

Getting Help

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1 Finding Information and Solving Problems

Chapter 1 covers the following topics:

- Where to go for help
- Getting help from the HP Support Center
- Using system tools
- Getting help from the Internet
- Restoring your software
- Calling HP support

Where to Go for Help

Hewlett-Packard offers a number of support solutions for HP Pavilion PC owners, and this guide describes each of these options.

- **Personal Guide** If you are having trouble with Microsoft® Windows®, try running the tutorials in Personal Guide. See “Learning About the Windows Desktop” in the *Getting Started* guide. You can also use the Windows Help system by choosing the **Help** option on the Start menu.
- **HP Support Center** The HP Support Center offers help with your hardware and software, contains support contact numbers, and includes a collection of system tools. See “Getting Help from the HP Support Center” on page 3.
- **HP At Home** The HP At Home Web site includes an online System Guide. See “Getting Help from the Internet” on page 5.
- **HP Pavilion Recovery** The Recovery CDs allow you to restore the software that originally came with your computer. See “Restoring Your Software” on page 6.
- **Troubleshooting** Chapter 2 of this guide provides a list of problems, along with possible solutions. Just look up the area or component you are having trouble with, and try the solutions listed. See page 9.
- **HP Customer Care Center** If you are still having problems, call the HP Customer Care Center. See “Calling HP Support” on page 8.

Getting Help from the HP Support Center

If you are having trouble learning a new software program or solving a problem, the HP Support Center is the place to go. Your support contacts, online documentation, tutorials, and system maintenance tools have been grouped in this one convenient location.

To go to the HP Support Center, choose **HP Support Center** on the Start menu or double-click the icon on the desktop.



Descriptions of HP Support Center options are listed on the following page.



HP Support Center Options

Software Help	Each software package shipped with your computer is listed here, along with its manual (if there is one), online Help, and a support phone number.
Hardware Help	Information on hardware components (such as your keyboard) is located here.
HP Pavilion Library	Online manuals are found here. Software manuals (also found under Software Help) are found here as well.
Tutorials	Learn skills such as creating software shortcuts and changing the color of your screen background by taking the short lessons found here.
Common Questions	Common questions that HP Customer Care Center personnel are frequently asked are listed and answered here. Subjects range from modems to the Internet to MS-DOS and more. Check here if you have a question about your computer.
System Maintenance	Here you will find system tools to clean up your hard disk and remove viruses.
Technical Support	Find information about your technical support options here.

Using System Tools

All of your system maintenance tools are organized in one convenient location — the HP Support Center. You can run special utilities provided by HP, as well as the Microsoft system tools.

To access system tools from the HP Support Center:

- 1 Double-click the **HP Support Center**  icon on the desktop.
- 2 Click **System Maintenance**. The HP-provided tools are described in the following table. You will also find links to the Microsoft system tools (such as ScanDisk and Disk Defragmenter).

HP Utilities in the HP Support Center

Virus Protection If your system is infected with a virus, it can display any number of symptoms. When in doubt, run this utility, especially if you download software from the Internet or use shareware.

HP Pavilion Recovery CDs Before you got your computer, HP did a backup of your entire system. The backup CDs are included with your system in case you need to restore any software that was originally on your computer.

Getting Help from the Internet

Hewlett-Packard has a Web site on the Internet dedicated to HP Pavilion PC owners. The HP At Home Web site includes the following:

- An online System Guide with technical support information
- Software updates
- Answers to frequently asked questions

To go to this Web site using the Easy Internet Access browser:

- 1 Double-click the **Easy Internet Access** icon on your desktop, or press the Internet button on your keyboard. 
- 2 In the Browser Selector dialog box, click **Easy Internet Access browser**.
- 3 Click **Start**.
- 4 Click the **HP At Home** button to go to the HP At Home Web site.

If you are using another browser, you can go to the Web site by entering the following address:

<http://www.hp-at-home.com>

Restoring Your Software

If your software accidentally gets erased or corrupted, you can reinstall the software. You may need to reinstall all the software on your hard disk or just certain applications. These two recovery methods are:

- **System Recovery** — Performs a full recovery with or without completely reformatting your hard disk. It reinstalls all application programs included with your HP Pavilion PC.
- **Application Recovery** — Allows you to select the applications or drivers to be recovered. This method preserves all data files that you have created on your hard disk.

An HP Pavilion Recovery CD is provided for each method. The CDs contain a copy of the software originally installed on your system and can be used *only* on the HP Pavilion PC model that they came with.

Running the System Recovery Program

 **Warning:** *Formatting the hard disk removes all information on the hard disk. If you reformat, you lose all installed software and files created since you bought your computer. You must reinstall software not originally on the computer.*

To run the HP Pavilion System Recovery program:

- 1 With the computer turned on, insert the System Recovery CD in the CD-ROM drive.
- 2 Restart your computer. (Click the **Start** button on the taskbar, choose **Shut Down** and then **Restart**.)

- 3 When the Recovery Options screen appears, choose **Recover**.
- 4 In the Select a Recovery Option screen, do one of the following:
 - Click the **Format & Recover** button to erase your hard disk and reinstall the original HP Pavilion PC software.
 - Click the **Recover Only** button to reinstall the original software without erasing the hard disk.
- 5 Click **Yes** to proceed.
- 6 When the recovery is complete, remove the System Recovery CD.
- 7 Click **OK** to restart the computer.

Note: *The Advanced Options menu, which allows recovery of specific files, is recommended for advanced users only.*

Restoring Applications

To restore certain applications:

- 1 Turn on your computer.
- 2 When you are in Windows, close all application programs and any open windows.
- 3 Insert the Application Recovery CD in the CD-ROM drive. The Application Recovery program starts automatically; it takes about 20 seconds for the program to load.
- 4 Make sure the **Application** tab is selected.

Note: *The Device Drivers tab allows you to restore drivers.*
- 5 Click the button for the application you wish to install.
- 6 Click **OK** to begin recovery of the application.
- 7 Click **Continue** to install another application.

- 8 Repeat steps 5–7 until you have recovered all the desired applications and drivers.
- 9 When you are finished restoring applications, remove the Application Recovery CD, and click **Restart** to restart the computer.

 **Warning:** *Do not skip this last step! You must restart the computer when you are finished recovering applications.*

Calling HP Support

If you need further support or your computer is completely nonfunctional, call the HP Customer Care Center. If you can, have your support ID number ready. To find your support ID number, press Alt+Ctrl+S or look for the sticker on the back or side of your computer.

Refer to your *HP Pavilion PC Support Path* card for the phone number to call.

2 Troubleshooting

Chapter 2 covers the following topics:

- Solving general computer problems
- Solving problems with specific components
- Solving Windows desktop problems

General Problems

My computer won't turn on at all.

- When you press the On button on the front of your computer, the following events should happen:
 - 1 The keyboard indicator lights should flash.
 - 2 The light next to the 3.5-inch disk drive should flash.
 - 3 You should hear the hard disk spin or the diskette drive make a noise.
 - 4 You should hear one beep; one beep indicates that your computer is operating properly.
- If the computer doesn't go through the above procedure, check the following:

- Make sure that the power cord and all cables are securely plugged into the computer.
- Make sure that the power cord is plugged into a grounded, three-prong outlet. Check to see whether the outlet works by plugging another item (such as a lamp) into the outlet.
- Make sure your display is plugged in, connected to your computer, and turned on.

My computer (or part of it) doesn't seem to be working.

If the system is “frozen” (no response to mouse or keyboard actions), you may have had too many application windows open at one time. Avoid this overload in the future by closing applications when you don't need them. (To close a window, click the **X** in the top right corner of the window.) For now, reset the computer as follows:

- 1 Press the On button to turn off the computer.
- 2 Wait a few seconds, and turn the computer back on.

Note: *Using the On button to reset the system is not a recommended practice and should be used only as a last resort.*

Also, a voltage spike, power outage, or brownout may have occurred. Symptoms of voltage spikes include a flickering video display, unexpected system startups, and the system not responding to your commands. A voltage spike can occasionally corrupt or destroy files, so it is a good idea to consistently make backup copies of your data files. Prevent voltage spikes by installing a surge suppressor between the power outlet and the system power cord.

If the problem persists, reload the software. (For software that originally came with your system, see “Restoring Your Software” on page 6.)

A “General Protection Fault” error occurred.

This error usually occurs when a program has corrupted your random access memory (RAM) resources. In some circumstances, you can close the message box and continue working. However, the environment may be unstable, causing additional errors to occur. If this happens, you can recover as follows:

- 1 Click **Close** on the message box announcing the error.
- 2 Close the software program.
- 3 Click **Start** on the taskbar.
- 4 Click **Shut Down**.
- 5 Select **Restart** and then click **OK**.

A “Non-System Disk” error occurred.

If you have a diskette in the drive, remove the diskette, and then press any key to continue.

I need more space on my hard disk.

- Run a hard disk space check to find out exactly how much space you have. See “Using System Tools” on page 4.
- You can defragment your hard disk. That is, you can rearrange your current files so that they are packed in together and any little storage spaces between them are removed to make empty space on the hard disk. Results will vary. See “Using System Tools” on page 4.

My computer is taking longer to start up than it did before.

- Before turning off the computer, make sure there isn't a CD in the drive, so that the computer won't have to spend time checking it the next time you turn on the system.
- You don't have to wait for the virus scan each time. Press the Spacebar to skip the scan. (Don't skip it all of the time; you should run a virus scan occasionally.)
- Your disk may need to be defragmented. See “Using System Tools” on page 4.

I think my computer has a virus.

A virus check is run automatically when you start the computer. However, you can run a more thorough check by using your system tools. See “Using System Tools” on page 4.

Note: *New types of viruses are invented all the time. Be sure to get regular updates of your virus scanning software from the software manufacturer so that you will be able to check for these new viruses.*

I installed a new printer or other device, and it won't work.

Be sure that you installed the device drivers that came with the new device.

Answering Machine

The computer's answering machine never answers the phone.

Make sure that the Intel Connect® software is running. (The screen with the phone should be in an open window.) If the software is running, make the following adjustments from the Intel Connect main window:

- 1 Click **Setup**.
- 2 Click **Answering**.
- 3 Choose either **Answer as a voice mail system** or **Answer as an answering machine**.

The computer's answering machine grabs calls before I can answer the phone.

- Increase the number of rings before Intel Connect automatically answers:
 - 1 From the Intel Connect main window, click **Setup**.
 - 2 Click **Ringin**g.
 - 3 Enter a higher number in the **Auto-answer ring count** box.
- Make sure that the DND (Do Not Disturb) button is not lit on the Intel Connect main window. If it is, click the **DND** button to disable the Do Not Disturb feature.

I can't hear messages as they are left.

Check the following:

- Make sure that the Screen button is lit on the Intel Connect main window.
- Make sure that the mute feature is not on. Press the keyboard Mute button until *Mute Off* briefly displays on your screen.
- Adjust the Volume knob on the keyboard or use the Multimedia Sound Mixer to increase just the answering machine sound level:
 - 1 Double-click the **Volume** icon on the taskbar.
 - 2 Adjust the slide control. Make sure that the Volume Controls are set at least halfway.



I can't hear phone messages when I play them back.

Make the following adjustments:

- Make sure that the mute feature is not on. Press the keyboard Mute button until *Mute Off* appears on the screen.
- Turn up the Volume knob on the keyboard.
- Adjust the Sound Mixer volume:
 - 1 Double-click the **Volume** icon on the taskbar.
 - 2 Make sure that the Volume Controls are not muted and are set at least halfway.



I can't record an outgoing message.

Use the phone you connected to your computer, rather than the microphone in the display, to record the message. If you haven't connected a phone to the computer, see your Set Up Poster for instructions.

CD-ROM

The message "System Error: Unable to read drive" appears when I try to run a CD program.

- Make sure that the CD is placed into the drive with the label side up.
- Wait 5 to 10 seconds after closing the drawer to give the computer time to recognize the CD.
- Are you trying to play a DVD in a CD-ROM drive? A DVD will only play in a DVD drive, not in a CD-ROM drive. If you aren't sure what type of drive you have, check the front of the drive; on DVD systems, "DVD" appears on the drive.

The CD-ROM or DVD is playing erratically.

Dirt or smudges can cause a disk to skip.

- Try cleaning the disk with a soft cloth.
- If the disk has a bad scratch, it will have to be replaced.

Display

My display doesn't work, even though the computer appears to work.

- Make sure that the power cord is securely plugged into the display.
- Make sure that the display is turned on — it has its own power button.
- Make sure that your power cord is plugged into a grounded three-prong outlet. Check to see whether the outlet works by plugging another item (such as a lamp) into the outlet. (If the light on the front of the display is lit, it is getting power. Try the next item on this list.)
- Check the cable connection between the display and the computer. The cable connectors must be pushed in all the way.

- Adjust the brightness and contrast controls on the display. (The information may be there, but you just can't see it.)

Fax and Phone

I can't dial out.

Check to make sure that a telephone cable connects from the back of the computer to the wall. The cable must be plugged into the Line socket on the computer (see illustration on page 28). The other socket is there to plug in a phone if you want to.

I can't correct typing mistakes when dialing a phone number in Intel Connect.

The Backspace key doesn't do anything here. If you misdial a number, you must hang up and start over.

The message “Invalid phone number” appears when I use the Address Book.

You need to include the area code in the Properties Description in the Address Book Manager window.

The message “Check error log” appears in the status window.

Make the following adjustments:

- 1 Click **Setup** on the Intel Connect main window.
- 2 Click **Error Log**.
- 3 Read the error message.
- 4 Click **Delete**.

Incoming faxes are not picked up automatically.

- 1 Click **Setup** on the Intel Connect main window.
- 2 Click **Answering**.
- 3 Choose either **Answer as a voice mail system** or **Answer as an answering machine**.

I can't enter a name or a phone number in the To: box when composing a fax.

In the Message Manager window:

- 1 Click **To:**
- 2 Choose a name from the Address Book; or click **Unlisted**, and then enter a name and phone number.

The Address Book dials the person's business phone instead of the home phone (and vice versa).

In the Address Book window:

- 1 Click **Other Number**.
- 2 Choose **Home Phone** or **Business Phone**.

Keyboard

My keyboard doesn't work, even though the computer and display seem to work.

- If the PC beeps repeatedly or if nothing happens when you press keys, it's possible that the keyboard is connected improperly. Make sure that the keyboard is connected to the keyboard port, not the mouse port. The colors of the cable plugs and the colors of the connector labels should match. If you need to reconnect these two cables, you **must** turn the computer off, reconnect the cables, and then turn the computer back on.
- It's possible that your system has crashed. Try rebooting your computer by pressing the On button, waiting a few seconds, and turning the computer back on.

When I push one of the special buttons (such as Internet) on the keyboard, nothing happens.

The button may be disabled. To reconfigure the button:

- 1 Click **Start** on the taskbar.
- 2 Select **Settings**.
- 3 Click **Control Panel**.
- 4 Double-click the **Keyboard** icon in Control Panel.
- 5 Click the **Keyboard Manager** tab.
- 6 Make sure the **Enable Multimedia Buttons and Onscreen Display** checkbox is selected.
- 7 Click the button you want to configure.
- 8 Make sure the **Disable Button** option is not selected.



- 9 Select an application from the list, or click **Browse** to find an application yourself.

- 10 Click **OK**.

Mouse

My mouse doesn't work, even though everything else does.

- Make sure that the mouse is connected to the mouse port, not the keyboard port. The colors of the cable plugs and the colors of the connector labels should match. If you need to reconnect these two cables, you **must** turn the computer off, reconnect the cables, and then turn the computer back on.

- Make sure that you are in the Windows desktop, not MS-DOS. (The MS-DOS interface is a plain screen with a prompt that looks like this: `C:\>`) If you are in MS-DOS, type **EXIT** and press the Enter key.
- It's possible that your system has crashed. Try rebooting your computer by pressing the On button, waiting a few seconds, and turning the computer back on.
- Does the pointer move on the screen when you move your mouse? If not, try this:
 - 1 Remove the mouse ball by unscrewing the bottom of the mouse.
 - 2 Clean the mouse ball with a damp cloth (not paper).

- 3 Use your finger to move the rollers in the mouse ball housing.
- 4 Replace the mouse ball and screw on the cover.

Sound

My computer doesn't make any sound.

- Check the headphone and microphone cables at the back of the computer to be sure they are not switched. The colors should match. Be sure the blue sound plug is pressed firmly into the jack.
- Locate the Volume knob on the keyboard. The knob is at the top of the keyboard, near the center. Turn up the volume by turning the knob clockwise. As you do this, you'll see the volume indicator increase on your screen.

- Make sure that you have the speakers connected properly.
- The Volume knob affects all sound on your computer, but each input can be turned up or down individually by adjusting the sound/mixer settings. To adjust these settings, double-click the **Volume** icon on the taskbar.
- Your audio system may be muted. Press the Mute button on the keyboard. If the message *Mute Off* appears, you just turned off the mute feature; your system should now produce sound. If the message *Mute On* appears, you just muted your system; press the Mute button again to turn it off.
- Make sure that headphones are not plugged into the keyboard. If they are, sound goes to the headphones.



Speakerphone

I'm getting a squealing noise from the speakers or the microphone.

- During a phone call, turn the Volume knob on the keyboard counterclockwise to decrease the volume.
- Click the **Volume** icon on the taskbar and drag the volume bar downward.
- If your display is against a wall or other object, pull it out a few inches.
- If your display is underneath a shelf or large object, pull the display out.



The volume is either too loud or too soft.

- Turn the Volume knob on the keyboard.
- To set the sound on the phone only, double-click the **Volume** icon on the taskbar, choose the phone, and drag the volume bar upward or downward.



I can't hear the other person clearly or at all.

- Turn the Volume knob on the keyboard clockwise.
- Adjust the Sound Mixer volume:
 - 1 Double-click the **Volume** icon on the taskbar.
 - 2 Make sure that Mute is not checked.



Windows Desktop

I'm having trouble understanding the Windows desktop.

- You have Windows desktop tutorials on your computer.

To access them:

- 1 Double-click the **Personal Guide** icon on the desktop.
- 2 Click one of the first three buttons: Organizing your Files, Changing Your Desktop, or Managing Your Software.



- The Pavilion Library in HP Support Center has online books that cover the Windows desktop. To view these books:

- 1 Double-click the **HP Support Center** icon on the desktop.
- 2 Click HP Pavilion Library.
- 3 Click Online Books.



- The printed Microsoft book *Introducing Microsoft Windows* is included with your computer.

My program window disappeared.

Sometimes, when operating a program, you accidentally click outside the program work surface and switch to another program. Your program isn't gone; it's just underneath something else. The program button for your open program appears on the taskbar — just click the button to switch to that program.

My taskbar disappeared.

You may have accidentally removed your taskbar. To get it back:

- 1 Point the cursor at the bottom of the screen.
- 2 When the cursor changes to a double arrow, click and hold down the left mouse button.
- 3 Drag the double arrows up and release the mouse button.

I don't use the Channel bar and would like to remove it from my desktop.

To remove the Internet Explorer Channel bar:

- 1 Right-click an empty area of the desktop.
- 2 Choose **Active Desktop** and then **Customize my Desktop**.

3 Turn off the **Internet Explorer Channel Bar** option.

4 Click **OK**.

The icon titles on my desktop and in my folders are underlined.

When an icon's descriptive text is underlined, single-click mode is active.

- To remove the underlining, but leave single-click mode active:

1 Click **Start** on the taskbar.

2 Choose **Settings** and then **Folder Options**.

3 Click **Custom** and choose **Settings**.

4 Choose the **Underline icon titles only when I point at them** option.

5 Close the dialog boxes.

- To turn off single-click mode:

1 Click **Start** on the taskbar.

2 Choose **Settings** and then **Folder Options**.

3 Click **Custom** and choose **Settings**.

4 Choose the **Double-click to open an item** option.

5 Close the dialog boxes.

When I try to select a file name in My Computer or Windows Explorer, the document opens. The same is true for icons on my desktop.

- You may have accidentally double-clicked the item instead of clicking it once.
- Single-click mode may be active on your computer. To turn off single-click mode:
 - 1 Click **Start** on the taskbar.
 - 2 Choose **Settings** and then **Folder Options**.
 - 3 Click **Custom** and choose **Settings**.
 - 4 Choose the **Double-click to open an item option**.
 - 5 Close the dialog boxes.

My desktop has a toolbar that belongs in the taskbar.

You may have accidentally dragged the toolbar off the taskbar and dropped it onto the desktop. The easiest way to fix this is to remove the toolbar and open it again:

- 1 Click the **X (Close)** button on the toolbar.
- 2 Right-click an empty area of the taskbar and choose **Toolbars**.
- 3 Select the toolbar you want to display in the taskbar.

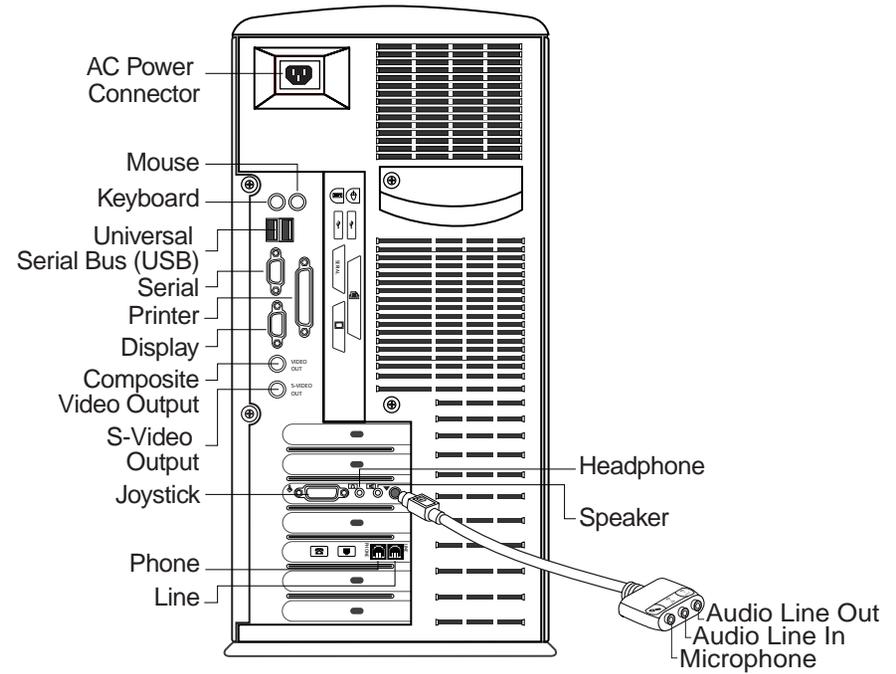
3 Upgrading and Servicing Your Computer

Chapter 3 covers the following topics:

- Connecting external components
- Removing computer covers and other components
- Replacing the battery
- Adding memory
- Installing add-in cards
- Adding drives
- Replacing computer covers and other components
- Using the BIOS Setup program

Connecting External Components

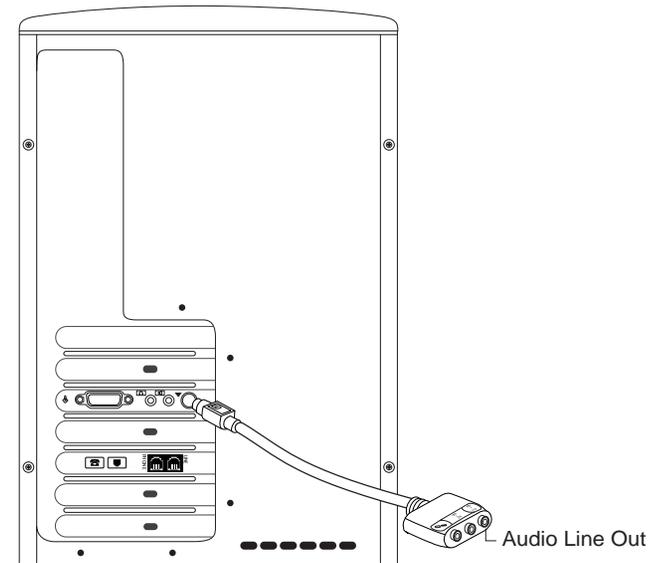
This illustration points out all the connections on the back of your computer. You may need to refer to this drawing in case you ever move your computer and need to reconnect the components, or if you purchase new accessories.



Connecting to a Stereo System

Your computer can be connected to your stereo system for games or multimedia applications. First, you'll need a cable that has a 3.5mm stereo plug on one end and two RCA plugs on the other end. (You can buy such a cable at most consumer electronics stores.) Then, connect any unused line-level input connector on the stereo system to the line output on the audio card (see illustration).

When your computer and your stereo system are connected, the volume levels can be adjusted with either the computer keyboard Volume knob or the stereo volume control.



Creating Audio Files

Using your computer and sound-recording software, you can record from a CD or your stereo system and create a file on your hard disk.

- 1 If you want to record from your stereo system, connect the stereo to the audio Line In at the back of your computer.
- 2 Go to **Control Panel**, and choose the **Multimedia** applet. In the Audio tab, set recording properties for the desired recording quality.

Note: *Be aware that the higher the recording quality, the larger the resulting file will be. A CD-quality recording requires approximately 11 MB per minute of recorded material.*

- 3 Start your sound recording software, either Microsoft Sound Recorder or Media Rack. To start the program:
 - Click **Start** on the taskbar.
 - Choose **Programs, Accessories**, and then **Entertainment**.
 - Select either **Sound Recorder** or **Media Rack**.
- 4 In the mixer's recording panel, select the sound source, such as Line (for stereo) or CD.
- 5 Start the recorder by clicking the red button on the recorder.
- 6 Play the material to be recorded.
- 7 After the material has been recorded, stop the recorder and save the file. The audio will be saved on the hard drive as a .WAV file.

Connecting to a Television Set

If your TV has either an S-video or a composite video connector, you can connect your PC to your television so that you can view your computer image on your TV (to watch DVD movies if you have a DVD drive, play games, and so forth). Determine which type of connector your TV has, and then refer to the appropriate drawing on the following pages.

To view your computer image on your TV:

- 1 Turn off your computer.
- 2 Connect the TV and computer as shown on pages 32 and 33.

Note: *The cables must be connected before you turn on the computer.*

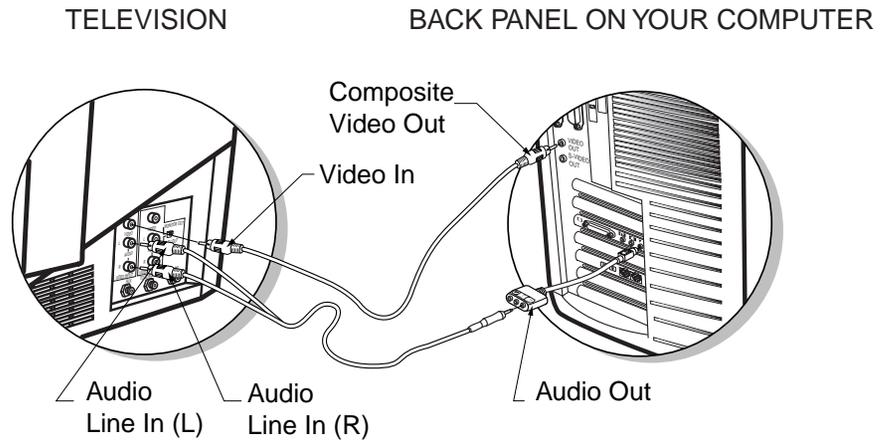
- 3 Turn on your computer.

- 4 When your Windows desktop appears, right-click an empty area of the desktop, choose **Properties**, click the **Settings** tab, and then choose the **Television** option. (The option should be checked.)
- 5 Turn on the TV.
- 6 On the remote control, find the Video/TV button.
- 7 Press Video/TV until you see your computer image on the television. You may have to press it twice.

The sound will come from your computer unless you connected the audio Line Out from the computer to the audio input on the TV or stereo.

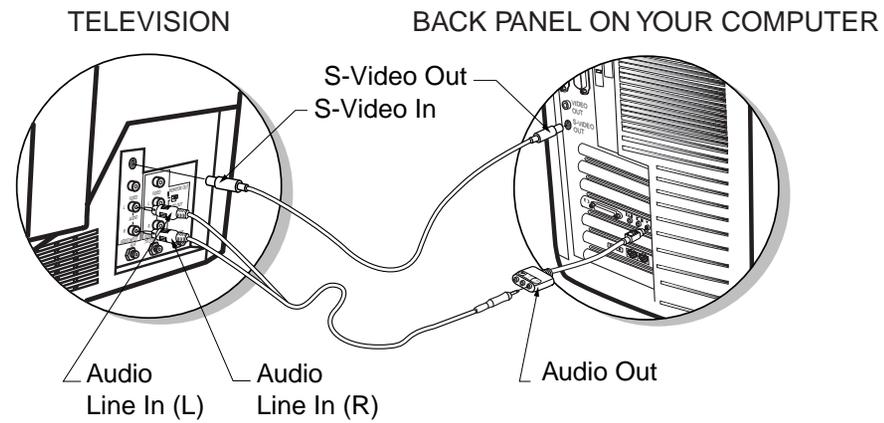
When you wish to disconnect the television from your PC, you may need to unselect the Television option in Display Properties in order to return your computer display to its original resolution. (See step 4.)

Connecting the PC to Your TV (Composite Connection)



Note: *The cables shown are not provided with your system. You can purchase these cables at an electronics or computer store. The audio and video jacks on your TV may be in different locations than the ones shown in the illustration.*

Connecting the PC to Your TV (S-Video Connection)

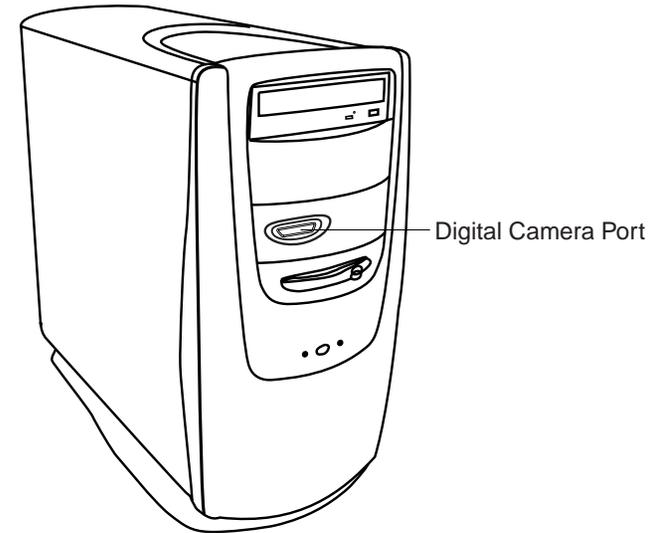


Note: *The cables shown are not provided with your system. You can purchase these cables at an electronics or computer store. The audio and video jacks on your TV may be in different locations than the ones shown in the illustration.*

Connecting a Digital Camera

Digital cameras are simple to connect, disconnect, and reconnect on your HP Pavilion PC. A Digital Camera Port is conveniently located right on the front of your computer.

Note: *Your system does not include a digital camera; it must be purchased separately.*



Note: *The Digital Camera Port is a standard serial port to which any serial device can connect.*

Removing the Computer Covers and Other Components

⚠ Warning: *The HP Pavilion PC is heavy; be sure to use ergonomically correct lifting procedures when moving the computer.*

⚠ Avertissement : *L'ordinateur HP Pavilion est lourd ; suivez des procédures ergonomiques lorsque vous le déplacez.*

⚠ Warning: *Electrostatic discharge (ESD) can damage disk drives, add-in cards, and other components. If an ESD station is not available, wear a wrist strap attached to a metal part of the computer. Place cards on a conductive foam pad or inside the conductive wrapper they came in; do not place the cards on top of the wrapper.*

⚠ Avertissement : *Les décharges électrostatiques peuvent endommager les unités de disque, cartes d'expansion et autres composants. Si vous ne disposez pas d'une station de protection contre les décharges électrostatiques, portez un bracelet antistatique relié à une partie métallique de l'ordinateur. Placez les cartes sur tapis en mousse conducteur ou dans leur emballage, mais ne les posez jamais sur l'emballage.*

⚠ Warning: *Do not operate the system with the cover removed. Always replace the cover before turning on the system.*

⚠ Avertissement : *N'utilisez pas le système lorsque son capot est ouvert. Remettez toujours le capot en place avant de mettre le système sous tension.*

Before You Begin

Be sure to read the items below before you attempt to upgrade or service your computer.

- These procedures assume familiarity with the general terminology associated with personal computers and with the safety practices and regulatory compliance required for using and modifying electronic equipment.
- Set up an equipment log to record the system model and serial numbers, all installed options, and other information about the system. If you need this information, it will be easier to consult the log than to open up and examine the system.
- You will need a #2 Phillips screwdriver and a medium flat-blade screwdriver. We recommend that you use an antistatic wrist strap and a conductive foam pad when working on the system.

- Disconnect the system from any telecommunications links, networks, or modems, and then disconnect the system power source before performing any of the procedures described in this chapter. Failure to do so before you open the system or do any procedures can result in personal injury or equipment damage.

Before you can add memory, replace or insert add-in cards, change the battery, or add drives to your system, you first need to remove the computer covers and any components that may be in the way. The following table summarizes what components need to be removed for each task.

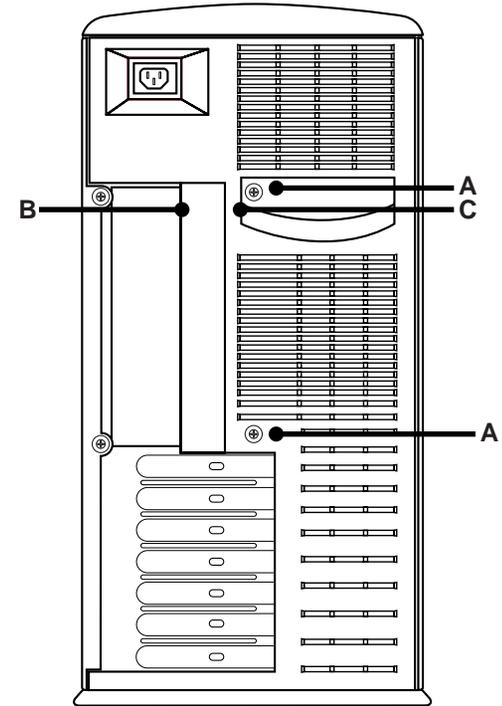
Task	Components to remove
Add or remove memory	Back panel, right side panel
Replace battery	Back panel, right side panel
Add or replace add-in cards	Back panel, right side panel, fan, expansion slot cover
Add or replace drives	Back panel, right side panel, left side panel, bay insert

Removing the Back Panel

You will need to remove the back panel before you can access the inside of your computer or remove any of the other covers.

To remove the back panel:

- 1 Use a #2 Phillips screwdriver to remove the two screws on the back panel (**A**).
- 2 Grasping the back panel at (**B**) and (**C**), remove the back panel by lifting up and out.



Removing the Right Side Panel

You'll need to remove the right side panel in order to add memory, insert add-in cards, or change the battery.

To remove the right side panel:

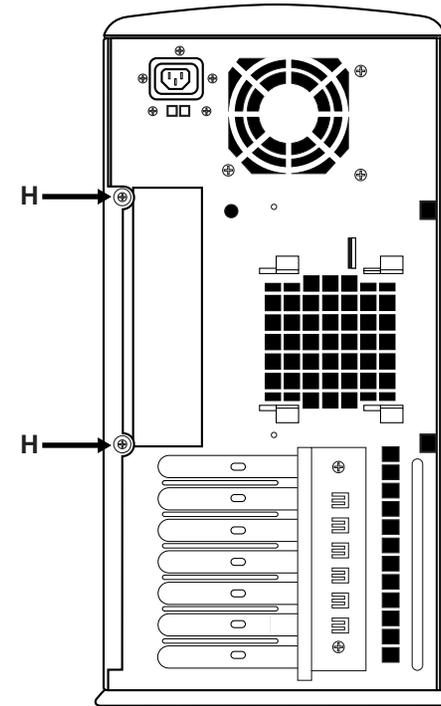
- 1 Make sure the back panel is removed.
- 2 Supporting the front edge of the panel, grasp the rear edge of the panel and pull toward the back of the computer.
- 3 Lift the side panel upward and out.

Removing the Left Side Panel

The left side panel must be removed before installing new drives.

To remove the left side panel:

- 1** Use a #2 Phillips screwdriver to remove the two screws that fasten the left side panel to the back panel (H).
- 2** Supporting the front edge of the left side panel, grasp the rear edge of the panel and pull toward the back of the computer.
- 3** Lift the left side panel upward and out.

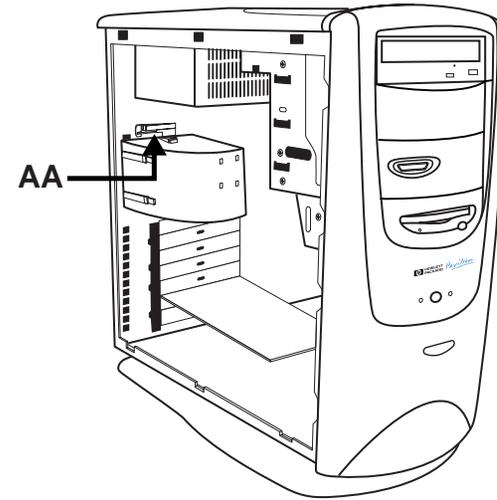


Removing the Fan

You may need to remove the fan to access removable components from the motherboard, to add a card in the top expansion slot, or to replace the fan.

Note: *The back panel and right side panel must be removed before beginning this procedure.*

- 1 With one hand below the fan for support, gently pull the release mechanism on the top of the fan (AA).
- 2 Slide the fan toward you approximately .5-inch.
- 3 Remove the fan from the frame and place out of the way.



Replacing the Battery

A lithium battery on the motherboard provides backup power for the computer's timekeeping capability. The battery has an estimated life expectancy of seven years.

When the battery starts to weaken, the date and time may be incorrect. If the battery fails, replace it with a CR2032 lithium battery (3 volt, 220mAH rating) or an equivalent battery.

⚠ Warning: *There is danger of explosion if the battery is incorrectly replaced. Replace only with the same, or equivalent, type of battery. Discard used batteries according to the manufacturer's instructions.*

⚠ Attention : *Il y a danger d'explosion s'il y a remplacement incorrect batterie. Remplacer uniquement avec une batterie du meme type ou d'un type equivalent recommand  par le constructeur. Mettre au rebut les batteries usages conformement aux instructions du fabricant.*

To replace the battery:

- 1 Turn off the computer and all peripherals.
- 2 Disconnect the modem cable.
- 3 Disconnect the power cord.
- 4 Remove the back panel (see "Removing the Back Panel" on page 37).
- 5 Remove the right panel (see "Removing the Right Side Panel" on page 38).
- 6 Move any components that are restricting access.
- 7 Remove the battery from its socket.
- 8 Install the new CR2032 battery in the socket, with the positive (+) side facing up.
- 9 Replace any components that were removed to gain access.

- 10** Replace the right panel (see “Replacing the Right Side Panel” on page 56).
- 11** Replace the back panel (see “Replacing the Back Panel” on page 57).
- 12** Reconnect the power cord.
- 13** Reconnect the modem cable.
- 14** Turn on the computer.
- 15** Run the BIOS (Basic Input Output System) Setup program to reset the date and time.
(For instructions, see “Starting the BIOS Setup Program” on page 58.)

Adding Memory

Your motherboard contains two or three 168-pin DIMM sockets, depending on which model you have. A DIMM is a dual inline memory module. You can install these types of DIMMs in your system:

- 16 MB
- 32 MB
- 64 MB
- 128 MB

All installed memory modules must be 168-pin unbuffered SDRAM (synchronous dynamic random access memory) DIMMs, and compliant with the Intel “PC SDRAM Unbuffered DIMM Specification Revision 1.0.” This specification covers both 66-MHz and 100-MHz SDRAM DIMMs. Refer to your HP Pavilion PC technical specifications on the HP online System Guide to determine whether 66-MHz or 100-MHz memory is required.

HP Pavilion PCs with two DIMM sockets can support up to 256 MB of SDRAM, and HP Pavilion PCs with three DIMM sockets can support up to 384 MB of SDRAM.

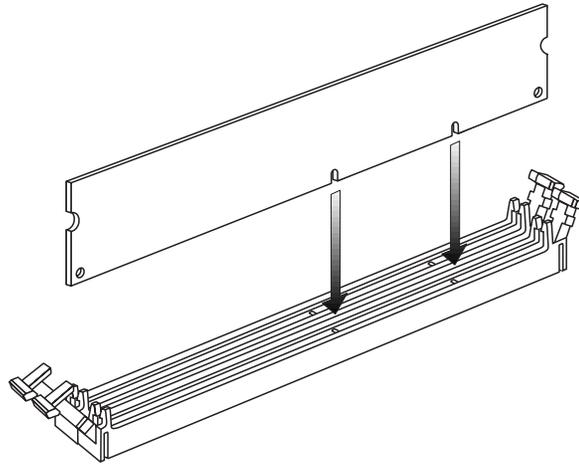
Your HP Pavilion PC is shipped with one or more DIMMs, but you can replace the existing DIMM(s) with higher capacity ones.

Installing a DIMM

To install a DIMM:

- 1** Turn off the computer and all peripherals.
- 2** Disconnect the modem cable.
- 3** Disconnect the power cord.
- 4** Remove the back panel (see “Removing the Back Panel” on page 37.)
- 5** Remove the right side panel (see “Removing the Right Side Panel” on page 38).
- 6** Lay the computer gently on the left side panel.
- 7** Move any cabling out of the way, if necessary.
- 8** Push down on the two retaining clips on the ends of the DIMM socket.

- 9** Holding the new DIMM by its edges only, remove it from its antistatic packaging. A DIMM has two small notches on the lower edge that fit into raised bumps in the DIMM socket.
- 10** Hold the DIMM perpendicular to the socket, aligning the notches with the bumps.



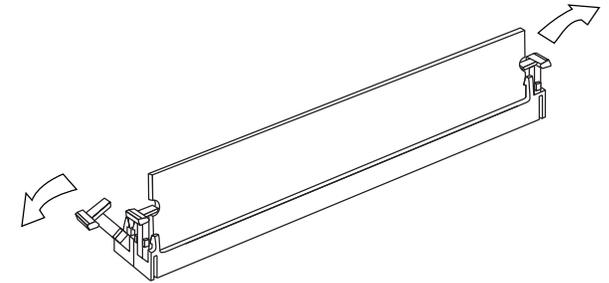
- 11** Push straight down on top of the DIMM until it is fully seated in the socket. The retaining clips on the ends of the socket will automatically lock into position when the DIMM is fully inserted.
- 12** Replace the right side panel (see “Replacing the Right Side Panel” on page 56).
- 13** Replace the back panel (see “Replacing the Back Panel” on page 57).
- 14** Reconnect the power cord.
- 15** Reconnect the modem cable.
- 16** Turn on your computer.

Removing a DIMM

To remove a DIMM:

- 1 Turn off the computer and all peripherals.
- 2 Disconnect the modem cable.
- 3 Disconnect the power cord.
- 4 Remove the back panel (see “Removing the Back Panel” on page 37).
- 5 Remove the right side panel (see “Removing the Right Side Panel” on page 38).
- 6 Lay the computer gently on its left side.

- 7 Push down on the two retaining clips on the ends of the DIMM socket until the DIMM pops out of the socket.



⚠ Warning: Do not pull the DIMM out of the socket. Use the retaining clips to eject the DIMM.

- 8 Holding the DIMM by its edges only, lift it away from the socket. Store it in its antistatic packaging.
- 9 To install a new DIMM in this socket, see “Installing a DIMM” on page 43.

Installing Add-in Cards

At some point, you may add an ISA or PCI card to your computer to accommodate a new component, such as a scanner, or you may want to upgrade an existing card.

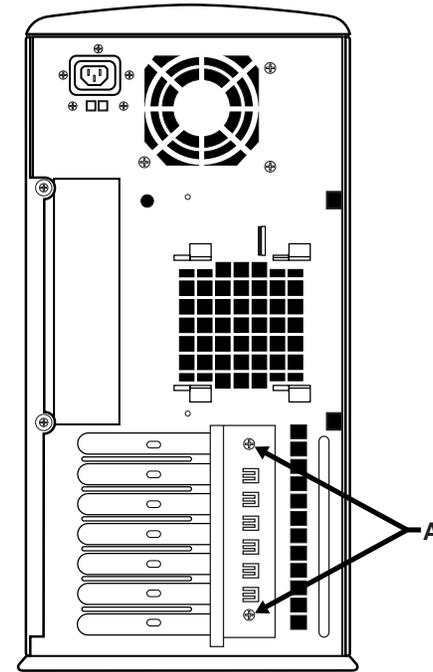
You will need a #2 Phillips screwdriver and a medium flat-blade screwdriver. You will also need any software (for example, drivers) supplied with the card.

 **Warning:** *Do not overload the system by installing add-in cards that draw excessive current. The system is designed to provide 2 amps (average) of +5V power for each board/card in the computer. The total +5V current draw in a fully loaded system (one with all add-in card slots filled) must not exceed the total number of slots multiplied by 2 amps.*

 **Avertissement :** *Ne surchargez pas le système en installant des cartes d'expansion qui consomment trop de puissance. Le système est conçu pour fournir une alimentation (moyenne) de 2 ampères à +5V à chaque carte de l'ordinateur. La puissance totale utilisée à +5V par un système chargé au maximum de sa capacité (dont toutes les fentes d'introduction de carte sont garnies) ne doit pas dépasser le nombre total de fentes multiplié par 2 ampères.*

To add or replace an add-in card:

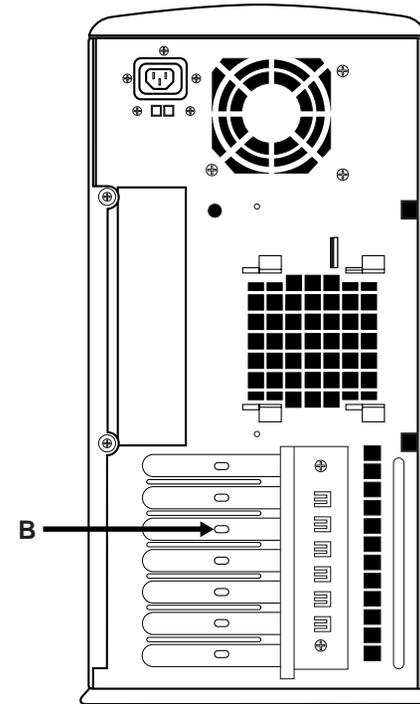
- 1 Install any drivers supplied by the card manufacturer.
- 2 Turn off the computer and all peripherals.
- 3 Disconnect the modem cable.
- 4 Disconnect the power cord.
- 5 Remove the back panel (see “Removing the Back Panel” on page 37).
- 6 Remove the right side panel (see “Removing the Right Side Panel” on page 38).
- 7 If necessary, remove the fan (see “Removing the Fan” on page 40).
- 8 Remove the two screws (A) in the metal retaining plate.



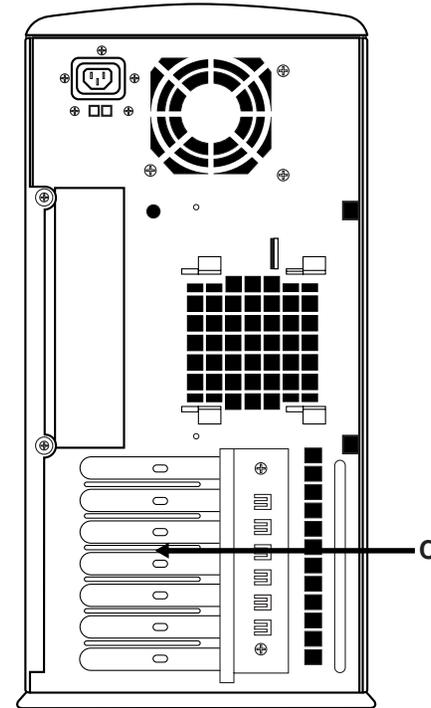
- 9 Remove the retaining plate and put it aside.
- 10 If replacing a card, disconnect any cables attached to the card. Then, holding the card by its metal bracket and the far top corner of the card, carefully pull the card straight out of the slot. Continue with step 15.

Note: *If you're adding a new card in a previously unused slot, you will need to remove the expansion slot cover as described in the following steps.*

- 11 Remove any add-in boards that are next to the expansion slot cover you want to remove.
- 12 Insert a screwdriver into the opening in the expansion slot cover (B). Gently rock the screwdriver up and down until the connecting tabs at the top edge break.



- 13** Insert the screwdriver into the area above the top edge of the expansion slot cover (C) and press down.

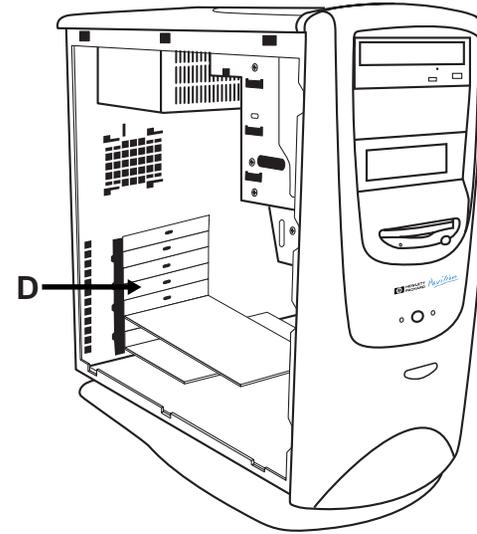


- 14 Reach inside the frame and remove the expansion slot cover (D).

⚠ Warning: *The expansion slot cover may have sharp edges.*

⚠ Avertissement : *Faites attention aux bords aigus du couvercle de la fente d'expansion.*

- 15 Insert the new card in the slot and push straight back. Make sure the card is properly seated.
- 16 Replace the retaining plate.
- 17 Reinstall the two screws in the metal retaining plate.
- 18 If necessary, replace the fan (see “Replacing the Fan” on page 54).



- 19 Replace the right side panel (see “Replacing the Right Side Panel” on page 56).
- 20 Replace the back panel (see “Replacing the Back Panel” on page 57).
- 21 Reconnect the power cord.
- 22 Reconnect the modem cable.
- 23 Turn on your computer.

What Is Plug and Play?

“Plug and Play” describes the ability to add and remove add-in cards, memory, and peripherals without any special procedures (like resetting jumpers and testing for system conflicts). Your system BIOS finds these components and adds them to the system. You do not have to run the BIOS Setup program.

If the New Card or Device Isn’t Working

Recheck all connections, including those to the card, power supply, keyboard, and display. If the problem still exists, run the BIOS Setup program and load the default settings; and then save and exit. (Refer to “Using the BIOS Setup Program” on page 58.)

Troubleshooting hints for add-in cards can be found in the System Guide located on the HP At Home Web site (<http://www.hp-at-home.com>).

Adding Drives

Your HP Pavilion PC has three drive bays:

- The top bay (bay 1) contains a DVD or CD-ROM drive.
- Bay 2 is empty; it can accommodate a 5.25-inch drive.
- Bay 3 contains the Digital Camera Port; it can also accommodate an internal 3.5-inch drive (such as a hard drive).

Note: *If the Digital Camera Port is removed, bay 3 can accommodate a 5.25-inch removable-media drive.*

This section describes how to access bays 2 and 3 so that you can install drives in them.

To install a 5.25-inch drive in bay 2:

- 1 Remove the back panel (see “Removing the Back Panel” on page 37).
- 2 Remove the right side panel (see “Removing the Right Side Panel” on page 38).
- 3 Remove the left side panel (see “Removing the Left Side Panel” on page 39).
- 4 If necessary, reach inside the drive bay and push the bay 2 insert out.

 **Warning:** *The insert may pop out forcefully.*

- 5 Install the drive in the bay 2 drive tray.
- 6 Install the two screws on each side of the bay 2 drive tray.
- 7 Attach the power cable to the back side of the drive.

- 8** Attach the IDE ribbon cable to the back side of the drive and to the motherboard.
 - 9** Replace the left side panel (see “Replacing the Left Side Panel” on page 55).
 - 10** Replace the right side panel (see “Replacing the Right Side Panel” on page 56).
 - 11** Replace the back panel (see “Replacing the Back Panel” on page 57).
- To install an internal 3.5-inch drive in bay 3:
- 1** Remove the back panel (see “Removing the Back Panel” on page 37).
 - 2** Remove the right side panel (see “Removing the Right Side Panel” on page 38).
 - 3** Remove the left side panel (see “Removing the Left Side Panel” on page 39).
 - 4** Install the drive in the bay 3 drive tray.
 - 5** Install the two screws on each side of the bay 3 drive tray.
 - 6** Attach the power cable to the back side of the drive.
 - 7** Attach the IDE ribbon cable to the back side of the drive and to the motherboard.
 - 8** Replace the left side panel (see “Replacing the Left Side Panel” on page 55).
 - 9** Replace the right side panel (see “Replacing the Right Side Panel” on page 56).
 - 10** Replace the back panel (see “Replacing the Back Panel” on page 57).

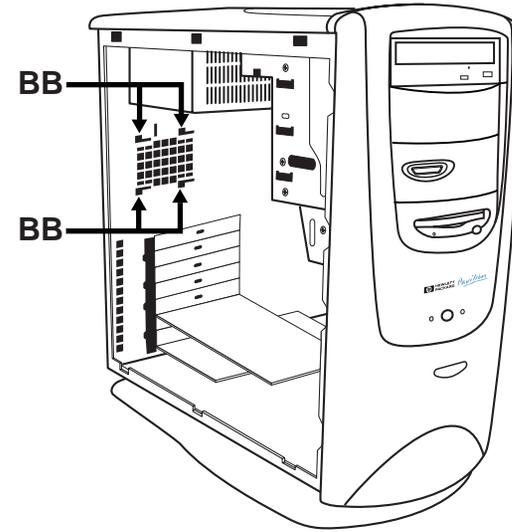
Replacing Computer Covers and Other Components

After you have finished changing the battery, adding memory, installing add-in cards, or adding drives, you will need to replace the computer cover(s) and other components you have removed.

Replacing the Fan

Note: *The back panel and right side panel must be removed before beginning this procedure.*

- 1 Align the four fan latches to the perforations in the frame (**BB**).
- 2 Slide the fan forward until the release mechanism snaps into place.
- 3 Replace all parts that were removed or disconnected to gain access to the fan.

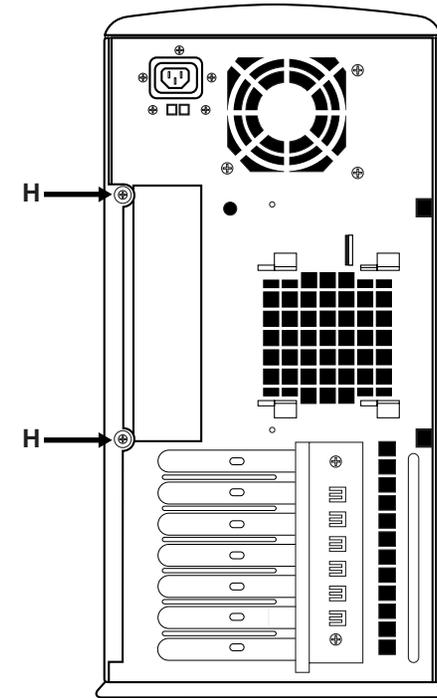


Replacing the Left Side Panel

Note: *The back and right side panels must be removed before beginning this procedure.*

To replace the left side panel:

- 1** Carefully lay the computer on its right side.
- 2** Aligning the bottom latches of the left side panel to the frame, place the side panel flat against the frame.
- 3** At the back edge, push the left side panel toward the front panel until it snaps in place.
- 4** Check the latches at the back edge of the right side panel to ensure that they are engaged.
- 5** Use a Phillips screwdriver to replace the two screws that fasten the left side panel to the back panel (**H**).

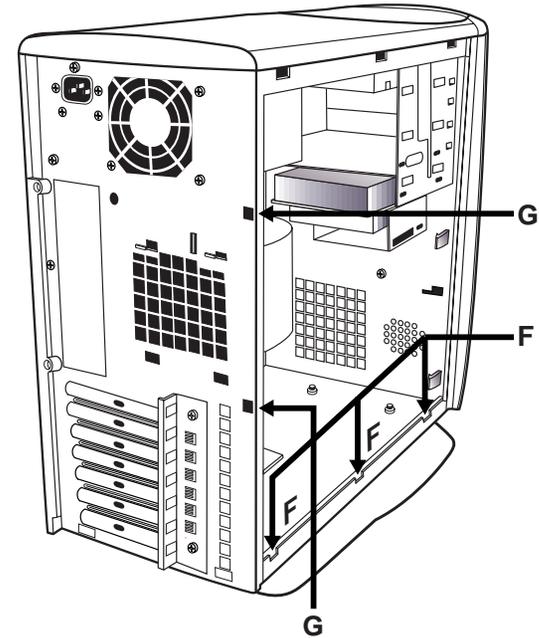


Replacing the Right Side Panel

Note: *The back panel must be removed before beginning this procedure.*

To replace the right side panel:

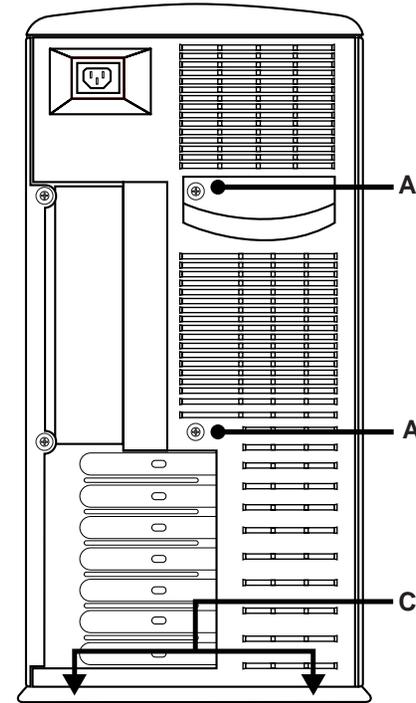
- 1 Carefully lay the computer on its left side.
- 2 Aligning the bottom latches (F) of the side panel to the frame, place the side panel flat against the frame.
- 3 At the back edge, push the right side panel toward the front panel until it snaps in place.
- 4 Check the latches at the back edge of the right side panel (G) to ensure they are engaged.



Replacing the Back Panel

To replace the back panel:

- 1 Align the bottom latches of the panel to the frame (C) and tilt forward.
- 2 Press the top of the back panel to snap it into place.
- 3 Use a #2 Phillips screwdriver to replace the two screws on the back panel (A).
- 4 Reconnect the power connections.
- 5 Reconnect the telecommunications links, networks, and modems.



Using the BIOS Setup Program

The system BIOS (Basic Input Output System) on your computer has a built-in setup program that lets you control the special features of your computer. Configuration information stored in the BIOS includes the type of peripherals installed, the startup sequence of the computer, and control for power management. The battery maintains this information when the system is turned off.

Starting the BIOS Setup Program

Start the BIOS Setup program by pressing the F1 key after you see the blue HP logo screen during startup but before the Windows desktop starts. You have only a few seconds to press the F1 key before the startup process continues.

We recommend that you keep a written copy of your settings and keep it up to date. If you never change the BIOS, you don't need to keep a record. You can always return to the original factory defaults by choosing the **Exit** menu option, choosing **Load Setup Defaults**, and then **Exit Saving Changes**.

BIOS Settings

The BIOS Setup program initially displays the Main Menu screen. In each screen, there are options for modifying the system configuration.

Main	Set up and modify basic options such as time, date, disk drives, and hard drives. Check the amount of system memory and extended memory here.
Advanced	Modify advanced features such as Plug and Play and memory settings. Configure your peripherals and check your CPU type and speed here.
Power	Enable power-saving mode and specify auto suspend settings.
Boot	Specify the sequence in which the system boots: disk drive, hard drive, CD-ROM drive.
Exit	Save or discard changes.

Use the left arrow and right arrow keys to make a selection, and then press the Enter key.

For a more detailed explanation, see the online System Guide available on the HP At Home Web site (<http://www.hp-at-home.com>).

Note: *We recommend that you keep a written copy of your settings and keep it up to date.*

Setting Auto Suspend in the BIOS

With the Auto Suspend feature enabled, the computer will automatically go into Suspend mode after a long period of inactivity and will resuspend itself after it is awakened by an application.

Note: *Some third-party software and hardware may experience problems with Suspend mode.*

To enable/disable the Auto Suspend feature:

- 1 Reboot your computer by shutting down and restarting it.
- 2 When you see a blue screen with an HP logo, press the F1 key on the keyboard; this starts the BIOS Setup program.
- 3 Press → to go to the Power menu.
- 4 In the **Power Savings** category, press Enter.

5 To disable Auto Suspend, choose **Disable**.

Or

To enable Auto Suspend, choose **Customized**. To set the amount of time before your PC suspends automatically, choose the **Auto Suspend Timeout** option, press Enter, and then select a time (such as 10 minutes).

6 Press the F10 key on the keyboard to save the setting, then press Enter.

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