REFERENCE GUIDE

Gateway®

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CHAPTER 1
About This Reference

- About this guide
- Accessing your online User Guide
- Gateway contact information
- Microsoft Certificate of Authenticity
- For more information

About this guide

This guide includes information and maintenance instructions that are specific to your model of Gateway computer. Some illustrations in this guide may look different than your computer because hardware options and port locations may vary. For all other computer information, see your online *User Guide*.

For more information

For more information about your computer, visit Gateway's *Support* page at www.gateway.com or the Web address shown on your computer's label. The *Support* page also has links to additional Gateway documentation and detailed specifications.

Accessing your online *User Guide*

In addition to this guide, your *User Guide* has been included on your hard drive. Your *User Guide* is an in-depth, easy-to-read manual that includes information on the following topics:

- Using and customizing Windows and other software
- Controlling audio and video settings
- Using the Internet
- Protecting your files
- Playing and recording media
- Networking

▶ **To access your *User Guide*:**

- Click (**Start**), **All Programs**, then click **Gateway Documentation**.

■

Gateway contact information

See your setup poster for Customer Care contact information. The label on the back of your computer contains information that identifies your computer model and serial number. Customer Care will need this information if you call for assistance.

Microsoft Certificate of Authenticity

The Microsoft Certificate of Authenticity label found on the back or side of your computer includes the product key code for your operating system. If you ever reinstall Windows from the installation DVD, you will need to enter these numbers to activate Windows.

CHAPTER 2
Checking Out Your Computer

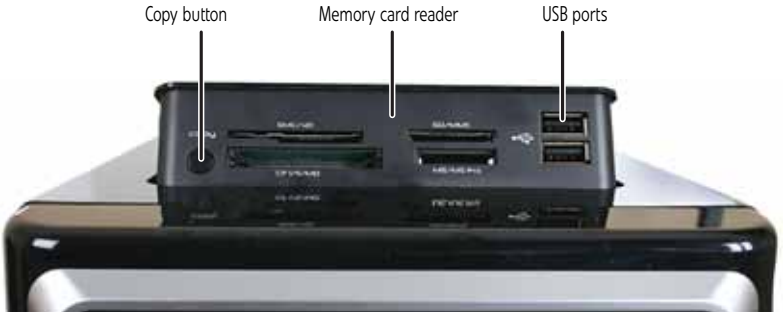
- Front
- Back

Front

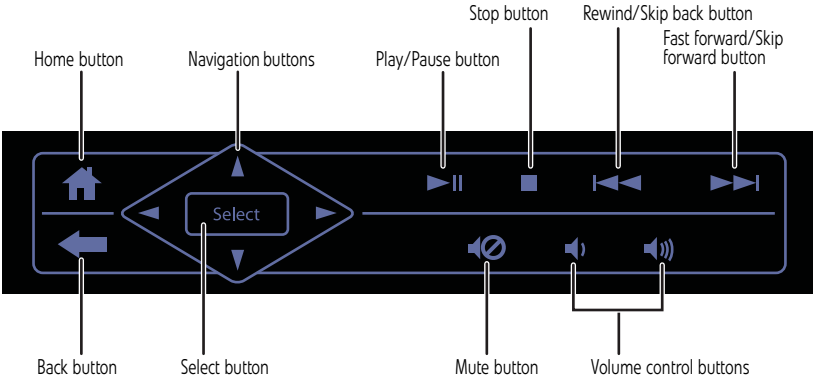
Digital media manager
USB ports
Media navigation interface
Optical disc drive
Optical disc drive (optional)
Optical drive eject buttons
Power button/ power indicator
Backup button
Multimedia panel
Removable hard drive carriers

Component	Description
Media navigation interface	Press these buttons to control media playback.
Optical disc drive	Use this drive to listen to audio CDs, install games and programs, watch DVDs, and store large files onto recordable discs. For more information about your drive, see "Identifying optical drive types" on page 26.
Multimedia panel	Connect multimedia devices to these ports and jacks. (available ports may vary) ▪ R (red) RCA jack—Connect the RCA cable for the right channel of two-channel (stereo) audio to this jack. ▪ L (white) RCA jack—Connect the RCA cable for the left channel of two-channel (stereo) audio to this jack. ▪ V (yellow) RCA jack—Connect an RCA cable for analog video to this jack. ▪ USB ports—Connect USB devices to these ports. ▪ IEEE 1394 (FireWire) port—Connect an IEEE 1394 device to this port. ▪ Microphone jack—Connect an external microphone to this jack. ▪ Headphone jack—Connect headphones or external speakers to this jack.
Removable hard drive carriers	Install a new hard drive to one of these carriers, then back up important files to the hard drives for removable storage. For more information, see "Adding a removable hard drive" on page 55 and "Backing up files" on page 76.
Digital media manager	Insert a memory card from a digital camera, MP3 player, PDA, cellular telephone, or other devices into the digital media manager (memory card reader). For more information, see "Using the digital media manager" on page 29.
USB ports	Plug USB (Universal Serial Bus) devices (such as a USB external drive, printer, scanner, camera, keyboard, or mouse) into these ports. For more information, see "Installing a printer, scanner, or other device" on page 34.
Optical drive eject buttons	Press these buttons to open the optical drive disc tray.
Power button/power indicator	Press this button to turn the power on or off. You can also configure the power button to operate in Standby/Resume mode or Hibernate mode. The power indicator lights when the computer is turned on.
Backup button	Press this button to launch the *Backup Status and Configuration* program.

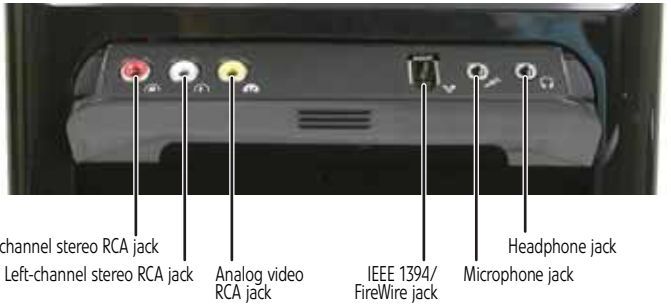
Digital media manager



Media control panel

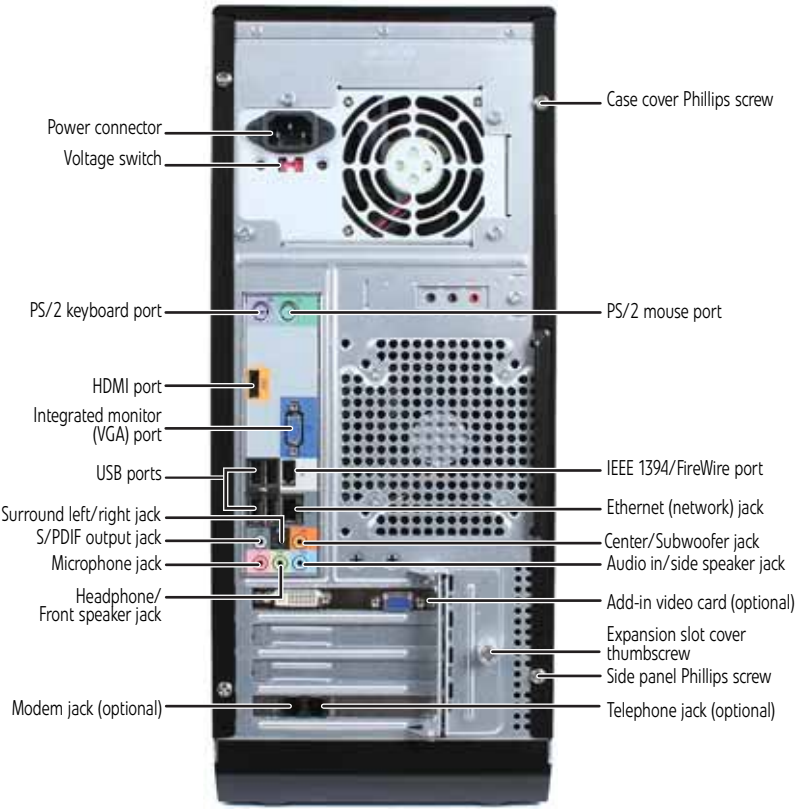


Multimedia panel



Back

Important
Your computer's hardware options and port locations may vary from this illustration.



Component	Icon	Description
Power connector		Plug the power cord into this connector.
Voltage switch		Make sure this switch is set to the proper local voltage.
PS/2 keyboard port		Plug a PS/2 keyboard into this port.
Integrated monitor (VGA) port		Connect a VGA monitor to this port if the optional add-in video card is **not** installed.
HDMI port		Connect an HDMI video device to this port.
USB ports		Plug USB (Universal Serial Bus) devices (such as a USB printer, scanner, camera, keyboard, or mouse) into these ports. For more information, see "Installing a printer, scanner, or other device" on page 34.
Surround left/right jack (black)		Plug your rear right and left speakers into this jack. This jack is disabled when an audio expansion card is installed. For more information, see "Configuring the audio jacks" on page 33.
S/PDIF output jack		Plug an optical cable from an amplifier or entertainment system into this jack for digital sound.
Microphone jack (pink)		Plug a microphone into this jack. This jack is disabled when an audio expansion card is installed.
Headphone/analog speakers jack (green) -OR- Front speakers jack		This jack is user configurable for one of the following: ▪ Headphone: Plug headphones or amplified speakers into this jack (Default). ▪ Stereo out: Plug your front left and right speakers into this jack. This jack is disabled when an audio expansion card is installed. For more information, see "Configuring the audio jacks" on page 33.
Modem jack (optional)		Plug a modem cable into this jack. For more information, see "Connecting a dial-up modem" on page 17.
Case cover Phillips screws		Remove these screws to remove the left side panel.

Component	Icon	Description
PS/2 mouse port		Plug a PS/2 mouse into this port.
IEEE 1394/FireWire port		Plug IEEE 1394 (also known as Firewire®) devices (such as a digital camcorder) into this 6-pin IEEE 1394 port. For more information, see "Installing a printer, scanner, or other device" on page 34.
Ethernet (network) jack		Plug an Ethernet network cable or a device (such as a DSL or cable modem for a broadband Internet connection) into this jack. For more information, see "Learning about the Internet" in your online *User Guide* and "Connecting to a broadband modem or network" on page 17.
Center/subwoofer jack (orange)		Plug your center speaker and subwoofer into this jack. This jack is disabled when an audio expansion card is installed. For more information, see "Configuring the audio jacks" on page 33.
Audio in (Line in) jack (blue) -OR- Side speaker jack		This jack is user configurable for one of the following: ▪ Stereo in: Plug an external audio input source (such as a stereo) into this jack so you can record sound on your computer (Default). ▪ Stereo out: Plug your side left and right speakers into this jack. This jack is disabled when an audio expansion card is installed. For more information, see "Configuring the audio jacks" on page 33.
Video card		Plug a monitor into a port on this card. If the card is a high-performance video card, the expansion slot opening above the card may be occupied by the card's ventilation fan.
Expansion slot cover thumbscrew		Remove this screw and open the expansion slot cover to unlock the expansion cards.
Telephone jack (optional)		Plug the cord from your telephone into this jack.
Cable lock slot		Attach a cable lock to this slot, then attach the cable to a solid object like a desk or table to prevent your computer from being stolen.

CHAPTER 3
Setting Up and Getting Started

- Working safely and comfortably
- Preparing power connections
- Connecting to a broadband modem or network
- Connecting a dial-up modem
- Starting your computer
- Turning off your computer
- Restarting (rebooting) your computer
- Opening the hideaway port panels
- Using the keyboard
- Using the mouse
- Using optical drives
- Using the digital media manager
- Adjusting the volume
- Configuring the audio jacks
- Installing a printer, scanner, or other device

Working safely and comfortably

Before using your computer, follow these general guidelines for setting up a safe and comfortable work area and avoiding discomfort and strain:

- Keep hands and arms parallel to the floor.
- Adjust the monitor so the screen is perpendicular to your line of sight, and the top of the screen is no higher than eye level.
- Place your feet flat on the floor or on a footrest.
- Keep ventilation openings clear of obstructions.

Reducing eye strain

Sunlight or bright indoor lighting should not reflect on the screen or shine directly into your eyes.

- Position the computer desk and monitor so you can avoid glare on your screen and light shining directly into your eyes. Reduce glare by installing shades or curtains on windows and by installing a glare screen filter.
- Use soft, indirect lighting in your work area. Do not use your computer in a dark room.
- Set paper holders at the same height and distance as the monitor.
- Avoid focusing your eyes on your computer screen for long periods of time. Every 10 or 15 minutes, look around the room, and try to focus on distant objects.

Setting up your computer desk and chair

When you are setting up your computer desk and chair, make sure that the desk is the appropriate height and the chair helps you maintain good posture.

- Select a flat surface for your computer desk.
- Adjust the height of the computer desk so your hands and arms are positioned parallel to the floor when you use the keyboard and touchpad. If the desk is not adjustable or is too tall, consider using an adjustable chair to control your arm's height above the keyboard.
- Use an adjustable chair that is comfortable, distributes your weight evenly, and keeps your body relaxed.
- Position your chair so the keyboard is at or slightly below the level of your elbow. This position lets your shoulders relax while you type.
- Adjust the chair height, adjust the forward tilt of the seat, or use a footrest to distribute your weight evenly on the chair and relieve pressure on the back of your thighs.
- Adjust the back of the chair so it supports the lower curve of your spine. You can use a pillow or cushion to provide extra back support.

Sitting at your computer

- Avoid bending, arching, or angling your wrists. Make sure that they are in a relaxed position when you type.
- Do not slouch forward or lean far back. Sit with your back straight so your knees, hips, and elbows form right angles when you work.
- Take breaks to stand and stretch your legs.
- Avoid twisting your torso or neck.

Avoiding discomfort and injury from repetitive strain

- Vary your activities to avoid excessive repetition.
- Take breaks to change your position, stretch your muscles, and relieve your eyes.
- Find ways to break up the work day, and schedule a variety of tasks.

Preparing power connections

Protecting from power source problems

Warning
High voltages can enter your computer through both the power cord and the modem connection. Protect your computer by using a surge protector. If you have a telephone modem, use a surge protector that has a modem jack. If you have a cable modem, use a surge protector that has an antenna/cable TV jack. During an electrical storm, unplug both the surge protector and the modem.

During a power surge, the voltage level of electricity coming into your computer can increase to far above normal levels and cause data loss or system damage. Protect your computer and peripheral devices by connecting them to a *surge protector*, which absorbs voltage surges and prevents them from reaching your computer.

An *uninterruptible power supply* (UPS) supplies battery power to your computer during a power failure. Although you cannot run your computer for an extended period of time with a UPS, a UPS lets you run your computer long enough to save your work and shut down your computer normally.

Connecting to a broadband modem or network

Important
Your computer has a built-in Ethernet (network) jack. For information about setting up a wired or wireless Ethernet network, see your online *User Guide*.

You can connect your computer to a broadband (cable or DSL) modem or to a wired Ethernet network.

▶ **To connect to a broadband modem or to an Ethernet network:**

1. Insert one end of the network cable into the network jack on the back of your computer.
2. Insert the other end of the network cable into a cable modem, DSL modem, or network jack.

■

Connecting a dial-up modem

Warning
To reduce the risk of fire, use only No. 26 AWG or larger telecommunications line cord.

Your computer may have a 56K modem that you can use with a standard telephone line to connect to the Internet or to fax documents.

▶ **To connect the modem:**

1. Insert one end of the modem cable into the modem jack on the modem at the back of your computer.
2. Insert the other end of the modem cable into a telephone wall jack. (The modem will not work with digital or PBX telephone lines.)
3. If you want, connect a telephone to the **PHONE** jack on the modem at the back of your computer.

■

Starting your computer

To start your computer:

1. Connect the power, network, mouse, and keyboard cables to your computer according to the setup poster.
2. Press the power button on the front of your computer. If your computer does not turn on, check the power cable connections.

Important
Your computer has a built-in, variable-speed fan. In addition, your computer uses a powerful processor which produces heat and has its own cooling fan. Both the system fan and processor fan can run at different speeds at times to ensure correct system cooling. You may notice an increase in the fan noise when the fan is running at high speed and a decrease in the fan noise when it switches to normal speed.

3. If you are starting your computer for the first time, follow the on-screen instructions to select the language and time zone and to create your first user account.
4. Attach and turn on any USB or audio peripheral devices, such as printers, scanners, and speakers. See the documentation that came with each device for its setup instructions.
5. To open your computer's Start menu, click ⊞ (**Start**). From that menu, you can run programs and search for files. For more information on using your computer's menus, see "Using Windows" and "Customizing Windows" in your online *User Guide*.

■

Waking up your computer

Tip
For more information about changing the power button mode, see the "Customizing" chapter in your online *User Guide*.

When you have not used your computer for several minutes, it may enter a power-saving mode called *Sleep*. While in Sleep mode, the power indicator on the power button flashes.

If your computer is in Sleep mode, move the mouse, press a key on the keyboard, or press the power button to "wake" it up. If the computer remains in Sleep mode, press the power button.

Turning off your computer

Warning
When you turn off your computer, certain components in the power supply and system board remain energized. In order to remove all electrical power from your computer, unplug the power cord and modem cable from the wall outlets. We recommend disconnecting the power cord and modem cable when your computer will not be used for long periods.

Important
If for some reason you cannot use the Shut Down option in Windows to turn off your computer, press and hold the power button for about five seconds, then release it.

Putting your computer into Sleep mode is the easiest way to power down your computer. Although it does not turn your computer completely off, it does turn off or slow down most system operations to save power, and saves your desktop layout so the next time you restore power, the programs are laid out just as you left them. Waking your computer from a Sleep state is much faster than turning on your computer after it has been turned completely off.

▶ **To put your computer to sleep:**

1. Click (**Start**), then click (power). The computer saves your session and partially shuts down to save power.
2. To "wake" your computer, press a key on the keyboard or press the power button. If the computer remains in Sleep mode, press the power button.

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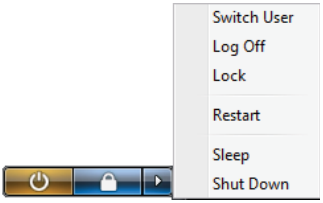
▶ **To turn off your computer:**

1 Click (**Start**), click the arrow next to the lock icon, then click **Shut Down**. The computer turns off.



2 To completely disconnect all power (such as for servicing internal components), also disconnect the power cord.

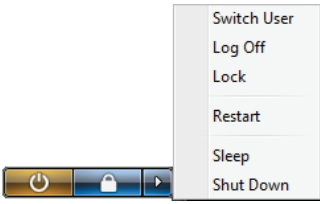
■

Restarting (rebooting) your computer

If your computer does not respond to keyboard or mouse input, you may need to restart (reboot) your computer.

▶ **To restart your computer:**

1 Click (**Start**), click the arrow next to the lock icon, then click **Restart**. Your computer turns off, then turns on again.



2 If your computer does not turn off, press and hold the power button until the computer turns off (about five seconds), then press it again to turn the computer back on.

■

Opening the hideaway port panels

In addition to the many ports and jacks on the back, your computer also has ports contained within panels that can be retracted into the case. The retractable panels are the memory card reader and the multimedia panel.

▶ **To open the hideaway port panels:**

1. Press the front edge (marked with finger grip lines) of the panel firmly against the case until it clicks, then release the panel.
2. To close the panels, press them back into the case until they click into place.

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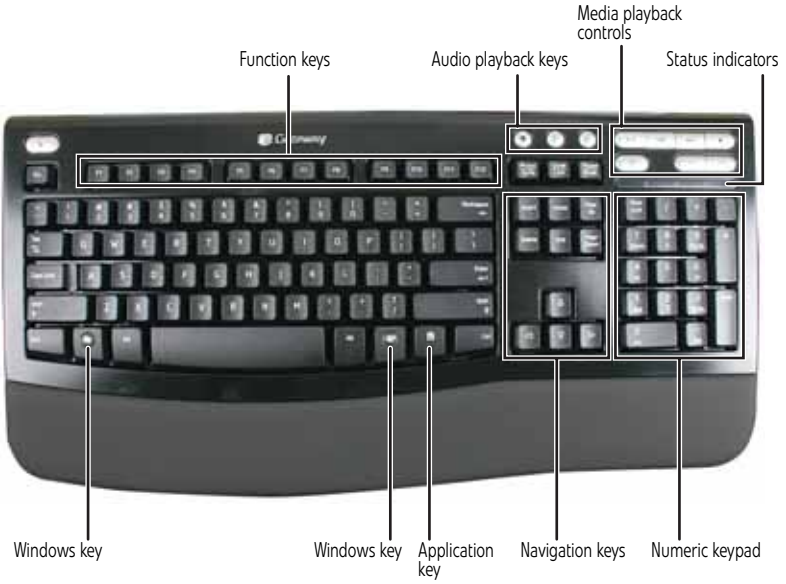
Using the keyboard

The keyboard has several different types of keys and buttons. Your keyboard also has status indicators that show which keyboard feature is active.

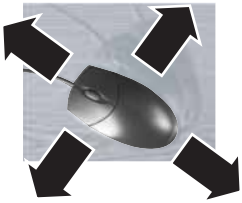


Feature	Icon	Description
Function keys		Press these keys to start program actions. Each program uses different function keys for different purposes. See the program documentation to find out more about the function key actions.
Audio playback keys		Press these keys to play your audio files and to adjust the volume.
Windows key		Press this key to open the Windows **Start** menu. This key can also be used in combination with other keys to open utilities like **F** (Find/Search), **R** (Run), and **E** (Computer).
Fn key		Press this key in combination with keys that have alternate functions defined, such as the **F9–F12** keys.
Application key		Press this key to access shortcut menus and help assistants in Windows.
Navigation keys		Press these keys to move the cursor and to copy, cut, and paste objects.
Numeric keypad		Press these keys to type numbers when the numeric keypad (**NUM LOCK**) is turned on.

Using the mouse

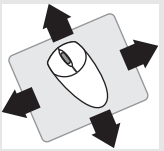
The *mouse* is a device that controls the pointer movement on the screen. This illustration shows the standard mouse.

As you move the mouse, the *pointer* (arrow) on the screen moves in the same direction.



You can use the *left* and *right buttons* on the mouse to select objects on the screen.

You can use the *scroll wheel* on the mouse to move through a document. This feature is not available in all programs.

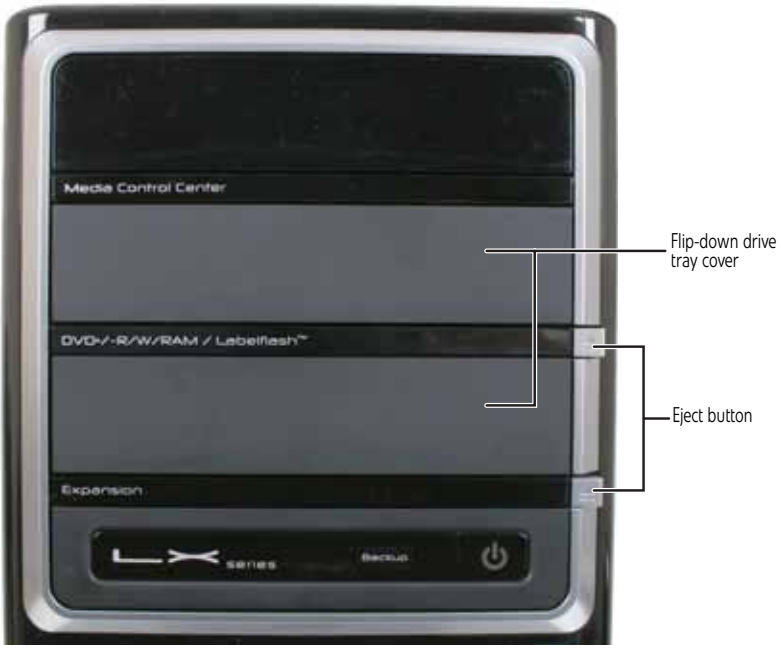
To...	Do this...	
Move the pointer on the screen		Move the mouse around. If you reach the edge of your mouse pad and need to move the mouse farther, lift the mouse and place it in the middle of the mouse pad, then continue moving the mouse.
Select an object on the screen		Position the pointer over the object. Quickly press and release the left mouse button. This is called *clicking*.
Start a program or open a file or folder		Position the pointer over the object. Quickly press and release the left mouse button twice. This is called *double-clicking*.
Access a shortcut menu or find more information about an object on the screen.		Position the pointer over the object. Quickly press and release the right mouse button once. This is called *right-clicking*.
Move an object on the screen.		Position the pointer over the object. Press the left mouse button and hold it down. Move (drag) the object to the appropriate part of the screen. Release the button to drop the object where you want it. This is called *clicking and dragging*.

For more information about how to adjust the double-click speed, pointer speed, right-hand or left-hand configuration, and other mouse settings, see the "Customizing" chapter in your online *User Guide*. For instructions on how to clean the mouse, see "Cleaning the mouse" on page 67.

Using optical drives

Features

Your optical drive has the following basic components:



Loading an optical disc

To insert an optical disc:

1. Press the eject button on the optical disc drive.

   Important
   When you place a single-sided disc in the tray, make sure that the label side is facing up. If the disc has two playable sides, place the disc so the name of the side you want to play is facing up.

2. Place the disc in the tray with the label facing up.
3. Press the eject button to close the tray.

■

Identifying optical drive types

Your computer may contain one of the following drive types. Eject the drive tray, then look on the front of the tray for these logos:

If your optical drive has this logo...	Your drive type is...	Use your drive for...
	CD-RW	Installing programs, playing audio CDs, accessing data, and creating CDs.
	DVD/CD-RW	Installing programs, playing audio CDs, accessing data, creating CDs, and playing DVDs.
	DVD	Installing programs, playing audio CDs, playing DVDs, and accessing data.
	DVD+RW	Installing programs, playing audio CDs, playing DVDs, accessing data, and recording video and data to CDs and DVD+R or DVD+RW discs.
	DVD R/RW	Installing programs, playing audio CDs, playing DVDs, accessing data, and recording video and data to CDs and DVD+R, DVD+RW, DVD-R, and DVD-RW discs.
	Double layer DVD+RW	Installing programs, playing audio CDs, playing DVDs, accessing data, and recording video and data to CDs and double layer DVD+R discs. Note: To use the double layer capability of the double layer recordable DVD drive, the blank DVDs you purchase must state Double Layer, Dual Layer, or DL. Using other types of blank media will result in less capacity.

If your optical drive has this logo...	Your drive type is...	Use your drive for...
	DVD-RAM/-RW	Installing programs, playing audio CDs, playing DVDs, accessing data, and recording video and data to CDs and DVD-RAM, DVD-R, or DVD-RW discs.
	Blu-ray Disc	Installing programs, playing audio CDs, playing DVDs, playing Blu-ray Discs, accessing data, and recording video and data to CDs, DVD-RAM, DVD-R, DVD-RW, and Blu-ray discs.

Playing discs

Playing a CD

Important
Some music CDs have copy protection software. You may not be able to play these CDs on your computer.

A standard compact disc (*CD*) can hold an entire album of digital songs and can be played on a CD player or your computer's CD drive.

Use a music program or Windows Media Player on your computer to:

- Play music CDs
- Create MP3 music files from your music CDs
- Edit music track information
- Use your music files to build a music library

For more information about playing CDs, see your online *User Guide*.

Playing a DVD

A Digital Versatile Disc (DVD) is similar to a standard CD but has greater data capacity. Because of this increased capacity, full-length movies, several albums of music, or several gigabytes of data can fit on a single disc. DVDs can be played on a DVD player or a DVD drive-equipped computer. For more information about playing DVDs, see your online *User Guide*.

Playing a Blu-ray Disc

Blu-ray Disc is a high-capacity optical disc that can store much more data than a DVD. A dual-layer Blu-ray Disc can hold 50 GB of files, about 23 hours of standard-definition video, or about nine hours of high-definition video. Blu-ray Discs can be played on a Blu-ray-compatible player or a Blu-ray drive-equipped computer. For more information about playing Blu-ray Discs, see your online *User Guide*.

Creating discs

Recording to optical discs

You can use the disc burning program on your computer to copy tracks from a music CD to your hard drive, copy or create data discs, create music CDs, create video DVDs, and more. For more information about creating CDs and DVDs, see your online *User Guide*.

Creating audio and video files

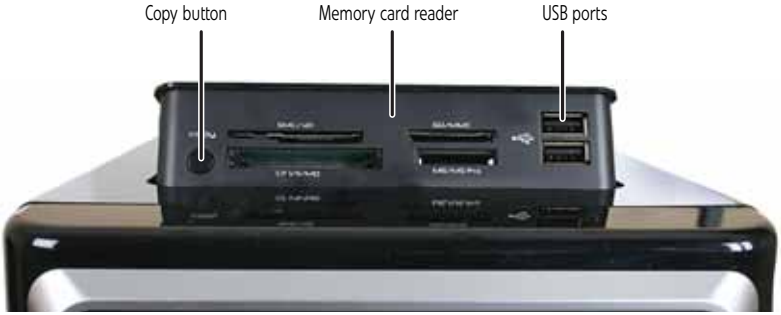
You can create audio and music files, either from scratch or from music CDs. You can also create video files from home video. For more information, see your online *User Guide*.

Copying optical discs

You can copy optical discs to make backups of your data. For more information, see your online *User Guide*.

Using the digital media manager

You can use the digital media manager to transfer pictures from a digital camera to your computer. You can also use the digital media manager to transfer data between your computer and a device that uses memory cards, such as a PDA, MP3 player, or cellular telephone.



Memory card types

The digital media manager supports several memory card types. To determine which types are supported by your card reader and the slots to use for each type of card, examine the face plate of the digital media manager. Each slot is assigned a different drive letter (for example, the E: and F: drives) so data can be transferred from one memory card type to another.

Using a memory card

Caution

Before inserting a memory card into a slot, make sure that the slot is empty, or you could damage the card reader.

To insert a memory card:

1. Insert the memory card into the appropriate memory card slot.
2. To access a file on the memory card, click (**Start**), then click **Computer**. Double-click the drive letter (for example, the **E:** drive), then double-click the file name. ■

▶ **To remove a memory card:**

- Make sure that the card is not being read from or written to, then pull the memory card out of the slot.

Important
Do not use the **remove hardware** icon in the taskbar to remove the memory card, or you will have to restart the computer to re-enable the digital media manager.

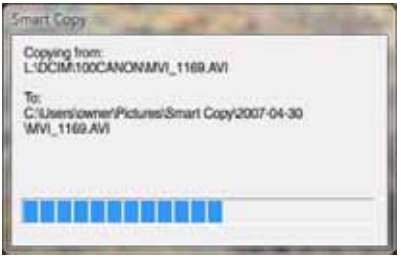
■

Using the Copy button

Your digital media manager includes a Copy button that makes it easy to copy pictures, movies, and data files from a memory card to your computer.

▶ **To use the Copy button:**

1. Insert the memory card into the appropriate slot in the digital media manager.
2. Press and hold the **Copy** button until the *Smart Copy* dialog box opens indicating that the files are being copied to your computer. It may take a few seconds for the *Smart Copy* dialog box to open.



3. Release the **Copy** button.

   By default, if you are copying picture files, Smart Copy creates a folder using the date the picture was taken as its name and places it in the **Pictures\SmartCopy** folder on your computer's hard drive. Smart Copy then copies the picture files into that folder.

   Also by default, if you are copying other types of files, Smart Copy copies them into the **Pictures\SmartCopy** folder on your computer's hard drive.

Important
During this copy process, no files are deleted from the memory card.
If a file name already exists in the folder, the new file will have a number added to the file name. The first number will be 1, the next number will be 2, and so on.

4 When the *Smart Copy* dialog box closes, remove the memory card.

■

Adjusting the volume

You can adjust volume using your speakers' controls or the Windows volume controls. You can also adjust the volume of specific sound devices in your computer.

▶ **To adjust the overall volume using hardware controls:**

- If you are using external speakers, turn the knob on the front of the speakers.

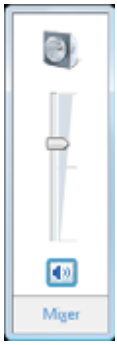
  -OR-

  Use the mute and volume control buttons on the keyboard. For more information, see "Using the keyboard" on page 21.

■

▶ **To adjust the volume from Windows:**

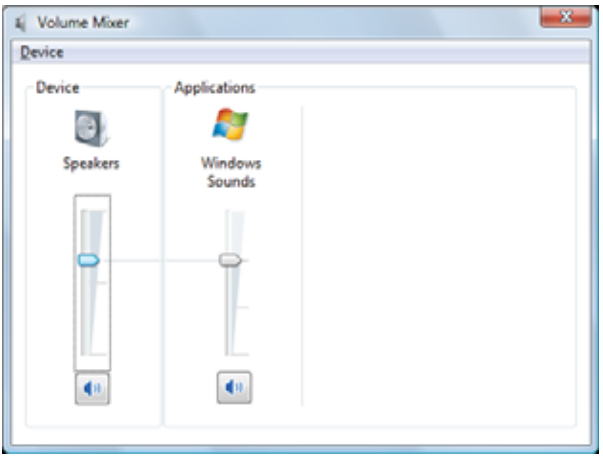
1 Click (**Volume**) on the taskbar. The volume control slider opens.



2 Click and drag the slider up to increase volume and down to decrease volume.

3 To mute the volume, click (**Mute**). To restore volume, click it again.

4 To adjust device volume levels, click **Mixer**. The *Volume Mixer* dialog box opens, where you can click and drag sliders for individual devices.



Tip
Adjust the Windows Sounds slider to change system sounds volume independently of general volume (such as the volume used for music and game sounds).

5 Click × in the top-right corner of the window to close it.

Help
For more information about adjusting the volume, click **Start**, then click **Help and Support**. Type **adjusting volume** in the **Search Help** box, then press ENTER.

■

Configuring the audio jacks

If the back of your computer has five audio jacks, they are universal jacks. This means that they can be used for more than one purpose. For example, the blue jack on the computer can be a stereo in jack or a stereo out jack. To use the audio jacks for something other than the default audio device, you need to configure the audio jacks. For a description of the default audio jack setup, see "Back" on page 9.

Important
If an audio expansion card is installed in your computer, then the computer's built-in audio jacks are disabled.

To configure the audio jacks:

Shortcut
Start ⇨ Control Panel ⇨ Hardware and Sound ⇨ Advanced

1. Connect your audio device(s) to the computer audio jack(s).
2. Click (**Start**), then click **Control Panel**. The *Control Panel* window opens.
3. Click **Hardware and Sound**, **Sound**, the **Playback** tab, then click **Configure**.

   -OR-

   If your computer has the Realtek Sound Effect Manager installed, double-click the Sound Effect Manager icon on the taskbar. The *Realtek* dialog box opens.
4. Follow the on-screen instructions to configure the audio jacks for your speaker setup.

■

Installing a printer, scanner, or other device

Important
Before you install a printer, scanner, or other peripheral device, see the device documentation and installation instructions.

Your computer has IEEE 1394 (also known as Firewire®) ports and Universal Serial Bus (USB) ports. You use these ports to connect peripheral devices such as printers, scanners, and digital cameras to your computer. For more information about port locations, see "Checking Out Your Computer" on page 5.

IEEE 1394 and USB ports support *plug-and-play* and *hot-swapping*, which means that your computer will usually recognize such a device whenever you plug it into the appropriate port. When you use an IEEE 1394 or USB device for the first time, your computer will prompt you to install any software the device needs. After doing this, you can disconnect and reconnect the device at any time.

Help
For more information about installing peripheral devices, click **Start**, then click **Help and Support**. Type **installing devices** in the **Search Help** box, then press ENTER.

CHAPTER 4
Advanced Hardware Setup

- Setting up multiple monitors
- Using a removable hard drive
- Setting up RAID

Setting up multiple monitors

If your computer came with a dual-DVI port graphics card installed, you can connect up to two monitors for a multi-screen panel array. To set up multiple monitors, see the "Customizing Windows" chapter in your online *User Guide*.

Using a removable hard drive

You can use your computer's removable hard drive carriers for high-volume backups and convenient backup storage.

To use a removable hard drive for backups:

1. Make sure that a removable hard drive is installed into one of the carriers and is formatted for use. For instructions on installing a removable hard drive, see "Adding a removable hard drive" on page 55.
2. Copy files to the hard drive using Windows Explorer or a backup utility. For more information, see "Backing up files" on page 76.
3. Turn off your computer, then remove the hard drive and store it in a secure location.

■

Setting up RAID

About RAID

Your computer can use multiple hard drives (if installed) to increase performance or reliability. RAID (*Redundant Array of Inexpensive/Independent Disks*) lets your computer use multiple hard drives more efficiently. Your computer supports RAID 0, RAID 1, RAID 5, and RAID 10.

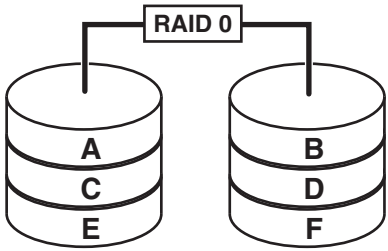
RAID 0 for performance

RAID 0 lets your computer see multiple hard drives as a single drive. This type of RAID can increase file access speeds, which is important if you work with video editing, sound editing, and high-performance games. RAID 0 is also an affordable way to increase your total file storage capacity.

How it increases performance

The more drives you have in your RAID 0 array, the faster the potential drive reading performance. All hard drives have limitations on how fast they can read and write files. If half a file is stored on one RAID 0 drive and the other half on another RAID 0 drive, each drive only has to read half of the file. So, the entire file is accessed by the computer up to twice as fast (using a two-drive RAID 0 array). In a three-drive RAID 0 array, if the file is evenly distributed among the drives, each drive must read only a third of the file, and so on. If the entire file happens to be stored on only one of the drives, the file is accessed at the same speed as if it were on a standard hard drive setup. Dividing up files between multiple hard drives is called *striping*.

In the following graphic, each letter represents a unique block of data, and each column represents a separate hard drive.



How it makes file storage cheaper

Because RAID 0 lets your computer see multiple hard drives as a single drive, you can install several lower capacity (less expensive) drives and have the same single-drive storage simplicity and capacity as a larger, more expensive hard drive.

Drawbacks

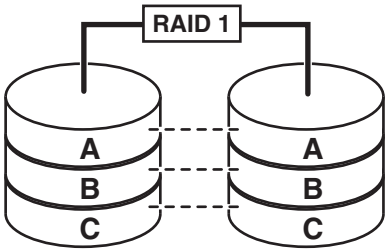
Unfortunately, RAID 0 lets multiple drives behave as one in another way. If part of the array fails (such as a hard drive crashing), the entire array fails. Because the drives are treated like a single drive, parts of files (including operating system files) can be spread across several drives, leaving the computer with only file fragments if one drive fails. Regular and frequent backups are critical.

Another drawback is that RAID 0 treats each hard drive as if it has the storage capacity of the smallest drive in the array. So if you have three drives (300 GB, 250 GB, and 200 GB) in a RAID 0 array, your computer only recognizes 600 GB total capacity.

RAID 1 for security

RAID 1 maintains a complete copy of all files on each physical hard drive in the array. Maintaining simultaneous, complete copies of files across multiple hard drives is called *mirroring*. If a drive fails, the mirrored drive takes over and acts as the primary drive.

In the following graphic, each letter represents a unique block of data, and each column represents a separate hard drive.



File reading performance (*seek time*) is increased using the same methods that RAID 0 uses, although writing speed is the same as if writing to a single hard drive.

Drawback

RAID 1 treats the entire array as a single drive with the storage capacity of the smallest physical drive in the array. So if you have two drives (300 GB and 250 GB) in a RAID 1 array, your computer only recognizes a single drive with 250 GB total capacity.

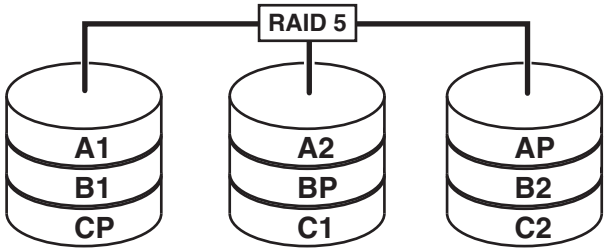
RAID 5 and 10 for both performance and security

Understanding RAID 5

RAID 5 uses striping (at the file level) with on-the-fly error correction across all drives. Because of this error correction, small file read/write errors can be quickly and automatically fixed without a significant drop in system performance. RAID 5 offers good performance and data redundancy. This array preserves your files if a drive fails.

RAID 5 stripes both data and *parity* information (error-checking information) across multiple drives. Striping across drives improves overall performance, and the parity information provides data protection. Because of the error-correction capabilities, if a drive fails, the data can be quickly and automatically fixed.

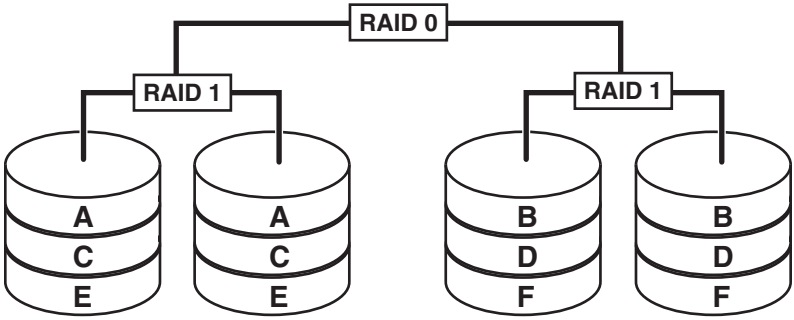
In the following graphic, each letter represents a unique block of data, and the number next to each letter represents which copy of the data files are stored on that drive. The "P" next to a letter represents *parity* (error-checking) information, and each column represents a separate hard drive.



Understanding RAID 10

RAID 10 (also called *RAID 1+0* or *RAID 1&0*) contains sets of RAID 1 mirrors acting as drives within a RAID 0 striping array. With this setup, the array could survive one drive failure in each mirrored array.

In the following graphic, each letter represents a unique block of data, and each column represents a separate hard drive.



Drawback

A RAID 5 array is treated as one drive with the capacity of all but one of the drives added together.

RAID 10 treats the entire array as a single drive with twice the storage capacity of the smallest drive. So if you have four drives (350 GB, 300 GB, 250 GB, and 200 GB) in a RAID 10 array, your computer recognizes a single drive with 400 GB total capacity.

Preparing your computer for RAID

Setting up RAID on your computer can involve two major steps, depending on how your computer has been configured.

▶ **To prepare your computer for RAID:**

1. Configure the RAID arrays. See the Array Manager User Guide or "Configuring RAID" on page 40.
2. Install the operating system from the Windows disc that came with your computer.

■

Configuring RAID

Creating a RAID volume

Because RAID can be configured so many ways, this procedure covers only the basics. This procedure assumes that no RAID has been defined yet.

▶ **To create a RAID volume:**

1. Install additional hard drives as needed for your RAID plan. For instructions on installing hard drives, see "Adding or replacing a hard drive" on page 52.
2. Start (or restart) your computer, then press **F9** during startup. The *MediaShield Utility* (RAID setup) screen opens.
3. To create a new array, set **RAID Mode** to **Striping** (for RAID 0), then select drives on the left and click **Add** to add the drives to the array.
4. Press **F7**, then press **Y**. The new array is created.
5. Press **CTRL+X** to exit the utility. Your computer restarts.
6. Install the operating system from the Windows disc that came with your computer.

■

Deleting a RAID volume

Deleting a RAID volume deletes all files on that volume, including operating system files. Before deleting a RAID volume, make sure that all important files have been backed up.

▶ **To delete a RAID volume:**

1. Start (or restart) your computer, then press **F9** during startup. The *MediaShield Utility* (RAID setup) screen opens.
2. Press the arrow keys to highlight the RAID volume you want to delete, then press **ENTER**. The *Array Detail* screen opens.

   Caution
   If your computer has the operating system installed on a RAID, deleting the RAID will remove the operating system, and you will not be able to start your computer into Windows.

3. Press **D** to delete the array. In this screen, you can also press **C** to clear (delete all data from) the array.

■

Getting help

For more information on RAID concepts, configuration, and maintenance, search for RAID FAQ information on the *Gateway Technical Support* Web site (www.gateway.com) or use an Internet search engine to search for:

- RAID
- configuring RAID
- RAID tutorials
- RAID levels

CHAPTER 5
Upgrading Your Computer

- Preventing static electricity discharge
- Opening the case
- Closing the case
- Adding or replacing memory
- Adding or replacing an optical disc drive
- Adding or replacing a hard drive
- Replacing the power supply
- Adding or replacing an expansion card

Preventing static electricity discharge

Warning
To avoid exposure to dangerous electrical voltages and moving parts, turn off your computer and unplug the power cord and modem and network cables before opening the case.
To prevent risk of electric shock, do not insert any object into the vent holes of the power supply.

The components inside your computer are extremely sensitive to static electricity, also known as *electrostatic discharge* (ESD).

Before opening the computer case, follow these guidelines:

- Wear a grounding wrist strap (available at most electronics stores) and attach it to a bare metal part of your computer.
- Turn off your computer.
- Touch a bare metal surface on the back of the computer.
- Unplug the power cord and the modem and network cables.

Caution
ESD can permanently damage electrostatic discharge-sensitive components in your computer. Prevent ESD damage by following ESD guidelines every time you open the computer case.

Before working with computer components, follow these guidelines:

- Avoid static-causing surfaces such as carpeted floors, plastic, and packing foam.
- Remove components from their antistatic bags only when you are ready to use them. Do not lay components on the outside of antistatic bags because only the inside of the bags provide electrostatic protection.
- Always hold expansion cards by their edges or their metal mounting brackets. Avoid touching the edge connectors and components on the cards. Never slide expansion cards or components over any surface.

Opening the case

Your computer case provides easy access to internal components.

Removing the left side panel

Warning
To avoid exposure to dangerous electrical voltages and moving parts, turn off your computer, then unplug the power cord and modem cable before opening the case.

▶ **To remove the left side panel:**

1. Follow the instructions in "Preventing static electricity discharge" on page 44.
2. Shut down your computer, then disconnect the power cord and modem, network, and all peripheral device cables.
3. Press the power button for ten seconds to drain any residual power from your computer.
4. Remove the security tape (if any) on the rear edge of the side panel.
5. Remove the two Phillips hex screws on the back edge of the left side panel. For their location, see "Back" on page 9.
6. Slide the side panel toward the back of your computer, then pull the panel away from your computer.

■

Removing the right side panel

Warning
To avoid exposure to dangerous electrical voltages and moving parts, turn off your computer, then unplug the power cord and modem cable before opening the case.

To help keep the case interior free from cable clutter, many cables (such as hard drive and optical drive data cables) are routed between the system board and the right side panel. Removing the right side panel may be necessary to replace some types of components.

▶ **To remove the right side panel:**

1. Make sure that the left side panel has already been removed by following the instructions in "Removing the left side panel" on page 45.
2. Remove the two Phillips hex screws on the back edge of the right side panel.
3. Slide the side panel toward the back of your computer, then pull the panel away from your computer.

■

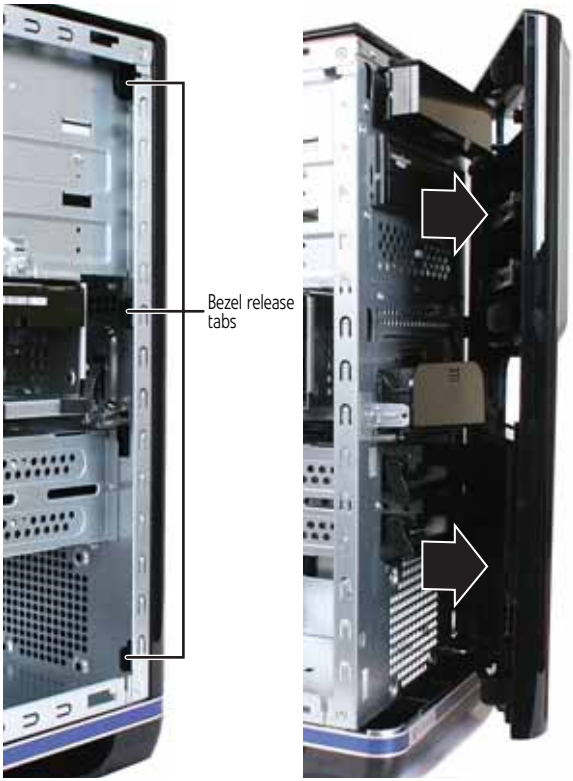
Removing the front bezel

Tip

The *bezel* is the front "face" piece of your computer that has the optical drive faces and the brand logo. It must be removed for some upgrading tasks.

To remove the front bezel:

1. Remove the left side panel by following the instructions in "Removing the left side panel" on page 45.
2. Press the three bezel release tabs on the left side of the computer, then swing the left side of the bezel away from the computer until the bezel is completely removed.



■

Closing the case

Replacing the front bezel

▶ **To replace the front bezel:**

1. Slide the hinge tabs on the right side of the bezel into the slots on the front of the computer, then press the left side of the bezel against the computer until its tabs snap into place.
2. Replace the side panels that you removed previously by following the instructions in "Replacing the side panels" on page 48.

■

Replacing the side panels

▶ **To replace the side panels:**

1. Make sure that all internal cables are arranged inside the computer so they will not be pinched when you close the computer.
2. Slide the side panels toward the front of the computer until the backs of the side panels are flush with the back of the computer.
3. Secure each side panel with the two Phillips screws you removed previously.
4. Reconnect the cables and power cord.

■

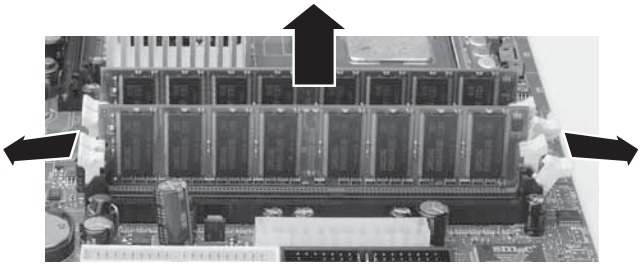
Adding or replacing memory

When you upgrade the computer memory, make sure that you install the correct type of memory module for your computer. Your computer uses DIMM memory.

▶ **To install or replace DIMM memory:**

1. Remove the side panel by following the instructions in "Removing the left side panel" on page 45.
2. For more stability, place your computer on its side. To avoid scratching the case, place it on a towel or other non-abrasive surface.
3. Find the memory module banks on your system board.

4 If you are removing a DIMM from the memory module bank, gently pull the plastic tabs away from the sides of the memory module and remove it.



- OR -

If you are adding a DIMM to an empty memory module bank, gently pull the plastic tabs away from the sides of the memory module bank.

5 Align the notches on the new DIMM with the notches on the memory module bank, then press the module firmly into the bank. The tabs on the sides of the memory module should snap into place to secure the memory module.

6 Return your computer to its upright position.

7 Replace the side panel by following the instructions in "Replacing the side panels" on page 48.

8 Reconnect the cables and the power cord.

9 Turn on your computer. Windows starts and the Windows desktop appears.

10 Click (**Start**), right-click **Computer**, then click **Properties**. The amount of memory in your computer is displayed.

■

Adding or replacing an optical disc drive

Tools
You need a Phillips screwdriver to add or replace an optical drive.

To add replace an optical drive:

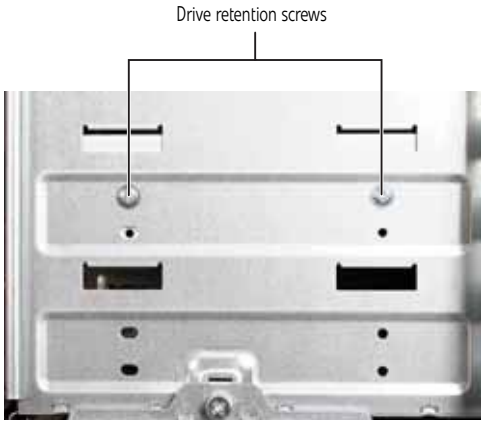
1. Remove the front bezel by following the instructions in "Removing the front bezel" on page 47.
2. If you are installing a new drive (not replacing an old one), remove the two drive retention screws in the drive bay, then go to Step 7. For the location of the screws, see the photo in Step 5.

   Important
   The color and shape of your replacement drive's front cover may vary from your original drive.

3. If you are replacing an existing drive, disconnect the cables from the drive, noting their locations and orientation. You will reconnect the cables after you install the new drive.

4. Note any jumper settings on the old drive (if any) and set the jumper on the new drive to be the same.

5 Remove the two drive retention screws.



6 Slide the drive forward and out of the drive bay.

7 Slide the new drive into the drive bay, line up the screw holes on the drive bay with the screw holes on the drive, then replace the two drive retention screws.

Important

Make sure that the optical drive's screw holes are lined up with the correct holes in the drive bay. If the drive screws are mounted through the wrong holes, the front of the drive will protrude too far out the front of the case for the front bezel to be reinstalled.

8 Reconnect the drive cables using your notes from Step 3, or according to the manufacturer's instructions.

9 Replace the front bezel by following the instructions in "Replacing the front bezel" on page 48.

10 Replace the side panels by following the instructions in "Replacing the side panels" on page 48.

■

Adding or replacing a hard drive

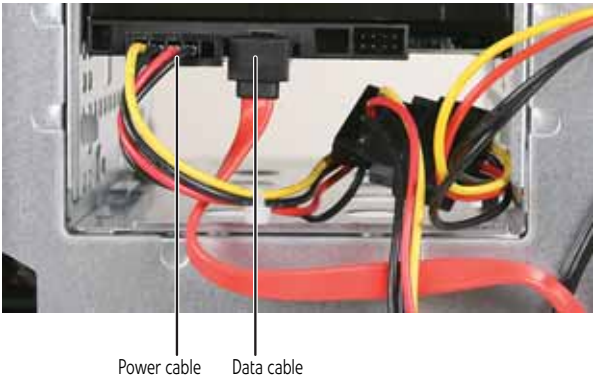
You can add hard drives to internal and external hard drive bays.

Adding or replacing an internal hard drive

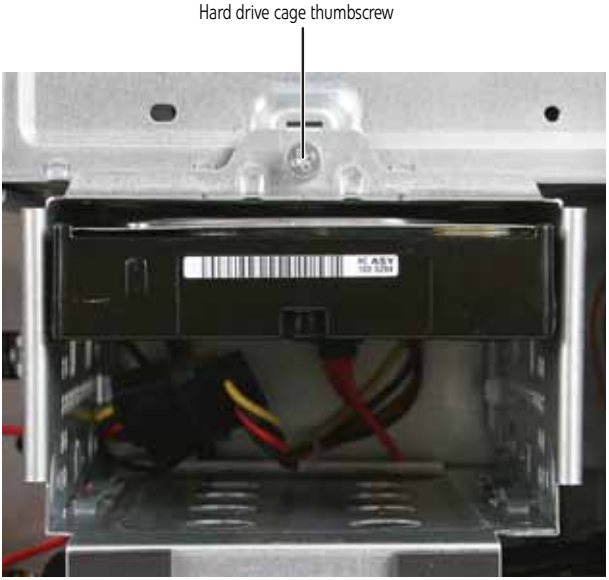
▶ **To add or replace an internal hard drive:**

Tools
You need a Phillips screwdriver to add or replace a hard drive.

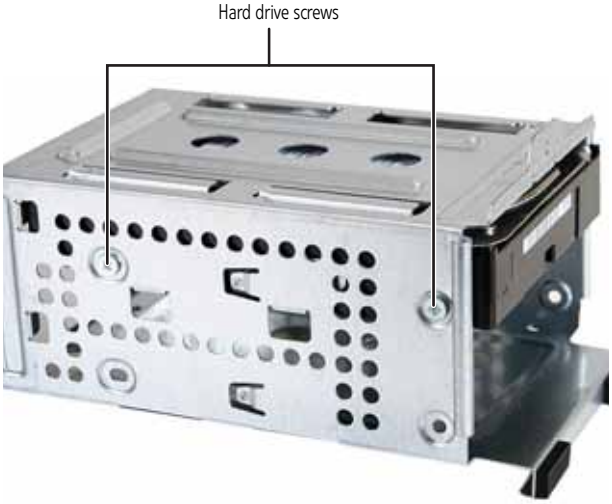
1. Remove the left and right side panels by following the instructions in "Removing the left side panel" on page 45 and "Removing the right side panel" on page 46.
2. On the right side of the computer, label and disconnect the cables for all internal hard drives, noting their locations and orientation. (You will reconnect the cables after you install the new drive.)



3 Remove the thumbscrew that secures the hard drive cage to the computer, then slide the hard drive cage out of the computer.



4 If you are replacing a drive, remove the screws that secure the hard drive to the hard drive cage, then slide the old hard drive out of the cage.



5 If you are replacing a drive, note any jumper settings on the old drive (if any) and set the jumpers on the new drive to be the same.

- OR -

If you are adding a new drive, set the jumpers as instructed by the drive's user guide.

6 Secure the new hard drive into the cage using the screws that you removed previously or that were provided with the drive.

7 Install the hard drive cage back into the computer by aligning the rails on the top of the cage with the slots on the bottom of the optical drive cage.

8 Secure the hard drive cage to your computer with the thumbscrew you removed previously.

9 Connect the drive cables on the right side of the computer. If you are replacing a drive, use your notes from Step 2.

10 Replace the side panels by following the instructions in "Replacing the side panels" on page 48.

11 Reconnect all external cables and the power cord.

12 Turn on your computer.

13 If you are using the new hard drive as your primary drive, install Windows using the operating system DVD that came with your computer. For more information on restoring your system, see "Recovering your system" on page 101.

■

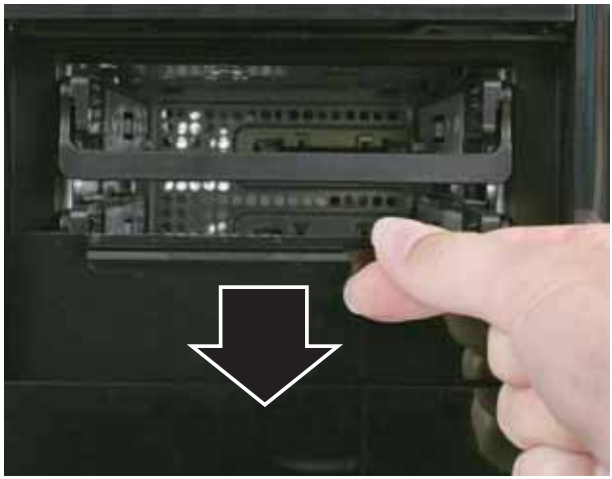
Adding a removable hard drive

You can use your computer's removable hard drive carriers for high-volume backups and convenient backup storage.

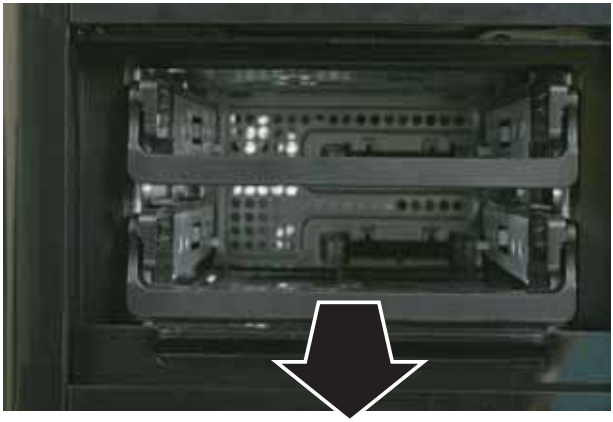
To install a removable hard drive:

1 Turn off your computer.

2 Slide open the removable hard drive cover.



3 Pull the handle of one of the carriers to remove it from the computer.



The empty carrier looks like this:

4 Align your new hard drive with the carrier so the end with the connectors is at the opposite end as the carrier's handle.

5 Align the hard drive's screw holes with the small metal prongs on the inside of the carrier.

6 Carefully pry the sides of the carrier away from each other, slide the hard drive inside the carrier, then release the sides. Make sure that the prongs on the inside of the carrier are securely inserted into the screw holes on the hard drive.

7 Slide the hard drive and carrier fully into the hard drive slot on the front of your computer.

8 Turn your computer on. Your new drive is recognized by your computer. Depending on the hard drive you installed, it may need to be formatted before use.

■

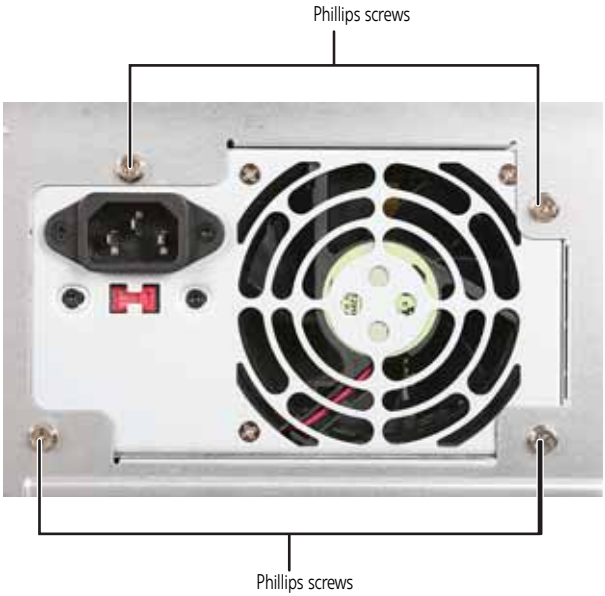
Replacing the power supply

Tools
You need a Phillips screwdriver to replace the power supply.

Warning
To avoid exposure to dangerous electrical voltages and moving parts, turn off your computer, then unplug the power cord and modem cable before opening the case.

▶ **To replace the power supply:**

1. Follow the instructions in "Preventing static electricity discharge" on page 44.
2. Remove the two side panels by following the instructions in "Removing the left side panel" on page 45 and "Removing the right side panel" on page 46. Make sure that you unplug the computer's external power cable.
3. Disconnect the power supply cables from all components (such as hard drives, optical and diskette drives, and the system board), noting their locations and orientation. (You will reconnect the cables after you install the new power supply.)
4. Remove the four Phillips screws that secure the power supply to the case.



5 Slide the power supply and cables out of the computer.

6 Insert the new power supply and cables into the case, then secure it to the case using the four Phillips screws you removed previously.

7 Reconnect the power supply cables using your notes from Step 3.

8 Replace the side panels by following the instructions in "Replacing the side panels" on page 48.

■

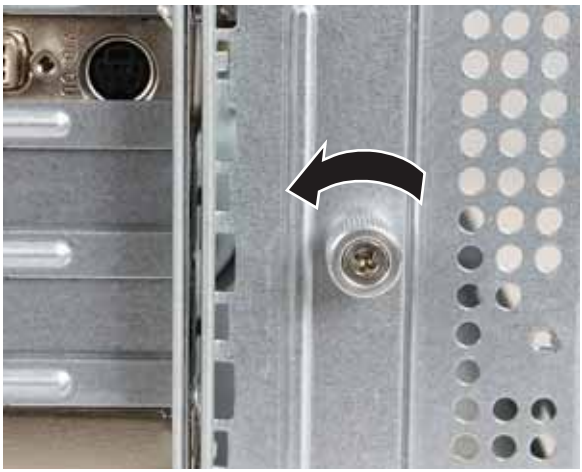
Adding or replacing an expansion card

To add or replace an expansion card:

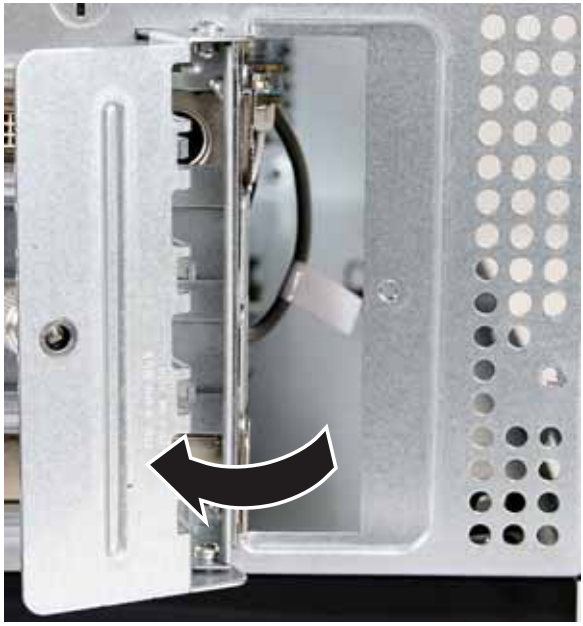
1. Remove the side panel by following the instructions in "Removing the left side panel" on page 45.

   Important
   Your computer hardware options and port locations may vary from the illustrations below.

2. Loosen the thumbscrew on the expansion card cover.



3 Open the expansion card cover.



4 For more stability, place your computer on its side. To avoid scratching the case, place it on a towel or other non-abrasive surface.

5 If you are replacing a card, disconnect any cables that are attached to the card, noting their locations and orientation. (You may have to reconnect the cables after you install the new card.)

6 Remove the old expansion card (if necessary). You can slightly seesaw the card end-to-end to loosen it, but do not bend the card sideways.

To remove a card (such as a video card) from the PCI Express slot, press the card release lever before trying to remove the card.

Caution

Do not touch the contacts on the bottom part of the expansion card. Touching the contacts can cause electrostatic damage to the card.

7 Install the new card into the expansion slot. You can slightly seesaw the card end-to-end to help insert the card, but do not bend the card sideways.

8 Reconnect the expansion card cables (if any) using your notes from Step 5, or, if you are adding a new card, follow the manufacturer's instructions.

9 Tighten the thumbscrew on the expansion card cover.

10 Return your computer to its upright position.

11 Replace the side panels by following the instructions in "Replacing the side panels" on page 48.

■

CHAPTER 6
Maintaining Your Computer

- Setting up a maintenance schedule
- Caring for your computer
- Cleaning your computer
- Updating Windows
- Using BigFix
- Managing hard drive space
- Backing up files
- Scheduling maintenance tasks
- Moving from your old computer

Setting up a maintenance schedule

Use the following table to set up a regular maintenance schedule.

Maintenance task	Weekly	Monthly	When needed
Check for viruses	X	X	X
Run Windows Update	X		X
Manage hard drive space			X
Clean up hard drives		X	X
Scan hard drive for errors		X	X
Defragment hard drive		X	X
Back up files	X	X	X
Clean computer case and peripheral devices			X

Caring for your computer

To extend the life of your computer:

- Be careful not to bump or drop your computer, and do not put any objects on top of it. The case, although strong, is not made to support extra weight.
- When transporting your computer, we recommend that you put it in the original packaging materials.
- Keep your computer away from magnetic fields. Magnetic fields can erase data on hard drives.
- Never turn off your computer when the drive indicator is on because data on the hard drive could be lost or corrupted.
- Avoid subjecting your computer to extreme temperature changes. The case can become brittle and easy to break in cold temperatures and can melt or warp in high temperatures. Damage due to either extreme is not covered by your warranty. As a general rule, your computer is safest at temperatures that are comfortable for you.
- Keep all liquids away from your computer. When spilled onto computer components, almost any liquid can result in expensive repairs that are not covered under a standard warranty.
- Avoid dusty or dirty work environments. Dust and dirt can clog the internal mechanisms and can lead to permanent damage to the computer.
- Do not block the ventilation fan slots. If these slots are blocked, your computer may overheat, resulting in unexpected shutdown or permanent damage to the computer.
- When storing your computer for an extended period of time, unplug AC power.

Cleaning your computer

Keeping your computer clean and the vents free from dust helps keep your computer performing at its best. You may want to gather these items and put together a computer cleaning kit:

- A soft, lint-free cloth
- An aerosol can of air that has a narrow, straw-like extension
- Cotton swabs
- An optical disc drive cleaning kit

Cleaning the exterior

Warning
When you shut down your computer, the power turns off, but some electrical current still flows through it. To avoid possible injury from electrical shock, unplug the power cord, modem cable, and network cable from the wall outlets.

- Always turn off your computer and other peripheral devices before cleaning any components.
- Use a damp, lint-free cloth to clean your computer and other parts of your system. Do not use household abrasive or solvent cleaners because they can damage the finish on components.
- Your computer is cooled by air circulated through the vents on the case, so keep the vents free of dust. With your computer turned off and unplugged, brush the dust away from the vents with a damp cloth. Be careful not to drip any water into the vents.

Cleaning the keyboard

You should occasionally clean the keyboard to remove dust and lint trapped under the keys.

To clean the keyboard:

1. Use an aerosol can of air with a narrow, straw-like extension to remove dust and lint trapped under the keys.
2. If you spill liquid on the keyboard, turn off your computer and turn the keyboard upside down. Let the liquid drain, then let the keyboard dry before trying to use it again. If the keyboard does not work after it dries, you may need to replace it.

■

Cleaning the monitor

Caution

A flat-panel screen is made of specially coated glass and can be scratched or damaged by abrasive or ammonia-based glass cleaners.

To clean the monitor:

- To clean an LCD flat panel monitor, use a soft cloth and water to clean the screen. Dampen the cloth (never apply liquid directly to the screen), then wipe the screen with the cloth.
- To clean a CRT monitor, use a soft cloth and glass cleaner to clean the monitor screen. Squirt a little cleaner on the cloth (never directly on the screen), then wipe the screen with the cloth.

■

Cleaning the mouse

If the mouse pointer begins moving erratically across the computer screen or becomes difficult to control precisely, cleaning the mouse will likely improve its accuracy.

To clean the mouse:

- Wipe the bottom of the mouse with a damp, lint-free cloth.

■

Cleaning optical discs

Optical discs (CDs, DVDs, and Blu-ray Discs) get dirty from frequent handling.

▶ **To clean an optical disc:**

1. Wipe from the center to the edge, not around in a circle, using a product made especially for the purpose.

■

Updating Windows

Windows Update helps you keep your computer up-to-date. Use Windows Update to choose updates for your computer's operating system, software, and hardware. New content is added to the site regularly, so you can always get the most recent updates and fixes to protect your computer and keep it running smoothly. Windows Update scans your computer and provides you with a tailored selection of updates that apply only to the software and hardware on your computer.

For information on running Windows Update, see "Windows Update" in your online *User Guide*. Windows Update can also be controlled through the Windows Security Center. For more information, see "Protecting Your Computer" in your online *User Guide*.

Help

For more information about Windows Update, click **Start**, then click **Help and Support**. Type **windows update** in the **Search Help** box, then press **ENTER**.

Using BigFix

BigFix may be installed on your computer. BigFix monitors your computer for problems and conflicts. It automatically gathers information about the latest bugs, security alerts, and updates from BigFix sites on the Internet. Whenever BigFix detects a problem, it alerts you by flashing the blue taskbar icon. To fix the problem, click on that icon to open BigFix.

▶ **To start BigFix:**

1. Click (**Start**), **All Programs**, **Accessories**, **System Tools**, then click **BigFix**.
2. To learn more about BigFix, click **Help**, then click **Tutorial**.

■

Managing hard drive space

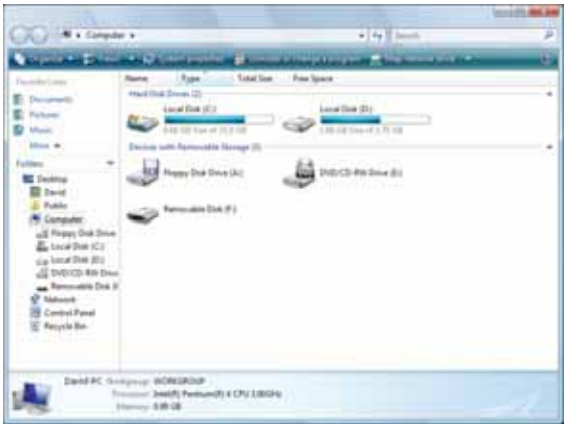
Windows provides several utilities you can use to check hard drive space, delete unnecessary files, defragment files, and back up files.

Checking hard drive space

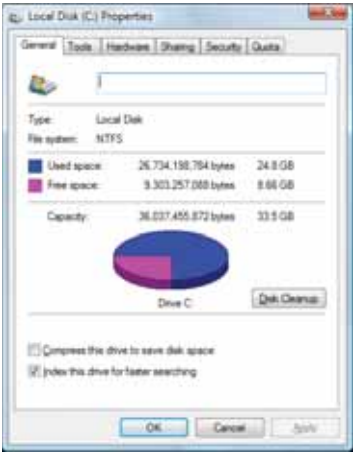
▶ **To check hard drive space:**

Shortcut
Start ⇨ Computer ⇨ right-click drive ⇨ Properties

1 Click ⊞ (**Start**), then click **Computer**. The *Computer* window opens.



2 Right-click the drive that you want to check for available file space, then click **Properties**. Drive space information appears.



■

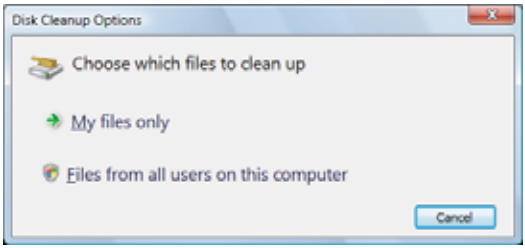
Deleting unnecessary files

Delete unnecessary files, such as temporary files and files in the Recycle Bin, to free hard drive space.

▶ **To delete unnecessary files:**

Shortcut
Start ⇨ Computer ⇨ right-click drive ⇨ Properties ⇨ Disk Cleanup

1 Click (**Start**), **All Programs**, **Accessories**, **System Tools**, then click **Disk Cleanup**. The *Disk Cleanup Options* dialog box opens.



2 Click one of the options:

- **My files only** cleans only the folders for the currently logged in user.
- **Files from all users on this computer** cleans all folders.

The *Disk Cleanup Options* dialog box opens.

3 Click to select the types of files you want to delete, then click **OK**. The types of files you indicated are deleted.

Help
For more information about keeping the hard drive free of unnecessary files, click **Start**, then click **Help and Support**. Type **disk cleanup** in the **Search Help** box, then press **ENTER**.

■

Checking the hard drive for errors

The Error-checking program examines the hard drive for physical flaws and file and folder problems. This program corrects file and folder problems and marks flawed areas on the hard drive so Windows does not use them.

If you use your computer several hours every day, you probably want to run Error-checking once a week. If you use your computer less frequently, once a month may be adequate. Also use Error-checking if you encounter hard drive problems.

▶ **To check the hard drive for errors:**

1 Click ⊛ (**Start**), then click **Computer**. The *Computer* window opens.

2 Right-click the drive that you want to check for errors, click **Properties**, then click the **Tools** tab.

3 Click **Check Now**, then click **Start**. Your drive is checked for errors. This process may take several minutes.

Important
Error checking cannot scan a drive while the drive is being used, so if you try to check your hard drive for errors, you see a prompt asking you if you want to scan the hard drive later (the next time you restart your computer). If you see this prompt, click **Schedule disc check**.

After Windows has finished checking the drive for errors, it provides a summary of the problems that it found.

4 Correct any problems that are found by following the on-screen instructions.

5 Click **OK**.

Help
For more information about checking the hard drive for errors, click **Start**, then click **Help and Support**. Type **checking for disk errors** in the **Search Help** box, then press **ENTER**.

■

Defragmenting the hard drive

When working with files, sometimes Windows divides the file information into pieces and stores them in different places on the hard drive. This is called *fragmentation*, and it is normal. In order for your computer to use a file, Windows must search for the pieces of the file and put them back together. This process slows the hard drive performance.

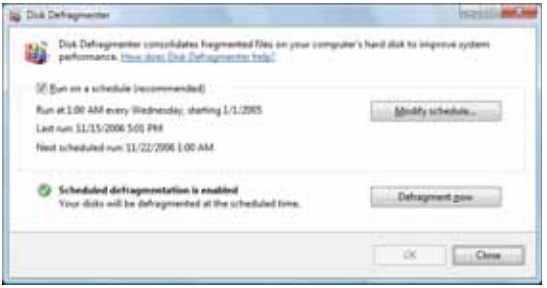
Disk Defragmenter organizes the data on the drive so each file is stored as one unit rather than as multiple pieces scattered across different areas of the drive. Defragmenting the information stored on the drive can improve hard drive performance.

While Disk Defragmenter is running, do not use your keyboard or mouse because using them may continuously stop and restart the defragmenting process. Also, if you are connected to a network, log off before starting Disk Defragmenter. Network communication may stop the defragmentation process and cause it to start over.

Tip
Because defragmenting a drive may take hours to complete (depending on the size of the drive being defragmented), consider starting the process when you will not need the computer for several hours.

▶ **To defragment the hard drive:**

1. Disconnect your computer from the network.
2. Click ⊞ (**Start**), **All Programs**, **Accessories**, **System Tools**, then click **Disk Defragmenter**. The *Disk Defragmenter* dialog box opens.



3. Click **Defragment now**. This process may take hours to complete, depending on the size of the drive being defragmented.

Help
For more information about defragmenting the hard drive, click **Start**, then click **Help and Support**. Type **defragmenting** in the **Search Help** box, then press **ENTER**.

■

Backing up files

Backing up files and removing them from the hard drive frees space for new files on the hard drive. It also protects you from losing important information if the hard drive fails or you accidentally delete files.

You should back up your files regularly to a writable optical disc (if you have a recordable drive). Use a backup device, such as a recordable disc drive, to do a complete hard drive backup.

To back up files:

1. Click (**Start**), then click **Computer**. The *Computer* window opens.
2. Right-click the drive that you want to back up, click **Properties**, then click the **Tools** tab.

3. Click **Backup Now**, then click **Run a file backup now**.
4. Follow the on-screen instructions to select a backup storage location and the files and folders to back up.

Help
For more information about backing up files, click **Start**, then click **Help and Support**. Type backup in the **Search Help** box, then press ENTER.

■

Backing up files

Your Gateway computer makes backing up files as easy as pressing a button.

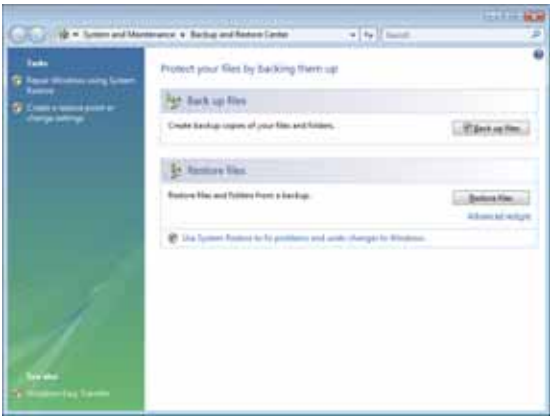
▶ **To back up files:**

> **Tip**
> If you are using a removable hard drive for your backup, see "Using a removable hard drive" on page 36 for more information.

1 Press the **Backup** button near the power button on the front of your computer.

Backup button

Windows' *Backup and Restore Center* opens.



2 Click **Back up files**, then follow the on-screen instructions to complete your backup.

■

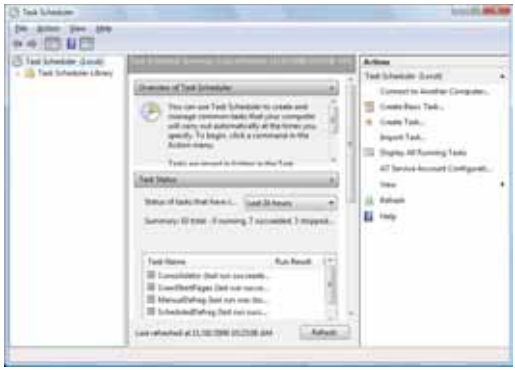
Scheduling maintenance tasks

Task Scheduler lets you schedule maintenance tasks such as running Disk Defragmenter and checking your drives for errors.

Important
Your computer must be on during scheduled tasks. If your computer is off, scheduled tasks will not run.

To start the Task Scheduler:

1. Click (**Start**), **All Programs**, **Accessories**, **System Tools**, then click **Task Scheduler**. The *Task Scheduler* dialog box opens.



2. Click **Create Basic Task** for basic tasks or click **Create Task** for more complex tasks, then follow the on-screen instructions to finish setting up and scheduling the task.

Help
For more information about scheduling tasks, click **Start**, then click **Help and Support**. Type `task scheduler` in the **Search Help** box, then press **ENTER**.

■

Moving from your old computer

Transferring files and settings automatically

You can move your files, folders, software settings, and user account settings (such as display, Internet, and e-mail settings) from your old computer to your new one using Windows Easy Transfer, providing your old computer uses Windows XP or Windows Vista.

While using Windows Easy Transfer, you will not be able to run other tasks on the computers.

Important
If your old computer does not use Windows XP or Windows Vista, you must manually move your data by using a writeable disc, flash drive, or external hard drive.

▶ **To move files and settings from your old computer:**

1. If you want to transfer program settings to your new computer, install those programs on the new computer before running Windows Easy Transfer. Windows Easy Transfer copies only the software's settings, not the software itself, to the new computer.
2. Click ⊞ (**Start**), **All Programs**, **Accessories**, **System Tools**, then click **Windows Easy Transfer**. The *Windows Easy Transfer* dialog box opens.
3. Click **Next**, click **Start a new transfer**, then follow the on-screen instructions to complete the transfer.

Help
For more information about transferring files, click **Start**, then click **Help and Support**. Type **transferring files** in the **Search Help** box, then press **ENTER**.

■

Transferring files and settings manually

You can manually transfer your personal data files by copying them to removable media, such as a writable disc, an external hard drive, a network location, or a flash drive.

Finding your documents

Many programs save your personal data files in the *Documents* or *My Documents* folder. Look in your old computer's documents folder for personal data files.

▶ **To find files in the documents folder:**

1. In Windows Vista, click (**Start**), then click **Documents**. The *Documents* folder opens and displays many of your saved personal data files. Go to 4.

   - OR -

   In Windows XP, click **Start**, then click **My Documents**. The *My Documents* window opens and displays many of your saved personal data files. Go to 4.

   - OR -

   In Windows 98, Windows Me, or Windows 2000, double-click the **My Computer** icon on the desktop. Go to the next step.

2. Double-click the **C:** drive icon.
3. Double-click the **Documents** or **My Documents** folder. The *My Documents* window opens and displays many of your saved personal data files.
4. Copy your personal data files to removable media or to another computer on your network.

■

Finding other files

Use Windows Find or Search to locate other personal data files. For more information, see your online *User Guide*.

You can often identify different data file types by looking at the file's *extension* (the part of the file name following the last period). For example, a document file might have a .DOC extension and a spreadsheet file might have an .XLS extension.

File type	File usually ends in...
Documents	.DOC, .TXT, .RTF, .HTM, .HTML, .DOT
Spreadsheets	.XLS, .XLT, .TXT
Pictures	.JPG, .BMP, .GIF, .PDF, .PCT, .TIF, .PNG, .EPS
Movies	.MPEG, .MPG, .AVI, .GIF, .MOV
Sound and music	.WAV, .CDA, .MP3, .MID, .MIDI, .WMA

▶ **To find files using Find or Search:**

1. In Windows Vista, click ⊞ (**Start**), then click **Search**. The *Search Results* window opens.

   - OR -

   In Windows XP, click **Start**, then click **Search**. The *Search Results* window opens.

   - OR -

   In Windows 98, Windows Me, or Windows 2000, click **Start**, **Find** or **Search**, then click **For Files or Folders**. The *Search Results* window opens.

2. Type the filename you want to search for, then press **ENTER**. The search results are displayed.

3. To learn about more search options, click **Help.**

■

CHAPTER 7
Troubleshooting

- Safety guidelines
- Try these steps first
- Error messages
- Internet and networking
- Power
- Display
- Printing
- Optical discs
- Memory card reader
- Mouse
- Keyboard
- Files
- Memory
- Audio
- Passwords
- Expansion cards
- Media Center
- Checking for device problems
- Recovering your system
- Technical support

Safety guidelines

While troubleshooting your computer, follow these safety guidelines:

Warning
To avoid bodily injury, do not attempt to troubleshoot your computer problem if:

- Power cords or plugs are damaged
- Liquid has been spilled into your computer
- Your computer was dropped
- The case was damaged

Instead, unplug your computer and contact a qualified computer technician.

Warning
Never open your computer case while your computer is turned on and while the modem cable, network cable, and power cord are connected.

Warning
Make sure that you are correctly grounded before accessing internal components. For more information about preventing damage from static electricity, see "Preventing static electricity discharge" on page 44.

Try these steps first

If you have problems with your computer, try these things first:

Warning
To avoid bodily injury, do not attempt to troubleshoot your computer problem if:

- Power cords or plugs are damaged
- Liquid has been spilled into your computer
- Your computer was dropped
- The case was damaged

Instead, unplug your computer and contact a qualified computer technician.

- Check all cable connections, including power.
- If an error message appears on the screen, write down the exact message. The message may help Customer Care in diagnosing and fixing the problem.
- If you added or removed peripheral devices, review the installation procedures you performed and make sure that you followed each instruction.
- If an error occurs in a program, see the program's printed documentation or the online help.

Help
For more information about troubleshooting, click **Start**, then click **Help and Support**. Type **troubleshooting** in the **Search Help** box, then press **ENTER**.

Error messages

Error message	Action
"Insufficient disk space"	See "You get an "Insufficient disk space" error message" on page 93.
"Data error"	See "You get a "Data error" message" on page 94.
"General failure reading drive C"	See "The hard drive cannot be accessed, or you see a "General failure reading drive C" error message" on page 94.
"Operating system not found"	See "You get an "Operating system not found" error message" on page 94.
"Unable to locate host"	See "You see an "Unable to locate host" message and are unable to browse the Internet" on page 84.
"Download Error"	See "You get a "Download Error" message when Media Center tries to update the Program Guide" on page 99.
"Memory error"	See "You see a "Memory error" message" on page 96.
"Not enough memory"	See "You see a "Not enough memory" error message" on page 96.

Internet and networking

Internet

If you do not find a solution to your problem in this section, the issue may be networking related. See "Networking" on page 88 for more information.

You cannot connect to the Internet

- If you are using a cable or DSL modem, make sure that the modem cable is securely plugged into the Ethernet network jack. See more troubleshooting at "Modem (cable or DSL)" on page 85.

  - OR -

  If you are using a dial-up modem, make sure that the modem cable is plugged into the modem jack and not the Ethernet network jack. See more troubleshooting at "Modem (dial-up)" on page 86.
- Make sure that your account with your Internet service provider (ISP) is set up correctly. For help, contact your ISP technical support.
- Your ISP may be having connection problems. Contact your ISP technical support to determine whether the Internet outage is widespread (a problem they are trying to solve).

Help
For more information about troubleshooting Internet connections, click **Start**, then click **Help and Support**. Type **troubleshooting connections** in the **Search Help** box, then press **ENTER**.

You see an "Unable to locate host" message and are unable to browse the Internet

- You may have typed the URL (Web address) incorrectly. Check the URL, then enter it again, or try a different URL.
- Your Web browser may be experiencing problems. Close your Web browser, then restart it. If that does not allow you to connect, restart your computer.
- The problem may be with your network, not the Internet itself. Check your network cables and network devices (such as switches, routers, and hubs).
- Your ISP may be having connection problems. Contact your ISP technical support to determine whether the Internet outage is widespread (a problem they are trying to solve).

People are sending you e-mails, but you have not received them

- Click the **Receive** or **Send and Receive** button in your e-mail program. This checks your mail server for incoming e-mail.
- Make sure that your account with your Internet service provider (ISP) is set up correctly. Contact your ISP for technical support.

E-mails you send are returned as undeliverable

- Check the spelling of the e-mail address you are sending e-mail to. A valid e-mail address consists of a user name, the @ symbol, and the Internet *domain name* of the Internet service provider (ISP) or company that "hosts" that user. E-mail addresses never contain spaces and are not case-sensitive.
- If possible, contact the intended recipient by using another method, then ask them to verify their e-mail address.

Modem (cable or DSL)

My computer cannot connect to the Internet.

- Make sure that your modem is connected to the network jack.
- See the documentation that came with your modem for additional troubleshooting information.
- Contact your modem manufacturer for technical support.

Modem (dial-up)

See also "Internet and networking" on page 84.

Your modem does not dial or does not connect

- Make sure that the modem cable is plugged into the modem jack and not the Ethernet or the PHONE network jack.
- Make sure that your computer is connected to the telephone line and the telephone line has a dial tone.
- Remove any line splitters or surge protectors from your telephone line, then check for a dial tone by plugging a working telephone into the telephone wall jack.
- Make sure that call waiting is disabled before using the modem. Contact your telephone service provider to get the correct code to temporarily disable the service.
- Make sure that the modem dialing properties are set correctly.

To check the dialing properties:

1. Click (**Start**), type modem, then press **ENTER**.
2. If the *Location Information* dialog box opens, enter the information for your area, then click **OK**.
3. Click the **Dialing Rules** tab, click the location from which you are dialing, then click **Edit**.
4. Make sure that all settings are correct.

■

Help
For more information about dialing properties, click **Start**, then click **Help and Support**. Type dialing in the **Search Help** box, then press **ENTER**.

- Check for line noise (scratchy, crackling, or popping sounds), which is a common problem that can cause the modem to connect at a slower rate, interrupt downloads, or even disconnect. You can also call your telephone service and have the telephone line checked for noise or low line levels.
- Try another telephone line (either a different telephone number in your house or a telephone line at a different location). If you can connect on this line, call your telephone service.

You cannot connect to the Internet

- The ISP may be having technical difficulties. Contact your ISP for technical support.
- Review the troubleshooting information under "Internet and networking" on page 84.

Your 56K modem does not connect at 56K

Current FCC regulations restrict actual data transfer rates over public telephone lines to 53K. Other factors, such as line noise, telephone service provider equipment, or ISP limitations, may lower the speed even further.

The modem is not recognized by your computer

- Use the modem cable that came with your computer. Some telephone cables do not meet required cable standards and may cause problems with the modem connection.
- Restart your computer.
- Run Windows modem diagnostics.

To run modem diagnostics:

1. Click (**Start**), type modem, then press **ENTER**.
2. Click the **Modems** tab, then click **Properties**.
3. Click the **Diagnostics** tab, then click **Query Modem**. If information about the modem appears, the modem passed diagnostics. If no modem information is available, a white screen appears with no data, or if you get an error such as *port already open* or *the modem has failed to respond*, the modem did not pass diagnostics.

■

Help
For more information about modem troubleshooting, click **Start**, then click **Help and Support**. Type modem troubleshooting in the Search Help box, then press **ENTER**.

The modem is noisy when it dials and connects

To turn down the modem volume:

1. Click (**Start**), type modem, then press **ENTER**.
2. Click the **Modems** tab, then click **Properties**.

3 Click the **Modem** tab, then adjust the **Speaker volume** control.

4 Click **OK** twice to close the dialog boxes.

■

Networking

For more information, see the Networking chapter in your *User Guide*.

You cannot see the other computers on your network

- If a network cable is connected to your computer, make sure that the other end is plugged into a network router, switch, hub, or other network device.
- Make sure that the other computers are turned on.
- If you are using a router, make sure that it is turned on. Most routers have lights that indicate they are working. For more information, see your router's documentation.
- If you are using a router, restart it by unplugging it from power for five seconds.
- Make sure that all computers on your network have the same workgroup name and Subnet Mask.
- If you assigned IP addresses to the computers, make sure that all computers have different IP addresses. For home networks, IP addresses should be **192.168.*N.N*** where *N* is a number you assign between **0** and **254**. The first *N* should be the same for all computers on your network, and the second *N* should be different for all computers on your network.

Your wired network is running slower than you expect

- If your network is running slower than you expect, check the speed of each component. For best results, all components should be standard Ethernet (10 Mbps), Fast Ethernet (100 Mbps), or Gigabit Ethernet (1000 Mbps). Components comprising a mixture of those speeds will result in your network running at the speed of the slowest component.
- For more troubleshooting help, see the documentation for your network components.

Help

For more information about network troubleshooting, click **Start**, then click **Help and Support**. Type **network troubleshooting** in the **Search Help** box, then press **ENTER**.

Power

Your computer will not turn on

- Make sure that the power cord is connected to an AC power source and to your computer, and that your computer is turned on. If your power cables are connected to a power strip, make sure it is turned on.
- Test the outlet by plugging in a working device, such as a lamp.
- Make sure that the power cord is free from cuts or damage, and replace any damaged cables.

Display

The screen resolution is not correct

- Change the screen resolution in Windows. For instructions, see your online *User Guide*.

The computer is on, but there is no picture

- Make sure that the computer is not in Standby (power-saving) mode.
- Make sure that the monitor is connected to a power outlet and to a video port on your computer, then make sure that the monitor is turned on. If the monitor is on, its power LED should be on.
- Adjust the monitor's brightness and contrast controls. For more information, see the monitor's documentation.
- Check the video cable for bent or damaged pins.
- Connect a display that you know works (such as a monitor from another computer) to your computer. If the display still works, the original monitor is faulty. If the display does **not** work, either the computer's video card (if installed) is faulty or the on-board video is faulty.

The color is not uniform

- Make sure that the display warms up for at least 30 minutes before making a final judgment about color uniformity.

The text on the display is dim or difficult to read

- Adjust the brightness and contrast controls.
- Change the display settings. For instructions, see your online *User Guide*.
- For more information about display types, see your display and video card documentation.

Help
For more information about changing the screen resolution, click **Start**, then click **Help and Support**. Type screen resolution in the **Search Help** box, then press **ENTER**.

Printing

The printer will not turn on

- Make sure that the power cable is plugged into an AC power source.

The printer is on but will not print

- Make sure that the **Print to file** box is not checked in the *Print* dialog box.
- If the printer you want to print to is not the default printer, make sure that you have selected it in the printer setup.

To set a default printer:

1. Click (**Start**), type printer, then press **ENTER**. *Control Panel* opens and lists available printers.
2. Right-click the printer you want to be the default printer, then click **Set as Default Printer**.

■

- Reinstall the printer driver. See your printer's user guide for instructions.
- Wait until files have been printed before sending additional files to the printer.
- If you print large files or many files at one time, you may want to add additional memory to the printer. See the printer documentation for instructions on adding additional memory.
- Contact your printer manufacturer's technical support.

Help

For more information about printer troubleshooting, click **Start**, then click **Help and Support**. Type **printer troubleshooter** in the **Search Help** box, then press **ENTER**.

Optical discs

Optical discs include CDs, DVDs, and Blu-ray discs.

The computer does not recognize a disc or the disc drive

- Make sure that the disc label is facing up, and make sure that the disc is clean and free from large scratches. For information on cleaning the disc, see "Cleaning optical discs" on page 68.
- Update the device driver. For instructions, see "Checking for device problems" on page 100.
- Your computer may be experiencing some temporary memory problems. Restart your computer.

An audio disc does not produce sound

- Make sure that the Windows volume controls are turned up (and mute is turned off) and that any attached speakers are turned on and connected correctly.
- Make sure that the disc is label side up, and make sure that the disc is clean and free from large scratches. For information on cleaning the disc, see "Cleaning optical discs" on page 68.

A movie disc will not play

- Make sure that the disc is label side up, and make sure that the disc is clean and free from large scratches. For information on cleaning the disc, see "Cleaning optical discs" on page 68.

- The regional code of the movie disc may not match your drive's regional code. Play only discs with a regional code for your region. The DVD regional code for the United States and Canada is **1**, and the regional code for Mexico is **4**. The Blu-ray regional code for North and South America is **A**, although many (if not most) Blu-ray movies are region-free.
- Update the device driver. For instructions, see "Checking for device problems" on page 100.
- Your computer may be experiencing some temporary memory problems. Restart your computer.

Memory card reader

Drive letters for the memory card slots do not appear in the Computer window

- The memory card reader may have been temporarily uninstalled using the **Remove Hardware** icon in the system tray. Restart your computer, and it will recognize the card reader again.

Mouse

The mouse does not work

- Make sure that the mouse cable is plugged in correctly.
- Restart your computer.
- Try a mouse you know is working to make sure that the mouse port works.

The mouse works erratically

- Clean the mouse by wiping the bottom with a clean, damp cloth. Make sure that the optical sensor is clean and free of debris.
- You may be using the mouse on a transparent, reflective, metallic, or glossy surface. Your mouse uses optical sensors that do not work correctly on these surfaces. Use a mouse pad or a surface with a non-glossy texture, such as fabric.
- The mouse pad may have a printed or fabric pattern on it that interferes with your mouse. Use a different mouse pad.

Keyboard

The keyboard does not work

- Make sure that the keyboard cable is plugged in correctly.
- Clean the keyboard by using an aerosol can of air with a narrow, straw-like extension to remove dust and lint trapped under the keys.
- Try a keyboard that you know works to make sure that the keyboard port works.

Liquid spilled in the keyboard

- Turn off your computer and unplug the keyboard. Wipe off the keyboard, turn the keyboard upside down to drain any remaining liquid, then blow the inside dry with a can of compressed air. Let the keyboard dry for several hours before using it again. If the keyboard does not work after it dries, you may need to replace it.

Files

You get an "Insufficient disk space" error message

- Delete unnecessary files from the hard drive using Disk Cleanup. For instructions, see "Deleting unnecessary files" on page 71.

  Help
  For more information about file management, click **Start**, then click **Help and Support**. Type **file management** in the **Search Help** box, then press **ENTER**.

- Empty the Recycle Bin by right-clicking the **Recycle Bin** icon, then clicking **Empty Recycle Bin**.

  Caution
  All deleted files will be lost when you empty the Recycle Bin.

- Save your files to another drive. If the hard drive is full, copy any files not regularly used to backup media, then delete them from the hard drive.

A file was accidentally deleted

- If a file was deleted while holding down the **SHIFT** key, or if the Recycle Bin has been emptied since the file was deleted, the file cannot be restored.

To restore deleted files:

1. Double-click the **Recycle Bin** icon.
2. Right-click the file you want to restore, then click **Restore**. The file is restored to the place where it was originally deleted from.

■

Help
For more information about restoring deleted files, click **Start**, then click **Help and Support**. Type System Restore in the **Search Help** box, then press **ENTER**.

You get a "Data error" message

- This may be the result of a defective area on the hard drive. To fix hard drive problems, run the error checking program. For instructions on fixing hard drive problems, see "Checking the hard drive for errors" on page 95.

The hard drive cannot be accessed, or you see a "General failure reading drive C" error message

- If your computer has been subjected to static electricity or physical shock, you may need to reinstall the operating system. See "Recovering your system" on page 101.

You get an "Operating system not found" error message

- Your computer is unable to detect the hard drive. Check cable connections. For instructions on opening your computer case, see "Opening the case" on page 45.
- A USB flash drive or a USB portable music player is connected to one of your computer's USB ports. Unplug the USB device, then restart your computer.
- Your hard drive has no operating system installed on it, or the operating system files cannot be recognized because they have become corrupted or erased. See "Recovering your system" on page 101.

You need to restore your computer to a working condition

- See "Recovering your system" on page 101.

Checking the hard drive for errors

Use Error-checking if you encounter hard drive problems. Error-checking examines the hard drive for file and folder problems, then corrects the data problems that it finds.

▶ **To check the hard drive for errors:**

1. Click (**Start**) then click **Computer**. The *Computer* window opens.
2. Right-click the drive that you want to check for errors, click **Properties**, then click the **Tools** tab.
3. Click **Check Now**, then click **Start**. Your drive is checked for errors. This process may take several minutes.

Important

Error checking cannot scan a drive while the drive is being used. If you try to check your hard drive for errors, you see a prompt asking you if you want to scan the hard drive later (the next time you restart your computer). If you see this prompt, click **Schedule disc check**.

After Windows has finished checking the drive for errors, it provides a summary of the problems that it found.

4. Correct any problems that are found by following the on-screen instructions.
5. Click **OK**.

Help

For more information about checking the hard drive for errors, click **Start**, then click **Help and Support**. Type **checking for disk errors** in the **Search Help** box, then press **ENTER**.

■

Memory

Help
For more information about troubleshooting memory errors, click **Start**, then click **Help and Support**. Type **memory error** in the **Search Help** box, then press **ENTER**.

You see a "Memory error" message

- Run the Memory Diagnostic Tool. Click (**Start**), type **Memory Diagnostic Tool**, then press **ENTER**. Click **Restart now and check for problems**. Your computer restarts and runs the memory diagnostics.

You see a "Not enough memory" error message

- Close all programs, then restart your computer.
- If you continue to receive this error message, consider adding more memory to your computer.

Audio

You are not getting sound from the speakers

- Make sure that the volume controls are turned up and not muted. For more information, see "Adjusting the volume" on page 31.
- If you are using external speakers:
  - Make sure that the speakers are turned on, and check the speaker connections. See your speakers' user guide for more troubleshooting tips.
  - Make sure that your computer's universal audio jacks are configured correctly. For more information, see "Configuring the audio jacks" on page 33.
- If you are trying to play an audio disc, see "Optical discs" on page 91.

Help
For more information about sound troubleshooting, click **Start**, then click **Help and Support**. Type **sound troubleshooter** in the **Search Help** box, then press **ENTER**.

Passwords

Your computer does not accept your password

- Windows passwords are case-sensitive. Make sure that **CAPS LOCK** is turned off, then retype the password.

Expansion cards

The computer does not recognize an expansion card

- Restart your computer.
- Make sure that you have installed the required software. For more information, see your expansion card's documentation.
- Remove the card from your computer's expansion slot, then reinstall the card.

Media Center

This section only covers problems relating to Media Center mode. Media Center mode is available only on Windows Vista Home Premium and Ultimate versions.

Help

For more information about Windows Media Center, click **Start**, then click **Help and Support**. Type Media Center in the **Search Help** box, then press ENTER.

The Media Center video display looks bad on your TV

Many factors can significantly affect the video quality:

- **Cable connections**—Loose cables can lower video quality. Check all cable connections.
- **Display type**—The Media Center is best viewed on computer displays. Other types of display devices, including TVs, may provide lower quality video.
- **Type of connection used**—The connection type has an affect on the video quality. Your computer has one or more video outputs. Use the highest quality output your TV and computer supports:
  - A/V cables (basic)
  - S-Video (fair, but not optimized for computer video display)
  - VGA (good)
  - DVI/HDMI (best)
- **Quality of video cables**—Poor quality video cables can cause problems. Gateway recommends using high-quality video cables.
- **Screen resolution**—Many TVs cannot display the high resolution that your computer's video signal uses, and may shift, scramble, or scroll the picture. For a better picture on a TV display, you may need to lower the computer's screen resolution to 800 × 600 or 640 × 480. For more information about changing the screen resolution, see your online *User Guide*.
- **Age of the TV**—Newer TVs usually have more advanced features, produce a better quality picture, and support higher screen resolutions.

- **Type of TV**
  - CRT TVs may have a slight flicker.
  - Plasma TVs may experience image burn-in after extended use.
  - LCD TVs use the same technology as your computer's flat panel display.

You want to change monitor settings to get better TV or DVD image quality

- Adjust the display device brightness, contrast, hue, and saturation. For more information, see the display's user guide.

You need to burn programs that were recorded with your computer to a DVD using Media Center

- Media Center saves recorded programs in the DVR-MS format. You can burn a DVR-MS file to a DVD with DVD recording (burning) software and with Media Center itself. For more information, see the Media Center online help.

You want to play recorded programs on other computers

- A DVR-MS file recorded to DVD can be replayed on another computer running Media Center or on any computer that has a DVD player and DVD decoder software (such as WinDVD). The non-Media Center computer must also have at least Windows XP with Service Pack (SP) 1 or 2, Windows Media Player 9 or later, and the Windows patch Q810243 Update.

You get a "Download Error" message when Media Center tries to update the Program Guide

- You must be connected to the Internet to update the Program Guide. Make sure that your computer is connected to the Internet. For information about manually updating the Program Guide, see the Media Center online help.

Checking for device problems

Faulty devices or corrupt device drivers can cause a variety of problems on your computer. Checking the condition of system devices and the status of their drivers can help pinpoint the problem.

▶ **To check for device problems:**

1. Click ⊞ (**Start**), type **device manager**, then press **ENTER**. *Device Manager* opens.
2. Examine the list of computer device types. A device type with problems have a yellow triangle or red octogon indicating a problem or a failed condition.
3. Click the **+** symbol to the left of the device type to expand the list of devices. The faulty device is marked with a yellow (problems) or red (failed) icon.
4. To update the device driver (a common solution to many device problems), right-click the device, click **Update Driver Software**, then click **Search automatically for updated driver software** and follow the on-screen prompts.

   - OR -

   To check for specific problems, right-click the device, then click **Properties** and examine the information within each of the tabs. Write down this information for future reference and troubleshooting. It may also be useful information to have available if you call Customer Care.

   ■

Recovering your system

You can solve most computer problems by following the information in "Try these steps first" on page 82 or in the technical support pages at www.gateway.com. Problem solving may also involve reinstalling some or all of the computer's software (also called *recovering* or *restoring* your system). Gateway provides everything you need to recover your system under most conditions.

Caution

To prepare your computer for additional system recovery options, you should create a set of recovery discs as soon as possible. Recovery discs take some time to create, but for long-term reliability, the effort is worth it. For instructions, see "Creating recovery discs" on page 102.

To recover your system:

1. Create recovery discs as soon as you can.

   You can use these discs later for recovering your system from significant hardware and software problems. For instructions, see "Creating recovery discs" on page 102.

2. Perform minor fixes.

   If only one or two items of software or hardware have stopped working correctly, the problem may be solved by reinstalling the software or the device drivers. To recover software and drivers that were pre-installed at the factory, see "Recovering pre-installed software and drivers" on page 104. For instructions on reinstalling software and drivers that were not pre-installed, see that product's documentation or technical support Web site.

3. Revert to a previous system condition.

   If reinstalling software or drivers does not help, then the problem may be solved by returning your system to a previous state when everything was working correctly. For instructions, see "Returning to a previous system condition" on page 105.

4. Reset your system to its factory condition.

   If nothing else has solved the problem and you want to reset your system to factory condition, see "Returning your system to its factory condition" on page 106.

Creating recovery discs

If your computer experiences problems that are not recoverable by other methods, you may need to reinstall the Windows operating system and factory-loaded software and drivers. To reinstall using discs, you must create the set of recovery discs beforehand.

▶ **To create recovery discs:**

1. Click (**Start**), **All Programs**, **Gateway**, then click **Gateway Recovery Management**. *Gateway Recovery Management* opens.

2. To create recovery discs for the hard drive's entire original contents, including Windows Vista and all factory-loaded software and drivers, click **Create factory default disc**.

   - OR -

   To create recovery discs for only the factory-loaded software and drivers, click **Create driver and application backup disc**.

Important
We recommend that you create each type of recovery disc as soon as possible.

The *Create Backup Disc* dialog box opens.

This dialog box tells you the number of blank, recordable discs you will need to complete the recovery discs. Make sure that you have the required number of identical, blank discs ready before continuing.

3 Insert a blank disc into the drive indicated in the **Burn to** list, then click **Next**. The first disc begins recording, and you can watch its progress on the screen.

When the disc finishes recording, the drive ejects it.

4 Remove the disc from the drive and mark it with a permanent marker.

Important
Write a unique, descriptive label on each disc, such as "Windows Recovery Disc 1 of 2." or "Apps/Drivers Recovery disc."

5 If multiple discs are required, insert a new disc when prompted, then click **OK**. Continue recording discs until the process is complete.

■

Recovering pre-installed software and drivers

As a troubleshooting step, you may need to reinstall the software and device drivers that came pre-installed on your computer from the factory. You can recover using either your hard drive or the backup discs you have created.

- **New software**—If you need to recover software that did *not* come pre-installed on your computer, you need to follow that software's installation instructions.
- **New device drivers**—If you need to recover device drivers that did *not* come pre-installed on your computer, follow the instructions for updating drivers in "Checking for device problems" on page 100.

▶ **To recover your pre-installed software and drivers:**

1. Click (**Start**), **All Programs**, **Gateway**, then click **Gateway Recovery Management**. *Gateway Recovery Management* opens.

   - OR -

   If you are recovering from your driver and application recovery disc, insert it into the disc drive, then go to Step 3 after the *Gateway Application Recovery* main menu opens.

2. Click the **Restore** tab, then click **Reinstall applications/drivers**. The *Gateway Application Recovery* main menu opens.

3 Click **Contents**. A list of software and device drivers opens.

4 Click the install icon for the item you want to install, then follow the on-screen prompts to complete the installation. Repeat this step for each item you want to reinstall.

■

Returning to a previous system condition

Microsoft System Restore periodically takes "snapshots" of your system settings and saves them as *restore points*. In most cases of hard-to-resolve software problems, you can return to one of these restore points to get your system running again.

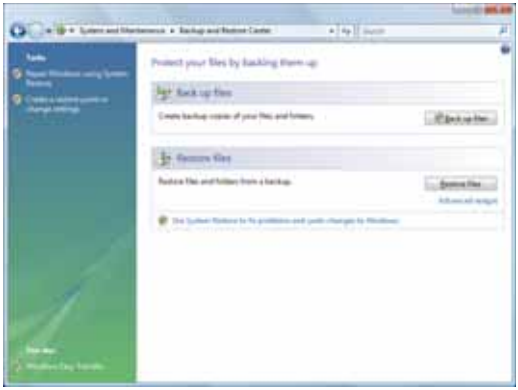
Windows automatically creates an additional restore point each day, and also each time you install software or device drivers.

Help

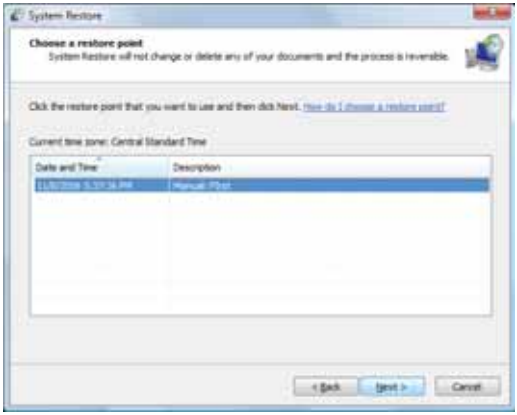
For more information about using Microsoft System Restore, click **Start**, then click **Help and Support**. Type **windows system restore** in the **Search Help** box, then press **ENTER**.

▶ **To return to a restore point:**

1 Click (**Start**), **Control Panel**, **System and Maintenance**, then click **Backup and Restore Center**. The *Backup and Restore Center* opens.



2 On the left side of the window, click **Repair Windows using System Restore**, then click **Next**. The *Choose a restore point* dialog box opens.



3 Click the restore point you want, click **Next**, then click **Finish**. A confirmation message box appears.

4 Click **Yes**. Your system is restored using the restore point you specified. This process may take several minutes, and may restart your computer.

■

Returning your system to its factory condition

In case your computer experiences problems that are not recoverable by other methods, you may need to reinstall everything to return your system to its factory condition. You can reinstall using either your hard drive or the recovery discs you have created.

Caution

This complete recovery deletes everything on your hard drive, then reinstalls Windows and all software and drivers that were pre-installed on your system. If you can access important files on your hard drive, back them up now.

- If you can still run Windows Vista, see "Recovering from within Windows Vista" on page 107.
- If you cannot run Windows Vista and your original hard drive is still working, see "Recovering from the hard drive during startup" on page 108.
- If you cannot run Windows Vista and your original hard drive has been completely re-formatted or you have installed a replacement hard drive, see "Recovering from your recovery discs" on page 108.

Recovering from within Windows Vista

▶ **To reinstall Windows Vista and all pre-installed software and drivers:**

1. Click (**Start**), **All Programs**, **Gateway**, then click **Gateway Recovery Management**. *Gateway Recovery Management* opens.
2. Click the **Restore** tab, then click **Restore system to factory default**. The *Confirm Restoration* dialog box opens.

3. Click **Yes**, then click **Start**. A dialog box displays information about the hard drive that the operating system will be recovered to.

Caution
Continuing the process will erase all files on your hard drive.

4. Click **OK**. The recovery process begins by restarting your computer, then continues by copying files to your hard drive. This process may take a while, but a *Gateway Recovery Management* screen shows you its progress.

   When the recovery has finished, a dialog box prompts you to restart your computer.
5. Click **OK**. Your computer restarts.
6. Follow the on-screen prompts for first-time system setup.

■

Recovering from the hard drive during startup

▶ **To reinstall Windows Vista and all pre-installed software and drivers:**

1. Turn on your computer, then press **ALT+F10** during startup. *Gateway Recovery Management* opens.
2. Click **Restore system from factory default**.

   Caution
   Continuing the process will erase all files on your hard drive.

3. Click **Next** to continue. Your hard drive's original, factory-loaded contents are recovered. This process will take several minutes.

■

Recovering from your recovery discs

▶ **To reinstall Windows Vista and all pre-installed software and drivers:**

1. Turn on your computer, insert the first system recovery disc into your optical disc drive, then restart your computer.

   Caution
   Continuing the process will erase all files on your hard drive.

2. During startup, press **F10** to open the boot menu. The boot menu is where you can select which device to start from, such as the hard drive or an optical disc.
3. Use your arrow keys to select **CDROM/DVD**, then press **ENTER**. Windows installs from the recovery disc you inserted.
4. Insert the second recovery disc when prompted, then follow the on-screen prompts to complete the recovery.

■

Technical support

Before calling Gateway Customer Care

If you have a technical problem with your computer, follow these recommendations before contacting Gateway Customer Care:

- Make sure that your computer is connected correctly to an AC power outlet that is supplying power. If you use a surge protector or power strip, make sure that it is turned on.
- If a peripheral device, such as a keyboard or mouse, does not appear to work, make sure that all cables are plugged in securely.
- If you have recently installed hardware or software, make sure that you have installed it according to the instructions provided with it. If you did not purchase the hardware or software from Gateway, see the manufacturer's documentation and technical support resources.
- If you have "how to" questions about using a program, see:
  - Its online Help
  - Its printed documentation
  - Its publisher's Web site
- See the troubleshooting section of this chapter.
- Have your customer ID, serial number, and order number available, along with a detailed description of your problem, including the exact text of any error messages, and the steps you have taken.
- Make sure that your computer is nearby at the time of your call. The technician may have you follow troubleshooting steps.

Calling Customer Care

For the contact number, see your setup poster. The label on top of your computer contains information that identifies your computer model and serial number. Gateway Customer Care will need this information if you call for assistance.

APPENDIX A
Legal Notices

- Important safety information
- Regulatory compliance statements
- Environmental information
- Notices

Important safety information

Warning
Always follow these instructions to help guard against personal injury and damage to your Gateway system.

Your Gateway system is designed and tested to meet the latest standards for safety of information technology equipment. However, to ensure safe use of this product, it is important that the safety instructions marked on the product and in the documentation are followed.

Setting up your system

- Read and follow all instructions marked on the product and in the documentation before you operate your system. Retain all safety and operating instructions for future use.
- Do not use this product near water or a heat source such as a radiator.
- Set up the system on a stable work surface.
- The product should be operated only from the type of power source indicated on the rating label.
- If your computer has a voltage selector switch, make sure that the switch is in the proper position for your area. The voltage selector switch is set at the factory to the correct voltage.
- Openings in the computer case are provided for ventilation. Do not block or cover these openings. Make sure you provide adequate space, at least 6 inches (15 cm), around the system for ventilation when you set up your work area. Never insert objects of any kind into the computer ventilation openings.
- Some products are equipped with a three-wire power cord to make sure that the product is properly grounded when in use. The plug on this cord will fit only into a grounding-type outlet. This is a safety feature. If you are unable to insert the plug into an outlet, contact an electrician to install the appropriate outlet.
- If you use an extension cord with this system, make sure that the total ampere rating on the products plugged into the extension cord does not exceed the extension cord ampere rating.
- If your system is fitted with a TV Tuner, cable, or satellite receiver card, make sure that the antenna or cable system is electrically grounded to provide some protection against voltage surges and buildup of static charges.

Care during use

Warning
Do not use Gateway products in areas classified as hazardous locations. Such areas include patient care areas of medical and dental facilities, oxygen-laden environments, or industrial facilities.

Warning
To reduce the risk of fire, use only No. 26 AWG or larger (for example, No. 24 AWG) UL-listed or CSA-certified telecommunication line cord for your dialup modem connection.

- Do not walk on the power cord or allow anything to rest on it.
- Do not spill anything on the system. The best way to avoid spills is to avoid eating and drinking near your system.
- Some products have a replaceable CMOS battery on the system board. There is a danger of explosion if the CMOS battery is replaced incorrectly. Replace the battery with the same or equivalent type recommended by the manufacturer. Dispose of batteries according to the manufacturer's instructions.
- When the computer is turned off, a small amount of electrical current still flows through the computer. To avoid electrical shock, always unplug all power cables and modem cables from the wall outlets before cleaning the system.
- Unplug the system from the wall outlet and refer servicing to qualified personnel if:
- The power cord or plug is damaged.
- Liquid has been spilled into the system.
- The system does not operate properly when the operating instructions are followed.
- The system was dropped or the cabinet is damaged.
- The system performance changes.

Replacement parts and accessories

Use only replacement parts and accessories recommended by Gateway.

Regulatory compliance statements

United States of America

Federal Communications Commission (FCC) Unintentional emitter per FCC Part 15

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television reception. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio and television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment to an outlet on a different circuit from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help.

Compliance accessories: The accessories associated with this equipment are: shielded video cable when an external monitor is connected. These accessories are required to be used in order to ensure compliance with FCC rules.

FCC declaration of conformity

Responsible party:
Gateway, Inc.
7565 Irvine Center Drive
Irvine, CA 92618
Phone: 800-846-2000

Caution
Changes or modifications not expressly approved by Gateway could void the FCC compliance and negate your authority to operate the product.

This device complies with Part 15 of the FCC Rules. Operation of this device is subject to the following two conditions: (1)this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

California Proposition 65 Warning

Warning
This product contains chemicals, including lead, known to the State of California to cause cancer, birth defects or reproductive harm.

Telecommunications per Part 68 of the Code of Federal Regulations (CFR 47) (applicable to products fitted with USA modems)

Your modem complies with Part 68 of the Code of Federal Regulations (CFR 47) rules. On the computer or modem card is a label that contains the FCC registration number and Ringer Equivalence Number (REN) for this device. If requested, this information must be provided to the telephone company.

A telephone line cord with a modular plug is required for use with this device. The modem is designed to be connected to the telephone network or premises wiring using a compatible modular jack which is Part 68-compliant. See installation instructions for details.

The Ringer Equivalence Number (REN) is used to determine the number of devices which may be connected to the telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company.

If this device causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. The telephone company may request that you disconnect the equipment until the problem is resolved.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of this equipment. If this happens, the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

This equipment cannot be used on telephone company-provided coin service. Connection to party line service is subject to state tariffs. Contact the state public utility commission or public service commission for information.

When programming or making test calls to emergency numbers:

- Remain on the line and briefly explain to the dispatcher the reason for the call.
- Perform such activities in the off-peak hours such as early morning or late evenings.

The United States Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device to send any message via a telephone fax machine unless such message clearly contains, in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent, an identification of the business, other entity, or other individual sending the message, and the telephone number of the sending machine or such business, other entity, or individual. Refer to your fax communication software documentation for details on how to comply with the fax-branding requirement.

Canada

Industry Canada (IC) Unintentional emitter per ICES-003

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de Classe B prescrites dans le règlement sur le brouillage radioélectrique édicté par Industrie Canada.

Telecommunications per Industry Canada CS-03 (for products fitted with an IC-compliant modem)

The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operation, and safety requirements. The Department does not guarantee the equipment will operate to the users' satisfaction.

Before installing this equipment, users should make sure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the inside wiring associated with a single-line individual service may be extended by means of a certified connector assembly. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Warning

To avoid electrical shock or equipment malfunction do not attempt to make electrical ground connections by yourself. Contact the appropriate inspection authority or an electrician, as appropriate.

Users should make sure, for their own protection, that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5.

Laser safety statement

Warning

Use of controls or adjustments or performance of procedures other than those specified in this manual may result in hazardous radiation exposure. To prevent exposure to laser beams, do not try to open the enclosure of a CD or DVD drive.

All Gateway systems equipped with CD and DVD drives comply with the appropriate safety standards, including IEC 825. The laser devices in these components are classified as "Class 1 Laser Products" under a US Department of Health and Human Services (DHHS) Radiation Performance Standard. Should the unit ever need servicing, contact an authorized service location.

Television antenna connectors protection (for systems fitted with TV/cable TV tuner cards)

External television antenna grounding

Important
The instructions are for the person who installs cable to the system. Gateway assumes you are qualified in the servicing of computer equipment and trained in recognizing hazards in products with electric shock.

If an outside antenna or cable system is to be connected to your Gateway PC, make sure that the antenna or cable system is electrically grounded to provide some protection against voltage surges and static charges.

Article 810 of the National Electrical Code, ANSI/NFPSA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

Cable distribution system should be grounded (earthed) in accordance with ANSI/NFPA 70, the National Electrical Code (NEC), in particular Section 820.93, Grounding of Outer Conductive Shield of a Coaxial Cable.

Lightning protection

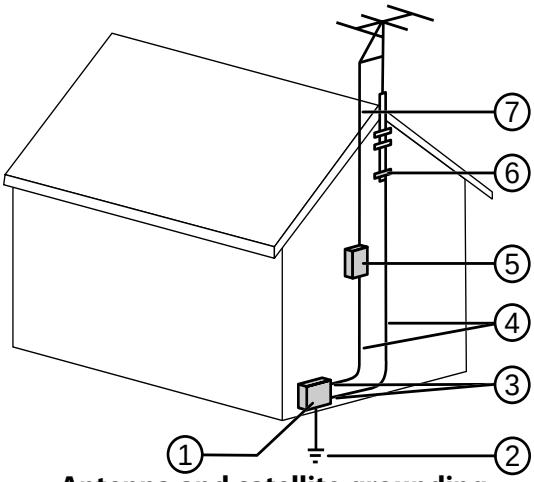
For added protection of any Gateway product during a lightning storm or when it is left unattended or unused for long periods of time, unplug the product from the wall outlet and disconnect the antenna or cable system.

Power lines

Warning

When installing or realigning an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits. Contact with them could be fatal.

Do not locate the antenna near overhead light or power circuits, or where it could fall into such power lines or circuits.



Antenna and satellite grounding

Reference	Grounding component
1	Electric service equipment
2	Power service grounding electrode system (NEC Art 250, Part H)
3	Ground clamps
4	Grounding conductors (NEC Section 810-21)
5	Antenna discharge unit (NEC Section 810-20)
6	Ground clamp
7	Antenna lead-in wire

Environmental information

The product you have purchased contains extracted natural resources that have been used in the manufacturing process. This product may contain substances known to be hazardous to the environment or to human health.

To prevent releases of harmful substances into the environment and to maximize the use of our natural resources, Gateway provides the following information on how you can responsibly recycle or reuse most of the materials in your "end of life" product.

Waste Electrical and Electronic Equipment (commonly known as WEEE) should never be disposed of in the municipal waste stream (residential garbage collection). The "Crossed-Out Waste Bin" label affixed to this product is your reminder to dispose of your "end of life" product properly.

Substances such as glass, plastics, and certain chemical compounds are highly recoverable, recyclable, and reusable. You can do your part for the environment by following these simple steps:

- When your electrical or electronic equipment is no longer useful to you, "take it back" to your local or regional waste collection administration for recycling.
- In some cases, your "end of life" product may be "traded in" for credit towards the purchase of new Gateway equipment. Call Gateway to see if this program is available in your area.
- If you need further assistance in recycling, reusing, or trading in your "end of life" product, you may contact us at the Customer Care number listed in your product's user guide and we will be glad to help you with your effort.

Finally, we suggest that you practice other environmentally friendly actions by understanding and using the energy-saving features of this product (where applicable), recycling the inner and outer packaging (including shipping containers) this product was delivered in, and by disposing of or recycling used batteries properly.

With your help, we can reduce the amount of natural resources needed to produce electrical and electronic equipment, minimize the use of landfills for the disposal of "end of life" products, and generally improve our quality of life by ensuring that potentially hazardous substances are not released into the environment and are disposed of properly.

Notices

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Irvine, CA 92618 USA

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Macrovision statement

If your computer has a DVD-compatible drive and an analog TV Out port, the following paragraph applies:

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

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