

# Acer Aspire 1600 series

User's guide

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Acer Aspire 1600 Series Notebook Computer User's Guide  
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Acer Aspire 1600 series Notebook computer

Model Number : \_\_\_\_\_

Serial Number: \_\_\_\_\_

Purchase Date: \_\_\_\_\_

Place of Purchase: \_\_\_\_\_

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# First things first

## Your guides

A set of guides is provided to help you set up and use your Aspire computer:



The *Just for starters...* poster shows you how to set up your computer.



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This *User's Guide* provides clear and concise information on using your computer productively. You are advised to read it thoroughly and keep it handy for future reference.

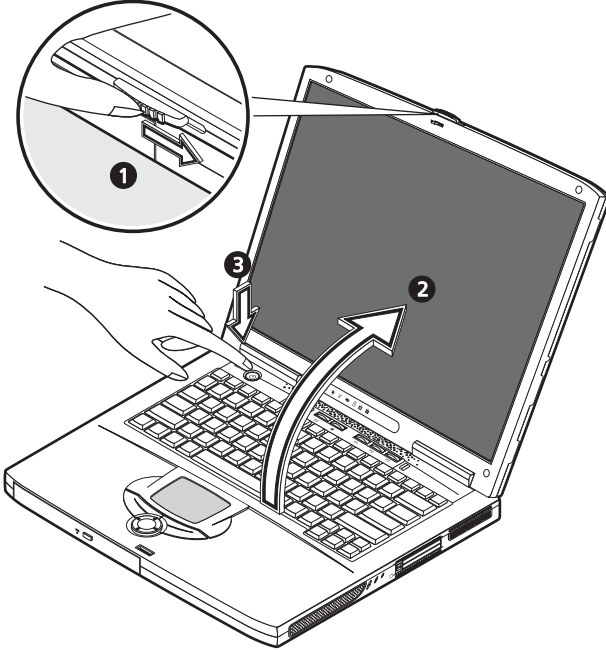
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For more information on our products, services, and support, please visit our web site [www.global.acer.com](http://www.global.acer.com).

## Basic care and tips for using your computer

### Turning your computer on and off

To turn on your computer, open the lid (1, 2) and press the power button (3) above the keyboard.



To turn the power off, you can do any of the following:

- Click on the Start button in Windows, and then select Shut Down on the popup menu.



- Push the power button.



To use this method, you must first click on the Power Management icon in Windows Control Panel, and then check that the power button is set to shut down the computer when pressed. See Windows Help for more information.



.....

**Note:** If you are unable to shut down the computer in the usual way, press and hold the power switch for more than four seconds. You should then wait at least two seconds before turning the computer on again.

## Taking care of your computer

Your computer will serve you well if you take care of it.

- Do not expose the computer to direct sunlight. Do not place it near sources of heat, such as a radiator.
- Do not expose the computer to temperatures below 0°C (32°F), or above 50°C (122°F).
- Do not expose the computer to magnetic fields.
- Do not expose the computer to rain or moisture.

- Do not spill water or any liquid on the computer.
- Do not subject the computer to heavy shock or vibration.
- Do not expose the computer to dust or dirt.
- Do not place objects on top of the computer.
- Do not slam the lid shut. Close the computer gently.
- Do not place the computer on unstable or uneven surfaces.

## Taking care of your AC adapter

It is important that you look after your AC adapter.

- Do not connect the adapter to any other device.
- Do not step on the power cord or place heavy objects on it. Route the power cord away from areas where people might walk on it or trip over it.
- Do not pull on the power cord when disconnecting from the mains power socket. Grasp and pull the plug instead.
- The total ampere ratings of equipment plugged into a power strip should not exceed the ampere rating for that power strip.

## Taking care of your battery pack

It is also important that you look after your computer's battery pack.

- Use the correct battery model for your computer. Do not use other kinds of batteries.
- Turn the power off before removing or replacing the battery.
- Do not tamper with the battery. Keep the battery away from children.
- Dispose of batteries according to local regulations. Recycle if possible.

## Cleaning and servicing

When cleaning your computer, it is important that you follow these steps:

- 1 Turn off the computer and remove the battery.
- 2 Disconnect the AC adapter.
- 3 Clean with a soft cloth moistened with a little water. Do not use liquid or aerosol cleaners.

Refer to the chapter entitled "Troubleshooting" on page 77 if any of the following occurs:

- You drop the computer or damage the case.

- You spill liquid on the computer.
- The computer does not operate normally.



Getting familiar with  
your computer

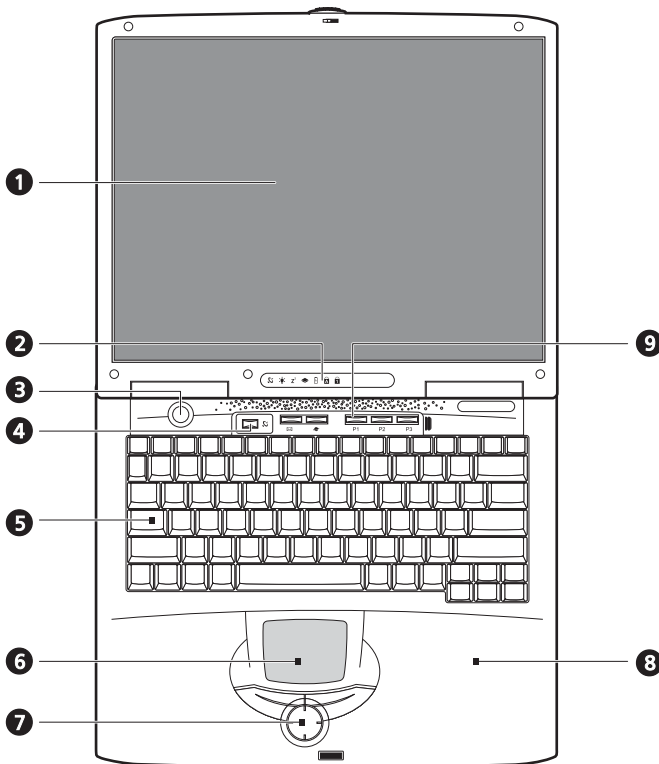
Your Aspire 1600 series notebook computer combines solid performance, versatility, multimedia capabilities and portability with a stylish design. Increase your productivity by working wherever you are.

This chapter provides an in-depth "tour" of your computer's features.


# A tour of your computer

After setting up your new Aspire notebook computer, as illustrated in the Just for starters... poster, take a few minutes to explore the unit.

## Top view



#	Item	Description
1	Display	Large liquid crystal display (LCD) provides visual output.
2	Status indicators	Light emitting diodes (LED) that show the status of the computer and its components.

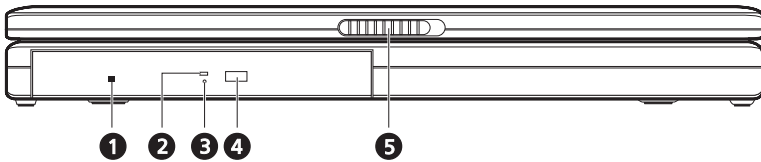
#	Item	Description
3	Power button	Turns the computer on and off.
4	Wireless communication button 	Lights when the Wireless LAN capability is enabled.
5	Keyboard	Full-size keyboard for inputting typed data.
6	Touchpad	Touch sensitive pad that functions like a computer mouse.
7	Click buttons & scroll key	Right and left buttons that provide the same functions as the buttons on a computer mouse. The scroll key scrolls the contents of a window up and down, left and right.
8	Palm rest	Provides a comfortable platform for your hands when typing on the keyboard.
9	Launch keys	Buttons that can be programmed to start frequently used applications. See "Launch keys" on page 23 for more details.



**Note:** The wireless communication button works for models with 802.11b wireless LAN only.

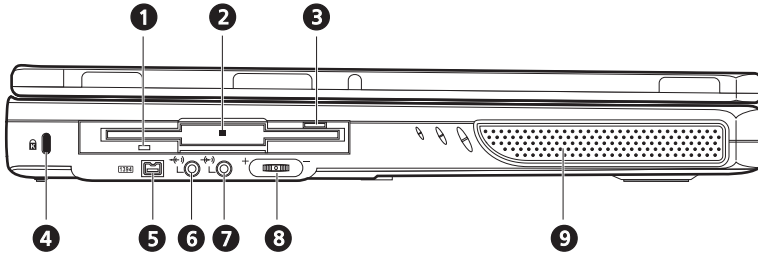






## Front view



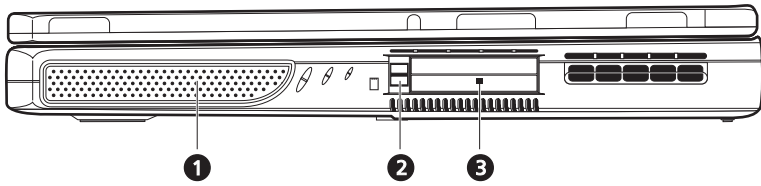
#	Item	Description
1	Optical drive emergency eject hole	Used to eject an optical disc when the computer is turned off.
2	Optical disc read indicator	Light emitting diode (LED) that indicates when an optical disc is being read.
3	Optical drive	Depending on your model, the optical drive is one of the following: <ul style="list-style-type: none"> <li>• CD-ROM drive for reading CDs.</li> <li>• DVD-ROM drive for reading CDs and DVDs.</li> <li>• DVD/CD-RW combo drive for reading CDs and DVDs, and writing to CD-Rs and CD-RWs.</li> </ul>
4	Eject button	Ejects the optical drive tray from the drive
5	Latch	Locks and releases the lid.

## Left view



#	Item	Description
1	Floppy disk read indicator	Light emitting diode (LED) that indicates when floppy diskette is being read.
2	Floppy disk drive	Supports a standard 3.5" diskette.
3	Floppy disk eject button	Press the eject button to remove a diskette from the floppy disk drive.
4	Kensington lock slot	For attaching a security connector.
		
5	IEEE 1394 port	Port for connecting IEEE 1394 devices.
		
6	Line-out jack	Connects headphones or external speakers for audio output.
		
7	Line-in jack	Connects an external microphone for audio input.
		
8	Volume control	Controls the volume of the speakers.
9	Speaker	Delivers stereo audio output.

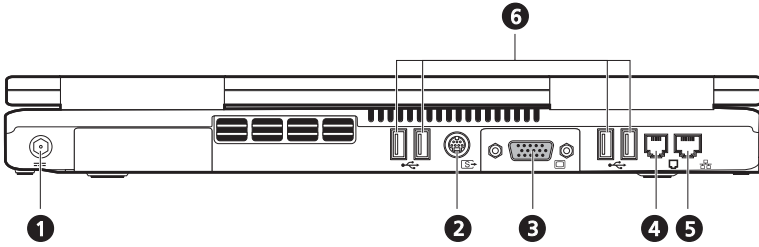
## Right view









#	Item	Description
1	Speaker	Delivers stereo audio output.
2	PC card eject button	Press the eject button to remove a PC card from the PC card slot.
3	PC card slots	The slots supports two standard Type II or one Type III PC card (PCMCIA or CardBus).

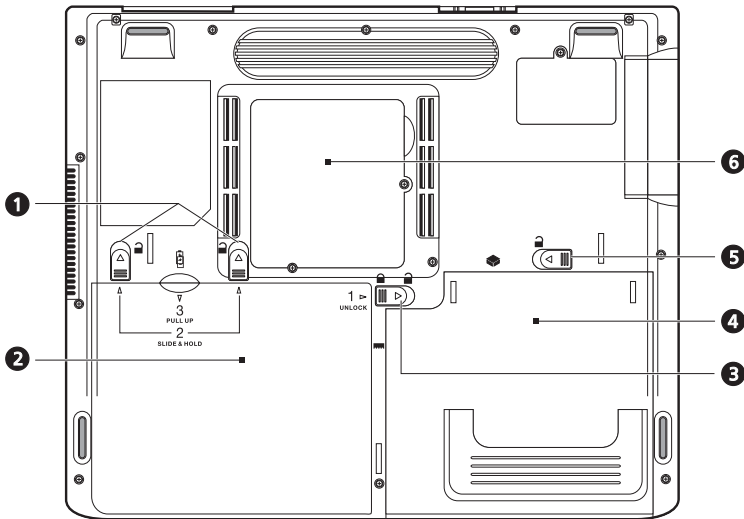





## Rear view



#	Item	Description
1	DC-in jack 	Connects the AC adapter.
2	S-video port 	Connects to a television or display device with S-video input.
3	External display port 	Connects an external (VGA) display monitor.
4	Modem jack 	Connects the built-in fax/data modem to a phone line.
5	Network jack 	Connects the computer to an Ethernet 10/100-based network.
6	USB ports 	4 ports for connecting USB devices.

## Bottom view



#	Item	Description
1	Battery release latches	Slide and hold the latches, and then pull the battery to remove it from the unit.
2	Battery 	The computer's removable battery.
3	Battery lock/unlock latch	Use to lock and unlock the battery bay.
4	Optical media bay 	Houses the removable optical media drive module (e.g. CD-ROM, DVD-ROM, or DVD/CD-RW combo drive).
5	Optical media bay release latch	Unlatches the optical media drive for removal or swapping.
6	Memory compartment 	Removable cover provides access to the memory slots for upgrading the computer's memory.

# Features

## Performance

- Intel® Pentium® 4 with 512K cache.
- 2 memory slots supporting PC2100/PC2700 (266/333MHz DDR) soDIMM, upgradeable to 1GB.
- 20 GB or higher Enhanced-IDE hard disk.
- Microsoft Windows XP operating system.

## Multimedia

- Built-in optical drive (CD-ROM, DVD-ROM, or DVD/CD-RW combo drive).
- 15.0" XGA TFT LCD panel.
- Built-in stereo speakers.
- Audio input and output jacks.

## Connectivity

- Integrated 10/100Mbps Ethernet connection.
- Built-in 56Kbps fax/data modem.
- Four universal serial bus (USB 2.0) ports.
- One IEEE 1394 (4-pin) port.

## Human-centric design and ergonomics

- All-in-one design (incorporating hard drive, optical drive and floppy disk drive).
- Rugged, yet extremely portable, construction.
- Stylish appearance.
- Full-size keyboard with 4 programmable launch keys.
- Comfortable palm rest area with well-positioned touchpad.

## Expansion

- PC card slot enables a range of add-on options.
- Upgradeable hard disk and memory modules.

# Display

The 15.0" display panel provides a large viewing area for maximum efficiency and ease-of-use. The thin-film transistor (TFT) liquid crystal display (LCD) supports extended graphics array (XGA) with resolution up to 16.7 million colors at 1024 x 768.

## Video performance

Your Aspire 1600 series notebook computer features an ATI accelerated graphics port (AGP). This provides a robust solution, while enabling high quality video output.

## Simultaneous display

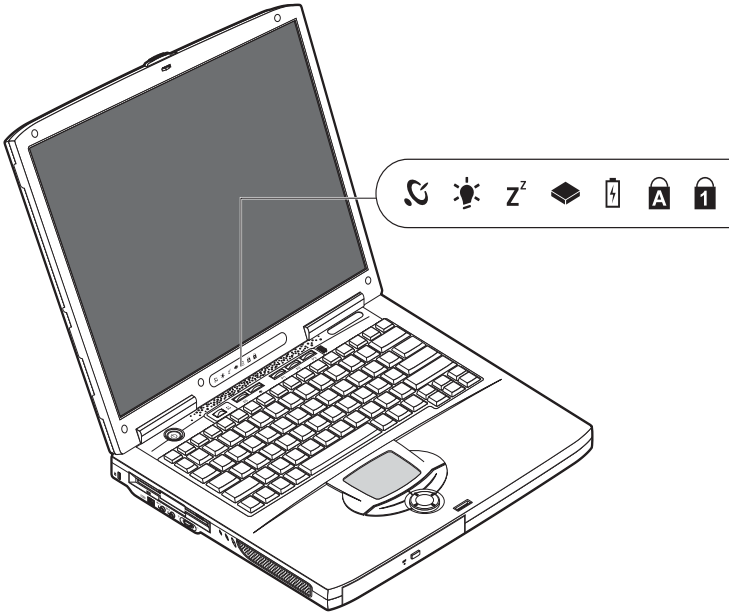
Your computer's large display, combined with its multimedia capabilities, makes it ideally suited to delivering presentations.

You can also connect an external monitor or projector, and then choose to use the computer's LCD panel only, the external device only, or the LCD panel and external device simultaneously.





Simultaneous display allows you to manage a presentation on your computer, while your audience watches the monitor or projector screen.

# Indicators




Your computer provides an array of seven indicators located above the keyboard, in addition to two indicators positioned at the back of the display screen. These indicators show the status of the computer and its components.



The indicators located above the keyboard provide the following status information

Icon	Function	Description
	Wireless Communication	Lights when the Wireless LAN capabilities are enabled.
	Power	Lights when the computer is on.
	Sleep	Lights when the computer enters Sleep mode.
	Media Activity	Lights when the floppy drive, hard disk or optical drive is active.



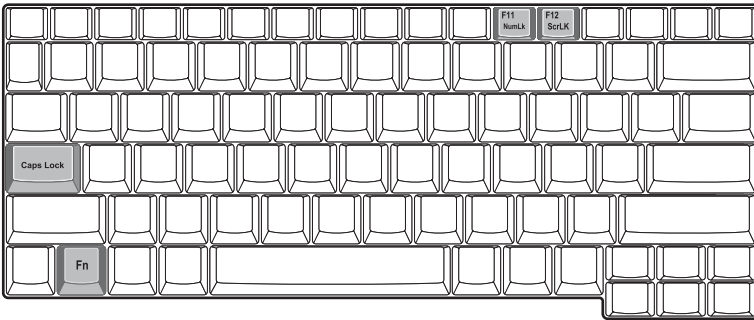
Icon	Function	Description
	Battery Charge	Lights when the battery is being charged.
	Caps Lock	Lights when Caps Lock is activated.
	Num Lock	Lights when Num Lock is activated.

# Keyboard

The keyboard features full-size keys with an embedded keypad, separate cursor control keys, two Windows keys, and twelve function keys (hot keys).

## Special keys

### Lock keys

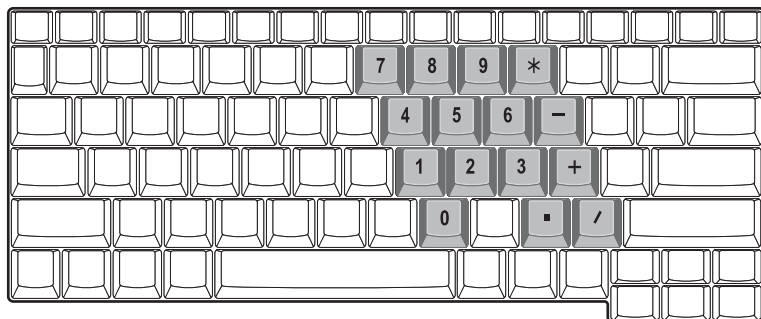


The computer features three lock keys, each with its own status indicator light.

Lock Key	Description
Caps Lock	When Caps Lock is on, all alphabetic characters are typed in uppercase. Toggle on and off by pressing the Caps Lock key on the left side of the keyboard.
Num Lock	When Num Lock is on, the embedded numeric keypad can be used. Toggle on and off by pressing the Fn + F11 keys simultaneously.
Scroll Lock	When Scroll Lock is on, the screen toggles up or down one line at a time when the up and down cursor control keys are pressed. Note: Scroll Lock doesn't work in all applications. Toggle on and off by pressing the Fn + F12 keys simultaneously.

## Embedded keypad

The embedded keypad functions like a desktop numeric keypad. It is indicated by small blue numbers and characters on the applicable keys.



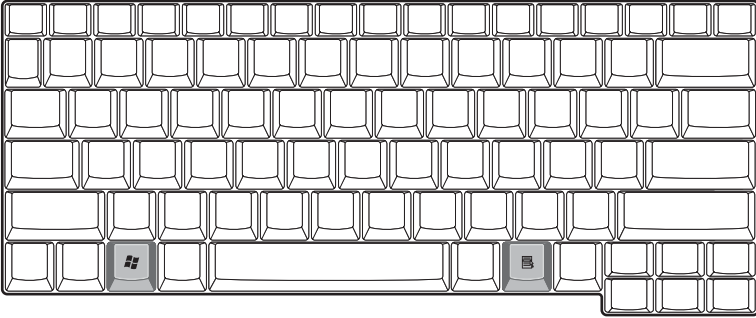
To use the embedded numeric keys, toggle the Num Lk on by pressing the Fn + F11 keys simultaneously.











With the embedded keypad turned on, the following actions are possible:

Desired Access	Num lock On	Num lock Off
Number keys on embedded keypad.	Type numbers using embedded keypad in the normal way.	
Cursor control keys on embedded keypad.	Hold down the Shift key while using the cursor keys on the embedded keypad.	Hold Fn key while using cursor-control keys.
Main keyboard keys.	Hold down the Fn key while typing letters using the embedded keypad keys. Simultaneously press the Shift key for capital letters.	Type letters in the normal way.

## Windows keys

The keyboard features two keys that provide Windows-specific functions.

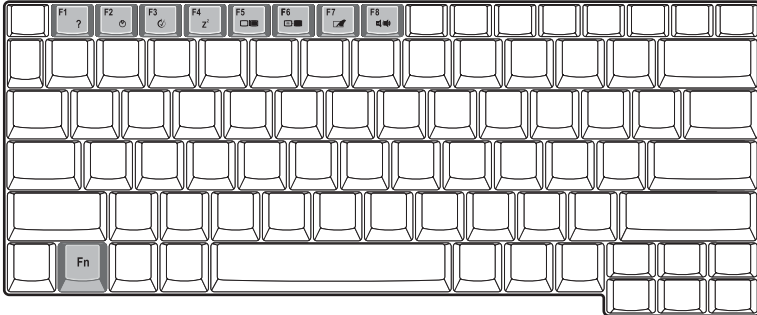


Key	Description
Windows key 	Pressed alone, this key has the same effect as clicking on the Windows Start button; it launches the Start menu. It can also be used with other keys to provide a variety of functions: <ul style="list-style-type: none"> <li> + Tab activates the next Taskbar button.</li> <li> + E opens the My Computer window.</li> <li> + F1 opens Help and Support.</li> <li> + F opens the Find: All Files dialog box.</li> <li> + M minimizes all windows.</li> <li>Shift +  + M undoes the minimize all windows (  + M ) action.</li> <li> + R opens the Run dialog box.</li> </ul>
Applications key 	This key has the same effect as clicking the right mouse button; it opens the application's context menu.




## Hotkeys






Using the Fn key with another key creates a hot key, providing a quick and convenient method for controlling various functions.

To use a hot key, first hold down the Fn key. Next, press the second key in the combination. Finally, release both keys.



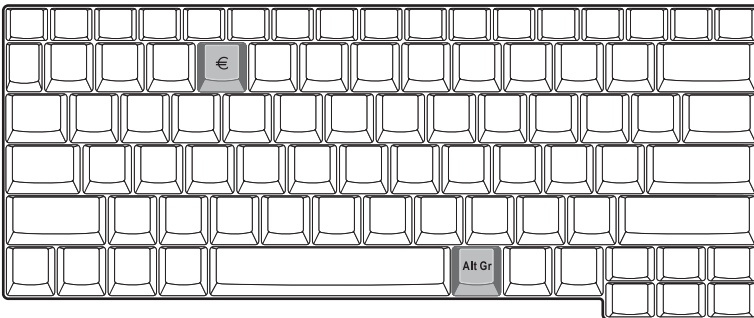
Your computer provides the following hot keys:

Hot key	Function	Description
Fn-F1 ?	Hot Key Help	Displays help on hot keys.
Fn-F2 	System Properties	Accesses the computer's system properties.
Fn-F3 	Power Scheme Toggle	Switches the power management scheme used by the computer (function available if supported by operating system).
Fn-F4 Z <sup>Z</sup>	Sleep	Puts the computer in Sleep mode.
Fn-F5 	Display Toggle	Switches display output between the display screen, external monitor (if connected) and both the display screen and external monitor.

Hot key	Function	Description
Fn-F6 	Screen Blank	Turns the display screen backlight off to save power. Press any key to return.
Fn-F7 	Touchpad Toggle	Turns the internal touchpad on and off.
Fn-F8 	Speaker Toggle	Turns the speakers on and off.
Fn→ 	Brightness up	Increases the screen brightness.
Fn← 	Brightness down	Decreases the screen brightness.

## Euro key

For keyboard with Euro key support, first hold down the Alt Gr key, and then press the Euro key.



## Keyboard ergonomics

The wide palm rest area provides a comfortable platform for your hands when typing on the keyboard. The ergonomic design enables you to adopt a relaxed, yet very efficient, typing style.



# Touchpad

The built-in touchpad is a PS/2- compatible pointing device that senses movement on its surface. The cursor responds to your finger movements on the touchpad. In addition, the two click buttons provide the same functionality as a computer mouse, while the scroll key enables easy scrolling in documents and web pages.

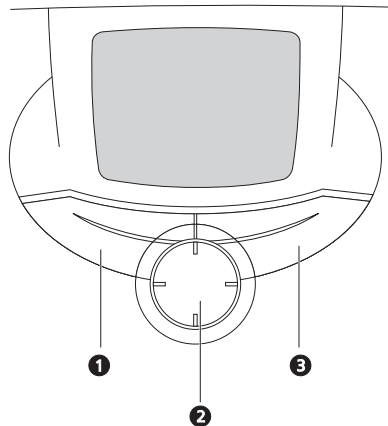
The touchpad is located in the middle of the palm rest area, providing maximum comfort and efficiency.





## Touchpad basics

Use the touchpad as follows:



- Move your finger across the touchpad to move the cursor.
- Press the left (1) and right (3) buttons located on the edge of the touchpad to do selection and execution functions. These two buttons are similar to the left and right buttons on a mouse. Tapping on the touchpad produces similar results.

Use the 4-way scroll (2) key (top/bottom/left/right) to scroll a page up, down, left or right. This button mimics your cursor pressing on the vertical and horizontal scroll bars of Windows applications.

Function	Left button	Right button	4-way scroll key	Tap
Execute	Click twice quickly			Tap twice (at the same speed as double-clicking a mouse button)
Select	Click once			Tap once
Drag	Click and hold, then use finger to drag the cursor on the touchpad			Tap twice (at the same speed as double-clicking a mouse button) then hold finger to the touchpad on the second tap and drag the cursor

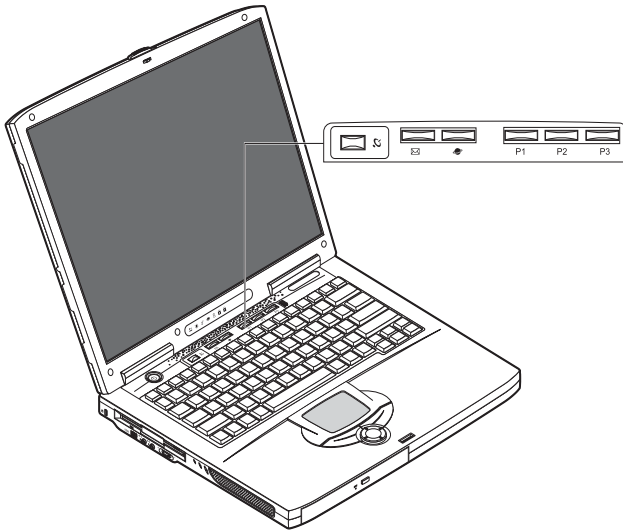
Function	Left button	Right button	4-way scroll key	Tap
Access context menu		Click once		
Scroll			Click and hold the button in the desired direction (up/down/left/right)	






**Note:** Keep your fingers, as well as the surface of the touchpad, clean and dry. The touchpad is sensitive to your finger movements: the lighter your touch, the better the response. Tapping hard will not increase the touchpad's responsiveness.

# Launch keys

Located at the top of the keyboard are six buttons. These buttons are called launch keys. They are designated as Wireless LAN, key 1, key 2, key 3, key 4 and key 5. By default, key 1 is used to launch the email application and key 2 is used to launch the Internet browser. Keys 3, 4 and 5 start the Launch Manager application. The Wireless LAN button cannot be set by the user, it is used to turn the function on and off. To set the other launch keys, run the Acer Launch Manager.



Description	Default application
Wireless LAN 	802.11b wireless LAN (Optional).
Email 	Launches your email application.
Web browser 	Launches your Internet browser.
P1	User-programmable.

Description	Default application
P2	User-programmable.
P3	User-programmable.

## Storage

Your computer's all-in-one design offers a variety of data storage options:

- The high capacity Enhanced-IDE hard disk drive.  
The hard drive is upgradeable, enabling you to increase your storage capacity in the future. Consult your dealer if you need to upgrade.
- The floppy disk drive.  
The floppy disk drive accepts standard 1.44MB 3.5" diskettes.
- The high speed optical drive.  
Depending on your model, you have a CD-ROM, DVD-ROM, or DVD/CD-RW combo drive. The optical drive provides increased storage capacity, as well as offering a host of multimedia possibilities.

See the section entitled, "A tour of your computer" on page 3, for the locations of these drives.

### Inserting and ejecting a diskette

To insert a diskette in the floppy disk drive:

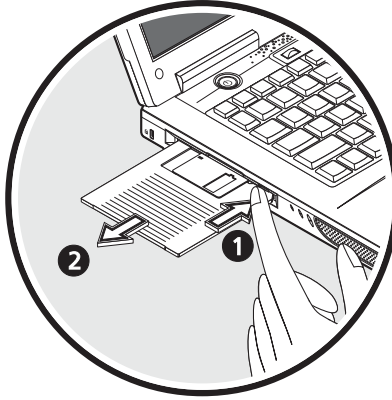
- Push the diskette into the drive. Make sure that the label is on the outer edge, and facing upwards.



- The diskette will click in place, and the floppy disk eject button will pop out.

To remove a diskette from the floppy disk drive:

- Push the floppy disk eject button.

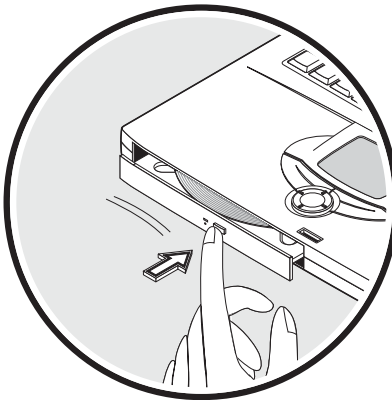


- The diskette will be released, and partially pop out of the drive.
- Pull the diskette from the drive.

## Ejecting the optical drive tray

To eject the optical drive tray:

- With the computer turned on, press the optical drive eject button.
- The tray will be released, and partially pop open.
- Gently pull the tray out to its limit.



To load an optical disc:

- Place a CD or DVD on the open tray. Align the disc's center hole with the tray's spindle.
- Gently push down on the disc until it clicks in place on the spindle.
- Gently push in the tray until it clicks closed.

## Playing DVD movies

To play DVD movies in your computer, just insert the DVD disc into the drive and the DVD movie will automatically play after a few seconds.



Important! When you launch the DVD player for the first time, the program asks you to input the region code. DVD discs are divided into 6 regions. Once your DVD drive is set to a region code, it will play DVD discs of that region only. You can set the region code a maximum of five times (including the first time), after which the last region code set will remain permanent. Recovering your hard disk does not reset the number of times the region code has been set. Refer to the table below for DVD movie region code information.

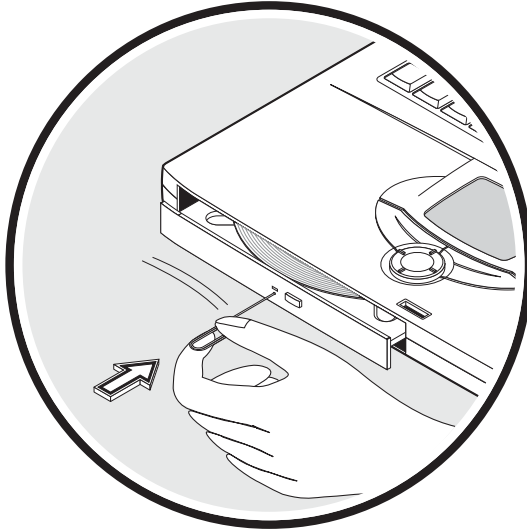
Region code	Country or region
1	U.S.A., Canada
2	Europe, Middle East, South Africa, Japan
3	Southeast Asia, Taiwan, Korea (South)
4	Latin America, Australia, New Zealand
5	Former U.S.S.R., parts of Africa, India
6	People's Republic of China



Note: To change the region code, insert a DVD movie of a different region into the DVD-ROM drive. Please refer to the online help for more information.

## Emergency ejection of the optical drive tray

If you need to eject the optical drive tray when the computer is turned off, push a straightened paper clip into the optical drive emergency eject hole. The tray will be released, and partially pop open.





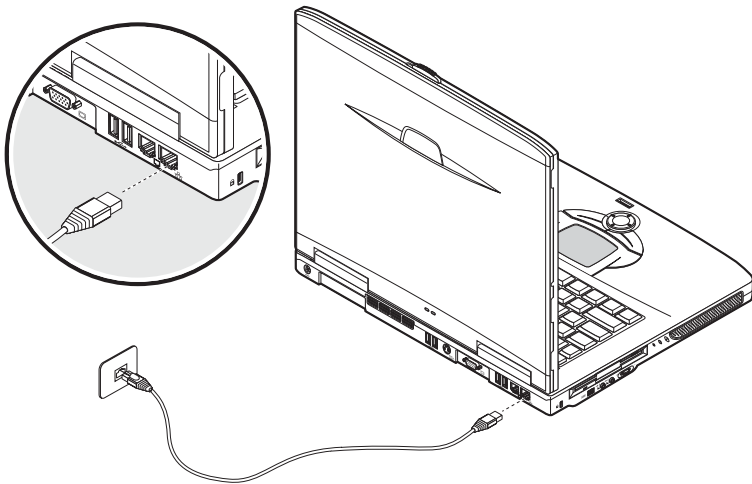
## Connectivity options

Your computer has built-in connectivity options, enabling you to hook up to a network or communicate over a phone line.

### Ethernet and LAN

The integrated network feature allows you to connect your computer to an Ethernet-based (10/100Mbps) network.

To use the network feature, plug an Ethernet cable into your computer's network jack, and then connect the other end to a network jack or hub on your network.



See Windows Help for information on setting up a network connection.

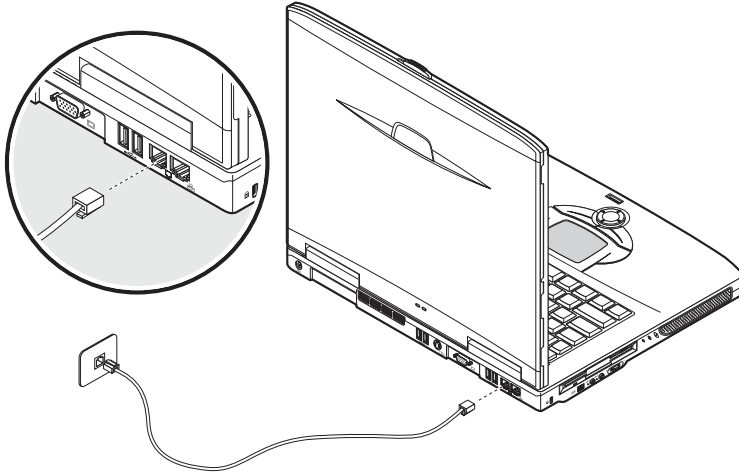
### Fax/data modem

Your computer features a built-in fax/data modem, enabling you to communicate over a phone line. This means that you can connect to the Internet via a dialup account with an ISP, log in to your network from a remote location, or send faxes.



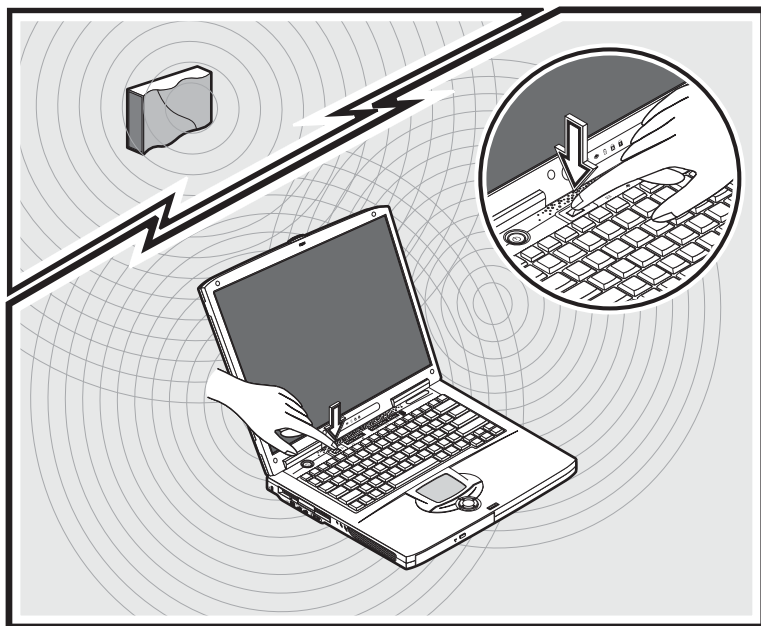
Warning: Your modem is not compatible with digital phone lines. Plugging the computer into a digital phone system will damage the modem.

To use the fax/data modem, plug a phone cable into your computer's modem jack, and then connect the other end to a telephone jack.



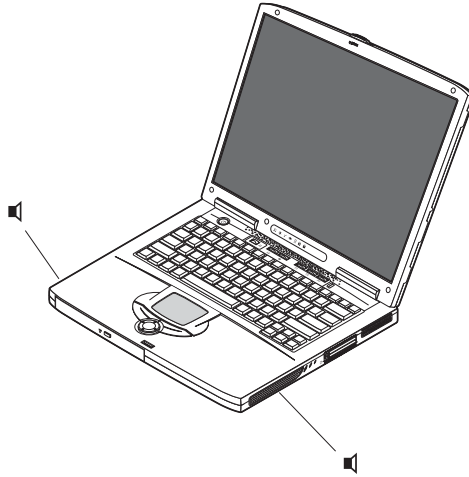
## Optional wireless communication

This computer can be equipped with an optional wireless communication feature. This feature allows you to communicate with other wireless communication devices.



# Audio

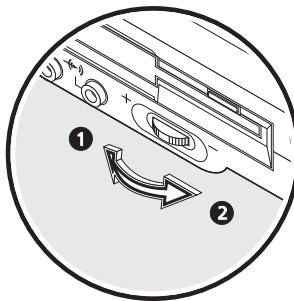
Your computer includes an integrated stereo audio system. Built-in stereo speakers are located on left and right side of the unit.



Two audio ports on the left side of the computer enable external devices to be connected. See, "A tour of your computer" on page 3, for the location of the audio ports. For information on connecting external devices, see "Audio devices" on page 54, in the section entitled, "Peripherals and options" on page 45.

## Adjusting the volume

Adjusting the volume on the computer is easy with a rotary volume control knob on the left panel. Turn the knob in the appropriate direction: (1) to increase the volume and (2) to decrease the volume.



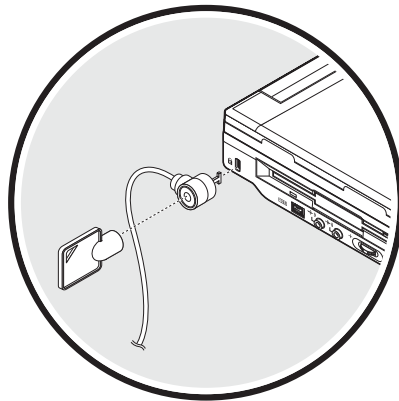
# Securing your computer

Your computer features hardware and software security solutions, in the form of a slot for a Kensington lock and a password facility.

## Security slot

A slot for a Kensington lock enables you to physically protect your computer from theft. Use this feature as follows:

- Wrap a security lock cable around a heavy or immovable object, such as a drawer handle on a file cabinet, or a table leg.
- Insert the lock into the slot on the computer, turn it 90°, and then lock it in place.



## Passwords

Passwords protect your computer from unauthorized access. When set, no one can access the computer without entering the correct password.

There are three types of passwords you can set:

- Supervisor Password secures your computer against unauthorized entry to and use of the BIOS Utility.
- User Password secures your computer against unauthorized use.
- Hard Disk Password protects your data by preventing unauthorized access to your hard disk.



Important! Do not forget your Setup and Hard Disk password! If you forget your password, please get in touch with your dealer or an authorized service center.

## Setting a password

You can set the password using the BIOS Utility.

Operating on  
battery power

Your Aspire 1600 series notebook computer operates on battery or AC power.

This chapter provides information for operating on battery power, as well as information on how your computer manages and saves power.



# Battery pack

The computer uses a battery pack that gives you long use between charges.

## Battery pack characteristics

The battery pack has the following characteristics:

- Employs current battery technology standards

The computer uses a Lithium-Ion battery pack which does not have the memory effect problem of Nickel Cadmium (NiCd) batteries. Li-Ion batteries consistently provide the longest battery life, best-suited for road warriors.
- Battery-low warning

When the battery charge level becomes low, the status indicator of the computer flashes at regular intervals. This tells you that the battery power is critically low (and you should save your work). You can correct this situation by recharging the battery pack.

Whenever possible, use the AC adapter. The battery will come in handy when you travel or during a power failure. It is advisable to have an extra fully-charged battery pack available as backup.

## Maximizing the battery's life

Like all other batteries, your computer's battery will degrade over time. This means that the battery's performance will diminish with time and use. To maximize your battery's life, you are advised to adhere to the recommendations set out below.

### Conditioning a new battery pack

Before you use a battery pack for the first time, there is a "conditioning" process that you should follow:

- 1 Insert the new battery in the computer. Do not turn the computer on.
- 2 Connect the AC adapter and fully charge the battery.
- 3 Disconnect the AC adapter.
- 4 Turn on the computer and operate using battery power.
- 5 Fully deplete the battery until the battery-low warning appears.
- 6 Reconnect the AC adapter and fully charge the battery again.

Follow these steps again until the battery has been charged and discharged three times.

Use this conditioning process for all new batteries, or if a battery hasn't been used for a long time. If the computer is to be stored for more than two weeks, you are advised to remove the battery pack from the unit.



.....

Warning: Do not expose battery packs to temperatures below 0°C (32°F) or above 60°C (140°F). Extreme temperatures may adversely affect the battery pack.

By following the battery conditioning process you condition your battery to accept the maximum possible charge. Failure to follow this procedure will prevent you from obtaining the maximum battery charge, and will also shorten the effective lifespan of the battery.

In addition, the useful lifespan of the battery is adversely affected by the following usage patterns:

- Using the computer on constant AC power with the battery inserted. If you want to use constant AC power, you are advised to remove the battery pack after it is fully charged.
- Not discharging and recharging the battery to its extremes, as described above.
- Frequent use; the more you use the battery, the faster it will reach the end of its effective life. A standard computer battery has a lifespan of about 500 charges.

## Installing and removing the battery pack




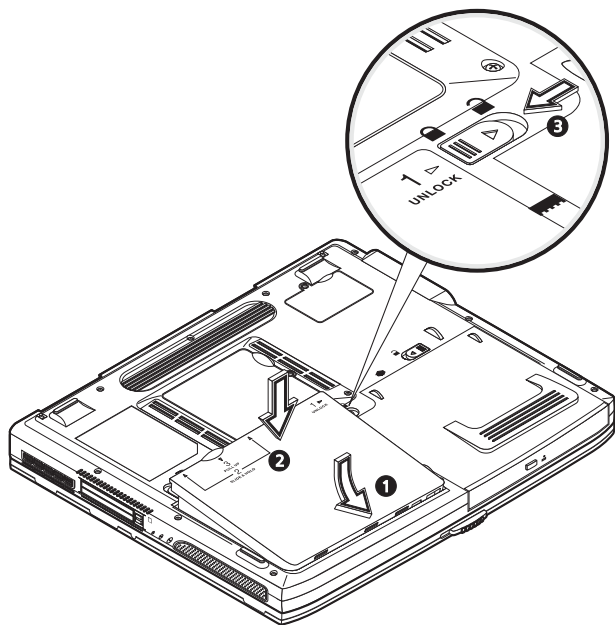
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Important! Before removing the battery from the unit, connect the AC adapter if you want to continue using your computer. Otherwise, turn off the computer first.



To install a battery pack:

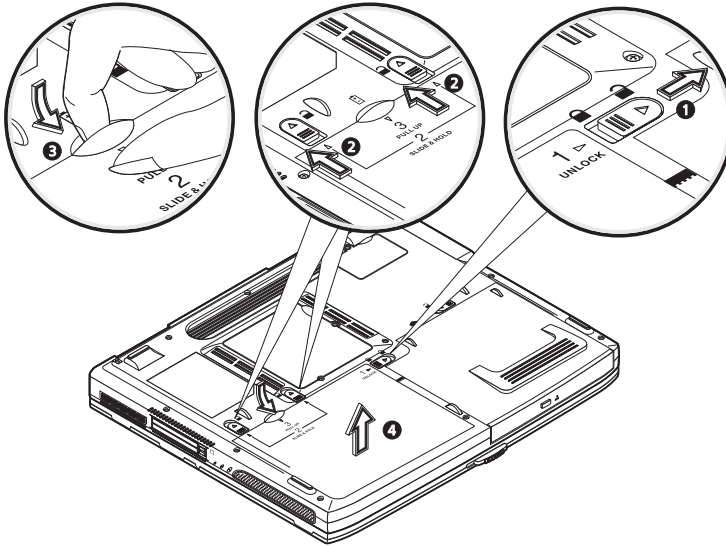
- 1 Align the battery with the open battery bay; make sure that the end with the contacts will enter first, and that the top surface of the battery is facing up.

- Slide the battery into the battery bay (1) and gently push until the battery clicks in place (2). To secure the battery, slide the battery lock/unlock latch to the lock position  (3).



To remove a battery pack:

Set the battery lock/unlock latch to the unlock position  (1). Slide and hold the two battery release latches to the unlock position  (2). Flip up the battery pack (3) and remove it (4).



## Charging the battery

To charge the battery, first make sure that it is correctly installed in the battery bay. Plug the AC adapter into the computer, and connect to a mains power outlet. You can continue to operate your computer on AC power while your battery is charging. However, charging the battery with the computer turned off results in a significantly faster charge time.



**Note:** You are advised to charge the battery before retiring for the day. Allowing the battery to charge overnight before traveling enables you to start the next day with a fully charged battery.

## Checking the battery level

The Windows Power Meter indicates the current battery level. Rest the cursor over the battery/power icon on the taskbar to see the battery's present charge level.

## Optimizing battery life

Optimizing battery life helps you get the most out of battery operation, prolonging the charge/recharge cycle and improving recharging efficiency. You are advised to follow the suggestions set out below:

- Purchase an extra battery pack.
- Use AC power whenever possible, reserving your battery for on-the-go use.
- Eject a PC card if it is not being used, as it will continue to draw power.
- Store the battery pack in a cool, dry place. The recommended temperature is 10°C to 30°C. Higher temperatures cause the battery to self-discharge faster.
- Excessive recharging decreases the battery life.
- Look after your AC adapter and battery. See, "Taking care of your AC adapter" on page x, and, "Taking care of your battery pack" on page x.

## Battery-low warning

When using battery power pay attention to the Windows Power Meter.



.....  
Warning: Connect the AC adapter as soon as possible after the battery-low warning appears. Data will be lost if the battery to become fully depleted and the computer shuts down.

When the battery-low warning appears, the recommended course of action depends on your situation:

Situation	Recommended Action
The AC adapter and a power outlet are available.	<ol style="list-style-type: none"> <li>1. Plug the AC adapter into the computer, and then connect to the mains power supply.</li> <li>2. Save all necessary files.</li> <li>3. Resume work.</li> </ol> Turn off the computer if you want to recharge the battery rapidly.

Situation	Recommended Action
An extra fully charged battery pack is available.	<ol style="list-style-type: none"><li data-bbox="372 212 568 236">1. Save all necessary files.</li><li data-bbox="372 244 563 268">2. Close all applications.</li><li data-bbox="372 276 858 300">3. Shut down the operating system to turn off the computer.</li><li data-bbox="372 308 592 331">4. Replace the battery pack.</li><li data-bbox="372 339 718 363">5. Turn on the computer and resume work.</li></ol>
The AC adapter or a power outlet is unavailable. You have no spare battery pack.	<ol style="list-style-type: none"><li data-bbox="372 394 568 418">1. Save all necessary files.</li><li data-bbox="372 426 563 450">2. Close all applications.</li><li data-bbox="372 458 858 481">3. Shut down the operating system to turn off the computer.</li></ol>

## Power management

Your computer features a built-in power management unit that constantly monitors system activity. System activity refers to any activity involving one or more of the following devices: keyboard, touchpad/mouse, floppy disk drive, hard disk drive, optical drive, peripherals connected to the computer, and video memory. If no activity is detected for a period of time (the settings are controlled in Windows Power Management), the computer turns off some, or all, of these devices in order to conserve power.

Your computer employs a power management scheme that supports ACPI (Advanced Configuration and Power Interface), enabling maximum power conservation without compromising system performance. ACPI allows Windows to control the amount of power given to each device attached to the computer. In this way, Windows handles all power-saving chores for your computer. Refer to Windows Help for more information.





# Peripherals and options

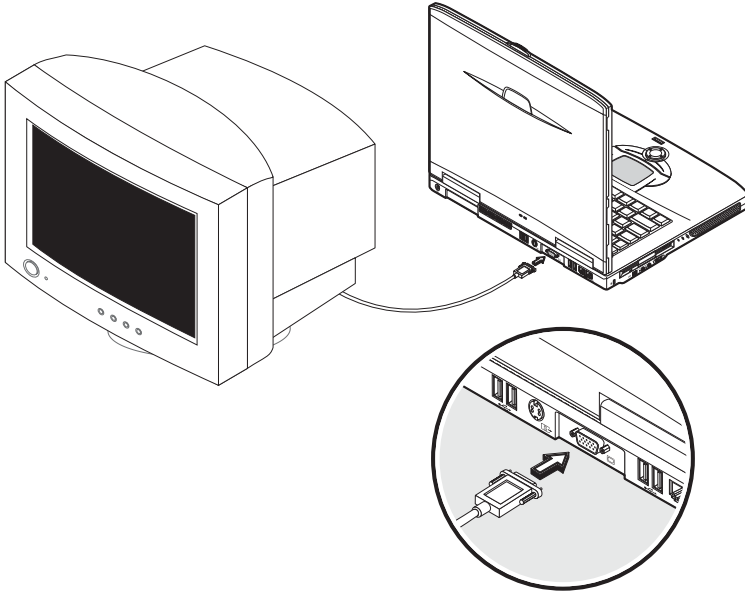
Your Aspire 1600 series notebook computer offers good expansion capabilities.

This chapter provides information on connecting peripherals to expand your system. It also describes how to upgrade key components to enhance system performance and keep your computer in step with the latest technology.

You are advised to consult your dealer for information on peripherals. In addition, make sure that you read the manuals and other documentation provided with new hardware.

## External display devices

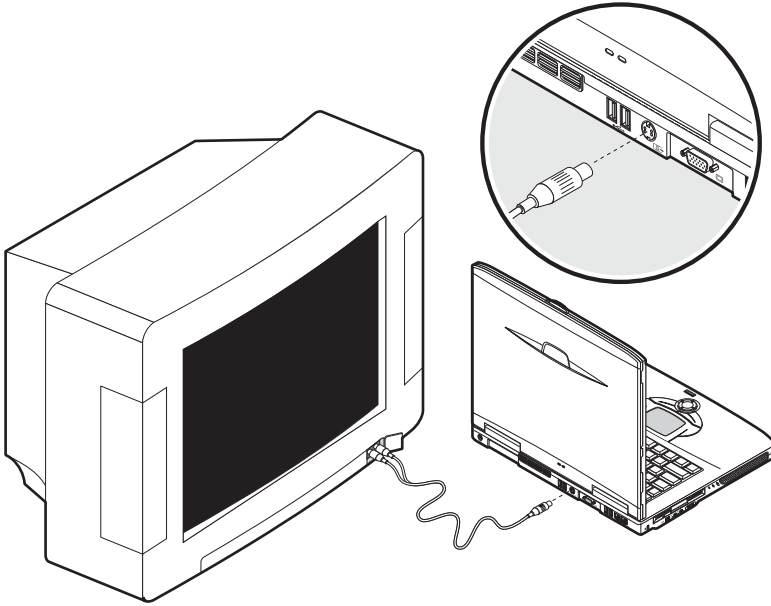
You can connect an external (VGA) monitor or projector to your computer's external display port. See the section entitled "Display" for information on using the computer's simultaneous display and multi-display features.



Use the Fn + F5 hot key to toggle the display setting between the computer's LCD panel and the external display device. See "Hot keys" for more information.

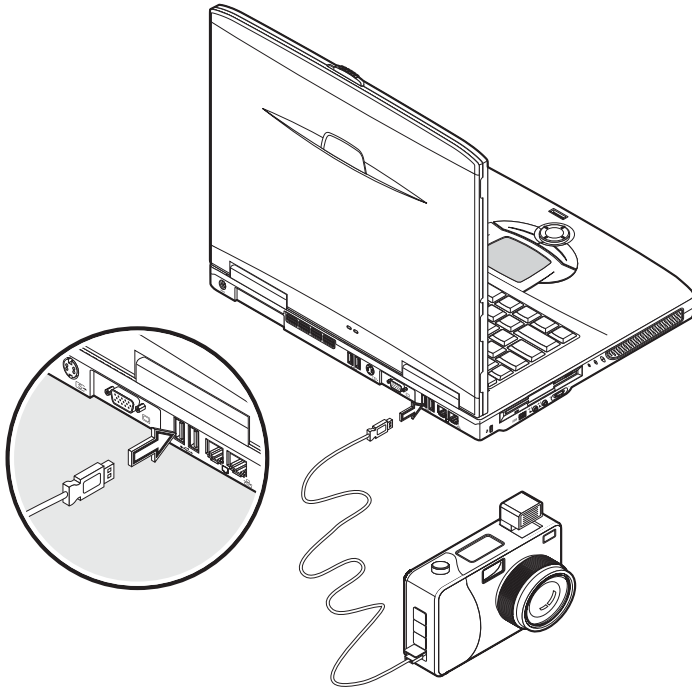
## S-video

The S-video port allows you to output to a television or display devices that support S-video input. This is important if you want to do some presentations or watch movies on a bigger screen.



## External input devices

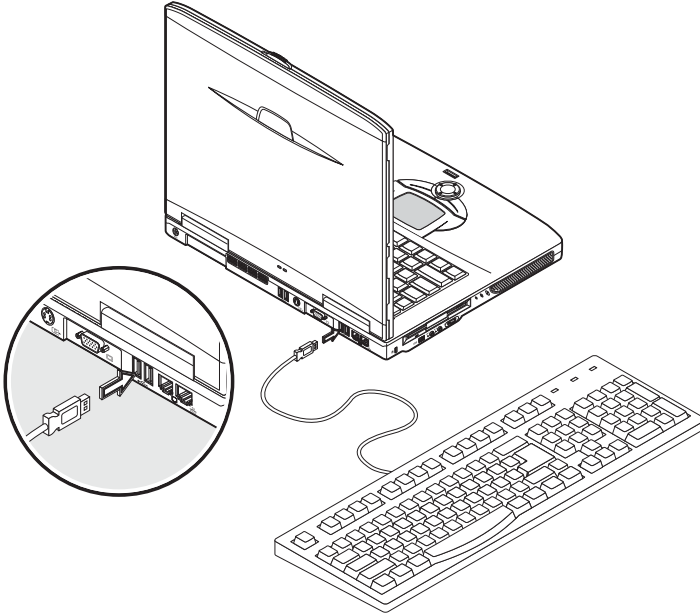
You can connect a variety of input devices to your computer's USB ports, providing increased functionality and greater ease-of-use. In addition, the USB ports can be used to connect many other peripheral devices, such as digital cameras, printers and scanners. See "Expansion devices" for more information on connecting USB devices.



## External keyboard

Your computer features a full-size keyboard. However, if you prefer, you can connect an external keyboard to one of your computer's USB ports. This enables you to enjoy the

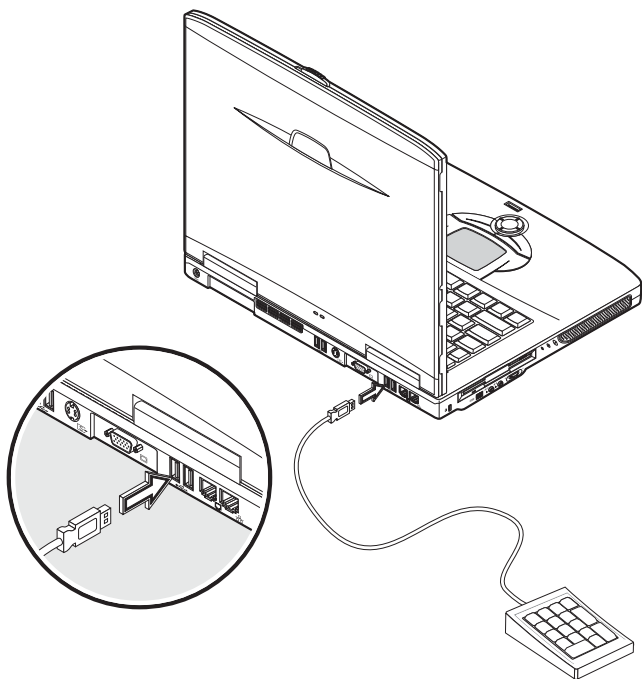
comfort and added features of a full-size desktop system keyboard when inputting typed data on your notebook computer.



## External keypad

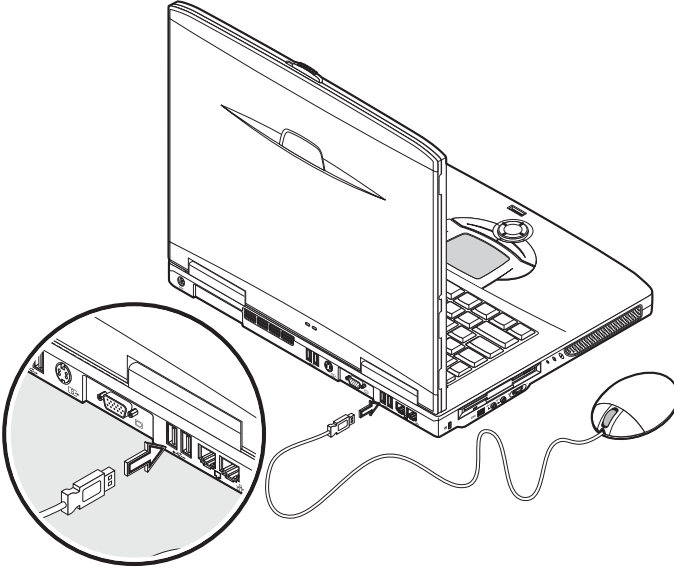
Your computer features an embedded keypad that, when combined with the Num Lock feature, enables you to easily input typed numeric data. Alternatively, you can connect a 17-key numeric keypad to one of your computer's USB ports. This enables

you to enjoy the benefits of a numeric keypad without interfering with your use of the computer's keyboard for typing text.



## External pointing device

Your computer features a sensitive touchpad pointing device with two click buttons and a scroll key. However, if you prefer to use a conventional mouse or other pointing device, you can connect it to one of your computer's USB ports.





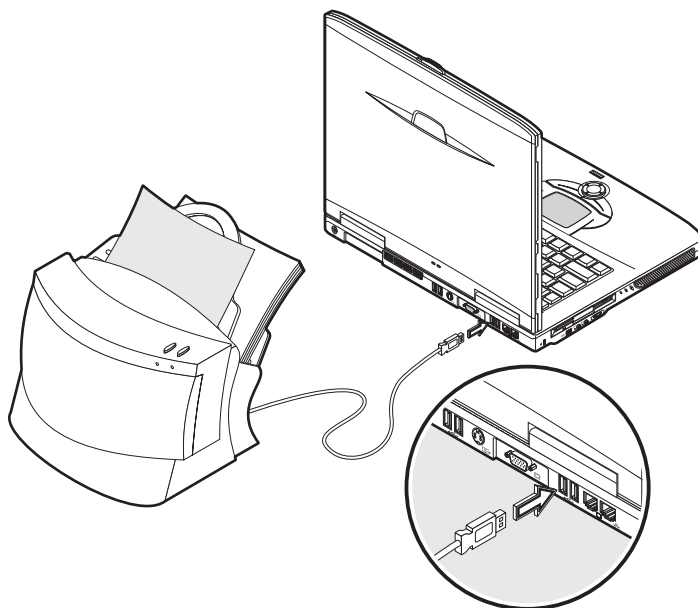
# Printer

Your computer supports both parallel and USB printers.

Refer to the printer's manual for information on:

- Setting up the hardware.
- Installing the necessary drivers in Windows.
- Operating instructions.

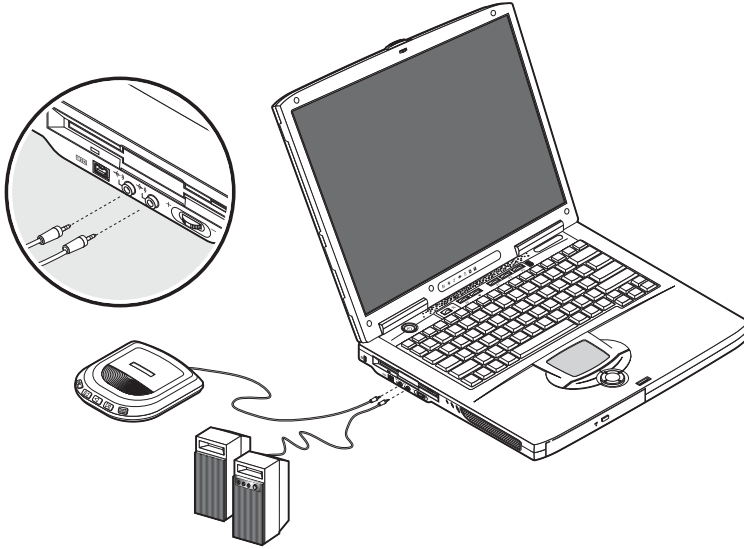
To use a USB printer, simply connect the device to one of your computer's USB ports, and then wait for Windows to find the new hardware.



To connect a parallel printer, first shut down the operating system. Connect the printer to the parallel port, and then restart the computer. Wait for Windows to find the new hardware.

## Audio devices

Your computer offers built-in stereo speakers. See the section entitled "Audio" for more information on these features. However, in addition to the integrated devices, the two audio ports on the left side of the unit enable you to connect external audio input and output devices.



You can plug an cd-player into your computer's line-in jack. This offers the convenience of greater freedom of movement, as well as improved audio input quality.

Connect external speaker to the line-out jack for improved audio output quality.

# Expansion devices

## PC Card

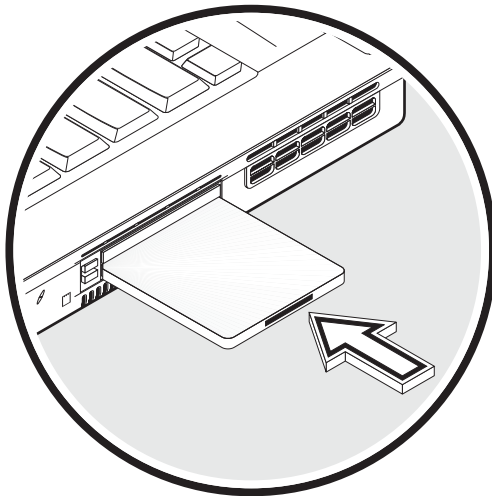
Your computer features a PC card slot that supports two standard Type II or one Type III PC card (PCMCIA or CardBus). This greatly increases your computer's usability and expandability. A variety of PC cards are available, such as flash memory, SRAM, fax/data modem, LAN, and SCSI cards. Consult your dealer for information on PC card options for your computer.



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**Note:** Refer to your card's manual for details on how to install and use the card.

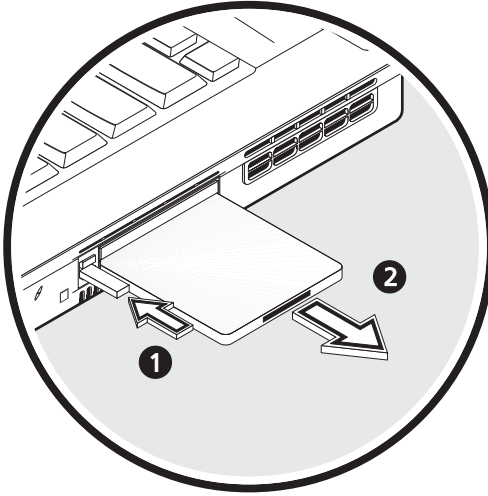
To insert a PC card:

- 1 Align the card with your computer's PC card slot. Make sure that the edge with the connectors is facing the slot, and that the card is the right way up. Many cards are marked with an arrow to help you insert them correctly.
- 2 Slide the card into the slot, and then push gently until the card connects.
- 3 If necessary, connect the card's cable to the jack on the outer edge of the card.
- 4 Windows will automatically detect the card's presence.



To remove a PC card:

- 1 Close the application that is using the PC card.
- 2 Double click on the PC card icon on the taskbar, and then select the option to safely remove the card. Wait for the message telling you that it is now safe to remove the card.
- 3 Press the PC card eject button to partially eject the card from the slot (1).
- 4 Pull the card from the slot (2).



## USB devices

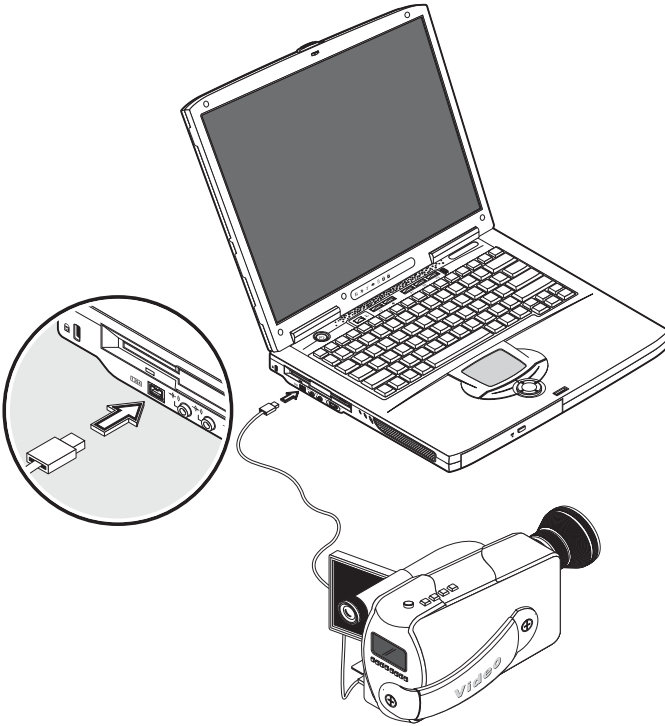
Your computer features four USB 2.0 (Universal Serial Bus) ports for connecting a range of USB peripherals. See "External input devices" and "Printer" for information on connecting a USB keyboard, keypad, mouse or printer. Other common USB devices include digital cameras, scanners, and external storage devices.

USB is plug and play, which means that you can connect and start using a USB device without having to restart your computer. You can also disconnect the device at any time.

A further advantage of USB is the ability to use USB hubs. This means that several devices can share a USB port simultaneously.

## IEEE 1394 devices

The computer's fast IEEE 1394 port allows you to connect IEEE 1394 supported devices like a digital video camera.



## Miscellaneous options

### Battery pack

It is a good idea to have a spare battery, especially when you travel with your computer. This greatly increases your productive range when you are on the move.

### AC adapter

Having a spare AC adapter allows you to keep one in two different places. For example, you could have one AC adapter at home and another at work. This means that you don't have to carry an AC adapter when traveling between your two base locations.

## Key component upgrades

Your computer is designed to deliver solid performance. However, in time, you might find that your applications demand even more computing power. For this reason, you are able to upgrade key components.



-----  
**Note:** Contact your authorized dealer if you decide to perform a key component upgrade.

## Memory upgrade

Your computer features two memory slots that accept soDIMMs (Small Outline Dual Inline Memory Modules). The memory slots support PC-2100/2700 266/333 MHz DDR (Double Data Rate).

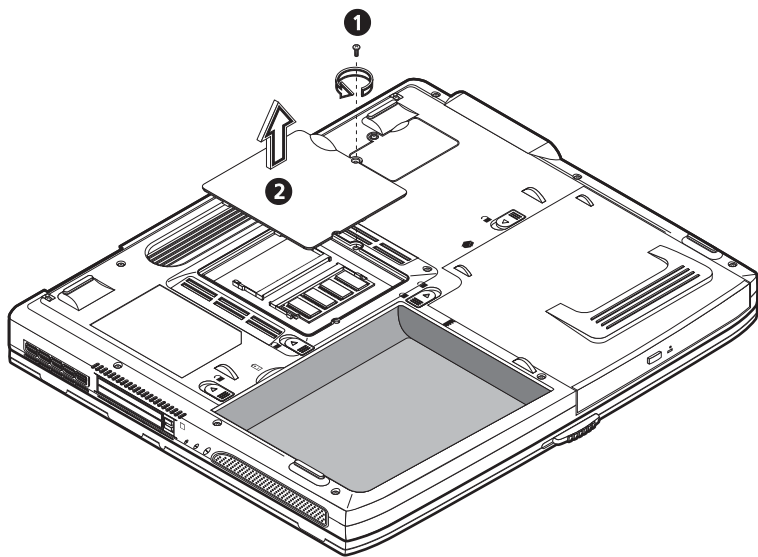
The memory slots are easily accessible, allowing you to upgrade your computer's memory.

To install memory:

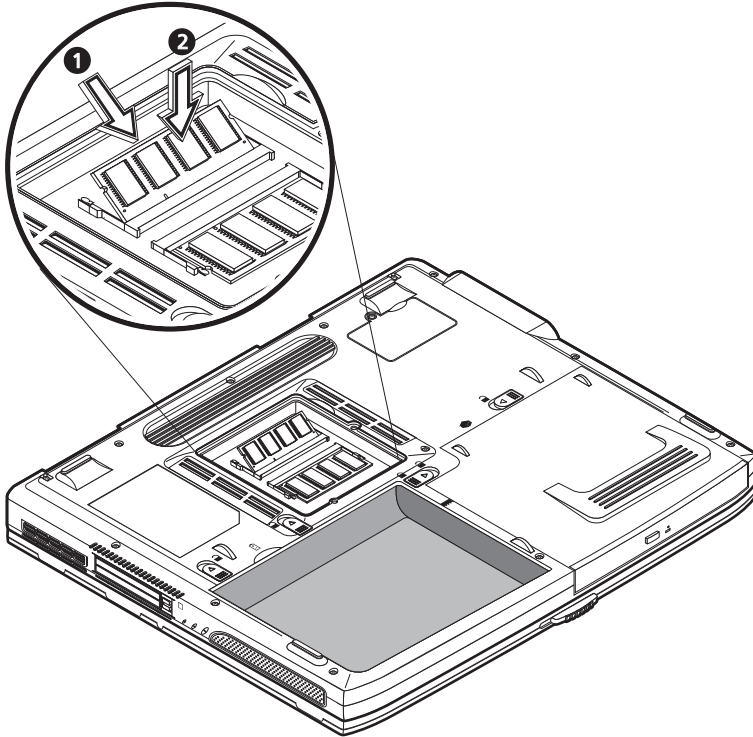
- 1 Turn off the computer. Make sure that the AC adapter is disconnected, and then remove the battery pack.



- 2 Turn the computer over to access the memory compartment on the bottom of the unit. Remove the screw from the memory compartment door, and then lift the door off.



- 3 Insert the memory module diagonally in the slot (1), and then press down gently until it clicks in place (2).



- 4 Replace the memory compartment door, and fasten the screw.

The computer automatically detects the new module and reconfigures the memory.

## Hard disk upgrade

It is possible to replace your hard disk with a higher capacity drive when you need more storage space. Your computer uses a 9.5mm 2.5-inch Enhanced-IDE hard disk. Consult your dealer if you need to perform a hard disk upgrade.

Moving with your  
computer

Your Aspire 1600 series notebook computer is ideal for taking with you when you move around. This chapter provides tips on things to consider when traveling with your computer.

## Disconnecting from the desktop

Before moving with your computer, you must turn it off and disconnect all peripherals:

- 1 Save your work and close all applications.
- 2 Shut down Windows to turn off your computer.
- 3 Unplug the AC adapter from the mains outlet, and then disconnect it from the computer.
- 4 Disconnect any external devices, such as a keyboard, mouse, or printer, that are attached to your computer.
- 5 If you are using a security lock cable, disconnect the lock from the computer.
- 6 Pack your computer in a strong, waterproof bag or case.

## Moving around

Sometimes you might need to move your computer a short distance. For example, you might need to move from your office desk to a meeting room. In these situations, you don't have to shut down the operating system.

### Preparing the computer

First, disconnect any peripherals that you don't want to take with you. Next close the lid, placing your computer in Standby mode. You can now safely carry it around the building with you.

When you are ready to use your computer again, open the lid and then press the power button to bring it out of Standby mode.

### What to bring to short meetings

If your battery is fully charged, you probably won't need to take anything else with you to the meeting.

### What to bring to long meetings

For longer meetings, take along the AC adapter. You can use mains power throughout the meeting, or you can run down your battery first, and then connect the AC adapter after receiving the battery-low warning.

If the meeting room does not have an available power outlet, reduce your computer's power consumption by putting it in Standby mode during long periods of inactivity. It is advisable to take along a spare battery if you have one.

# Taking the computer home

When you move between your office and home you will need to prepare your computer for the short trip.

## Preparing the computer

After disconnecting your computer from the desktop (see "Disconnecting from the desktop"), prepare the unit as follows:

- 1 Remove all media from the drives. Loaded media can damage the drive heads during transit.
- 2 Pack the computer in a protective case that is padded to guard against knocks. Make sure that the unit cannot slide around inside the case.



-----  
**Caution:** Avoid packing items next to the top of the computer, as this could result in damage to the screen.

## What to bring with you

If you don't have spare items at home, it is advisable to take along the AC adapter and this User's Guide.

## Special considerations

To protect your computer in transit, it is advisable to pay attention to the following:

- Minimize the effect of temperature changes. Keep your computer with you instead of placing it in storage holds.
- Avoid leaving your computer in a hot car.
- Changes in temperature and humidity can cause condensation to form in your computer. Before turning the computer on, allow it to return to room temperature, and then check the screen for signs of condensation. If the temperature change is greater than 10°C (18°F), allow the computer to come to room temperature slowly by placing it in a room with a temperature between the outside and room temperatures.

## Setting up a home office

If you frequently work on your computer at home, as well as at work, it may be worthwhile purchasing a second AC adapter. This will allow you to travel lighter, as you can keep an AC adapter in each location.

You might also find it worthwhile keeping a second set of peripherals at home, such as a keyboard, keypad, mouse and printer.



# Traveling with the computer

Sometimes you might need to make longer trips with your computer.

## Preparing the computer

Prepare the computer as you would for moving between your office and home. It is advisable to make sure that the battery is fully charged. If you are traveling by air, you might be required to turn on the computer during security checks.

## What to take with you

It is advisable to take the following items with you:

- AC adapter.
- Spare, fully charged battery packs.
- Additional printer driver files (if you plan to use another printer).
- Phone and network cables (if you plan to use the computer's modem and network connections).

## Special considerations

In addition to the considerations for taking your computer home, keep the following in mind:

- Always take your computer as carry-on luggage.
- If possible, have your computer manually inspected at security checks. Although the computer can pass safely through security X-ray machines, you should never expose it to a metal detector.
- If carried separately, avoid exposing floppy disks to hand-held metal detectors.

# Traveling internationally with your computer

Occasionally you might need to travel between countries with your computer.

## Preparing the computer

Prepare the computer as you would for normal travel. Remember to take special precautions for air travel (see "Traveling with your computer").

## What to take with you

It is advisable to take the following items with you:

- AC adapter.
- Power cords that are appropriate for the countries you plan to visit.
- Spare, fully charged battery packs.
- Additional printer driver files (if you plan to use another printer).
- Phone and network cables (if you plan to use the computer's modem and network connections). Check that your modem is suitable for the telephone system in the countries you plan to visit. You might have to use a PC card modem in some locations.

## Special considerations

In addition to the considerations for normal travel with your computer, keep the following in mind when traveling internationally:

- Check that your power cord is suitable for the local power supply. If necessary, purchase a power cord that meets local requirements. Avoid using converter kits.
- If you plan to connect over a phone line, check that the computer's modem and your phone cord are suitable for the local phone system. If necessary, purchase a PC card modem that meets local requirements.
- If carried separately, avoid exposing floppy disks to hand-held metal detectors.

Software

Your Aspire 1600 series notebook computer includes system utilities.

This chapter provides information on the important software that comes with your computer.

# System software

Your computer comes preloaded with the following software:

- Microsoft Windows operating system.
- Hardware BIOS setup utility.
- System utilities, drivers and application software.



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**Note:** To run software applications in Windows, first click on the Start button. Next, select the appropriate folder, and then click on the application icon. To learn about the software and utility, make use of the online help provided by the software.

## Launch Manager

Launch Manager allows you to set the launch keys located above the keyboard. See “Launch keys” on page 23 for the location of the launch keys.

You can access the Launch Manager by clicking on Start, All Programs, and then Launch Manager to start the application.

# BIOS Utility

The BIOS Utility is a hardware configuration program built into your computer’s BIOS (basic input/output system).

To activate the BIOS Utility, press F2 during POST. The BIOS setup utility displays summary information on your computer, its devices, processor and memory.

PhoenixBIOS Setup Utility					
Information	Main	Advanced	Security	Boot	Exit
CPU Type:	Intel(R) Pentium(R)4 CPU 3.06 GHz				
CPU Speed:	3.0 Ghz				
System Memory:	640 KB				
Total Memory:	259072 KB				
HDD1 Serial Number	XXXXXXXXXXXX				
HDD2 Serial Number	XXXXXXXXXXXX				
System BIOS Version:	VX.XX (XXXXXXXXXX)				
VGA BIOS Version	XXXX				
KBC Version	XX.XX.XX				
Serial Number	XXXXXXXXXXXXXXXXXXXX				
Asset Tag Number:					
Product Name	Aspire 1600				
Manufacture Name	Acer				
UUID Number	00000000-0000-0000-0000-000000000000				
F1 Help    ↑ Select Item    -/+ Change Values    F9 Setup Defaults Esc Exit   ← Select Menu   Enter Select > Sub-Menu   F10 Save and Exit					



**Note:** The screen above is for reference only. Actual values may differ.

Your computer is already configured for optimal performance, and so you should not need to run this utility. However, you may need to change the BIOS settings if you encounter configuration problems in the future. Refer to “Troubleshooting” on page 77 if a problem arises.

## Navigating the BIOS Utility

These are the menu options: Information, Main, Advanced, Security, Boot and Exit.

To enter a menu, highlight the item using the ← → keys.

Within a menu, navigate through the BIOS Utility by following these instructions:

- Press the cursor up/down keys (↑↓) to select item.

- Press the -/+ to change the value of a parameter.
- Press Enter to go to sub-menu.
- Press Esc while you are in any of the menu options to return to the main menu



.....

Note: You can change the value of a parameter if it is enclosed in square brackets. Navigation keys for a particular menu are shown on the bottom of the screen.

Note: For optimal settings, you can press F9 to load setup defaults.

## Setting a password



.....

Warning: Don't forget your password. If you forget your password, you may have to return your computer to your dealer to reset it.

Follow these steps:

- 1 Go to the Security screen. Use the ↑ and ↓ keys to highlight a password parameter (Supervisor, User, or Hard Disk) and press the Enter key. The password box appears:

Set Password	
Enter New Password	[       ]
Confirm New Password	[       ]

- 2 Type a password. The password may consist of up to eight alphanumeric characters (A-Z, a-z, 0-9).



.....

Important: Be very careful when typing your password because the characters do not appear on the screen.

- 3 Retype the password to verify your first entry and press “Enter”.  
After setting the password, the computer automatically enables the chosen password parameter and a dialog box appears confirming the changes.

Setup Notice
Changes have been saved. [Continue]

- 4 Press “Esc” to return to the previous menu.

## Changing a password

To change a password, follow step 1 in “Setting a password” on page 75. Enter the current password, then enter a new password. Retype your new password to verify your first entry.

Set Password		
Enter Current Password	[	]
Enter New Password	[	]
Confirm New Password	[	]

## Removing a password

To remove a password, follow step 1 in “Setting a password” on page 75. Enter the current password, then leave the Enter New Password and Cofirm New Password blank.

## A note on HT Technology

Hyper-Threading (HT) Technology is only supported by Intel® Pentium® 4 processor running at 3.06 GHz or higher. This technology enables the processor to executes two threads (a part of a program) in parallel. Your software can run more efficiently and you can multitask more effectively.

To enable the HT Technology function, go to the Advanced screen and select the Hyper-Threading item. Press F5 or F6 to enable the function.

## To exit the BIOS Utility

To exit the BIOS Utility, go the the Exit screen and choose an item and press Enter. Press Enter again to confirm the selection.



# Troubleshooting

This chapter instructs you on how to deal with common system problems. Please read it before calling a technician.

Solutions to more serious problems may require opening the computer. Do not attempt to open and service the computer by yourself. Contact your dealer or an authorized service center for assistance.

## Frequently asked questions

This section suggests solutions to commonly encountered problems.

I press the power switch, but my computer does not start or boot-up.

Look at the Power status indicator:

- If it is not lit, no power is being delivered to the computer. Check the following:
  - If you are running on battery power, the battery may be low and unable to power the computer. Connect the AC adapter to recharge the battery pack.
  - If you are running on mains power, make sure that the AC adapter is properly plugged in to the computer and to the power outlet.
- If it is lit, check the following:
  - Make sure that there is not a non-bootable (non-system) diskette in the floppy disk drive. If so, remove the diskette or replace it with a system diskette, and then press Ctrl-Alt-Del to restart the system.
  - The operating system files may be damaged or missing. Insert the Windows startup disk, and then press Ctrl-Alt-Del to restart the system. Windows will diagnose your system and make necessary fixes.

Nothing appears on the screen.

The computer's power management system automatically blanks the screen to save power. Press any key to turn the display back on.

If pressing a key does not turn the display back on, check the following:

- The brightness level might be too low. Press Fn + → hot key to increase the screen brightness level.
- The display device might be set to an external monitor. Press the Fn + F5 hot key to toggle the display setting.
- The system may be in standby mode. Try pressing the power switch to resume.

The image is not full-screen.

Make sure that the resolution is set to a resolution your system supports:

- Right click on your Windows desktop and select Properties to bring up the Display Properties dialog box. Alternatively, click on the Display icon in Control Panel.
- Click on the Settings tab to check the resolution setting. Resolutions lower than the specified resolution result in a display that is less than full-screen.

There is no audio coming from my computer.

Check the following:

- The volume may be muted. In Windows, look at the volume control icon on the taskbar. If it is crossed-out, click on the icon and deselect the Mute option.
- The volume level may be too low. Use the volume control dial to adjust the volume. See "Adjusting the volume" on page 32 for more details..
- If headphones are connected to the headphone jack on the computer, your computer's built-in speakers will be turned off.

My external microphone does not work.

Check the following:

- Make sure that the external microphone is properly plugged into the microphone-in jack on the computer.
- Make sure that the volume is not muted or set too low (see the problem, "There is no audio coming from my computer").

I can't eject the optical drive tray with my computer turned off.

The computer needs to be turned on for the optical drive eject button to function. If you need to eject the optical drive tray when the computer is turned off, push a straightened paper clip into the optical drive emergency eject hole. See "Ejecting the optical drive tray" on page 26 for more information.

The keyboard does not respond.

Try attaching an external USB keyboard to one of your computer's USB ports. If it works, the internal keyboard might have become disconnected. Contact your dealer or an authorized service center.

The floppy disk drive cannot read a diskette.

Check the following:

- Make sure that the diskette is properly inserted in the floppy disk drive.
- Make sure that the diskette is formatted.
- Try to read a second diskette. If this works, then the first diskette might have a problem.
- If the diskette is not the cause of the problem, then the drive head might be dirty. Clean it using a drive head cleaning kit.

The optical drive cannot read a disc.

Check the following:

- Make sure that the disc is supported by the drive. If your computer has a CD-ROM drive, it can read CDs but cannot read DVDs. If your computer has a DVD drive, it can read CDs and DVDs.
- When placing a disc in the drive tray, make sure that it is secure on the spindle of the drive tray.
- Make sure that the disc is free from scratches or smudges. If the disc is dirty, clean it using a disc cleaning kit.
- If the disc is OK, the drive head might be dirty. Clean it using a drive head cleaning kit.

The printer does not work.

Check the following:

- Make sure that the printer is connected to a power outlet and it is turned on.
- Check that the cable is properly connected to the appropriate ports on both the computer and the printer.

I want to set up my location to use the internal modem.

Follow these steps:

- Click on Start, and then click on Control Panel.
- Double-click on Phone and Modem Options.
- In the Dialing Rules tab, begin setting up your location.

Refer to Windows Help for more information.

When the battery is 95-99% full, it won't charge to 100% capacity.

To preserve the life of the battery, the system only lets you charge the battery when its capacity falls below 95%. It is recommended that you run down the battery, and then fully recharge it.

## Error messages

The following is a list of the messages that the BIOS can display. Most of them occur during POST. Some of them display information about a hardware device, e.g., the amount of memory installed. Others may indicate a problem with a device, such as the way it has been configured. Following the list are explanations of the messages and remedies for reported problems.



**Note:** If your system displays one of the messages marked below with an asterisk (\*), write down the message and contact your dealer. If your system fails after you have made the changes in the Setup menus, reset the computer, enter Setup and load the Setup defaults to correct the error.

Error Messages	Corrective Action
0200 Failure Fixed Disk	Fixed disk is not working or not configured properly. Check to see if fixed disk is attached properly. Run Setup. Find out if the fixed-disk type is correctly identified.
0210 Stuck key	Stuck key on keyboard.
0211 Keyboard error	Keyboard not working.
0212 Keyboard Controller Failed*	Keyboard controller failed test. May require replacing keyboard controller.
0213 Keyboard locked - Unlock key switch	Unlock the system to proceed.
0220 Monitor type does not match CMOS - Run SETUP	Monitor type not correctly identified in Setup
0230 Shadow Ram Failed at offset: <i>nnnn</i> *	Shadow RAM failed at offset <i>nnnn</i> of the 64k block at which the error was detected.
0231 System RAM Failed at offset: <i>nnnn</i> *	System RAM failed at offset <i>nnnn</i> of in the 64k block at which the error was detected.
0232 Extended RAM Failed at offset: <i>nnnn</i> *	Extended memory not working or not configured properly at offset <i>nnnn</i> .

Error Messages	Corrective Action
0250 System battery is dead - Replace and run SETUP	The CMOS clock battery indicator shows the battery is dead. Replace the battery and run Setup to reconfigure the system.
0251 System CMOS checksum bad - Default configuration used	System CMOS has been corrupted or modified incorrectly, perhaps by an application program that changes data stored in CMOS. The BIOS installed Default Setup Values. If you do not want these values, enter Setup and enter your own values. If the error persists, check the system battery or contact your dealer.
0260 System timer error*	The timer test failed. Requires repair of system board.
0270 Real time clock error*	Real-Time Clock fails BIOS hardware test. May require board repair.
0271 Check date and time settings	BIOS found date or time out of range and reset the Real-Time Clock. May require setting legal date (1991-2099).
0280 Previous boot incomplete - Default configuration used	Previous POST did not complete successfully. POST loads default values and offers to run Setup. If the failure was caused by incorrect values and they are not corrected, the next boot will likely fail. On systems with control of wait states, improper Setup settings can also terminate POST and cause this error on the next boot. Run Setup and verify that the wait-state configuration is correct. This error is cleared the next time the system is booted.
0281 Memory Size found by POST differed from CMOS	Memory size found by POST differed from CMOS.
02B0 Diskette drive A error 02B1 Diskette drive B error	Drive A: or B: is present but fails the BIOS POST diskette tests. Check to see that the drive is defined with the proper diskette type in Setup and that the diskette drive is attached correctly.
02B2 Incorrect Drive A type - run SETUP	Type of floppy drive A: not correctly identified in Setup.
02B3 Incorrect Drive B type - run SETUP	Type of floppy drive B: not correctly identified in Setup.
02D0 System cache error - Cache disabled	RAM cache failed and BIOS disabled the cache. On older boards, check the cache jumpers. You may have to replace the cache. See your dealer. A disabled cache slows system performance considerably.

Error Messages	Corrective Action
02F0: CPU ID:	CPU socket number for Multi-Processor error.
02F4: EISA CMOS not writeable*	ServerBIOS2 test error: Cannot write to EISA CMOS.
02F5: DMA Test Failed*	ServerBIOS2 test error: Cannot write to extended DMA (Direct Memory Access) registers.
02F6: Software NMI Failed*	ServerBIOS2 test error: Cannot generate software NMI (Non-Maskable Interrupt).
02F7: Fail-Safe Timer NMI Failed*	ServerBIOS2 test error: Fail-Safe Timer takes too long.
<i>device</i> Address Conflict	Address conflict for specified <i>device</i> .
Allocation Error for: <i>device</i>	Run ISA or EISA Configuration Utility to resolve resource conflict for the specified <i>device</i> .
Failing Bits: <i>nnnn</i> *	The hex number <i>nnnn</i> is a map of the bits at the RAM address which failed the memory test. Each 1 (one) in the map indicates a failed bit. See errors 230, 231, or 232 above for offset address of the failure in System, Extended, or Shadow memory.
Invalid System Configuration Data	Problem with NVRAM (CMOS) data.
I/O device IRQ conflict	I/O device IRQ conflict error.
One or more I2O Block Storage Devices were excluded from the Setup Boot Menu	There was not enough room in the IPL table to display all installed I2O block-storage devices.
Operating system not found	Operating system cannot be located on either drive A: or drive C.: Enter Setup and see if fixed disk and drive A: are properly identified.
Parity Check 1 <i>nnnn</i> *	Parity error found in the system bus. BIOS attempts to locate the address and display it on the screen. If it cannot locate the address, it displays <i>nnnn</i> . Parity is a method for checking errors in binary data. A parity error indicates that some data has been corrupted.



Error Messages	Corrective Action
Parity Check 2 <i>nnnn</i> *	Parity error found in the I/O bus. BIOS attempts to locate the address and display it on the screen. If it cannot locate the address, it displays <i>nnnn</i> .
Press <F1> to resume, <F2> to Setup, <F3> for previous	Displayed after any recoverable error message. Press <F1> to start the boot process or <F2> to enter Setup and change the settings. Press <F3> to display the previous screen (usually an initialization error of an Option ROM, i.e., an add-on card). Write down and follow the information shown on the screen.
Run the I2O Configuration Utility	One or more unclaimed block storage devices have the Configuration Request bit set in the LCT. Run an I2O Configuration Utility (e.g. the SAC utility).

If you still encounter problems after going through the corrective measures, please contact your dealer or an authorized service center for assistance. Some problems may be solved using the BIOS Setup Utility. See "BIOS Utility" on page 74 for more informations.



Appendix A  
Specifications

This appendix lists the general specifications of your computer.

### Microprocessor

- Intel® Pentium® 4.

### Memory

- 2 memory slots supporting PC2100/PC2700 (266/333MHz DDR) soDIMM, upgradeable to 1GB.
- 512 KB Flash ROM BIOS.

### Data storage

- One internal floppy disk drive (3.5", 1.44 MB).
- One E-IDE hard disk (2.5", 9.5mm, UltraDMA-100).
- One internal optical drive.

### Display and video

- 15.0" Thin-Film Transistor (TFT) liquid-crystal display (LCD), displaying 16.7 million colors at 1024 x 768 Extended Graphics Array (XGA) resolution
- Simultaneous LCD and CRT display.

### Audio

- 16-bit stereo audio (AC'97).
- Two built-in stereo speakers.
- Audio ports for microphone-in and headphones.

### Keyboard and pointing device

- 88-/90-key Windows keyboard.
- Ergonomically-centered touchpad pointing device.

### I/O ports

- One type III or two type II PC Card slots (PCMCIA and CardBus).
- One RJ-11 modem jack (V.90, 56K).
- One RJ-45 network jack (Ethernet 10/100).
- One DC-in jack.
- One S-video out port
- One external monitor port.
- One microphone-in jack (3.5mm mini jack).
- One headphone jack (3.5mm mini jack).
- Four Universal Serial Bus (USB 2.0) ports.

- One IEEE 1394 port.

#### Weight and dimensions

- 3.36kg (7.4 lbs).
- 326(W) x 275(D) x 39.9/45.6(H) mm

#### Environment

- Temperature:
  - Operating: 5°C ~ 35°C.
  - Non-operating: -20°C ~ 65°C.
- Humidity (non-condensing):
  - Operating: 20% ~ 80% RH.
  - Non-operating: 10% ~ 90% RH.

#### Operating system

- Microsoft Windows XP.

#### Power

- 86W 12-cell Li-ion battery pack.
- 120-Watt 20V AC adapter, auto sensing 100~240Vac, 50~60Hz.

#### Options

- 256/512 MB memory upgrade module.
- Additional AC adapter.
- Additional battery pack.

Appendix B  
Notices

This appendix lists the general notices for your computer.



## FCC notice

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 device 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 communications.

However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be determined by turning the device 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 device and receiver.
- Connect the device into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

## Notice: Shielded cables

All connections to other computing devices must be made using shielded cables to maintain compliance with FCC regulations.

## Notice: Peripheral devices

Only peripherals (input/output devices, terminals, printers, etc.) certified to comply with the Class B limits may be attached to this equipment. Operation with non-certified peripherals is likely to result in interference to radio and TV reception.

## Caution

Changes or modifications not expressly approved by the manufacturer could void the user's authority, which is granted by the Federal Communications Commission, to operate this computer.

## Use conditions

This part complies with Part 15 of the FCC Rules. Operation 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.

## Notice: Canadian users

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

## Remarque à l'intention des utilisateurs canadiens

Cet appareil numérique de la classe B respecté toutes les exigences du Règlement sur le matériel brouilleur du Canada.

## Modem notices

### FCC

This equipment complies with Part 68 of the FCC rules. Located on the bottom side of the modem is a label that contains, among other information, the FCC Registration Number and Ringer Equivalence Number (REN) for this equipment. Upon request, you must provide this information to your telephone company.

If your telephone equipment causes harm to the telephone network, the telephone company may discontinue your service temporarily. If possible, they will notify you in advance. But, if advance notice is not practical, you will be notified as soon as possible. You will also be informed of your right to file a complaint with the FCC.

Your telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the proper functioning of your equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

If this equipment should fail to operate properly, disconnect the equipment from the phone line to determine if it is causing the problem. If the problem is with the equipment, discontinue use and contact your dealer or vendor.

### TBR 21

This equipment has been approved [Council Decision 98/482/EC - "TBR 21"] for pan-European single terminal connection to the Public Switched Telephone Network (PSTN). However, due to differences between the individual PSTNs provided in different countries, the approval does not, of itself, give an unconditional assurance of successful operation on every PSTN termination point. In the event of problems, you should contact your equipment supplier in the first instance.

## Telecommunications notices

### A-Tick notice

For safety reasons, only connect headsets with a telecommunications compliance label. This includes customer equipment previously labelled permitted or certified.

## Important safety instructions

Read these instructions carefully. Save them for future reference.

- 1 Follow all warnings and instructions marked on the product.
- 2 Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
- 3 Do not use this product near water.
- 4 Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
- 5 Slots and openings are provided for ventilation; to ensure reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register, or in a built-in installation unless proper ventilation is provided.
- 6 This product should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
- 7 Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
- 8 If an extension cord is used with this product, make sure that the total ampere rating of the equipment plugged into the extension cord does not exceed the extension cord ampere rating. Also, make sure that the total rating of all products plugged into the wall outlet does not exceed the fuse rating.
- 9 Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.
- 10 Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage points or other risks. Refer all servicing to qualified service personnel.
- 11 Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
  - a When the power cord or plug is damaged or frayed.
  - b If liquid has been spilled into the product.
  - c If the product has been exposed to rain or water.
  - d If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal condition.
  - e If the product has been dropped or the case has been damaged.
  - f If the product exhibits a distinct change in performance, indicating a need for service.
- 12 Replace the battery with the same type as the product's battery we recommend. Use of another battery may present a risk of fire or explosion.
- 13 **Warning!** Batteries may explode if not handled properly. Do not disassemble or dispose of them in fire. Keep them away from children and dispose of used batteries promptly.

- 14 Use only the proper type of power supply cord set (provided in your accessories box) for this unit. It should be a detachable type: UL listed/CSA certified, type SPT-2, rated 7A 125V minimum, VDE approved or its equivalent. Maximum length is 15 feet (4.6 meters).

## Laser compliance statement

The CD or DVD drive used with this computer is a laser product. The CD or DVD drive's classification label (shown below) is located on the drive.

### CLASS 1 LASER PRODUCT

CAUTION: INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.

### APPAREIL A LASER DE CLASSE 1 PRODUIT

LASERATTENTION: RADIATION DU FAISCEAU LASER INVISIBLE EN CAS D'OUVERTURE.  
EVITER TOUTE EXPOSITION AUX RAYONS.

### LUOKAN 1 LASERLAITE LASER KLASSE 1

VORSICHT: UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET NICHT DEM STRAHL AUSSETZEN

### PRODUCTO LÁSER DE LA CLASE I

ADVERTENCIA: RADIACIÓN LÁSER INVISIBLE AL SER ABIERTO. EVITE EXPONERSE A LOS RAYOS.

ADVARSEL: LASERSTRÅLING VED ÅBNING SE IKKE IND I STRÅLEN.

VARO! LAVATTAESSA OLET ALTTINA LASERSÄTEILYLLE.

WARNING: LASERSTRÅLNING NÅR DENNA DEL ÅR ÖPPNAD ÅLÅ TUIJOTA SÄTEESEENSTIRRA EJ IN I STRÅLEN

WARNING: LASERSTRÅLNING NAR DENNA DEL ÅR ÖPPNADSTIRRA EJ IN I STRÅLEN

ADVARSEL: LASERSTRÅLING NAR DEKSEL ÅPNESSTIRR IKKE INN I STRÅLEN

## Lithium battery statement

### CAUTION

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

### ADVARSEL!

Lithiumbatteri - Eksplosjonsfare ved feilagtig håndtering. Udsiftingning må kun ske med batteri af samme fabrikat og type. Léver det brugte batteri tilbage til leverandøren.

### ADVARSEL

Eksplosjonsfare ved feilaktig skifte av batteri. Benytt samme batteritype eller en tilsvarende type anbefalt av apparatfabrikanten. Brukte batterier kasseres i henhold til fabrikantens instruksjoner.

**VARNING**

Explosionsfara vid felaktigt batteribyte. Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren. Kassera använt batteri enligt fabrikantens instruktion.

**VAROITUS**

Päristo voi räjähtää, jos se on virheellisesti asennettu. Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

**VORSICHT!**

Explosionsgefahr bei unsachgemäßen Austausch der Batterie Ersatz nur durch denselben oder einem vom Hersteller empfohlenem ähnlichen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

## LCD pixel statement

The LCD unit is produced with high-precision manufacturing techniques. Nevertheless, some pixels may occasionally misfire or appear as black or red dots. This has no effect on the recorded image and does not constitute a malfunction.

## Macrovision copyright protection notice

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.

Apparatus Claims of U.S. Patent Nos. 4,631,603, 4,577,216, 4,819,098, and 4,907,093 licensed for limited viewing uses only.

**Note: Below regulatory information is for models with 802.11b wireless LAN only.**

## Regulatory Information

The Wireless module must be installed and used in strict accordance with the manufacturer's instructions. This device complies with the following radio frequency and safety standards.

### Canada - Industry Canada (IC)

- This device complies with RSS 210 of Industry Canada.

### Europe - EU Declaration of Conformity

This device complies with the standards listed below, following the provisions of the

EMC Directive 89/336/EEC:

- ETSI EN 301 489-1/17
- ETSI EN 300 328-2

## USA - Federal Communications Commission (FCC)

This device complies with Part 15 of FCC Rules. Operation of the devices in an Wireless LAN System is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference that may cause undesired operation.

## Exposure to Radio Frequency Radiation

The radiated output power of the Wireless module is far below the FCC radio frequency exposure limits. Nevertheless, the Wireless module shall be used in such a manner that the potential for human contact during normal operation is minimized.

The transmitter and the antenna are permanently installed inside the notebook, and are specific for this model (not for generic computer). The antenna of this device is installed on the top of the LCD display. For compliance with FCC radiation exposure limits, it should be operated with a separation distance of 20cm or more between the antenna and the body of the user, and the antenna should not be operated next to a nearby person.

This equipment 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 communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or 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 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.

FCC Caution: To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment (example - use only shielded interface cables when connecting to computer or peripheral devices).

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





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