

User's Manual

(September 2008)

WARNING

Do not attempt to disassemble your notebook computer. Doing so may void your warranty. There are no serviceable parts inside. Please refer all servicing to a qualified personnel.

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Preface

This manual contains information that will help you operate the computer. It is divided into 8 chapters, 2 appendices, and an index.

- Chapter 1, **Getting Started**, takes you through the process of setting up the computer and identifying its external components.
- Chapter 2, **Operating Your Computer**, tells you how to use the computer's components and features.
- Chapter 3, **Managing Power**, provides information on power.
- Chapter 4, **Expanding Your Computer**, provides information on installing and using peripheral devices.
- Chapter 5, **Using BIOS Setup**, describes the BIOS Setup program that configures the computer's BIOS settings.
- Chapter 6, **Installing Software Drivers and Using the P1 Utilities**, describes how to install the drivers and utilities supplied with the computer, as well as how to use the P1 quick launch key utility.
- Chapter 7, **Caring for the Computer**, gives you tips in care and maintenance.
- Chapter 8, **Troubleshooting**, gives solutions to common problems you may encounter when using the computer.
- Appendix A, **Specifications**, gives a brief specification of the computer.
- Appendix B, **Regulatory Information**, provides regulatory statements and safety notices on your computer.

Notational Conventions

Throughout this manual, the following conventions are used to distinguish elements of text.

■ **NOTE:** identifies additional information that requires special attention.

■ **CAUTION:** identifies important information that, if not followed, may result in loss of data or damage to the computer.

Keyboard keys are shown in a bold typeset. For example:

Press the **Enter** key to complete.

When keys are joined by a plus sign (+), press the first key, and, while keeping the first key down, press the remaining keys, finally release all the keys. When necessary, keys are also shown in graphics.

A title, command, setup item, or button that you can see on the screen is shown in boldface. A value or an option that you can select for a setup item is shown in italic. For example:

Select **When I press the power button**, set it to *Shut down*, and then click the **Save changes** button.

Getting Started

Congratulations on purchasing this durable computer.

Your computer incorporates desktop computer capabilities into a compact notebook-sized package. It can greatly enhance your productivity either in the office or at home. And, of course, wherever you need it, the computer is ready and easy “to go.”

This chapter first tells you step by step how to get the computer up and running. You will find instructions for these procedures:

- Unpacking
- Connecting to AC power
- Opening the cover
- Turning on the computer
- Turning off the computer

Then, you will find a section briefly introducing the external components of the computer. And the last section navigates you to the information you may need after the computer is ready for use.

Getting the Computer Running

This section guides you through the procedures for getting the computer ready for operation.

Unpacking

After unpacking the shipping carton, you should find these standard items:

- Notebook computer
- Accessories:
 - AC adapter
 - AC power cord
 - Driver disc

Inspect all the items. If any item is damaged or missing, notify your dealer immediately.

Keep the shipping carton and packing materials in case you need to ship or store the computer in the future.

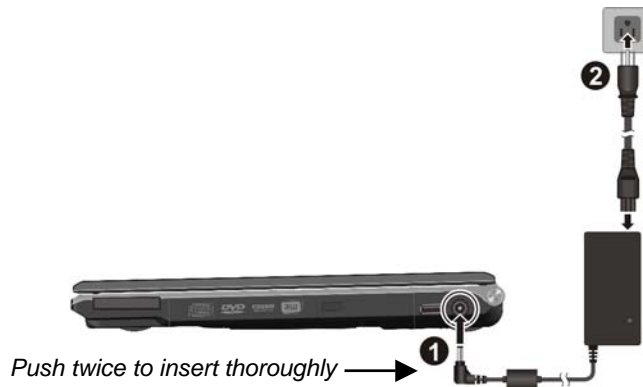
Connecting to AC Power

The computer operates either on the external AC power or internal battery power. It is suggested that you use AC power when you start up the computer for the very first time.

CAUTION: Use only the AC adapter included with your computer. Using other AC adapters may damage the computer.

1. Make sure that the computer is turned off.
2. Plug the DC cord of the AC adapter to the power connector of the computer (❶).

3. Plug the female end of the AC power cord to the AC adapter and the male end to an electrical outlet (2).



4. When the AC adapter is connected, power is being supplied from the electrical outlet to the AC adapter and onto your computer. Now, you are ready to turn on the computer.
5. When the AC adapter is connected, it also charges the battery pack. The Battery Charge Indicator on the computer glows amber to indicate that charging is in progress. When the battery is fully charged, the Battery Charge Indicator is off. (For information on using battery power, see Chapter 3.)

CAUTION:

- When you disconnect the AC adapter, disconnect from the electrical outlet first and then from the computer. A reverse procedure may damage the AC adapter or the computer.
- When unplugging the connector, always hold the plug head. Never pull on the cord.

Opening the Cover

CAUTION: Be gentle when opening and closing the cover. Opening it vigorously or slamming it shut could damage the computer.

Open the top cover by lifting up the cover. You can tilt the cover forward or backward for optimal viewing clarity.



Turning On and Off the Computer

Turning On

1. Make sure that the computer is connected to AC power or the battery is fully charged.

2. Press the power button.



3. Each time the computer is turned on, it performs a Power-On Self Test (POST), and the Windows operating system should start.

Turning Off

To turn off the computer power, use the “Shut Down” command of your operating system.

NOTE: There are other ways you can stop the computer so that you will be back to where you left off when you next turn on the computer. (See “Stopping the Computer” in Chapter 2 for information.)

CAUTION: If you have to turn the computer on again immediately after turning it off, wait for at least five seconds. Turning the computer off and on rapidly can damage it.

Taking a Look at the Computer

This section identifies the external components of the computer and briefly describes the function of each component.

NOTE: Depending on the model you purchased, the appearance of your computer may not be exactly the same as those shown in this manual.

Right-Side Components



Ref	Component	Description	See Also
①	ExpressCard Slot	Accepts an ExpressCard for additional functions.	P. 4-4
②	Swappable Bay	Depending on your model, the swappable bay may contain any of the following:	
	DVD Super Multi Drive	Accepts a compact disc for installing or loading software, accessing data, and playing music/video.	P. 2-14
	Secondary Battery Pack	Supplies power to your computer when external power is not connected.	P. 3-7
	Optical Drive Dummy	Install an optical drive dummy if you do not plan to use the optical drive for a length of time or to lighten the computer during transport.	P. 2-17
③	USB Port	Connects a USB device, such as a flash disk, printer, digital camera, joystick, and more.	P. 4-3
④	Power Connector	Connects the AC adapter.	P. 1-2

Left-Side Components



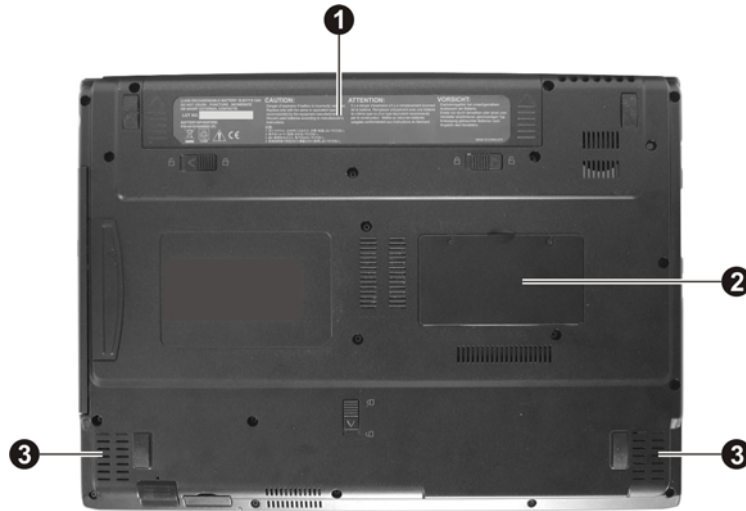
Ref	Component	Description	See Also
①	Kensington Lock	Locks the computer to a stationery object for security.	P. 7-3
②	VGA Connector	Connects an external display.	P. 4-2
③	Expansion Bus Connector	Connects to a Port Replicator.	P. 4-8
④	RJ-45 Connector	Connects the LAN cable.	P. 2-23
⑤	USB Ports	Each of the two ports connects a USB device, such as a flash disk, printer, digital camera, joystick, and more.	P. 4-3
⑥	Microphone Connector	Connects an external microphone.	P. 2-21
⑦	Audio Output Connector	Connects a set of headphones, external speakers with amplifier, or an audio recording device.	P. 2-21
⑧	S/PDIF Connector	Connects an S/PDIF device such as a digital speaker set for digital audio output.	P. 2-21
⑨	RF (radio frequency) On/Off Switch	Serves as the master switch that allows you to turn the wireless LAN radio, 3G, and <i>Bluetooth</i> wireless feature.	P. 2-24, 2-27, 2-32

Front Components



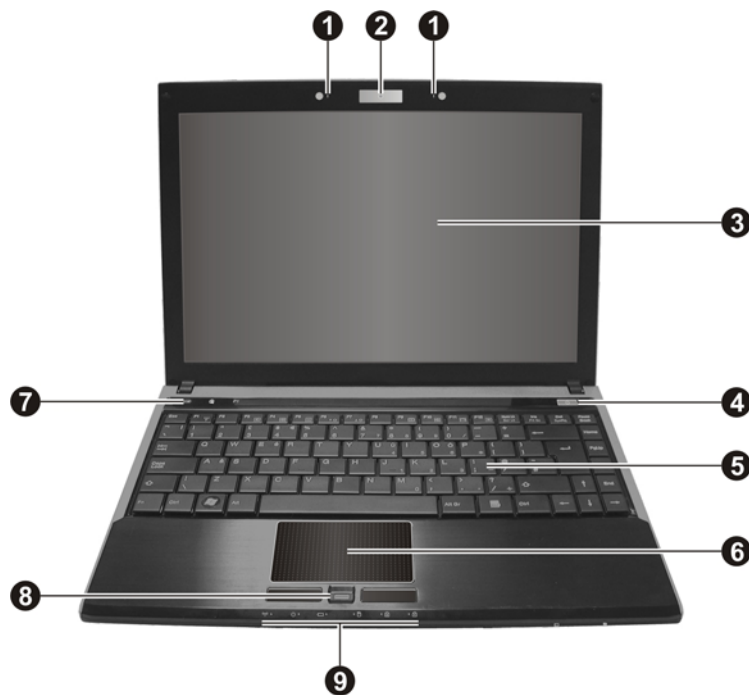
Ref	Component	Description	See Also
①	Card Reader	Accepts a MultiMediaCard (MMC), Secure Digital (SD), Memory Stick (MS) or Memory Stick PRO (MS PRO) card for removable storage media.	P. 4-6
②	SIM Card slot	Contains the optional 3G SIM card.	P. 2-31


Bottom Components











Ref	Component	Description	See Also
①	Battery Pack	Supplies power to your computer when external power is not connected.	P. 3-3
②	Memory Slot	Inside is the memory slot for expanding the memory size.	P. 4-12
③	Speakers	Sends out sound and voice from the computer.	P. 2-20

Top-open Components



Ref	Component	Description	See Also
①	Microphone	Receives sound and voice for the computer.	P. 2-20
②	CMOS Camera Lens	Allows you to use your computer's camera function.	
③	LCD Screen	Displays the output of the computer.	P. 4-2
④	Power Button 	Turns the computer power ON and OFF.	P. 1-4
⑤	Keyboard	Serves as the data input device of the computer.	P. 2-5
⑥	Touchpad	Serves as the pointing device of the computer.	P. 2-12

Ref	Component	Description	See Also
7	Quick Buttons		
	 ECO	Enables/disables power saving when using battery power.	P. 2-4
		Microsoft® Internet Explorer quick launch key.	P. 2-4
	P1	P1 (Program 1 – user customized) quick launch key.	P. 2-27
8	Fingerprint Sensor	Serves as the fingerprint verification, preventing unauthorized access to your computer.	P. 2-31
9	Indicators	Show the current status of the computer's devices.	
	WLAN / Bluetooth® indicator 	Lights blue when WLAN radio is on.	P. 2-24
		Lights red when <i>Bluetooth</i> ® feature is on.	P. 2-27
		Lights purple when both WLAN radio and <i>Bluetooth</i> ® feature is on.	
	AC / Battery Power indicator 	Lights blue when computer is on and connected to AC power.	P. 1-4
		Lights amber when computer is on and using battery power.	
		Blinks blue when computer is in Sleep mode.	
	Battery charge indicator 	Lights blue when the battery is charged.	P. 3-3
		Lights amber when the battery is being charged.	
		Blinks red when the battery's capacity is below 10 %.	
	Hard disk drive in-use indicator 	Blinks blue when computer is accessing the hard disk drive.	P. 2-14
	Caps Lock indicator 	Lights blue when Caps Lock is on.	P. 2-5

Ref	Component	Description	See Also
	Num Lock indicator 	Lights blue when Num Lock is on.	P. 2-5

Where to Go from Here

As your computer is ready for operation, you may want to do any of the following now:

For this purpose...	Do this...
To know more about the computer...	Go on to the next chapter.
To install the operating system if your dealer has not already done so...	See the operating system manual.
To know more about the operating system...	Read the operating system manual.
To install the drivers if your dealer has not already done so...	See Chapter 6.
To charge the battery pack for the first time...	See “Charging the Battery Pack” in Chapter 3.

Operating Your Computer

This chapter provides information about the use of the computer.

If you are new to computers, reading this chapter will help you learn the operating basics. If you are already a computer user but are new to notebook computers, you may choose to read only the parts containing information unique to your computer.

Described in this chapter are the operating basics of these components:

- Starting and stopping the computer
- Quick buttons
- Keyboard
- Touchpad
- DVD drive
- Video features
- Audio features
- Communication features
- Fingerprint sensor

Starting and Stopping the Computer

There are a number of ways to start and stop the computer.

Starting the Computer

You always start the computer using the power button.

A computer starts up with an operating system (OS) existing on the storage device such as the hard disk and optical disc. The computer will automatically load the OS after you turn it on. This process is called booting.

NOTE: An operating system is the platform for all your software application programs to run on. Your computer uses the Microsoft Windows Vista operating system.

Stopping the Computer

When you finish a working session, you can stop the computer by turning off the power or leaving the computer in Sleep or Hibernation mode:

To stop in this mode...	Do this...	To start up or resume again
Off	Click Start → Shut Down This can prevent loss of unsaved data or damage to your software programs. If the system is locked up because of hardware or software problems, press the power button to turn off the computer.	Press the power button.
Sleep	Depending on your settings in Windows, you can place the computer in Sleep mode by: <ul style="list-style-type: none">• Closing the display cover• Pressing the Fn+F12 hot key• Pressing the power button	Press any key.

To stop in this mode...	Do this...	To start up or resume again
Hibernation	Depending on your settings in Windows, you can place the computer in Hibernation mode by: <ul style="list-style-type: none">• Closing the display cover• Pressing the power button	Press the power button.

If you choose to stop in Sleep or Hibernation mode, you can return to where you left off the next time you start up the computer. (See “Power Management” in Chapter 3 for more information.)

Using the Quick Buttons


The Quick buttons are three pre-defined buttons located on the left above the keyboard.



The Easy Start buttons allow you to start the frequently-used programs with one single press of a button (from left to right):

- **ECO** Enter into power saving mode when using battery power. The system will turn down the panel backlight and sacrifice processing speed to gain more battery life.

NOTE:

- The ECO button works only when using battery power.
- Upon connecting AC power when in ECO mode, your computer will return to previous state before power saving mode.
-  Microsoft® Internet Explorer
- P1 P1 (Program 1 – user customized) quick launch key (see chapter 6 for details)

Using the Keyboard

Your keyboard has all the standard functions of a full-sized computer keyboard plus a Fn key added for specific functions.

The standard functions of the keyboard can be further divided into four major categories:

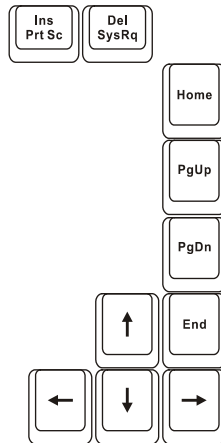
- Typewriter keys
- Cursor-control keys
- Numeric keys
- Function keys

Typewriter Keys

Typewriter keys are similar to the keys on a typewriter. Several keys are added such as the Ctrl, Alt, Esc, and lock keys for special purposes. When the lock keys (Caps Lock, Num Lk, and Scr Lk) are pressed, their corresponding indicators light up.

The Control (Ctrl) / Alternate (Alt) key is normally used in combination with other keys for program-specific functions. The Escape (Esc) key is usually used for stopping a process. Examples are exiting a program and canceling a command. The function depends on the program you are using.

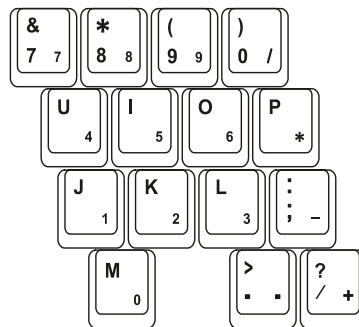
Cursor-Control Keys



NOTE: The word "cursor" refers to the indicator on the screen that lets you know exactly where on your screen anything you type will appear. It can take the form of a vertical or horizontal line, a block, or one of many other shapes.

Numeric Keypad

A 15-key numeric keypad is embedded in the typewriter keys as shown next:



Numeric keys facilitate entering of numbers and calculations. When Num Lock is on, the numeric keys are activated; meaning you can use these keys to enter numerals.

NOTE:

- When the numeric keypad is activated and you need to type the English letter in the keypad area, you can turn Num Lock off or you can press **Fn** and then the letter without turning Num Lock off.
- Some software may not be able to use the numeric keypad on the computer. If so, use the numeric keypad on an external keyboard instead.

Function Keys

On the top row of the keys are the function keys: F1 to F12. Function keys are multi-purpose keys that perform functions defined by individual programs.









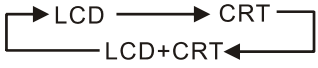








Fn Key





The Fn key, at the lower left corner of the keyboard, is used with another key to perform the alternative function of a key. The letter “Fn” and the alternative functions are identified by the color of blue on the keytop. To perform a desired function, first press and hold Fn, then press the other key.

Hot Keys

Hot keys refer to a combination of keys that can be pressed any time to activate special functions of the computer. Most hot keys operate in a cyclic way. Each time a hot key combination is pressed, it shifts the corresponding function to the other or next choice.

You can easily identify the hot keys with the icons imprinted on the keytop. The hot keys are described next.

Key	Description
 	Switches the wireless LAN radio and/or <i>Bluetooth</i> [®] wireless feature and/or 3G feature on and off. NOTE: Refer to the next table for the behavior of Fn+F1 key in relation to the availability of the wireless LAN module and/or <i>Bluetooth</i> [®] module and/or 3G module in your computer.
 	Decreases the sound volume.
 	Increases the sound volume.
 	Switches the display output to one of the following when external devices are connected. Upon booting the system with CRT: <div style="text-align: center; margin: 10px 0;">  <pre> graph LR LCD --> CRT CRT --> LCD_CRT[LCD+CRT] LCD_CRT --> LCD </pre> </div> NOTE: This function only applies to Plug & Play display devices.
 	Decreases the LCD brightness.
 	Increases the LCD brightness.
 	Switches the touchpad off and on (depending on your model).
 	Switches the system sound output off (mute) and on.

Key	Description
 	Switches LCD display on and off.
 	Serves as the sleep button that you can define with Windows' Power Options . (See the "Power Management" in Chapter 3.)

Fn+F1 Behavior

The following table shows the behavior of Fn+F1 key in relation to the availability of the wireless LAN module and/or *Bluetooth*[®] module and/or 3G module in your computer.

NOTE: Make sure that RF switch is at the ON position.



Available Module	Upon pressing Fn+F1 key . . .		
	Wireless LAN	Bluetooth	3G
Wireless LAN (only) Default: wireless LAN radio is ON.	OFF	N/A (not available)	N/A
<i>Bluetooth</i> [®] (only) Default: <i>Bluetooth</i> [®] wireless feature is OFF.	N/A	ON	N/A
Wireless LAN + <i>Bluetooth</i> [®] Default: wireless LAN radio is ON, <i>Bluetooth</i> [®] wireless feature is OFF.	ON	ON	N/A
	OFF	ON	N/A
	OFF	OFF	N/A
Wireless LAN + <i>Bluetooth</i> [®] + 3G Default: wireless LAN radio is ON, <i>Bluetooth</i> [®] wireless feature is OFF, 3G feature is OFF.	ON	ON	OFF
	OFF	OFF	ON
	OFF	ON	ON
	OFF	ON	OFF
	ON	OFF	ON
	ON	ON	ON
	OFF	OFF	OFF

NOTE: Upon restarting your computer or upon waking up from Sleep mode, the system will resume **Fn+F1** behavior based on the last state.



Euro Symbol



You can press the euro dollar sign € on various keyboards.

- To press the euro sign on a United States-International keyboard, hold down the **Alt Gr** key and press 5 (which has an euro sign on it).
- To press the euro sign on a standard United States keyboard, hold down either of the **Alt** keys and type 0128 on the numeric keypad part of your keyboard.
- To press the euro sign on an UK keyboard, hold down the **Alt Gr** key and press 4 (which has an euro sign on it).

Windows Keys

The keyboard has two keys that perform Windows-specific functions:

 Windows Logo key and  Application key.

The  Windows Logo key opens the **Start** menu and performs software-specific functions when used in combination with other keys. The  Application key usually has the same effect as a right mouse click. (See your Windows manual for more information.)

Using the Touchpad

CAUTION: Do not use a sharp object such as a pen on the touchpad. Doing so may damage the touchpad surface.

NOTE: For optimal performance of the touchpad, keep your fingers and the pads clean and dry. When tapping on the pad, tap lightly. Do not use excessive force.

The touchpad is a pointing device that allows you to communicate with the computer by controlling the location of the pointer on the screen and making selection with the buttons.



The touchpad consists of a rectangular pad and a left and right buttons. To use the touchpad, place your forefinger or thumb on the pad. The rectangular pad acts like a miniature duplicate of your display. As you slide your fingertip across the pad, the pointer (also called cursor) on the screen moves accordingly. When your finger reaches the edge of the pad, simply relocate yourself by lifting the finger and placing it on the other side of the pad.

Here are some common terms that you should know when using the touchpad:

Term	Action
Point	Move your finger on the pad until the cursor points to the selection on the screen.
Click	Press and release the left button. –or– Tap gently anywhere on the pad.
Double-click	Press and release the left button twice in quick succession. –or– Tap twice on the pad rapidly.
Drag and drop	Press and hold the left button, then move your finger until you reach your destination (drag). Finally, release the button (drop) when you finish dragging your selection to the destination. The object will drop into the new location. –or– Gently tap twice on the pad and on the second tap, keep your finger in contact with the pad. Then, move your finger across the pad to drag the selected object to your destination. When you lift your finger from the pad, the selected object will drop into place.
Scroll	To scroll is to move up and down or left and right in the working area on the screen. To move vertically, place your finger on the right or left edge of the pad and slide your finger up and down along the edge. To move horizontally, place your finger on the top or bottom edge of the pad and slide your finger left and right. This function works only after you install the touchpad driver supplied with the computer and it may not work for all applications.

TABLE NOTE: If you swap the left and right buttons, “tapping” on the touchpad as an alternative method of pressing the left button will no longer be valid.

Configuring the Touchpad

You may want to configure the touchpad to suit your needs. For example, if you are a left-handed user, you can swap the two buttons so that you can use the right button as the left button and vice versa. You can also change the size of the on-screen pointer, the speed of the pointer, and so on.

To configure the touchpad, go to **Control Panel → Hardware and Sounds → Mouse Properties**. However, you can install the touchpad driver supplied with your computer to take advantage of more powerful features. (For information on installing the driver, see “How to Use the Driver Disc” in Chapter 6.)

Using the DVD Drive (Optional)

Depending on the model your computer's swappable bay may contain a DVD drive, usually configured as drive D. The **Super Multi drive** can work both as a DVD-ROM drive for reading DVD (Digital Versatile Disc) discs in addition to CDs, audio CDs and CD-R/-RW discs, and CD-RW drive. Can also write to DVD+R/+RW/-R/-RW/DVD-RAM discs.

CAUTION:

- When inserting a disc, do not use force.
- Make sure that the disc is correctly inserted into the tray, and then close the tray.
- Do not leave the DVD tray open. Also, avoid touching the lens in the tray with your hand. If the lens becomes dirty, the DVD drive may malfunction.
- Do not wipe the lens using materials with rough surface (such as paper towel). Instead, use a cotton swab to gently wipe the lens.

FDA regulations require the following statement for all laser-based devices:
"Caution, Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure."

NOTE: The DVD drive is classified as a Class 1 laser product. This label is located on the DVD drive.

**CLASS 1 LASER PRODUCT
LASER KLASSE 1**

NOTE: For DVD and Combo drives only.

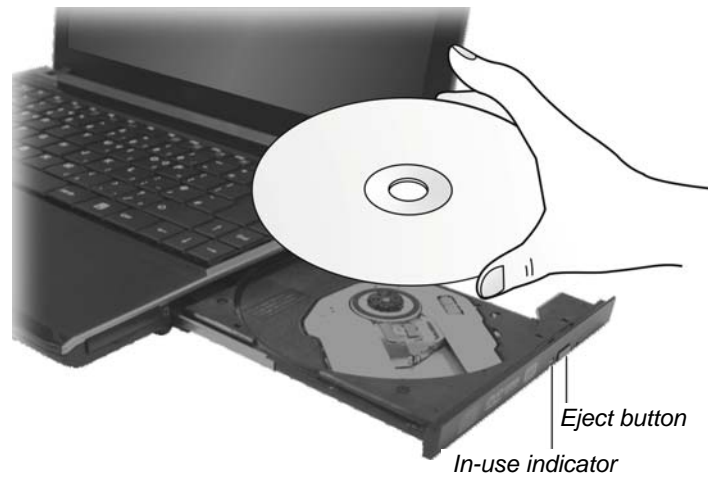
This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation,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

Inserting and Removing a Disc

Follow this procedure to insert or remove a disc:

1. Turn on the computer.

2. Press the eject button and the DVD tray will slide out partially. Gently pull on it until it is fully extended.
3. To insert a disc, place down the disc in the tray with its label facing up. Slightly press the center of the disc until it clicks into place.



To remove a disc, hold the disc by its outer edge and lift it up from the tray.

4. Gently push the tray back into the drive.

NOTE: In the unlikely event that you are unable to release the DVD tray by pressing the eject button, you can manually release the disc. (See "Optical Drive Problems" in Chapter 8.)

Installing an Optical Drive Dummy (Optional)

You can install an optical drive dummy in place of the optical drive if you do not plan to use it for a length of time or to lighten the computer during transport. To install an optical drive dummy:

1. Make sure that system power is off.
2. Gently place the computer upside down.
3. Slide the swappable bay release lever outward to the unlock (🔒) position (❶) and, while holding it in the unlock position, pull the optical drive off the computer (❷).



4. Slide the optical drive dummy all the way into the slot. Make sure to observe the correct orientation. The swappable bay security lock will slide to the lock (🔒) position to secure the optical drive dummy.



Using the Video Features

The video subsystem of your computer features:

- 13.3-inch TFT (Thin-Film Transistor) color LCD display with 1280×800 WXGA resolution
- Simultaneous display on LCD and external display, which is useful when you have a presentation as you can control the screen from your computer and face the audience at the same time.
- Multi-display capability, which allows you to expand your desktop on the screen to another display device so that you have more desktop space to work on.
- Power Management

NOTE:

- Before using the multi-display capability or taking advantage of the enhanced video capabilities, the VGA driver supplied with your computer must be installed. (See chapter 6 for details.)
- The computer enters the Sleep or Hibernation mode when the LCD is closed. If you want to use the computer with the LCD closed, set *Do Nothing* to the "When I Close the lid" option in the **Power Options** → **System Settings** Properties. Thus the computer does not enter the Sleep or Hibernation mode when the LCD is closed.

Configuring the Display Modes

NOTE: When using an external CRT monitor, the resolution depends on the CRT monitor's supported resolution.

Your computer has been set to a default resolution and number of colors before shipment. You can view and change display settings through your operating system. See your operating system documentation or online help for specific information.

For displaying in higher resolutions, you can connect an external monitor that supports higher resolutions. (See "Connecting an External Monitor" in Chapter 4 for more information.)

Using the Audio Features

NOTE:

- To take advantage of the enhanced audio capabilities, the audio driver supplied with your computer must be installed. (See chapter 6 for details.)
- If you experience interference while recording, try lowering the microphone recording volume.

The audio subsystem of your computer features:

- Built-in sound system for recording and playing sound on your computer
- Azalia interface (high density audio codec)
- 2.1-channel analog output
- Built-in microphone (❶)
- External audio connectors (❷), and
- Set of speakers (❸)

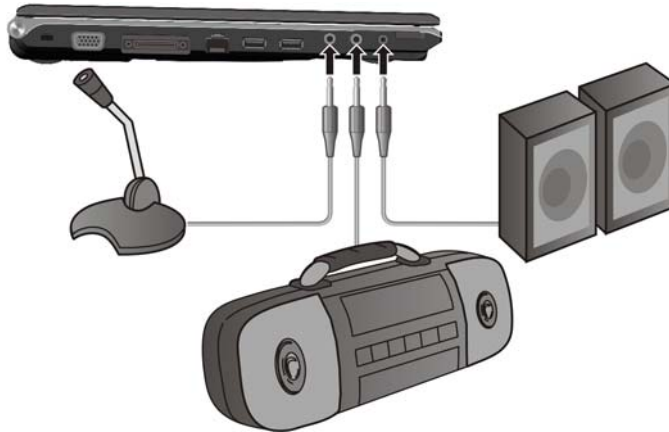




Ways of playing and recording sound vary with the operating system used. See your operating system documentation or online help for specific information.

Connecting Audio Devices

For higher audio quality, you can send or receive sound through external audio devices.

NOTE: After connecting an external audio device, make sure that you specify the use of the correct audio device in Windows.



- **Microphone Connector** () can be connected to an external microphone for recording voice or sound.
- **Audio Output Connector** () can be connected to speakers, headphones, or earphone set.
- **S/PDIF Connector** (S/PDIF) can be connected to the line-in connector of S/PDIF (Sony/Philips Digital InterFace) compliant as well as ordinary powered speakers with built-in amplifiers, headphones, or earphone set. S/PDIF is an audio transfer file format that ensures a high quality digital audio output through optical fibers.

NOTE:

- The S/PDIF connector is classified as a Class 1 laser product.
- When using the external speakers/headphones or microphone, you cannot use the internal one.

Using the Communication Features

Using the LAN

NOTE: To take advantage of the LAN feature, the LAN driver supplied with your computer must be installed. (See chapter 6 for details.)

The internal 10/100/1000Base-T LAN (Local Area Network) module allows you to connect your computer to a network. It supports data transfer rate up to 1000 Mbps.

To connect the network cable to the LAN module, connect one end of the LAN cable to the RJ-45 connector on the computer and the other end to the network hub.



Using the Wireless LAN

Depending on your model, an internal mini PCI-E wireless LAN (WLAN) card may have been pre-installed by your computer manufacturer at the factory. This card allows you to access corporate networks or the Internet in a wireless environment.

The WLAN features include:

- WEP (Wired Equivalent Privacy) 64/128-bit data encryption
- IEEE 802.11a/b/g/n standard compliance

Technology	Stated Maximum Throughput (Mbps)	Data Rates (Mbps)	Band (GHz)	Modulation Technology
802.11a	54	54, 48, 36, 24, 18, 12, 9, 6	5.15 ~ 5.35	OFDM (Orthogonal Frequency Division Multiplexing)
802.11b	11	11, 5.5, 2, 1	2.4	DSSS (Direct Sequence Spread Spectrum)
802.11g	54	54, 36, 18, 9	2.4	OFDM (Orthogonal Frequency Division Multiplexing)
802.11n	100 Mbps or more	100 ~ 210	2.4 / 5	Spatial multiplexing, uses MIMO (multiple-input multiple-output)

To take advantage of the WLAN feature, make sure that the WLAN driver is installed correctly. (See chapter 6 for details.) If your WLAN card was provided by your dealer instead of the computer manufacturer, contact your dealer for the correct driver to use.


Turning Off/On the WLAN Radio

NOTE: The FAA (Federal Aviation Agency) has deemed it unsafe to operate wireless devices in aircraft as this may interfere with flight safety. Remember to turn off wireless LAN when using your computer in the airplane.

To turn on the WLAN radio:

1. Make sure that the RF switch is at the ON position.




2. Press Fn+F1 to turn on the WLAN radio (see “Fn+F1 Behavior” in Chapter 2), indicated by the WLAN indicator () glowing in blue when on.

If you need to temporarily turn off the radio, press Fn+F1. To resume network connection, press Fn+F1 again.

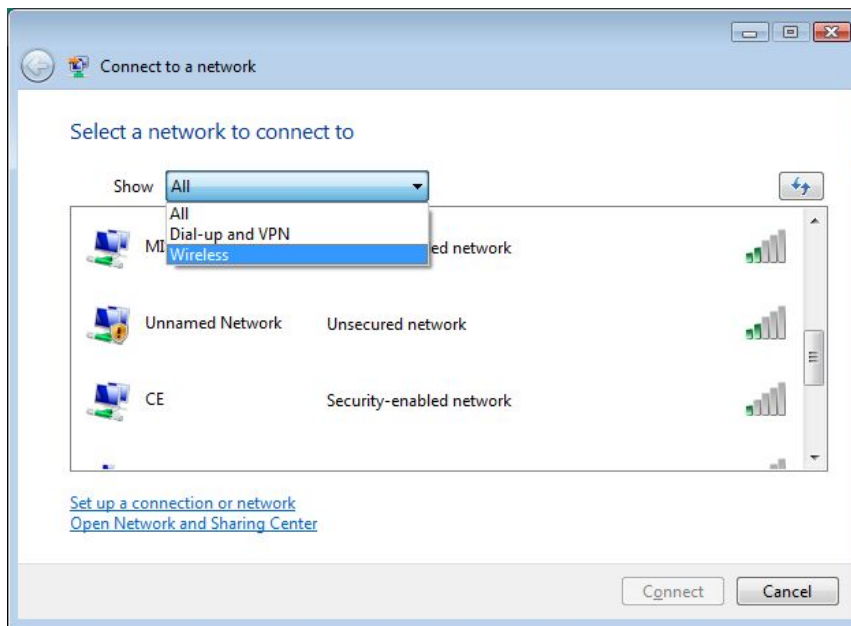
It takes approximately 30 seconds for your computer to make a successful WLAN connection and approximately 10 seconds to disconnect.

Connecting to a Wireless Network

To connect to a wireless network:

1. Make sure that the WLAN radio is on (see the previous section).
2. Right-click the **Wireless Network Connection** icon  located on the Windows system tray and select **Connect to a network**.

3. If any wireless network is detected, the following window appears on screen. Click the **Show** drop down menu and select **Wireless**.



4. Select a wireless network to connect to by clicking a selection, then click **Connect**.
5. Depending on the settings, you may be asked to enter a WEP key (refer to your Windows online help for more information on setting a wireless network connection).

Using the *Bluetooth*[®] Wireless Feature


NOTE: To take advantage of the Bluetooth feature, the Bluetooth driver supplied with your computer must be installed. (See chapter 6 for details.)

Depending on your model, your computer may incorporate the Bluetooth capability for short-range (about 10 meters) wireless communications between devices without requiring a cable connection.

With Bluetooth, data can be transmitted through walls, pockets and briefcases as long as two devices are within range.

Turning On and Off the Bluetooth Feature


NOTE:

- You can still use the WLAN feature when the Bluetooth feature is turned on.
- The wireless LAN indicator () will glow in purple when both wireless LAN and Bluetooth feature are turned on.

1. Make sure that the RF switch is at the **ON** position.






2. Press Fn+F1 to turn the *Bluetooth*[®] wireless feature on (see “Fn+F1 Behavior” in Chapter 2).

The wireless LAN indicator () will glow in red. By default, your computer is in the general discoverable and pairable mode after the Bluetooth feature is turned on.


3. To turn off the Bluetooth feature, press Fn+F1 again.

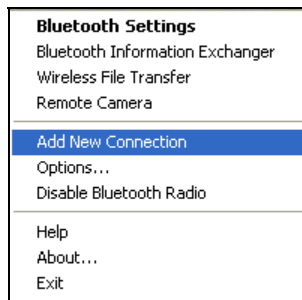
The status of the Bluetooth connection is indicated by the Bluetooth icon located in the system tray in the lower-right part of the screen.

Status	Icon
Off	 (blue with red logo)
On	 (blue with white logo).
Connected	 (blue with green logo)

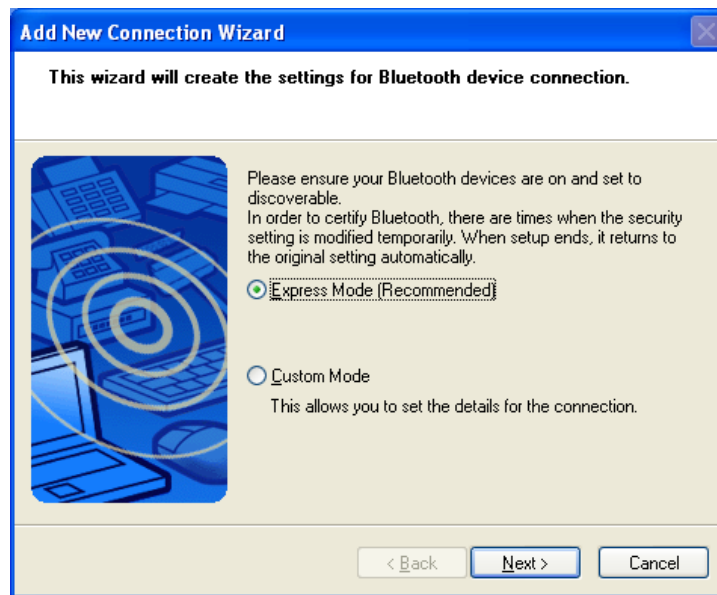
You can use the Bluetooth Utility to configure Bluetooth connection settings and transfer files.

Connecting to Another Bluetooth Device

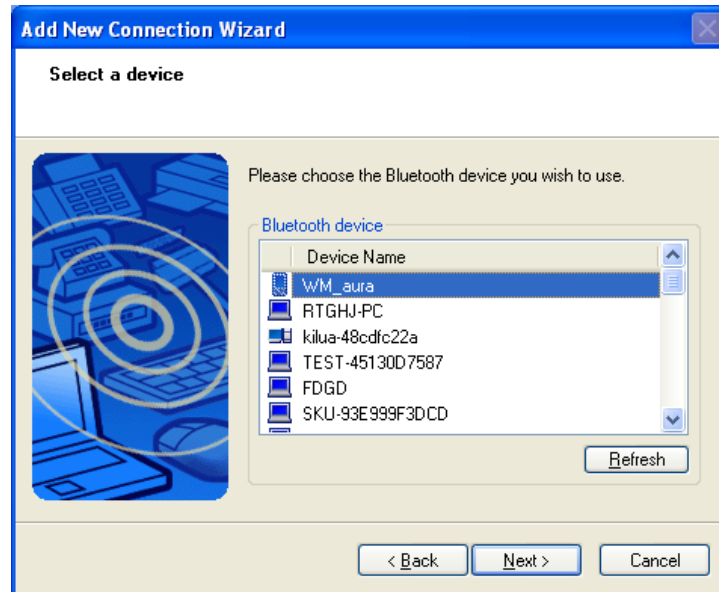
1. Make sure that the target Bluetooth device is turned on, discoverable and within close range. (See the documentation that came with the Bluetooth device.)
2. Right-click the  icon, and then click **Add New Connection**.



3. The Add New Connection Wizard window appears. Select Express Mode (Recommended), then click Next.



4. Select the device to connect to and click **Next**.



5. Depending on the type of Bluetooth device that you want to connect to, you will need to enter the pertinent information.

For detailed information on using the Bluetooth Utility, see the Bluetooth Utility Help on your computer by clicking **Help**, then **Contents and Index**.

Using the 3G Feature (Optional)

NOTE: To take advantage of the 3G feature, the 3G driver supplied with your computer must be installed. (See chapter 6 for details.)

3G is the third generation of mobile phone standards and technology, after 2G. It is based on the International Telecommunication Union (ITU) family of standards under the International Mobile Telecommunications programme, “IMT-2000”. Services include wide-area wireless voice telephony and broadband wireless data, all in a mobile environment.

Unlike IEEE 802.11 networks, 3G networks are *wide area cellular telephone networks* which evolved to incorporate high-speed internet access and video telephony. IEEE 802.11 networks are short range, high-bandwidth networks primarily developed for data.

To use the 3G feature on your computer, you need to subscribe to 3G service and install the 3G SIM card from your service provider, network operator, or other vendor.

To install the SIM card, follow these steps:

1. Make sure that the computer is not turned on or connected to AC power.
2. Remove the SIM card slot cover.



3. Insert the SIM card into the holder. Make sure the beveled corner on the SIM card is facing towards the computer and that the golden contact area on the card is facing upwards.



WARNING: Keep all SIM cards out of the reach of small children. For availability and information on using SIM card services, contact your SIM card vendor. This may be the service provider, network operator, or other vendor.

NOTE: To remove the SIM card, push inward to release and slide the SIM card out of the slot.

Turning On and Off the 3G Feature

1. Make sure that the RF switch is at the **ON** position.



2. Press **Fn+F1** to turn the 3G feature on (see “**Fn+F1 Behavior**” in Chapter 2).
3. To turn off the 3G feature, press **Fn+F1** again.

You can use the 3G software application to configure 3G connection settings.

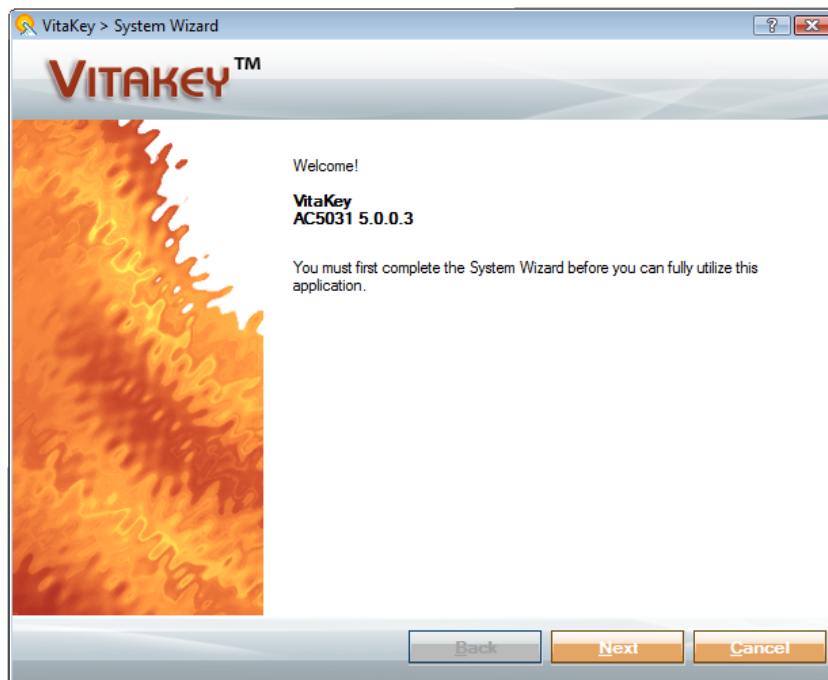
Using the Fingerprint Sensor

NOTE: To take advantage of the fingerprint sensor, the fingerprint driver supplied with your computer must be installed. (See chapter 6 for details.)

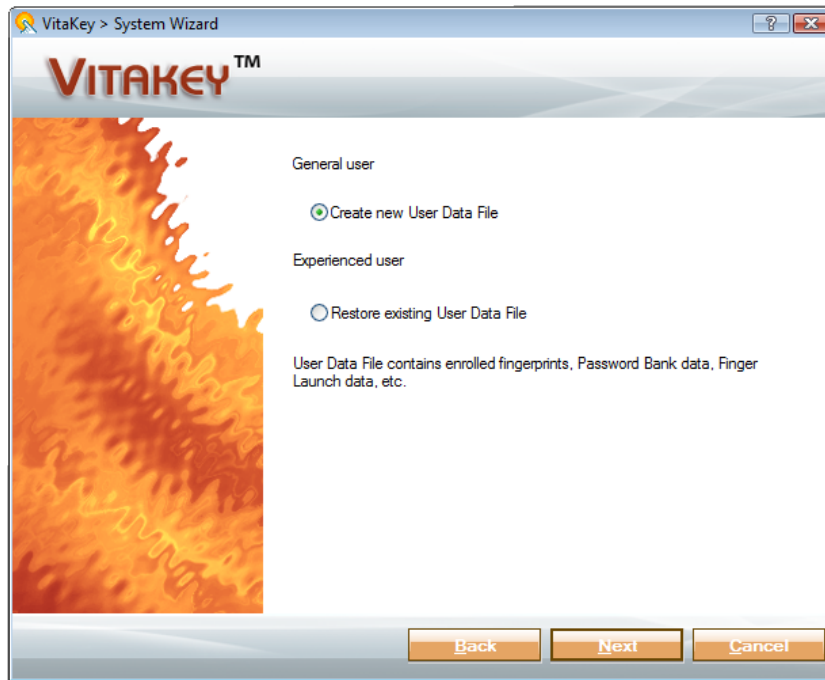
To start using the fingerprint sensor:

1. Locate the fingerprint sensor.
2. Go to Start menu → All Programs → VitaKey → AC5031 → System → System Settings.

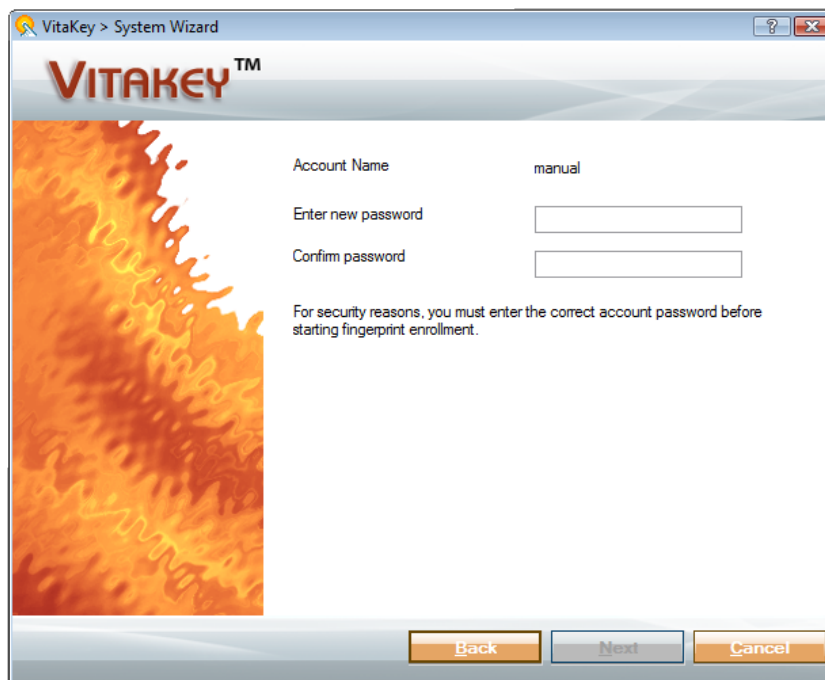
NOTE: You must first complete the System Wizard before you can utilize the VitaKey utility. The following screen appears.



3. Click **Next** to continue and the following screen appears.



4. Select **Create new user data file** and click **Next** to continue. The following screen appears.



5. Enter the password twice and click **Next** to continue. Follow the onscreen instructions to complete the System Wizard.

NOTE: For an online Help information on using the VitaKey utility, you can go to **Start menu → All Programs → VitaKey → AC5031 → Online Help**.

Managing Power

Your computer operates either on external AC power or on internal battery power.

This chapter tells you how you can effectively manage power. To maintain optimal battery performance, it is important that you use the battery in the proper way.

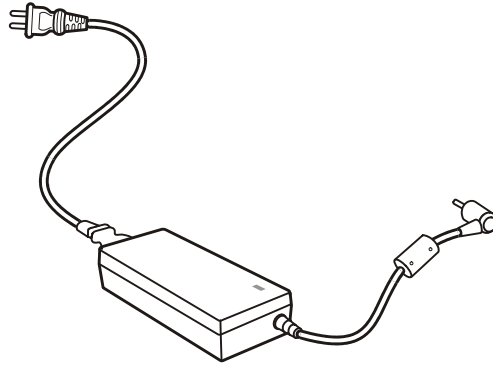
The topics in this chapter include:

- What is an AC adapter
- How to charge the battery pack
- When and how to initialize the battery pack
- How to check the battery level
- How to replace the battery pack
- What happens when the battery is low and what actions to take
- What is Power Management
- How to save power

AC Adapter

CAUTION:

- The AC adapter is designed for use with your computer only. Connecting the AC adapter to another device can damage the adapter.
- The AC power cord supplied with your computer is for use in the country where you purchased your computer. If you plan to go overseas with the computer, consult your dealer for the appropriate power cord.
- When you disconnect the AC adapter, disconnect from the electrical outlet first and then from the computer. A reverse procedure may damage the AC adapter or computer.
- When unplugging the connector, always hold the plug head. Never pull on the cord.



The AC adapter serves as a converter from AC (Alternating Current) to DC (Direct Current) power because your computer runs on DC power, but an electrical outlet usually provides AC power. It also charges the battery pack when connected to AC power.

The adapter operates on any voltage in the range of 100~240 V AC.

Battery Pack

The battery pack is the internal power source for the computer. It is rechargeable using the AC adapter.


The operating time of a fully charged battery pack depends on how you are using the computer. When your applications often access peripherals, you will experience a shorter operating time.

NOTE: Care and maintenance information for the battery is provided in the "Battery Pack Guidelines" section in Chapter 7.

Charging the Battery Pack

NOTE:

- Charging will not start if the battery's temperature is below 0 °C (32 °F) or above 45 °C (113 °F).
- The charging process will stop and the Battery Charge Indicator flashes red when the battery's temperature gets above 60 °C (140 °F). If this happens, the battery pack may be damaged. Please contact your dealer.
- During charging, do not disconnect the AC adapter before the battery has been fully charged; otherwise you will get a prematurely charged battery.

To charge the battery pack, connect the AC adapter to the computer and an electrical outlet. The Battery Charge Indicator () on the computer glows amber to indicate that charging is in progress. You are advised to keep the computer power off while the battery is being charged. When the battery is fully charged, the Battery Charge Indicator is off.

The charging times are as follows:

Battery Type	Charging Time	
	Computer is Off	Computer is On and in Idle State
3-cell (2600 mAH)	3 hours	3.5 hours
6-cell (5200 mAH)	4 hours	4.5 hours
Second battery pack (in swappable bay)	3.5 hours	4 hours

CAUTION: After the computer has been fully recharged, do not immediately disconnect and reconnect the AC adapter to charge it again. Doing so may damage the battery.

NOTE: The battery level may automatically lessen due to the self-discharge process (0.21 % per day), even when the battery pack is fully charged (100 %). This happens no matter if the battery pack is installed in the computer.

Initializing the Battery Pack

You need to initialize a new battery pack before using it for the first time or when the actual operating time of a battery pack is much less than expected.


Initializing is the process of fully charging, discharging, and then charging. It can take several hours.

1. Make sure that the computer power is turned off. Connect the AC adapter to fully charge the battery pack.
2. After the battery pack is fully charged, turn on the computer. When the message “**Press F2 for System Utilities**” appears, press the F2 key to invoke the program.
3. Disconnect the AC adapter and leave the computer on until the battery is fully discharged. The computer will shut down automatically.
4. Connect the AC adapter to fully charge the battery pack.

Checking the Battery Level

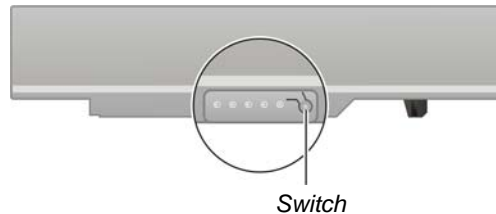
NOTE: Any battery level indication is an estimated result. The actual operating time can be different from the estimated time, depending on how you are using the computer.

By Operating System

You can check the approximate battery level using the battery meter function of the operating system. To read the battery level, click the  icon on the system tray.

By Gas Gauge

On the exterior side of the battery pack is a gas gauge for displaying the estimated battery charge. When the battery pack is not installed in the computer and you want to know the battery charge, you can press the switch with a pointed device to see the corresponding value of indicator segment that light green. The value of the corresponding green segment indicates the relative percentage of the battery charge. The battery pack is fully discharged when you see no segment glowing green.



Replacing the Battery Pack

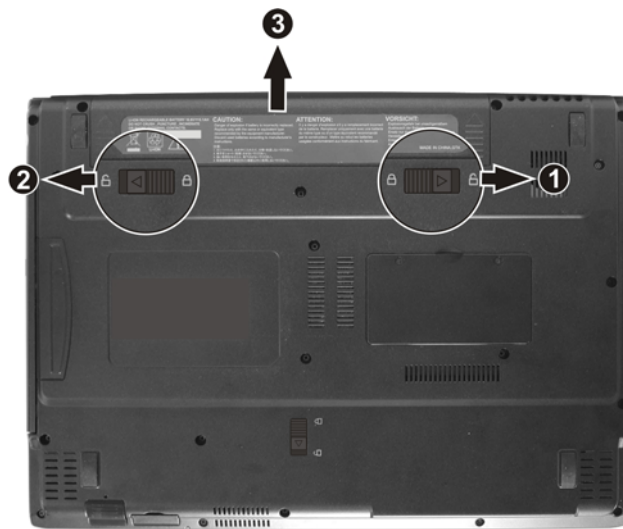
CAUTION:

- There is danger of explosion if the battery is incorrectly replaced. Replace the battery only with the computer manufacturer's optional battery packs. Discard used batteries according to the dealer's instructions.
- Do not attempt to disassemble the battery pack.

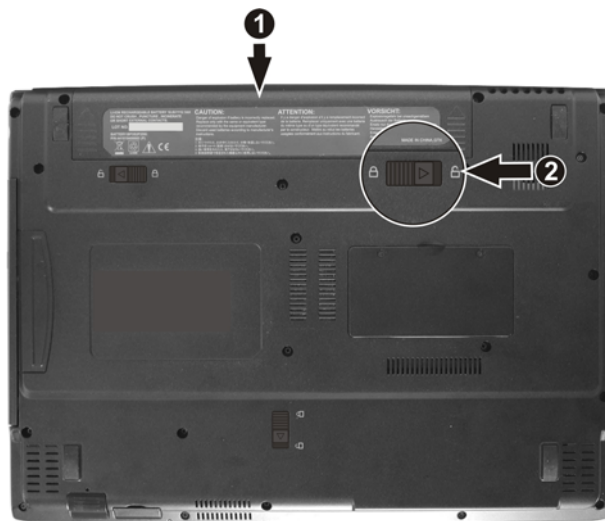
If you often rely on battery power for a long period of time while traveling, you may consider the purchase of an additional battery pack from your dealer and keep it with you in a fully charged state as a backup.

To replace the battery pack, follow these steps:

1. Make sure that the computer is not turned on or connected to AC power.
2. Place the computer upside down.
3. Slide the battery security lock outward to the unlock (🔓) position (❶).
4. Slide the battery release lever outward to the unlock (🔓) position (❷) and, while holding it in the unlock position, remove the battery pack off the computer (❸).



5. Fit another battery pack into place (❶) and slide the battery security lock to the lock (🔒) position (❷).



Installing a Second Battery Pack (Optional)

You can install a second battery pack to your computer for a longer operating time when AC power is not available. To install a second battery pack:

1. Make sure that system power is off.
2. Gently place the computer upside down.



3. Slide the swappable bay release lever outward to the unlock (🔓) position (❶) and, while holding it in the unlock position, pull the optical drive off the computer (❷).



4. Slide the second battery pack all the way into the slot. Make sure to observe the correct orientation. The swappable bay security lock would slide to the lock (🔒) position to secure the second battery pack.



Battery Low Signals and Actions

The battery icon  changes appearance to display the current state of the battery so that you can see how much charge remains (Windows default setting). When the battery charge is above 25 % the battery icon is green. When the battery charge reaches 25 % a yellow triangle with an exclamation point (!) appears above the green battery icon. When the charge reaches the low battery level a red circle with a white “X” appears above the green icon. The computer’s Battery Charge Indicator () blinks red to alert you to take actions.

Immediately save your data upon Battery Low. The remaining operating time depends on how you are using the computer. If you are using the audio subsystem, ExpressCard, hard or USB flash disk, the battery might run out of charge very quickly.

Always respond to Battery Low by placing your computer on Hibernation mode, turning off the computer, or connecting the AC adapter.

CAUTION:

- If you are using an ExpressCard, do not access the card during battery low periods. This is because the access may take longer than the time it takes the battery to run out of charge, thus making your access to the card unsuccessful.
- If you fail to save your data when the battery completely runs out of charge, then you lose your data.

Power Management

Your computer supports ACPI (Advanced Configuration and Power Interface) for power management. The power management feature allows you to reduce the power consumption for energy saving.

With an ACPI-compliant operating system such as Windows, power supply to different computer components is controlled on an as-needed basis. This allows maximum power conservation and performance at the same time.

In general, Windows' power management works in this way:

What...	When...
Power to the hard disk is turned off	When the hard disk has been idle for a set period.
Power to the display is turned off	When the display has been idle for a set period.
The computer enters the Sleep mode. The hard disk and display are turned off and the entire system consumes less power.	When the entire system has been idle for a set period.
	When you press the Fn+F12 hot key. *
	When you close the cover. *
The computer enters the Hibernation mode. (See the next subsection for more information.)	When you press the power button. *
	When the entire system has been idle for a set period.
	When you press the Fn+F12 hot key. *
	When you close the cover. *
	When you press the power button. *

* Depends on your settings in Windows.

For detailed information on power management, see Windows' Help.