+F11                   |
| Increase screen brightness.         | Fn+F11 | Fn+F9                    |

\*QuickLock cannot be initiated until a power-on password is set and QuickLock is enabled. For instructions, refer on this CD to the *Utilities* guide, "Security" section.

# **Hotkey Procedures**

Most hotkeys keys can be used as described at anytime and from within any application, with 2 exceptions:

- To use hotkeys on an external keyboard, press the **scroll lock** key twice, then the other key only of the hotkey combination. For example, to use the **Fn+F5** hotkeys, press **scroll lock+scroll lock+F5**.
- The functionality of the Fn+F4, Fn+F11, and Fn+F9 hotkeys on an external keyboard connected by USB varies by configuration. If these hotkeys do not function as described in the preceding table on your USB keyboard, visit the Compaq Web site at http://www.compaq.com/support/files and download the latest system ROM and Hotkey Support Software.

For information about entering hotkey commands sequentially, refer to "Using the Fn Key Sequentially" later in this section.

### Switch Display and Image (Fn+F4)

**Fn+F4** supports any external display device connected through the external monitor connector. Toggle the **Fn+F4** hotkeys to switch the image among:

Computer display

External display

Simultaneous display (computer and external displays)

You can set the default display to internal display, external display, or simultaneous display in the Setup utility. Changing the default display does not affect the function of the **Fn+F6** hotkeys. For more information about the Setup utility, refer on this CD to the *Utilities* guide.

### Adjust System Volume (Fn+F5)

Press **Fn+F5** to display a system volume slide bar. Click and drag the slide bar upward to increase volume or downward to decrease volume.

To mute or restore volume, press **Fn+F5**, then select or clear the Mute check box.

### Initiate QuickLock (Fn+F6)

When QuickLock is enabled, you can lock the computer at any time by pressing **Fn+F6**. To unlock the computer, enter the power-on password.

QuickLock cannot be initiated until a power-on password is set and QuickLock is enabled. For instructions, refer on this CD to the *Utilities* guide, "Security" section.

### Set Power Conservation Level (Fn+F7)

In Windows XP Professional, press **Fn+F7** to open the Power Options Properties window.

In Windows 2000 Professional, press **Fn+F7** to open the Power Schemes window.

## **Display Battery Charge Information (Fn+F8)**

Press **Fn+F8** to display charge information about any battery pack in the system. The display indicates which battery pack is charging and reports the amount of charge remaining in each battery pack. Battery packs are identified by number: (1) battery pack in battery bay and (2) optional external battery pack.

## Adjust Screen Brightness (Fn+F9 and Fn+F11)

Press **Fn+F9** to decrease screen brightness. Press **Fn+F11** to increase screen brightness.

# Using the Fn Key Sequentially

Many commands are entered by simultaneously pressing the Fn key and another key. For example, hotkey commands are entered by pressing Fn + a function key.

If you enable *sequential* **Fn** commands, all commands that can be entered by simultaneously pressing the **Fn** key and another key can also be entered by sequentially pressing **Fn** and the other key.

While this feature is enabled:

- Whenever you press the **Fn** key, the computer beeps to indicate that the next key you press will be interpreted as the other key of an **Fn** command.
- Fn commands can still be entered by simultaneously pressing the Fn key and the other key of the Fn command.

To enable the sequential feature, press the **Fn** key 5 times. A beep confirms that the feature is enabled. The feature remains enabled until you disable it.

To disable this feature, press the **Fn** key 5 times. No beep sounds, indicating that the feature has been disabled.



Identifying the Fn key

# Using the Embedded Numeric Keypad

The 15 keys of the embedded numeric keypad ① can be used for the functions indicated by the icons in the upper right corner of each key. Enabling the numeric keypad assigns those functions to the keypad keys. The standard functions of the keypad keys can still be accessed while the numeric keypad is enabled.

### **Enabling the Numeric Keypad**

To enable the numeric keypad, press **Fn+num lk @**. The num lock light **③** turns on when the numeric keypad is enabled.

The numeric keypad cannot be enabled while an optional external keyboard or keypad is connected to the computer.



Identifying embedded numeric keypad components

### **Disabling the Numeric Keypad**

To disable the numeric keypad and return the keys to their standard keyboard functions, press **Fn+num lk**.

### **Using Numeric Keypad Keys as Standard Keys**

To use the keypad keys temporarily as standard keys while the keypad is enabled:

- Press and hold **Fn** to type in lowercase.
- Press and hold **Fn+shift** to type in uppercase.

When the **Fn** key is released, the keypad functions return.

### Enabling the Numeric Keypad at Startup

By default the computer starts up with the embedded numeric keypad disabled. You can set the computer to start up with the numeric keypad enabled.

The numeric keypad can be enabled or disabled with **Fn+num lk** in either startup state.

Use the Setup utility to set the computer to start up with the numeric keypad enabled.

- 1. To access the Setup utility, turn on or restart the computer, then press **F10** while the To Change System Settings, Press F10 message is displayed in the lower left corner of the screen.
- 2. Select Advanced from the menu bar. (To select a menu, press **shift +** the **home** or **end** arrow key.)
- 3. In the Num Lock State at Boot field, select On. (To toggle this field from Off to On, press the key.)
- 4. To save your preference and exit the Setup utility, press the **esc** key (or select Exit from the menu bar), select Exit Saving Changes by pressing the **pg dn** arrow key, then follow the instructions on the screen.

To disable the embedded numeric keypad at startup, repeat the above procedure, selecting Off in the Num Lock State at Boot field.

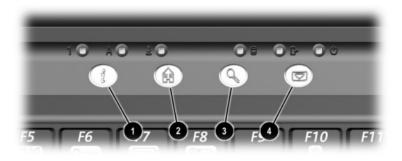
# **Using the Easy Access Buttons**

The 4 Easy Access buttons enable you to have single-button access to Internet or network destinations or to software applications or data files in your system.

### **Using Default Settings**

Until your Internet or network services are set up, all buttons launch the Internet Setup wizard for your operating system.

After your Internet or network services are set up, each button opens your default Web browser and connects you to the default destination represented by the icon on the button.



Identifying Easy Access buttons

| Button Name | Default Assignment                                       |
|-------------|--|
| Information | Compaq informational Web site.                           |
| Home        | Personal home page.                                      |
| 3 Search    | Launches AltaVista search engine.                        |
| 4 Email     | Launches Microsoft Outlook Express<br>Email application. |

### **Using Custom Assignments and Schemes**

Each button can be assigned to an Internet or network destination or to any software application or data file in your system.

Button assignments can be grouped into schemes. When you select a scheme, only the button assignments within that scheme are active.

Button assignments and schemes can be set up, changed, or deleted in the Easy Access buttons window. To access the window:

■ In Windows XP Professional, select the Easy Access Buttons icon in the notification area of the Windows taskbar.

If the icon does not appear in the taskbar, select Start > Settings > Control Panel > Other Control Panel Options > Easy Access Buttons.

■ In Windows 2000 Professional, select Start > Settings > Control Panel > Easy Access Keyboard.

For more information about using button assignments and schemes, open the Easy Access button window, then select the Help menu.

# **Battery Packs**

## **Charging a Battery Pack**

Any battery pack in the system charges whenever the computer is connected to external power.

The computer supports up to 2 battery packs.

- The *primary* battery pack is a 6-cell lithium-ion polymer battery pack that can be used only in the battery bay.
- An optional *external* battery pack is a 4-cell lithium-ion polymer battery pack that can be used only by attaching it to the rear of the computer.

When both battery packs are in the system, the primary battery pack is the first to charge, and the external battery pack is the first to discharge.

## **Using a New Battery Pack**

A new battery pack should be fully charged before it is used for the first time.

Although you can use a new battery pack that has been fully charged to run the computer, battery charge displays may not accurately report the amount of charge in the battery pack until the battery pack has been calibrated. For calibration instructions, refer on this CD to the *Utilities* guide, "Power Management" section, "Calibrating a Battery Pack."

# **Replacing or Adding a Battery Pack**

### **Replacing a Primary Battery Pack**

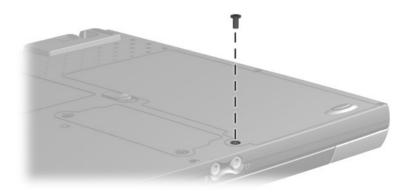
The primary battery pack is a durable, high performance battery pack that may never need replacing. If replacement becomes necessary, use the following procedures.



**CAUTION:** To prevent loss of information when removing a battery pack that is the sole power source, initiate Hibernation or turn off the computer before removing the battery pack.

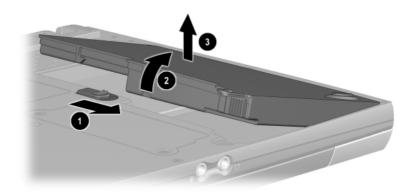
- 1. If the battery pack in the battery bay is the only power source, turn off the computer or initiate Hibernation.
  - □ To initiate Hibernation in Windows 2000 Professional, select Start > Shut Down > Hibernate, then select the OK button. (Extensive drive activity may delay Hibernation.)
  - For information about initiating Hibernation from a button or switch in Windows XP Professional or Windows 2000 Professional, refer on this CD to the Utilities guide, "Power Management" section, "Setting Power Procedure Preferences."
- 2. Close the display, then turn the computer bottom-side up.

3. Remove the battery pack retaining screw.



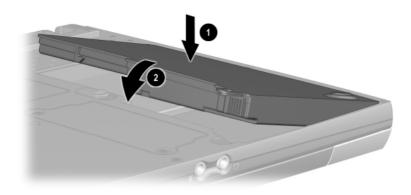
Removing the battery pack retaining screw

- 4. Remove or insert the battery pack:
  - To remove a battery pack: Slide the battery release latch toward the rear of the computer **1** while tilting the battery pack out of the battery bay **2**. Remove the battery pack **6**.



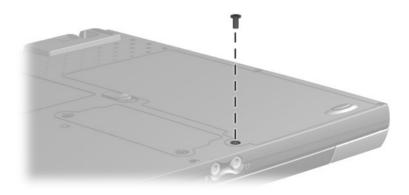
#### Removing a primary battery pack

To insert a battery pack: Insert the battery pack into the battery bay at a 45 degree angle ①, then tilt the battery pack downward into the battery bay until it is seated ②.



Inserting a primary battery pack

5. Replace the battery pack retaining screw.



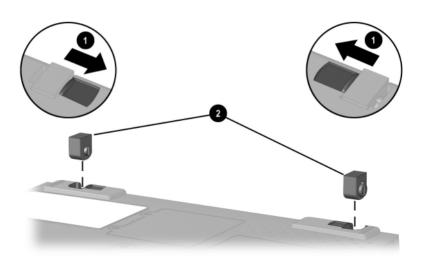
#### Replacing the battery pack retaining screw

- 6. To return to your work:
  - a. Turn the computer right-side up.
  - b. Open the display.
  - c. Turn on the computer or exit Hibernation.

#### Attaching an External Battery Pack

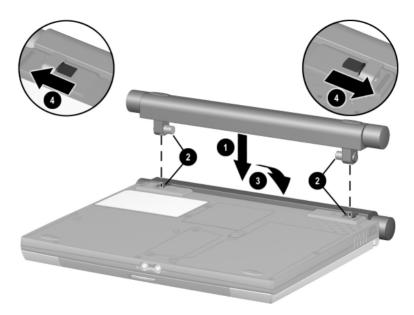
- 1. Close the display.
- 2. Turn the computer bottom-side up.
- 3. Slide the external battery security latches toward the inside of the computer **①**.
- 4. If you are attaching an external battery pack for the first time, remove the battery connector plugs from the computer **2**.

Retain the battery connector plugs. They protect the battery connectors and should be replaced whenever you use the computer without an attached external battery pack.



Removing the battery connector plugs

- 5. Guide the battery pack onto the computer until the contacts on the battery pack connect with the battery pack connectors on the computer ②.
- 6. Rotate the battery pack 90 degrees toward the back of the computer ③ until the battery pack is seated.
- Slide the external battery security latches toward the outside of the computer to secure the battery pack 4.

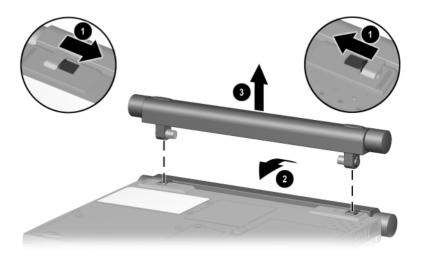


Attaching an optional external battery pack

#### **Removing an External Battery Pack**

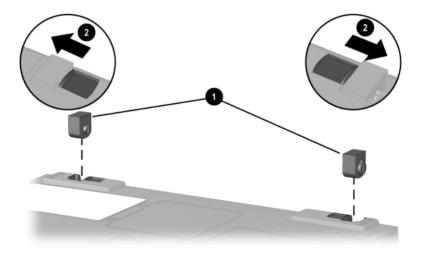
CAUTION: To prevent loss of information when removing a battery pack that is the sole power source, initiate Hibernation or turn off the computer before removing the battery pack.

- 1. If the external battery pack is the only power source, turn off the computer or initiate Hibernation. (Extensive drive activity may delay Hibernation.)
- 2. Close the display, then turn the computer bottom-side up.
- 3. Slide the external battery security latches toward the inside of the computer **①**.
- 4. Rotate the battery pack 90 degrees toward the front of the computer **2**.
- 5. Lift the battery pack off the computer  $\boldsymbol{\Theta}$ .



Removing an external battery pack

- 6. To replace the external battery pack, refer to "Attaching an External Battery Pack" earlier in this section.
- 7. To return to your work if you are not replacing the battery pack:
  - a. Replace the battery pack plugs you removed the first time you attached an external battery pack **①**.
  - b. Slide the external battery security latches toward the outside of the computer **2**.
  - c. Turn the computer right-side up.
  - d. Open the display.
  - e. Turn on the computer or exit Hibernation.



*Closing the battery security latches and replacing the battery connector plugs* 

#### **Storing a Battery Pack**

If a computer will be unused and unplugged for more than 2 weeks, remove and store the battery pack(s).

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

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

| Storage Time             | Temperature Range °F | Temperature Range °C |
|--------------------------|----------------------|----------------------|
| Less than 1<br>month     | 32°–122°             | 0°–50°               |
| No more than<br>3 months | 32°–104°             | 0°–40°               |
| Unlimited                | 32°- 86°             | 0°–30°               |

#### **Recycling a Used Battery Pack**

To determine whether a battery pack recycling program is available in your geographical region, refer on this CD to *Regulatory and Safety Notices*. If your region is not listed, refer to *Worldwide Telephone Numbers*, included with the computer, to contact a Compaq authorized dealer, reseller, or service provider.

## **Removable Drives**

#### Adding a Drive to the System

Removable drives enable you to store and access data.

The hard drive in the computer hard drive bay is the *primary* hard drive. The primary hard drive is interchangeable with other Compaq removable hard drives.

Additional standard drives can be added to the system by inserting them into an optional Mobile Expansion Unit or by connecting them to a USB connector on the computer or a Mobile Expansion Unit.

For information about using a Mobile Expansion Unit, refer to the documentation included with the unit. For information about connecting a USB drive, refer to the "External Device Connections" section in this guide.

The Mobile Expansion Unit bay supports Compaq MultiBay storage devices, including the following drives:

- Hard drive (MultiBay hard drive adapter required)
- CD drive
- DVD drive
- Diskette drive
- SuperDisk drive
- Zip drive

## **Caring for Drives**

Drives are fragile computer components that must be handled with care.

**CAUTION:** To prevent damage to the computer and drive and loss of information, ensure that you are discharged of static electricity before handling a drive. Avoid touching the connectors on the drive.

- For more information about preventing electrostatic discharge damage, refer on this CD to Regulatory and Safety Notices.
- For additional cautions about handling drives, refer on this CD to the Maintenance, Travel and Shipping guide.

# Removing and Inserting a Primary Hard Drive

Any hard drive in the computer hard drive bay is the *primary* hard drive. A hard drive used as the primary hard drive does not require an adapter.

CAUTION: To prevent system lockup and loss of information:

Shut down the computer before removing the hard drive from the hard drive bay. Do not remove the hard drive while the computer is on, in Suspend (Standby), or in Hibernation.

If you are not sure whether the computer is in Hibernation, turn the computer on, then shut it down.

- 1. Save your work.
- 2. Shut down the computer.
- 3. Close the display.
- 4. Turn the computer bottom-side up.

5. Remove the hard drive retaining screw.



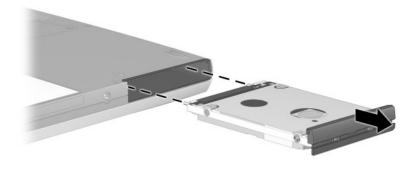
#### Removing the hard drive retaining screw

6. With the computer bottom-side up, slide the bottom half of the front bezel of the hard drive upward to provide a handle.



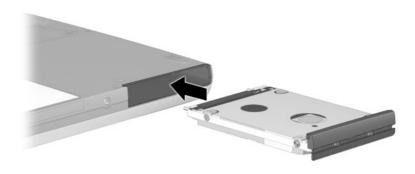
Extending the front bezel to provide a handle

- 7. Remove or insert the hard drive:
  - □ To remove a hard drive, pull the drive out of the bay.



#### Removing the hard drive from the hard drive bay

□ To insert a hard drive, slide the hard drive into the bay until it is seated.



Inserting the hard drive into the hard drive bay

8. Close the front bezel of the hard drive.



#### Closing the front bezel of a hard drive

9. If you have inserted a hard drive, reinsert the hard drive retaining screw. (If you removed but did not replace a hard drive, put the retaining screw in a safe place.)



Replacing the hard drive retaining screw

## **Playing Media with an Optional Drive**

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

If you are playing a medium with an optional drive, turn off the medium before initiating Suspend (Standby) or Hibernation.

If Suspend or Hibernation is accidentally initiated while a medium is playing:

- 1. Exit Suspend or Hibernation.
- 2. Restart the computer.

For more information about Suspend and Hibernation, refer on this CD to the *Utilities* guide, "Power Management" section.

#### **Changing the Startup Sequence**

The computer can start up from most bootable media or devices. A bootable medium or device contains files needed by the computer to start up and operate properly.

When more than 1 bootable medium or device is in the system, the computer selects the medium or device to start from by searching sequenced locations for, first, a bootable CD or DVD medium; second, a bootable diskette; third, a bootable hard drive; and fourth, a network interface card (NIC) installed in the computer. The locations the computer can search for bootable media and devices varies by model and configuration.

Use the Setup utility to view the devices the computer can start from in your system or to change the sequence in which the computer searches these devices.

- 1. To access the Setup utility, turn on or restart the computer, then press **F10** while the To Change System Settings, Press F10 message is displayed in the lower left corner of the screen.
- Select Boot from the menu bar. (To select a menu, press shift + the home or end arrow key.) The devices the computer can start from are displayed in the current startup sequence.
- 3. To change the startup sequence:
  - a. Select a device by using the **pg up** or **pg dn** arrow keys.
  - b. Press **shift +** the **+** or **-** key to move the device toward the beginning or end of the startup sequence.
- 4. To save your preferences and exit the Setup utility, press the **esc** key (or select Exit from the menu bar), select Exit Saving Changes by pressing the **Pg dn** arrow key, then follow the instructions on the screen.

Changing the startup sequence also changes the logical drive designations. For example, if you start from a hard drive in a Mobile Expansion Unit, that hard drive becomes drive C and the computer hard drive becomes drive D.

# 6

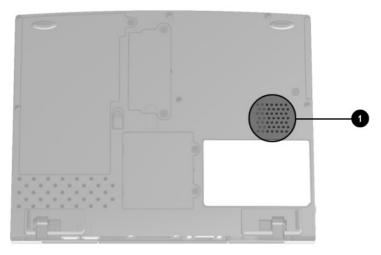
## Audio

## **Identifying Audio Components**

#### Speaker

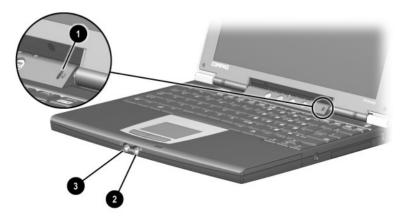
The speaker **1** provides single sound channel (monaural) audio playback for multimedia applications.

When the computer is docked in an optional Mobile Expansion Unit, the computer speaker is disabled and sound plays through the stereo speakers in the Mobile Expansion Unit. For more information, refer to the documentation included with the Mobile Expansion Unit.



Identifying the speaker

#### Audio Jacks



Identifying the audio jacks

| Audio Jack                                      | Function   |
|---|--|
| Microphone                                      | Supports audio input optimally when the display is open; has a standard sensitivity of -50 dB.   |
| Microphone jack                                 | Supports a single sound channel (monaural) microphone.   |
| Stereo speaker/<br>headphone<br>(line-out) jack | Connects powered stereo speakers,<br>headphones, a headset, or the audio only of<br>an audio/visual device such as a television<br>or VCR. |

## Using the Microphone Jack

When connecting a microphone to the microphone jack, use a single sound channel (monaural) microphone with a 3.5-mm plug. A monaural electret condenser microphone is recommended

- If you connect a stereo microphone, left channel sound will record on both channels
- If you connect a dynamic microphone, the recommended sensitivity may not be achieved.

When an external microphone is connected to the computer, the computer microphone is disabled.

#### Using the Stereo Speaker/Headphone Jack

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

**CAUTION:** To prevent possible damage to an external device, do not plug a single-sound channel (monaural) connector into the stereo speaker/headphone (line-out) jack.

When connecting a device to the stereo speaker/headphone (line-out) jack:



- Use only a 3.5-mm stereo plug.
- For best sound quality, use 24- to 32-ohm headphones.

When an external audio device is connected to the stereo speaker/headphone (line-out) jack, the computer speaker is disabled

## **Adjusting Volume**

To adjust volume, use either of the following methods:

- Keyboard **Fn+F5** hotkeys
  - □ To increase or decrease volume, press **Fn+F5**, then move the slide bar on the screen or press the keyboard arrow keys.
  - □ To mute or restore volume, toggle **Fn+F5+M**. Or, press **Fn+F5**, then select or clear the Mute check box.
- Windows Volume Control window
  - □ To open the window and access the volume settings, double-click the volume icon on the taskbar.
  - □ To activate the Widows Volume Control window while it is open but inactive, press the **Fn+F5** hotkeys.

Volume can also be adjusted within some applications.

7

## **External Device Connections**

#### **Connecting a Standard Device**

The jacks and connectors described in this guide support standard external devices.

- For information about which jack or connector to use, refer to the documentation included with the device.
- For information about installing or loading software, such as drivers, required by the device, refer to the device documentation, your operating system documentation, or the device manufacturer's Web site.
- Devices that require a connector not provided on the computer, such as a serial, parallel, or keyboard/mouse (PS/2) connector, can be added to the system by using an optional Mobile Expansion Unit.

To connect a standard external device to the computer:

- 1. If the device is powered, turn it off.
- 2. Connect the device to a jack or connector on the computer.
- 3. If the device is powered, plug the device power cord into a grounded electrical outlet.
- 4. Turn on the device.

If a properly connected external monitor does not display an image, try pressing the **Fn+F4** hotkeys to switch the image to the monitor.

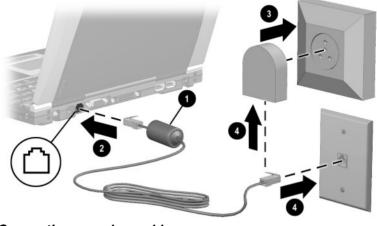
#### **Connecting the Modem Cable**

The modem cable, which has a standard 6-pin RJ-11 connector at each end, must be connected to an analog telephone line. Jacks for digital PBX systems may resemble analog telephone jacks, but are not compatible with the modem. Immediately disconnect an accidental connection to a digital line.

- 1. If the modem cable contains noise suppression circuitry **①**, which prevents interference from TV and radio reception, orient the circuitry end of the cable toward the computer.
- 2. Plug the modem cable into the RJ-11 jack 2 on the computer.

WARNING: To reduce the risk of electrical shock, fire, or damage to the equipment, do not plug a telephone cable into the RJ-45 jack.

- If you are connecting the cable to a telephone jack that is not an RJ-11 jack, plug a country-specific modem adapter into the telephone jack <sup>(3)</sup>.
- 4. Plug the modem cable into the country-specific modem adapter or into an RJ-11 telephone jack ④.



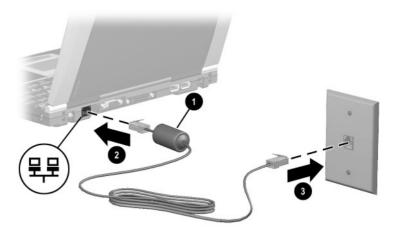
Connecting a modem cable

For more information about using the modem or about using AT commands and dial modifiers, refer on this CD to the *Modem and Networking* guide or the *Modem Commands* guide.

#### **Connecting a Network Cable**

An optional network cable has an standard 8-pin RJ-45 connector at each end and may contain noise suppression circuitry, which prevents interference with TV and radio reception.

- 1. Orient the end of a network cable with noise suppression circuitry toward the RJ-45 jack on the computer.
- 2. Plug the network cable into the RJ-45 jack **2**.
- 3. Plug the other end of the cable into a network jack ③.
- 4. Turn on or restart the computer.
- 5. Connect to the network.



#### Connecting a network cable

For more information about using a network, refer to the *Modem and Networking* guide on this CD.

## **Connecting a USB Device**

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

USB hubs can be connected to a USB connector on the computer or a Mobile Expansion Unit or to other USB devices. Hubs support varying numbers of USB devices and are used to increase the number of USB devices in the system:

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

A USB connector on the computer or a Mobile Expansion Unit supports USB devices only if the computer is running an operating system that supports USB. Windows XP Professional and Windows 2000 Professional support USB.

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.



Identifying the 2 USB connectors on the computer

#### Using a USB Device

USB devices function in the system the same as comparable non-USB devices, with 3 exceptions:

USB devices require operating system or USB legacy support. By default, USB devices do not function unless an operating system that supports USB is loaded.

To use a USB keyboard, mouse, or hub connected to a USB connector on the computer during startup or in a non-Windows application, enable USB legacy support. For instructions, refer in this guide to "Enabling USB Legacy Support," next in this section.

■ The only type of USB drive that the computer can start up from is a diskette drive, and the only type of USB drive included in the Setup utility startup sequence is a diskette drive.

For information about using the Setup utility to set the computer to start up from a specific medium or device, refer in this guide to the "Removable Drives" section, "Changing the Startup Sequence."

■ The functionality of the Fn+F4, Fn+F11, and Fn+F9 hotkeys on an external keyboard connected by USB varies by configuration. If these hotkeys do not function as described in the "Keyboard and Pointing Device" section of this guide, visit the Compaq Web site at http://www.compaq.com/support/files and download the latest system ROM and Hotkey Support Software.

#### **Enabling USB Legacy Support**

Use the Setup utility to enable USB legacy support.

- 1. To access the Setup utility, turn on or restart the computer, then press **F10** while the To Change System Settings, Press F10 message is displayed in the lower left corner of the screen.
- 2. Select Advanced from the menu bar. (To select a menu, press **shift +** the **home** or **end** arrow key.)
- 3. In the Legacy USB Support field, select Enabled. (To toggle this field from Enabled to Disabled, press the key.)
- 4. To save your preference and exit the Setup utility, press the **esc** key (or select Exit from the menu bar), select Exit Saving Changes, then follow the instructions on the screen.

#### Linking to an Infrared Device

The computer is IrDA-compliant and can communicate with another infrared-equipped device that is also IrDA-compliant.

Infrared signals are sent through an invisible beam of infrared light and require an unobstructed line of sight path.



#### Linking to an infrared device

The infrared port supports both low-speed connections up to 115 kilobits per second (Kbps) and high-speed connections up to 4 megabits per second (Mbps).

Infrared performance may vary depending on performance of infrared peripherals, distance between infrared devices, and applications used.

#### **Configuring the Infrared Port**

If you are using optional infrared software and a preinstalled operating system, the following information may be helpful.

- The infrared port default settings are:
  - DMA=3
  - □ I/O addresses=2F8h
  - □ IRQ=3
- The optimal port selection in Direct Cable Connection is Infrared Port.

#### Setting Up an Infrared Transmission

For information about using infrared software, refer to your operating system documentation.

To set up infrared devices for optimal transmission:

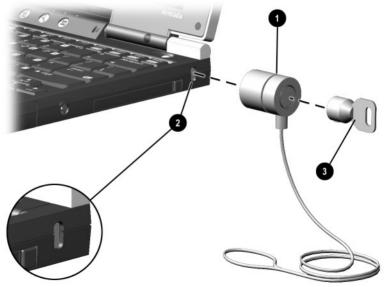
- Enable the infrared port on the external device as instructed in the documentation included with the device. (In Windows XP Professional and Windows 2000 Professional, the infrared port on the computer is fully enabled whenever the computer is on.)
- Position the devices so their infrared ports face each other at a distance no greater than 3.3 feet (1 meter).
- Position the ports so they face each other directly. Because the maximum capture angle is 30 degrees, the ports must be aligned no more than 15 degrees off center.
- Shield the ports from direct sunlight, flashing incandescent light, and energy-saving fluorescent light.
- Be sure no signals from remote control or other wireless devices, such as headphones or audio devices, aim at a port.
- During the transmission, do not move either device and do not allow objects or movement to disrupt the beam.

#### **Using Suspend with Infrared**

Both system-initiated Suspend (Standby) and user-initiated Suspend prevent or interrupt an infrared transmission. When the computer exits Suspend, an interrupted transmission resumes.

### **Connecting an Optional Cable Lock**

Loop the cable around a secure object, then insert the cable lock ① into the security cable slot ② and lock it with the cable lock key ③.



Connecting an optional cable lock

## **Hardware Upgrades**

To order or learn more about hardware upgrades and accessories, visit the Compaq Web site at http://www.compaq.com, or refer to *Worldwide Telephone Numbers*, included with the computer, to contact a Compaq authorized dealer, reseller, or service provider.

For information about obtaining and installing software updates and upgrades, refer on this CD to the *Getting Started* guide, "How to Get Information, Updates, and Help" section.

#### Adding and Using PC Cards

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 computer supports both 32-bit CardBus and 16-bit PC Cards.

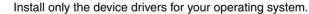
PC Cards are classified as Type I, Type II, and Type III. The 3 types are about the same length and width, but vary in thickness.

The PC Card slot supports Type I and Type II PC Cards. Type III and zoomed video PC Cards are not supported.

#### **Configuring a PC Card**

Windows XP Professional and Windows 2000 Professional configure plug and play PC Cards. If the card you plan to use includes software provided by the manufacturer, read the following caution before installing the software.

CAUTION: If you install all of the software or any of the 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:



Do not install other software, such as card services, socket services, or enablers, that may also be supplied by the PC Card manufacturer.

#### **Inserting a PC Card**

**CAUTION:** To prevent damage to the connectors, use minimal pressure when inserting a PC Card into the PC Card slot.

 $\triangle$ 

**CAUTION:** Failure to remove a PC Card that extends beyond the computer before transporting the computer may cause permanent damage to the PC Card connectors.

- 1. Hold the PC Card label-side up with the connector facing the computer.
- 2. Gently push the card into the PC Card slot until the card is seated.



Inserting a PC Card

#### **Removing a PC Card**

**CAUTION:** To prevent loss of work or system lockup, stop a PC Card before removing it.

- 1. If the system is on:
  - □ In Windows XP Professional, select the Safely Remove Hardware icon in the taskbar, then select the PC Card you want to remove. A message is displayed when the card can be safely removed.
  - □ In Windows 2000 Professional, select the Unplug or Eject Hardware icon in the taskbar, then select the PC card you want to remove. A message is displayed when the card can be safely removed.
- 2. To release the PC Card, press the PC Card eject button **①**.
- 3. Gently pull out the card  $\boldsymbol{Q}$ .



Removing a PC Card

#### **Turning Off Power to a PC Card**

When a PC Card is inserted in the computer, it draws power from the system even when it is not in use. To conserve power:

- In Windows XP Professional, select the Safely Remove Hardware icon in the taskbar, then stop the card.
- In Windows 2000 Professional, select the Unplug or Eject Hardware icon in the taskbar, then stop the card.

## **Upgrading Memory**

The memory expansion slot supports up to a 128-megabyte memory expansion board.

#### **Displaying RAM and Hibernation File Information**

When RAM increases, the hard drive space reserved for the hibernation file also increases. Windows XP Professional and Windows 2000 Professional manage this increase. However, if you experience problems with Hibernation after increasing RAM, verify that your hard drive has enough free space for the larger hibernation file.

- To display the amount of RAM in the system, right-click the My Computer icon on the desktop, then select Properties.
- To display the amount of free space on your hard drive and the amount of space required by the hibernation file:
  - In Windows XP Professional, select Start > Control Panel
    > Performance and Maintenance > Power Options icon
    > Hibernate tab.
  - □ In Windows 2000 Professional, select Start > Settings > Control Panel > Power Options > Hibernation tab.

## Removing or Inserting a Memory Expansion Board

WARNING: The memory and mini PCI compartments are the only user-accessible internal compartments on the computer. All other areas that require a tool to access should be opened only by a Compaq authorized service provider.



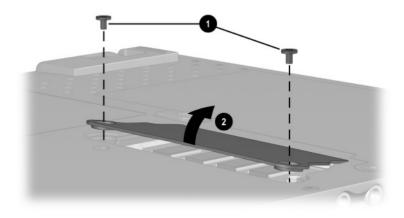
**WARNING:** Failure to unplug the power cord and remove all battery packs before installing a memory expansion board can damage the equipment and expose you to the risk of electrical shock.



**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 on this CD to *Regulatory and Safety Notices.* 

- 1. Shut down the computer. (If you are not sure whether the computer is off or in Hibernation, turn the computer on, then shut it down.)
- 2. Disconnect the power cord and all external devices connected to the computer.
- 3. Remove all battery packs from the computer.
- 4. Turn the computer bottom-side up.

5. Remove the 2 screws • securing the memory expansion compartment cover, then tilt up and remove the cover •.

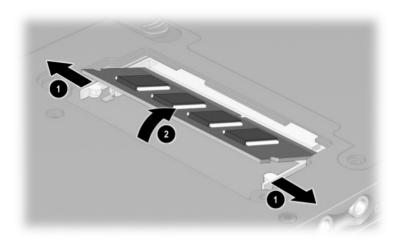


Opening the memory expansion compartment

6. Remove or insert the memory expansion board.

To remove a memory expansion board:

- a. Pull away the retention clips on each side of the board ①. (The board tilts upward ②.)
- b. Lift the edge of the memory expansion board, then gently pull it out of the memory expansion slot.

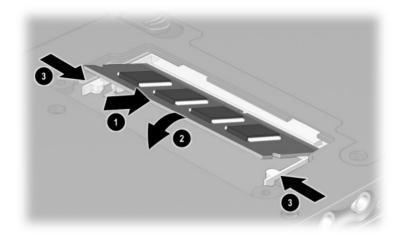


#### Removing a memory expansion board

To protect a removed memory expansion board, place it in an electrostatic-safe container.

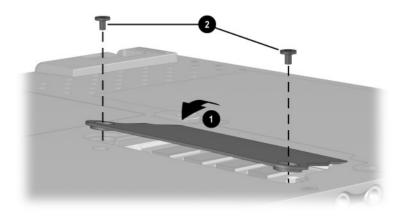
To insert a memory expansion board:

- a. Align the keyed (notched) edge of the board with the keyed area in the expansion slot **①**.
- b. Press the board into the slot from a 45-degree angle until it is seated, then push the board downward ② until the retention clips snap into place ⑤.



Inserting a memory expansion board

- 7. Align the tabs on the memory expansion compartment cover with the cover slots on the computer, then tilt the cover downward until it is seated ●.
- 8. Replace the 2 screws securing the cover to the computer **2**.



Closing the memory expansion compartment

# **Specifications**

This computer has been tested and found to comply with the limits for a Class B digital device. For more governmental agency information, refer on this CD to *Regulatory and Safety Notices*.

## **Regulatory Agency Series Numbers**

Regulatory agencies worldwide use agency series numbers for product identification. Each approved product displays the assigned agency series number. To ensure continued safe and reliable operation, use the computer only with the products listed below:

| Product               | Agency Series Number            |
|-----------------------|---------------------------------|
| Computer              | PP2120                          |
| Battery pack          | PP2121, PP2122                  |
| AC Adapter            | PPP005                          |
| Mobile Expansion Unit | PP2125                          |
| Automobile Adapter    | PPP007                          |
| Aircraft Adapter      | PPP004                          |
| Modem                 | J07M040.00                      |
| NIC/Modem             | U98M010.00                      |
| Security NIC/Modem    | U98M008.00 (or IPSec NIC/Modem) |

# **Computer Dimensions**

| Dimension | U.S.   | Metric  |
|-----------|--------|---------|
| Height    | .8 in  | 2.1 cm  |
| Width     | 9.9 in | 25.1 cm |
| Depth     | 7.9 in | 20.0 cm |

## **Operating Environment**

| Factor                            | U.S.         | Metric       |  |
|-----------------------------------|--------------|--------------|--|
| Temperature                       |              |              |  |
| Operating                         | 50° to 95°F  | 10° to 35°C  |  |
| Nonoperating                      | 14° to 140°F | –10° to 60°C |  |
| Relative humidity (noncondensing) |              |              |  |
| Operating                         | 10 to 90%    | 10 to 90%    |  |
| Nonoperating                      | 5 to 95%     | 5 to 95%     |  |
| Maximum altitude (unpressurized)  |              |              |  |
| Operating                         | 10,000 ft    | 3,048 m      |  |
| Nonoperating                      | 30,000 ft    | 9,144 m      |  |

# **Rated Input Power**

| Input Power   | Rating               |  |
|---|----------------------|--|
| Operating voltage   | 100-120/220-240 Vrms |  |
| Operating current   | 1.2/0.6 A RMS        |  |
| Operating frequency range   | 50–60 Hz AC          |  |
| When powered by a DC source   | 18.5V MAX            |  |
| This product is designed for IT power systems in Norway with phase-to-phase voltage not exceeding 240 Vrms. |                      |  |

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