Acer Aspire 2000 series

User's guide

Acer Aspire 2000 series Notebook computer

Model Number : _____

Serial Number: _____

Purchase Date: _____

Place of Purchase: _____

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.

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.

For more information on our products, services, and support, please visit our web site: www.acer.com.

Basic care and tips for using your computer

Turning your computer on and off

To turn on your computer, open the lid and press the power button 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 button 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:

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

Refer to the chapter entitled "Frequently asked questions" on page 69 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.

Contents

Getting familiar with
your computer

Your Aspire 2000 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.

Open view

#	Item	Description
1	Display	Wide screen display provides visual output.
2	Launch keys	4 buttons that can be programmed to start frequently used applications.
3	Stereo Speakers	Produce stereo sound

English

#	Item	Description
4	Touchpad	Touch sensitive pad that functions like a computer mouse.
5	Click buttons & 4-way 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, as well as right and left.

Front view

#	Item	Description
1	Headphone-in jack	Connects headphones for audio output
2	Microphone-in jack	Connects an external microphone for audio input
3	4 in 1 Card Reader	Supports MS/MMC/SD/SM kinds of memory sticks
4	Latch	Locks and releases the lid
5	Bluetooth Button	Stares (optional) Bluetooth functionality
6	Wireless Button	Turns an optional internal wireless device on or off

English

Top view

#	Item	Description
1	Status Indicator	LEDs that turn on and off to show the status of the computers. It's function and components.
2	Arcade	Multimedia button
3	LCM Panel	Panel control display
4	Stop Button	Stop the Arcade application
5	Naviagation Button	Multimedia Button

Left view

#	Item	Description
1	PC card slot	The slot supports a standard Type II PC card (PCMCIA or CardBus).
2	PC card eject button	Press the eject button to remove a PC card from the PC card slot.
3	Eject button	Ejecting a Disc
4	Slot-in Optical	Support an optical disc.

English

Right view

#	Item	Description
1	Infrared port	Interfaces with infrared devices (e.g.,infrared printer, IR-aware computer)
2	DC-in jack	Connect the AC adapter
3	Kensington lock slot	For attaching a security connector.
4	Ventilation Hole	Enables the computer to stay cool, even after prolonged use.

Rear view

#	Item	Description
1	S-video	Connects to a television or display device with S-video input.
2	External display port	Connects an external (VGA) display monitor.
3,4, 8	USB ports	Three USB 2.0 ports for connecting USB devices.
5	Network jack	Connects the computer to an Ethernet 10/100-based network.

#	Item	Description
6	Modem jack	Connects the built-in fax/data modem to a phone line.
7	Parallel port	Connects a parallel device, such as a printer.
9	IEEE 1394 port 1394	Connects IEEE 1394 devices.

Bottom view

#	Item	Description
1	Mini-PCI Slot	Slot for adding mini-PCI cards
2	Hard disk bay	Removable cover provides access to the computer's hard drive.
3	Memory compartment	Removable cover provides access to the memory slots for upgrading the computer's memory.
4	Battery pack	The computer's removable battery.
5	Sub-Woofer	Speaker to output base sound

English

Features

Performance

- Intel® Pentium® M Porcessor at 1.4 GHz or higher .
- 2 memory slots supporting 333 MHz DDR, upgradeable to 2GB.
- 30GB and up Enhanced-IDE hard disk drive.

Multimedia

- Built-in optical drive (Slot-in DVD/CD-RW Combo or Slot-in DVD Rewritable Drives).
- 15.4" TFT XGA ,1280x800(WXGA)/1680x1050(WXGA+) panel.
- Built-in stereo speakers.
- Audio input and output jacks.

Connectivity

- Integrated 10/100Mbps Ethernet connection.
- Built-in 56Kbps fax/data modem.
- Three universal serial bus (USB 2.0) ports.
- One IEEE 1394 port.
- 802.11b and 802.11a/b Wireless LAN and Bluetooth (manufacturing optional).

Human-centric design

- Rugged, yet extremely portable, construction.
- Stylish appearance.
- Standard keyboard 85 keys with four 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 15.4" display panel provides a large viewing area for maximum efficiency and ease-of-use. The Thin-Film Transistor (TFT) supports WSXGA up to resolution.

- ATI Radeon 9200 with 64MB/128MB(optional) DDR VGA Memory.

- Supports simultaneous display between LCD and CRT display.

- S-video for output to a television or display device that supports S-video input.

- One 1x16 LCM for multimedia feature and status message showing.

- Dual View support.

Indicators

Your computer provides an array of three indicators located above the keyboard, in addition to five indicators positioned at the front of the palm rest area. These indicators show the status of the computer and its components.

The three indicators located above the keyboard provide the following status information:

Icon	Description
🔒A	Caps Lock activity.
🔒1	Num Lock activity.

Icon	Description
🔒⬇	Scroll Lock activity.

📎 ··

Note: The keypad lock must be turned on to use the embedded numeric keypad.

The five indicators located at the front of the unit provide the following status information:

Icon	Item	Description
☼	Power mode	• Steady green -- power on • Flashing orange -- standby mode • Orange -- hibernation mode
🗄	Hard Disc mode	• Lights to Indicate when the hard disc drive is reading or writing data.
🔋	Battery mode	• Blue -- fully charged • Flashing orange -- being charged • Orange -- low on power
✳	Bluetooth mode	Lights to indicate that Bluetooth (optional) is enabled.
◯	Wireless LAN mode	Lights to Indicate status of wireless LAN (optional) communication.

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.

Desired Access	Num lock On	Num lock Off
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:
	+ Tab activates the next Taskbar button.
	+ E opens the My Computer window.
	+ F1 opens Help and Support.
	+ F opens the Find: All Files dialog box.
	+ M minimizes all windows.
	Shift + + M undoes the minimize all windows (+ M) action.
	+ R opens the Run dialog box.
Application key	This key has the same effect as clicking the right mouse button; it opens the application's context menu.

Hot keys

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:

HotKey	Function	Description
Fn + F1	Hot key help	Displays help on hot keys.
Fn + F2	Setup	Accesses the computer's configuration utility.
Fn + F3	Power management scheme toggle	Switches the power management scheme used by the computer (function available if supported by operating system). See "Power management" on page 39.
Fn + F4	Sleep	Puts the computer in Sleep mode. See "Power management" on page 39.
Fn + F5	Display toggle	Switches display output between the display screen, external monitor (if connected) and both the display screen and external monitor.

HotKey	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 + Sub-woofer key	Sub-woofer	Turns the sub woofer on and off
Fn + ↑	Volume up	Increases the speaker volume.
Fn + ↓	Volume down	Decreases the speaker volume.
Fn + →	Brightness up	Increases the screen brightness.
Fn + ←	Brightness down	Decreases the screen brightness.

Euro key

Your computer supports the new Euro currency character. First, hold down the Alt Gr key, and then press the Euro key.

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 up and down 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:

- Slide your finger over the surface of the touchpad to control the movement of the cursor. Tap the touchpad to perform selection and execution functions.

- Press the left (1) and right (3) click buttons to perform selection and execution functions, just as you would use the buttons on a computer mouse.

- Use the scroll key (2) to scroll through long documents and web pages. Press the top of the key to scroll up, and the bottom to scroll down; left to scroll left, and right to scroll right.

Function	Left Button	Right Button	4-Way Scroll Key	Tap
Execute	Click twice quickly.			Tap twice quickly.
Select	Click once.			Tap once.
Drag	Click and hold. Then, slide your finger across the touchpad to drag the cursor over the selection.			Tap twice quickly. On the second tap, slide your finger across the touchpad to drag the cursor over the selection.
Access content menu		Click once.		
Scroll			Click and hold the up/ down/left/ right button.	

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 four buttons, in addition to the
power button. These buttons are called launch keys. They are desig-
nated as key 1, key 2, key 3 and key 4, from right to left. By default,
key 1 is used to launch the email application and key 2 is used to
launch the Internet browser. Keys 3 and 4 start the Launch Manager
application.   The first four launch keys can be set by the user. To set
the launch keys, run the Acer Launch Manager.

Launch key	Default application
Email	Launches your email application.
Web browser	Launches your Internet browser.
P1	User-programmable
P2	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 high speed optical drive.

 Depending on your model, you have a Slot-in DVD/CD-RW combo, DVD-RW 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.

Ejecting the optical disc

To eject the optical disc :

•   With the computer turned on, press the optical drive eject button.

To load an optical disc:

•   With the computer turned on, insert the disc into the drive slot until you feel the drive catch the disc and take it the rest of the way in.

•   The disc may need to be inserted nearly all the way in before the drive takes it in rest of way.

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.

Audio

Your computer includes an integrated stereo audio system.

Embedded sub-woofer provides tight and precise bass performance for sounds from opteratiing system, games, multi-media and internet applications, and other sources .

Once the external device (Ex:headphone, microphone) is connected, the embedded speakers would be disable.

Media Control Button

When system off: Press "Arcade" button to enable "Aspire Arcade" Applicaion without getting into Windows OS. Press "Arcade" button four seconds to close application and shut down system.

When system on and under Windows OS: Press "Arcade" button to enable "Aspire Arcade" application.

Press stop button will stop CD or DVD playback.

Multimedia Control buttons can adjust volume, select play mode and other features .

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 slot enables you to physically protect your computer from theft. Use this feature as follows:

- Wrap a security lock cable around a heavy or immoveable 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

You can protect your computer from unauthorized access by setting Windows password protection. The user must enter the password before beginning a Windows session.

- First, open **User Accounts** in Windows **Control Panel** and select your account.

- Click **Create a Password**, and then set your desired password.

- Click **Performance and Maintenance**, **Power Options** in **Control Panel**.

- On the **Advanced** tab, select the option to prompt for password when computer resumes from standby.

To cancel password protection, reset the password with a blank password.

Operating on
battery power

Your Aspire 2000 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.

• Delivers a battery-low warning.

The battery is recharged whenever you connect the computer to the mains power supply. Your computer supports charge-in-use, enabling you to recharge the battery while you continue to operate the computer. However, recharging with the computer turned off results in a significantly faster charge time.

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. Contact your dealer for details on ordering a spare battery pack.

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 without turning 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 dis-charged 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 bat-tery to accept the maximum possible charge. Failure to follow this pro-cedure 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 life span of about 500 charges.

Installing and removing the battery pack

> 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.

2 Slide the battery into the battery bay and gently push until the battery locks in place.

To remove a battery pack:

1   Slide the battery release latch to release the battery.

2   Pull the battery from the battery bay.

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.

English

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.	1. Plug the AC adapter into the computer, and then connect to the mains power supply. 2. Save all necessary files. 3. Resume work. Turn off the computer if you want to recharge the battery rapidly.
An extra fully charged battery pack is available.	1. Save all necessary files. 2. Close all applications. 3. Shut down the operating system to turn off the computer. 4. Replace the battery pack. 5. Turn on the computer and resume work.
The AC adapter or a power outlet is unavailable. You have no spare battery pack.	1. Save all necessary files. 2. Close all applications. 3. Shut down the operating system to turn off the computer.

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.

English

Peripherals and options

Your Aspire 2000 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" on page 20 for more information.

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" on page 47 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.

USB devices

Your computer features three USB (Universal Serial Bus) 2.0 ports for connecting a range of USB peripherals. See "External input devices" on page 43 and "Printer" on page 46 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 Port

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

See your video or digital camera's documentation for details.

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 with sub-woofer. See the section entitled "Audio" on page 29 for more information on these features. However, in addition to the integrated devices, the two audio ports on the front of the unit enable you to connect external audio input and output devices.

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

Connect headphones to the headphone jack for private listening and improved audio output quality.

Expansion devices

PC Card

Your computer features a PC card slot that supports a standard Type II 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.

> **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 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.

English

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.

4   Pull the card from the slot.

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

Memory is expandable to 2GB, employing 256/512 MB or 1 GB industry standard soDIMMs (Small Outline Dual Inline Memory Modules). The computer supports DDR (Double Data Rate) SDRAM.

There are two memory slots on your computer, one of which is occupied by standard memory. You can upgrade memory by installing a memory module into the other available slot.

Installing 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, and then press down gently until it clicks in place.

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 2000 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, 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.

English

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.

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 2000 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.

> 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 four launch keys located above the keyboard. See "Launch keys" on page 24 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.

Aspire Arcade

Windows Arcade

Mode	Support	Unsupport
Cinema	DVD	5.1 Channel through SPDIF
	SVCD	DTS
	VCD	Liner PCM
	MiniDVD	TruSurroundXT
		SRS
		DVD audio
Video	ASF	DVD navigator
	WMV	SVCD
	MPEG-I-II	M2V, MOV, Flash
	DivX (requires codec)	
Album	BMP, JPG, PNG	GIF, TIF, PSD, ICO
Music	MP3, WMA, WAV, CDA (Audio CD)	DVD audio, SACD

Instant-on Arcade

Mode	Support	Unsupport
Audio		5.1 Channel through SPDIF
		DTS
		Liner PCM
Video	DVD/VCD	DVD-Navigator
		SVCD
Music	MP3	DVD audio format
Album	JPEG (Only)	N.A

1   USB external drive does not support. (need extra device driver)

2   You have to return to main menu or stop the media before eject the disc.

Fn +F1 => For on-line help menu.

LBIOS Setup Utility

The BIOS (basic input/output system) contains important information used to configure the hardware and system software settings. Your computer reads the BIOS when it first starts up, before it loads the operating system.

Your computer's BIOS includes a built-in setup utility called Insyde Software SCU (system configuration utility). It can be started shortly after you turn the computer on, by pressing the F2 key during POST.

The BIOS setup utility displays summary information on your computer, its devices, processor and memory.

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 "Frequently asked questions" on page 69 if a problem arises.

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 button, 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.

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 button 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 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.

- If you are using a printer connected to your computer's parallel port, restart the computer. Windows needs to find the new hardware and install the necessary drivers.

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.

Appendix A
Specifications

This appendix lists the general specifications of your computer.

Microprocessor

- Intel® Pentium® M Porcessor at 1.4 GHz or higher .

Memory

- DDR333 256MB/2GB(Max).
- Dual 200-pin soDIMM sockets.
- PC2100 / PC2700 DDR SDRAM (Double Date Rate-Synchronous Dynamic Random Access Memory) support.
- 512 KB flash ROM BIOS; shadow RAM support.

Data storage

- 4-in-1 card reader.
- 9.5mm 30GB and up Enhanced-IDE hard disk drive.
- One internal optical drive.

Display and Slot-in video

- 15.4" 16:10 Thin-Film Transistor (TFT) displaying at 1280 x 800(WXGA)/1680 x 1050(WSXGA+),16.7M Colors.
- ATI Radon 9200 with 64MB/128MB(optional) DDR VGA Memory.
- Simultaneous LCD and CRT display support.
- Dual View support.
- S-video for output to a television or display device that support S-video input.
- One 1x16 LCM for multimedia feature and status message showing.

Audio

- 2.1 Channel Speaker (with subwoofer).
- MS-Sound compatible.
- Audio ports for microphone-in and headphones.

Keyboard and pointing device

- 85-key Windows keyboard.
- Ergonomically-centered touchpad pointing device.

I/O ports

- One type II PC Card slot (PCMCIA and CardBus).
- One IEEE 1394 port
- One RJ-11 modem jack (V.90/V.92, 56K).
- One RJ-45 network jack (Fast Ethernet 10/100).
- One DC-in jack.
- One parallel port .
- One S-video port (NTSC/PAL).
- One external monitor port.
- One microphone-/line-in jack
- One headphone-/speaker-/line out jack
- Infrared (FIR) port.
- Three USB 2.0 ports.
- 4 in 1 Card Reader (MS/MMC/SD/SM)

Weight and dimensions

- 15.4"-display model:
  - 3.0 kg (6.6 lbs).
  - 360(W) x 273(D) x 28/33.49(H) mm
  - (14.2"x10.7"x1.1"~1.32")

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 Edition.

Power

- 8-cell Li-Ion battery pack.
- 65W AC adapter .

Options

- Additional AC adapter.
- Additional Li-Ion battery pack.
- Additional SODIMMs (256/512MB/1GB)
- Headphone

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 respected toutes les exigences du Règlement sur le materiel 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. EVITTER TOUTE EXPOSITION AUX RAYONS.

LUOKAN 1 LASERLAITE LASER KLASSE 1
VORSICHT: UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET NICHT DEM STRAHLL AUSSETZEN

PRODUCTO LÁSER DE LA CLASE I
ADVERTENCIA: RADIACIÓN LÁSER INVISIBLE AL SER ABIERTO. EVITE EXPONERSE A LOS RAYOS.

ADVARSEL: LASERSTRÅLING VEDÅBNING SE IKKE IND I STRÅLEN.

VARO! LAVATTAESSA OLET ALTTINA LASERSÅTEILYLLE.
VARNING: LASERSTRÅLNING NÅR DENNA DEL ÅR ÖPPNAD ÅLÅ TUIJOTA SÅTEESEENSTIRRA EJ IN I STRÅLEN

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

ADVARSEL: LASERSTRÅLING NAR DEKSEL ÅPNESSTIRR IKKE INN I STRÅLEN

Lithium battery statement

The Aspire 2000 series uses the lithium battery, series BATCL32L.

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 - Eksplosionsfare ved fejlagtig håndtering. Udskiftning 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.

English

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 wireless LAN and/or Bluetooth 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
- EN 300 328 V1.4.1.

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.

Canada

Canada Radio Frequency Interference Requirements

The device is certified to the requirements of the RSS-210 for LELAN devices. The use of this device in a system operating either partially or completely outdoors may require the user to obtain a license for the system according to the Canadian regulations. For further information, contact your local Industry Canada office.

This Class B digital apparatus complies with Canadian ICES-003, Issue 2, and RSS-210, Issue 4 (Dec. 2000).

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

Cet appareil numerique de la classe B est conforme a la norme NMB-003, No. 2, et CNR-210, No. 4 (Dec. 2000).

" Pour empecher que cet appareil cause du brouillage au service faisant l'objet d'une licence, il doit etre utilise a l'interieur et devrait etre place loin des fenetres afin de fournir un ecran de blindage maximal. Si le materiel (ou son antenne d'emission) est installe a l'exterieur, il doit faire l'objet d'une licence. "

European Union (R&TTE)

EU member states as of April 2003 are: Belgium, Denmark, Germany, Greece, Spain, France, Ireland, Italy, Luxembourg, the Netherlands, Austria, Portugal, Finland, Sweden, and the United Kingdom.

European Regulatory and Compliance Information

European Union CE Marking and Compliance Notices

Products (including packaging and documentation) intended for sale within the European Union are marked with the Conformite Europeene (CE) Marking, which indicates compliance with the applicable Directives and European standards and amendments identified below. This equipment also carries the Class 2 identifier.

Declaration of Conformity (Dual-Band MiniPCI Adapter)

[to be supplied]

Product Descriptions:

Intel® PRO/Wireless 2100A LAN 3B MiniPCI Adapter (model WM3B2100A)

CE0336①

CE mark applicable only with
Intel authorized antenna solutions

Intel Corporation declares that the equipment described in this document is in conformance with the essential requirements of the European Council Directives, standards, and other normative documents listed below:

73/23/EEC Safety of the User (article 3.1.a)

89/336/EEC Electromagnetic Compatibility (article 3.1.b)

1999/5/EC (R&TTE) Radio and Telecommunications Terminal Equipment Directive (Following annex IV for model WM3B2100A)

EN 60950 1992 2nd Edition (A1 - A4, A11) Safety of Information Technology Equipment, Including Electrical Business Equipment

EN 300 328 V1.4.1 (April 2003) Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband Transmission system; data transmission equipment operating in the 2.4GHz ISM band and using spread spectrum modulation techniques; Part 1: Technical characteristics and test conditions; Part 2; Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive.

EN 301 489-1, Aug. 2000; EN 301489-17, Sept. 2000 - Electromagnetic compatibility and radio spectrum matters (ERM); electromagnetic compatibility (EMC) standard for radio equipment and services: Part 1: Common technical requirements; Part 17: Specific conditions for Wideband Data and HIPERLAN equipment

Draft EN 301 893 v1.2.1, (2002-07) - Broadband Radio Access Networks (BRAN); 5 GHZ high performance RLAN; Harmonized EN covering essential requirements of Article 3.2 of the R&TTE Directive.

IDA-TS-SSS, Following FCC OET bulletin 65 supplement C guidelines - Specific Absorption Rate (SAR) evaluating radio equipment for human exposure to radiofrequency electromagnetic fields.

Warning: See 802.11a and 802.11b restrictions and guidelines for specific EU countries, or regions within countries, under the heading "European Economic Area Restrictions" below.

Translated Statements of Compliance

[English]

This product follows the provisions of the European Directive 1999/5/EC.

European Economic Area Restrictions

Note on Local Restrictions on 802.11a and 802.11b Radio Usage

Caution: Due to the fact that the frequencies used by 802.11a and 802.11b wireless LAN devices may not yet be harmonized in all countries, 802.11a and 802.11b products are designed for use only in specific countries, and are not allowed to be operated in countries other than those of designated use. As a user of these products, you are responsible for ensuring that the products are used only in the countries for which they were intended and for verifying that they are configured with the correct selection of frequency and channel for the country of use.

The device transmit power control (TPC) interface is part of the Intel® PROSet software. Operational restrictions for Equivalent Isotropic Radiated Power (EIRP) are provided by the system manufacturer. Any deviation from the permissible power and frequency settings for the country of use is an infringement of national law and may be punished as such.

The European variant is intended for use throughout the European Economic Area. However, authorization for use is restricted as follows:

Permissible Frequencies

802.11b Permissible Frequencies

For all EU members except France, the allowed frequencies for 802.11b are 2400-2483.5 Mhz. See additional restrictions below for France under the heading Additional 802.11a and 802.11b Restrictions.

802.11a Permissible Frequencies

Intel PRO/Wireless 2100A LAN MiniPCI Adapters in 5 GHz mode support passive scanning for selection of channels. This means that the adapter obtains its channel settings from the access point to which it is connected. These values cannot be set on the adapter itself. In order to comply with local regulations, adapters must only be used with access points configured for the legal channels in the country of use.

Country	Permissible Frequencies
Austria	5.15 - 5.25 GHz

Country	Permissible Frequencies
Belgium	5.15 - 5.35 GHz
Denmark	5.15 - 5.25 GHz
Finland	5.15 - 5.35 GHz
France	5.15 - 5.25 GHz
Germany	5.15 - 5.25 GHz
Iceland	5.15 - 5.25 GHz
Ireland	5.15 - 5.35 GHz
Italy	5.15 - 5.25 GHz
Luxembourg	5.15 - 5.35 GHz
Netherlands+	5.15 - 5.35 GHz
Norway	5.15 - 5.25 GHz
Portugal	5.15 - 5.25 GHz
Sweden+	5.15 -5.25 GHz
Switzerland	5.15 - 5.25 GHz
United Kingdom	5.15 - 5.35 GHz

+Subject to verification.

Transmit Power Restrictions

802.11b Transmit Power

European standards dictate maximum radiated transmit power of 100 mW equivalent isotropic radiated power (EIRP) and the frequency range 2400 - 2483.5 MHz.
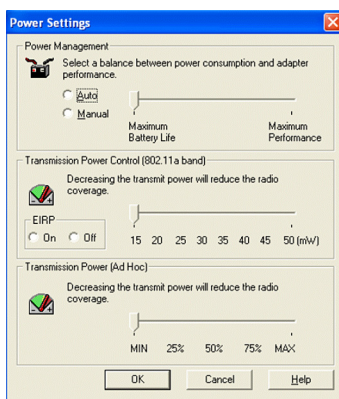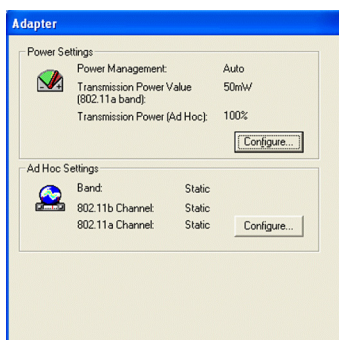
802.11a Transmit Power

Transmit Power Control User Instructions

Modifying the transmission power level of your wireless LAN adapter allows you to expand or confine a coverage area in relation to other wireless devices

that could be operating nearby. Decreasing the transmit power level will reduce the radio coverage.

Setting Transmit Power Using the Intel PROSet Configuration Utility

1.Start Intel PROSet. In the PROSet interface, click the Adapter tab.

2.In the Power Settings section of the Adapter screen, click Configure.

3.On the Power Settings window, find the Transmission Power Control (802.11a band) section.

The default setting under EIRP is ON. This setting is not modifiable by the user.

The default transmission power setting on the slider is 50 milliwatts (mW).

These default settings allow use of the Intel adapter in countries where 802.11a is currently allowed, including Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Hong Kong, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Saudi Arabia, Singapore, South Africa, Switzerland, Turkey, United Kingdom, USA.

4.To reduce the amount of output power used, move the power slider bar to a lower value, then check the strength and quality of the wireless link, using the Intel PROSet icon in the system tray or the General tab in Intel PROSet.

5.Modify the power setting repeatedly until you find the lowest power setting value that still yields acceptable link quality.

Additional 802.11a and 802.11b Restrictions

All EU countries

Use of 802.11a is indoors only.

France

Note: At the time of publication of this document, operation of Intel® PRO/ Wireless 2100A LAN MiniPCI Adapters in 802.11b mode was restricted in France to indoor use only and was allowable in only 58 specific regional "departements" due to local restrictions on transmission power and frequencies. The departments in which the Intel adapter can currently be used are listed below. Since it is likely that additional permitted departments will be added to the list at regular intervals, visit the website of the French Authority for Regulation of Telecommunications (ART) for updated information, in French at http://www.art-telecom.fr/ or in English at http//www.art-telecom.fr/eng/

Departments in Which the Intel Wireless LAN MiniPCI Adapter Can Be Used (Indoors Only)

The Intel® PRO/Wireless 2100A LAN MiniPCI Adapter can currently be used in the following departments of mainland France, and in those departments, indoors only.

01	Ain	36	Indre	69	Rhone
02	Aisne	37	Indre et Loire	70	Haute Saone
03	Allier	39	Jura	71	Saone et Loire

05	Hautes Alpes	41	Loir et Cher	72	Sarthe
08	Ardennes	42	Loire	75	Paris
09	Ariege	45	Loiret	77	Seine et Marne
10	Aube	50	Manche	78	Yvelines
11	Aude	54	Meurthe et Moselle	79	Deux Sevres
12	Aveyron	55	Meuse	82	Tarn et Garonne
16	Charente	57	Moselle	84	Vaucluse
19	Correze	58	Nievre	86	Vienne
2A	Corse Sud	59	Nord	88	Vosges
2B	Haute Corse	60	Oise	89	Yonne
21	Cote d'Or	61	Orne	90	Territoire de Belfort
24	Dordogne	63	Puy du Dome	91	Essonne
25	Doubs	64	Pyrenees Atlantique	92	Hauts de Seine
26	Drome	65	Haute Pyrenees	93	Seine St Denis
27	Eure	66	Pyrenees Orientales	94	Val de Marne
32	Gers	67	Bas Rhin		
35	Ille et Vilaine	68	Haut Rhin		

Departments in Which the Intel Wireless LAN MiniPCI Adapter Cannot Be Used

The Intel® PRO/Wireless 2100A LAN MiniPCI Adapter cannot currently be used in any departments of mainland France other than those listed above. Before operating your computer device or system in a department not listed above, see the heading in this section "How to Turn Off the Wireless LAN Radio."

Maximum allowable EIRP 802.11b wireless LAN cards in the mainland departments of France not shown in the table above are as follows: (See the ART website at www.art-telecom.fr for information on the French overseas territories.)

Frequency Ranges (MHz)	Indoors	Outdoors
2400 - 2446.5	10 mW	Not permitted
2446.5 - 2483.5	100 mW	100 mW on private property with Ministry of Defense approval

How to turn off the wireless LAN radio

Note: Turning the wireless LAN radio off is not the same as disabling the wireless LAN card. It is not necessary to disable the card to meet the regulatory requirements.

While operating the computer or system incorporating the Intel® PRO/Wireless 2100A LAN MiniPCI in those French departments that do not allow use of the wireless LAN equipment, the user of the equipment must turn off the wireless LAN radio in order to comply with local regulations. Instructions on how to do this are provided below.

How to turn off the WLAN radio using software

If Intel® PROSet is installed

To turn off the wireless LAN radio using Intel PROSet:

1.Right-click the Intel(R) PRO/Wireless card icon in the system tray

2.Select the active Intel adapter and click Switch Radio Off.

3.You can also turn off the radio on the General tab of the Intel PROSet screen, by selecting Off next to Switch radio.

If Intel PROSet is not installed

To turn off the wireless LAN radio using the Control Panel:

1.Access the Control Panel and double-click the System icon.

2.Go to Device Manager under Hardware and expand the list of Network Adapters.

3.Double-click the Intel PRO/Wireless MiniPCI LAN Adapter and select the Advanced tab.

4.On the Advanced tab, check the Wireless device off (radio off) check box, and click OK.

Japan

Indoor use only.

United States

USA and Canada Safety Requirements and Notices

The FCC with its action in ET Docket 93-62 has adopted a safety standard for human exposure to radio frequency (RF) electromagnetic energy emitted by FCC certified equipment. The Intel PRO/Wireless LAN MiniPCI Adapter products meet the Human Exposure limits found in OET Bulletin 65, 2001, and ANSI/IEEE C95.1, 1992. Proper operation of this radio according to the instructions found in this manual will result in exposure substantially below the FCC's recommended limits.

The following safety precautions should be observed:

°PDo not touch or move antenna while the unit is transmitting or receiving.

°PDo not hold any component containing the radio such that the antenna is very close or touching any exposed parts of the body, especially the face or eyes, while transmitting.

°PDo not operate the radio or attempt to transmit data unless the antenna is connected; if not, the radio may be damaged.

Use in specific environments:

The use of wireless devices in hazardous locations is limited by the constraints posed by the safety directors of such environments.

The use of wireless devices on airplanes is governed by the Federal Aviation Administration (FAA).

The use of wireless devices in hospitals is restricted to the limits set forth by each hospital.

Antenna use:

Note: Any U-NII device that operates in the 5.15-5.25 GHz band shall use a transmitting antenna that is an integral part of the device.

In order to comply with FCC RF exposure limits, low gain integrated antennas should be located at a minimum distance of 2 cm or more from the body of all persons.

High-gain, wall-mount, or mast-mount antennas are designed to be professionally installed and should be located at a minimum distance of 3 cm or more from the body of all persons. Please contact your professional installer, VAR, or antenna manufacturer for proper installation requirements.

Explosive Device Proximity Warning

Warning: Do not operate a portable transmitter (such as a wireless network device) near unshielded blasting caps or in an explosive environment unless the device has been modified to be qualified for such use.

Antenna Warning

Warning: To comply with the FCC and ANSI C95.1 RF exposure limits, it is recommended for Intel PRO/Wireless 2100A LAN MiniPCI Adapters installed in a desktop or portable computer, that the antenna for this device be installed so as to provide a separation distance of al least 2 cm from all persons and that the antenna must not be co-located or operating in conjunction with any other antenna or radio transmitter. It is recommended that the user limit exposure time if the antenna is positioned closer than 2 cm.

Use On Aircraft Caution

Caution: Regulations of the FCC and FAA prohibit airborne operation of radio-frequency wireless devices because their signals could interfere with critical aircraft instruments.

Other Wireless Devices

Safety Notices for Other Devices in the Wireless Network: Refer to the documentation supplied with wireless Ethernet adapters or other devices in the wireless network.

USA Radio Frequency Interference Requirements

This device is restricted to indoor use when used over its full frequency bandwidth capabilities (5.15 to 5.35 GHz) due to its operation in the 5.15 to 5.25 GHz frequency range. FCC requires this product to be used indoors for the frequency range 5.15 to 5.25 GHz to reduce the potential for harmful interference to co-channel Mobile Satellite systems. The product can be used outdoors only if the frequency range is limited to 5.26 to 5.35 GHz. In addition, it should be noted that high power radars are allocated as primary users of the 5.25 to 5.35 GHz and 5.65 to 5.85 GHz bands. These radar stations can cause interference with and /or damage this device. See the user's guide for information on specifying the radio frequency to be used.

FCC Regulations Part 15 Declaration of Conformity (DoC)

Intel Corporation declares that the equipment described in this document is within the requirements of the Code of Federal Regulations listed below:

Title 47 Part 15, Subpart B, Class B for a digital device.

This declaration is based upon the compliance of the Intel(R) PRO/Wireless LAN MiniPCI Adapters to the above standards. Intel has determined that the models listed have been shown to comply with the applicable technical standards if no unauthorized change is made in the equipment and if the equipment is properly maintained and operated.

These units are identical to the units tested and found acceptable with the applicable standards. Records maintained by Intel continue to reflect that units

being produced under this Declaration of Conformity, within the variation that can be expected due to quantity production and tested on a statistical basis, continue to comply with the applicable technical standards.

FCC Rules and Regulations - Part 15

This device uses, generates and radiates radio frequency energy. The radio frequency energy produced by this device is well below the maximum exposure allowed by the Federal Communications Commission (FCC).

°PThis device complies with the limits for a Class B digital device pursuant to Part 15 subpart C of the FCC Rules and Regulations. Operation is subject to the following two conditions:

°PThis device may not cause harmful interference.

°PThis device must accept any interference received, including interference that may cause undesired operation.

The FCC limits are designed to provide reasonable protection against harmful interference when the equipment is installed and used in accordance with the instruction manual and operated in a commercial environment. However, there is no guarantee that interference will not occur in a particular commercial installation, or if operated in a residential area.

If harmful interference with radio or television reception occurs when the device is turned on, the user must correct the situation at the user's own expense. The user is encouraged to try one or more of the following corrective measures:

°PRe-orient or relocate the receiving antenna.

°PIncrease the separation between the equipment and receiver.

°PConnect the equipment into an outlet on a circuit different from that on which the receiver is connected.

°PConsult the dealer or an experienced radio/TV technician for help.

CAUTION: The Part 15 radio device operates on a non-interference basis with other devices operating at this frequency. Any changes or modification to said product not expressly approved by Intel could void the user's authority to operate this device.

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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