



Troubleshooting and Maintenance Guide

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Hewlett-Packard Company
P.O. Box 4010
Cupertino, CA 95015-4010
USA

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Maintenance

It is important that you keep current backups of your important data, protect against data loss, and perform simple maintenance of your computer to ensure that it works at peak performance.

Creating Data Backup Discs

If you ever need to perform a system recovery, the process deletes data and returns your system to its factory state. Back up data before a problem occurs.

An external hard disk drive is the best way to back up important data. Or, use CD or DVD recording (or burning) software to create backup discs of important information, including personal files, e-mail messages, and Web site bookmarks.

When writing data to a backup disc, you should use software that includes *write verification* functionality. This feature compares the data on your hard disk drive with the data copied to the backup media, ensuring that it is an exact copy.

If you encounter recording issues with discs, try alternate media (different types or brands). Also, use the Windows Explorer tool to view your files and verify that all content was copied. To open Windows Explorer, right-click the **Windows Start Button**[®], and then click **Explore**.

Creating System Recovery Disks

One of the first things to do when you get a new computer is to create system recovery discs. In the event of a full system crash, these discs can be used to return your system to its original factory condition.

Refer to your System Recovery documentation by clicking the **Windows Start Button** and then **User Guides**.

Security Updates

Keeping your system free from viruses and spyware is just as important as backing up your files.

To check for security software updates:

- 1 Click the **Windows Start Button**, and then click **Control Panel**.
- 2 Under **Security**, click **Check for Updates**.
- 3 Download and install any updates by clicking **Install Updates**.

To schedule automatic security updates:

- 1 Click the **Windows Start Button**, and then click **Control Panel**.
- 2 Under **Security**, click **Turn automatic updating on or off**.
- 3 Follow onscreen instructions to schedule updates.

Reviewing Programs that Run Automatically at Startup

Set the Windows Start Menu to open only needed software programs, to improve system speed and performance:

- 1 Click the **Windows Start Button**, **All Programs**, and then click **Windows Defender**.
- 2 Click **Tools**.
- 3 Click **Software Explorer**.
- 4 In the Category list, select **Startup Programs**.
- 5 Select the program that you want to prevent from running, and then click **Disable**.

Keeping the Computer Free of Dust and Dirt

Physical maintenance of your hardware is required to keep components working well. This includes cleaning keyboards, screens, and internal fans in the computer.

You might notice that your computer is getting louder when it runs. This can be caused by dust buildup on the inside. When dust buildup gets to a certain point, the system can overheat, causing automatic shutdown.

Refer to the *Upgrading and Servicing Guide* to access the inside of the computer. Locate this guide by clicking **Windows Start Button** and then **User Guides**.

You will need:

- a clean, dry, lint-free cloth
- isopropyl or rubbing alcohol (optional)
- small battery-operated vacuum cleaner
- can of compressed air with small sprayer tube

Cleaning the computer and monitor

- 1 Unplug the computer from its power source.
- 2 Unplug the monitor from its power source.
- 3 Use a clean, dry cloth to dust the computer case and the monitor case.
- 4 Use a clean cloth dampened with warm water to wipe the computer case and the monitor case clean.
- 5 If there is sticker residue or a spill on the computer or monitor case, use isopropyl or rubbing alcohol and a lint-free cloth to remove it.

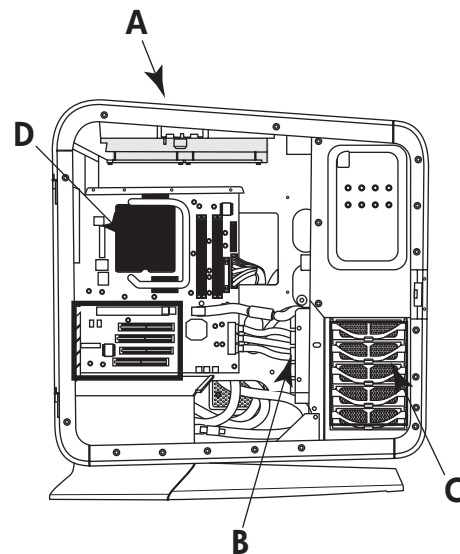
NOTE: Do not use water on the monitor screen.

- 6 Use a clean cloth to dry the computer and monitor case.
- 7 Use a clean, dry cloth to clean the monitor screen; or, for more thorough cleaning, use an antistatic screen cleaner and a clean cloth.

Cleaning vents

Air vents keep the computer and monitor cool. To maintain efficient air flow, keep these vents clean by using a small battery-operated vacuum cleaner. (A battery-operated vacuum cleaner eliminates the risk of electric shock.)

- 1 Ensure the computer is off and unplugged.
- 2 Run the vacuum cleaner over all the vents in the computer case.
- 3 Pay particular attention to two system vents:
 - top vents above the main system fan (**A**)—use compressed air to thoroughly remove dust.
 - hard disk drive vents (**B**)—use compressed air on each vent to remove dust. Access these vents by taking off the internal PCI cover in the computer. Refer to “Removing the Internal Covers” in your *Upgrading and Servicing Guide*.



- 4 Remove any debris that has accumulated in and around the computer ports (for example, the Ethernet and USB ports).

Cleaning fans, heat sink, and inside computer

Critical components inside your computer system are cooled by fans. The heat sink absorbs and dissipates heat. When dust builds up on the fans and heat sink, it creates a blanket effect, causing components to overheat, leading to poor system performance, automatic shutdown, or early part failure.

Refer to your *Upgrading and Servicing Guide* to remove parts and access the inside of your computer.

- 1 Ensure the computer is off and unplugged.
- 2 Remove the left side of the computer.
- 3 Remove all the hard disk drives (C), and use compressed air to remove dust from the fan on the left of the disk drive area (the fan is visible only when the drives are removed).
- 4 (Air-cooled systems) With the small tube attached to the compressed air sprayer, blow dust off the heat sink (D).
- 5 (Liquid-cooled systems) Blow the dust through the radiators, from the inside out.
- 6 Blow off the dust from all other fans.
- 7 Vacuum all bottom surfaces on the computer inside.

Cleaning the keyboard and mouse

When cleaning the keyboard keys, use a low setting on the battery-operated vacuum cleaner, to avoid removing key caps and springs.

- 1 Vacuum between the keys of the keyboard and along the grooves.
- 2 Use a clean, dry cloth and isopropyl alcohol to clean buildup on the keyboard keys and along the keyboard edges.
- 3 Wipe the body of the mouse and the mouse cord with cleaning wipes or a cloth and cleanser.

If you have a rollerball mouse, clean the ball and rollers inside:

- 1 Turn the mouse upside down.
- 2 Rotate the ball-cover ring counterclockwise to remove the ring and release the roller ball.
- 3 Rinse the roller ball with soap and warm water.
- 4 Clean the rollers inside the mouse with a cotton swab dampened with isopropyl alcohol.
- 5 After the roller ball and rollers are completely dry, replace the ball and ball-cover ring.

Running the Disk Cleanup Program

The Disk Cleanup software program frees up space on your hard disk drive by removing temporary and unused files (including temporary Internet files and files in the Recycle Bin). Either run Disk Cleanup manually, or set it up to run automatically.

Manual disk cleanup

- 1 Click the **Windows Start Button**, **All Programs**, **Accessories**, **System Tools**, and then click **Disk Cleanup**.
Disk Cleanup searches for files to delete and calculates how much disk space can be saved.
- 2 Place a check mark in the check box next to the file types you want to delete.
- 3 Click **OK**, and then click **Delete Files** to finish deleting the selected files.

Automatic disk cleanup

- 1 Click the **Windows Start Button**, **All Programs**, **Accessories**, **System Tools**, and then click **Task Scheduler**.
- 2 Click **Action**, and then click **Create Basic Task**.
- 3 Type a name for the task, and an optional description.
- 4 Click **Next**, and then click **Next** again.
- 5 Select the reoccurrence, and then click **Next**.
- 6 Select the time at which to run Disk Cleanup, and then click **Next**. Disk Cleanup may take a long time, so select a time when the computer is on but not in use.
- 7 Select **Start a program**, and then click **Next**.
- 8 Under **Program/Script**, click **Browse**.
- 9 Type *cleanmgr.exe*, click **Open**, and then click **Next**.
- 10 Review the summary of the schedule that you set. When you are done, click **Finish**. Disk Cleanup will run at the time that you set.

Running the Disk Defragmenter Program


When Microsoft® Windows Vista® stores files on your hard disk drive, it often divides them into fragments so that they fit into the available space on the drive. When you open a fragmented file, the process takes more time, because it must be retrieved from more than one place.

The Disk Defragmenter program groups the fragmented files together on your hard disk drive to improve computer performance. This does not affect the location of files and folders on your computer.

NOTE: The Disk Defragmenter program may take a long time to complete. You can run it unattended overnight.

- 1 Save your work and close all open programs.
- 2 Press the Ctrl, Alt, and Delete keys simultaneously.
- 3 Click **Start Task Manager**.
- 4 On the Applications tab, select all the programs that are listed, and then click **End Task**. Close the Task Manager.
- 5 Click the **Windows Start Button**, **All Programs**, **Accessories**, **System Tools**, and then click **Disk Defragmenter**.
- 6 Click **Defragment Now**.

If Disk Defragmenter repeatedly starts, a background program is still accessing the hard disk drive. Restart the computer in Safe Mode, and then run the Disk Defragmenter program again:

- 1 Click the **Windows Start Button**, click the **Arrow** button  next to the **Lock** button, and then click **Restart**.
- 2 As soon as the first logo screen appears, press the F8 key.
- 3 In the Windows Advanced Options menu, use the arrow keys to select **Safe Mode**, and then press Enter.
- 4 After Windows Vista starts, use the preceding procedure to run the Disk Defragmenter program.
- 5 To turn off Safe Mode, repeat step 1.

Checking for Hard Disk Drive Errors

Perform the following procedure to check the integrity of the hard disk drive in Windows Vista. Close all open programs before beginning the disk check.

- 1 Click the **Windows Start Button**, and then click **Computer**.
- 2 Right-click the hard disk drive that you want to check, and then click **Properties**.
- 3 Click the **Tools** tab.
- 4 Under **Error-checking**, click **Check Now**.
- 5 If desired, place a check mark in the **Automatically fix file system errors** and **Scan for and attempt recovery of bad sectors check boxes**.
- 6 Click **Start**. If you are prompted to restart the computer, click **Yes**.

The computer will restart and check the hard disk drive for errors.

Understanding Hard Disk Drive Space

The hard disk drive on the Hewlett-Packard and Compaq computers with the Windows Vista operating system preinstalled *may* appear to be smaller than what is stated in the product specifications, in the documentation, or on the box. Hard disk drives are described and advertised by manufacturers in terms of decimal (base 10) capacity. Windows Vista and other programs, such as FDISK, use the binary (base 2) numbering system.

In decimal notation, one megabyte (MB) is equal to 1,000,000 bytes, and one gigabyte (GB) is equal to 1,000,000,000 bytes. In the binary numbering system, one megabyte is equal to 1,048,576 bytes, and one gigabyte is equal to 1,073,741,824 bytes. Because of the different measuring systems, you may see a difference between the size reported by Windows Vista and the size advertised. The storage capacity of the hard disk drive is as advertised.

Windows Vista reports smaller capacity in the Windows Explorer tool and in the Computer window, because it shows information about one partition on the hard disk drive at a time. One of the partitions contains the system recovery information.


Troubleshooting Computer Problems

The troubleshooting tables in this section appear in the following order:

- Audio
 - CD and DVD Drives
 - Video
 - Display (Monitor)
 - Hard Disk Drive
 - Hardware Installation
- Internet Access
 - Keyboard and Mouse
 - Power
 - Performance
 - Miscellaneous

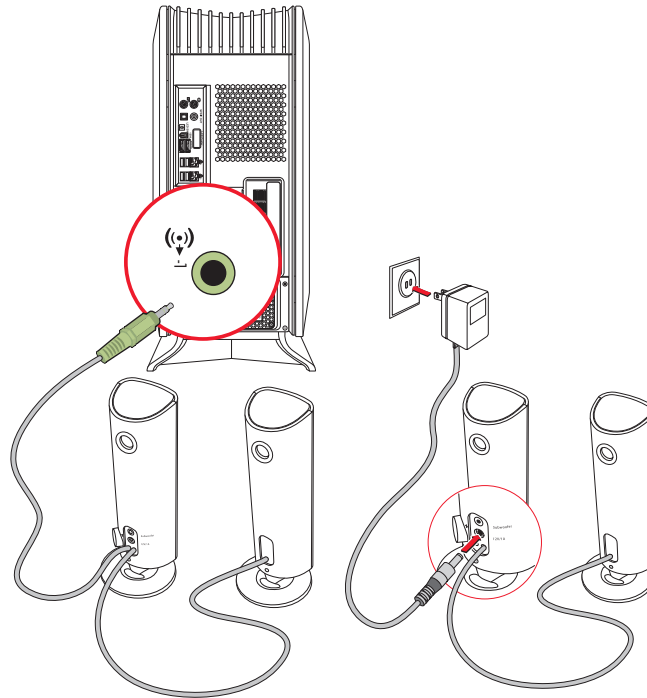
For more information about monitor problems, or for problems related specifically to your printer, refer to the documentation provided by the product manufacturer.

Audio

Symptom	Possible solution
No sound is produced.	<p>Press the Mute button on the keyboard to see whether the Mute feature is enabled.</p> <p>Or</p> <ol style="list-style-type: none">1 Click the Windows Start Button, and then click Control Panel.2 Click Hardware and Sound, and then click Adjust system volume.3 If programs are muted, click the Mute button to unmute them. <hr/> <p>Click the Volume icon () on the task bar, or use the keyboard controls to increase the volume.</p> <hr/> <p>Ensure that powered (active) speakers are turned on.</p> <hr/> <p>Turn off your computer and reconnect the speakers. Ensure that the speakers are connected to an audio connector, not a Line In or headphone connector.</p> <hr/> <p>Press the Sleep button (select models only) or the Esc key on the keyboard, to resume from sleep mode.</p> <hr/> <p>Unplug headphones if they are connected to your computer.</p>
Sound is only coming out of two speakers.	<p>Ensure that all speakers are connected into the correct audio connectors.</p>

Audio (continued)

Symptom	Possible solution
Codec error messages appear when certain audio files are played.	<p>Open the file in Windows Media Player. Ensure that Windows Media Player is configured to automatically download codecs.</p> <ul style="list-style-type: none">■ If the correct codec is available, the file will play. Note that you must be connected to the Internet to download codec files.■ If the correct codec is not available, check whether an update is available for Windows Media Player. <p>For more information, open Windows Media Player Help and search for <i>codec</i>.</p>
Volume is very low or unsatisfactory.	<p>Detached non-powered speakers (speakers without a separate power cord) will not produce satisfactory sound. Replace the non-powered speakers with powered speakers. Powered speakers have a power cord and On button, and they connect to the Audio Out (green) connector on the back of the computer.</p>



CD and DVD Drives

Symptom	Possible solution
The CD or DVD drive cannot read a disc, or it takes too long to start.	Ensure that the disc is inserted with the label facing up and centered in the tray.
	Wait at least 30 seconds for the drive to determine the type of media.
	Clean the disc with a disc cleaning kit, available from most computer stores.
	The driver may be corrupted or outdated. For detailed information about restoring and updating drivers, visit the HP Web site.
I cannot remove a CD or DVD.	Turn on your computer, and then press the Eject button closest to the drive to open the tray.
	If you suspect a problem with the Eject button itself:
	<ol style="list-style-type: none">1 Click the Windows Start Button, and then click Computer.2 Right-click the CD or DVD drive you want to open, and then click Eject.
I cannot record (burn) a disc.	Ensure that the disc is inserted with the label facing up and centered in the tray.
	Verify that you are using the correct disc type (media) for the drive. Try a different brand of disc.
	Ensure that the disc is clean and undamaged. If recording stopped during a recording session, the disc may be damaged; use a different disc.
	Use the correct type of disc for the type of files that you are recording.
	When using a CD-R disc, ensure that it is blank if you are recording music, and that it is blank or appendable (with space to add more data files) if you are recording data.
	Verify that you are using the correct disc type when you make a copy of a disc. Some recording programs can record only to the same disc type as the source. For example, you can record a DVD only to a DVD+R/-R or a DVD+RW/-RW disc, and you can record a CD only to a CD-R or a CD-RW disc.
	Ensure that the disc is in the correct drive, and that you specify the same drive in the CD or DVD recording software.

CD and DVD Drives (continued)

Symptom	Possible solution
I cannot record (burn) a disc. (continued)	<p>Select a slower write speed for the recording drive, if a slower speed is available.</p> <hr/> <p>The recording software may not let you add a track if it exceeds the available space on your disc. You can make space available by removing one or more tracks from the list before recording the files to the disc.</p> <hr/> <p>Close all software programs and windows before recording.</p> <hr/> <p>Ensure that you have enough available space on your hard disk drive to store a temporary copy of the content:</p> <ol style="list-style-type: none">1 Click the Windows Start Button, and then click Computer.2 Right-click the hard disk drive, and then click Properties to view the available space. <hr/> <p>If you are on a network, copy the files from a network drive to your hard disk drive first, and then record them to disc.</p> <hr/> <p>Close all programs and windows, and then restart your computer.</p>
I cannot add data to a DVD.	<p>Ensure that you set the correct recording option (append or add data files) in your DVD recording software.</p>
Titles of music tracks are not displayed for the CD.	<p>For the artist, title, and track information to appear when you play music CDs, the computer must be connected to the Internet. This information is not recorded on the disc.</p> <hr/> <p>Track information may not be available for every CD.</p>
An error message appears when I capture video.	<p>You may need to select the capture device if your computer has both analog and digital video capture devices. To find out how to change the video device selection, refer to the Help menu in the video capture program.</p>
I cannot play a DVD movie on a DVD player.	<p>Your DVD player cannot play video files that were recorded onto the DVD as data files. To play a movie properly, use a video recording program. Some video files may be viewed on a computer, but not on a home DVD video player.</p>

Video

Symptom	Possible solution
Some video files do not play.	Your file may be corrupt or in an unsupported format. Open the video file in a video editor, and then resave the file in a supported format.
Codec error messages appear when I play certain video files.	<p>Open the file in Windows Media Player. Ensure that Windows Media Player is configured to automatically download codecs.</p> <ul style="list-style-type: none">■ If the correct codec is available, the file will play. Note that you must be connected to the Internet to download codec files.■ If the correct codec is not available, check whether an update is available for Windows Media Player. <p>For more information, open Windows Media Player Help and search for <i>codec</i>.</p>
Error message: <i>Files Needed To Display Video Are Missing or Corrupt.</i>	<ol style="list-style-type: none">1 Click the Windows Start Button, right-click Computer, and then click Properties.2 Under Tasks, click Device Manager.3 Click the plus sign (+) next to Sound, video and game controllers.4 Right-click TV tuner (select models only), and then click Update Driver Software.5 Select Search automatically for updated driver software.6 Follow the instructions to update the driver.7 If you are prompted, restart the computer.
Graphics become corrupted when I play video games.	<ol style="list-style-type: none">1 Click the Windows Start Button, right-click Computer, and then click Properties.2 Under Tasks, click Device Manager.3 Click the plus sign (+) next to Display adapters.4 Right-click the video card, and then click Update Driver Software.5 Select Search automatically for updated driver software.6 Follow the onscreen instructions to update the driver.7 If you are prompted, restart the computer. <p>Undo any overclocking you may have done to your video card.</p>

Display (Monitor)

In addition to the information listed here, also refer to the documentation that came with your monitor.

Symptom	Possible solution
Screen is blank, and monitor power light is not lit.	Reconnect the power cord to the back of the monitor and to the wall outlet. Press the On button on the front of the monitor.
Screen is blank.	Press the space bar on the keyboard, or move the mouse, to make the screen display visible again. Press the Sleep button (select models only), or the Esc key on the keyboard, to resume from sleep mode. Press the On button to turn on the computer. Inspect the monitor video connector for bent pins: <ul style="list-style-type: none">■ If any of the pins are bent, replace the monitor connector cable.■ If no pins are bent, reconnect the monitor connector cable to the computer. Ensure that the video cards are properly seated in the connection slots on the motherboard. For more information, refer to the <i>Upgrading and Servicing Guide</i> .
Images on the screen are too large or too small, or the images are fuzzy.	Adjust the monitor resolution setting in Windows Vista: <ol style="list-style-type: none">1 Right-click the desktop, and then click Personalize.2 Click Display Settings.3 Adjust the Resolution slider as necessary.



Hard Disk Drive

Symptom	Possible solution
Computer seems to be locked up and is not responding.	<p>Use the Windows Task Manager to close any programs not responding, or restart the computer:</p> <ol style="list-style-type: none">1 Press the Ctrl, Alt, and Delete keys on the keyboard simultaneously.2 Click Start Task Manager.3 Select the program that is not responding, and then click End Task. <p>If closing programs does not work, restart the computer:</p> <ol style="list-style-type: none">1 Press the Ctrl, Alt, and Delete keys on the keyboard simultaneously.2 Click the arrow next to the red Shut Down button, and then click Restart. <p>Or</p> <ol style="list-style-type: none">1 Press and hold the On button for 5 or more seconds to turn off the computer.2 Press the On button to start the computer.
Error message: <i>Hard disk drive error</i> .	Press the Help ? button on the keyboard to open the Help and Support Center, or refer to the <i>Limited Warranty and Support Guide</i> to contact Support.

Hardware Installation

Symptom	Possible solution
A new device is not recognized as part of the system.	<p>Install the device driver from the CD provided with the device, or download and install the driver from the device manufacturer's Web site.</p> <p>You may need an updated driver for Windows Vista. Contact the device vendor directly for an update.</p> <p>For HP peripherals, visit the HP Web site. For details, refer to the <i>Limited Warranty and Support Guide</i> for details.</p> <hr/> <p>Ensure that all cables are properly and securely connected, and that the pins in the cable or connector are not bent.</p> <hr/> <p>Turn off the computer, turn on the external device, and then turn on the computer to integrate the device with the computer.</p> <hr/> <p>Restart the computer, and then follow the onscreen instructions to accept the changes.</p> <hr/> <p>Disable the automatic settings in the operating system for the card, and choose a basic configuration that does not cause a resource conflict.</p> <p>You can also reconfigure or disable devices to resolve the resource conflict.</p>

Hardware Installation (continued)

Symptom	Possible solution
A new device does not work.	To install or uninstall a device driver, you must be logged in with administrative privileges. If you need to switch users, click the Windows Start Button , click the Arrow button next to the Lock button, and then click Switch User . Choose a user with administrative privileges. 
A device does not work after installing a new device.	<p>To resolve a device conflict, you may need to disable one of the devices or uninstall an old device driver:</p> <ol style="list-style-type: none">1 Click the Windows Start Button, right-click Computer, and then click Properties.2 Under Tasks, click Device Manager.3 Click the plus sign (+) next to the problem device, and check for exclamation points in a yellow circle near the device icon. The exclamation point means that there is a device conflict or a problem with the device. Exclamation points do not always appear when a device is not working properly.4 If you have removed a hardware device, and the device driver is listed in the Device Manager, this may be causing the device conflict. To uninstall the old driver so that the new device driver works properly, right-click the device, click Uninstall, and then click OK.5 Double-click the name of the device, and then select Properties.6 Click the Resources tab to verify that there is a device conflict.7 Click the General tab to see whether your device is enabled and working properly. If it is available, click the Troubleshoot button, and then follow the onscreen instructions in the device troubleshooter wizard.8 Click the Windows Start Button, click the Arrow button next to the Lock button, and then click Restart. 

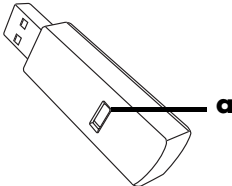
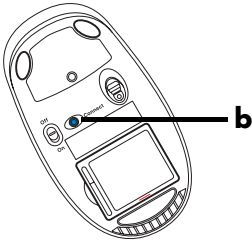
Internet Access

Symptom	Possible solution
I cannot connect to the Internet.	<p>Verify Internet settings, or contact your Internet Service Provider (ISP) for assistance.</p> <hr/> <p>Verify that you are using the proper cables for your Internet connection type. Your computer may have a modem and an Ethernet network adapter (also called a network interface card, or NIC). A modem uses a standard telephone cable to make a dial-up connection. A NIC uses a network cable to connect to a local area network (LAN). Do not connect a telephone cable to the NIC. Do not plug a network cable into a telephone service line; doing so may damage the NIC.</p> <hr/> <p>For more information about connecting to the Internet, press the Help ? button on the keyboard to open the Help and Support Center.</p> <hr/> <p>Verify that the Web browser is installed and set up to work with your ISP.</p> <hr/> <p>If your system has external antennas, try to move the antenna to a better position. If the antenna is internal, try to move the chassis.</p> <hr/> <p>Try to connect again later, or contact your ISP for assistance.</p>
I cannot automatically start Internet programs.	<p>Log in to your ISP, and start the desired program.</p>
Web pages load slowly.	<p>Verify that the correct modem speed and COM port are selected:</p> <ol style="list-style-type: none">1 Click the Windows Start Button, and then click Control Panel.2 Click Hardware and Sound.3 Double-click Phone and Modem Options.4 Click the Modems tab, and then click the Properties button.5 In the <i>Device status</i> area, verify that the modem is working properly. <p>Note that Web pages do not always load as quickly as files stored on your computer. Web pages may also load slowly if there is currently a high demand for the Web site.</p>
The AOL program opens even when it is not being used.	<p>You may want to remove the AOL program.</p> <p>To uninstall AOL:</p> <ol style="list-style-type: none">1 Click the Windows Start Button, and then click Control Panel.2 Click Uninstall a program.3 Select America Online, click Uninstall, and then follow the onscreen instructions. <p>NOTE: Removing the AOL program will not cancel your account with AOL.</p>

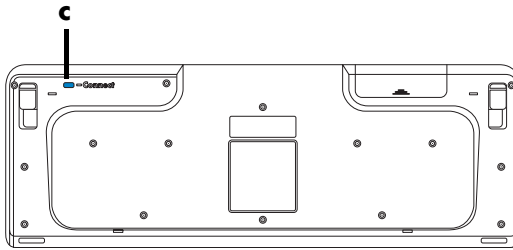

Internet Access (continued)

Symptom	Possible solution
My Internet browser home page changed to something I did not want.	<p>You may have <i>spyware</i> on your computer. Spyware is software that usually runs silently in the background on your computer, collecting and sending information about you and your use of the computer to another person or system on the Internet.</p> <p>You can find and remove spyware from your computer by using any one of a number of software programs available for this purpose, including Windows Defender.</p> <p>To scan for spyware by using Windows Defender:</p> <ol style="list-style-type: none">1 Click the Windows Start Button, All Programs, then click Windows Defender.2 Click Scan. <p>Note that many of the popular virus protection programs also include tools that scan for and remove spyware from your computer.</p> <p>To avoid getting spyware on your computer:</p> <ul style="list-style-type: none">■ Do not install programs if you are not sure they come from reputable companies. Check the company Web site carefully for information about what is included with the program.■ Do not automatically click Yes when a download window asks if it is OK to install a program on your computer. Read the message in the window and ensure that it is a software program that you really want.
Unwanted pop-up advertisements display on my computer when I am connected to the Internet.	<p>This is typically caused by <i>adware</i> or advertising-supported software.</p> <p>You can configure your Web browser to block pop-ups. For example, in Internet Explorer, click Tools, and then click Pop-up Blocker.</p> <p>To remove adware from your computer, use the antispyware/adware program included on your computer (select models only), or use any one of a number of available software programs that remove adware programs.</p> <p>Note that many of the popular virus protection programs also include tools that scan for and remove adware from your computer.</p>

Keyboard and Mouse

Symptom	Possible solution
Keyboard commands and typing are not recognized by the computer.	Turn off the computer by using the mouse, reconnect the keyboard to the back of the computer, and then turn on the computer.
Keyboard Print button does not work.	Use the Print menu item in the program (usually located on the File menu).
Wireless keyboard or mouse does not work or is not detected.	<p>Check for these problems:</p> <ul style="list-style-type: none">■ Ensure that the mouse and keyboard are within range of the receiver.■ Replace the batteries in the keyboard and mouse. Turn each device over, take off the battery cover, remove the old batteries, and insert new alkaline batteries. Do not use rechargeable batteries.■ Ensure that the mouse is not in suspend mode, which occurs after 20 minutes of inactivity. Click the left mouse button to reactivate it. <p>Resynchronize the keyboard and mouse to the receiver:</p> <ol style="list-style-type: none">1 Plug the receiver into a USB port on the computer. If you have a choice, use a USB port on the front of the computer.2 Push the Connect button (a) on the receiver (which is also the LED light), and hold it for 5 to 10 seconds, until the blue light starts to flash.  <ol style="list-style-type: none">3 Check that the mouse is on, and push and hold the Connect button (b) on the underside of the mouse until the blue LED on the receiver stops flashing.  <p>NOTE: The receiver connection session times out after 60 seconds. To ensure that the connection was established, and that the receiver did not time out instead, move the mouse and check for response.</p>

Keyboard and Mouse (continued)

Symptom	Possible solution
Wireless keyboard or mouse does not work or is not detected. (continued)	<p>After the mouse connection is established, repeat the procedure with the keyboard:</p> <ol style="list-style-type: none">1 Push the Connect button on the receiver and hold it for 5 to 10 seconds, until the blue light starts to flash.2 Push and hold the Connect button (c) on the underside of the keyboard until the blue LED on the receiver stops flashing. <div data-bbox="581 513 1091 763"></div> <p>Refer to the documentation that came with the keyboard and mouse.</p>
Mouse (with cable) does not work or is not detected.	<p>Unplug and reconnect the mouse cable to the computer.</p> <p>If the mouse is still not detected, turn off the computer, reconnect the mouse cable, and then restart the computer.</p>
Cursor does not respond to mouse movement.	<p>Restart your computer by using the keyboard:</p> <ol style="list-style-type: none">1 Press the Alt and Tab keys on the keyboard simultaneously, to navigate to an open program.2 Press the Ctrl and S keys on the keyboard simultaneously to save your changes in the selected program (Ctrl+S is the keyboard shortcut for Save on most—not all—programs).3 After saving changes in all open programs, press the Ctrl and Esc keys on the keyboard simultaneously to display the Windows Start Menu.4 Use the arrow keys to select the Arrow button next to the Lock button. Select Shut Down, and then press the Enter key on the keyboard.5 After the shutdown is complete, reconnect the mouse connector to the back of your computer, and then turn on the computer. <div data-bbox="1268 1304 1438 1358"></div>
Cursor responds slowly to mouse movement.	<p>If you have a rollerball mouse, clean the roller ball. For detailed cleaning instructions, go to: http://www.hp.com/support</p> <p>Select your country/region and language, search on your computer model number, and then search on the keyword <i>cleaning</i>.</p> <p>For a mouse with a roller ball, use a mouse pad or other rough surface under the mouse. For an optical mouse, try a less reflective surface under the mouse.</p>

Keyboard and Mouse (continued)

Symptom	Possible solution
I cannot move the cursor using the arrow keys on the number key pad.	Press the Num Lock key. The Num Lock light should not be on if you want to use the arrow keys on the number key pad.
Cursor moves only vertically or horizontally (or it does not move smoothly on the screen).	Remove the rollerball cover from bottom of mouse (by rotating it counterclockwise), remove the ball, and clean it with a damp, lint-free cloth (not paper). Also clean the rollers on which the ball moves.
Optical mouse does not track the cursor well.	Place the mouse on a mouse pad or sheet of white paper, or gently wipe the light sensor lens on the bottom of the mouse with a lint-free cloth (not paper).
Cursor moves too fast or too slow.	Adjust the cursor speed: <ol style="list-style-type: none">1 Click the Windows Start Button, and then click Control Panel.2 Click Hardware and Sound, and then click Mouse.3 Click the Pointer Options tab.4 Adjust the Motion slider toward either Slow or Fast, to decrease or increase the speed at which the cursor responds to mouse movement.5 Click OK.

Power

Symptom	Possible solution
Computer will not turn on or start.	<p>Ensure that the cables connecting the computer to the external power source are plugged in properly.</p> <p>When the cables connecting the computer to the external power source are plugged in properly, and the wall outlet is functioning, the green power supply light on the back of the computer should be on; if it is not, refer to the <i>Limited Warranty and Support Guide</i> to contact Support.</p> <p>Ensure that the switch on the back of your power supply is set to the ON position.</p> <p>If the screen is blank, the monitor may not be properly connected. Connect the monitor to the computer, plug it in, and turn it on. See "Display (Monitor)" on page 11.</p> <p>Set the line voltage selection switch to the correct setting for your country/region, or refer to the <i>Limited Warranty and Support Guide</i> to contact Support.</p> <p>Test the wall outlet by connecting a different electrical device to it.</p> <p>Incompatible memory (RAM) may have been installed. Reinstall the old memory to return the computer to its original state. For instructions, refer to the <i>Upgrading and Servicing Guide</i>.</p> <p>Reseat the hard disk drive data and power cables. For instructions, refer to the <i>Upgrading and Servicing Guide</i>.</p>
Error message: <i>Invalid system disk or Non-System disk or disk error</i> .	<p>When drive activity stops, remove the disk and press the spacebar on the keyboard. The computer should start up.</p>
Computer does not turn off when the On button is pressed.	<p>Press and hold the On button until the computer turns off.</p>
Computer shuts down automatically.	<p>The computer may be in an exceedingly hot environment. Let it cool down.</p> <p>Ensure that the computer air vents are not blocked, and that the internal fan is running. Note that your computer may not have an internal fan.</p>
Computer displays the wrong date and time.	<p>The real-time clock (RTC) battery may need to be replaced. Battery life is approximately seven years.</p> <p>Before replacing the battery, try resetting the date and time in Windows Vista by using Control Panel. If the problem persists, replace the battery. For instructions, refer to the <i>Upgrading and Servicing Guide</i>.</p>


Performance

Symptom	Possible solution
Software programs and files take longer than normal to open or respond.	If you created multiple user accounts on your computer, ensure that no other users are logged in. If there are multiple users logged in simultaneously, system resources must be shared among them.
	Run the Disk Cleanup program to delete unwanted files (including temporary Internet files, installed components and programs that you no longer use, and files in the Recycle Bin) from your hard disk drive:
	<ol style="list-style-type: none">1 Click the Windows Start Button, All Programs, Accessories, System Tools, and then click Disk Cleanup.2 Select the drive on which you want to perform the cleanup.3 Place a check mark in the check box next to the file types that you want to delete.4 Click OK, and then click OK to permanently delete the files.
	Run the Disk Defragmenter program to group fragmented files together on your hard disk drive to improve performance. This does not affect the location of files and folders on your computer.
	<p>NOTE: The Disk Defragmenter program may take a long time to complete. It is a good idea to run it overnight.</p> <ol style="list-style-type: none">1 Save your work and close all other programs.2 Press the Ctrl, Alt, and Delete keys on the keyboard simultaneously.3 Click Start Task Manager.4 On the Applications tab, select all the programs that are listed, and then click End Task. Close the Task Manager.5 Click the Windows Start Button, All Programs, Accessories, System Tools, and then click Disk Defragmenter.6 Click Defragment now.
	Remove unused programs:
	<ol style="list-style-type: none">1 Click the Windows Start Button, and then click Control Panel.2 Click Uninstall a program.3 Select the program you want to remove, and then click Uninstall.4 Follow the onscreen instructions.

Performance (continued)

Symptom	Possible solution
Software programs and files take longer than normal to open or respond. (continued)	<p>Check for hard disk drive errors:</p> <ol style="list-style-type: none">1 Close all open programs and windows.2 Click the Windows Start Button, and then Computer.3 Right-click the hard disk drive that you want to check, and then click Properties.4 Click the Tools tab.5 Under Error-checking, click Check Now.6 If desired, place a check mark in the Automatically fix file system errors and Scan for and attempt recovery of bad sectors check boxes.7 Click Start. If you are prompted to restart the computer, click Yes.
System shuts down on its own.	When the computer or its parts get overheated, the system shuts down. Clean the computer at least every 2 to 3 months, and more if it is a dusty environment. See "Keeping the Computer Free of Dust and Dirt" on page 2.

Miscellaneous

Symptom	Possible solution
Computer overheats.	<p>If your computer is liquid-cooled, and if you replaced the power supply, check that all cables you disconnected are reconnected.</p> <p>A buildup of dust also causes overheating. See "Keeping the Computer Free of Dust and Dirt" on page 2.</p>
Error message: <i>Insufficient memory</i> .	<p>Close all open programs, and then try the desired task again, or restart your computer (click the Windows Start Button, click the Arrow button next to the Lock button, and then click Restart). If the message displays again, consider purchasing and installing additional memory.</p> 

Miscellaneous (continued)

Symptom	Possible solution
Remote sensor is not receiving a signal from the remote control (select models only).	<ol style="list-style-type: none">1 Click the Windows Start Button, right-click Computer, and then click Properties.2 Under Tasks, click Device Manager.3 Click the plus sign (+) next to Universal Serial Bus Controllers.4 If eHome Infrared Receiver is listed under Universal Serial Bus Controllers, Windows Vista is properly detecting the infrared (IR) receiver. If it is not listed, go to the next step.5 Unplug the end of the USB cable on the remote sensor from the computer, and then plug it back into the same USB port.6 Disconnect all other USB devices, leaving the remote sensor connected, and then restart the computer. Connect other USB devices after the remote sensor appears in the Device Manager window.
Memory card reader (select models only) cannot read my memory card.	<p>Do not insert or remove memory cards when the in-use light is flashing. Doing so may cause data loss or permanently damage the card reader.</p> <p>Some memory cards have a Read/Write or Security switch. Ensure the switch is set to Write Enabled before you attempt to write data to the card.</p> <p>Ensure that the amount of data you are storing has not exceeded the storage limit of the memory card.</p> <p>Ensure that the memory card is one of the supported types: CompactFlash (I, II, and Microdrive), Memory Stick, Memory Stick Pro, MultiMedia, Secure Digital, SmartMedia, or xD. Some models may support additional types.</p> <p>Ensure that the memory card is fully inserted into the correct slot.</p> <p>Inspect the ends of the memory card for dirt or material that closes a hole or spoils a metal contact. Clean the contacts with a lint-free cloth and a small amount of isopropyl alcohol. Replace the memory card if necessary.</p>

Repairing Software Problems

Your computer uses the operating system and installed software programs during normal operation. If your computer works improperly or stops, you may be able to repair it.

Restarting Your Computer

Restarting is the simplest repair method for your computer. When you restart, the computer reloads the operating system and software into its memory.

To restart your computer:

- 1 Close all open programs and windows.
- 2 Click the **Windows Start Button**, click the **Arrow** button next to the **Lock** button, and then click **Restart**.



Turning Off Your Computer

When you turn off your computer and then turn it on again, you force the computer to reload the operating system into its memory, which clears some tracking information. This may eliminate some problems that can remain after you perform a restart.

To turn off your computer:

- 1 Close all open programs and windows.
- 2 Click the **Windows Start Button**, click the **Arrow** button next to the **Lock** button, and then click **Shut Down**.
- 3 Start your computer by pressing the On button.



Updating Drivers

A *driver* is a software program that enables your computer to communicate with an attached device, such as a printer, hard disk drive, mouse, or keyboard.

Complete the following procedure to update a driver, or to revert (or roll back) to an earlier version of the driver if the new one does not solve your problem:

- 1 Click the **Windows Start Button**, right-click **Computer**, and then click **Properties**.
- 2 Under **Tasks**, click **Device Manager**.
- 3 Click the plus sign (+) to expand the type of device for which you want to update or roll back the driver, (for example, DVD/CD-ROM drives).
- 4 Double-click the specific item (for example, **HP DVD Writer 640b**).
- 5 Click the **Driver** tab.
- 6 To update a driver, click **Update Driver**, and then follow the onscreen instructions.

Or

To revert to an earlier version of a driver, click **Rollback Driver**, and then follow the onscreen instructions.

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