

REFERENCEGUIDE

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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:

- Help and technical support
 - 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

The label on the top or side 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.



Web site: gateway.com	Gateway
Online support: support.gateway.com	
Tech Support Phone: 877-485-1464 (toll free)	
Tech Support Hours: 24 hours a day/7 days a week	
Model:	
S/No:	

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

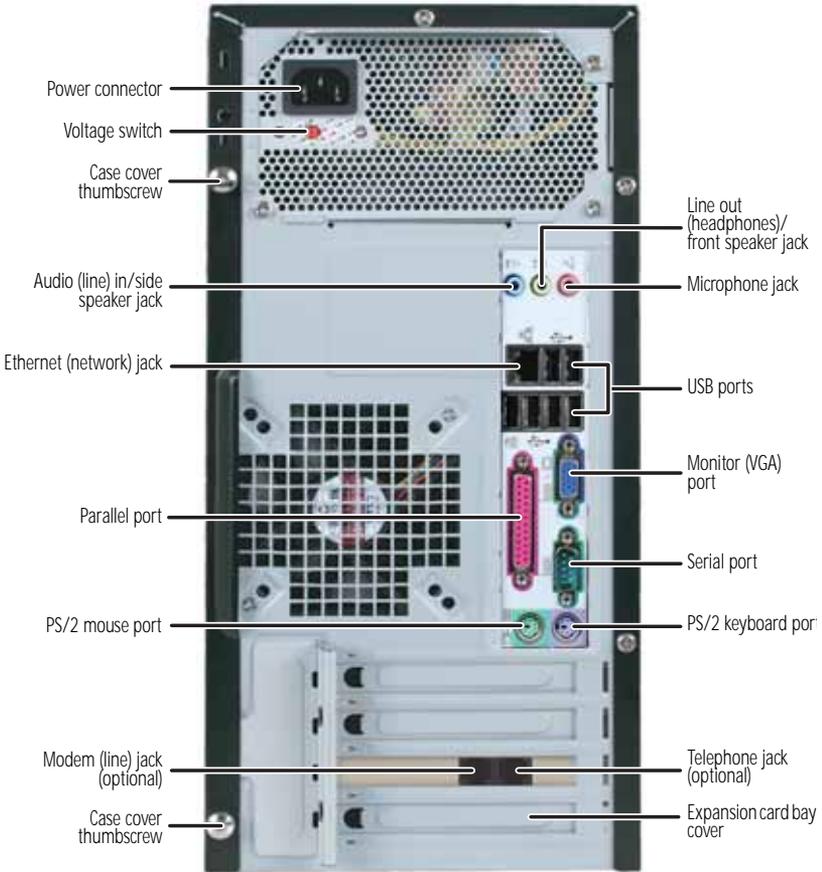
- [Front](#)
- [Back](#)

Front



Component	Icon	Description
DVD/CD drive		Use this drive to listen to audio CDs, install games and programs, watch DVDs, and store large files onto recordable discs (depending on drive type). This drive may be a CD, recordable CD, DVD, recordable DVD, Blu-ray, or HD DVD drive. For more information about your drive, see "Identifying optical drive types" on page 27.
Memory card reader or diskette drive (optional)		Insert a memory card from a digital camera, MP3 player, PDA, cellular telephone, or other device into the memory card reader. Insert a 3.5" diskette (<i>floppy</i>) to read from and write to.
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 33.
Power button/power indicator		Press this button to turn the power on or off. You can also configure the power button to operate in Sleep mode or Hibernate mode. The power indicator lights when the computer is turned on.
Hard drive activity indicator		When lit, indicates hard drive activity.
Microphone jack		Plug a microphone into this jack. This jack is color-coded pink.
Headphone jack		Plug powered, analog front speakers, an external amplifier, or headphones into this jack. This jack is color-coded green.

Back



Component	Icon	Description
Power connector		Plug the power cord into this connector.
Voltage switch		Make sure this switch is positioned correctly for the power in your area. For more information, see "Checking the voltage selection" on page 15.
Case cover thumbscrew		Remove these thumbscrews to open the side panel of the case.
Audio (line) in/side speaker jack (blue)		Plug an external audio input source (such as a stereo) into this jack so you can record sound on your computer. For 5.1 surround sound, plug the surround sound side speakers to this jack.
Ethernet (network) jack		Plug an Ethernet network cable or a device (such as a cable or DSL modem) 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 16.
Parallel port		Plug a parallel device (such as a printer) into this port.
PS/2 mouse port (green)		Plug a PS/2 mouse into this port.
Modem (line) jack (optional)		Plug a modem cable into this jack. For more information, see "Connecting a dial-up modem" on page 16.
Line out (headphones)/front speaker jack (green)		Plug headphones or amplified speakers into this jack. For 5.1 surround sound, plug the surround sound front speaker to this jack.
Microphone jack (pink)		Plug a microphone into this jack.
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 33.
Monitor (VGA) port		Plug a VGA monitor cable into this port.
Serial port		Plug a serial device into this port.

Component	Icon	Description
PS/2 keyboard port (purple)		Plug a PS/2 keyboard into this port.
Telephone jack (optional)		Plug your telephone into this jack.
Expansion card bay cover		Install additional PCI expansion cards in one of these available slots.

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
- Using the keyboard
- Using the mouse
- Using optical drives
- Using the memory card reader
- Using the diskette drive
- Adjusting the volume
- 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 screen so it 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 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 mouse. 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.

Positioning the computer case

Position the computer case in a location that is easy for you to reach. Your case can be positioned either horizontally or vertically. With the case in a vertical orientation, you can rotate the support base on bottom for more stability.

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 or DSL 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.

Checking the voltage selection



Caution

If you set the voltage selection switch incorrectly, your system will be damaged. Make sure this switch is set correctly for your location before turning on your computer. In the United States, the utility power is supplied at a nominal 115 volts at 60 Hz. The power supply should always be set to this when your computer is operating in the United States. In other areas of the world, such as Europe, the utility power is supplied at 230 volts at 50 Hz. If your computer is operating in an environment such as this, the voltage switch should be moved to 230.

The *power supply*, a component built into your computer, provides power to the system board, add-in cards, and peripheral devices. The power supply's voltage selection for your location is typically set at the factory, but you can change it to match the electrical service available in your usage area (such as while in another country). Use the power selection switch on the back of your computer to set the voltage to 115V or 230V. To verify that your system has the correct setting for your area, check the voltage selection switch.

► To set the voltage selection switch:

- 1 Disconnect your computer's power cable.
- 2 Use a tool such as an opened paper clip to slide the voltage selection switch to the correct voltage position. The switch is located on the back of your computer, near the power cable connector.



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 .
- 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 fax documents.

► **To connect the modem:**

- 1 Insert one end of the modem cable into the modem jack  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 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 variable-speed fan, which 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. If you need to attach a peripheral device to the parallel or serial ports, turn off your computer first. 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 Windows" 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 in Sleep (power-saving) mode:

- 1 Click **Start, Shut Down**, then click **Standby**.
- 2 To “wake” your computer, press a key on the keyboard. If the computer remains in Sleep mode, press the power button.
 -

► To turn off your computer:

- Click **Start, Shut Down**, then click **Shut Down** again. Windows shuts down and turns off your computer.



Important

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



Restarting (rebooting) your computer

► **To restart your computer:**

- Click **Start, Shut Down**, then click **Restart**. Your computer turns off, then turns on again.
- OR -

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.

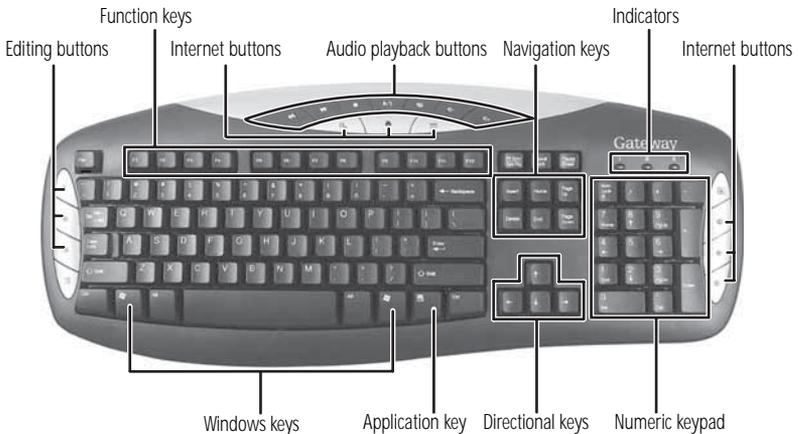
As a part of the regular startup process, a program to check the disk status runs automatically. When the checks are finished, Windows starts.



Using the keyboard

Premium multimedia keyboard features

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
Editing buttons		Press these buttons to copy, cut, and paste.
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.
Internet buttons		Press these buttons to launch your Internet home page, search, or e-mail programs.
Audio playback buttons		Press these buttons to play your audio files and to adjust the volume.
Navigation keys		Press these keys to move the cursor to the beginning of a line, to the end of a line, up the page, down the page, to the beginning of a document, or to the end of a document.
Indicators		Show if your NUM LOCK, CAPS LOCK, or SCROLL LOCK keys are activated. Press the corresponding key to activate the function.
Windows keys		Press one of these keys to open the Windows Start menu. These keys can also be used in combination with other keys to open utilities like F (Find/Search), R (Run), and E (Computer).
Application key		Press this key to access shortcut menus and help assistants in Windows.
Directional keys		Press these keys to move the cursor up, down, right, or left.
Numeric keypad		Press these keys to type numbers when the numeric keypad (NUM LOCK) is turned on.

Elite multimedia keyboard features

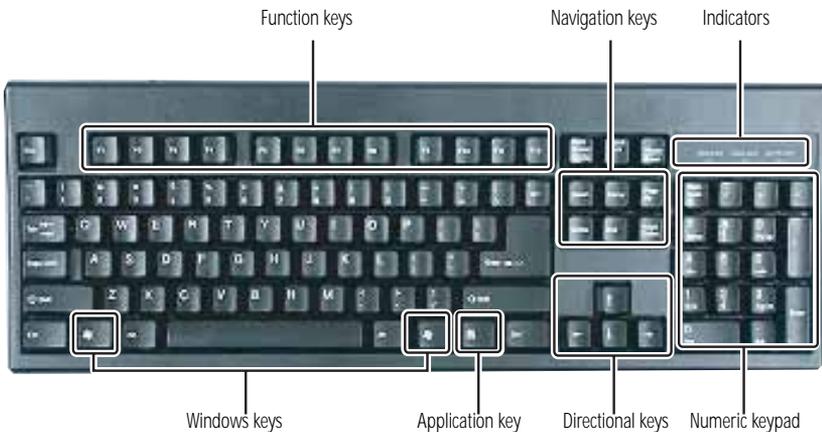
The keyboard has several different types of keys and buttons. Your keyboard also has status indicators that show which keyboard feature is active.



Feature	Icon	Description
Sleep button		Press this button to activate your computer's Sleep (power-saving) mode.
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.
Application buttons		Press these buttons to launch your Internet home page, search for files, or launch the calculator program.
Audio playback buttons		Press these buttons to play your audio files and to adjust the volume.
Indicators		Show if your NUM LOCK, CAPS LOCK, or SCROLL LOCK keys are activated. Press the corresponding key to activate the function.
Windows keys		Press one of these keys to open the Windows Start menu. These keys can also be used in combination with other keys to open utilities like F (Find/Search), R (Run), and E (Computer).

Feature	Icon	Description
Application key		Press this key to access shortcut menus and help assistants in Windows.
Navigation keys		Press these keys to move the cursor to the beginning of a line, to the end of a line, up the page, down the page, to the beginning of a document, or to the end of a document. Press the arrow keys to move the cursor.
Numeric keypad		Press these keys to type numbers when the numeric keypad (NUM LOCK) is turned on.

Standard keyboard features



Feature	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.
Navigation keys	Press these keys to move the cursor to the beginning of a line, to the end of a line, up the page, down the page, to the beginning of a document, or to the end of a document.
Indicators	Show if your NUM LOCK, CAPS LOCK, or SCROLL LOCK keys are activated. Press the corresponding key to activate the function.

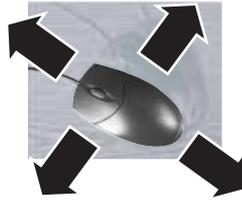
Feature	Description
Windows keys	Press to open the Windows Start menu. These keys can also be used in combination with other keys to open utilities like F (Find/Search), R (Run utility), and E (Computer).
Application key	Press this key to access shortcut menus and help assistants in Windows.
Directional keys	Press these keys to move the cursor up, down, right, or left.
Numeric keypad	Press these keys to type numbers when the numeric keypad (NUM Lock) is turned on.

Using the mouse



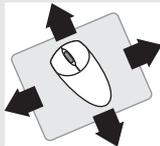
The *mouse* is a device that controls the pointer movement on the computer screen. This illustration shows the standard mouse.

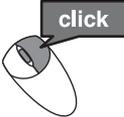
As you move the mouse, the *pointer* (arrow) on the screen moves in the same direction.



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 <i>clicking</i> .
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 <i>double-clicking</i> .

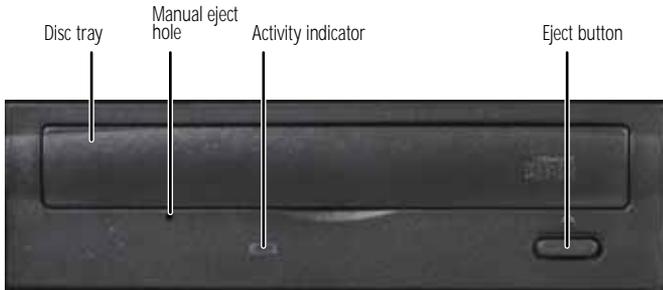
To...	Do this...
Access a shortcut menu or find more information about an object on the screen.	 <p>Position the pointer over the object. Quickly press and release the right mouse button once. This is called <i>right-clicking</i>.</p>
Move an object on the screen.	 <p>Position the pointer over the object. 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 <i>clicking and dragging</i>.</p>

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 Windows” chapter in your online *User Guide*. For instructions on how to clean the mouse, see [“Cleaning the mouse” on page 65](#).

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. Look on the front of the drive's disc tray for one or more of the following logos:

If your optical drive has this logo...	Your drive type is...	Use your drive for...
	CD	Installing programs, playing audio CDs, and accessing data.
	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 RW/R	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.
	HD-DVD	Installing programs, playing audio CDs, playing DVDs and HD-DVDs, accessing data, and recording video and data to CDs, DVD-RAM, DVD-R, DVD-RW, and HD-DVD 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 CD (*compact disc*) 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 DVD (*Digital Versatile Disc*) 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

A 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*.

Playing an HD-DVD

A HD-DVD is a high-capacity optical disc that can store much more data than a DVD. A dual-layer HD-DVD can hold 30 GB of files, about 14 hours of standard-definition video, or about 5.5 hours of high-definition video. HD-DVDs can be played on an HD-DVD-compatible player or an HD-DVD drive-equipped computer. For more information about playing HD-DVDs, 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

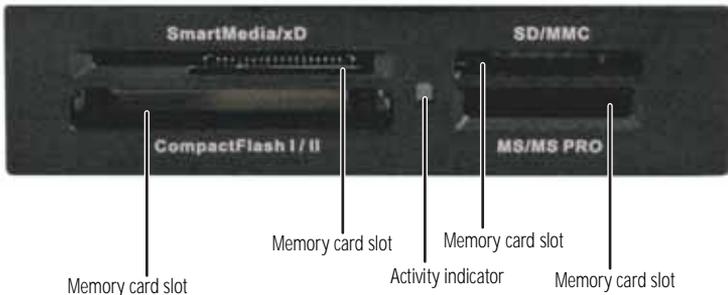
You can create audio and music files, either from scratch or from music CDs. You can also create video files from home video. For more information, see your online *User Guide*.

Copying optical discs

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

Using the memory card reader

You can use the optional memory card reader to transfer pictures from a digital camera to your computer. You can also use the memory card reader to transfer data between your computer and a device that uses memory cards, such as a PDA, MP3 player, or cellular telephone. (Your memory card reader may be different than the one shown.)



Memory card types

The memory card reader 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 reader. Each slot is assigned a different drive letter (for example, **E:** and **F:**), 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 **My Computer**. Double-click the drive (for example, the **E:** drive), then double-click the file name.

► To remove a memory card:

- Wait for the memory card reader activity indicator to stop blinking, then pull the memory card out of the slot.



Caution

Do not remove the memory card or turn off the computer while the memory card reader access indicator is blinking. You could lose data. Also, remove the memory card from the reader before you turn off the computer.

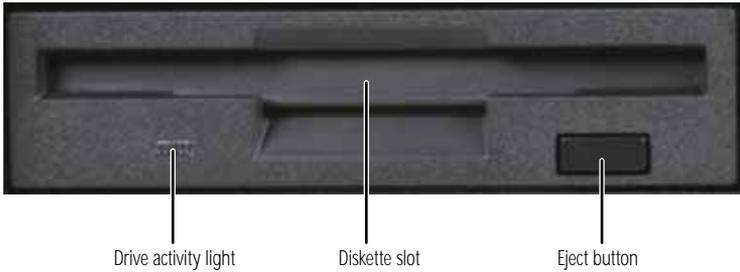


Important

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

Using the diskette drive

The optional diskette drive uses 3.5-inch diskettes (sometimes called *floppy disks*). Diskettes are useful for storing files or transferring files to another computer.



► **To load a diskette:**

- 1 Insert the diskette into the diskette drive with the label facing up.
- 2 To access a file on the diskette, click **Start**, then click **My Computer**. Double-click the diskette drive (for example, the **A:** drive), then double-click the file name.
- 3 To remove the diskette, make sure that the drive activity light is off, then press the eject button.



Adjusting the volume

You can adjust volume using your speakers' controls, your keyboard 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 19](#).



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

- 1 Double-click the speaker icon 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 Click × in the top-right corner of the window to close it.

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 one or more of the following ports: IEEE 1394 (also known as Firewire[®]), Universal Serial Bus (USB), serial, and parallel. 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.

Parallel and serial port devices are not plug-and-play. See the device documentation for detailed information and installation instructions.

CHAPTER 4

Upgrading Your Computer

- Preventing static electricity discharge
- Opening and closing the case
- Removing and installing the front bezel
- Installing memory
- Replacing an optical or diskette drive or a card reader
- Replacing the hard drive
- Adding or replacing an expansion card
- Replacing the front fan
- Replacing the rear fan
- Replacing the front I/O board
- Replacing the processor
- Replacing the system battery
- Replacing the power supply
- Replacing the system board

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 and closing the case

Your computer case provides easy access to internal components.



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.



Important

Some details of your computer, such as available ports, may differ from those shown.

► To remove the side panel:

- 1 Follow the instructions in [“Preventing static electricity discharge” on page 36](#).
- 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 Lay the computer down flat, then remove the case cover thumbscrews from the side panel cover. For the location of the thumbscrews, see [“Back” on page 8](#).



Tip

To avoid scratching the case, place it on a towel or other non-abrasive surface.

- 5 Slide the side panel toward the back of the computer, then lift it up and away from the computer.
■
- ### ► To replace the side panel:
- 1 Make sure that all of the internal cables are arranged inside the case so they will not be pinched when you close the case.
 - 2 Insert the panel tabs into the front of the case, then swing the side panel toward the back of the computer to secure it into place.
 - 3 Replace the case cover thumbscrews, then reconnect the cables and power cord.
■

Removing and installing the front bezel

► **To remove the front bezel:**

- 1 After removing the side panel, press the three black plastic tabs (positions indicated by the arrows) to release the right side of the bezel. (Case shown upright for clarity.)



- 2 Swing the right side of the bezel out until the left side of the bezel comes away from the left side of the computer, then remove the bezel.
■

► **To replace the front bezel:**

- 1 Insert the tabs on the left side of the bezel into the slots in the left side of the computer.



- 2 Swing the right side of the bezel in to insert the tabs on the right side of the bezel into the slots on the right side of the computer.



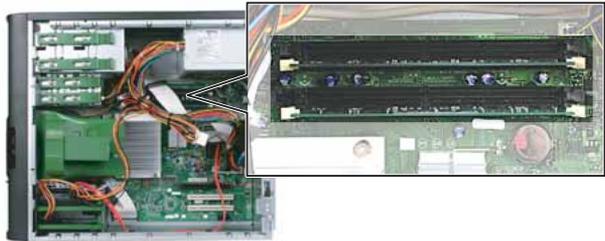
- 3 Press the right side of the bezel firmly until it snaps into place.
 -

Installing memory

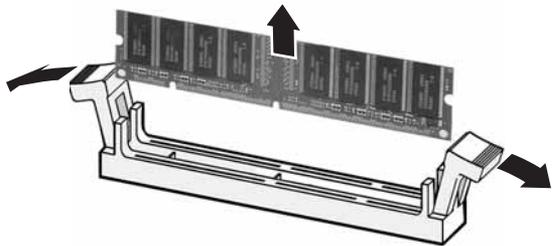
When you upgrade the computer memory, make sure that you install the correct type of memory module for your computer. Your computer uses DIMM memory.

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

- 1 Remove the side panel by following the instructions in [“Opening and closing the case” on page 37](#).
- 2 Find the memory module banks on your system board.



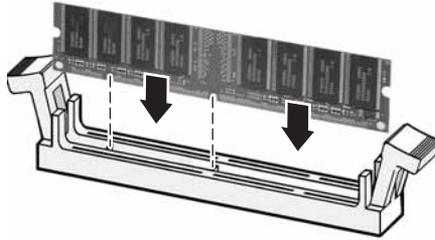
- 3 If you are removing a DIMM from the memory module bank, gently pull the plastic tabs away from the sides of the memory module and remove it.



- 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.

- 4 Align the notches on the new DIMM with the notches on the memory module bank and press the module firmly into the bank. The tabs on the sides of the memory module should secure the memory module automatically. When the module is secure, you hear a click.



- 5 Replace the side panel by following the instructions in ["Opening and closing the case" on page 37](#).
- 6 Return your computer to its upright position.
- 7 Reconnect the cables and the power cord.
- 8 Turn on your computer. Windows starts and the Windows desktop appears.
- 9 Click **Start**, right-click **My Computer**, then click **Properties**. The amount of memory in your computer is displayed.



Replacing an optical or diskette drive or a card reader

Throughout this procedure, “drive” is used to indicate either a drive or a memory card reader.

► **To replace a drive or card reader:**

- 1 Remove the side panel by following the instructions in [“Opening and closing the case” on page 37](#).
- 2 Remove the front bezel by following the instructions in [“Removing and installing the front bezel” on page 38](#), then place the computer in an upright position.



Important

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

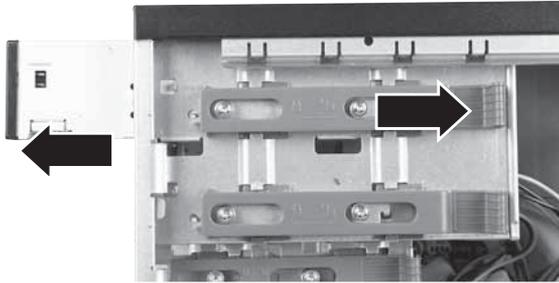
- 3 If you are replacing an existing drive, disconnect the cables from the drive, noting their locations and orientation. You will reconnect the cables after you install the new component. (CD/DVD drive shown.)



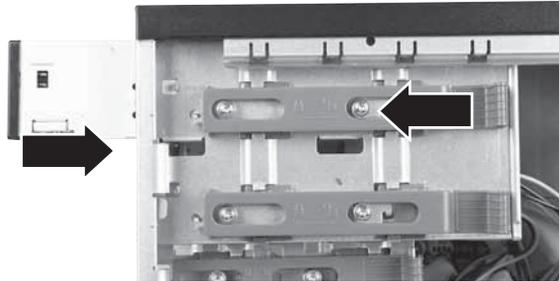
- OR -

If you are installing a new drive, go to Step 5.

- 4 Slide the drive release latch toward the back of the computer to the Unlock position, then slide the drive forward and out of the drive bay.



- 5 Slide the new drive into the drive bay, then slide the drive release latch toward the front of the computer to the Lock position.

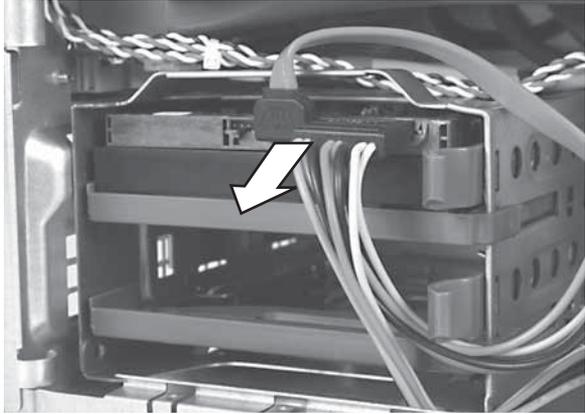


- 6 Reconnect the drive cables using the notes you took previously.
- 7 Replace the front bezel, then replace the side panel. ■

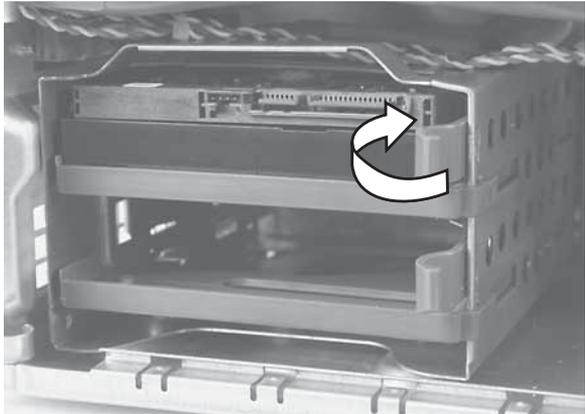
Replacing the hard drive

- ▶ To replace the hard drive:
 - 1 Remove the side panel by following the instructions in ["Opening and closing the case" on page 37](#).
 - 2 If you are adding a new drive, go to Step 6. If you are replacing an existing drive, go to the next step.

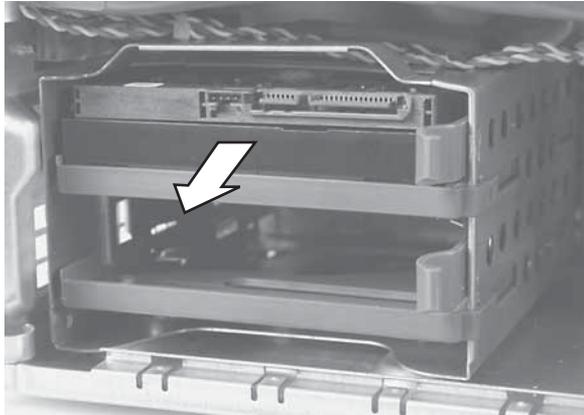
- 3 Disconnect the drive cables, noting their locations and orientation. (You will reconnect the cables after you install the new drive.)



- 4 Press the the drive release latch in toward the drive, then slide the drive out of the drive bay.



5 Remove the hard drive.



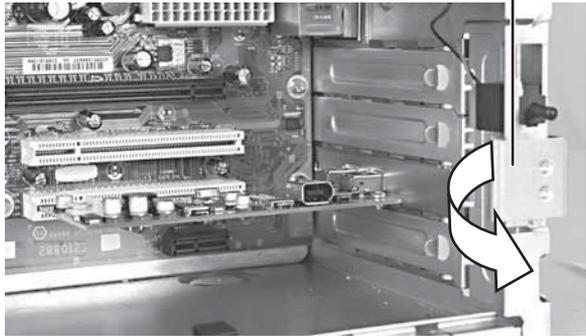
- 6 Slide the new drive into the drive bay, then slide the drive release latch back.
- 7 If you are adding a drive, connect the drive cables to the new drive according to the drive's documentation.
- OR -
If you are replacing a drive, reconnect the drive cables using the notes you took previously.
- 8 Replace the side panel by following the instructions in ["Opening and closing the case" on page 37](#), then return your computer to an upright position.
- 9 Reconnect all external cables and the power cord.
■

Adding or replacing an expansion card

► **To add or replace an expansion card:**

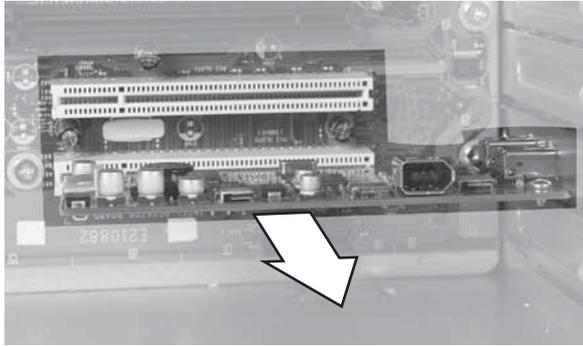
- 1 Remove the side panel by following the instructions in [“Opening and closing the case” on page 37](#).
- 2 Open the card retention lever.

Card retention lever



- 3 If you are replacing an expansion card, go to the next step. If you are adding a new expansion card, go to [Step 6](#).
- 4 Disconnect any cables that are attached to the card, noting their locations and orientation. (You may need to reconnect the cables after you install the new card.)

- 5 Remove the old expansion card. You can slightly seesaw the card end-to-end to loosen the card, but do not bend the card sideways.



Caution

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

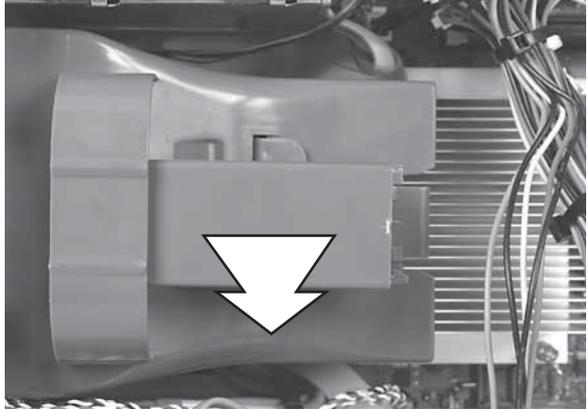
- 6 Install the new card into the expansion slot. You can slightly seesaw the card end-to-end to help insert the card, but do not bend the card sideways.
- 7 Reconnect the expansion card cables (if any) using the notes you took previously or the manufacturer's instructions.
- 8 Replace the side panel, then return the computer to an upright position.
- 9 Reconnect all external cables and the power cord.



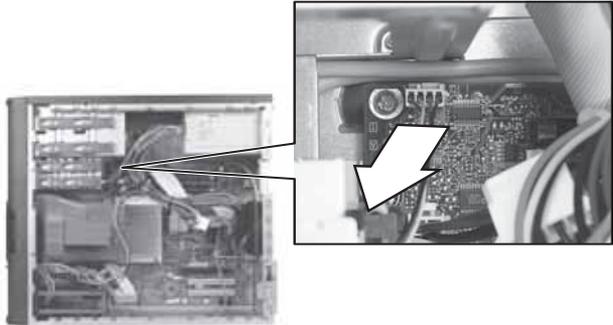
Replacing the front fan

► To replace the front fan:

- 1 Remove the side panel by following the instructions in [“Opening and closing the case” on page 37](#).
- 2 Remove the fan by pulling it away from the system board.



- 3 Disconnect the fan cable from the system board.



- 4 Connect the new fan cable to the system board, then insert the new fan into place.
- 5 Replace the side panel, then return the computer to an upright position.
- 6 Reconnect all external cables and the power cord.



Replacing the rear fan

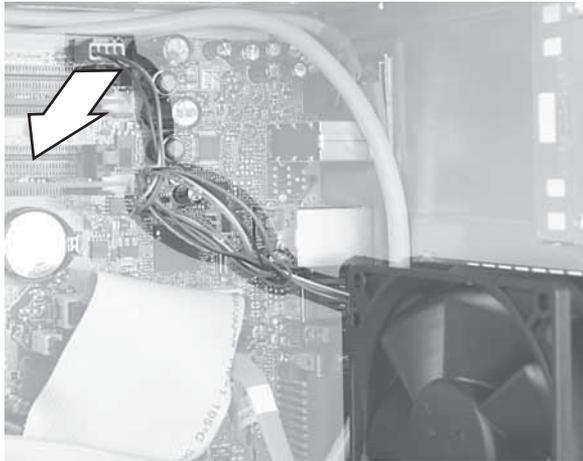


Tools

Phillips screwdriver

► **To replace the rear fan:**

- 1 Remove the side panel by following the instructions in [“Opening and closing the case”](#) on page 37.
- 2 Disconnect the fan from the system board.



- 3 Remove the four screws that secure the fan to the back of the case, then remove the fan.



- 4 Place the new fan on the back of the computer, then replace the screws that secure it to the back of the case.
- 5 Reconnect the fan cable to the system board.

- 6 Replace the side panel by following the instructions in [“Opening and closing the case” on page 37.](#)
- 7 Replace the side panel, then return the computer to an upright position.
- 8 Reconnect all external cables and the power cord.
■

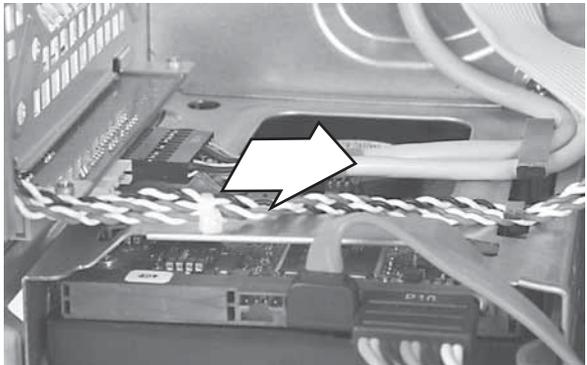
Replacing the front I/O board



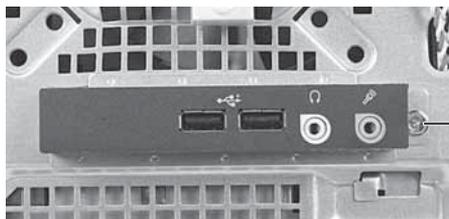
Important

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

- **To replace the front I/O panel:**
- 1 Remove the side panel by following the instructions in [“Opening and closing the case” on page 37.](#)
 - 2 Remove the bezel by following the instructions in [“Removing and installing the front bezel” on page 38.](#)
 - 3 Disconnect the cable from the I/O panel.



- 4 Remove the screw that secures the I/O panel to the computer, then remove the I/O panel from the computer.



- 5 Insert the new I/O panel board into the computer, then replace the screw.
 - 6 Connect the I/O panel cable to the new I/O panel.
 - 7 Replace the front bezel by following the instructions in [“Removing and installing the front bezel” on page 38.](#)
 - 8 Replace the side panel by following the instructions in [“Opening and closing the case” on page 37.](#)
-

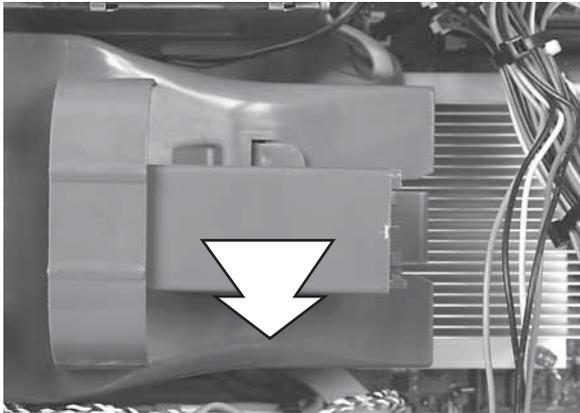
Replacing the processor



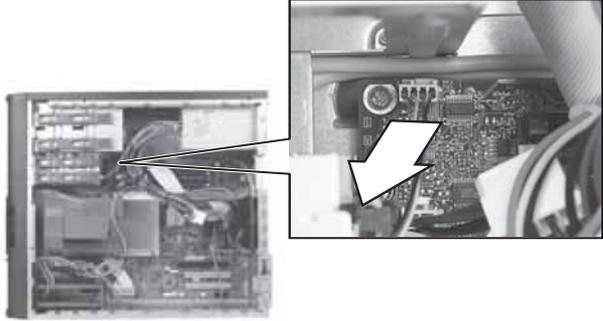
Tools

Phillips screwdriver

- **To replace the heat sink and processor:**
- 1 Remove the side panel by following the instructions in [“Opening and closing the case” on page 37.](#)
 - 2 Remove the fan by pulling it away from the system board.



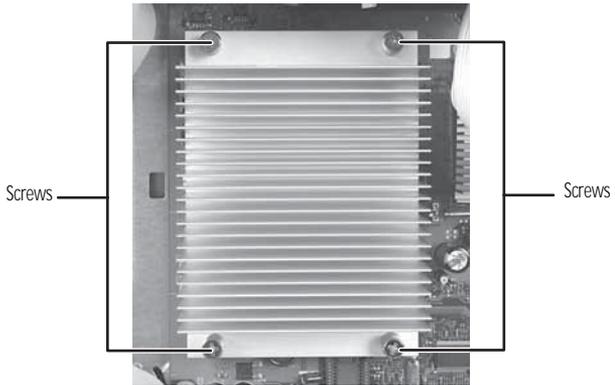
- 3 Disconnect the fan cable from the system board.



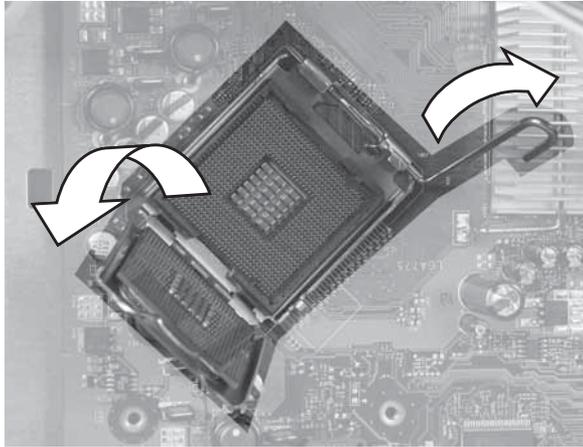
Caution

The heat sink has thermal paste located on the bottom of it. Use caution when you remove the old heat sink or unpack the new heat sink so you do not damage the thermal paste.

- 4 Loosen the four screws that secure the heat sink to the system board, then remove the heat sink.



- 5 Release the processor by pushing down on the lever and then lifting it completely up.



- 6 Remove the processor from the system board.
- 7 Install the new processor onto the system board making sure that Pin 1 on the processor (indicated by the silk-screened arrow on the corner of the processor) aligns with Pin 1 on the processor socket (indicated by the absence of a pin hole in the processor socket), then return the lever to its locked position.
- 8 Place the heat sink on the system board, then tighten the screws that secure it to the system board.
- 9 Connect the fan cable to the system board, then insert the fan into place.
- 10 Replace the side panel.
■

Replacing the system battery



Warning

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries following the manufacturer's instructions.



Caution

Any custom BIOS settings you have made will be lost when you remove the system battery. All settings will return to their factory defaults.

If the computer clock does not keep time or the settings in the BIOS Setup utility are not saved when you turn off your computer, replace the system battery. Use a battery of the same size and voltage as the original battery that was in your computer.

► To replace the battery:

- 1 Restart your computer.
- 2 During the restart, press and hold **F2**. The main menu of the BIOS Setup utility opens.
- 3 Write down all values in the menus and submenus, then exit from the utility.



Caution

Any custom BIOS settings you have made will be lost when you remove the system battery. All settings will return to their factory defaults.

- 4 Shut down your computer.
- 5 Remove the side panel by following the instructions in ["Opening and closing the case" on page 37](#).
- 6 Locate the old battery on the system board and note its orientation. You will need to install the new battery the same way.



Battery release tab

- 7 Push the battery release tab. The battery pops out of the socket.
- 8 Make sure that the positive (+) side of the new battery is facing up, then press the battery into the socket until it snaps into place.
- 9 Replace the side panel, then return the computer to an upright position.
- 10 Reconnect all external cables and the power cord.
- 11 Turn on your computer.
- 12 Open the BIOS Setup utility.
- 13 In the BIOS Setup utility, restore any settings that you wrote down previously.
- 14 Save all your settings and exit the BIOS Setup utility.
■

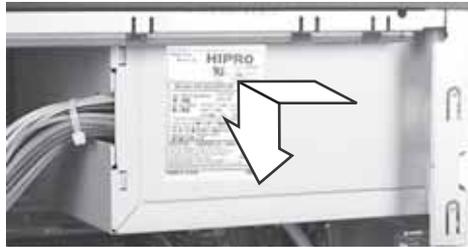
Replacing the power supply

► **To replace the power supply:**

- 1 Remove the side panel by following the instructions in [“Opening and closing the case” on page 37](#).
- 2 Disconnect the power supply cables from all components (such as hard drives, CD or DVD drives, and the system board), noting their locations and orientation. (You will reconnect the cables after you install the new power supply.)
- 3 Remove the three screws that secure the power supply to the computer.



- 4 Slide the power supply away from the back of the computer, then pull it down and remove it.



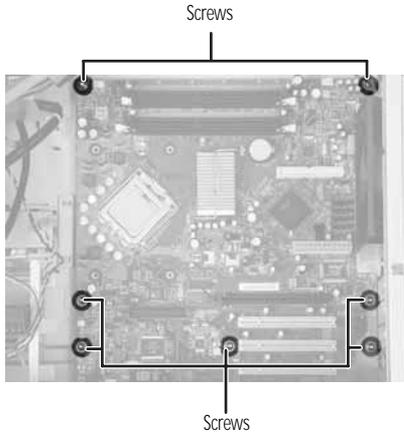
- 5 Install the new power supply into the case, then install the three screws to secure the power supply to the case.
 - 6 Reconnect the power supply cables using your notes from Step 2.
 - 7 Replace the side panel, then return the computer to an upright position.
 - 8 Reconnect all external cables and the power cord.
-

Replacing the system board

► **To replace the system board:**

- 1 Remove the side panel by following the instructions in ["Opening and closing the case" on page 37](#).
- 2 Remove all expansion cards by following the directions in ["Adding or replacing an expansion card" on page 47](#).
- 3 Remove the front fan by following the directions in ["Replacing the front fan" on page 49](#).
- 4 Remove the memory from your computer by following the directions in ["Installing memory" on page 41](#).
- 5 Disconnect the power and data cables from the system board, noting their locations and orientation. (You will reconnect the cables after you install the new board.)
- 6 Remove the power supply by following the directions in ["Replacing the power supply" on page 56](#).

- 7 Remove the seven system board screws.



- 8 Lift the system board up and out of the case.
- 9 Align the new system board on the screw holes in the case, then secure it into the case with the screws.
- 10 If your replacement system board does not include a processor, go to the next step.

-OR-

If your replacement system board includes a processor, go to Step 16.

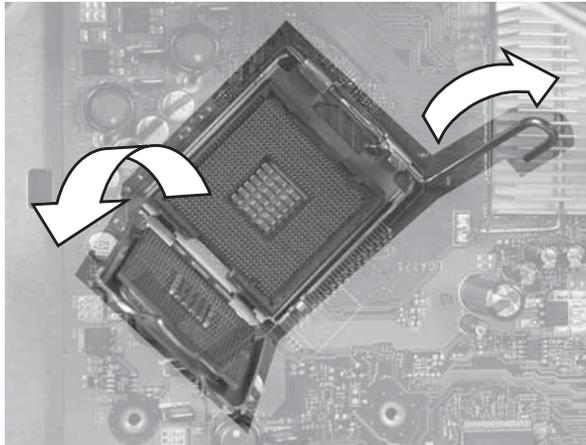


Caution

The heat sink has thermal paste located on the bottom of it. Use caution when you remove the old heat sink or unpack the new heat sink so you do not damage the thermal paste.

- 11 Loosen the four screws that secure the heat sink to the system board, then remove the heat sink.

- 12 Release the processor from the old system board by pushing down on the lever and then lifting it completely up.



- 13 Remove the processor from the old system board.
- 14 Install the processor onto the new system board making sure that Pin 1 on the processor (indicated by the silk-screened arrow on the corner of the processor) aligns with Pin 1 on the processor socket (indicated by the absence of a pin hole in the processor socket), then return the lever to its locked position.
- 15 Place the heat sink on the system board, then tighten the screws that secure it to the system board.
- 16 Install the power supply into the case, then install the three screws to secure the power supply to the case.
- 17 Connect the power and data cables using the notes you took previously.
- 18 Connect the fan cable to the system board, then insert the fan into place.
- 19 Install the memory you removed previously.
- 20 Reinstall any expansion cards you removed, using the notes you took previously.
- 21 Replace the side panel, then return the computer to an upright position.
- 22 Reconnect all external cables and the power cord.

■

CHAPTER 5

Maintaining Your Computer

- Setting up a maintenance schedule
- Caring for your computer
- Cleaning your computer
- Updating Windows
- Using BigFix
- Managing hard drive space
- 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 your computer.
- Do not block the ventilation fan slots. If these slots are blocked, your computer may overheat, resulting in unexpected shutdown or permanent damage.
- 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 monitor 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 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 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:**

- 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

Your computer may have BigFix software installed. 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**.

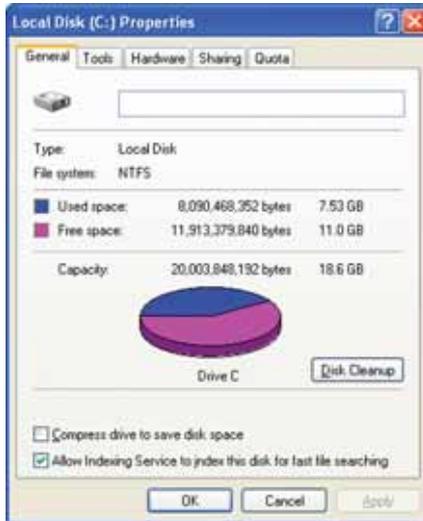


Managing hard drive space

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

Checking hard drive space

- ▶ **To check hard drive space:**
 - 1 Click **Start**, then click **My Computer**. The *My Computer* window opens.
 - 2 Right-click the drive that you want to check for available file space, then click **Properties**. Drive space information appears.



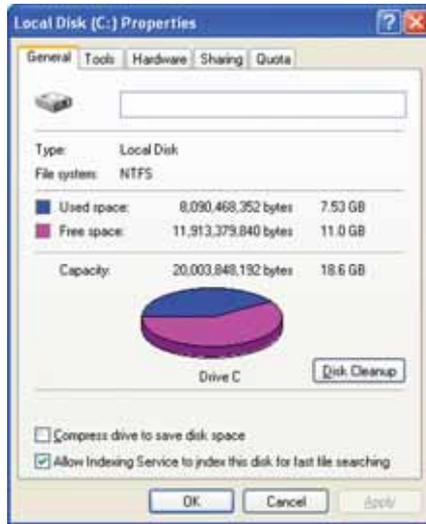
■

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:**
 - 1 Click **Start**, then click **My Computer**. The *My Computer* window opens.

- 2 Right-click the hard drive that you want to delete files from (for example, Local Disk (C:)), then click **Properties**. The *Properties* dialog box opens at the General tab.



- 3 Click **Disk Cleanup**. The *Disk Cleanup* dialog box opens.
- 4 Make sure that the check box beside each file type you want to delete is selected. For more information about file types you can delete, read the descriptions in the *Disk Cleanup* dialog box.
- 5 Click **OK**, then click **Yes**.

Checking the hard drive for errors

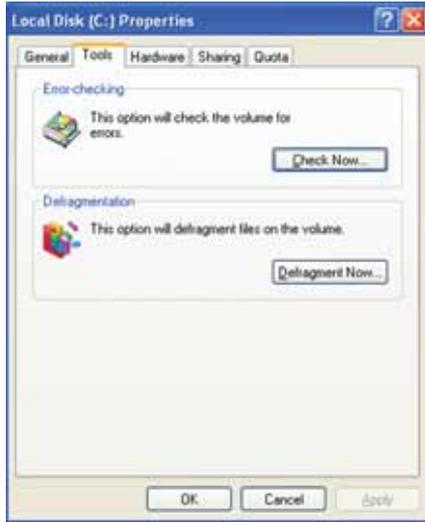
The Error-checking program examines the hard drive for physical flaws and file and folder problems. This program corrects file and folder problems and marks flawed areas on the hard drive so Windows does not use them.

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 **My Computer**. The *My Computer* window opens.

- 2 Right-click the drive that you want to check for errors (for example, Local Disk (C:)), then click **Properties**. The *Properties* dialog box opens.
- 3 Click the **Tools** tab.



- 4 Click **Check Now**, click the options you want to use, then click **Start**. For help, press **F1**. Windows checks the drive for errors. This process may take several minutes.
After Windows has finished checking the drive for errors, it provides a summary of the problems that it found.
- 5 Correct any problems that are found by following the on-screen instructions.
- 6 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**, then click **My Computer**. The *My Computer* window opens.
- 3 Right-click the hard drive that you want to defragment (for example, Local Disk (C:)), then click **Properties**. The *Properties* dialog box opens.
- 4 Click the **Tools** tab.



- 5 Click **Defragment now**. If Disk Defragmenter does not start automatically, click **Defragment**.
Disk Defragmenter shows its progress on the display. When finished, Disk Defragmenter asks if you want to quit the program.
- 6 Click **Close**, then click the **X** in the top-right corner to close the *Disk Defragmenter* window.



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.

Scheduling maintenance tasks

The Scheduled Task Wizard lets you schedule maintenance tasks such as running Disk Defragmenter and Error-checking.

► **To start the Scheduled Task Wizard:**

- 1 Click **Start, All Programs, Accessories, System Tools**, then click **Scheduled Tasks**. The *Scheduled Tasks* window opens.

- 2 Double-click the **Add Scheduled Task** icon. The Scheduled Task Wizard opens.



- 3 Click **Next**, then click the task or program you want to schedule.
- 4 Follow the on-screen instructions to customize the task. ■

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 the Files and Settings Transfer Wizard. Files can be transferred automatically to it as long as your old computer has Windows 95, 98, 98SE, Me, NT 4.0, or XP.



Important

If your old computer's Windows version is not compatible with automatic transfer, you must manually move your data by using a writeable disc, flash drive, or external hard drive.

While using these transfer utilities, you will not be able to run other tasks on the computers.

- ▶ **To move files and settings from your old computer:**
 - 1 Click **Start, All Programs, Accessories, System Tools**, then click **Files and Settings Transfer Wizard**.
 - 2 Follow the on-screen instructions to complete the transfer.
 -

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 *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 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 **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 "Using Windows" in 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 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 or part of a filename you want to search for, then press ENTER. The search results are displayed.
- 3 To learn about more search options, click **Help**.
■

CHAPTER 6

Troubleshooting

- [Safety guidelines](#)
- [First steps](#)
- [Troubleshooting](#)
- [Recovering your system](#)
- [Telephone support](#)

Safety guidelines

While troubleshooting your computer, follow these safety guidelines:



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 36](#).



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.

First steps

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

- Make sure that the power cord is connected to your computer and an AC power outlet and that the power outlet is supplying power.
- If you use a power strip or surge protector, make sure that it is turned on.
- If a peripheral device does not work, make sure that all connections are secure.
- Make sure that your hard drive is not full.
- 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.

Troubleshooting

Troubleshooting topics are listed in alphabetical order.

Add-in cards

See ["Expansion cards" on page 86](#).

Audio

See ["Sound" on page 97](#).

CD or DVD drives

The computer does not recognize a disc or the CD or DVD drive

- Make sure that the disc label is facing up, then try again.
- Try a different disc. Occasionally, discs are flawed or become scratched and cannot be read by the CD or DVD drive.
- If you are trying to play a DVD, make sure that you have a DVD drive. To identify your drive type, see ["Identifying optical drive types" on page 27](#).
- Your computer may be experiencing some temporary memory problems. Shut down and restart your computer.
- Some music CDs have copy protection software. You may not be able to play these CDs on your computer.
- Clean the disc. For more information, see ["Cleaning optical discs" on page 66](#).
- Restart your computer, then enter the BIOS Setup utility by pressing and holding **F2** while your computer restarts. Make sure that the IDE controllers are enabled.
- Make sure that the drive is configured correctly by following the instructions in the drive documentation.
- Reinstall the device driver.

An audio CD does not produce sound

- Make sure that the disc label is facing up, then try again.
- Some music CDs have copy protection software. You may not be able to play these CDs on your computer.
- Make sure that the volume controls are turned up. For more information, see [“Adjusting the volume” on page 32](#).
- Make sure that the mute controls are turned off. For more information, see [“Adjusting the volume” on page 32](#).
- If you have external speakers attached, make sure that the speakers are turned on and that the cables are connected correctly and securely.
- Shut down and restart your computer.
- Clean the disc. For more information, see [“Cleaning optical discs” on page 66](#).
- Reinstall the appropriate device drivers.

A DVD movie will not play

- Make sure that you have a DVD drive. To identify your drive type, see [“Cleaning optical discs” on page 66](#).
- Make sure that the disc label is facing up, then try again.
- Try a different disc. Occasionally discs are flawed or become scratched and cannot be read by the DVD drive.
- Clean the disc. For more information, see [“Cleaning optical discs” on page 66](#).
- Shut down and restart your computer.
- Make sure that the DVD program has been installed on your computer.
- DVDs and DVD drives contain *regional codes* that help control DVD title exports and help reduce illegal disc distribution. To be able to play a DVD, the disc’s regional code and your DVD drive’s regional code must match. The regional code on your DVD drive is determined by your computer’s delivery address. The regional code for the United States and Canada is 1. The regional code for Mexico is 4. Your DVD drive’s regional code must match the regional code for the disc. The regional code for the disc is on the disc, disc documentation, or disc packaging.
If the DVD movie does not play, the disc’s regional code and your DVD drive’s regional code may not match.
- Reinstall the device driver.

Diskette drive

The diskette drive is not recognized

- Shut down and restart your computer.

You cannot save a file to diskette or you see the message “disk is full or write-protected”

- Make sure that the write-protection tab on the upper-right corner of the diskette is down (unprotected).
- The diskette may be full. Delete unnecessary files on the diskette and try again.
- Make sure that the diskette you are using is IBM-compatible.
- Try a different diskette. Occasionally diskettes are flawed and cannot be read by the diskette drive.
- Run Error-checking on the diskette. For more information, see [“Checking the hard drive for errors” on page 69](#). If errors are detected and corrected, try using the diskette again.

You see an “Access Denied” or “Write protect” error message

- Make sure that the write-protection tab on the upper-right corner of the diskette is down (unprotected).
- The diskette may be full. Delete unnecessary files on the diskette and try again.
- Make sure that the diskette you are using is IBM-compatible.
- Try a different diskette. Occasionally diskettes are flawed and cannot be read by the diskette drive.

You see a “Disk is full” error message

- Delete unnecessary files on the diskette.
- Try a different diskette. Occasionally diskettes are flawed and cannot be read by the diskette drive.
- Run Error-checking on the diskette. For more information, see [“Checking the hard drive for errors” on page 69](#). If errors are detected and corrected, try using the diskette again.

You see a “Non-system disk” or “Disk error” error message

- Eject the diskette from the diskette drive, then press ENTER.
- Make sure that the diskette you are using is IBM-compatible.

The diskette drive LED is lit continuously

- Remove the diskette from the drive. If the light stays on, try restarting your computer.

Display

The screen resolution is not correct

- Change the screen resolution from the *Display Settings* dialog box. For more information, see the “Customizing Windows” chapter in your online *User Guide*.

The computer is running, but there is no picture

- Adjust the monitor’s brightness and contrast controls to the center position.
- Check the cable for bent or damaged pins.
- Make sure that the monitor is plugged in and turned on. If the monitor is turned on, the power LED should be lit.
- Make sure that the video cable is connected to the video port on your computer.
- Connect a monitor that you know works to your computer.
- Reinstall the device driver.

The color is not uniform

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

The text on the screen is dim or difficult to read

- Adjust the monitor’s brightness and contrast controls.
- Change the display settings. For more information, see the “Customizing Windows” chapter in your online *User Guide*.

For more information about monitor types, see your monitor 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.

DVD drives

- See “CD or DVD drives” on page 81.

Ethernet

You cannot see the other computers on your network

- Make sure that your Ethernet cable is plugged into the Ethernet jack on your computer, as shown in your setup poster. Make sure that the other end is plugged into a network router, switch, hub, or other network device.
- Make sure that all computers are plugged into a powered electrical outlet and turned on.
- Make sure that the router (if you are using one) is plugged into a powered electrical outlet and turned on. Most routers have lights that indicate they are working. For more information, see the documentation that came with your router.
- If you are using a router, try rebooting it by unplugging its power cord, waiting five seconds, then plugging it back in.
- Make sure that all computers on your network have the same workgroup name.
- Make sure that all computers are using the same 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.

The computer does not recognize an Ethernet expansion card

- Shut down and restart your computer.
- Make sure that you have installed the required software. For more information, see the documentation that came with your Ethernet card.
- Reseat the card. For more information about reseating the card, see ["Adding or replacing an expansion card" on page 47](#). For more information about your Ethernet card, see the documentation that came with your Ethernet card.

Your Ethernet network is running slower than you expect

- If your Ethernet network is running slower than you expect, check the speed of each Ethernet component. For best results, all Ethernet components should be standard Ethernet (10 Mbps), Fast Ethernet (100 Mbps or 10/100 Mbps), or Gigabit Ethernet (1000 Mbps or 10/100/1000 Mbps). A mixture of Ethernet, Fast Ethernet, and Gigabit Ethernet components will result in your network running at the slowest component speed.

Expansion cards

The computer does not recognize an expansion card

- Shut down and restart your computer.
- Make sure that you have installed the required software. For more information, see the documentation that came with your expansion card.
- Reseat the card. For more information, see [“Adding or replacing an expansion card” on page 47.](#)

File management

**Help**

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

A file was accidentally deleted

If a file was deleted while holding down the SHIFT key, 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.

If the Recycle Bin was emptied before you try to restore a file, the file cannot be restored.

**You need to restore your computer to a working condition**

- See [“Recovering your system” on page 98.](#)

Floppy drive

See [“Diskette drive” on page 83.](#)

Hard drive

You see an “Insufficient disk space” error message

- Delete unnecessary files from the hard drive using Disk Cleanup. For instructions on deleting unnecessary files, see [“Deleting unnecessary files” on page 68](#).



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.

You see 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 69](#).

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

- If a diskette is in the diskette drive, eject it and restart your computer.
- 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 98](#).

You see a “Non-system disk” or “disk error” error message

- Eject the diskette from the diskette drive, then press ENTER.

Internet

See also [“Modem \(dial-up\)” on page 91](#).

You cannot connect to the Internet

- 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 your setup poster to make sure that the connections have been made correctly.

- OR -

If you are using a cable or DSL modem, make sure that the modem cable is plugged into the Ethernet network jack and not the modem jack. See your setup poster to make sure that the connections have been made correctly.

- Make sure that your account with your Internet service provider (ISP) is set up correctly. Contact your ISP technical support for help.
- Make sure that you do not have a problem with your modem. For more information, see [“Modem \(dial-up\)” on page 91](#).



Help

For more information about troubleshooting Internet connections, click **Start**, then click **Help and Support**. Type the phrase **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

- This problem can occur when you have typed a URL (Web address) incorrectly, you have lost your Internet connection, or your ISP is having technical difficulties. Double-check the URL or try a different URL. If the error message still appears, disconnect from the ISP connection and close your browser, then reconnect and open the browser. If you still get the error, your ISP may be having technical difficulties.

Connecting to a Web site takes too long

Many factors can affect Internet performance:

- The condition of the telephone lines in your residence or at your local telephone service
- The condition of the Internet computers to which you connect and the number of users accessing those computers
- The complexity of graphics and multimedia on Web pages
- Having multiple Web browsers open, performing multiple downloads, and having multiple programs open on your computer

People are sending you e-mail messages, but you have not received any mail

- Click the receive button in your e-mail program.
- Make sure that your account with your Internet service provider (ISP) is set up correctly. Contact your ISP for technical support.

Keyboard

The keyboard does not work

- Make sure that the keyboard cable is plugged in correctly. For more information, see your computer's setup poster.
- Remove all extension cables and switch boxes.
- 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.
- Reinstall the keyboard device driver.

A keyboard character keeps repeating or you see a "keyboard stuck" or "key failure" error message

- Make sure that nothing is resting on the keyboard.
- Make sure that a key is not stuck. Press each key to loosen a key that might be stuck, then restart your computer.

Liquid spilled in the keyboard

- If you spilled liquid in the keyboard, turn off your computer and unplug the keyboard. Clean the keyboard and turn it upside down to drain it. Let the keyboard dry before using it again. If the keyboard does not work after it dries, you may need to replace it.

Memory



Help

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

You see a “Not enough memory” error message

- Close all programs, then restart your computer.

Memory card reader

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

- The memory card reader was temporarily uninstalled using the **Safely remove hardware** icon in the system tray. Reboot your computer, and your card reader will be re-installed.

Modem (cable or DSL)

My computer cannot connect to the Internet.

- Make sure that your modem is connected to the network jack. For the location of your network jack, see your setup poster or [“Back” on page 8](#).
- See the documentation that came with your modem for additional troubleshooting information.

Modem (dial-up)

See also [“Internet” on page 88](#).

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 network jack. See your setup poster to make sure that the connections have been made correctly.
- Make sure that your computer is connected to the telephone line and the telephone line has a dial tone.
- Make sure that the modem cable is less than 6 feet (1.8 meters) long.
- 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.
- If you have additional telephone services such as call waiting, call messaging, or voice mail, make sure that all messages are cleared and call waiting is disabled before using the modem. Contact your telephone service to get the correct code to temporarily disable the service. Also make sure that the modem dialing properties are set correctly.

► To check the dialing properties:

- 1 Click **Start**, then click **Control Panel**. The *Control Panel* window opens. If your Control Panel is in Category View, click **Printers and Other Hardware**.
- 2 Click/Double-click the **Phone and Modem Options** icon, then click the **Dialing Rules** tab.
- 3 Click the location from which you are dialing, then click **Edit**.
- 4 Make sure that all settings are correct.



- Disconnect any answering machine, fax machine, or printer that is on the same line as the modem. Do not connect these devices to the same telephone line as the modem.
- Make sure that you are not using a digital, rollover, or PBX line. These lines do not work with your modem.
- Check for line noise (scratchy, crackling, or popping sounds). Line noise is a common problem that can cause the modem to connect at a slower rate, abort downloads, or even disconnect. The faster the modem, the less line noise it can tolerate and still work correctly.

Listen to the line using your telephone. Dial a single number (such as 1). When the dial tone stops, listen for line noise. Wiggle the modem cable to see if that makes a difference. Make sure that the connectors are free from corrosion and all screws in the telephone wall jack are secure.

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.
- Try connecting with the modem at a lower connection speed. If reducing the connect speed lets you connect, call your telephone service. The telephone line may be too noisy.

You cannot connect to the Internet

- The ISP may be having technical difficulties. Contact your ISP for technical support.
- See if the modem works with a different communications program. The problem may be with just one program.
- Review the troubleshooting information under [“Internet” on page 88](#).

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.

If your computer has a v.90 modem, the speed at which you can upload (send) data is limited to 33.6K. If your computer has a v.92 modem, the speed at which you can upload data is limited to 48K. Your ISP may not support 48K uploads.

Your fax communications program only sends and receives faxes at 14,400 bps when you have a 56K modem

- Current fax technology only supports a maximum send and receive rate of 14,400 bps.

The modem is not recognized by your computer

- Make sure that the line connected to the modem is working and plugged into the appropriate port on your computer. To make sure that the connections have been made correctly, see your setup poster or ["Connecting a dial-up modem" on page 16](#).
- If the modem shares the telephone line with another device, make sure that the telephone line is not in use (for example, someone is on the telephone, or another modem is in use).
- 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.
- Shut down and restart your computer.
- Run Windows modem diagnostics.

► To run modem diagnostics:

- 1 Close all open programs.
- 2 Click **Start**, then click **Control Panel**. The *Control Panel* window opens. If your Control Panel is in Category View, click **Printers and Other Hardware**.
- 3 Click/Double-click the **Phone and Modem Options** icon, then click the **Modems** tab.
- 4 Click your modem, then click **Properties**. The *Modem Properties* dialog box opens.
- 5 Click the **Diagnostic** 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.



The modem is noisy when it dials and connects

When your modem tries to connect to another modem, it begins *handshaking*. Handshaking is a digital “getting acquainted” conversation between the two modems that establishes connection speeds and communication protocols. You may hear unusual handshaking sounds when the modems first connect. If the handshaking sounds are too loud, you can turn down the modem volume.

► **To turn down the modem volume:**

- 1 Click **Start**, then click **Control Panel**. The *Control Panel* window opens. If your Control Panel is in Category View, click **Printers and Other Hardware**.
- 2 Click/Double-click the **Phone and Modem Options** icon, then click the **Modems** tab.
- 3 Click the modem you want to adjust, then click **Properties**.
- 4 Click the **Modem** tab, then adjust the **Speaker volume** control.
- 5 Click **OK** twice to close the *Phone and Modem Options* dialog box.



Monitor

See [“Display” on page 84](#).

Mouse

The mouse does not work

- Make sure that the mouse cable is plugged in correctly.
- Shut down and restart your computer.
- Remove all extension cables and switch boxes.
- Try a mouse you know is working to make sure that the mouse port works.

The mouse works erratically

- If the mouse pointer begins moving erratically across the screen or becomes difficult to control precisely, cleaning the mouse will likely improve its accuracy.
Clean the mouse by wiping the bottom with a clean, damp cloth. Make sure that the optical sensor is clean and free of debris.
- The mouse pad may have a printed or fabric pattern on it that interferes with your mouse. Try a different mouse pad.

Networks

You cannot connect to your company network

- Every network is unique. Contact your company computer department or network administrator for help. For more information about setting up a network in your home, see [“Connecting to a broadband modem or network” on page 16](#), your online *User Guide*, or [“Ethernet” on page 85](#).

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.

Passwords

Your computer does not accept your password

- Make sure that CAPS LOCK is turned off, then retype the password.

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 computer is plugged into a surge protector, make sure that the surge protector is connected securely to a power outlet, turned on, and working correctly. To test the outlet, plug a working device, such as a lamp, into the outlet and turn it on.
- Make sure that the power cord is free from cuts or damage. Replace any damaged cables.

Printer

The printer will not turn on

- Make sure that the printer is online. Many printers have an online/offline button that you may need to press.
- Make sure that the power cable is plugged into an AC power source.

The printer is on but will not print

- Check the cable between the printer and your computer. Make sure that it is connected to the correct type of port.
- Make sure that the printer is online. Many printers have an online/offline button that you may need to press so the printer can start printing. Press the button to put the printer online.
- Check the cable for bent or broken pins.
- 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**, then click **Control Panel**. The *Control Panel* window opens. If your Control Panel is in Category View, click **Printers and Other Hardware**.
 - 2 Click/Double-click the **Printers and Faxes** icon. The *Printers and Faxes* window opens.
 - 3 Right-click the name of the printer you want to be the default printer, then click **Set as Default Printer**.
■
- Reinstall the printer driver. See the guide that came with your printer for instructions on installing the printer driver.

You see a “Printer queue is full” error message

- Make sure that the printer is not set to work offline.

► To make sure that the printer is not set to work offline:

- 1 Click **Start**, then click **Control Panel**. The *Control Panel* window opens. If your Control Panel is in Category View, click **Printers and Other Hardware**.
- 2 Click/Double-click the **Printers and Faxes** icon. The *Printers and Faxes* window opens.

- 3 Right-click the name of the printer you want to use. If the menu shows a check mark next to **Use Printer Offline**, click **Use Printer Offline** to clear the check mark.



- 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 for adding additional memory.

You see a “Printer is out of paper” error message

After adding paper, make sure that the printer is online. Most printers have an online/offline button that you need to press after adding paper.

Help

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

Sound

You are not getting sound from the speakers

- Make sure that the volume controls are turned up. For more information, see [“Adjusting the volume” on page 32](#).
- Make sure that mute controls are turned off. For more information, see [“Adjusting the volume” on page 32](#).
- If you are using external speakers:
 - Make sure that the speakers are turned on.
 - See the speaker setup poster to check your speaker connections.

Help

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

Recovering your system

Understanding system recovery options

Most computer problems can be solved by following the information in [“Troubleshooting” on page 79](#) or at gateway.com. Problem-solving may also involve re-installing 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. A backup copy of your operating system may be provided on a CD or DVD, as well as a backup copy (CD) of your factory-installed drivers and applications.

We recommend that you make a backup of your factory-installed software as soon as you get your new Gateway system.

If you are still having problems even after you follow troubleshooting steps, you can use Microsoft System Restore to roll back your system to a previous condition when drivers and programs worked correctly.

- [“Recovering your system using Microsoft System Restore” on page 101](#) describes how to return your system to a previous working condition.

If you are still experiencing problems, you may need to reinstall specific software, such as a device driver.

- [“Recovering specific files and software” on page 99](#) describes how to install specific, factory-installed software and device drivers.

Finally, in order to recover your system you may need to reinstall everything, including the operating system, so your computer has its original factory settings.

- [“Recovering your system from the hard drive” on page 104](#) tells how to completely reinstall the original factory software.

Recovering your system



Important

If your hard drive has failed and you cannot restore the software from the hard drive, contact Gateway Customer Care for help. For a fee, Customer Care may be able to provide a set of recovery discs to restore your computer.

For more help, you can find the Gateway Customer Care contact information on the label located on the front or side of your computer.

If you have problems with your computer and you need to recover your system, you can restore specific drivers and programs from a set of recovery discs, roll back your system to a previous condition when drivers and programs were working correctly, or reinstall everything from the computer's hard drive.

- To selectively restore device drivers or programs, see [“Recovering specific files and software” on page 99](#).
- OR -
- To recover your system to a previous condition when software and device drivers were working correctly, see [“Recovering your system using Microsoft System Restore” on page 101](#).
- OR -
- To reinstall everything, see [“Recovering your system from the hard drive” on page 104](#).

Recovering specific files and software

You can perform a partial recovery by recovering specific files, such as device drivers and most pre-installed software. If you need to recover software that did not come pre-installed on your system, you need to follow the software's own instructions for installation.

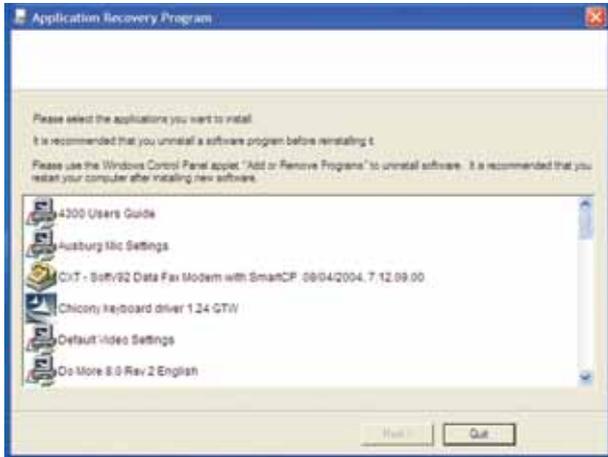
You can recover specific files using either the Start menu or a driver and application recovery disc that you have created.

► To restore your system from the driver and application recovery discs:

- 1 Click **Start, All Programs, System Recovery**, then click **Application & Driver Recovery**.

- OR -

Turn on your computer, then insert the driver and application recovery disc #1 (if available) into the CD or DVD drive. The *Application Recovery* program opens.



- 2 Click the driver or application you want to install. To select multiple items, press and hold CTRL while clicking each item.
- 3 Click **Next**. The items you selected are installed. When the installation is finished, a message asks you if you want to install more drivers or applications.
- 4 Click **Yes** to install more drivers or applications, or click **Quit** to exit.
- 5 Store the discs in a safe place for future use. You are done.
- 6 If your system still has problems, follow the directions in ["Recovering your system using Microsoft System Restore"](#) on page 101.



Recovering your system using Microsoft System Restore

Before using Gateway System Recovery, you should try Microsoft System Restore to determine whether you can restore your system to a previous condition.

Every time you install new device drivers or software, and every 24 hours (while your computer is turned on), Microsoft System Restore takes a “snapshot” of your system settings and saves it as a *restore point*. In most cases of hard-to-resolve software problems, you can return to one of these restore points to get your system running again.

► To restore using Microsoft System Restore:

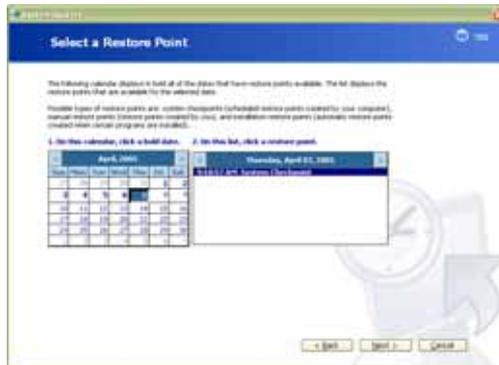
- 1 Press F1. The *Microsoft Windows XP Help and Support Center* opens.



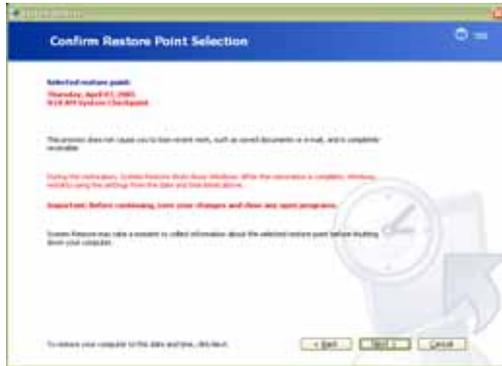
- 2 Click **Undo changes to your computer with System Restore**. The *Welcome to System Restore* dialog box opens.



- 3 Click **Restore my computer to an earlier time**, then click **Next**. The *Select a Restore Point* dialog box opens.
- 4 Click a bold date on the calendar (Step 1 on the screen), then click a restore point in the list (Step 2 on the screen).



- 5 Click **Next**. The *Confirm Restore Point Selection* dialog box opens.



- 6 Make sure that you want to use the restore point you selected, and read all notices on the screen.
- 7 Click **Next**, then follow the on-screen instructions to finish the restoration. If completing Microsoft System Restore does not solve your problem, restart Gateway System Recovery. See ["Recovering your system from the hard drive"](#) on page 104 for instructions.
■

Recovering your system from the hard drive

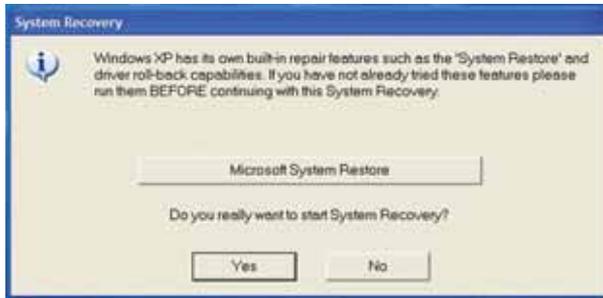


Caution

Because of virus and spyware activity on the Internet, you should disconnect all Internet connections before recovering your system. After you recover your system, you can reinstall antivirus and firewall software, then re-enable the Internet connection to update antivirus definitions and install Windows Updates.

► To recover your system from the hard drive:

- 1 Remove all CDs and DVDs from the disc drives, disconnect all USB devices except the keyboard and mouse, then disconnect your Internet cable.
- 2 If you can still run Windows, click **Start, All Programs, System Recovery, System Recovery**, then click **Yes**. Your computer restarts, then the System Recovery program starts.

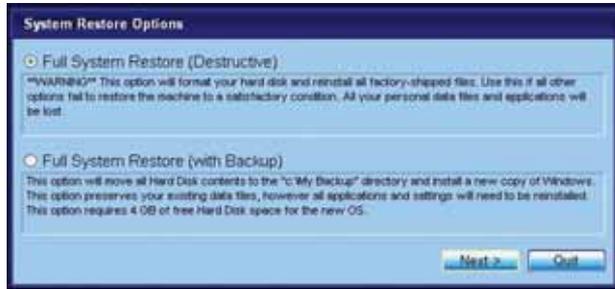


- OR -

Turn on or restart your computer and press F11 while your computer is starting.

- 3 Insert the *Operating System Recovery CD/DVD* when prompted. The System Recovery program starts.

4 Click a system recovery option:



Caution

The Full System Restore option deletes all files on your hard drive except the restore files. Make sure that you back up all personal data files before continuing this process.

- **Full System Restore (Destructive)** reformats the hard drive and restores the system software as it was when you purchased your computer. This process deletes your data files.
- **Full System Restore (with Backup) (recommended)** moves the contents of the hard drive to the **C:\My Backup** folder and installs a new copy of Windows XP. This option saves your existing data files, but all programs must be reinstalled and the program settings reconfigured. You need at least 4 GB of hard drive space to use this restore option.

5 Click **Next**. The *System Restore - Format and Recover* dialog box opens.

6 Click **Yes**. Files are restored to your hard drive. When file recovery has finished, the *System Restore* dialog box opens.



Important

After you restore your system, it will appear with the same files and programs it had when it shipped from the factory. You still need to download Windows updates and antivirus updates to bring your computer's software up to date.

7 Click **Restart**. Your computer restarts, and Windows finishes its setup and installation.

8 Reconnect your Internet cable and all USB peripheral devices. You are done.



Telephone 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 a grounded AC outlet that is supplying power. If you use a surge protector, 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:
 - Online Help
 - Printed documentation
 - The Microsoft Windows documentation
 - The software publisher's Web site
- See the troubleshooting section of this chapter.



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.

- 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.

Telephone numbers

Gateway offers a wide range of customer service, Customer Care, and information services. To access Customer Care services, contact Gateway at the telephone number or Web address listed on your computer's Customer Care label.

Self-help

If you have *how-to* questions about using your Gateway-supplied hardware or software, see the following resources:

- The printed or online documentation that came with your hardware or software. In many cases, additional product information and online documentation for Gateway-supplied hardware can be found in our Web site's Documentation Library.
- This *Reference Guide* and your online *User Guide*.
- The software publisher's Web site.

Help

For more how-to information about Windows, click **Start**, then click **Help and Support**. Type the keyword **practice** in the **Search Help** box, then press **ENTER**.

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/NFPA 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.

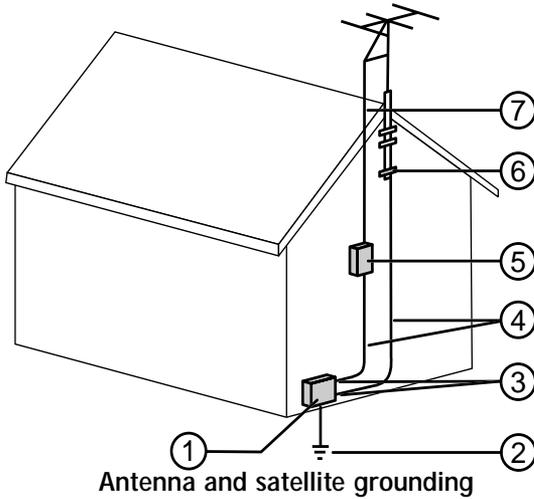
Power lines



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.



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.

For additional recycling information specific to your area, please go to www.gateway.com/recycle.

Notices

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Irvine, CA 92618 USA

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