

Gateway™



User Guide

Gateway M520 Notebook

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Chapter 1

Getting Help



- Using the Gateway Web site
- Using Help and Support
- Using Your Computer guide
- Using online help

Thank you for purchasing our notebook!

You've made an excellent decision choosing Gateway. We're sure that you'll be pleased with the outstanding quality, reliability, and performance of your new notebook. Each and every Gateway notebook uses the latest technology and passes through the most stringent quality control tests to ensure that you are provided with the best product possible.

Your new Gateway notebook is designed to provide an exceptional balance of performance and portability. Your notebook uses the latest chipset and mobile processor technologies to manage the processor speed and power consumption for a greater battery life experience. This design provides you with maximum performance when plugged into AC power balanced with optimized battery life when on battery power.

Please read this manual carefully to familiarize yourself with our range of services and support. We've highlighted some basic care and safety information to help you keep your notebook in good operating condition.

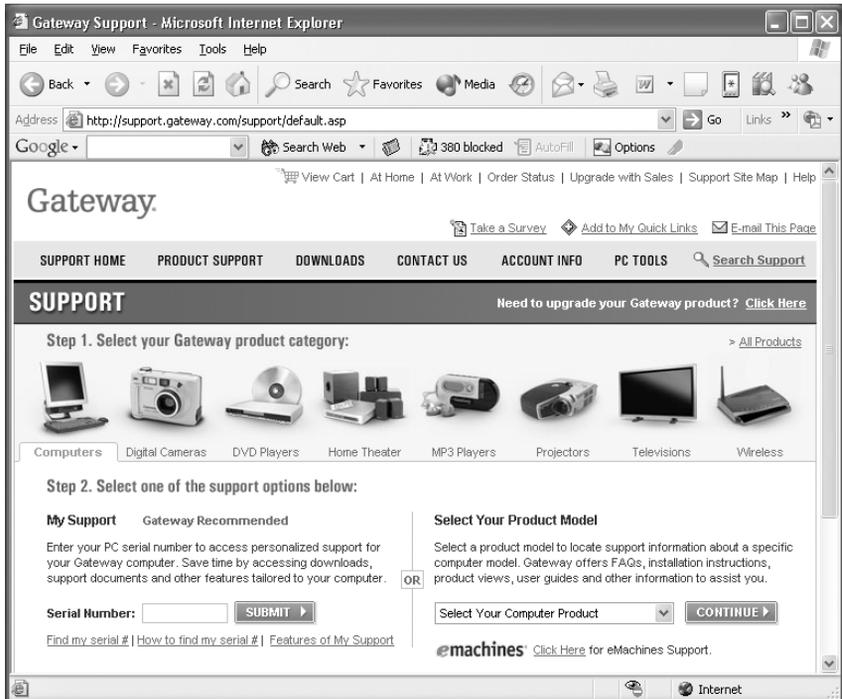
Gateway stands behind our value proposition to our customers — to provide best-of-class service and support in addition to high-quality, brand-name components at affordable prices. If you ever have a problem, our knowledgeable, dedicated customer service department will provide you with fast, considerate service.

We sincerely hope that you will receive the utmost satisfaction and enjoyment from your new Gateway notebook for years to come.

Thanks again, from all of us at Gateway.

Gateway Web site

Gateway's online support is available 24 hours per day, 7 days per week and provides the most current drivers, product specifications, tutorials, and personalized information about your notebook. Visit the Gateway eSupport Web site at support.gateway.com.



Using eSupport

The eSupport site is divided into six major areas:

- Support Home
- Product Support
- Downloads
- Contact Us
- PC Tools

Support Home

Click **Support Home**, then click **All Support Documents** to access product documentation, specifications, and guides. You can also browse through the reference area to locate an article specific to the question you have.

Click **Support Home**, then click **General Tutorials** to access an extensive library of how-to articles and videos on topics, such as making audio CDs and installing a hard drive.

Product Support

Click **Product Support** to view a list of all the products that Gateway supports.

Downloads

Click **Downloads**, then click **My Downloads** to get the latest software updates for BIOS and driver upgrades. By entering your serial number you get drivers specific to your notebook. Click **All Downloads** to walk through a step-by-step wizard to locate your drivers.

Contact Us

Click **Contact Us** to access links to customer care with a live technician, including chat and e-mail. Click **Call Us** to get a list of Gateway telephone numbers for both sales and support. For more information, see [“Telephone support” on page 102](#).

PC Tools

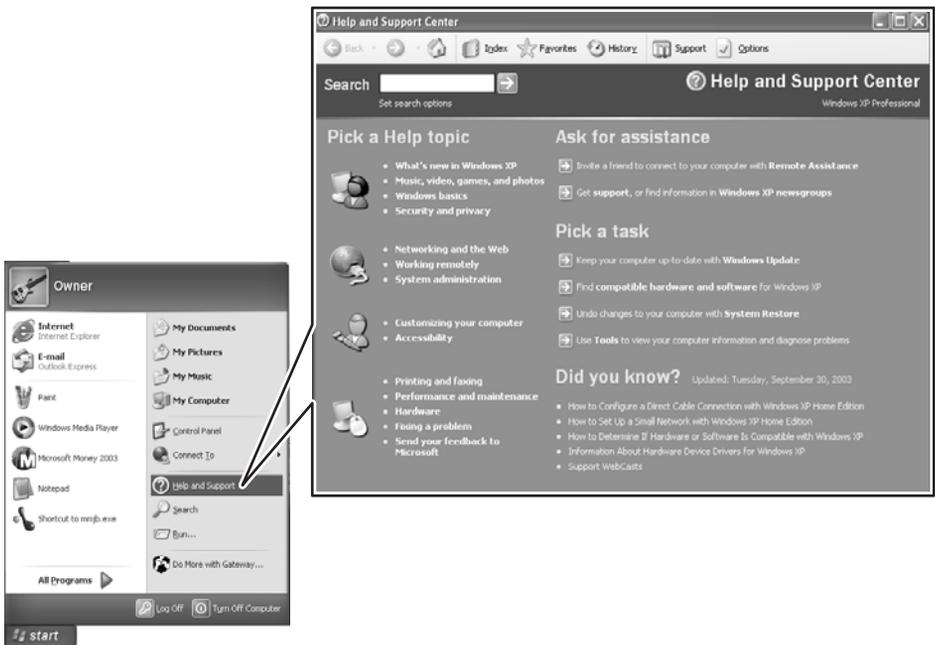
Click **PC Tools** to access utilities to help you manage your notebook.

Help and Support

Your notebook includes *Help and Support*, an easily accessible collection of help information, troubleshooters, and automated support. Use Help and Support to answer questions about Windows and to help you quickly discover and use the many features of your Gateway notebook.

▶ To start Help and Support:

- Click **Start**, then click **Help and Support**. Help and Support opens.



You can find help information by clicking a link, performing a search, or browsing the index.

Searching for a topic

To search for a topic in Help and Support, type a word or phrase (keyword) in the **Search** box located at the top of any Help and Support screen, then click the arrow  button.

For each search, you receive the following search result types:

- Suggested Topics - These topics are located in Help and Support and are relevant to your search topic.
- Full-text Search Matches - These topics are located in Help and Support and contain the words you entered in the **Search** box.
- Microsoft Knowledge Base - These topics are located on the Microsoft Web site and contain the words you entered in the **Search** box. You must be connected to the Internet to search for and access these topics.

To view a list of your search results, click the results header for the type of results you want to view.

To view a topic, click the topic name in the **Search Results** list.

Using Your Computer guide

In addition to this *Using Your Notebook* guide, the *Using Your Computer* guide has been included on your hard drive. This guide includes information on using Windows, using the Internet, sending a fax, and changing power-setting settings as well as other topics.

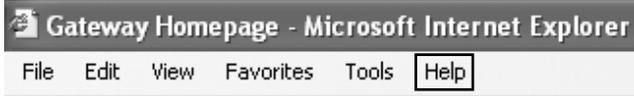
To access the **Using Your Computer** guide:

Click **Start**, **All Programs**, then click **Gateway Documentation**.

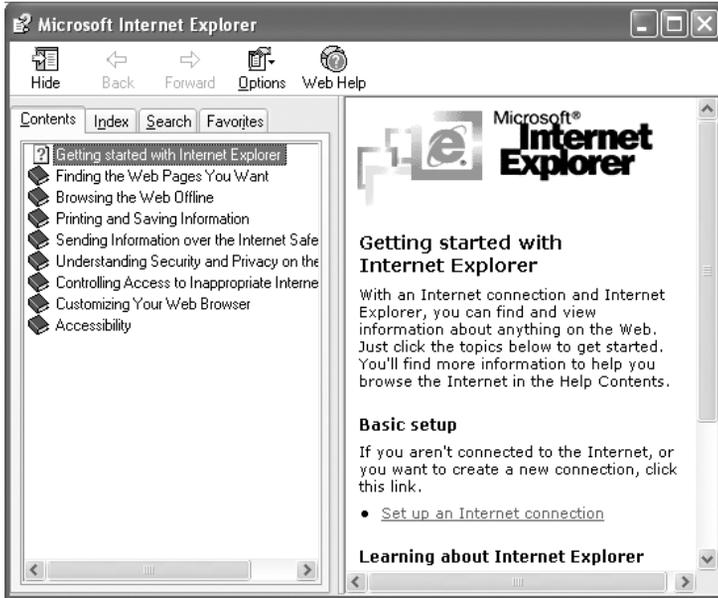


Online help

Many programs provide information online so you can research a topic or learn how to perform a task while you are using the program. You can access most online help information by selecting a topic from a **Help** menu or by clicking a **Help** button.



You can search for information by viewing the help contents, checking the index, searching for a topic or keyword, or browsing through the online help.



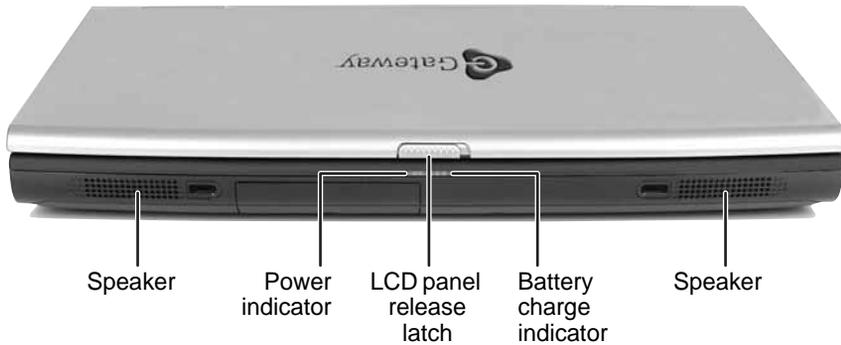
Chapter 2

Checking Out Your Gateway Notebook



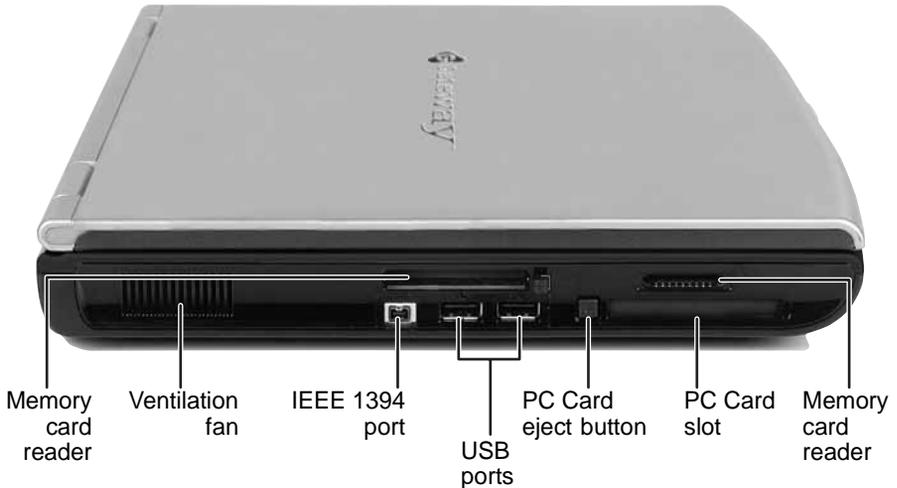
- Identifying features
- Locating your notebook's model and serial number
- Locating the Microsoft Certificate of Authenticity
- Locating the specifications for your notebook
- Purchasing accessories

Front



Component	Description
Speakers	Provide audio output when headphones or amplified speakers are not plugged in.
Power indicator	<ul style="list-style-type: none">▪ LED on - notebook is on.▪ LED blinking - notebook is in Standby mode.▪ LED off - notebook is off.
LCD panel release latch	Open the LCD panel by sliding the release latch.
Battery charge indicator	<ul style="list-style-type: none">▪ LED on - battery is charging.▪ LED blinking - battery charge is very low.▪ LED off - battery is fully charged.

Left side



Component	Icon	Description
Memory card reader (optional)		Insert a memory card from a digital camera, MP3 player, PDA, or cellular telephone into the optional memory card reader. For more information, see “Using the memory card reader” on page 45 . The memory card reader supports CompactFlash®, IBM Microdrive™, Memory Stick®, MultiMediaCard™, and Secure Digital™ cards.
Ventilation fan		Helps cool internal components. Caution: Do not block or insert objects into these slots. If these slots are blocked, your notebook may overheat resulting in unexpected shutdown or permanent damage to the notebook.
IEEE 1394 port (optional)	1394	Plug an IEEE 1394 (also known as Firewire® or i.Link®) device (such as a digital camcorder) into this optional 4-pin IEEE 1394 port.
USB ports		Plug USB devices (such as a diskette drive, flash drive, printer, scanner, camera, keyboard, or mouse) into these ports.

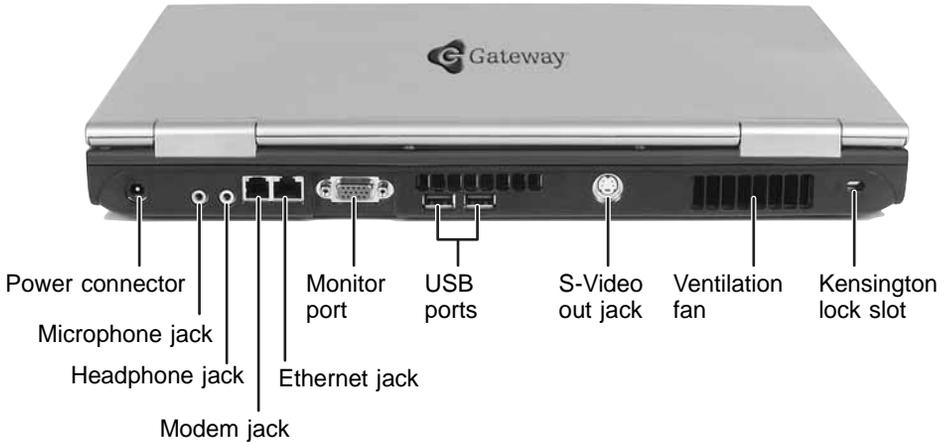
Component	Icon	Description
PC Card eject button		Press the eject button to remove a PC Card from the PC Card slot. For more information, see “Adding and removing a PC Card” on page 47.
PC Card slot		Insert one Type II PC Card into this slot. For more information, see “Adding and removing a PC Card” on page 47.

Right side



Component	Description
DVD/CD-RW or DVD-RW drive	<p>Insert CDs or DVDs into this drive. For more information, see “Using the DVD drive” on page 42.</p> <p>This drive may be a combination DVD/CD-RW or DVD-RW drive. To determine the type of drive in the notebook, examine the drive tray's plastic cover and compare the logo to those listed in “Identifying drive types” on page 42.</p>

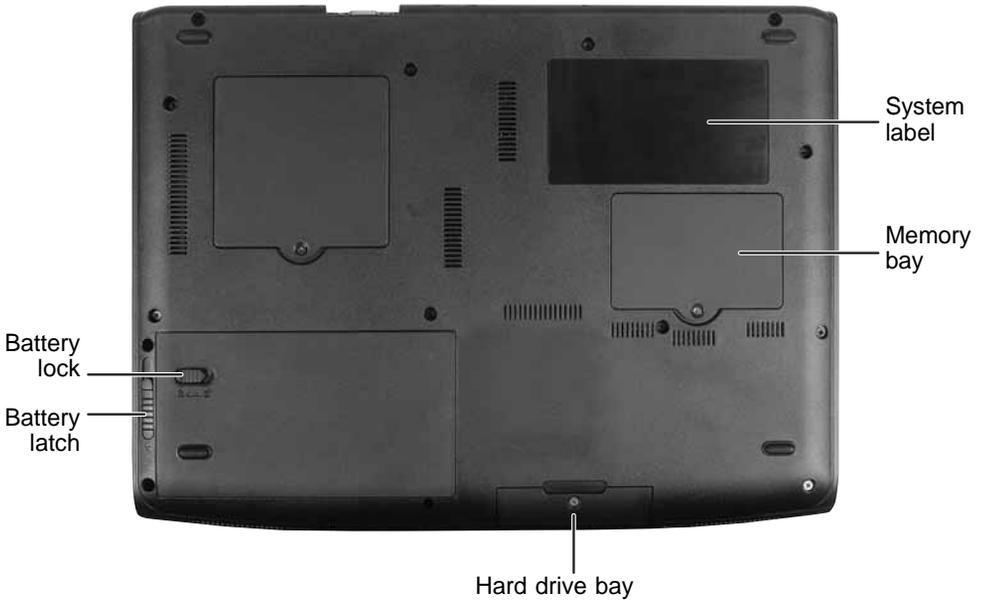
Back



Component	Icon	Description
Power connector		Plug the AC adapter cable into this connector.
Microphone jack		Plug a microphone into this jack.
Headphone jack		Plug amplified speakers or headphones into this jack. The built-in speakers are turned off when speakers or headphones are plugged into this jack.
Modem jack		Plug a modem cable into this jack.
Ethernet jack		Plug a 10/100 Ethernet network cable into this jack.
Monitor port		Plug an analog VGA monitor into this port.
USB ports		Plug USB devices (such as a diskette drive, flash drive, printer, scanner, camera, keyboard, or mouse) into these ports.

Component	Icon	Description
S-Video out jack (optional)		Plug a standard S-Video cable into this jack. For more information, see “Viewing the display on a television” on page 51.
Ventilation fan		Helps cool internal components. Caution: Do not block or insert objects into these slots. If these slots are blocked, your notebook may overheat resulting in unexpected shutdown or permanent damage to the notebook.
Kensington™ lock slot		Secure your notebook to an object by connecting a Kensington cable lock to this slot.

Bottom



Component	Description
Battery lock	Slide to unlock the battery. For more information, see “Changing batteries” on page 59.
Battery latch	Slide to release the battery. For more information, see “Changing batteries” on page 59.
Hard drive bay	The hard drive is located in this bay. For more information, see “Replacing the hard drive kit” on page 70.
Memory bay	Install a memory module into this bay. For more information, see “Adding or replacing memory” on page 68.
System label	Includes the product model number. For more information, see “Identifying your model” on page 17.

Keyboard area



Component	Icon	Description
Multi-function buttons		Press these buttons to open programs assigned to them or control the volume. For more information, see “Multi-function buttons” on page 34.
Keyboard		Provides all the features of a full-sized, 86-key keyboard. For more information, see “Using the keyboard” on page 30.
Status indicators		Inform you when a drive is in use or when a button has been pressed that affects how the keyboard is used. For more information, see “Status indicators” on page 29.
Touchpad		Provides all the functionality of a mouse. For more information, see “Using the EZ Pad touchpad” on page 36.
Power button		Press to turn the power on or off. You can also configure the power button for Standby/Resume mode. For more information on configuring the power button mode, see “Changing Power-saving Settings” in Using Your Computer which has been included on your hard drive. To access this guide, click Start, All Programs , then click Gateway Documentation .

Identifying your model

Important



The labels shown in this section are for informational purposes only. Label information varies by model, features ordered, and location.

Gateway model and serial number

The label on the bottom of your notebook contains information that identifies your notebook model and its features. Gateway Customer Care will need this information if you call for assistance.



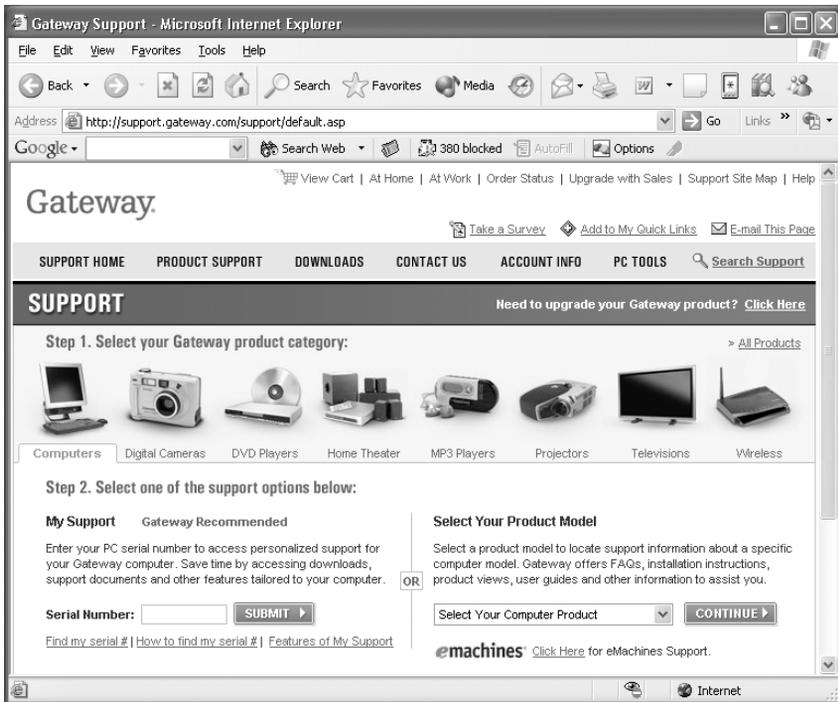
Microsoft Certificate of Authenticity

The Microsoft Certificate of Authenticity label found on the bottom of your notebook includes the product key code for your operating system.



Finding your specifications

For more information about your notebook, such as memory size, memory type, and hard drive size, visit Gateway's *eSupport* page at support.gateway.com. The *eSupport* page also has links to additional Gateway documentation and detailed specifications. For more information, see “Using eSupport” on page 4.



Accessories

To order accessories, visit the Accessory Store at accessories.gateway.com.

Batteries and automobile/airplane power adapters

If you run your notebook on battery power for extended periods, you may want to buy an additional battery so you can swap batteries when necessary. See “[Changing batteries](#)” on page 59 for more information about using an additional battery.

With an automobile/airplane power adapter, you can save battery power by plugging your notebook into an automobile cigarette lighter or an airplane in-flight power receptacle.

Carrying cases

Gateway has large-capacity carrying cases if you need additional space for accessories or supplies.

Memory

Large programs, such as multimedia games or graphics programs, use a lot of memory. If your programs are running more slowly than you think they should, try adding more memory. See “[Adding or replacing memory](#)” on page 68 for more information.

Printers

You can attach almost any type of printer to your notebook. The most common types are inkjet and laser printers, which print in color or black and white.

Inkjet printers and cartridges are relatively inexpensive, but they are slower than laser printers. Using an inkjet color printer, you can print pictures, banners, and greeting cards, as well as documents.

Laser printers and cartridges are more expensive, but they print much faster than inkjet printers. Laser printers are better than inkjet printers when you are printing large documents.

USB flash drive

Use a USB flash drive for storing files or transferring files to another computer.

Chapter 3

Getting Started



- Installing the battery
- Connecting the AC adapter
- Turning your notebook on and off
- Using the status indicators, keyboard, and the EZ Pad touchpad
- Adjusting the volume

Installing the battery

▶ To install the battery:

- 1 Close the LCD panel.
- 2 Turn your notebook over so the bottom is facing up.
- 3 Hold the battery label-side down and slide it into the open battery compartment until the battery clicks into place.



- 4 Slide the battery lock to the locked position.



Connecting the AC adapter

You can run your notebook using an AC adapter or your notebook's battery. The battery was shipped to you partially charged. You should use the AC adapter right away to fully charge the battery. Allow three hours for the battery to fully charge.

Important



If the battery is not fully charged before you use your notebook on battery power for the first time, the battery life may be much shorter than you expect. If the battery life seems short even after being charged for three hours, the battery may need to be recalibrated. For information on recalibrating the battery, see [“Recalibrating the battery” on page 57](#).

▶ To connect the AC adapter:

- 1 Connect the power cord to the AC adapter.



Caution



Make sure that you use the AC adapter that came with your notebook or one of the same type purchased from Gateway.

Replace the power cord if it becomes damaged. The replacement cord must be of the same type and voltage rating as the original cord or your notebook may be damaged.

- 2 Connect the AC adapter to your notebook's power connector.



- 3 Plug the power cord into a wall outlet.

The battery charge indicator turns on (see “Front” on page 10 for the location of the battery charge indicator).

If the battery charge indicator does not turn on, complete the following steps until it turns on:

- a Unplug the adapter from your notebook, then plug it back in.
 - b Press **FN+F1** to toggle the status lights on and off.
- 4 When you finish using your notebook for the first time, turn off your notebook and leave your notebook connected to AC power until the battery charge indicator turns off.

Warning



Do not attempt to disassemble the AC adapter. The AC adapter has no user-replaceable or user-serviceable parts inside. The AC adapter has dangerous voltages that can cause serious injury or death. Contact Gateway about returning defective AC adapters.

Important



If the battery charge indicator does not turn off after three hours, contact Gateway Customer Care at support.gateway.com.



Protecting from power source problems

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

Warning

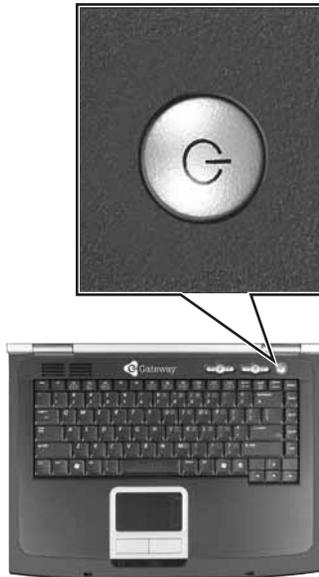


High voltages can enter your notebook through both the power cord and the modem connection. To protect your notebook and avoid electrical shock, use a surge protector. If you have a telephone modem, use a surge protector that has a modem jack. If you have a cable modem, use a surge protector that has an antenna/cable TV jack. During an electrical storm, unplug both the surge protector and the modem.

Starting your notebook

▶ To start your notebook:

- 1 Slide the latch on the front of your notebook, then lift the LCD panel.
- 2 Press the power button located above the keyboard.



The power button is preset to On/Off mode. However, you can also set it to function in Standby/Resume mode.

Tips & Tricks



For more information about changing the power button mode, see “Changing Power-saving Settings” in *Using Your Computer* which has been included on your hard drive. To access this guide, click **Start, All Programs**, then click **Gateway Documentation**.

- 3 If you are starting your notebook for the first time, follow the on-screen instructions to set up your notebook.



Waking up your notebook

When you have not used your notebook for several minutes or if you close the LCD panel without turning off your notebook, it may enter a power-saving mode called *Standby*. While in Standby, the power indicator flashes.

If your notebook is in Standby mode, press the power button to “wake” it up.

Tips & Tricks



For more information about changing the power button mode, see “Changing Power-saving Settings” in *Using Your Computer* which has been included on your hard drive. To access this guide, click **Start, All Programs**, then click **Gateway Documentation**.

Turning off your notebook

To turn off your notebook:

- 1 Click **Start**, then click **Turn Off Computer**. The *Turn Off Computer* dialog box opens.
- 2 Click **Turn Off**. Windows shuts down and turns off your notebook.

Important



If for some reason you cannot use the Turn Off Computer option in Windows to turn off your notebook, press and hold the power button for about five seconds, then release it.



Restarting (rebooting) your notebook

If your notebook does not respond to keyboard or touchpad input, you may have to close programs that are not responding. If closing unresponsive programs does not restore your notebook to normal operation, you may have to restart (reboot) your notebook.

To close unresponsive programs and restart your notebook:

- 1 Press **CTRL+ALT+DEL**. The *Windows Security* dialog box opens.
- 2 Click **Task Manager**. The *Windows Task Manager* dialog box opens.
- 3 Click the program that is not responding.
- 4 Click **End Task**.
- 5 Click **X** in the top-right corner of the *Windows Task Manager* dialog box.
- 6 If your notebook does not respond, turn it off, wait ten seconds, then turn it on again.

Important



If your notebook does not turn off immediately, complete the following steps until the notebook turns off:

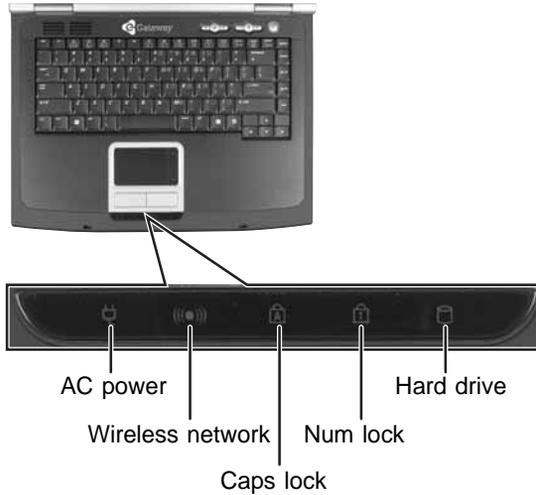
- 1 Press and hold the power button for about five seconds, then release it.
- 2 Unplug the power cord and remove the battery for more than 10 seconds.

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



Status indicators

Status indicators inform you when a drive is being used or when a button has been pressed that affects how the keyboard is used.



Indicator	Icon	Description
AC power		<ul style="list-style-type: none">▪ LED on - AC power is connected.▪ LED off - AC power is not connected.
Wireless Ethernet (optional)		<ul style="list-style-type: none">▪ LED on - wireless network is turned on.▪ LED off - wireless network is turned off.
Caps lock		<ul style="list-style-type: none">▪ LED on - caps lock is turned on.▪ LED off - caps lock is turned off.
Num lock		<ul style="list-style-type: none">▪ LED on - Numeric keypad is turned on.▪ LED off - Numeric keypad is turned off.
Hard drive		<ul style="list-style-type: none">▪ LED blinking - The hard drive is in use.▪ LED off - The hard drive is not in use.

Important

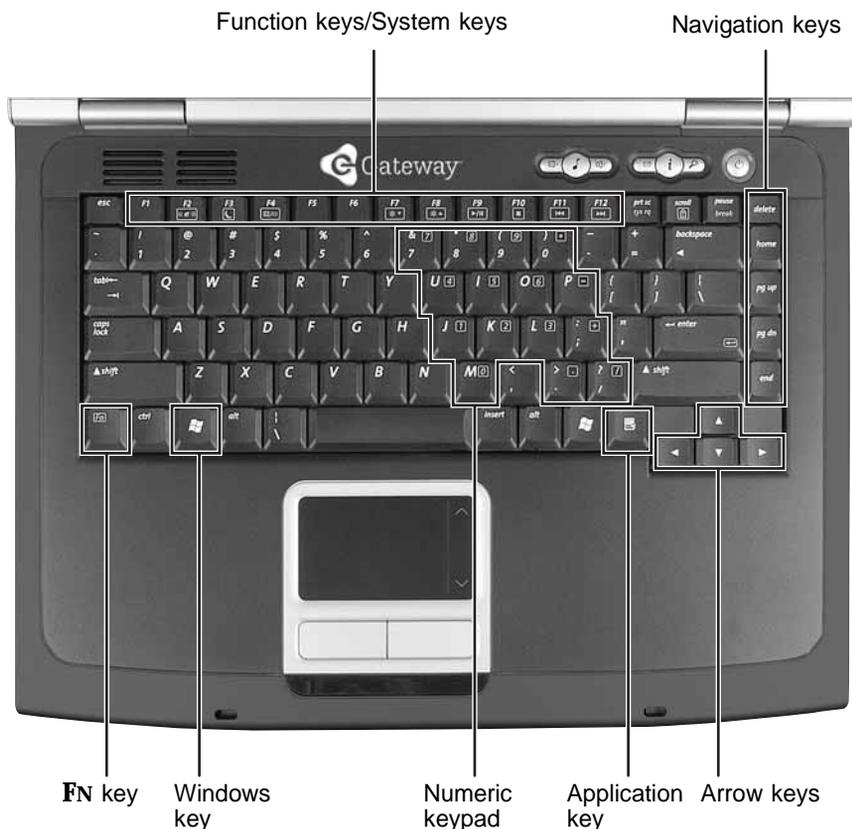


If none of the indicators are on, you may need to press **FN+F1** to toggle the status lights on and off.

Using the keyboard

Your notebook features a full-size keyboard that functions the same as a desktop computer keyboard. Many of the keys have been assigned alternate functions, including shortcut keys for Windows, function keys for specific system operations, and the Num Lock keys for the numeric keypad.

You can attach an external keyboard to the notebook using a USB port. You do not need to shut down the notebook to connect a USB keyboard.



Key types

The keyboard has several different types of keys. Some keys perform specific actions when pressed alone and other actions when pressed in combination with another key.

Key type	Icon	Description
Function keys		Press these keys labeled F1 to F12 to perform actions in programs. For example, pressing F1 may open help. Each program uses different function keys for different purposes. See the program documentation to find out more about the function key actions.
System keys		Press these colored keys in combination with the FN key to perform specific actions. For more information, see “System key combinations” on page 32 .
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.
FN key		Press the FN key in combination with a colored system key to perform a specific action.
Windows key		Press this key to open the Windows Start menu. This key can also be used in combination with other keys to open utilities like F (Search utility), R (Run utility), and E (Explorer utility).
Numeric keypad		Use these keys to type numbers when the numeric keypad is turned on. Press FN+NUM LOCK to turn on the numeric keypad.
Application key		Press this key for quick access to shortcut menus and help assistants in Windows.
Arrow keys		Press these keys to move the cursor up, down, right, or left.

System key combinations

When you press the **FN** key and a system key at the same time, your notebook performs the action identified by the colored text or icon on the key.

Press and hold **FN**, then press this system key...

To...



Toggle the status indicators on or off. For more information, see [“Status indicators” on page 29](#).



Turn the optional wireless network on or off. For more information, see [“Networking Your Notebook” on page 105](#).

Warning: Radio frequency wireless communication can interfere with equipment on commercial aircraft. Current aviation regulations require wireless devices to be turned off while traveling in an airplane. 802.11G (also known as wireless Ethernet or Wifi) communication devices are examples of devices that provide wireless communication.

Important: Your notebook came to you with the optional wireless network turn off.



Enter Standby mode. Press the power button to leave Standby mode. For more information, see “Changing Power-saving Settings” in *Using Your Computer* which has been included on your hard drive. To access this guide, click **Start, All Programs**, then click **Gateway Documentation**.



Toggle the notebook display in the following order:

- The LCD
- An external monitor or projector (a monitor or projector must be plugged into the monitor port on your notebook)
- Both displays at the same time
- S-Video (optional)

For more information, see [“Viewing the display on a projector or monitor” on page 49](#).

Press and hold **FN**, then
press this system key...

To...



Decrease the brightness of the display.



Increase the brightness of the display.



Play or Pause the CD or DVD.



Stop playing the CD or DVD.



Skip back one CD or DVD song or track.



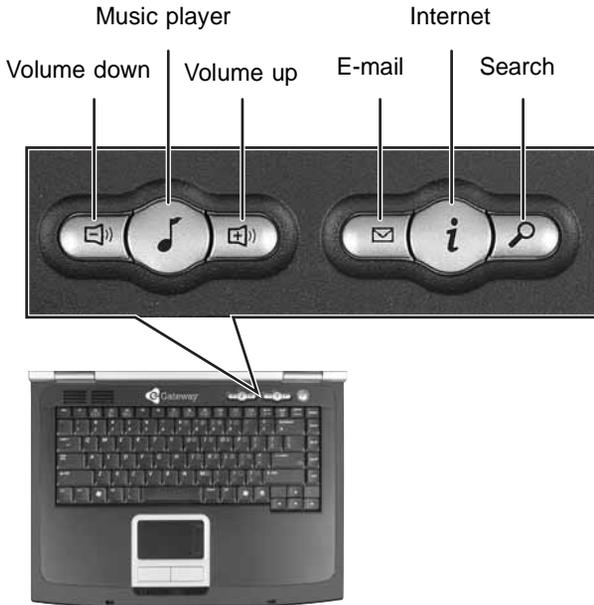
Skip ahead one CD or DVD song or track.



Turn on Num Lock so you can use the numeric keypad.
Press this key combination again to turn off Num Lock.
The Num Lock status indicator appears when this
function is turned on.

Multi-function buttons

Press the multi-function buttons to open the programs associated with them.

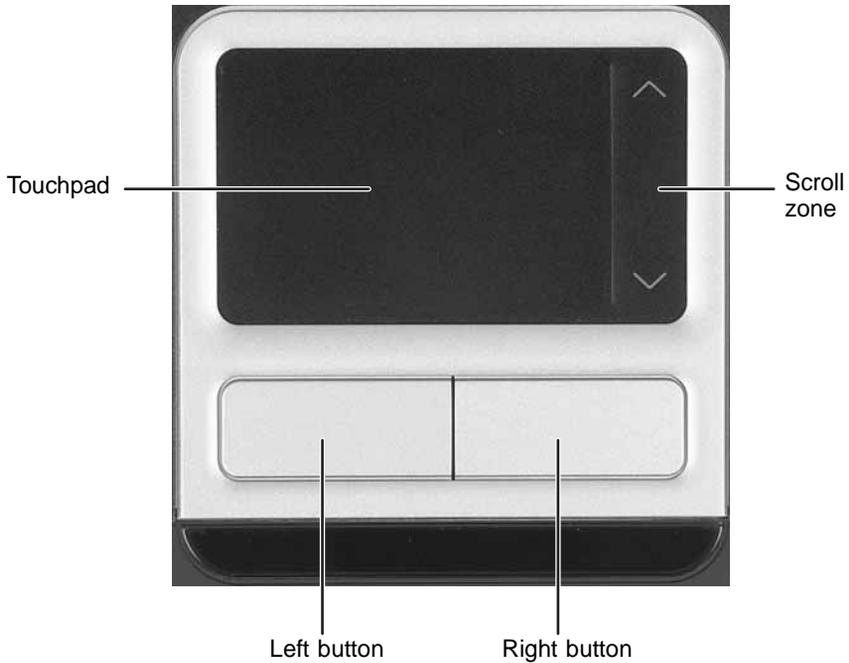


Button	Icon	Press to...
Volume down		Turn the volume down. Press the Volume Up and Volume Down buttons at the same time to mute or un-mute the sound.
Music player		Open your default music player.
Volume up		Turn the volume up. Press the Volume Up and Volume Down buttons at the same time to mute or un-mute the sound.
E-mail		Open your default e-mail program.

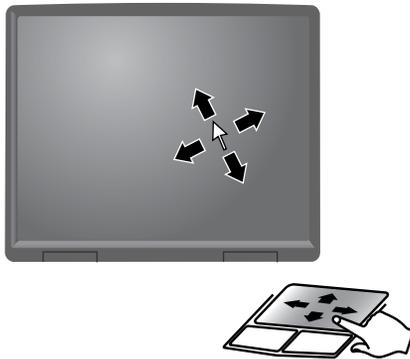
Button	Icon	Press to...
Internet		Open your default Web browser.
Search		Open the <i>Search Results</i> window. For more information, see “Searching for files” in <i>Using Your Computer</i> which has been included on your hard drive. To access this guide, click Start , All Programs , then click Gateway Documentation .

Using the EZ Pad touchpad

The EZ Pad™ consists of a touchpad, two buttons, and a scroll zone.



When you move your finger on the touchpad, the *pointer* (arrow) on the screen moves in the same direction.



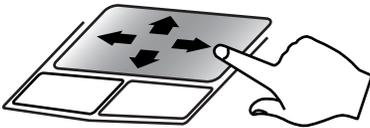
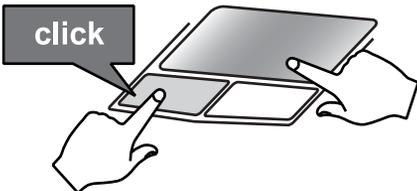
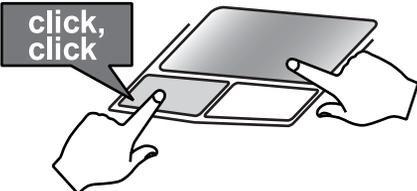
You can use the EZ-Pad *left* and *right buttons* below the touchpad to select objects.

Tips & Tricks



For instructions on how to adjust the double-click speed, pointer speed, right-hand or left-hand configuration, and other touchpad settings, see “Changing the mouse or touchpad settings” in *Using Your Computer* which has been included on your hard drive. To access this guide, click **Start**, **All Programs**, then click **Gateway Documentation**.

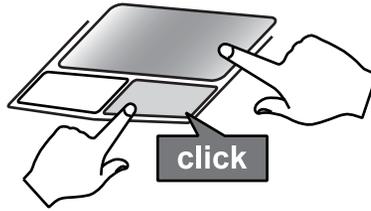
Using the touchpad

To...	Do this...
Move the pointer on the screen.	 <p>Move your finger around on the touchpad. If you run out of space and need to move the pointer farther, lift your finger, move it to the middle of the touchpad, then continue moving your finger.</p>
Select an object on the screen.	 <p>Position the pointer over the object. Quickly press and release the left button once. This action is called <i>clicking</i>.</p>
Start a program or open a file or folder.	 <p>Position the pointer over the object. Press the left button twice in rapid succession. This action is called <i>double-clicking</i>.</p>

To...

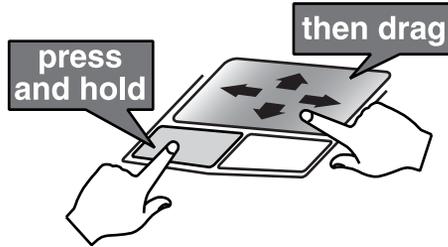
Do this...

Access a shortcut menu or find more information about an object on the screen.



Position the pointer over the object. Quickly press and release the right button once. This action is called *right-clicking*.

Move an object on the screen.



Position the pointer over the object. Press the left button and hold it down, then use the touchpad to move (drag) the object to the appropriate part of the screen. Release the button to drop the object where you want it.

Adjusting the volume

You can use the volume controls to adjust the overall volume and the volume of specific sound devices in your notebook.

To adjust the overall volume level 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 [“Multi-function buttons” on page 34](#).



Tips & Tricks



For instructions on how to adjust the volume in Windows, see “Adjusting the Volume” in *Using Your Computer* which has been included on your hard drive. To access this guide, click **Start**, **All Programs**, then click **Gateway Documentation**.

Chapter 4

Using Drives and Ports



- Using DVD drives
- Using the media card reader
- Using a PC Card
- Viewing the display on a monitor, projector, or television

Using the DVD drive

You can use your notebook to enjoy a wide variety of multimedia features.

Identifying drive types

Your Gateway notebook may contain one of the following drive types. Look on the front of the drive for one or more of the following logos:

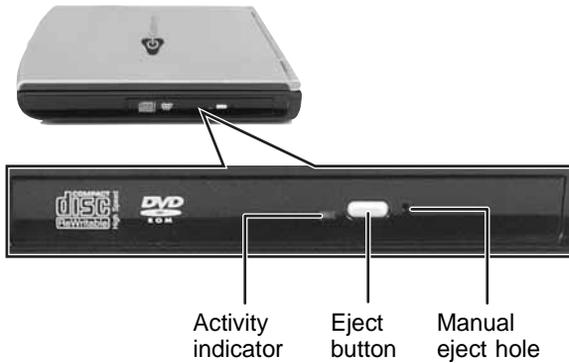
If your drive has this logo...	This is your drive type...	Use your drive for...
	Combination DVD/CD-RW drive	Installing programs, playing audio CDs, playing DVDs, accessing data, and recording music and data to CD-R or CD-RW discs. You cannot use this drive to create DVDs.
	DVD-RW Drive	Installing programs, playing audio CDs, playing DVDs, accessing data, recording music and data to CD-R or CD-RW discs, and recording video and data to DVD-RAM, DVD-R, or DVD-RW discs.

Tips & Tricks



For more information, see [“Creating CDs and DVDs”](#) on page 45.

Inserting a CD or DVD



Important



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

▶ To insert a CD or DVD:

- 1 Press the eject button on the DVD drive. After the tray opens slightly, pull the disc tray completely open.
- 2 Place the disc in the tray with the label facing up, then press down carefully on the disc until it snaps into place.

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.

- 3 Push the tray in until it is closed.



Playing a CD

Use the 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
- Listen to Internet Radio

Tips & Tricks



For more information about playing CDs, see “Playing CDs” in *Using Your Computer* which has been included on your hard drive. To access this guide, click **Start, All Programs**, then click **Gateway Documentation**.

Playing a DVD

A Digital Versatile Disc (DVD) is similar to a standard CD but has greater data capacity. Because of this increased capacity, full-length movies, several albums of music, or several gigabytes of data can fit on a single disc. You can play DVDs with the DVD program or Windows Media Player.

Tips & Tricks



For more information about playing DVDs, see “Playing DVDs” in *Using Your Computer* which has been included on your hard drive. To access this guide, click **Start, All Programs**, then click **Gateway Documentation**.

Creating CDs and DVDs

You can use the CD and DVD burning program on your computer to copy tracks from a music CD to your hard drive, copy or create data CDs and DVDs, create music CDs, create video DVDs, and more.

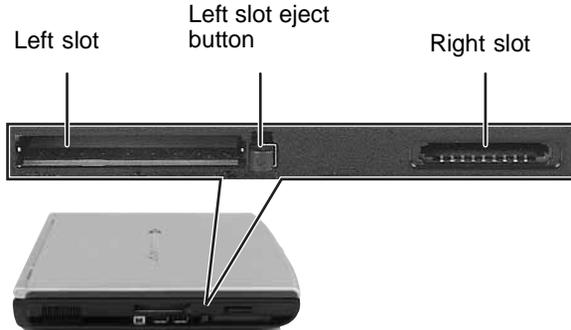
Tips & Tricks



For more information about creating CDs and DVDs, see "Creating CDs and DVDs" in *Using Your Computer* which has been included on your hard drive. To access this guide, click **Start**, **All Programs**, then click **Gateway Documentation**.

Using the memory card reader

You can use memory cards to transfer pictures from a digital camera to your notebook. You can also use the memory card reader to transfer data between your notebook and a device that uses memory cards, such as a PDA, MP3 player, or cellular phone.



Memory card types

The memory card reader supports the following card types.

Card Type	Slot
CompactFlash [®]	left
IBM Microdrive [™]	left
Memory Stick [®]	right
MultiMediaCard [™]	right
Secure Digital [™]	right

Each slot is assigned a different drive letter (for example, the E: and F: drives) so data can be transferred from one media type to another.

Inserting a memory card

To use a memory card:

- 1** Remove the protector from the memory card slot.
- 2** Insert the memory card into the memory card slot with the label facing up and the arrow on the label pointing towards the notebook.
- 3** To access a file on the memory card, click **Start**, then click **My Computer**. Double-click the drive letter (for example, the E: drive), then double-click the file name.



To remove a memory card:

- 1 If you are removing a CompactFlash card or IBM Microdrive, release the eject button by pressing the eject button once, then eject the card by pressing the eject button again.

-OR-

If you are removing a MemoryStick, MemoryStick Pro, SecureDigital, or MultiMediaCard, push the memory card into the notebook. The memory card pops out slightly.

Important



Do not use the remove hardware  icon in the taskbar to remove the memory card.

- 2 Pull the memory card out of the notebook.
- 3 Insert the protector into the memory card slot.



Adding and removing a PC Card

Your notebook has a PC Card slot (also known as a PCMCIA card slot). This slot accepts one Type II card.

You do not need to restart your notebook when changing most cards because your notebook supports *hot-swapping*. Hot-swapping means that you can insert a PC Card while your notebook is running. If your PC Card does not work after hot-swapping, see the PC Card manufacturer's documentation for further information.

▶ To insert a PC Card:

- Push the card firmly into the PC Card slot label-side up until the outer edge of the card is flush with the side of your notebook.



▶ To remove a PC Card:

- 1 Click the remove hardware  icon in the taskbar, the PC Card name, then click **Stop**.

-OR-

Turn off your notebook.

Important



If the remove hardware icon does not appear on the taskbar, click the show hidden icons  button.

- 2 Release the eject button by pressing the PC Card eject button once.
- 3 Eject the PC Card by pressing the eject button again.



Viewing the display on a projector or monitor

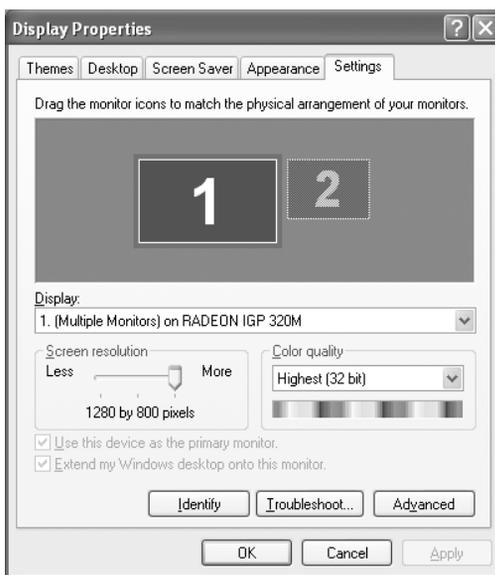
You can use your notebook for giving presentations by connecting an external monitor or projector to your monitor (VGA) port. Your notebook supports simultaneous LCD and CRT display. Simultaneous display lets you control the presentation from your notebook and at the same time face your audience.



To use a projector or external monitor:

- 1 Turn off your notebook.
- 2 Plug the projector or monitor cable into the VGA port on your notebook. For the location of the VGA port, see [“Back” on page 13](#).
- 3 Turn on your notebook.

- 4 Plug the projector's or monitor's power cord into an AC power source and turn it on. Windows recognizes the new hardware and searches for its driver. You may need to install the driver from the disc supplied by the manufacturer or download the driver from the manufacturer's Web site.
- 5 After the driver is installed, right-click any empty space on the desktop, then click **Properties**. The *Display Properties* dialog box opens.
- 6 Click the **Settings** tab.



- 7 Right-click the second monitor icon (labeled 2), then click **Attached**.
- 8 Click **Apply**.
- 9 Adjust properties such as **Screen Resolution** or **Color Quality** if necessary.
- 10 Click **OK**.



Important



Press **FN+F4** to switch between viewing the display on the LCD panel and viewing the display on the projector or monitor.

Important



If an external monitor or projector is connected and you close the LCD panel, your notebook turns off the LCD panel, but does not enter Standby mode.

Viewing the display on a television

The optional S-Video out jack on your notebook lets you view your notebook display on a television screen using a standard S-Video cable.

Important



To turn on external video by default, connect the television (or other external video device) before starting your notebook.

Important



Audio is not transmitted through the S-Video jack. Use the built-in speakers, a set of headphones or external powered speakers, or connect your notebook to a stereo system to hear sound while playing a DVD. DVD playback to a VCR will be scrambled by copyright protection software.

To view your notebook display on a television:

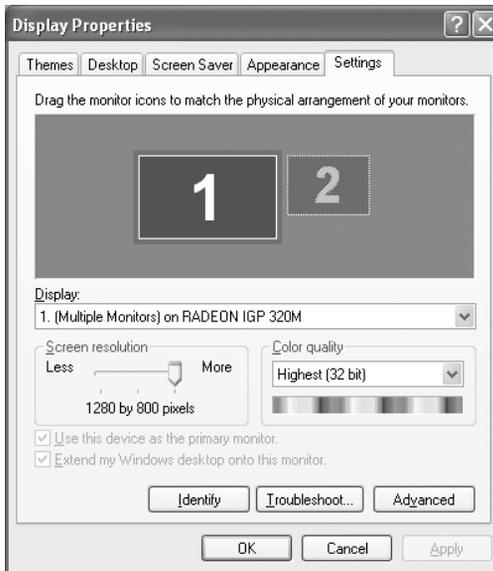
- 1** With your notebook off, connect one end of a standard S-Video cable to the S-Video jack. For the location of the S-Video jack, see [“Back” on page 13](#).
- 2** Connect the other end of the cable to the Video in jack on your television or VCR.
- 3** Turn on the television or VCR.

- 4 Start your notebook.
- 5 Press **FN+F4** several times until the notebook display is shown on your television.



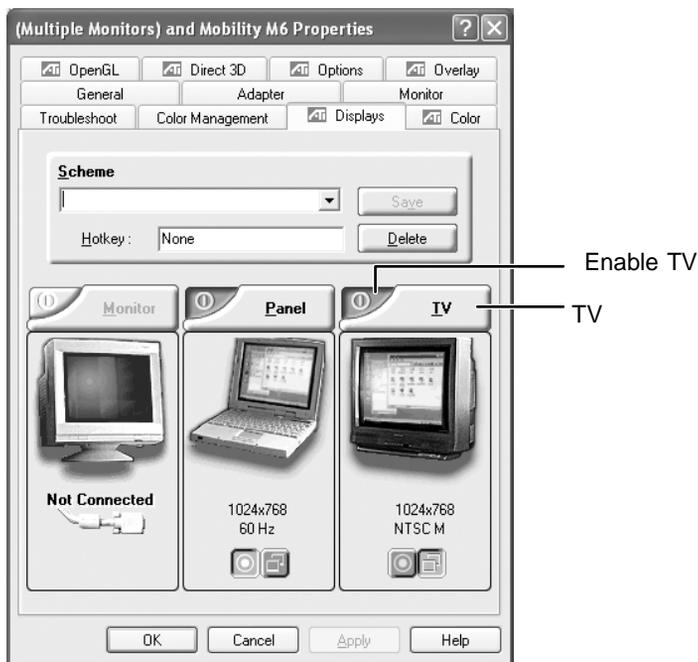
 **To modify television settings:**

- 1 Click **Start**, then click **Control Panel**. The *Control Panel* window opens. If your Control Panel is in Category View, click **Appearance and Themes**.
- 2 Click/Double-click the **Display** icon. The *Display Properties* dialog box opens.
- 3 Click the **Settings** tab.



- 4 Click **Advanced**. The *Multiple Monitors and RADEON IGP 320M Properties* dialog box opens.

5 Click the **Displays** tab.



6 Click the Enable TV button if it is not already enabled.

7 Click TV to make any adjustments to the TV settings.

8 Click **Apply**.

9 Click **OK** to close the *Multiple Monitors and RADEON IGP 320M Properties* dialog box.

10 Click **OK** to close the *Display Properties* dialog box.

11 Click **X** to close the *Control Panel* window.



Chapter 5

Managing Power



- Checking and recharging the battery
- Recalibrating the battery
- Changing batteries
- Extending the life of the battery

Monitoring the battery charge

Your new Gateway notebook is designed to provide an exceptional balance of performance and portability. Your notebook uses the latest chipset and mobile processor technologies to manage the processor speed and power consumption for a greater battery life experience. This design provides you with maximum performance when plugged into AC power balanced with optimized battery life when on battery power.

Closely monitor the battery charge. When the battery charge gets low, change the battery or connect to AC power immediately to prevent losing any unsaved work.

To monitor the battery charge:

- Double-click the power cord icon  or battery icon  in the taskbar. The *Power Meter* dialog box opens.

Important



If the power cord or battery icon does not appear on the taskbar, click the show hidden icons  button. If the icon still does not appear, make sure that **Always show icon on the taskbar** is checked on the Power Options Properties Advance tab.

For more information, see “Changing advanced settings” in *Using Your Computer* which has been included on your hard drive. To access this guide, click **Start, All Programs**, then click **Gateway Documentation**.

- Look at the battery charge indicator:
 - LED off - battery is fully charged.
 - LED on - battery is charging.
 - LED blinking - battery charge is very low.

Important



This LED only lights up when the notebook is connected to AC power. For the location of the battery charge indicator, see [“Front” on page 10](#).

- Wait for a Low Battery warning message to appear.

If your battery charge indicator displays what looks like an inaccurate charge, you may need to recalibrate the battery. For more information, see [“Recalibrating the battery” on page 57](#).

Recharging the battery

The battery recharges while it is installed and your notebook is connected to AC power. While the battery is recharging, the battery charge indicator turns on and the battery icon in the taskbar has a lightning bolt .

Important



If the power cord or battery icon does not appear on the taskbar, click the show hidden icons  button. If the icon still does not appear, make sure that **Always show icon on the taskbar** is checked on the Power Options Properties Advance tab.

For more information, see “Changing advanced settings” in *Using Your Computer* which has been included on your hard drive. To access this guide, click **Start, All Programs**, then click **Gateway Documentation**.

Recalibrating the battery

If your notebook unexpectedly goes into Standby mode while you are using it but the battery charge is not low, you may need to recalibrate your battery. You should also recalibrate the battery periodically to maintain the accuracy of the battery gauge.

To recalibrate the battery:

- 1 Close all open files and programs.
- 2 Connect your notebook to AC power and allow the battery to completely charge.
- 3 Disconnect the AC power and restart your notebook.

- 4 Completely discharge the battery by doing the following:
 - a From the desktop, right-click on the power icon, then select **Adjust Power Properties**.
 - b Click the **Power Schemes** tab.
 - c Click the arrow button to open the **Power Schemes** list, then click **Always On**.
 - d Click the **Alarms** tab.
 - e Click to deselect the **Low battery alarm** and **Critical battery alarm** checkboxes. Let the battery drain until your notebook automatically turns off.

Important



Do not use your notebook during the recalibration process. Do not connect the AC adapter to your notebook during this process, or you will interrupt the recalibration process and will have to start again.

- 5 After the battery is completely drained, reconnect your notebook to AC power.
- 6 Charge the battery completely until the yellow battery status indicator goes out.
- 7 When you are ready to use your notebook again, do the following:
 - a From the desktop, right-click on the power icon, then select **Adjust Power Properties**.
 - b Click the **Power Schemes** tab.
 - c Click the arrow button to open the **Power Schemes** list, then click the power scheme you want.
 - d Click the **Alarms** tab.
 - e Click to select the **Low battery alarm** and **Critical battery alarm** checkboxes.



Changing batteries

If your notebook is connected to AC power, you can change the battery while the notebook is turned on.

Warning



Danger of explosion if battery is incorrectly replaced.

Replace only with a battery specifically manufactured for your Gateway notebook. Discard used batteries according to the manufacturer's instructions.

The battery used in this device may present a fire or chemical burn hazard if mishandled. Do not disassemble, heat above 212°F (100°C), or incinerate. Dispose of used battery promptly. Keep away from children.

Replacing the battery

To replace the battery:

- 1 If your notebook is on and is connected to AC power, go to [Step 2](#).

-OR-

If your notebook is on and is not connected to AC power, save your work and turn off your notebook.

- 2 Close the LCD panel.
- 3 Turn your notebook over so the bottom is facing up.

- 4 Slide the battery lock to the unlock position.



- 5 Slide the battery release latch, then lift the battery out of the bay.



- 6 Place a recharged battery into the bay and press down until it snaps into place.

- 7 Slide the battery lock to the lock position.

- 8 Turn your notebook over.
- 9 Open the LCD panel and press the power button.



Extending battery life

Conserving battery power

To conserve power while using the battery to power your notebook:

- Dim the display as low as is comfortable.
- Remove PC Cards and IBM Microdrive cards when you do not need them. Many PC Cards and Microdrive cards use a small amount of power while inserted, even if they are not being used.
- Modify the power management settings for maximum power savings.

Tips & Tricks



For more information about using power management settings, see “Changing Power-saving Settings” in *Using Your Computer* which has been included on your hard drive. To access this guide, click **Start**, **All Programs**, then click **Gateway Documentation**.

- Close the LCD panel to turn off the display while you are not using your notebook. The display stays off until you open the panel again.
- Use Hibernate mode for maximum power savings while your notebook is not in use.

Tips & Tricks



For more information about using Hibernate mode, see “Activating and using Hibernate mode” in *Using Your Computer* which has been included on your hard drive. To access this guide, click **Start**, **All Programs**, then click **Gateway Documentation**.

- Use the DVD drive only when necessary. These drives use a large amount of power.
- Recharge the battery often, take an extra battery, and fully recharge the batteries before traveling. For more information, see [“Recharging the battery” on page 57](#) and [“Changing batteries” on page 59](#).

Using alternate power sources

To extend battery life, use alternate power sources whenever possible.

- If traveling internationally, take electrical adapters. Save the battery for times when you cannot use a power adapter. If you plan on taking your AC power adapter, also take a single-plug surge protector.
- If you will have access to an EmPower™ in-flight power receptacle or an automobile cigarette lighter, use an airplane/automobile power adapter or power inverter. Save the battery for times when you cannot use a power adapter.
- To find AC power outlets in airports, look for them next to support pillars, in large areas such as boarding gates, and under banks of telephones.

Changing power modes

You can use the following power modes to lengthen the life of your notebook's battery:

- *Standby* - while your notebook is in Standby, it switches to a low power state where devices, such as the display and drives, turn off.
- *Hibernate* - (also called *save to disk*) writes all current memory (RAM) information to the hard drive, then turns your notebook completely off. The next time you turn on your notebook, it reads the memory information from the hard drive and opens the programs and documents that were open when you activated Hibernate mode.

Using power saving modes

Always save your work before using Standby mode. In Standby mode, your notebook reduces or turns off the power to most devices except memory. However, the information in memory is not saved to the hard drive. If power is interrupted, the information is lost.

When in Hibernate mode, your notebook saves all memory information to the hard drive, then turns the power completely off.

If your notebook is...	...and you want to...	...then
On	Enter Standby mode	Press FN+F3 .
On	Enter Hibernate mode (must be activated)	Click Start , then click Turn Off Computer . Press and hold SHIFT , then click Hibernate .
In Standby or Hibernate mode	Exit Standby or Hibernate mode	Press the power button.

Chapter 6

Upgrading Your Notebook



- Adding and replacing memory
- Replacing the hard drive

Preventing static electricity discharge

Important



Before installing memory or replacing the hard drive, you should read and understand the information in this section.

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

Warning



To avoid exposure to dangerous electrical voltages and moving parts, turn off your notebook and unplug the power cord and modem and network cables before opening the case.

Caution



ESD can permanently damage electrostatic discharge-sensitive components in your notebook. Prevent ESD damage by following ESD guidelines every time you install memory or replace the hard drive.

Before installing memory or replacing the hard drive, follow these guidelines:

- Turn off your notebook.
- Wear a grounding wrist strap (available at most electronics stores) and attach it to a bare metal part of your workbench or other grounded connection.

Warning



To prevent risk of electric shock, do not insert any object into the vent holes of the notebook.

- Touch a bare metal surface on your workbench or other grounded object.
- Unplug the power cord and the modem and network cables.

- Remove the battery. For more information, see [“Changing batteries” on page 59](#).
- Disconnect all peripheral devices and remove any PC Cards.

Before working with computer components, follow these guidelines:

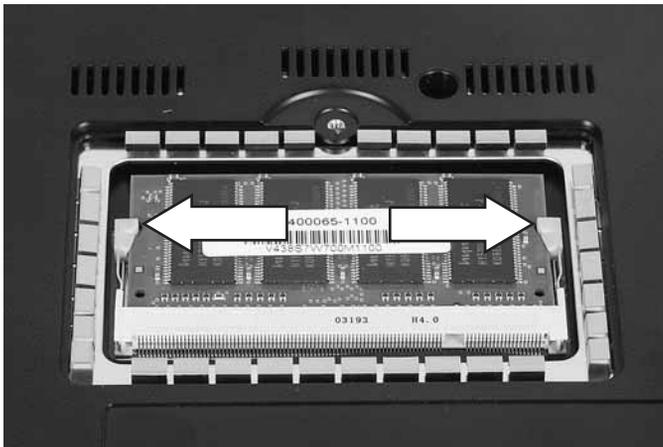
- Avoid static-causing surfaces such as carpeted floors, plastic, and packing foam.
- Remove components from their antistatic bags only when you are ready to use them. Do not lay components on the outside of antistatic bags because only the inside of the bags provide electrostatic protection.
- Always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

Adding or replacing memory

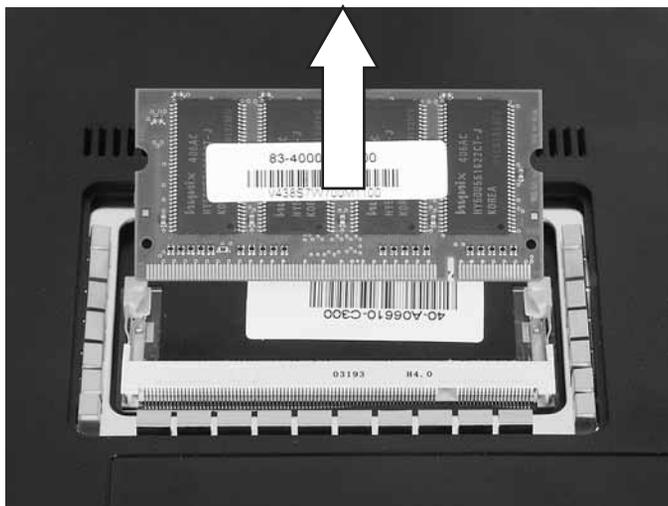
Your notebook uses memory modules called SO-DIMMs (Small Outline Dual Inline Memory Modules). The modules are available in various capacities and any module can be placed in the slot. Use only memory modules designed for your Gateway notebook for upgrading your memory.

▶ To add or replace memory modules:

- 1 Follow the instructions under “[Preventing static electricity discharge](#)” on page 66.
- 2 Turn off your notebook, disconnect the AC adapter and modem and network cables.
- 3 Turn your notebook over so the bottom is facing up.
- 4 Remove the battery. For more information, see “[Changing batteries](#)” on page 59.
- 5 Remove the memory bay cover screw, then remove the memory bay cover. For the location of the memory bay, see “[Bottom](#)” on page 15.
- 6 If you are removing a module, gently press outward on the clip at each end of the memory module until the module tilts upward.



- 7 Pull the memory module out of the slot.



- 8 Hold the new or replacement module at a 30-degree angle and press it into the empty memory slot. This module is keyed so it can only be inserted in one direction. If the module does not fit, make sure that the notch in the module lines up with the tab in the memory bay.

Important



Use only memory modules designed for your Gateway notebook.

- 9 Gently push the module down until it clicks in place.
- 10 Replace the memory bay cover and replace the cover screw.
- 11 Insert the battery, then turn your notebook over.
- 12 Connect the power adapter and modem and network cables, then turn on your notebook.

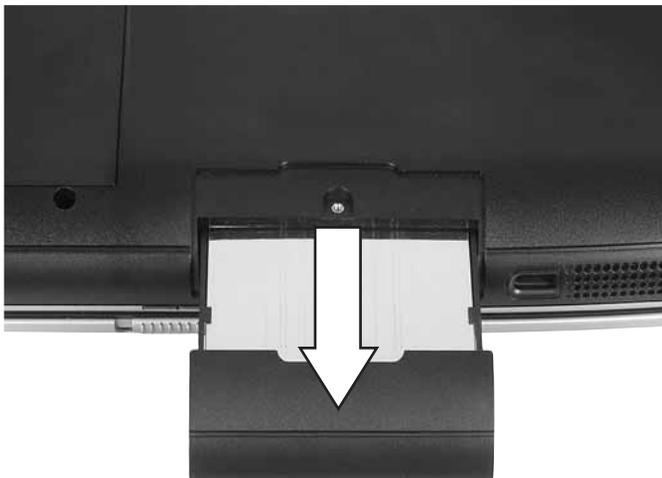


Replacing the hard drive kit

If you would like more hard drive capacity, you can replace your original drive with a higher-capacity drive.

▶ To replace the hard drive kit:

- 1 Back up any data you want to transfer to the new hard drive. For more information, see “Backing up files” in *Using Your Computer* which has been included on your hard drive. To access this guide, click **Start, All Programs**, then click **Gateway Documentation**.
- 2 Follow the instructions under “[Preventing static electricity discharge](#)” on page 66.
- 3 Turn off your notebook, disconnect the AC adapter and modem and network cables.
- 4 Turn your notebook over so the bottom is facing up.
- 5 Remove the battery.
- 6 Remove the hard drive kit screw. For the location of the hard drive bay, see “[Bottom](#)” on page 15.
- 7 Slide the old hard drive kit out of your notebook.



8 If your new hard drive already includes the hard drive kit bracket, go to [Step 13](#).

-OR-

If you need to move the hard drive kit bracket from your old hard drive kit to your new hard drive, go to [Step 9](#).

- 9** Remove the screws that secure the hard drive to the hard drive kit bracket.
- 10** Remove the bracket from the old drive.
- 11** Insert the new drive into the bracket so the screw holes line up.
- 12** Replace the two screws that secure the bracket to the drive.
- 13** Slide the new hard drive kit into your notebook.
- 14** Replace the screw that secures the hard drive kit to your notebook.
- 15** Insert the battery and turn your notebook over.
- 16** Connect the power adapter and modem and network cables, then turn on your notebook.
- 17** For instructions on installing Windows, your drivers, and your applications, see the instructions that were included with the Restore DVD.



Chapter 7

Maintaining Your Notebook



- Caring for your notebook
- Cleaning your notebook
- Protecting from viruses
- Updating Windows
- Restoring your system

Caring for your notebook

To extend the life of your notebook:

- Be careful not to bump or drop your notebook, and do not put any objects on top of it. The case, although strong, is not made to support extra weight.
- When transporting your notebook, we recommend that you put it in a carrying case.
- Keep your notebook away from magnetic fields. Magnetic fields can erase data on hard drives.
- Never turn off your notebook when the hard drive light is on because data on the hard drive could be lost or corrupted.
- Avoid subjecting your notebook to extreme temperature changes. The case (and LCD panel) 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 notebook is safest at temperatures that are comfortable for you.
- Keep all liquids away from your notebook. When spilled onto computer components, almost any liquid can result in extremely expensive repairs that are not covered under your warranty.
- Avoid dusty or dirty work environments. Dust and dirt can clog the internal mechanisms.
- Do not block the ventilation fan slots. If these slots are blocked, your notebook may overheat resulting in unexpected shutdown or permanent damage to the notebook.
- When storing your notebook for an extended period of time, unplug AC power and remove the battery after discharging it partway.

Cleaning your notebook

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

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

Cleaning the exterior

Warning



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

Always turn off your notebook and other peripherals before cleaning any components. Also, remove the battery before cleaning any components.

Use a damp, lint-free cloth to clean your notebook and other parts of your system. Do not use household abrasive or solvent cleaners because they can damage the finish on components.

Your notebook is cooled by air circulated through the vents on the case, so keep the vents free of dust. With your notebook 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. Do not attempt to clean dust from the inside of your notebook.

Cleaning the keyboard

You should clean the keyboard occasionally by using an aerosol can of air with a narrow, straw-like extension to remove dust and lint trapped under the keys.

If you spill liquid on the keyboard, turn off your notebook and turn the notebook 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 notebook screen

To clean a notebook LCD screen, use a soft cloth and water to clean the LCD screen. Squirt a little water on the cloth (never directly on the screen), and wipe the screen with the cloth.

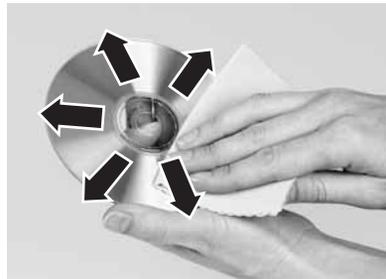
Caution



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

Cleaning CDs or DVDs

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



Protecting your computer from viruses

A *virus* is a program that attaches itself to a file on a computer, then spreads from one computer to another. Viruses can damage data or cause your computer to malfunction. Some viruses go undetected for a period of time because they are activated on a certain date.

Protect your computer from a virus by:

- Registering your copy of Norton AntiVirus and subscribing to the virus definition update service. You received a free limited time subscription to the Norton AntiVirus service when you purchased your notebook.
- Using the Norton® AntiVirus program to check files and programs that are attached to e-mail messages or downloaded from the Internet.
- Checking all programs for viruses before installing them.
- Disabling macros on suspicious Microsoft Word and Excel files. These programs will warn you if a document that you are opening contains a macro that might have a virus.
- Periodically updating the Norton AntiVirus program to protect against the latest viruses.

Help and Support

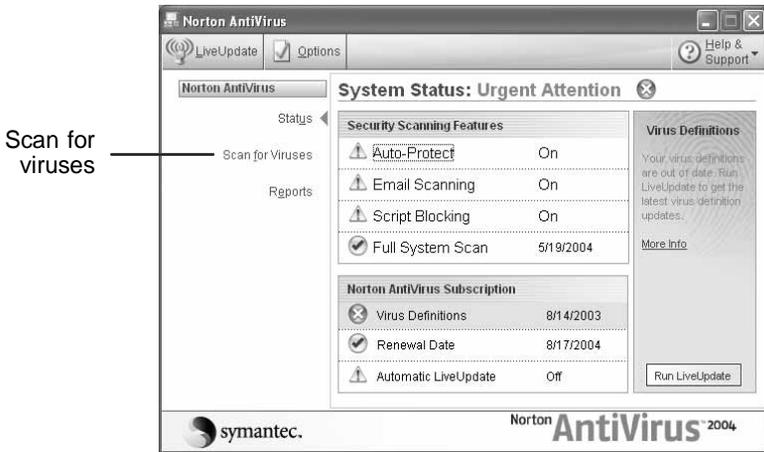


For more information about protecting your computer against viruses, click **Start**, then click **Help and Support**.

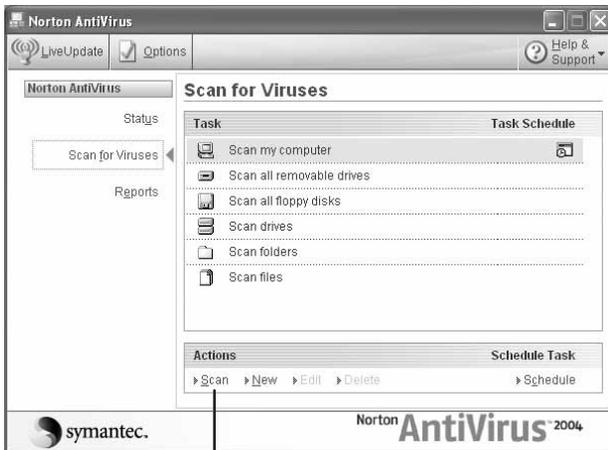
Type the keyword **viruses** in the **Search** box
Search , then click the arrow.

▶ **To scan for viruses:**

- 1 Click **Start, All Programs, Norton AntiVirus**, then click **Norton AntiVirus 2004**. Norton AntiVirus opens.



- 2 Click **Scan for Viruses**.



- 3 Click the type of scan you want to make in the Scan for Viruses area, then under Actions, click **Scan**.





To remove a virus:

- 1 If Norton AntiVirus finds a virus, follow all on-screen instructions to remove the virus.
- 2 Turn off your computer and leave it off for at least 30 seconds.
- 3 Turn on your computer and rescan for the virus.



To update Norton AntiVirus:

Important



You received a free limited time subscription to the Norton AntiVirus service when you purchased your notebook. To update Norton AntiVirus after the free subscription period, you must extend your subscription.

- 1 Make sure that you are connected to the Internet.
- 2 Click **Start, All Programs, Norton AntiVirus**, then click **LiveUpdate - Norton AntiVirus**. The LiveUpdate wizard opens.
- 3 Follow the on-screen instructions to update your Norton AntiVirus program with the latest virus protection files.
- 4 When the program has finished, click **Finish**.



Updating Windows

Windows Update is the online extension of Windows that helps you to 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.

To run Windows Update:

- 1 Connect to the Internet.
- 2 Click **Start**, **All Programs**, then click **Windows Update**.
- 3 Click **Scan for Available Updates**.



Help and Support



For more information about Windows Update in Windows XP, click **Start**, then click **Help and Support**.

Type the keyword **Windows Update** in the HelpSpot **Search** box , then click the arrow.

Restoring your system

If you need to restore your computer to its original configuration, use the Restore DVD that was shipped with your computer. The Restore DVD contains a copy of all programs that were preinstalled on your computer. Instructions for using the Restore DVD are included with the DVD.

Chapter 8

Troubleshooting



- Troubleshooting typical hardware and software problems
- Getting telephone support
- Using automated troubleshooting systems

Safety guidelines

While troubleshooting your notebook, follow these safety guidelines:

- Never remove the memory bay cover or hard drive while your notebook is turned on, while the battery is installed, and while the modem cable, network cable, and AC power adapter are connected to your notebook.
- 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 66](#).
- After you complete any maintenance tasks where you remove the memory bay cover or hard drive kit, make sure that you replace the cover or hard drive kit, reinstall any screws, then replace the battery before you start your notebook.

Warning



Do not try to troubleshoot your problem if power cords or plugs are damaged, if your notebook was dropped, or if the case was damaged. Instead, unplug your notebook and contact a qualified computer technician.

First steps

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

- Make sure that the AC power adapter is connected to your notebook and an AC outlet and that the AC outlet is supplying power.
- If you use a power strip or surge protector, make sure that it is turned on.
- If a peripheral device (such as a keyboard or mouse) 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 Gateway 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 and Support



For more information about troubleshooting, click **Start**, then click **Help and Support**.

Type the keyword **troubleshooting** in the **Search** box Search , then click the arrow.

Troubleshooting

Troubleshooting topics are listed in alphabetical order.

Audio

Audio troubleshooting is covered under [“Sound” on page 100](#).

Battery

Battery troubleshooting is covered under [“Power” on page 98](#).

CD drives

CD drive troubleshooting is covered under [“DVD drives” on page 86](#).

Device installation

You have computer problems after adding a new device

Sometimes a new device, such as a PC Card, can cause a system resource (IRQ) conflict. Check IRQ usage to determine if there is an IRQ conflict.

To check IRQ usage:

- 1** Click **Start**, then click **Control Panel**. The *Control Panel* window opens. If your Control Panel is in Category View, click **Performance and Maintenance**.
- 2** Click/Double-click **System**, click the **Hardware** tab, then click **Device Manager**. The *Device Manager* window opens.
- 3** Click **View**, then click **Resources by type**. Double-click **Interrupt request (IRQ)**. All IRQs and their hardware assignments are displayed.



Help and Support



For more information about IRQs, click **Start**, then click **Help and Support**.

Type the keyword **IRQs** in the **Search** box
Search , then click the arrow.

To free IRQ resources for the new device:

- 1** In the *Device Manager* window, check the device list for a resource conflict. A resource conflict appears as a black exclamation point in a yellow circle.
- 2** Remove the device you are trying to install, then determine which one of the existing devices or ports you can disable.
- 3** Right-click the device or port you want to disable, then click **Disable**. The device or port is disabled.



Display

The screen is too dark

Adjust the brightness using the system keys. For more information, see [“System key combinations” on page 32](#).

The screen resolution is not correct

Change the screen resolution from the *Display Properties* dialog box.

Tips & Tricks



For instructions on changing the screen resolution, see “Adjusting the screen resolution” in *Using Your Computer* which has been included on your hard drive. To access this guide, click **Start**, **All Programs**, then click **Gateway Documentation**.

The text on the display is dim or difficult to read

- Adjust the brightness and contrast using the system keys. For more information, see [“System key combinations” on page 32](#).
- Change the display settings.

Tips & Tricks



For instructions on changing the display settings, see “Adjusting the screen and desktop settings” in *Using Your Computer* which has been included on your hard drive. To access this guide, click **Start**, **All Programs**, then click **Gateway Documentation**.

- Move your notebook away from sources of electrical interference, such as televisions, unshielded speakers, microwaves, fluorescent lights, and metal beams or shelves.

The display has pixels that are always dark or too bright

This condition is normal and inherent in the TFT technology used in active-matrix LCD screens. Gateway’s inspection standards keep these to a minimum. If you feel these pixels are unacceptably numerous or dense on your display, contact Gateway Customer Care to identify whether a repair or replacement is justified based on the number of pixels affected.

DVD drives

Your notebook does not recognize a disc

- The disc may not be seated correctly in the tray. When you place a disc on the tray, make sure that you press the disc firmly onto the spindle so the retainers hold the disc in place.
- Make sure that the disc label is facing up, then try again.
- Try a different disc. Occasionally discs are flawed and cannot be read by the drive.
- Some music CDs have copy protection software. You may not be able to play these CDs on your notebook.
- Your notebook may be experiencing some temporary memory problems. Shut down and restart your notebook.
- Clean the disc. For more information, see [“Cleaning CDs or DVDs” on page 76](#).

An audio CD does not produce sound

- Make sure that the CD 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 notebook.

- Make sure that the volume control on your notebook is turned up. For more information, see [“Multi-function buttons” on page 34](#).
- Make sure that the Windows volume control is turned up.

Tips & Tricks



For instructions on how to adjust the volume control in Windows, see “Adjusting the volume” in *Using Your Computer* which has been included on your hard drive. To access this guide, click **Start**, **All Programs**, then click **Gateway Documentation**.

- Make sure that Mute controls are turned off. For more information about the mute setting, see [“Multi-function buttons” on page 34](#).
- Make sure that headphones are not plugged into the headphone jack. For the location of the headphone jack, see [“Back” on page 13](#).
- If you are using powered speakers, make sure that they are plugged in and turned on.
- Clean the disc. For more information, see [“Cleaning CDs or DVDs” on page 76](#).
- Your notebook may be experiencing some temporary memory problems. Shut down and restart your notebook.
- Reinstall the audio device drivers. For more information, see [“Downloads” on page 4](#).

A DVD movie will not play

- Make sure that the label or side you want to play is facing up, then try again.
- Shut down and restart your notebook.
- Clean the DVD. For more information, see [“Cleaning CDs or DVDs” on page 76](#).
- DVD discs and 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 notebook'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 of the disc. The regional code for the disc is on the disc, disc documentation, or packaging.

If the DVD movie does not play, the disc's regional code and your DVD drive's regional code may not match.

- Make sure that a DVD player program has been installed on your notebook.

Tips & Tricks



For instructions on playing a DVD, see ["Playing a DVD" on page 44](#).

A DVD does not produce sound on a TV

Audio is not transmitted through the S-Video jack. Use the built-in speakers, a set of headphones or external powered speakers, or connect your notebook to a stereo system to hear sound while playing a DVD.

File management

A file was accidentally deleted

If a file was deleted at a DOS prompt or in Windows 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 tried to restore a file, the file cannot be restored.



Help and Support



For more information about restoring deleted files, click **Start**, then click **Help and Support**.

Type the keyword **System Restore** in the **Search** box Search , then click the arrow.

Hard drive

You see an “Insufficient disk space” error message

- Delete unnecessary files from the hard drive using Disk Cleanup.

Tips & Tricks



For instructions on deleting unnecessary files, see “Using Disk Cleanup” in *Using Your Computer* which has been included on your hard drive. To access this guide, click **Start**, **All Programs**, then click **Gateway Documentation**.

- 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.

Help and Support



For more information about file management, click **Start**, then click **Help and Support**.

Type the keyword **file management** in the **Search** box Search , then click the arrow.

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.

Tips & Tricks



For instructions on fixing hard drive problems, see “Checking the hard drive for errors” in *Using Your Computer* which has been included on your hard drive. To access this guide, click **Start**, **All Programs**, then click **Gateway Documentation**.

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

- Make sure that the hard drive is installed correctly. Remove it, firmly reinsert it, then restart your notebook. For more information, see [“Replacing the hard drive kit” on page 70](#).
- If your notebook has been subjected to static electricity or physical shock, you may need to reinstall the operating system.

Internet

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 [“Back” on page 13](#) 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 [“Back” on page 13](#) to make sure that the connections have been made correctly.

- Make sure that you do not have a problem with your modem. For more information, see [“Modem \(dial-up\)” on page 93](#).
- Make sure that your account with your Internet service provider (ISP) is set up correctly. Contact your ISP technical support for help.

Help and Support



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

Type the keyword **troubleshooting connections** in the **Search** box , then click the arrow.

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 notebook

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 external keyboard does not work

- Make sure that the keyboard cable is plugged in correctly.
- Remove all extension cables and switchboxes.
- 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.

- If you spilled liquid in the keyboard, turn off your notebook 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.

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 notebook.

You are pressing a letter key and a number appears on the screen

- The numeric keypad is turned on. See “[System key combinations](#)” on [page 32](#) for instructions on turning off your numeric keypad.

Memory

You see a “Memory error” message

- Make sure that the memory module is inserted correctly in the memory bay slot. For more information, see “[Adding or replacing memory](#)” on [page 68](#).
- Use a third-party diagnostic program to help determine if the memory module is failing.

You see a “Not enough memory” error message

Close all programs, then restart your notebook.

Help and Support



For more information about troubleshooting memory errors, click **Start**, then click **Help and Support**.

Type the keyword **memory error** in the **Search** box Search , then click the arrow.

Memory card reader

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

- Reboot your notebook.

Modem (dial-up)

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 “Back” on page 13 to make sure that the connections have been made correctly.
- Make sure that your notebook 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 appropriately.

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.



Help and Support



For more information about dialing properties, click **Start**, then click **Help and Support**.

Type the keyword **dialing** in the **Search** box
Search , then click the arrow.

- 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 wall or 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 90](#).

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 notebook has a v.90 modem, the speed at which you can upload (send) data is limited to 33.6K. If your notebook 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 notebook

- Make sure that the line connected to the modem is working and plugged into the appropriate port on your notebook. See “[Back](#)” on [page 13](#) to make sure that the connections have been made correctly.
- 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 notebook. Some telephone cables do not meet required cable standards and may cause problems with the modem connection.
- Shut down and restart your notebook.
- 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.



Help and Support



For more information about modem troubleshooting, click **Start**, then click **Help and Support**.

Type the keyword **modem troubleshooting** in the **Search** box Search ↵, then click the arrow.

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.



Mouse

The external mouse does not work

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

The external mouse works erratically

- Clean the mouse.
- Some mouse pad patterns “confuse” optical mice. Try the mouse on a different surface.

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 [“Networking Your Notebook” on page 105](#).

Help and Support



For more information about network troubleshooting, click **Start**, then click **Help and Support**.

Type the keyword **network troubleshooting** in the **Search** box Search , then click the arrow.

Passwords

Your notebook does not accept your password

Make sure that **CAPS LOCK** and **NUM LOCK** are turned off, then retype the password.

You forgot your startup password

The password feature (which is set in the BIOS Setup utility) is very secure, with no easy way to recover a forgotten password. You must return your notebook for repair. Call Gateway Customer Care for instructions.

PC Cards

You installed a PC Card and now your notebook is having problems

- Make sure that you have correctly installed required software for the PC Card. For more information, see your PC Card's documentation.
- Make sure that the PC Card you installed is not causing a system resource conflict. For more information on resource conflicts, see "Device installation" on page 84.

Power

Your notebook is not working on AC power

- Make sure that your AC power adapter is connected correctly to your notebook. For more information, see "[Connecting the AC adapter](#)" on page 23.
- If your notebook is plugged into a surge protector, make sure that the surge protector is connected securely to an electrical 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 AC power adapter cables are free from cuts or damage. Replace any damaged cables.

Your notebook is not working on battery power

- Make sure that the battery is installed correctly. For more information, see "[Installing the battery](#)" on page 22.
- Make sure that the battery is fully recharged. For more information, see "[Recharging the battery](#)" on page 57.
- Make sure that the battery is calibrated correctly. For more information, see "[Recalibrating the battery](#)" on page 57.

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 notebook. Make sure that it is connected to the correct 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 port and 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.



Help and Support



For more information about printer troubleshooting, click **Start**, then click **Help and Support**.

Type the keyword **printer troubleshooter** in the **Search** box Search , then click the arrow.

- 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.

Sound

You are not getting sound from the built-in speakers

- Make sure that headphones are not plugged into the headphone jack. For the location of the headphone jack, see [“Back” on page 13](#).
- Make sure that the volume control on your notebook is turned up. For more information, see [“Multi-function buttons” on page 34](#).
- Make sure that the Windows volume control is turned up.

Tips & Tricks



For instructions on how to adjust the volume control in Windows, see “Adjusting the volume” in *Using Your Computer* which has been included on your hard drive. To access this guide, click **Start**, **All Programs**, then click **Gateway Documentation**.

- Make sure that Mute controls are turned off. For more information about the mute setting, see [“Multi-function buttons” on page 34](#).

Help and Support



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

Status indicators

The status indicators are not functioning

- Make sure the status indicators are turned on. Press **FN+F1** to toggle the indicators.

Video

The projector or external monitor is not working

- Make sure that you have pressed **FN+F4** to activate the external monitor option.
- Make sure that the monitor is turned on and that the video cable is connected correctly.

TV out is not working

- Make sure that you have activated TV out. For more information, see [“Viewing the display on a television” on page 51](#).
- Make sure that the television is turned on and that the S-Video cable is connected correctly.
- Televisions in different countries use different standards. If you are traveling, you may need to change the TV Out mode. For more information, see [“Viewing the display on a television” on page 51](#).

Telephone support

Before calling Gateway Customer Care

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

- Make sure that your notebook 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 notebook problem if:

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

Instead, unplug your notebook 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 notebook 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.

Automated troubleshooting system

Service description	How to reach
Use an automated menu system and your telephone keypad to find answers to common problems.	800-846-2118

Telephone numbers

You can access the following services through your telephone to get answers to your questions:

Resource	Service description	How to reach
Gateway's fee-based software tutorial service	Get tutorial assistance for software issues billed by the minute.	800-229-1103 (charged to your credit card) 900-555-4695 (charged to your telephone bill)
Gateway Customer Care	Talk to a Gateway Customer Care representative about a non-tutorial technical support question. (See "Before calling Gateway Customer Care" on page 102 before calling.)	Gateway Customer Care telephone numbers vary by country or region. See the label on the bottom of your notebook. For more information, see "Identifying your model" on page 17 .
America Online	Get support for your America Online ISP account	800-827-6364 (US) 888-265-4357 (Canada)
Sales, accounting, and warranty	Get information about available systems, pricing, orders, billing statements, warranty service, or other non-technical issues.	800-846-2000 (US) 888-387-7752 (Canada)

Chapter 9

Networking Your Notebook



- Introducing networking
- Creating a wireless network
- Testing your network
- Sharing your resources
- Troubleshooting your network

Introduction to networking

A network is a collection of computers and other devices that communicate with each other.

Using a network

A network lets you:

- Share a single Internet connection
- Share computer drives
- Share peripheral devices
- Stream audio and video files
- Play multi-player games

Sharing a single Internet connection

Each computer connected to the network can share the same broadband connection or modem and telephone line to access the Internet at the same time. This saves on the cost of installing another telephone line for your second computer and paying for a second Internet service provider (ISP) account.

Sharing drives

With a network, you can copy files from computer to computer by copying and pasting or dragging and dropping. You will no longer waste your time transferring files by using recordable media. In addition, you can *map* a drive on a networked computer to another computer, and access the files as if they were located on the hard drive of the computer you are using.

Sharing peripheral devices

Each computer that is connected to the network can share the same peripheral devices, such as a printer. Select print from the computer you are currently using and your file is automatically printed on your printer no matter where it is located on your network.

Streaming audio and video files

With a network, you can store audio files (such as the popular .MP3 files) and video files on any networked computer, then play them on any of the other computers or devices connected to your network. This process is called *streaming*.

Playing multi-player games

With a home network, you can play multi-player games. Load a game like *Microsoft Racing Madness 2* on your computers, and in minutes, you and your friends can race in competing cars or on competing motorcycles.

Help and Support



For more information about using a network, click **Start**, then click **Help and Support**.

Type one of these keywords in the **Search** box

Search , then click the arrow:

- **internet sharing**
- **sharing network drives**
- **streaming**
- **network games**

Using a wireless network

A wireless network is ideal for creating a home or office network because it lets you move about your home or office with your notebook. For example, you can take your notebook from your home office to your patio without losing a connection to your network.

Warning



Radio frequency wireless communication can interfere with equipment on commercial aircraft. Current aviation regulations require wireless devices to be turned off while traveling in an airplane. IEEE 802.11a, IEEE 802.11b, and IEEE 802.11g communication devices are examples of devices that provide wireless communication. For more information, see "[System key combinations](#)" on page 32.

Important



If your computer came equipped with an internal radio frequency wireless device, see [“Safety, Regulatory, and Legal Information”](#) on page 139 for general wireless regulatory and safety guidelines. To find out if your computer has an internal wireless device, check the device manager. For more information, see [“Determining if wireless networking is already installed on your computers”](#) on page 110.

Important



Note any antenna placement constraints in the user guide of each type of wireless device in your network.

Important



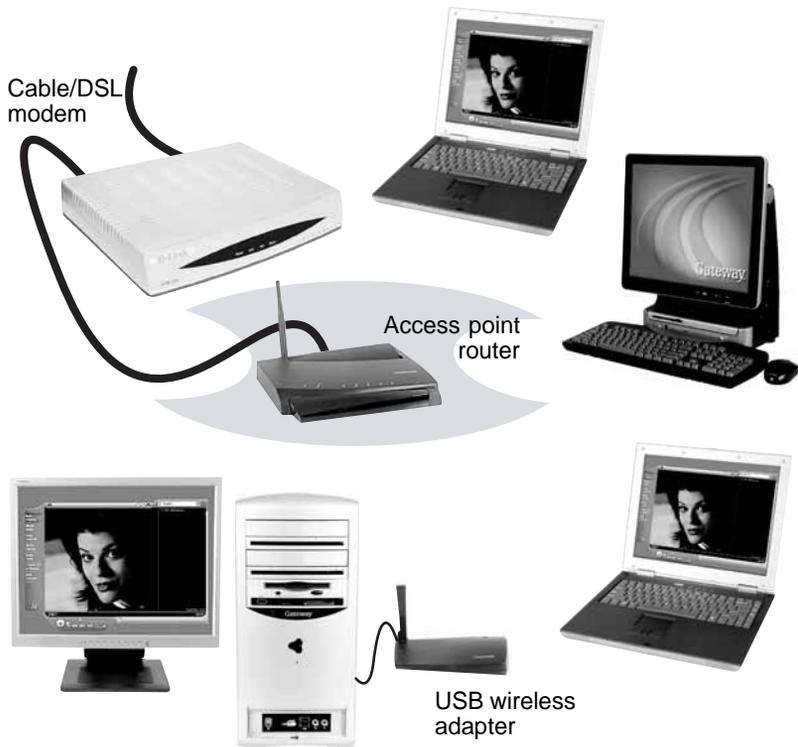
The speed of a wireless network is related to signal strength. Signal strength is affected by the distance between your wireless network devices, by radio interference, and by interference from natural obstructions such as walls, floors, and doors.

The most common way to set up a wireless network is Dynamic Host Control Protocol (DHCP) using a wireless access point router. A DHCP network configuration uses an access point router to automatically assign IP addresses to each computer or network device.

Example access point wireless network

By using an *access point router*, you can join a wireless network and access the Internet.

The following is an example of an access point wireless network that shows how an access point router also lets you access the Internet. The network is made up of an access point router, a cable or DSL modem, and your computers. The access point router is the central control point for the network. Attached to the access point router is the cable or DSL modem that provides access to the Internet. Each of the computers or Ethernet-ready devices communicate with the access point router using radio waves. If your computer does not have built-in wireless networking, you need to add a wireless PCI card (desktop), PC card (notebook), or USB adapter.



Equipment you need for an access point wireless network

For an access point wireless network you need:

- Two or more computers with wireless networking
- One access point router
- One broadband Internet connection (optional)

Important



IEEE 802.11b and IEEE 802.11g use the same radio frequency. IEEE 802.11a uses a different radio frequency than IEEE 802.11b and IEEE 802.11g. All wireless networking components must use the same frequency. A combination of IEEE 802.11a and IEEE 802.11b or IEEE 802.11a and IEEE 802.11g components will not work. Some wireless devices can broadcast and receive signals on both frequencies.

A mixture of IEEE 802.11b and IEEE 802.11g components will result in your network running at the speed of the slower IEEE 802.11b components.

Tips & Tricks



When buying your access point router, be sure the model includes everything your network needs, including:

- 802.11g support - for next-generation, high-speed wireless communications
- Internet security features - such as a firewall to protect your network from unwanted intruders
- Wireless security features - such as 128-bit WEP encryption
- 4-port switch - to eliminate the need for additional network hardware
- DHCP server/dynamic IP address assignment - to automatically configure network and IP addresses

Determining if wireless networking is already installed on your computers



To determine if wireless networking is already installed on your computer:

- 1** Click **Start**, then click **Control Panel**. The *Control Panel* window opens. If your Control Panel is in Category View, click **Performance and Maintenance**.
- 2** Click/Double-click **System**, click the **Hardware** tab, then click **Device Manager**. The *Device Manager* window opens.

- 3 Click the plus (+) in front of **Network adapters**. The wireless networking device installed in your computer is listed. If one is not listed, you must install a PC card or USB adapter.



Creating an wireless network

Making sure your broadband connection works

Before you change anything about your home setup, make sure that your broadband connection is working correctly. To test the connection, log onto the Internet using your current setup. If the connection is not working, contact your Internet service provider.

Important



If you do not have a broadband connection already installed, make the necessary arrangements with your ISP. Be sure to find out how soon after the installation the line will be activated.

Important



Broadband Internet settings will differ from ISP to ISP. Before you begin setting up your network, you should contact your ISP for any specific instructions they have for setting up a network.

Naming the computers and the workgroup

Each computer on your network must have a unique name and be identified as part of a workgroup. This must be done individually on each computer.



To identify this computer on the network:

- 1 Click **Start**, then click **Control Panel**. The *Control Panel* window opens. If your Control Panel is in Category View, click **Performance and Maintenance**. The *Performance and Maintenance* window opens.
- 2 Click/Double-click **System**. The *System Properties* dialog box opens.
- 3 Click **Computer Name**.
- 4 Click **Change**. The *Computer Name Changes* dialog box opens.
- 5 Type a unique computer name in the **Computer name** box. This name identifies the computer to other users on the network. Use a computer name of up to 15 characters with no blank spaces. Each computer name must be unique on your network. All-numeric computer names are not allowed. Names must contain some letters.
- 6 Type a name for your workgroup in the **Workgroup** box. Use a workgroup name of up to 15 characters with no blank spaces. The workgroup name must be the same for all computers in your network workgroup, and the name must be different than any computer name on your network.
- 7 Click **OK** to close the *Computer Name Changes* dialog box.



Important



You must give each computer on the network a unique Computer Name and the same Workgroup Name.

Configuring the TCP/IP protocol

A networking protocol is a language computers use to talk to each other. One of several available protocols must be set up on each computer you plan to use on your network. We recommend you use the Transmission Control Protocol/Internet Protocol (TCP/IP), which is widely accepted and compatible for local area networks (LANs), as well as for Internet communications.

When networking is set up in Windows XP or Windows 2000, TCP/IP is automatically installed as the default protocol.

Terms you should know

DHCP - Dynamic Host Configuration Protocol (DHCP) enables an access point router to temporarily assign an IP address to a computer on the network.

IP Address - Internet Protocol (IP) address is a number that uniquely identifies a computer on the network.

Subnet Mask - A number that identifies what subnetwork the computer is located on. This number will be the same on all computers on a home network.

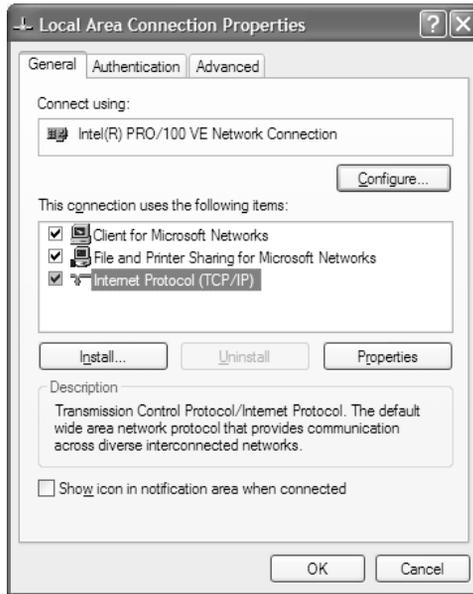
Using a DHCP server

In order to use the TCP/IP protocol on each computer with an access point router, you must set the protocol to “Obtain an IP address from a DHCP server”.

To use a DHCP server

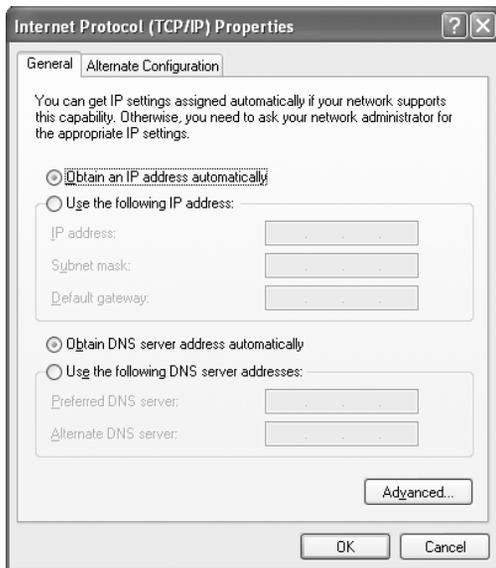
- 1 Click **Start**, then click **Control Panel**. The *Control Panel* window opens. If your Control Panel is in Category View, click **Network and Internet Connections**. The *Network and Internet Connections* window opens.
- 2 Click/Double-click **Network Connections**. The *Network Connections* window opens.

- 3 Right-click **Local Area Connection**, then click **Properties**. The *Local Area Connection Properties* dialog box opens.



- 4 Click to select the **Internet Protocol (TCP/IP)** check box in the **This connection uses the following items** list. If you do not see TCP/IP, drag the scroll bar to see more choices.
- 5 Click **Properties**. The *Internet Protocol (TCP/IP) Properties* dialog box opens.

- 6 Click the **General** tab.



- 7 Click **Obtain an IP address automatically**.
- 8 Click **OK** to close the *Internet Protocol (TCP/IP) Properties* dialog box.
- 9 Click **OK** to close the *Local Area Connection Properties* dialog box.
- 10 Click **X** to close the *Network Connections* window.
- 11 Repeat this procedure for every computer on your network.



Setting up a wireless network

See the instructions that came with your wireless access point router for initial setup. How you set up your access point router varies depending on the features of the access point router and your networking situation.

Mounting the access point router

When selecting a place to mount your access point router, consider the following guidelines:

- Mount your access point router as high as possible (to avoid interference from natural obstacles and appliances).
- Mount your access point router in a location where you can run an Ethernet cable from the access point router to your cable or DSL modem.

Configuring the access point router

Important



The following configuration information applies to the Linksys wireless access point router with 4-port switch. For any other brand or model of access point router, see the manufacturer's documentation, which may accompany the access point router or be available from the manufacturer's Web site.



To configure the Linksys wireless access point router with 4-port switch:

- 1 Plug one end of a straight-through cable into the WAN port on the wireless access point router and the other end into the DSL or cable modem.
- 2 Plug one end of the power adapter into the AC connector on the router and the other end into a grounded, 110V electrical outlet.
- 3 Turn on the DSL or cable modem.
- 4 Press the reset button on the wireless access point router.
- 5 Temporarily connect a computer to the wireless access point router using a straight-through cable and turn the computer on.
- 6 From the computer plugged into your wireless access point router, open your Web browser.
- 7 In the browser's Address box, type **http://192.168.1.1**, then press **ENTER**.

8 When prompted for a username and password, leave the username box empty and type **admin** in the password box, then click **OK**. The setup page opens.

9 Enter the following values in the appropriate fields:

- **Host Name and Domain Name** - Check with your ISP to see if entries are required in these fields and, if so, what entries are required.
- **Enable/Disable wireless** - Click **Enable** to turn on the wireless functions of your access point router.
- **SSID** - Type a unique name for your wireless access point router.
- **Allow Broadcast SSID to associate** - Clicking **Yes** allows you to automatically see the SSID in the **Available Networks** list (see “[Connecting to an access point wireless network](#)” on page 118). Clicking **No** means that you will need to manually add the access point router (see “[Adding an access point router](#)” on page 122). Clicking **No** makes your wireless network more secure because intruders will not be able to connect to your network without knowing the name of your access point router.

Tips & Tricks



If you live in an apartment building or dormitory, you may want to click **No** to prevent your neighbors from discovering and accessing your network.

- **Channel** - In the United States, you can specify any channel between 1 and 11.
- **WEP** - To use WEP (wired equivalent privacy) encryption, select **Mandatory**. If you use WEP encryption, all computers on your network must use the same WEP encryption. See the documentation that came with your access point router on how to use WEP encryption.
- **WAN Connection Type** - If your ISP assigns you a different IP address each time you log on, click **Obtain an IP Address Automatically**. If your ISP requires a fixed IP address, click **Static IP**, then type the values provided by your ISP.

10 Click **Apply**, then click **Continue** to save the settings.

11 Disconnect the computer you connected to the access point router in [Step 5](#).

- 12 Reset the power on your cable or DSL modem.
- 13 Restart all of your computers on the network.
- 14 To connect to the access point router, see [“Connecting to an access point wireless network”](#) on page 118.



Connecting to an access point wireless network

After you have set up your wireless access point router, you need to set up the network connection on your computers.



To connect to an access point wireless network:

- 1 Before connecting to an access point router, you must turn on wireless networking. For more information, see [“System key combinations”](#) on page 32.
- 2 Click **Start**, then click **Control Panel**. The *Control Panel* window opens. If your Control Panel is in Category View, click **Network and Internet Connections**. The *Network and Internet Connections* window opens.
- 3 Click/Double-click **Network Connections**. The *Network Connections* window opens.

- 4 Right-click **Wireless Network Connection**, then click **View Available Wireless Networks**. The *Connect to Wireless Network* dialog box opens.



- 5 Click the network you created in the **Available networks** list, then click **Connect**. If you are able to connect to the network in the **Available networks** list, go to [“Testing your network” on page 124](#).

-OR-

If you are unable to connect to the network in the **Available networks** list, see [“Configuring computer settings for an access point network” on page 120](#).

-OR-

If the network you created does not appear in the **Available networks** list, see [“Adding an access point router” on page 122](#).



Help and Support



For more information about connecting to a wireless network, click **Start**, then click **Help and Support**.

Type the keyword **connecting to wireless network** in the **Search** box

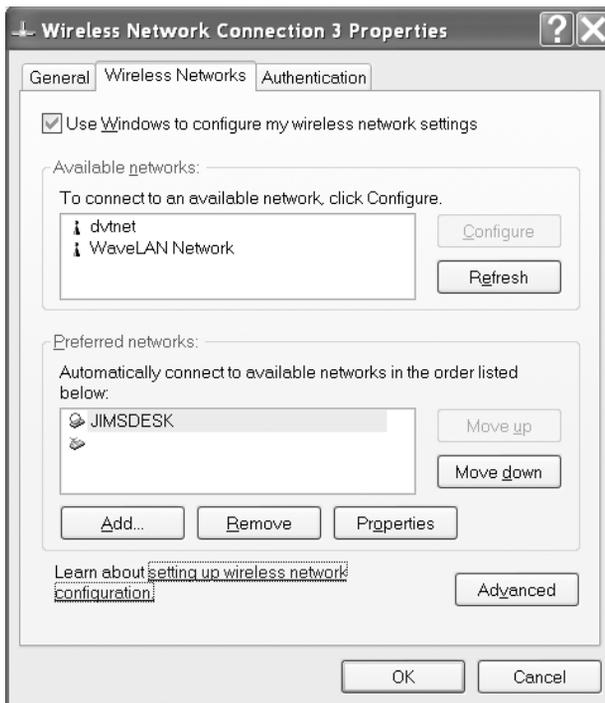
Search , then click the arrow.

Configuring computer settings for an access point network

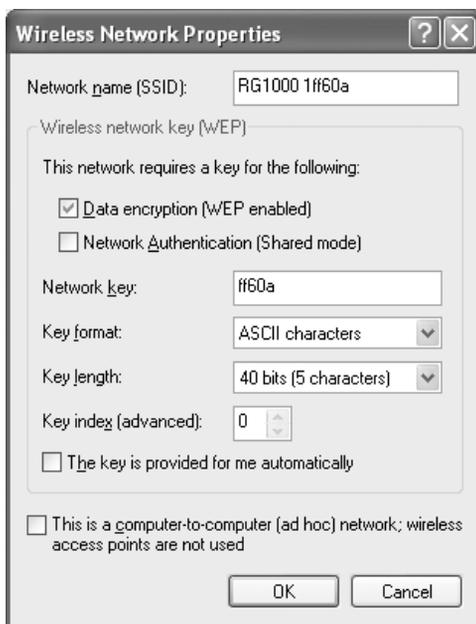
If you are unable to connect to an access point router in the **Available networks** list, the most likely cause is that the access point router is using WEP security. You need to configure your network settings to use the same WEP security settings as those used by the access point router.

To configure computer settings for an access point wireless network:

- 1 With the *Connect to Wireless Network* dialog box open, click the network you want to configure your computer for, then click **Advanced**. The *Wireless Network Connection Properties* dialog box opens.
- 2 Click the **Wireless Networks** tab.



- 3 Click to select the access point network in the **Available networks** box, then click **Configure**. The *Wireless Network Properties* dialog box opens. The name of the network already appears in the **Network name (SSID)** box.



- 4 Set the Wireless network key (WEP) settings to match those set on the access point router.
- 5 Make sure that the **This is a computer-to-computer (ad hoc) network; wireless access points are not used** check box is not selected.
- 6 Click **OK** to close the *Wireless Network Properties* dialog box. Your network should be running. Go to [“Testing your network” on page 124](#).



Help and Support



For more information about configuring a wireless network, click **Start**, then click **Help and Support**.

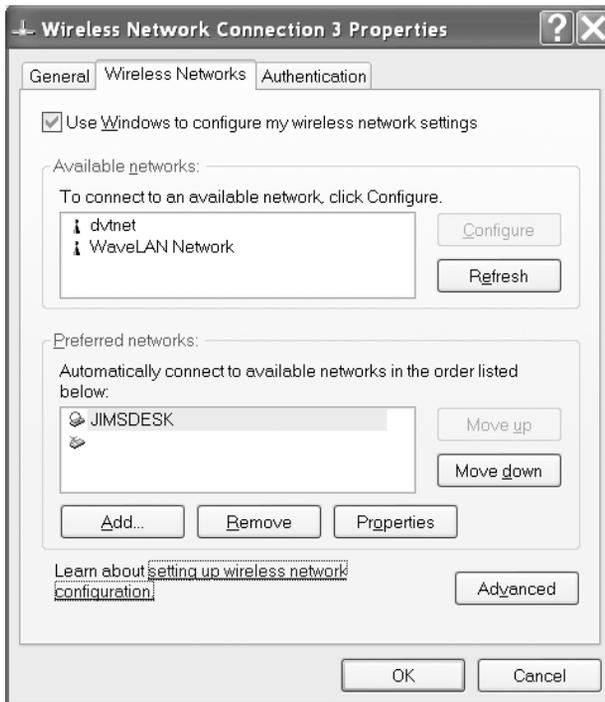
Type the keyword **wireless network** in the **Search** box Search , then click the arrow.

Adding an access point router

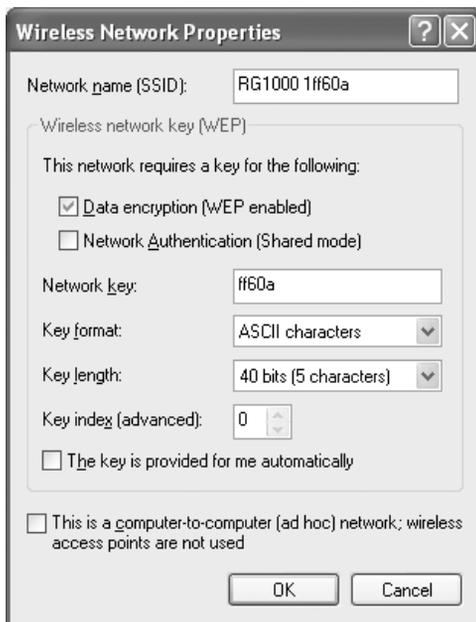
If an access point router does not appear in the **Available networks** list, and you know the access point router is turned on, you need to add it manually. This typically happens when you set the access point router's **Allow Broadcast SSID to associate** to **No**. For more information, see [“Configuring the access point router” on page 116](#).

▶ To manually add an access point wireless network:

- 1 With the *Connect to Wireless Network* dialog box open, click **Advanced**. The *Wireless Network Connection Properties* dialog box opens.
- 2 Click the **Wireless Networks** tab.



- 3 Click **Add**. The *Wireless Network Properties* dialog box opens.



- 4 Type the name of the network in the **Network name (SSID)** box.
- 5 Set the Wireless network key (WEP) settings to match those set on the access point router.
- 6 Make sure that the **This is a computer-to-computer (ad hoc) network; wireless access points are not used** check box is not selected.
- 7 Click **OK** to close the *Wireless Network Properties* dialog box. Your network should be running. Go to [“Testing your network” on page 124](#).



Help and Support



For more information about configuring a wireless network, click **Start**, then click **Help and Support**.

Type the keyword **wireless network** in the **Search** box Search , then click the arrow.

Testing your network

Now that your home network is set up, log onto one of your computers and access a favorite Internet Web site. If you are unable to connect to the Internet:

- Run the New Connection Wizard (see [“Sharing an Internet connection” on page 125](#))
- Check all physical cable connections
- Compare the status lights on the front of the access point router with the patterns described in the access point router literature
- Temporarily turn off any firewall software on your desktop computer
- Turn off all of the devices, then power them back on
- Refer to your access point router’s troubleshooting information

Sharing your resources

Sharing an Internet connection

Internet sharing lets all computers on the network access the Internet at the same time using one Internet service provider (ISP) connection.

Important



The Internet setup procedure uses the Windows XP New Connection Wizard and Internet Explorer. The example screens show those screens that typically appear in the course of using the wizard. If your Internet connection differs from that used in this example, you may encounter additional screens or screens with different selections. Make sure that you read each screen in the wizard and make your selections based on your particular Internet connection situation.

If you use a browser other than Internet Explorer, see the help provided with that browser for configuring it for use on a network.

Important



If you are using a dial-up modem instead of a broadband connection, see the documentation that came with your access point router for the correct procedure.

To set up Internet Explorer on each computer on your network:

- 1 Make sure that the access point router is turned on and configured as instructed by your cable or DSL provider.
- 2 Click **Start**, right-click **Internet**, then click **Internet Properties**. The *Internet Properties* dialog box opens.

3 Click the **Connections** tab.



4 Click **Setup**. The **New Connection Wizard** opens.

5 Click **Next**. The **Network Connection Type** screen opens.



- 6 Click **Connect to the Internet**, then click **Next**. The *Getting Ready* screen opens.



- 7 Click **Set up my connection manually**, then click **Next**. The *Internet Connection* screen opens.



- 8 Click the type of Internet connection you are setting up, then click **Next**.

- 9 Click **Finish**.
- 10 Repeat this procedure for each computer on your network. Go to [“Accessing the Internet” on page 128](#).



Accessing the Internet

 **To access the Internet from your computer:**

- 1 Make sure that the access point router is turned on.
- 2 Open Internet Explorer.



Sharing drives and printers

With a network, you can *share* drives (for example hard drives, diskette drives, and CD or DVD drives) and printers among the computers connected to the network.

After the drives and printers on each network computer are shared, you can access them as though they were attached directly to your computer. Then you can:

- View a network drive
- Open and copy files stored on other network computers
- Print documents on network printers

Important



To share a printer among the network computers, each computer must have the shared printer's drivers installed. Follow the instructions included with your printer to install the printer drivers on each computer.

Turning on Windows file and printer sharing

Before you can share your drives and printers, you need to turn on Windows file and printer sharing on **all** the network computers.

To turn on Windows file and printer sharing:

- 1 Click **Start**, then click **Control Panel**. The *Control Panel* window opens. If your Control Panel is in Category View, click **Network and Internet Connections**.
- 2 Click/Double-click the **Network Connections** icon.
- 3 Right-click the Local Area Network icon that you want to set up file and printer sharing on, then click **Properties**.
- 4 Click **Install**.
- 5 Click **Service**, then click **Add**.
- 6 Click **File and Printer Sharing for Microsoft Networks**.
- 7 Click **OK**.
- 8 If prompted, restart your computer.
- 9 Repeat this procedure on every computer on the network.



Sharing drives or folders

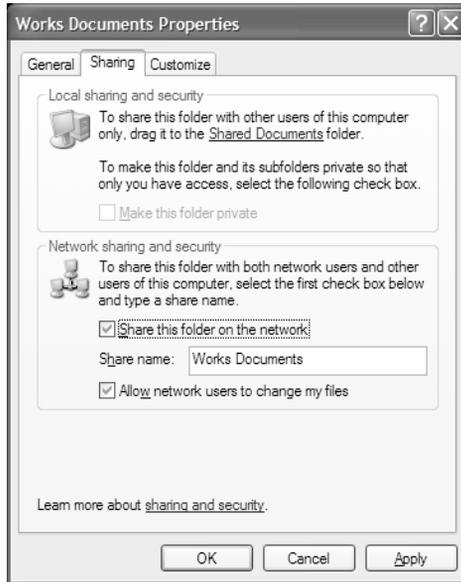
If you want to share a drive or folder, use the following instructions.

To share drives or folders:

- 1 Make sure that each computer on your network has Windows file and printer sharing turned on by following the steps in [“Turning on Windows file and printer sharing” on page 128](#).
- 2 In My Computer or Windows Explorer, right-click the drive or folder that you want to share, then click **Sharing and Security**. The folder properties dialog box opens.

If you share a drive, the entire contents of that drive will be available to everyone on your network. If you share a folder, only the contents of that folder will be available to everyone on the network.

3 Click the **Sharing** tab.



4 If you want to share the drive or folder with anyone on the network (network sharing), click to select the **Share this folder on the network** check box.

5 Click **OK**.



Un-sharing drives, folders, and files

▶ **To un-share drives or folders:**

1 In My Computer or Windows Explorer, right-click the drive or folder that you want to un-share, then click **Sharing and Security**.

2 Make sure that the **Share this folder on the network** check box is not selected.

3 Click **OK**.



Sharing printers

To share printers:

- 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 share, then click **Sharing**.
- 4 Click **Share this printer**.
- 5 Click **OK**.



Using the network

After the drives and printers on each network computer are shared, you can:

- View shared drives and folders
- Map a network drive
- Open and copy files stored on other network computers
- Print documents on network printers

Viewing shared drives and folders

To view shared drives and folders:

- 1 Click **Start**, then click **My Network Places**. The *My Network Places* window opens.
- 2 Click/Double-click **Entire Network**. The *Entire Network* window opens. If you do not see the contents of the network after you double-click **Entire Network**, click **entire contents**.
- 3 Double-click **Microsoft Windows Network**.

- 4 Double-click the name of your workgroup. The names of each of the computers in your workgroup are listed. For more information about workgroups, see [“Naming the computers and the workgroup” on page 111](#).
- 5 Double-click the name of the computer containing the drive or folder you want to view. All shared drives and folders are listed.



Mapping a network drive

After a drive or folder on one computer is mapped as a drive on another computer, the contents of the drive or folder can be accessed as if the drive were attached directly to the computer.

For example, the My Documents folder on computer 1 is mapped as the Z drive on computer 2. To access the My Documents folder on computer 1 from computer 2, double-click the Z drive.

To map a network drive:

- 1 Locate the drive or folder by completing the steps in [“Viewing shared drives and folders” on page 131](#).
- 2 Right-click the drive or folder, then click **Map Network Drive**. The Map Network Drive wizard opens.
- 3 Click the arrow button to open the **Drive** list, then click the drive letter you want to map this drive or folder to.
- 4 Click **Reconnect at Logon** if you want to reconnect to this drive or folder each time you log on to the network.
- 5 Click **Finish**.



Opening files across the network

To open files across the network:

- 1 Start the program for the file you want to open.
- 2 Click **File**, then click **Open**.

- 3 Browse to the network drive that contains the file you want to open.
- 4 Double-click the folder containing the file, then double-click the file.



Copying files across the network

To copy files across the network:

- 1 Click **Start**, then click **My Computer**. The *My Computer* window opens.
- 2 Browse to the network drive that contains the file you want to copy.
- 3 Browse to the file you want to copy.
- 4 Click the file.
- 5 Click **Edit**, then click **Copy**.
- 6 Double-click the folder where you want to copy the file to.
- 7 Click **Edit**, then click **Paste**.



Printing files across the network

Important



Before you can print a file across the network, you must install the driver for the printer on the computer you are sending the file from. You can obtain the printer driver and installation instructions from the CD that shipped with your printer or from the manufacturer's Web site.

To print files across the network:

- 1 Open the file you want to print.
- 2 Click **File**, then click **Print**.
- 3 In the printer name list, click the network printer.
- 4 Click **OK**.



Connecting to hotspots

A hotspot is a high-speed wireless Internet access point available in public locations such as airports, airline clubs, libraries, book shops, and coffee houses.

While you are away from your home office, hotspots let you send and receive e-mail, surf Web sites, or access your company's network.

Important



If you want to access your company's network through a hotspot, contact your network administrator for setup information. You will probably be routed through a VPN connection for maximum security.

You usually need to sign up to get access through hotspot connections. During the sign-up process, the vendor will provide you with the necessary connection information.

To access any new network, obtain information about the network (such as the SSID, password key, and security settings to use) and enter that information. See [“Configuring computer settings for an access point network” on page 120](#) for instructions.

Caution



Because hotspots typically do not enable any security measures, the data that you are sending and receiving may be vulnerable.

Any of the files on your notebook that are marked for sharing may be accessible to other users on the network.

Troubleshooting your wireless network

The wireless network does not connect.

If you ran the Windows XP Network setup wizard, your computer may be set up to use a bridge even if you do not need one.

To remove the network bridge:

- 1** Click **Start**, then click **Control Panel**. The *Control Panel* window opens. If your Control Panel is in Category View, click **Network and Internet Connections**. The *Network and Internet Connections* window opens.
- 2** Click/Double-click **Network Connections**. The *Network Connections* window opens.
- 3** Click to select the **Network Bridge** icon.
- 4** Click **File**, then click **Delete**. The *Confirm Connection Delete* dialog box opens.
- 5** Click **Yes**. When the bridge has been removed, it no longer appears in the *Network Connections* window.



The wireless utility icon shows that your wireless network is off, but when you right-click the icon in the system tray and select “radio on” the wireless network does not turn on.

- Press **FN+F2** on the keyboard to turn the wireless network on. This hot key is the master on/off toggle.

You turned the wireless network on, but it takes a while to connect.

- When the wireless network is turned on, it automatically scans for available connections, which can take approximately 30 seconds to complete.

Your connection on the network seems intermittent.

- In addition to other factors, the strength of a wireless connection is determined by the distance from the access point router and structural material that the signal must travel through (such as walls, cabinets, ceilings, and floors.)

If you cannot relocate, see if you can improve the connection by changing the channel of the access point router.

Your wireless network is running slower than you expect

- If your wireless network is running slower than you expect, you should check your network signal strength. If you find the signal strength is low, try moving to a new location to increase the signal strength.

Important



Signal strength is affected by the distance between your wireless network devices, by radio interference, and by interference from natural obstructions such as walls, floors, and doors.

To check the signal strength of your wireless network:

- 1 Click **Start**, then click **Control Panel**. The *Control Panel* window opens. If your Control Panel is in Category View, click **Network and Internet Connections**. The *Network and Internet Connections* window opens.
- 2 Click/Double-click **Network Connections**. The *Network Connections* window opens.
- 3 Right-click **Wireless Network Connection**, then click **Status**. The *Wireless Network Connection Status* dialog box opens. The meter shows the signal strength for wireless networking on your computer if other computers with the same network name are within range of your computer.



You can see the network, but cannot communicate, send files, print, or get to the Web.

- If WEP is used by your access point router, go to the Windows XP *Wireless Networking Properties* window and make sure that both the WAP and the WLAN in the notebook have matching WEP keys.

Your are in a wireless network, but no available networks are listed in the Windows XP Wireless Networking utility.

- If the network you are attempting to access does not broadcast its SSID, you need to request the SSID from the administrator and add that network's information into the wireless utility. For more information, see [“Adding an access point router” on page 122](#).
- You may want to try entering ANY as the SSID, which will make the notebook try to auto-detect the network.

Your wireless network is listed as a preferred network, but it has an “x” on it.

- An x means your preferred network is not currently available or you are not currently in range to connect.

Appendix A

Safety, Regulatory, and Legal Information



- Safety information
- Regulatory statements
- Notices

Important safety information

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.

Warning



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

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 notebook 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 notebook 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 notebook 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

- 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 notebook is turned off, a small amount of electrical current still flows through the notebook. 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.

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 telecommunications line cord.

Regulatory compliance statements

Wireless Guidance

Low power, Radio transmitting type devices (radio frequency (RF) wireless communication devices), may be present (embedded) in your notebook system. These devices may operate in the 2.4 GHz (i.e. 802.11B/G LAN & Bluetooth), 5.2 GHz (i.e. 802.11A LAN), and traditional cellular or PCS cellular bands (i.e. Cellular data modem). The following section is a general overview of considerations while operating a wireless device.

Additional limitations, cautions, and concerns for specific countries are listed in the specific country sections (or country group sections). The wireless devices in your system are only qualified for use in the countries identified by the Radio Approval Marks on the system rating label. If the country you will be using the wireless device in, is not listed, please contact your local Radio Approval agency for requirements. Wireless devices are closely regulated and use may not be allowed.

The power output of the wireless device or devices that may be embedded in your notebook is well below the RF exposure limits as known at this time. Because the wireless devices (which may be embedded into your notebook) emit less energy than is allowed in radio frequency safety standards and recommendations, Gateway believes these devices are safe for use. Regardless of the power levels, care should be taken to minimize human contact during normal operation.

Measurements have been performed to show that the RF exposure is below what is considered safe limits; however care should be taken to make sure the user or bystanders keep the transmitter away from their body when the wireless device is transmitting. The transmitting antenna installed in the top third of the lid should be used in a manner to maintain 20 cm (8 inches) from user's or bystander's bodies.

The wireless devices installed in this system are intended to be used indoors. In some areas, use of these devices outdoors is prohibited.

Some circumstances require restrictions on wireless devices. Examples of common restrictions are listed below:

Warning



Radio frequency wireless communication can interfere with equipment on commercial aircraft. Current aviation regulations require wireless devices to be turned off while traveling in an airplane. 802.11B (also known as wireless Ethernet or Wifi) and Bluetooth communication devices are examples of devices that provide wireless communication.

Warning

In environments where the risk of interference to other devices or services is harmful or perceived as harmful, the option to use a wireless device may be restricted or eliminated. Airports, Hospitals, and Oxygen or flammable gas laden atmospheres are limited examples where use of wireless devices may be restricted or eliminated. When in environments where you are uncertain of the sanction to use wireless devices, ask the applicable authority for authorization prior to use or turning on the wireless device.

Warning

If your system came equipped with an internal embedded wireless device, do not operate the wireless device unless all covers and shields are in place and the system is fully assembled.

Caution

Wireless devices are not user serviceable. Do not modify them in any way. Modification to a wireless device will void the authorization to use it. Please contact Gateway for service.

Caution

Only use drivers approved for the country in which the device will be used. See the Gateway System Restoration Kit, or contact Gateway Customer Care for additional information.

Important

Every country has different restrictions on the use of wireless devices. Since your system is equipped with a wireless device, when traveling between countries with your system, check with the local Radio Approval authorities prior to any move or trip for any restrictions on the use of a wireless device in the destination country.

United States of America

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

Low power, Radio transmitter type devices (radio frequency (RF) wireless communication devices), operating in the 2.4 GHz band and/or 5.15 – 5.35 GHz band, may be present (embedded) in your notebook system. This section is only applicable if these devices are present. Refer to the system label to verify the presence of wireless devices.

Wireless devices that may be in your system are only qualified for use in the United States of America if an FCC ID number is on the system label.

The FCC has set a general guideline of 20 cm (8 inches) separation between the device and the body, for use of a wireless device near the body (this does not include extremities). This device should be used more than 20 cm (8 inches) from the body when wireless devices are on. The power output of the wireless device (or devices), which may be embedded in your notebook, is well below the RF exposure limits as set by the FCC.

The wireless devices installed in this system are intended to be used indoors. In some areas, use of these devices outdoors is prohibited.

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 of the device.

Caution



Wireless devices are not user-serviceable. Do not modify them in any way. Modification to a wireless device will void the authorization to use it. Contact Gateway for service.

Caution



The transmitting device embedded in this system may not be used with any antenna other than the one provided with the system.

Caution



In order to comply with FCC requirements this transmitter must not be operated (or co-located) in conjunction with any other transmitter or antenna installed in the notebook.

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 into an outlet on a circuit different 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 Companies, Inc.
610 Gateway Drive, North Sioux City, SD 57049
(605) 232-2000 Fax: (605) 232-2023

Product:

- Gateway M520

This device complies with Part 15 of the FCC Rules. Operation of this product 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.

Caution



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

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.

Mercury Warning

Warning



 lamp(s) inside this product contain mercury and must be recycled or disposed of according to local, state, or federal laws.

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) Intentional emitter per RSS 210

Low power, Radio transmitter type devices (radio frequency (RF) wireless communication devices), operating in the 2.4 GHz band and/or 5.15 – 5.35 GHz band, may be present (embedded) in your notebook system. This section is only applicable if these devices are present. Refer to the system label to verify the presence of wireless devices.

Wireless devices that may be in your system are only qualified for use in Canada if an Industry Canada ID number is on the system label.

As a general guideline, a separation of 20 cm (8 inches) between the wireless device and the body, for use of a wireless device near the body (this does not include extremities) is typical. This device should be used more than 20 cm (8 inches) from the body when wireless devices are on. The power output of the wireless device (or devices), which may be embedded in your notebook, is well below the RF exposure limits as set by Industry Canada.

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 of the device.

Caution



To prevent radio interference to licensed service or co-channel Mobile Satellite systems, this device is intended to be operated indoors and away from windows to provide maximum shielding. Equipment (or its transmit antenna) that is installed outdoors is subject to licensing.

Caution



Wireless devices are not user-serviceable. Do not modify them in any way. Modification to a wireless device will void the authorization to use it. Contact Gateway for service.

Caution



The transmitting device embedded in this system may not be used with any antenna other than provide with the system.

Caution



The 802.11A radio LAN your system may have been equipped with operates in the same frequency range as high power radar, which has priority use, and may damage the radio LAN if both are present and being used in the same area.

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.

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.

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.

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

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.

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.

EPA ENERGY STAR



As an ENERGY STAR® Partner, Gateway has determined that this product meets the ENERGY STAR guidelines for energy efficiency when used with a computer equipped with a Display Power Management System.

Notices

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14303 Gateway Place
Poway, CA 92064 USA

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Macrovision statement

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

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

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