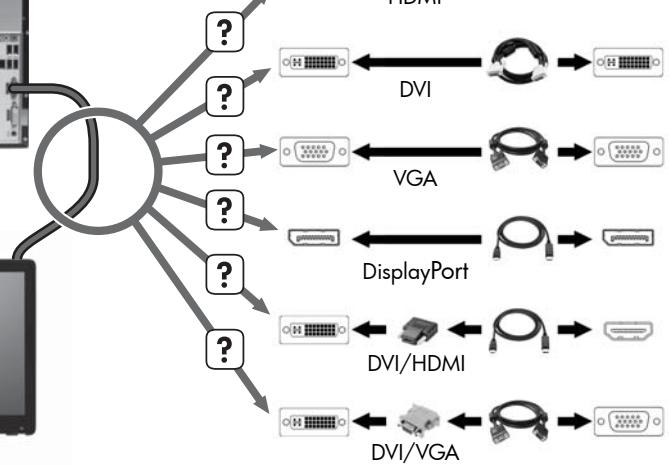


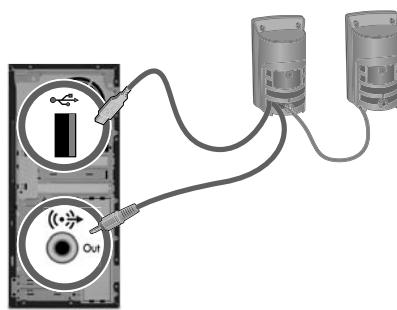
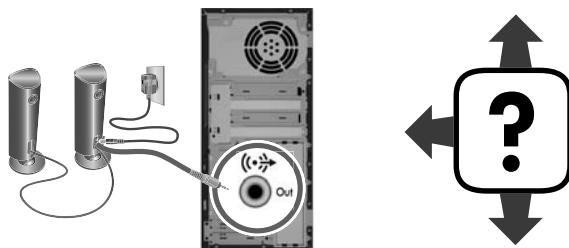
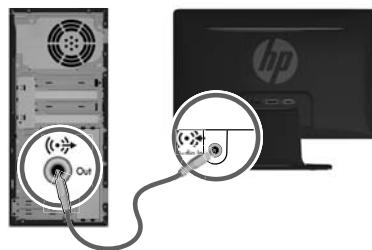
1



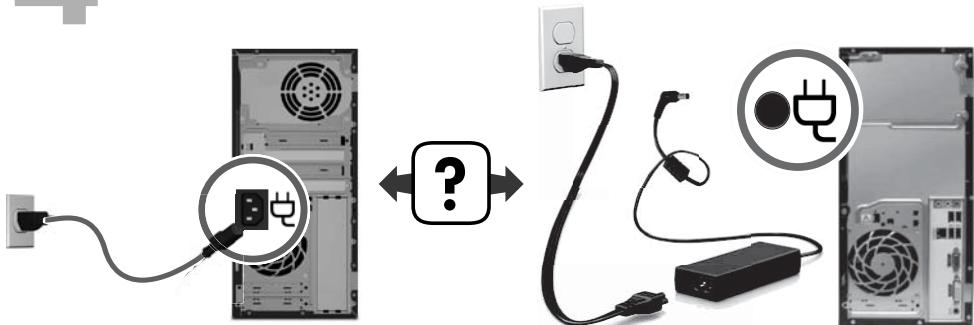
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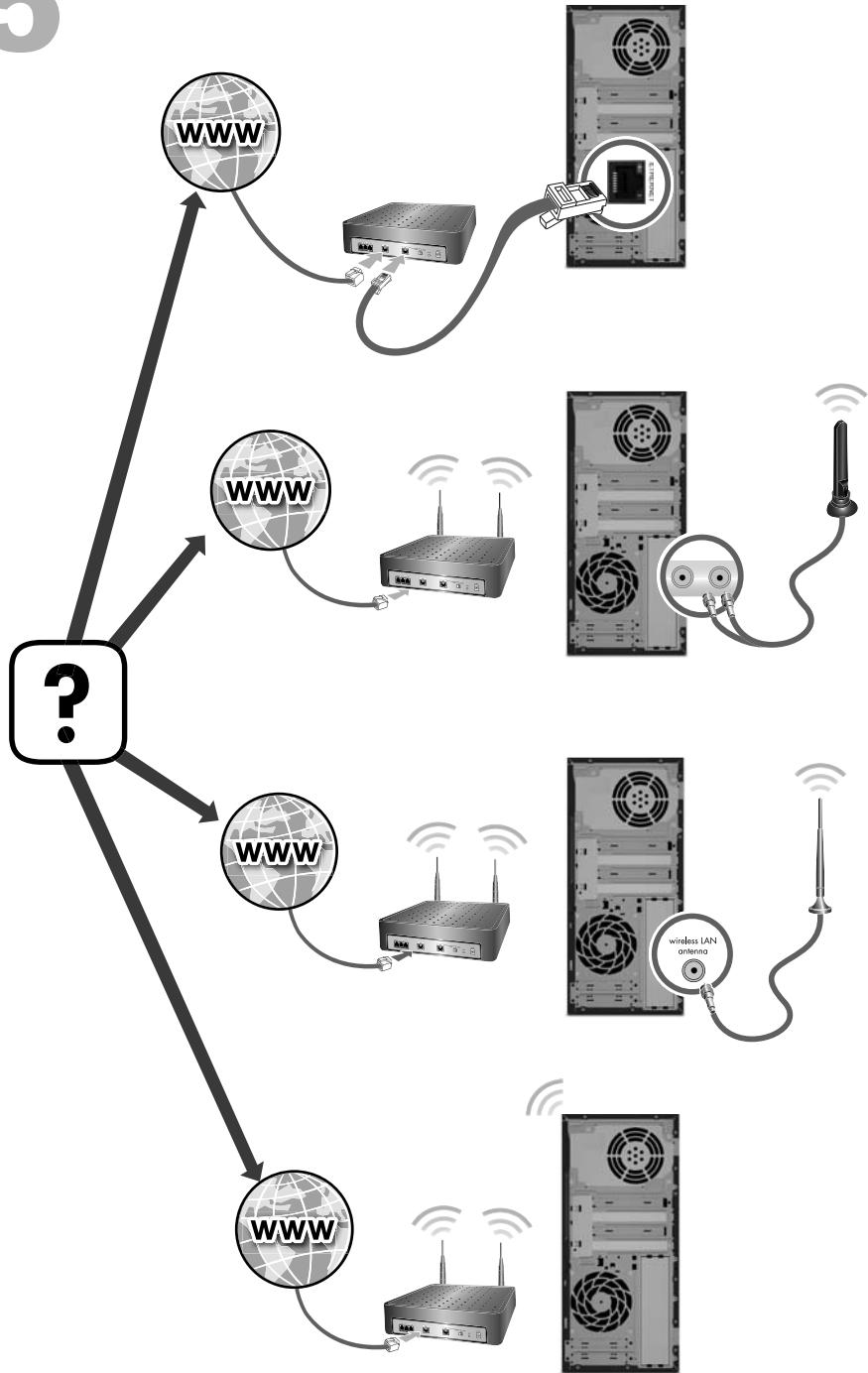
3



4



5



6



<http://www.hp.com/go/contactHP>



http://welcome.hp.com/country/us/en/wwcontact_us.html

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Product notice

This guide describes features that are common to most models. Some features may not be available on your computer.

The information in this document is subject to change without notice.

Warranty Print on Demand Statement

You can find the expressly provided HP Limited Warranty applicable to your product located with the user guides on your computer and/or on the CD/DVD provided in the box. In some countries/regions, HP may provide a printed HP Limited Warranty in the box. For some countries/regions where the warranty is not provided in printed format, you may request a printed copy from hp.com/go/orderdocuments or write to:

North America: Hewlett-Packard, MS POD,
11311 Chinden Blvd., Boise, ID 83714, USA

Europe, Middle East, Africa: Hewlett-Packard,
POD, Via G. Di Vittorio, 9, 20063 Cernusco s/
Naviglio (MI), Italy

Asia Pacific: Hewlett-Packard, POD, P.O. Box
200, Alexandra Post Office, Singapore 911507

When you request a printed copy of your warranty, please include your product number, warranty period (found on your service label), name, and postal address.

IMPORTANT! Do NOT return your HP product to the addresses above. For U.S. products, go to <http://www.hp.com/go/contactHP>. For worldwide support, go to http://welcome.hp.com/country/us/en/wwcontact_us.html.

1 Getting information

Type of information	Where to find
<ul style="list-style-type: none">Set up your computer.	<i>Quick Setup</i> (this Guide)
<ul style="list-style-type: none">Use the computer.Connect to the Internet.	<i>Quick Setup</i> (this Guide)
<ul style="list-style-type: none">Recover factory settings.	<i>Troubleshooting and Maintenance Guide</i> on your computer. Select the HP Support Assistant app on the Start screen, select My computer , and then select User guides .
<ul style="list-style-type: none">See how-to videos about using the features of your computer.	Visit http://www.hp.com/supportvideos (English only)
<ul style="list-style-type: none">Learn how to use the Microsoft Windows operating system.Find Windows password information.Find links to driver updates.Read frequently asked questions.	Help and Support From the Start screen, type h , and then select Help and Support . For U.S. support, go to http://www.hp.com/go/contactHP . For worldwide support, go to http://welcome.hp.com/country/us/en/wwcontact_us.html . Windows troubleshooting tools <ol style="list-style-type: none">From the Start screen, type c, and then select Control Panel.Select System and Security, and then under Action Center, select Troubleshoot common computer problems.
<ul style="list-style-type: none">Troubleshoot the most common computer hardware and software issues.	<i>Troubleshooting and Maintenance Guide</i> on your computer. Select the HP Support Assistant app on the Start screen, select My computer , and then select User guides .
<ul style="list-style-type: none">Find electronic user guides and specifications for your computer model.Order parts and find additional troubleshooting help.	HP Support website: http://www.hp.com/go/contactHP
<ul style="list-style-type: none">Upgrade or replace components of your computer.	<i>Upgrading and Servicing Guide</i> HP Support website: http://www.hp.com/go/contactHP

Type of information	Where to find
<ul style="list-style-type: none">Find computer warranty information.	<p><i>HP Worldwide Limited Warranty and Technical Support</i> included with your computer.</p> <p>Select the HP Support Assistant app on the Start screen, select My computer, and then select User guides.</p>
<ul style="list-style-type: none">Get up-to-date information and help from the Windows community.	<p>http://www.hp.com/support/consumer-forum</p>
<ul style="list-style-type: none">Connect to a TV.	<p><i>Watching and Recording TV</i></p> <p>Select the HP Support Assistant app on the Start screen, select My computer, and then select User guides.</p> <p>If the guide is not available there, visit http://www.hp.com/go/contactHP.</p>
<ul style="list-style-type: none">Maintain your computer.	<p>HP Support Assistant — Maintains your computer performance and resolves problems faster by using automated updates, on-board diagnostics, and guided assistance.</p> <p>Select the HP Support Assistant app on the Start screen.</p> <p><i>Troubleshooting and Maintenance Guide</i></p> <p>Select the HP Support Assistant app on the Start screen, select My computer, and then select User guides.</p> <p><i>Maintaining Your Computer</i> (this Guide)</p>
<ul style="list-style-type: none">Find safety and regulatory notices.	<p><i>Regulatory, Safety and Environmental Notices</i></p> <p>Select the HP Support Assistant app on the Start screen, select My computer, and then select User guides or visit http://www.hp.com/go/contactHP.</p>
<ul style="list-style-type: none">Find ergonomic information.	<p><i>Safety & Comfort Guide</i></p> <p>Select the HP Support Assistant app on the Start screen, select My computer, and then select User guides or visit http://www.hp.com/ergo.</p>

2 Setting up your computer



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

- Place the computer in a location away from water, dust, moisture, and soot. These can increase the inside temperature, or can cause fire or electrocution.
- Do not disable the power cord grounding plug. The grounding plug is an important safety feature.
- Plug the power cord in a grounded (earthed) outlet that is easily accessible at all times.
- Disconnect power from the equipment by unplugging the power cord from the electrical outlet. To prevent direct exposure to laser beam, do not try to open the enclosure of the CD or DVD drives.
- The power supply is preset for the country/region in which you purchased your computer. If you move, check the voltage requirements for your new location before plugging the computer into an AC power outlet.

The computer may be heavy; be sure to use ergonomically correct lifting procedures when moving the computer.

To reduce the risk of serious injury read the *Safety & Comfort Guide*. The guide is located on the web at <http://www.hp.com/ergo>.

1. Place the computer so that all ventilation openings are unobstructed and cabling is not in a walkway or where it can be stepped on or damaged by placing furniture on it.
2. Connect all power cords from the monitor, computer, and accessories to a power surge protection device that is specifically labeled as having surge protection, an uninterruptible power supply (UPS), or a similar device. If the computer has a television tuner, or a modem or telephone connection, protect the computer by using surge protection with these signal inputs as well. Connect the television cable or the telephone line cord to the surge protection device, and then connect the device to the computer.
3. Download and install operating system updates.
 - a. Find out what operating system and version your computer is currently running.
(From the Start screen, type **c**, select **Control Panel**, select **System and Security**, and then select **System**. The operating system and version are shown under Specifications.)
 - b. Open your internet browser and go to <http://www.hp.com/go/contactHP>.

- c. Select your country and language, if necessary, and click **Support & Drivers**.
 - d. Select **Download drivers and software (and firmware)**, type your computer model name and number in the product field, and press Enter.
 - e. If necessary, select your computer model from **Product search results**.
 - f. Select your computer operating system.
 - g. Click **Download** next to each update you wish to download.
 - h. Follow the on-screen instructions to install each downloaded update.
4. Look in the computer box for additional printed details or updates.
 5. Read the *Regulatory, Safety and Environmental Notices* included with your computer. Select the **HP Support Assistant** app on the Start screen, select **My computer**, and then select **User guides**.
 6. Read the *Safety & Comfort Guide* for proper workstation setup, posture, health and work habits, and electrical and mechanical safety information. Select the **HP Support Assistant** app on the Start screen, select **My computer**, and then select **User guides** or visit <http://www.hp.com/ergo>.

After you complete the initial computer setup, you might want to install additional software programs or hardware devices. Check the operating system, memory, and other requirements listed before purchasing new software or hardware for your computer. Follow the software manufacturer's directions to install the new software.



NOTE: Use only licensed original software. Installing copied software could result in an unstable installation, infect the computer with a virus, or be illegal.

Security solutions can deter theft, mishandling, and software attacks, but cannot prevent them.

Connecting to the Internet

Steps to connect to the Internet:

1. Connect the hardware as shown on the setup view.
2. Get Internet service.

Sign up with an Internet Service Provider (ISP). If you already have an account with an ISP, skip this step and follow the instructions provided by the ISP.
3. Using your Internet connection through your ISP, open a web browser and browse the Internet.



NOTE: If you have issues connecting to the Internet, see [Internet access on page 15](#).

3 Setting up additional features

Using Beats Audio™ (select models only)

Your HP TouchSmart PC features audio connectors (headphone and Audio Out) that are optimized for Beats Audio™ headphones and external audio systems (purchased separately). Select HP TouchSmart PC models also include four Beats-optimized internal speakers and a Beats toggle button  on the keyboard.

Your computer comes ready for you to experience music with Beats enabled. To disable Beats, press the Beats toggle button; the Beats off icon appears on the screen. To turn Beats on, press the Beats toggle button again. If your keyboard does not contain the Beats toggle button, press Fn+B to enable and disable Beats. To view the Beats user interface, from the Start screen, type  b, and then select **HP Beats Audio**.

All you need to do is plug the Beats Audio headphones into the side headphone connector to experience crisp and clear sound separation. To experience the full capability of BEATS audio using the internal speakers, HP recommends connecting a matching HP subwoofer to the Sub connector on the back panel. If you are using an external audio system, plug it into the Audio Out connector on the back panel.

Using an HDMI monitor

If your computer has a graphics card with an HDMI (High Definition Multimedia Interface) connector, Hewlett-Packard recommends using a DVI or VGA connector for a monitor, and using HDMI to connect a TV.

If you use HDMI to connect your monitor, you may need to adjust some settings to hear sound (see the following steps). Because of this, HP recommends that you connect analog speakers to the computer if you want to hear sound during the initial setup of the computer.

For optimum viewing, you may need to adjust the resolution setting for the monitor (see [Adjusting resolution on page 6](#)).

Save this document for future use.

 **NOTE:** If you ever need to recover the computer operating system by using the Recovery Manager, you must repeat these procedures to activate sound and adjust resolution for the HDMI connector.

 **IMPORTANT:** Your HDMI monitor must be connected to the graphics card before you activate sound and adjust resolution.

Activating sound

1. Press the Windows logo key on the keyboard to view the Desktop.
2. Right-click the **Volume** icon (white speaker) in the notification area, at the far right of the task bar.

3. Select **Playback devices**. The Sound window opens.
4. On the **Playback** tab, look for the Default Device. It may display a green circle with a checkmark in it.
If the Default Device is one of the following, then your HDMI monitor is already activated:
 - **NVIDIA High Definition Audio** (select models only)
 - **ATI High Definition Audio** (select models only)
 - **Realtek HDMI Output**Select the **Cancel** button to close the window, and then continue with the next procedure, “Adjusting resolution,” if necessary.
- If the Default Device is not one of these devices, continue with step 5.
5. If one of the following HDMI options is available on the **Playback** tab, select it:
 - **NVIDIA High Definition Audio** (select models only)
 - **ATI High Definition Audio** (select models only)If neither of these is present, select **Realtek HDMI Output**.
6. Select **Set Default**.
7. Select **OK** to close the window. This completes the steps to activate HDMI sound.

Adjusting resolution

To adjust resolution, follow the instructions for your type of graphics card. Press the Windows logo key on the keyboard to view the Desktop. Right-click an empty area of the desktop, and then:

- If **NVIDIA Control Panel** is present, follow the steps under “NVIDIA graphics cards.”
- If **Catalyst Control Center** is present, follow the steps under “ATI graphics cards.”
- If only **Screen resolution** is present, follow the steps under “Other graphic cards.”

NVIDIA graphics cards	<ol style="list-style-type: none">1. Right-click an empty area of the desktop, and then click NVIDIA Control Panel. The View Selection window opens.2. In the Selecting a Task area on the left, under Display, click Change resolution. The Change resolution window opens.3. If your HP computer is connected to an HP monitor, make sure that the Show only TV resolutions check box does not contain a check mark. If your HP computer is connected to a non-HP monitor, make sure that the Show only TV resolutions check box contains a check mark. If necessary, click the box to remove a check mark or add a check mark.4. Close the NVIDIA Control Panel. This completes the steps to adjust resolution for NVIDIA graphics cards.
ATI graphics cards	<ol style="list-style-type: none">1. Right-click an empty area of the desktop, and then click Catalyst™ Control Center. The Catalyst Control Center window opens.2. Select Graphics and then Desktops & Displays on the top left corner of the window.3. Under the Desktops & Displays window, right click the monitor icon at the bottom left corner of the window and select Configure. The DTV (HDMITM) 2 window opens.4. If your HP computer is connected to an HP monitor, make sure that the Show only TV resolutions check box does not contain a check mark. If your HP computer is connected to a non-HP monitor, make sure that the Show only TV resolutions check box contains a check mark. If necessary, click the box to remove a check mark or add a check mark.5. Click OK. This completes the steps to adjust resolution for this option.
Other graphics cards	<ol style="list-style-type: none">1. Right-click an empty area of the desktop, and then click Screen resolution.2. Select the resolution from the drop-down menu.3. Click Apply, and then click Keep changes. This completes the steps to adjust resolution for this option.

Setting up multiple displays

Use the following steps to connect and set up additional monitors:

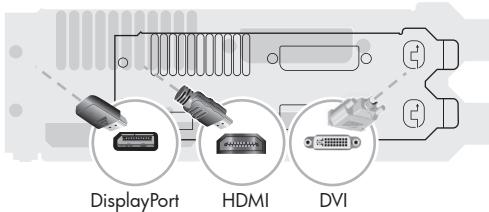
These instructions are for standard two-monitor setup. If you have purchased a dual-monitor system with ATI™ Eyefinity software, follow these instructions for

dual-monitor setup (or for three monitors), and proceed to the instructions for ATI Eyefinity Catalyst™ setup.

1. Verify that the PC is set up according to the instructions in the setup view. Do not power on the PC or monitor.
2. Connect the monitors to an available display connector on the back of the PC. The monitor's connection type must match the connector on the PC.



NOTE: The three-monitor setup requires that you **separately purchase** an additional monitor and cable. The monitor should have a DVI, HDMI, or VGA connector. A DVI-to-VGA adapter is required for monitors with a VGA connector.



DisplayPort HDMI DVI

- Connect the DisplayPort cable to the DisplayPort connector (required).
 - Connect the DVI cable to the bottom DVI connector.
3. Connect power to each additional monitor.
 4. Press the power button on each display and then press the power button on the computer. The power indicator light on each of the displays will be amber; the lights will turn blue when the PC starts.



NOTE: During the initial setup, only one display is active; you may see various display states (such as blank screens, blue screens, etc.) on the other displays until the setup is completed.

5. When the setup is complete, you will see the extended desktop on all connected displays.
6. To change the display mode for a display, select **Start**, from the Start screen, type **c**, select **Control Panel**, select **Appearance and Personalization**, select **Display**, and then select the option you want to change and follow the onscreen instructions.

ATI Eyefinity Catalyst™ setup

1. Right-click on the **Eyefinity Catalyst™** icon on the desktop to bring up **ATI Catalyst Control Center™**.
2. Select **CCC-Advanced**, select **Graphics**, and select **Desktop & Displays**, then follow the onscreen instructions to set up the layout for the two- or three-monitor display.

4 Maintaining your computer

Cleaning procedures

Keeping your computer system free of dust, dirt, and heat will prolong its life.

- Dust, pet hair, and other particles can build up, creating a blanket effect; as a result, components can overheat or, in the case of the keyboard and mouse, not work smoothly and effectively.
 - Check your system once a month for visible signs of dust and debris, and clean it about once every three months.
 - Visit <http://www.hp.com/go/contactHP> for additional cleaning instructions.
-

Cleaning the computer vents Air vents keep the computer cool. Keep these vents clean by using a small, battery-powered vacuum cleaner. (A battery-powered vacuum cleaner eliminates the risk of electric shock.)

1. Vacuum the vents on the computer case.
 2. Remove any debris that has accumulated in and around the computer connectors (for example, the Ethernet and USB connectors).
-

Cleaning the keyboard and mouse When cleaning the keyboard keys, use a low setting on a battery-powered 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 (rubbing) alcohol to clean buildup on the keyboard keys and along its edges.
 3. Wipe the body of the mouse and the mouse cord by using cleaning wipes.
-

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

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

5 Troubleshooting

Refer to the documentation provided by the product manufacturer for information about peripheral-specific problems, such as issues with a monitor or a printer. The following tables present some issues you might encounter while installing, starting up, or using your computer and possible solutions.

For more information or for additional troubleshooting options, see [Getting information on page 1](#).

Computer does not start

Symptom	Possible solution
Error message:	Restart the computer.
Hard disk drive error.	<ol style="list-style-type: none">1. Press the Ctrl+Alt+Delete keys on the keyboard simultaneously.2. Select the Power icon, and then select Restart. Or, press and hold the Power button on the computer for 5 or more seconds to turn off the computer, and then press the Power button to restart the computer.3. If Windows opens, immediately back up all important data to a backup hard disk drive.4. Contact Support, whether it was possible or not to start up Windows. Either the hard disk drive or the system board may need to be replaced.
Computer will not turn on or start.	<p>Ensure that the cables connecting the computer to the external power source are plugged in properly. 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, contact Support.</p> <p>If the display (monitor) is blank, the monitor might not be properly connected. Connect the monitor to the computer, plug it in, and turn it on. See Display (monitor) on page 12.</p> <p>Test the wall outlet by connecting a different electrical device to it.</p>

Symptom	Possible solution
Computer seems to be locked up and is not responding.	<p>Use the Task Manager to close any programs not responding, or restart the computer:</p> <ol style="list-style-type: none">1. Press the Ctrl+Alt+Delete keys on the keyboard simultaneously.2. Select Task Manager.3. Select the program that is not responding, and then select End task. <hr/> <p>If closing programs does not work, restart the computer:</p> <ol style="list-style-type: none">1. Press the Ctrl+Alt+Delete keys on the keyboard simultaneously.2. Select the Power icon, and then select Restart. <p><i>Or, press and hold the Power button on the computer for 5 or more seconds to turn off the computer, and then press the Power button to restart the computer.</i></p>
Error message: Invalid system disk or Non-System disk or Disk error.	When drive activity stops, remove the disc and press the spacebar on the keyboard. The computer should start up.

Power

Symptom	Possible solution
Computer does not turn off when the Power button is pressed.	Press and hold the Power button until the computer turns off. Check Power Settings.
Computer shuts down automatically.	<ul style="list-style-type: none">The computer might be in an exceedingly hot environment. Let it cool down.Ensure that computer air vents are not blocked and that the internal fan is running — see Cleaning procedures on page 9. (Your computer might not have an internal fan.)

Display (monitor)

Symptom	Possible solution
Screen is blank, and monitor power light is not lit.	<p>Reconnect the power plug to the back of the monitor and to the wall outlet.</p> <p>Press the Power button on the monitor.</p>
Screen is blank.	<p>Press the space bar on the keyboard or move the mouse to make the screen display visible again.</p> <p>Press the Sleep button (select models only), or Esc on the keyboard, to resume from Sleep mode.</p> <p>Press the Power button to turn on the computer.</p>
	<p>Inspect the monitor video connector for bent pins:</p> <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.
	<p>If you have a multi-monitor setup, refer to Setting up multiple displays on page 7.</p>

Keyboard and mouse (general)

Symptom	Possible solution
Keyboard commands and typing are not recognized by the computer.	Use the mouse to turn off the computer, unplug and reconnect the keyboard to the back of your computer, and then restart your computer.
Mouse (with cable) does not work or is not detected.	<p>Unplug and reconnect the mouse cable to your computer.</p> <p>If the mouse is still not detected, turn off the computer, unplug and reconnect the mouse cable, and then restart the computer.</p>
Cursor does not move using the arrow keys on the number keypad.	Press Num Lock on the keyboard to turn off Num Lock, so that the arrow keys on the number keypad can be used.
Cursor does not respond to mouse movement.	<p>Use the keyboard to save changes in all open programs, and then restart your computer:</p> <ol style="list-style-type: none">1. Press the Alt+Tab keys simultaneously to navigate to an open program.2. Press Ctrl+S simultaneously to save your changes in the selected program (Ctrl+S is the keyboard shortcut for Save on most—not all—programs).3. Repeat step 1 and step 2 to save changes in all open programs.4. After saving changes in all open programs, press the Power button to turn off the computer.5. After the shutdown is complete, unplug and reconnect the mouse connector to the back of your computer, and then restart your computer.

Keyboard and mouse (wireless)

Symptom	Possible solution
Wireless keyboard or mouse does not work or is not detected.	<ul style="list-style-type: none">Ensure that you are using the wireless keyboard or wireless mouse within range of the receiver, approximately 3 meters (10 feet) for normal use, and within 30 cm (12 inches) during initial setup or for re-synchronization.Ensure that the mouse is not in Suspend mode, which occurs after 20 minutes of inactivity. Click the left mouse button to reactivate it.Replace the batteries in the keyboard and mouse.Re-synchronize the keyboard and mouse to the receiver using the following steps.

The receiver, wireless keyboard, and wireless mouse shown in the following illustrations are examples; your models might vary. **IMPORTANT:** During these steps, place the wireless keyboard and wireless mouse on the same level as the receiver, within 30 cm (12 inches) of the receiver, and away from interference from other devices.

1. Unplug the receiver from a USB connector on the computer, and then reconnect it. Your computer model might have a connector dedicated to the receiver. If you have a choice, use a USB connector on the front of the computer.



2. Check that the mouse is on (A), and push and hold the **Connect** button (B) on the underside of the mouse for 5 to 10 seconds until the LED on the receiver lights or stops flashing. 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 on the screen.



3. After the mouse connection is established, continue by using the steps that follow to repeat the procedure for the keyboard.
4. Push and hold the **Connect** button (C) on the underside of the keyboard for 5 to 10 seconds until the LED on the receiver lights or stops flashing.



Speakers and sound

Symptom	Possible solution
No sound is produced.	<ol style="list-style-type: none">From the Start screen, type c, select Control Panel, and then select System and Security.Under Action Center, select Troubleshoot common computer problems, and then select Troubleshoot audio playback. <p>If you use an High-Definition Multimedia Interface (HDMI) connector on the graphics card (select models only) to connect your monitor to the computer, you should also connect analog speakers to the computer Audio Line Out connector if you want to hear sound during the initial setup of the computer. Refer to the Setup Poster to connect analog speakers.</p>
	If you are using built-in monitor speakers, use the monitor front-panel Volume button to adjust volume. Use the front-panel buttons to enter the on-screen display (OSD) and ensure that audio is enabled and that the volume is set appropriately.
	Ensure that you connected powered (active) speakers and that they are turned on.
	Turn off your computer, and then unplug and reconnect the speakers. Ensure that the speakers are connected to an audio connector, not a Line In or headphone connector.
	To resume from Sleep mode, press the Sleep button (select models only), or press Esc .
	Unplug headphones if they are connected to your computer (or speaker system).
Volume is very low or unsatisfactory.	Ensure that you connected the speakers to the Audio Out (lime green) connector on the back of the computer. (Additional audio connectors are used for multiple-channel speakers.) Detached non-powered speakers (speakers without a separate power source, such as batteries or a power cord) do not produce satisfactory sound. Replace the non-powered speakers with powered speakers.

Internet access

Symptom	Possible solution
Internet programs do not start automatically.	Log in to your ISP, and start the desired program.

Symptom	Possible solution
I cannot connect to the Internet.	<ol style="list-style-type: none">1. From the Start screen, type c, and then select Control Panel.2. Under Network and Internet, select Connect to the Internet. <p>Verify that you are using the proper cables for your Internet connection type. Your computer might have a dial-up modem and an Ethernet network adapter (also called a network interface card, or NIC). A modem uses a standard telephone cable, whereas the network adapter uses a network cable, to connect to a local area network (LAN). Do not connect a telephone cable to the network adapter, and do not plug a network cable into a telephone service line; doing so might damage the network adapter.</p>
	<p>Run the wireless setup wizard:</p> <ol style="list-style-type: none">1. From the Start screen, type c, select Control Panel, select Network and Internet, and then select Network and Sharing Center.2. In the Network and Sharing Center window, select Set up a new connection or network to open the wizard, and then follow the on-screen instructions.
	<p>If your system has an external antenna, try to move the antenna to a better position. If the antenna is internal, try to move the computer.</p>
	<p>Try to connect again later, or contact your Internet service provider (ISP) for assistance.</p>

Software troubleshooting

- To repair software problems, try these methods:
- Turn the computer off completely and then turn it on again. This is the easiest (and sometimes the best) way.
 - Update the drivers (see Updating device drivers, following).
 - Use Microsoft System Restore Software program and hardware driver reinstallation (see Microsoft System Restore, later in this table). — Restores your computer to a configuration that was in use before the software was installed.
 - Reinstall the software program or hardware driver (see Software program and hardware driver reinstallation, later in this table). — Restores the software (if it came with the product) or hardware driver to factory defaults.
 - System Recovery (see *Troubleshooting and Maintenance Guide* on your computer). Select the **HP Support Assistant** app on the Start screen, select **My computer**, and then select **User guides**). — Erase and reformat the hard disk drive, and then reinstall the operating system, programs, and drivers. This erases all data files you have created.

Updating device drivers	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: <ol style="list-style-type: none">1. From the Start screen, type c and then select Control Panel.2. Select System and Security, and then in the System area, select Device Manager.3. Select the arrow to expand the type of device you want to update or roll back. (For example, DVD/CD-ROM drives).4. Double-click the specific item (for example, HP DVD Writer 640b).5. Select the Driver tab.6. To update a driver, select Update Driver, and then follow the on-screen instructions. Or, to revert to an earlier version of a driver, select Roll Back Driver, and then follow the on-screen instructions.
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Microsoft System Restore	If you have a problem that might be due to software that was installed on your computer, use System Restore to return the computer to a previous restore point. You can also set restore points manually. NOTE: Always use this System Restore procedure before you use the System Recovery program.
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To start a system restore or to add restore points manually:

1. Close all open programs.
 2. From the Start screen, type **c**, and then select **Control Panel**.
 3. Select **System and Security**, select **System**, and then select **System protection**.
 4. Select the **System protection** tab on the System Properties screen.
 5. Follow the on-screen instructions.
-

Software program and hardware driver reinstallation	If any of your factory-installed software programs or hardware drivers are damaged, you can reinstall them by using the Recovery Manager program (select models only). NOTE: Do not use the Recovery Manager program to reinstall software programs that came on CDs or DVDs included in the computer box. Reinstall these programs directly from the CDs or DVDs. Before you uninstall a program, be sure you have a way to reinstall it. Check to be sure that it is still available from where you initially installed it (for example, discs or the Internet). Or check to be sure that the program is in the list of programs you can reinstall from the Recovery Manager.
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To check the list of installable programs in the Recovery Manager:

1. From the Start screen, type **r**, and then select **Recovery Manager**. If prompted, click **Yes** to allow the program to continue.
2. Under **I need help immediately**, select **Software Program Reinstallation**.
3. Select **Next** at the Welcome screen. A list of programs opens. Check whether your program is there.

To reinstall a program using the **Recovery Manager**:

1. From the Start screen, type **r**, and then select **Recovery Manager**.
2. Select **Software Program Reinstallation**, and then select **Next** at the **Welcome** screen.
3. Choose the program you want to install, select **Next**, and follow the on-screen instructions.
4. When you have finished reinstalling, restart the computer. **Do not skip this last step.**
You must restart the computer after recovering software programs or hardware drivers.

To uninstall a program:

1. Close all software programs and folders.
 2. From the Start screen, type **c**, and then select **Control Panel**.
 3. Under **Programs**, select **Uninstall a program**.
 4. Select the program you want to remove, and then select **Uninstall**.
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6 Support information

Ways to get help

Easy to reach. Easy to use. Award-winning HP Customer Support is our promise to help you get the most from your computer. Whether with tools located on your computer, from information on the web, by phone, or through your local retailer, you'll find what you need.

Before contacting the HP Customer Care Center, it's important to have the following information handy.

- Model number
- Product number
- Serial number
- Software build number
- Operating system
- Purchase date

Please take a moment to write down your product information for future reference.

The first four items on the list (model number, product number, serial number, and software build number) can be viewed using HP Support Information. From the Start screen, type **s**, and then select **HP Support Information**.

Don't forget to register!

Go to: <http://www.hp.com/apac/register>.

Where to get help

1. Use Windows Help and Support for help with hardware and software questions. From the Start screen, type **h**, and then select **Help and Support**.
2. Use Support Assistant. From the Start screen, type **h**, and then select **HP Support Assistant**. The HP Support Assistant provides useful troubleshooting and diagnostics information and includes the following:
 - E-mail support
 - HP Real Time Chat with qualified support specialists
 - Support phone numbers
3. For help online, go to the HP Customer Care Center website at <http://www.hp.com/go/contactHP>.

Phone assistance to get you up and running is covered for thirty (30) days from the time you purchased your computer. After thirty (30) days, there may be a charge, but the helpful support is still available.

Customer support for repairs

If your computer needs to be repaired or to have parts replaced, you have two choices:

- You can easily replace many of your computer parts that are considered consumer replaceable. This is the fastest method of repair, as many times we can send the part directly to your home or business in a few days. (This option may not be available in all countries/regions.)
- If a repair is necessary, the HP Customer Care Center will make arrangements to fix your computer.

These services are covered during the warranty period.

There are a few limitations and exclusions to the warranty (as well as some important details), which are described in the *HP Worldwide Limited Warranty and Technical Support* guide.

Before upgrading your hardware

Any hardware upgrades that you intend to do should only be done after you have completely set up your new computer. Refer to the setup instructions in the beginning of this guide for help with setting up. If you have any problems setting up your system and turning it on, immediately contact the HP Customer Care Center listed earlier in this guide, and an HP Customer Representative will assist you. This must be done first before attempting to upgrade your system.

By breaking the security seal on the back of the computer, you are confirming that the computer was working properly before you attempted to upgrade your system. Once the security seal has been broken, your computer is then, to the extent allowed by local law, covered under the terms and conditions listed in the *HP Worldwide Limited Warranty and Technical Support* guide.

The power to make a change

Thank you for your purchase. HP is dedicated to producing the highest quality, best performing, and easiest to use computers in the world. HP also designed this product with the environment in mind.

But to reduce its impact even further, we need your help.

Let's work together to make a change.

How you can help	What we do
<p><i>Recycle your old computer.</i></p> <p>Disposing of electronic waste responsibly has been an HP priority for more than 20 years. If this computer is a replacement for an older computer you no longer need, go to www.hp.com/go/recycle to find out if HP can help you dispose of your old computer with minimum impact on the planet.</p>	<p><i>We design with the environment in mind.</i></p> <p>While we want you to enjoy this computer for many years to come, we recognize that you will eventually dispose of it. We have designed it so it can be easily dismantled and recycled as much as possible. The packaging that came with your computer is also designed for maximum recyclability.</p>
<p><i>Don't use a screen saver.</i></p> <p>Screen savers can prevent your HP computer from going to sleep and thereby waste power. Screen savers can also reduce the life of your monitor by increasing the number of hours the LCD backlight is on.</p>	<p><i>We design to be more energy efficient.</i></p> <p>This computer has HP Power Management Technology, which can reduce computer energy use up to 45% compared to computers without power management. HP computers keep energy needs to a minimum, saving you money and reducing your carbon footprint.</p>
<p><i>Don't disable the power settings.</i></p> <p>The power management tools on this computer are set to minimize energy use without impacting performance. Please do not disable them.</p>	<p><i>We design our products to use better and fewer materials.</i></p> <p>Ensuring the health of you, your family, and our planet is a key priority at HP. We are committed to using the safest materials in the production of this and all our other products.</p>

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