

PC Troubleshooting and Maintenance Guide



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PC Maintenance

This section includes information about tasks you can perform to help ensure the trouble-free operation of your PC, and to ease the recovery of important information on your PC should problems arise in the future.

Creating Data Backup Discs

You can use the CD or DVD burning software included on your PC 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 verification feature compares the data on your hard disk drive with the data copied to the disc to ensure it is an exact copy. Depending on your disc burning software, you may need to manually enable this feature.

Creating System Recovery Discs

This is a one-time step that you should perform while your PC is working properly. If you later encounter problems with your PC, you can restore it to its original configuration using the System Recovery discs that you create.

Before creating recovery discs, read "System Recovery Overview" on page 17, and then create the discs as described in "Creating System Recovery Discs" on page 18.

Removing Unused Programs

- 1 Click **Start**, and then click **Control Panel**.
- 2 Double-click **Add or Remove Programs**. The Add or Remove Programs window opens.
- 3 Select the program you want to remove, and click the **Change/Remove** button.
- 4 Follow the onscreen instructions.

NOTE: Some programs have their own uninstall features. If you cannot uninstall a program from the Control Panel, try using the program to uninstall.

Running the Disk Cleanup Program

The Disk Cleanup 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). You can run Disk Cleanup manually, or you can set it up to run automatically.

Running Disk Cleanup manually

- 1 Click **Start**, **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 Choose the files to delete by placing a check mark in the check box next to the file types listed.
- 3 Click **OK**, and then click **Yes** to finish deleting the selected files.

Scheduling Disk Cleanup to run automatically

- 1 Click **Start**, and then **Run**, and type the following into the open field (note there is a space between the *r* and the */*): `cleanmgr /sageset:100`
- 2 Select the types of files that you want removed (for example, temporary files, Temporary Internet Files, and the files in the Recycle Bin).
- 3 Click **OK** to save the settings.
- 4 Click **Start**, **All Programs**, **Accessories**, **System Tools**, and then click **Scheduled Tasks**.
- 5 Double-click **Add Scheduled Task** and then click **Next**.
- 6 Select **Disk Cleanup** from the application list and then click **Next**.
- 7 Accept the default task name or type a name for the task, select when the task is performed, and click **Next**.
- 8 Select the time and reoccurrence (if available), and click **Next**. Disk cleanup may take a long time, so select a time when the PC is on but not in use.
- 9 Enter your login name and password and click **Next**.
If you do not have a password, leave the Password field blank and click **Next**.
- 10 Select **Open advanced properties for this task when I click Finish** and click **Finish**.

- 11 In the Run field of the Disk Cleanup window add `/sagerun:100` at the end of the path. For example:
`C:\WINDOWS\system32\cleanmgr.exe`
`/sagerun:100`
- 12 Click **OK** and, if prompted, verify your password. Disk Cleanup runs at the time you have set.

Running the Disk Defragmenter Program

When Windows stores files on your hard disk drive, it often divides them into multiple pieces (or *fragments*) so they fit into available space on the drive. When you attempt to open a fragmented file, it must be retrieved from more than one place, so the process takes more time.

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

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

- 1 Open the Windows Task Manager by pressing the Ctrl key, the Alt key, and the Delete key at the same time.
- 2 On the Applications tab, select all the programs that are listed, and then click **End Task**. Close the Task Manager.
- 3 Click **Start**, choose **All Programs**, **Accessories**, **System Tools**, and then click **Disk Defragmenter**.
- 4 In the Volume column, select the hard disk drive you want to defragment (typically **C:**), and then click **Defragment**.

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

- 1 Click **Start**, **Turn Off Computer**, and then **Restart**.
- 2 Press the F8 key as soon as the first logo screen appears.
- 3 On the Windows Advanced Options menu, use the arrow keys to select **Safe Mode** and press the Enter key.

- 4 Press the Enter key again to select the operating system.
- 5 Log on to Windows. When the Desktop message appears, click **Yes** to continue in Safe Mode.
- 6 After Windows starts, use the previous procedure to run the Disk Defragmenter program.

Checking for Hard Disk Drive Errors

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

- 1 Click **Start**, and then click **My Computer**.
- 2 In the window that opens, right-click the hard disk drive that you want to check, and click **Properties**.
- 3 In the Properties window, click the **Tools** tab.
- 4 Under **Error-checking**, click **Check Now**.
- 5 If desired, click the check box next to **Automatically fix file system errors** and **Scan for and attempt recovery of bad sectors**.
- 6 Click **Start**. If prompted to restart, click **Yes** to restart the PC.

Understanding Hard Disk Drive Space

HP PCs with the Windows XP operating system preinstalled *may* appear to have a hard disk drive 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 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 and the size advertised. The storage capacity of the hard disk drive is as advertised.

Windows reports smaller capacity in the Windows Explorer tool and in the My Computer window because it shows information about one partition on the hard disk drive at a time. The first partition contains the System Recovery information.

Recommended Maintenance Schedule

Daily	Weekly	Monthly	Quarterly (seasonally)
<p>Manage e-mail</p> <ul style="list-style-type: none"> • Delete e-mail from unknown sources. • Do not open untrusted attachments. • File e-mail. 	<p>Protect against viruses, adware, and spyware</p> <ul style="list-style-type: none"> • Update definition files or schedule a weekly automatic update. • Run a full virus, adware, and spyware scan or schedule a weekly automatic scan. 	<p>Use Windows Update</p> <ul style="list-style-type: none"> • Check for updates or schedule a monthly automatic update. (See the <i>Getting Started Guide</i> for details.) 	<p>Set new passwords (See the <i>Getting Started Guide</i> for details.)</p>
	<p>Optimize performance</p> <ul style="list-style-type: none"> • Run Disk Cleanup. (See "Running the Disk Cleanup Program" on page 1.) • Check for disk errors. (See "Checking for Hard Disk Drive Errors" on page 2.) • Run Disk Defragmenter. (See "Running the Disk Defragmenter Program" page 2.) 	<p>Review the Start menu</p> <ul style="list-style-type: none"> • Set to launch only needed applications. 	<p>Clean the PC, monitor, keyboard, and mouse</p> <ul style="list-style-type: none"> • For detailed cleaning instructions, go to http://www.hp.com/support select your country/region and language, search on your PC model number, and then search on the keyword <i>cleaning</i>.
	<p>Optimize your browser</p> <ul style="list-style-type: none"> • Delete cookies. • Delete cache. • Delete history files. 	<p>Clean up the desktop</p> <ul style="list-style-type: none"> • Delete or uninstall unneeded icons and applications. (See "Removing Unused Programs" on page 1.) 	
	<p>Empty the Recycle Bin</p> <ul style="list-style-type: none"> • This, and other cleanup tasks, can be performed with the Disk Cleanup program. (See "Running the Disk Cleanup Program" on page 1.) 	<p>Maintain overall condition</p> <ul style="list-style-type: none"> • Check cleanliness. • Make sure ventilation is unobstructed. • Secure all connections and cabling. 	
	<p>Back up important files to CD or DVD (See "Creating Data Backup Discs" on page 1.)</p>	<p>Create a Restore Point (See "Microsoft System Restore" on page 16.)</p>	

Troubleshooting PC Problems

This section contains a series of tables that describe possible solutions to problems that may occur when using your PC. Each table contains:

- **Symptoms** that describe the sign or warning message for the type of problem.
- **Possible solutions** that describe what you should do to try to solve the problem.


The troubleshooting tables appear in the following order:

- Audio
- Video
- CD and DVD Drives

- Display (Monitor)
- Hard Disk Drive
- Hardware Installation
- Internet Access
- Keyboard and Mouse
- Power
- Performance
- Miscellaneous

For additional information about monitor problems, or for problems relating specifically to your printer, refer to the documentation provided by the product's manufacturer.

Audio

Symptom	Possible solution
No sound is produced.	Press the Mute button on the keyboard to see if the Mute feature is turned on. Or 1 Click Start , and then click Control Panel . 2 Click Sounds, Speech, and Audio Devices , and then Sounds and Audio Devices . 3 Click the Mute check box to remove the check mark from the box.
	Click the task bar Volume icon () , or use the keyboard controls to increase the volume.
	Ensure powered (active) speakers are turned on.
	Turn off your PC, and reconnect the speakers.
	Press the Standby button (select models only), or press the Esc key on the keyboard to resume from standby mode.
	Replace the passive speaker system with an active speaker system (sold separately). Active speakers have a power cord and On button and connect to the Audio Out (green) connector on the PC.
	Unplug headphones if they are connected to your PC.
Codec error messages appear when certain audio files are played.	Open the file in Windows Media Player. Ensure Windows Media Player is configured to automatically download codecs. <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 the codec file. • If the correct codec is not available, check to see if there is an update available for Windows Media Player. • For more information, open Windows Media Player Help, and then search the online Help for <i>codec</i>.

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 such as WinDVD Creator, 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 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 the codec file. • If the correct codec is not available, check to see if there is an update available for Windows Media Player. <p>For more information, open Windows Media Player Help, and then search the online Help for <i>codec</i>.</p>
<i>Files Needed To Display Video Are Missing or Corrupt</i> error message appears.	<ol style="list-style-type: none"> 1 Click Start, right-click My Computer, and then select Properties. 2 Click the Hardware tab, and then click Device Manager. 3 Click the plus sign (+) next to Sound, video and game controllers. 4 Double-click TV tuner (select models only). 5 Click the Driver tab, and then click Update Driver. 6 Select Install from a list or a specific location, and then click Next. 7 Remove the check mark from Search removable media. 8 Click Include this location in this search, and then click the Browse button. 9 Click the plus sign (+) in order, next to each of the following directories: <ul style="list-style-type: none"> • My Computer • C:\ • Drivers 10 Click OK, Next, and then click Finish after the drivers are updated. 11 Restart the PC.

CD and DVD Drives

Symptom	Possible solution
The CD or DVD drive cannot read a disc or takes too long to start.	Ensure the disc is inserted with the label facing up and centered in the tray.
	Wait at least 30 seconds to let the DVD drive determine the type of media.
	Clean the disc with a CD cleaning kit, available from most PC stores.
	The driver may be corrupted or outdated. Refer to "Updating Drivers" on page 16 for detailed information about restoring and updating drivers.
I cannot remove a CD or DVD.	<p>Turn on your PC, and press the Eject button nearest the drive to open the tray.</p> <p>If you suspect a problem with the actual Eject button:</p> <ol style="list-style-type: none"> 1 Click Start and then My Computer. 2 Right-click the CD or DVD drive you want to open. 3 Select Eject from the menu.

CD and DVD Drives (*continued*)

Symptom	Possible solution
I cannot create (burn) a disc.	Ensure 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.
	Make sure 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 you are recording.
	When using a CD-R disc, make sure that it is blank when recording music and is blank or appendable (with space to add more data files) when recording data.
	Verify that you are using the correct disc type when making 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.
	Make sure the disc is in the correct drive and you specify the same drive in the CD or DVD recording software.
	Select a slower write speed for the recording drive, if it is available.
	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 disc.
	Close all software programs and windows before recording.
	Make sure you have enough space available on your hard disk drive to store a temporary copy of the content.
	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.
Close all programs and windows and then restart your PC.	
I cannot add data to a DVD.	Make sure you set the correct recording option (append or add data files) in your DVD burning software.
I cannot play a music CD on a home stereo.	Use a CD-R disc, not a CD-RW disc.
	Try a different brand of disc, or check to see if the brand of disc works with your stereo. Refer to the documentation that came with your stereo or CD player, and check the manufacturer's Web site.
	Use a CD instead of a DVD. Audio files on a DVD can be played on your PC, but you cannot create a music DVD to be played in a home CD player.
	Convert .mp3 or .wma audio files to .wav or .cda music files before burning them to a disc.

CD and DVD Drives (continued)

Symptom	Possible solution
Titles of music tracks are not displayed for the CD.	The PC must be connected to the Internet for the artist, title, and track information to appear when playing music CDs. This information is not recorded on the disc. Track information may not be available for every CD.
An error message appears when capturing video.	You may need to select the capture device if your PC has both an analog and a digital video capture device. Refer to the Help menu in the video capture program to find out how to change the video device selection.
I cannot play a DVD movie on a DVD player.	Your DVD player cannot play video files recorded onto the DVD as data files. To play a movie properly, use a video recording program such as WinDVD. Some video files may be viewed on a PC, but not on a home DVD video player.

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 plug on the back of the monitor and the wall outlet.
	Press the On button on the front of the monitor.
Screen is blank.	Press any key or move the mouse to make the screen display visible again.
	Press the Standby button (select models only), or press the Esc key on the keyboard to resume from standby mode.
	Press the On button to turn on the PC.
	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 PC.
Images on the screen are too large or too small, or the images are fuzzy.	Adjust the monitor resolution setting in Windows: <ol style="list-style-type: none"> 1 Right-click the desktop, and then select Properties. 2 Select the Settings tab. 3 Drag the Screen Resolution slider to adjust the resolution as needed.

Hard Disk Drive

Symptom	Possible solution
PC seems to be locked up and not responding.	<p>Use the Windows Task Manager to close any programs not responding or to restart the PC:</p> <ol style="list-style-type: none"> 1 Press the Ctrl key, the Alt key, and the Delete key on the keyboard at the same time. 2 Select the program that is not responding, and click End Task. <p>Or</p> <p>Click Shut Down, and then click Restart.</p> <p>If this does not work, press and hold the On button for 5 or more seconds to turn off the PC. Then, press the On button.</p>
Hard disk drive error message displays.	Press the Help ? button on the keyboard to open the Help and Support Center, or refer to the <i>Warranty and Support Guide</i> to contact Support for replacement details.

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 XP. Contact the device vendor directly for an update.</p> <p>For HP peripherals, visit the HP Web site. Refer to the <i>Warranty and Support Guide</i> for details.</p>
	Ensure that the device is properly and securely connected and that the pins in the connector are not bent down.
	Ensure that all cables are properly and securely connected and that the pins in the cable or connector are not bent.
	Turn off the PC, turn on the external device, and then turn on the PC to integrate the device with the PC.
	Restart the PC, and follow the instructions for accepting the changes.
	<p>Deselect the automatic settings in the operating system for the card, and choose a basic configuration that doesn't cause a resource conflict.</p> <p>You can also reconfigure or disable devices to resolve the resource conflict.</p>
	New device does not work.

Hardware Installation (continued)

Symptom	Possible solution
New or existing 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 Start, and click Control Panel. 2 Click Performance and Maintenance. 3 Click the System icon, and select the Hardware tab. 4 Click Device Manager. 5 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 there is a device conflict or problem with the device. Exclamation points do not always appear when a device is not working properly. 6 If there is an old or unnecessary device driver listed in the Device Manager, this may be causing the device conflict. To uninstall the old driver for the new device driver to work properly, do the following: Right-click the device, click Uninstall, and then click OK. 7 Right-click the device, and select Properties. 8 If available, click the Resources tab to verify that there is a device conflict. 9 Click the General tab to see if your device is enabled and working properly. If it is available, click the Troubleshoot button, and follow the onscreen instructions in the device troubleshooter wizard. 10 Restart the PC. Click Start, click Turn Off Computer, and then click Restart.

Internet Access

Symptom	Possible solution
I cannot connect to the Internet.	Verify Internet settings, or contact your Internet Service Provider (ISP) for assistance.
	<p>Reconnect the modem, verifying connections.</p> <p>Note that your PC may also have an Ethernet network interface (also called a network interface card, or NIC) that connects to a local area network (LAN). Although it looks similar to the modem connector, the RJ-45 Ethernet network connector is not the same. Verify that you are using the modem connector. 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>
	Verify that the Web browser is installed and set up to work with your ISP.
	Try to connect again later, or contact your ISP for assistance.
I cannot automatically start Internet programs.	Log in to your ISP, and start the desired program.

Internet Access (continued)

Symptom	Possible solution
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 Start, and then click Control Panel. 2 Click Printers and Other Hardware, if it is present. 3 Double-click Phone and Modem Options. 4 Select the Modems tab, and then click the Properties button. 5 In the <i>Device status</i> area, verify the modem is working properly. 6 In the <i>Device usage</i> area, verify the modem is enabled. 7 If there are further problems, click the Troubleshoot button, and follow the onscreen instructions. <p>Note that Web pages do not always load as quickly as files stored on your PC. Web pages may also load slowly if there is a high demand for the Web site at that time.</p>
The AOL program comes up 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 Start on the taskbar. 2 Click Control Panel. 3 Double-click Add or Remove Programs. 4 Select America Online, click Change/Remove, and then follow the onscreen instructions. <p>NOTE: Removing the AOL program will not cancel your account with AOL.</p>
My Internet browser home page changed to something I did not want.	<p>You may have <i>spyware</i> on your PC. Spyware is software that usually runs silently in the background on your PC, collecting and sending information about you and your use of the PC to another person or system on the Internet.</p> <p>You can find and remove spyware from your PC by using any one of a number of software programs available for this purpose. Many of the popular virus protection programs have some tools that scan for and remove spyware from your PC.</p> <p>To avoid getting spyware on your PC:</p> <ul style="list-style-type: none"> • Do not install programs if you are not sure they come from reputable companies. Check the company's Web site very 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 PC. Read the message in the window and make sure it is a software program that you really want.
Unwanted pop-up advertisements display on my PC when 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 (available by clicking Tools and then Pop-up Blocker).</p> <p>To remove adware from your PC, use the antispyware/adware program included on your PC (select models only) or any number of available software programs that remove adware programs.</p> <p>Note that many of the popular antivirus programs have tools that scan for and remove adware from your PC.</p>

Keyboard and Mouse

Symptom	Possible solution
Keyboard commands and typing are not recognized by the PC.	Turn off the PC by using the mouse, reconnect the keyboard to the back of your PC, and then turn on your PC.
	Press the Help ? button on the keyboard to open the Help and Support Center, or refer to the <i>Warranty and Support Guide</i> to contact Support for replacement details.
Keyboard Print button does not work.	Use the Print menu item in the program (typically located on the File menu).
Wireless keyboard does not work after installation or is not detected.	<ul style="list-style-type: none"> • Ensure the keyboard is within the range of the receiver. • Replace the batteries in the wireless keyboard. • Refer to the documentation that came with the keyboard.
Wireless mouse does not work after installation or is not detected.	<ul style="list-style-type: none"> • Ensure the mouse is within the range of the receiver. • Replace the batteries in the wireless mouse. • Refer to the documentation that came with the mouse.
Cursor does not respond to mouse movement.	<p>Restart your PC using the keyboard:</p> <ol style="list-style-type: none"> 1 Press the Alt and Tab keys on the keyboard at the same time to navigate to an open application. 2 Press the Ctrl and S keys on the keyboard at the same time to save your changes in the selected application (Ctrl+S is the keyboard command for Save on most — <i>not all</i> — applications). 3 After saving changes in all open applications, press the Ctrl and Esc keys on the keyboard at the same time to display the Start menu. 4 Use the up arrow key to select Turn Off Computer, and then press the Enter key on the keyboard. 5 Use the left and right arrow keys to select Turn Off, and then press the Enter key. 6 After the shutdown is complete, disconnect and reconnect the mouse connector into the back of your PC, and then turn on your PC.
Cursor responds slowly to mouse movement.	Use a mouse pad or other rough surface under the mouse.
Cursor does not move using the arrow keys on the keypad.	Press the Num Lock key. The Num Lock light should not be on if you want to use the arrow keys in the number keys group.
Cursor moves only vertically or horizontally (or does not move smoothly on the screen).	Remove the rollerball cover from bottom of mouse (rotate it counter-clockwise), remove the ball, and clean it with a damp, lint-free cloth (not paper). Also clean the rollers on which the ball moves.
Mouse does not work after installation or is not detected.	Unplug and reconnect the mouse cable to your PC.
Optical mouse does not track cursor well.	Place the mouse on a mouse pad or white sheet of paper, or gently wipe the light sensor lens on the bottom of the mouse with a lint-free cloth (not paper).

Keyboard and Mouse (*continued*)

Symptom	Possible solution
Cursor moves too fast or too slow.	<p>Adjust the cursor speed:</p> <ol style="list-style-type: none"> 1 Click Start, Control Panel, Printers and Other Hardware, and then Mouse. 2 Click the Pointer Options tab. 3 Adjust the Motion slider toward Slow or Fast to decrease or increase the speed at which the pointer (cursor) responds to mouse movement. 4 Click OK.

Power

Symptom	Possible solution
PC will not turn on or start.	Ensure that cables connecting the PC to the external power source are plugged in properly.
	When the cables connecting the PC to the external power source are plugged in properly and the wall outlet is functioning, the green power supply light should be on; if the light is not on, refer to the <i>Warranty and Support Guide</i> to contact Support.
	Connect the monitor to the PC, plug it in, and turn it on.
	Set the line voltage selection switch to the correct setting for your country/region, or refer to the <i>Warranty and Support Guide</i> to contact Support.
	Test the outlet by connecting a different electrical device to the outlet.
	Reinstall the old memory to return your PC to its original state. Refer to the <i>Upgrading and Servicing Guide</i> for instructions.
	Press the Help ? button on the keyboard to open the Help and Support Center, or refer to the <i>Warranty and Support Guide</i> to contact Support for replacement details.
Invalid system disk or Non-System disk or disk error message displays.	When drive activity stops, remove the disk and press the spacebar. The PC should start up.
	Press and hold the On button until the PC turns off.
PC does not respond or turn off when the On button is pressed.	Press and hold the On button until the PC turns off.
	Refer to the <i>Warranty and Support Guide</i> to contact Support for replacement details. Note that your PC may not have an internal fan.
PC shut down automatically.	The PC is in an exceedingly hot environment. Let it cool down. Ensure PC air vents are not blocked and internal fan is running. Note that your PC may not have an internal fan.
	Refer to the <i>Warranty and Support Guide</i> to contact Support for replacement details. Note that your PC may not have an internal fan.

Power (continued)

Symptom	Possible solution
PC date and time display is incorrect.	<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 your operating system by using the Control Panel. If the problem persists, replace the battery. See the <i>Upgrading and Servicing Guide</i> for replacement instructions.</p>

Performance

Symptom	Possible solution
Applications and files take longer to open or respond.	<p>If you created multiple user accounts on your PC, make sure other users are not logged in. If there are multiple users logged in at one time, system resources must be shared among the multiple users.</p>
	<p>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:</p> <ol style="list-style-type: none"> 1 Click Start, All Programs, Accessories, System Tools, and then click Disk Cleanup. 2 Select the drive on which you want to perform the cleanup. 3 Choose the files to delete by placing a check mark in the check box next to the file types listed. 4 Click OK, and then click Yes to permanently delete the files.
	<p>Run the Disk Defragmenter program to group fragmented files together on your hard disk drive and improve performance. This does not affect the location of files and folders on your PC.</p> <p>NOTE: The Disk Defragmenter program may take a long time to complete. It is a good idea to run it overnight.</p> <p>To run the Disk Defragmenter program:</p> <ol style="list-style-type: none"> 1 Open the Windows Task Manager by pressing the Ctrl key, the Alt key, and the Delete key at the same time. 2 On the Applications tab, select all the programs that are listed, and then click End Task. 3 Click Start, choose All Programs, Accessories, System Tools, and then click Disk Defragmenter. 4 In the Volume column, select the hard disk drive you want to defragment (typically C:), and then click Defragment.
<p>Remove unused programs:</p> <ol style="list-style-type: none"> 1 Click Start, and then click Control Panel. 2 Double-click the Add or Remove Programs icon. The Add or Remove Programs window opens. 3 Select the program you wish to remove and click the Change/Remove or the Remove button. <p>Follow the onscreen instructions.</p>	

Performance (continued)

Symptom	Possible solution
Applications and files take longer 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 Start, and then click My Computer. 3 Right-click the hard disk drive that you want to check, and then click Properties. 4 In the System Properties window, click the Tools tab. 5 Under Error-checking, click Check Now. 6 If desired, select the buttons next to Automatically fix file system errors and Scan for and attempt recovery of bad sectors. 7 Click Start. If prompted to restart, click Yes and allow the PC to restart.

Miscellaneous

Symptom	Possible solution
Insufficient memory message displays.	Close all open programs, and then try the desired task again, or restart your PC (click Start , Turn Off Computer , and then Restart). If the message displays again, consider purchasing and installing additional memory.
Remote sensor is not receiving a signal from the remote control (select models only).	<ol style="list-style-type: none"> 1 Click Start, right-click My Computer, and then select Properties. 2 Click the Hardware tab, and then click Device Manager. 3 Click the plus (+) sign next to Universal Serial Bus Controllers. 4 If the eHome Infrared Receiver is listed under Universal Serial Bus Controllers, Windows is properly detecting the 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 PC and plug it into the same USB port. 6 Disconnect all other USB devices, leave the remote sensor plugged in, and then restart the PC. Plug in other USB devices after the remote sensor appears in the Device Manager window.
Memory card reader (select models only) cannot read my memory card.	Do not insert or remove memory cards when the in-use light is flashing. To do so may cause data loss, or it may permanently damage the card reader.
	Some cards have a Read/Write or Security switch on the card. Make sure the switch is set to Write Enabled before attempting to write data to it.
	Make sure the amount of data you are storing has not exceeded the storage limit of the card.
	Make sure the memory card is one of the supported types: CompactFlash (1, 2, and Microdrive), Memory Stick, Memory Stick Pro, MultiMedia, Secure Digital, SmartMedia, or XD.
	Make sure the memory card is fully inserted into the correct slot.
	Inspect the ends of the memory cards for dirt or material closing a hole or spoiling a metal contact. Clean the contacts with a lint-free cloth and small amounts of isopropyl alcohol. Replace the memory card if necessary.

Repairing Software Problems

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

Some software repairs are as simple as restarting your PC, and others require performing a System Recovery from files on your hard disk drive.

Your hard disk drive contains a System Recovery image that includes all the software files that were originally installed on your PC at the factory. In the unlikely event that you need to recover your system, it is easy to do so using this recovery image.

Because all the necessary information is contained in the System Recovery image on your hard disk drive, recovery discs are not included in the accessory box.

As a backup, you can:

- Make your own System Recovery discs from the recovery image as described in “Creating System Recovery Discs” on page 18.
- Contact HP Support to purchase a set of System Recovery discs.

You should also make the HP PC Recovery Tools CD. This CD contains utilities that allow you to make changes to your hard disk drive. See “Creating a Recovery Tools CD” on page 18.

NOTE: It is important that you perform the PC repair methods in the order described in this document.

Software Repair Overview

This section lists the available methods to fix your PC if you are experiencing software problems. Detailed instructions about each method are in the sections that follow. You must perform the procedures in the order listed here.

- Restarting your PC
- Turning off your PC
- Updating drivers

- Microsoft System Restore
- Application Recovery and Driver Recovery
- System Recovery

NOTE: If you are replacing a hard disk drive, you only have to run the System Recovery.

Additionally, your PC may include a Software Repair Wizard (select models only). You can use this wizard to access many of the repair methods described in this chapter, including:

- Creating System Recovery discs
- Microsoft System Restore
- Application Recovery and Driver Recovery
- System Recovery

You can start the Software Repair Wizard by clicking **Start, All Programs, PC Help & Tools**, and then **Software Repair Wizard**.

Restarting Your PC

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

To restart your PC:

- 1** Close all open programs and windows.
- 2** Click **Start**.
- 3** Choose **Turn Off Computer**.
- 4** Click **Restart**.

Turning Off Your PC

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

To turn off your PC:

- 1** Close all open programs and windows.
- 2** Click **Start**.
- 3** Choose **Turn Off Computer**.
- 4** Click **Turn Off**.
- 5** Start your PC by pressing the On button.

Updating Drivers

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

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

- 1 Click **Start**, right-click on **My Computer**, and then click **Properties**. The System Properties window displays.
- 2 Click the **Hardware** tab, and then **Device Manager**. The Device Manager displays.
- 3 Click the plus sign (+) to expand the device whose driver you want to update or rollback, (for example, **DVD/CD-ROM drives**).
- 4 Double-click the specific item (for example, **HP DVD Writer 640b**), and then click the **Driver** tab.
- 5 Click **Update Driver** or **Rollback Driver**, and follow the onscreen instructions.

Microsoft System Restore

Microsoft® Windows® XP includes a feature that allows you to restore your PC configuration to that of a previous time when a current software problem did not exist. The feature does this by creating a “restore point” where it records the PC settings at that time and date.

When you add programs by clicking **Add New Programs** in the Add or Remove Programs window (accessed by clicking **Start, Control Panel**, and then **Add or Remove Programs**), the operating system automatically creates a restore point before it adds the new software. You can also set them manually.

If you experience a problem that you think may be due to software on your computer, use System Restore to return the PC to a previous restore point.



WARNING: Always use this System Restore procedure before using the System Recovery program.

To start a System Restore:

- 1 Close all open programs.
- 2 Click **Start**.
- 3 Choose **All Programs**.
- 4 Choose **Accessories**.
- 5 Choose **System Tools**.
- 6 Click **System Restore**.
- 7 Click **Next**.
- 8 Follow the onscreen instructions.

To manually add restore points:

- 1 Close all open programs.
- 2 Click **Start**.
- 3 Choose **All Programs**.
- 4 Choose **Accessories**.
- 5 Choose **System Tools**.
- 6 Click **Create a Restore Point**.
- 7 Click **Next**.
- 8 Follow the onscreen instructions.

For more information about software restore points:

- 1 Click **Start**.
- 2 Click **Help and Support**. The Help and Support Center displays.
- 3 Type *system restore* into the Search box, and then click **Search**.

Application and Driver Recovery

If an individual factory-installed driver or software program (also known as an *application*) accidentally gets erased or damaged, you can reinstall the software program using the HP Application Recovery program (select models only).

NOTE: To ensure your PC includes the program, perform steps 3 through 5 of the following procedure. If HP Application Recovery is listed in the PC Help & Tools folder, your PC includes the program.

NOTE: Do not use the Application Recovery program to reinstall software programs that came on CDs or DVDs included in the PC box. Reinstall these programs directly from the CDs or DVDs.

To start an Application Recovery or Driver Recovery:

- 1 Close all applications and folders (skip to step 3 if you are recovering a driver).
- 2 Uninstall the damaged application:
 - a Click **Start, Control Panel**, and then **Add or Remove Programs**.
 - b Select the program you want to remove, and then click **Change/Remove**.
- 3 Click **Start**.
- 4 Choose **All Programs**.
- 5 Choose **PC Help & Tools**.
- 6 Click **HP Application Recovery**.
- 7 Click **Application Installation** or **Driver Installation**, and then click **Next**.
- 8 Select the driver or application program to install, and then click **Install**.
- 9 Repeat steps 7 and 8 to install other drivers or applications.
- 10 When you have finished recovering applications or drivers, close the Application Recovery program. Then click **Start, Turn Off Computer**, and then **Restart** to restart the PC.



WARNING: Do not skip this last step. You must restart the PC when you are finished recovering applications or drivers.

System Recovery Overview

After you have tried the previously mentioned methods of repairing your system software, you can run the System Recovery program as a last resort to reinstall the operating system and the application software.

System Recovery provides two recovery options:

- **Standard Recovery** — This option recovers factory shipped programs, drivers, and the operating system without affecting any data files that you may have created since purchasing this PC. Some data files may be difficult to find after the System Recovery, so it is best to back up all hard disk drive files before performing a System Recovery.
- **Full System Recovery** — This option completely erases and reformats the hard disk drive — this includes deleting all data files you have created. The Full System Recovery reinstalls the operating system, programs, and drivers from the recovery image or discs. However, you must reinstall any software that was not installed on the PC at the factory. This includes software that came on CDs included in the PC accessory box, and software programs you installed since your purchase.

NOTE: If your PC has a blank or corrupted hard disk drive, you will see only the Full System Recovery option.

NOTE: If your PC includes an HP Personal Media Drive (select models only), you must remove it before starting the System Recovery program.

Additionally, you have to choose from the following methods for performing a System Recovery:

- **Recovery Image** — Run the recovery from a recovery image stored on your hard disk drive. The recovery image is a file that contains a copy of the original software. To perform a system recovery from the recovery image on your hard disk drive, see “Running System Recovery from the Hard Disk Drive” on page 19.

NOTE: The recovery image uses a portion of the hard disk drive that cannot be used for data storage.

- **Recovery Discs** — Run the recovery from a set of recovery discs (CDs or DVDs) that you create from files stored on your hard disk drive. To create recovery discs, perform the procedure in the next section.

Creating System Recovery Discs

Complete the procedure described in this section to create a set of system recovery discs from the recovery image stored on your hard disk drive. This image contains the operating system and software program files that were originally installed on your PC at the factory.

You can create only one set of recovery discs for your PC. The recovery discs you create can only be used with your PC.

After creating the recovery discs, you can delete the recovery image if you would like to make extra space available on your hard disk drive.

NOTE: Do not delete the recovery image unless you have made recovery CDs or DVDs.

Choosing Recovery Disc Media

There are several advantages to using DVDs instead of CDs when creating recovery discs:

- DVDs have a faster data transfer rate. DVD recovery discs restore the original data faster than CD recovery discs.
- DVD recovery discs take less time to create than CD recovery discs.
- DVDs have greater capacity than CDs, so there are fewer discs to record and store.

To create recovery discs, your PC must have a CD or DVD writer drive, or other drive that can write to CDs or DVDs.

The number of discs in the recovery disc set depends on your PC model. The program that creates the discs tells you the number of blank discs needed to make the set. The process takes some time, up to 15 minutes per disc, to verify that the information written on the disc is correct.

You can quit the process at any time. The next time you run the program, it begins where you left off.

To create System Recovery discs:

- 1 Close all open programs.
- 2 Click **Start**.
- 3 Choose **All Programs**.

4 Choose **PC Help & Tools**.

5 Click **HP PC Recovery CD-DVD Creator**.

The Recovery CD/DVD Creator window appears.

6 Follow the onscreen instructions. Label each disc as you make it (for example, Recovery 1, Recovery 2).

Store the System Recovery discs in a safe place.

Creating a Recovery Tools CD

In addition to System Recovery discs, you can create a Recovery Tools CD. The Recovery Tools CD can be used to:

- Read instructions to use each utility on the Recovery Tools CD.
- Start the System Recovery program from the recovery partition.
- Remove the System Recovery partition from your PC hard disk drive to increase space for data.
- Create a new data partition on your PC hard disk drive.
- Start the Microsoft Recovery Console (a utility from Microsoft that can perform operating system diagnostics and repairs).



WARNING: Before using the HP PC Recovery Tools CD to change your hard disk drive, create System Recovery discs as described in the previous section. You cannot make System Recovery discs after you remove the System Recovery partition.

You must create a Recovery Tools CD before you can use any of these utilities.

To create or start the Recovery Tools CD:

- 1 Click **Start**.
- 2 Choose **All Programs**.
- 3 Choose **PC Help & Tools**.
- 4 Click **HP PC Recovery Tools CD**. The tools window appears.
- 5 Follow the onscreen instructions.

Store the Recovery Tools CD in a safe place.

Running System Recovery from Recovery Discs

This section contains the procedure for performing a system recovery from the recovery discs you created as described in "Creating System Recovery Discs" on page 18.

To run the System Recovery program using recovery discs:

- 1** If the PC works, create a backup CD or DVD containing all data files that you want to save. Remove the backup disc from the disc tray when you are finished.
- 2** Insert recovery disc #1 into the appropriate drive tray (CD or DVD), and close the tray.
- 3** Turn off the PC:
 - If the PC works: Click **Start, Turn Off Computer**, and then **Turn Off**.

Or

 - If the PC is not responding: Press and hold the On button approximately 5 seconds until the PC turns off.
- 4** Disconnect all peripheral devices from the PC except the monitor, the keyboard, and the mouse.
- 5** Disconnect or remove all external drives and remove the HP Personal Media Drive if your PC includes one.
- 6** Press the On button to turn on the PC.
- 7** The PC starts the recovery from the recovery disc. Follow the onscreen instructions when they are displayed.
 - For standard System Recovery, press R. Choose **Next** to proceed with the System Recovery. Choose **Yes** to start the recovery. Insert the remaining recovery discs when directed.

Or

 - For Full System Recovery, press F. Choose **Yes** to perform a Full System Recovery. Insert the remaining discs when directed.

Or

 - If your PC hard disk drive is blank or corrupted, press R to perform a Full System Recovery. Insert the remaining recovery discs when directed.



WARNING: The Full System Recovery option deletes any data or programs that you created or installed after purchase. Be sure to back up any data that you want to keep onto a removable disc.

- 8** Insert the next disc if prompted.
 - 9** When the recovery program finishes, remove the last disc.
-

NOTE: If the message *Please Insert Login Advanced Installation Disc Number 1 and Restart* is displayed at the end of a Full System Recovery, remove the recovery disc from the drive tray, and restart the PC. You do not need to insert the referenced disc.

- 10** Click **Restart** to restart the PC.
- 11** After the PC restarts, a series of startup screens appears. To proceed with the initial Microsoft Windows setup, you must answer a few questions.
- 12** Complete the PC startup, finish the registration process, and wait until you see the desktop. Then, turn off the PC, reconnect all peripheral devices, and turn on the PC.
- 13** Reinstall software not originally installed on the PC by the factory.
- 14** Copy data files from the backup disc to your hard disk drive.

Running System Recovery from the Hard Disk Drive

Choose one of the following procedures to reinstall the software from the recovery image on your hard disk drive:

- Starting System Recovery if the PC is responding
- Starting System Recovery if the PC is not responding


Starting System Recovery if the PC is responding

- 1 Turn off the PC. Remove the HP Personal Media Drive if your PC includes one. Disconnect all peripheral devices from the PC except the monitor, the keyboard, and the mouse. Turn on the PC.
- 2 Click **Start** on the taskbar, choose **All Programs**, choose **PC Help & Tools**, and then click **HP PC System Recovery**.

You are prompted to confirm that you have performed the Microsoft System Restore and Driver Rollback:

- If you have not performed the Microsoft System Restore and Driver Rollback, click **Microsoft System Restore**, and follow the onscreen instructions.
- If you have performed the Microsoft System Restore and Driver Rollback, click **Yes** to start the recovery process, and then continue with step 3.


- 3 Follow the onscreen instructions.

 **WARNING: The Full System Recovery option deletes any data or programs that you created or installed after purchase. Be sure to back up any data that you want to keep onto a removable disc.**

- 4 Complete the PC startup, finish the registration process, and wait until you see the desktop. Then, turn off the PC, reconnect all peripheral devices, and then turn on the PC.

Starting System Recovery if the PC is not responding

- 1 Turn off the PC. If necessary, press and hold the On button until the PC turns off.
- 2 Remove the HP Personal Media Drive if your PC includes one. Disconnect all peripheral devices from the PC except the monitor, the keyboard, and the mouse.
- 3 Press the On button to turn on the PC.
- 4 During the startup, do the following to enter the System Recovery program:
When the blue screen with the HP Invent logo appears, press the F10 key on the keyboard. (You have only a few seconds to press the F10 key before the normal startup process continues.)
- 5 The PC starts the recovery; wait for the onscreen instructions to display, and then follow those instructions.

 **WARNING: The Full System Recovery option deletes any data or programs that you created or installed after purchase. Be sure to back up any data that you want to keep onto a removable disc.**

- 6 Complete the PC startup, finish the registration process, and wait until you see the desktop. Then, turn off the PC, reconnect all peripheral devices, and turn on the PC.

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