

Versa User's Guide



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 nec.authors@nec-computers.com

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Navigating in this Guide

Use one of the means described below to browse through this online documentation.

Note: we recommend you to print this documentation. It will then be easily accessible even when your system is shut down.

Using Microsoft® Internet Explorer Toolbar

When reading the guide, a menu bar appears across the top of the window, providing easy access to the following commands.

Hide/Show

Click **Hide** to hide the left-tab components (table of contents, index or search results list) in the window. Click **Show** to display the left-tab components (table of contents, index or search results list) in the window.

Back

Click **Back** to display the previously displayed page.

Forward

Click **Forward** to display the next page in a previously displayed sequence of pages.

Print

Click the page you want to print and then click **Print** in the menu bar. The print dialogue box appears, allowing you to define your print options. To print a pop-up page, right-click inside the pop-up window, and then click **Print Topic**.

Using Hyperlinks

The user's guide contains hyperlinks, which allow you to quickly locate information related to the topic you are viewing. Hyperlinked information usually appears in the form of blue or white underlined text. When you position your cursor over a text or graphic hyperlink, your cursor will change into a hand symbol with a pointed finger. You can select the hyperlink either by clicking or double-clicking on it with the mouse.

Finding a Topic

- To see a list of index entries, click the **Index** tab in left window and then either type a word or scroll through the list.
- To search for words or phrases that may be contained in a topic, click the **Search** tab. Type the word or phrase, then click on **List topics**. Choose the topic in the list and click on **Display**.

Text Set-up

To make this guide as easy to use as possible, the text is laid out as follows.

Note: notes give particularly important information about whatever is being described.

Caution: cautions indicate situations that can damage the system hardware or software.

Warning: warnings alert you to situations that could result in serious personal injury or loss of life.

■ Names of keys are printed as they appear on the keyboard.

For example, **Ctrl**, **Alt**, or **Enter**.

■ Text that you must type is printed in bold type.

For example, type **dir**.

■ Window titles, field names, pane names, application names, list box names... are printed in italic type.

For example, the *Power Options Properties* window.

■ Buttons, check box names, tabs, icons, menus, menu choices, key names... are printed in bold type.

For example, click **Start**, and select **Programs**.

■ Click on this hyperlinked button () for more information on the subject.

Basic Care and Handling Tips



Protect the computer from extremely low or high temperatures. Let the computer warm (or cool) to room temperature before using it.



Keep the computer away from magnetic forces (some airline tray tables are magnetic, do not set your notebook on top of them. Doing so can destroy the data on your hard drive).



Keep the computer dry.
Do not wash the computer with a wet cloth or pour fluid into it.



Protect the computer from being bumped or dropped.



Check the computer for condensation.
If condensation is present, allow it to evaporate before switching on the computer.



Keep the computer away from dust, sand and dirt.

System Care

Follow these guidelines to maintain the condition and performance of your computer.

Caution: immediately turn off and unplug the Versa under the following conditions:

-  the power cord is damaged or frayed.
-  liquid spills on or into the Versa.
-  someone drops the system or damages the casing.

Precautions for System Use

Follow these precautions when using your Versa computer and AC adapter.

-  Avoid dropping or bumping the computer or the AC adapter.
-  Do not stack heavy objects on the computer, the AC adapter, or the battery packs.

- Do not place items near the Versa that could block air vents and cause overheating.
- Avoid moving the Versa during system operation, especially while the hard disk, floppy disk, or optical disc drive is being accessed.
- When using the AC adapter, make sure the power source falls within the system's compatible range. Never use the AC adapter if the voltage falls outside this range. (Watch for this when travelling to other countries.)
- Turn computer power off before attaching or removing non-plug and play devices.
- Disconnect the notebook from the electrical outlet if it is not going to be used for a long time. This will avoid damage by transient over-voltage.
- Do not attempt to disassemble the computer.
- Do not push any foreign objects into the Versa bays, connectors or slots.
- Do not set the computer on top of a magnetised area. Doing so can destroy the data on your hard disk drive. (Some airline tray tables are magnetic.)
- Avoid using the computer or AC adapter for extended periods in direct sunlight.
- Do not use the system in humid or dusty environments.
- Keep liquids and food away from the system.
- Turn computer power off before cleaning it.
- Avoid exposing the Versa or AC adapter to extreme changes in temperature or humidity. If it is unavoidable, allow your Versa to adjust to room temperature before use.
- When cleaning the system, use a soft, clean, dry cloth. Avoid wiping the display surface with abrasive material, including rough fabric. Do not use a cleaning solution; this may damage the notebook's plastic.
- If the AC adapter becomes extremely hot, unplug the adapter and let it cool.
- Be sure to follow these power cord safety tips:
 - Unplug by the plug only; do not pull on the cable.
 - Place the power cord so that it cannot be tripped or stepped on, and do not place items directly on the power cord.
 - Use an electrical outlet that is as close as possible to the computer.

Note: you may refer to the ['Using Your Versa'](#) section for additional information on these matters.

Storage Requirements

Store the computer and AC adapter in an environment that meets the following conditions:

If the temperature of the Versa suddenly rises or falls (for example, when you move the system from a cold place to a warm place), vapour condenses inside the system. Turning on the system under this condition can damage the internal system components.

Before turning on the system, wait until the system's internal temperature equalises with the new environment and any internal moisture evaporates.

- Operate and store your system within the recommended temperatures and humidity levels (refer to the ['System Components'](#) section for more information).
- Keep the storage area free from vibration and magnetic fields.
- Keep the system and its components away from organic solvents or corrosive gases.
- Avoid leaving the system and its components in direct sunlight or near heat sources.

Routine Cleaning

Clean or dust your system as follows:

Caution: never use harsh solutions, household cleaners, or spray cleaners that contain caustic materials

Care and Handling

on the Versa computer. These cleaners are usually high in alkalinity which is measured in pH. Using these cleaners can cause the plastic surface to crack or discolour.

■ **LCD screen** - carefully wipe the LCD screen with a soft cloth or a screen wipe designed for that purpose. Special screen wipes are available through your local computer dealer.

■ **System case** - we recommend you carefully wipe the case with a slightly damp, almost dry cloth.

Safety Notices

 European Notice

 FCC Notice

 Modem

 Wireless LAN Regulations (if applicable)

 Modifications to the Product

- CE Mark Certification
- Radio Frequency Interference

 Radio Frequency Interference Statement

 Connections and Remote Earths

- PELV (Protected Extra Low Voltage)
- SELV (Safety Extra Low Voltage)
- Remote Earths
- Building Supply
- BABT's Apparatus Approval

 Batteries

- Replacing Batteries
- Battery Disposal

 Laser Compliance Statement

 Thunderstorm Warning

 Additional Notices

 Electrostatic Discharge (ESD)

European Notice

Products with the CE marking comply with both the ElectroMagnetic Compatibility Directive (89/336/EEC) and the Low Voltage Directive (72/23/EEC) - modified by the Directive 96/68/EEC - issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European Standards:

- EN55022 : Radio disturbance characteristics.
- EN55024: Immunity characteristics.
- EN6100-3-2: Limits for harmonic current emissions.
- EN6100-3-3: Limitation of voltage fluctuation and flicker in low-voltage supply system.
- EN50082-1 : Electromagnetic immunity.
- EN60950 : Product safety.

If your computer includes a telecommunication network board, the input/output socket is classified as Telecommunication Network Voltage (TNV-3)

FCC Notice

Note: the FCC Notice applies only to products that feature the FCC mark.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interferences that may cause undesired operation.

Modem

The equipment has been approved in accordance with Council Decision 98/482/EC 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 network termination point.

In the event of problems, you should contact your equipment supplier in the first instance.

Radio-communications Regulations (if applicable)

Specific regulations apply when using wireless radio-communication products. Follow the links below for more information on these regulations:

- [802.11b](#), also known as Wireless LAN



Note: hereby, NEC Computers International, declares that this notebook is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

Modifications to the Product

CE Marking

NEC Computers International cannot be held responsible for modifications made by the User and the consequences thereof, which may alter the conformity of the product with the CE Marking.

Radio Frequency Interference

The manufacturer is not responsible for any radio or TV interference caused by unauthorised modifications to this equipment.

Radio Frequency Interference Statement

WARNING: changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: this is a Class B Digital Device. 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.

There is no guarantee, however, 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 or more of the following measures.

-  Reorient or relocate the receiving antenna.
-  Increase the distance between the equipment and receiver.
-  Connect the equipment to an outlet on a circuit different from the one to which the receiver is connected.

To meet FCC standards, shielded cables and power cords are required to connect this device to a personal computer or other Class B certified device.

Connections and Remote Earths

PELV (Protected Extra Low Voltage)

To ensure the extra-low voltage integrity of the equipment, only connect equipment with mains-protected electrically-compatible circuits to the external ports.

SELV (Safety Extra Low Voltage)

Every input and output of this product is classified as Safety Extra Low Voltage, except the modem, which is

classified as TNV-3.

Remote Earths

To prevent electrical shock, connect all local (individual office) computers and computer support equipment to the same electrical circuit of the building wiring. If you are unsure, check the building wiring to avoid remote earth conditions.

Building Supply

Only connect the equipment to a building supply that is in accordance with current wiring regulations in your country. In the U.K., those are the IEE regulations.

British Approvals Board for Telecommunications (BABT)'s Apparatus Approval

This equipment complies with BABT's Apparatus Approval No. NS/G/1234/J/100003 with regard to indirect Connection to the BT Public Switched Telephone Network. Refer to OFTEL statement SA29 for further information.

Batteries

Replacing batteries

A lithium battery in some computers maintains system configuration information. In the event that the battery fails to maintain system configuration information, we recommend you replace the battery. For battery replacement information, call your dealer or your Customer Assistance Centre.

WARNING: there is a danger of explosion if the 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.

Battery Disposal

Ultimate disposal of this product should be handled according to all national laws and regulations. Do not place used batteries in your regular waste: the incineration, land filling or mixing of batteries with the municipal solid waste stream is prohibited by law in most countries.

Contact your local waste management officials for other information regarding the environmentally sound collection, recycling and disposal of the batteries.

Laser Compliance Statement

The optical devices are tested and certified to be compliant with International Electro-technical Commission IEC825-1 and European Norm EN60825-1 and EN60825-2 regulations for Class 1 laser products.

Class 1 laser products are not considered hazardous. The optical devices are designed such that there is never human access to laser radiation above a Class 1 level during normal operation or prescribed maintenance conditions.

The optical devices installed in your computer are designed for use solely as components of such electronic product and therefore do not comply with the appropriate requirements of Code of Federal Regulation Sec. 1040.10 and Sec. 1040.11 for COMPLETE laser products.

Thunderstorm Warning

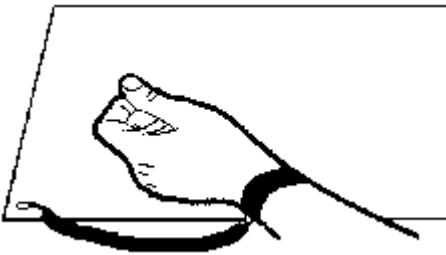
In thunderstorm conditions, make sure that you disconnect your modem from the telephone line. A lightning strike to nearby telephone lines could damage your modem or even your whole computer system. Please note that the product warranty does not apply if damage to your computer is the result of a lightning strike.

Additional Notices

Every input or output of this product are classified as Safety Extra Low Voltage (SELV).

Electrostatic Discharge (ESD) and ESD Protection

WARNING: ESD can damage disk drives, cards, memory modules and other parts. We recommend that you do all procedures in this guide only at an ESD workstation. If one is not available, provide some ESD protection by wearing an antistatic wrist strap attached to any unpainted metal surface when handling parts. If you don't have one, discharge static electricity from yourself and your clothing by touching a nearby metal surface before handling any internal components.



Wireless LAN Regulations



Low power radio LAN product operating in 2.4 GHz band for Home and Office environments.

This product complies with the Radio and Telecommunications Terminal Equipment (R&TTE) Directive (1999/5/EC) issued by the Commission of the European Community.

Compliance with this directive implies conformity to the following European Norms:

■ EN 60950 - Product Safety.

■ EN 300 328-2 V1.2.1 (11-2001)

Electromagnetic compatibility and Radio Spectrum Matters (ERM); Wideband Transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using spread spectrum modulation techniques; Part 2: Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive.

■ EN 301 489-01 V1.3.1 (09-2001)

Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements.

■ EN 301 489-17 V1.1.1 (09-2000)

Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for Wideband data and HIPERLAN equipment.

Note: channel 14 may not be used in European countries. In some countries, using the product may be subject to specific and additional restrictions, as listed in the table below.

Country	Restriction(s)
France	Only the channels 10, 11, 12 and 13 (2457 MHz, 2462 MHz, 2467 MHz and 2472 MHz respectively) may be used to operate this device. A license is required for indoor use. Please contact the ART (Autorité de Régulation des Télécommunications) for more information. Outdoor use is not allowed.
Germany	A license is required for outdoor installations. Check with an authorised reseller for the procedure to follow.
Italy	A license is required for indoor use. Outdoor use is not allowed.
The Netherlands	A license is required for outdoor installations. Check with an authorised reseller for the procedure to follow.

Wireless LAN (802.11b) Regulations

Note: this device is qualified for use within the following countries: Germany, France, Italy, Spain, The Netherlands, and the United Kingdom.

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Introducing Your Versa

Getting to Know Your Versa

Warning: prolonged or improper use of a computer workstation may pose a risk of serious injury. To reduce your risk of injury, set up and use your computer in the manner described in, '[Setting Up a Healthy Work Environment](#)'.

After completing the steps in the Quick Start Guide that comes with your computer, your Versa notebook computer is ready to go! To get started, do the following:

- Read '[Setting Up a Healthy Work Environment](#)' for guidelines that help you use your computer productively and safely. Information includes how to set up and use your computer to reduce your risk of developing nerve, muscle, or tendon disorders.
- Read through this online documentation to familiarise yourself with the Versa.

Versa Notebook

The Versa notebook computer offers you a portable system filled with exciting resources for home, business or travel. Standard features include either a powerful Intel® Pentium® 4 Processor-M or Mobile Intel® Celeron® processor that works together with the latest Peripheral Component Interconnect (PCI) architecture, a hard disk drive, and PC Card support.

In addition, your system may feature the following high-performance components:

- an optical disc drive; either a CD-ROM drive, a DVD-ROM drive or a DVD-ROM/CD-R/CD-RW combination drive.
- connectivity options; an integrated modem, integrated LAN, and/or IEEE 802.11b support.

The Versa comes with Windows® XP preinstalled.



To get comfortable with your notebook, read the following sections and take a tour around your system!

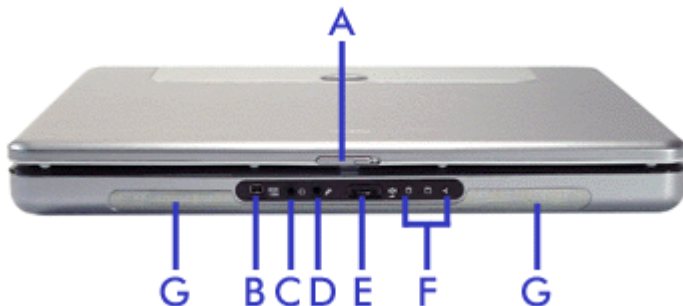
Around the Front of the System

The Versa is compact with features on every side. First, look at the front of the system.

Front Features

The Versa contains the following features.

Closed

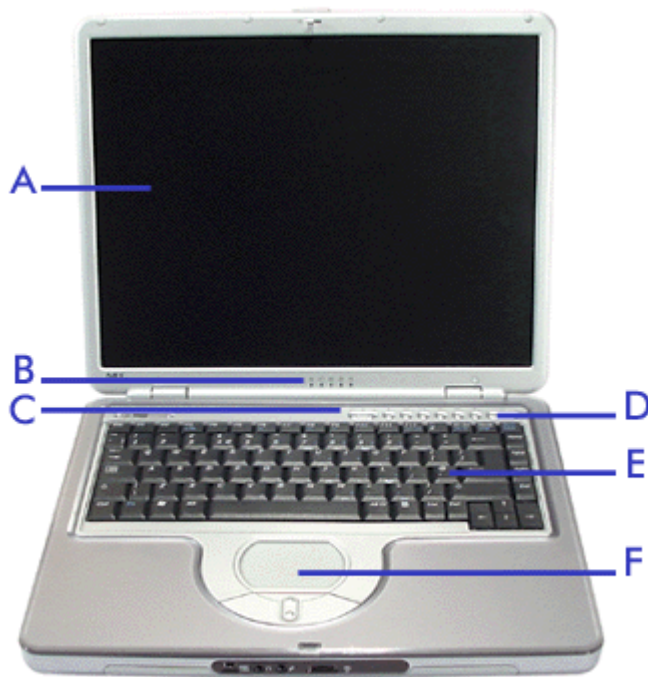


- **Top Cover Latch (A)** - slide the latch to the right and raise the panel to open the notebook.
- **Mini-IEEE 1394 Port (B)** - use this ports to daisy chain up to 63 IEEE 1394-compliant (also known as FireWire® or i-Link®) devices to your system. IEEE 1394 devices support Plug and Play connectivity for transfer rates of up to 400 Mbits/s. This high-speed serial bus provides enhanced PC connectivity for a wide range of devices, especially consumer electronics audio/video (A/V) appliances and storage peripherals. Refer to the corresponding ['Frequently Asked Questions'](#) and ['IEEE 1394 Devices'](#) sections for more information.
- **Line Out (C)** - lets you plug in stereo headphones or external speakers. 
- **Microphone In (D)** - allows you to connect an external microphone for monophonic recording or amplification through the unit. 
- **Volume Control (E)** - allows you to control the speaker volume through the thumb wheel. 
- **Activity LEDs (F)** - allow you to monitor the drives and wireless feature activity. From left to right:
 - **Hard Disk/Optical Disc Drive Activity LED** - blinks green when the hard disk or optical disc drive is active.
 - **Floppy Disk Drive Activity LED** - blinks green when the floppy disk drive is active.
 - **Wireless Status LED** - lights blue when the Wireless On/Off button is switched to On.

Note: this LED exists only on notebooks that feature Wireless LAN capabilities.

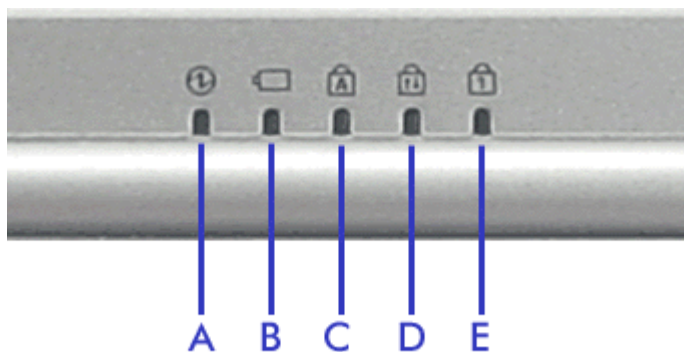
- **Speakers (G)** - provide stereo sound for your multimedia presentations or listening pleasure. Refer to the ['Using Multimedia'](#) and ['Audio'](#) sections for more information.

Open



- **LCD Panel (A)** - the Versa comes with a colour LCD panel that you can adjust for a comfortable viewing position. The LCD panel is either a 12.1-inch Extended Graphics Array (XGA) TFT colour display.
- **Power and Status LEDs (B)** - refer to the '*Power and Status LEDs*' section below for details.
- **Quick Launch and CD Control buttons (C)** - refer to the '*Quick Launch and CD Control Buttons*' section below for details.
- **Power Button (D)** - press the button to power on/off the system. Refer to the '*Power Button*' section below for details.
- **Keyboard (E)** - standard QWERTY-key layout. Refer to the '*Keyboard*' section below for details.
- **Touchpad (F)** - works like a standard computer mouse. Simply move your fingertip over the touchpad to control the position of the cursor. Use the left and right selection buttons below the touchpad to select menu items. See '*Using the Touchpad*' for information about customising touchpad settings.

Power and Status LEDs



- **Power Status LED* (A)** - lights when the Versa is powered on.
 - Lights green when powered on AC or battery power.
 - Flashes green when in Standby mode (AC power or battery power).
 - Lights orange when battery power is at 8% or less (AC power or battery power).

Around the Front of the System

- Flashes orange when battery power is at 8% or less, and the notebook is in standby mode (battery power only).
- Lights amber when battery power is at 3% or less (battery power only).
- Flashes amber when battery power is at 3% or less, and the notebook is in standby mode (battery power only).

■ **Battery Status LED* (B)** - lights to indicate battery charging status.

- Turns off when using battery power, or to indicate the battery is fully charged.
- Lights amber to indicate the battery is charging.
- Flashes amber to indicate a charging error.

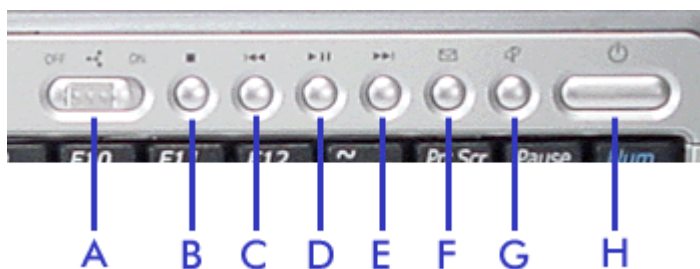
**These LEDs are replicated on the back of the LCD panel and can be viewed even when the LCD is closed.*

■ **Caps Lock (C)** - lights green when caps lock is active.

■ **Scroll Lock (D)** - lights green when scroll lock is active.

■ **Num Lock (E)** - lights green when num lock is active.

Quick Launch and CD Control buttons



■ **Wireless On/Off Button (A)** - slide the button to enable or disable the Wireless LAN feature.

Note: this button exists only on notebooks that feature Wireless LAN capabilities.

■ Audio CD Controls

- **Stop (B)** - press this button to stop playback.
- **Reverse/Rewind (C)** - press this button to skip back; hold it down to fast reverse.
- **Play/Pause (D)** - press this button to begin playback. Press again to pause playback.
- **Cue/Fast Forward (E)** - press this button to advance to the next track; hold it down to fast forward.

Note: if no media player is running, pressing any of these buttons launches either the **Windows Media Player**, or the **DVD Player** (depending on your configuration). Press the relevant button again to perform its action.

■ **Email Button (F)** - press the button to launch *Outlook Express*.

■ **Internet Button (G)** - press the button to launch *Internet Explorer*.

■ **Power Button (H)** - press the button to power on/off the system. Refer to the '*Power Button*' section below for details.

Power Button

The Power button is a "smart" switch, meaning that it recognises when the system is in Standby mode. If in Standby mode, you cannot power off until you press the Power button to resume operation.

Use the Power button in the following ways:

- Press the Power button to power on.
- Press the Power button to put your system into Standby mode.
- Press the Power button to resume from Standby mode and proceed with normal operation.
- Press and hold the Power button in place for 4 or more seconds to initiate power override (powers off the system). Only use this option if you cannot power off your system using the normal procedure described in the '*Tips*' section relevant to your operating system.

Put the unit in Standby mode when you need to be away from your system for a short period of time and want to return to where you left off. Standby mode shuts down all devices in the system while retaining data and system status.

Check the [*'Managing System Power'*](#) section relevant to your operating system for more information on the power management states.

Keyboard



The keyboard is equipped with many features. These include:

- Function Keys (A)** - twelve function keys, **F1** through **F12**, are available on the Versa keyboard. These keys work together with the **Fn** key to activate special functions. Some of these keys (printed in yellow) are pre-programmed with dual functions.

Function keys are application-driven. See the specific application's user guide for information about how each function key works within the application you are using.

The following function key combinations are pre-programmed for the Versa.

- F1** - in most software applications, launches the help.
- Fn-F3** - toggles the video mode between LCD only, CRT only, LCD/CRT simultaneous display, and TV-Out mode.
- Fn-F6** - toggles the internal speaker on and off.
- Fn-F8** - increases the LCD brightness.
- Fn-F9** - decreases the LCD brightness.
- Fn-Prt Sc (Sys Rq in blue)** - enables the SysRq key, used in combinations with other keys by programmers to perform specific actions.
- Fn-Num Lk** - activates the numeric keypad (see the numeric keypad section below).
- Fn-Pause (Break in blue)** - performs a "Break". This key is used in programming and debugging applications. It has no function in most programs.
- Fn-J (End in blue)** - moves the cursor to the end of a line.

Fn-7 (Home in blue) - moves the cursor to the beginning of a line.

Fn-9 (PgUp in blue) - moves the cursor one page up.

Fn-L (PgDn in blue) - moves the cursor one page down.

■ **Numeric Keypad (B)** - pressing **Fn-Num Lk** on the keyboard activates the numeric keypad numbers and functions printed in blue on the bottom right corner of the keys.

The keypad lets you type numbers and mathematical operands (+, -) as you would on a calculator. The keypad is ideal for entering long lists of numbers.

When you press **Fn-Num Lk** again, the keys revert to their normal functions as typewriter keys.

■ **Typewriter keys (C)** - typewriter keys (also called alphanumeric keys) are used to enter text and characters. Keys with blue print on them behave differently when combined with control keys or the **Fn** key.

■ **Control keys (D)** - **Ctrl**, **Alt**, **Fn**, **Alt Gr** and **Shift** are controls used in conjunction with other keys to change their functions. To use control keys, press and hold the control key while pressing another key. For example, "Press **Ctrl c**" means to hold down the **Ctrl** key and press the **c** key. Key combinations are specific to the application you are running.

■ **Cursor Control keys (E)** - cursor control keys let you position the cursor on the screen where you want. On the screen, the cursor is a blinking underline, block, or vertical bar depending on the application. The cursor indicates where the next typed text will be inserted.

■ **Windows keys (F)** - use the following two keys to facilitate your work.

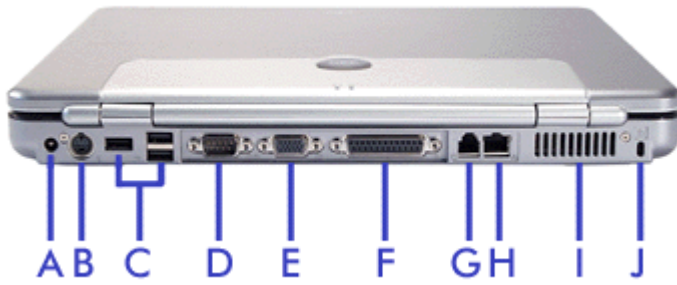


Shortcut/Application key - provides quick access to shortcut menus. (This key acts like a right mouse button.)



Floating Window key - displays the **Start** menu.

Around the Back of the System



Around the Back of the System

You'll find system ports for connecting your Versa to optional devices (like a printer or external monitor) on the back of your Versa.

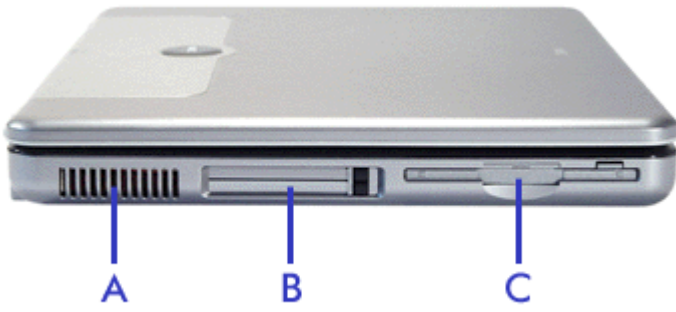
Note: for more information on how to connect the devices described below, you may refer to the *'Using Peripheral Devices'* section of this guide. Clicking on the '+' button will take you directly to the corresponding section.

- **AC Power Port (A)** - lets you attach the Versa to the AC power source using the AC adapter that comes with your system. Keep the system connected to AC power whenever possible to keep the battery pack and internal CMOS battery charged.
- **S-video TV-Out (B)** - use this port to connect to a compatible television or other display device. The computer supports PAL and NTSC signals. 
- **USB Ports (C)** - a Universal Serial Bus (USB) port allows you to connect up to 127 USB-equipped peripheral devices (for example, printers, monitors, scanners) to your Versa. 
- **Serial Port (D)** - use this port to connect a serial printer or other serial device. 
- **VGA Port (E)** - use this 15-pin port to attach an external monitor to your Versa. 
- **Parallel Port (F)** - use this port to connect a parallel printer or other parallel device. The parallel port default supports the Enhanced Capabilities Port (ECP) standard. The port also supports bi-directional and output only protocols. 
- **Modem Port (G)** - a 56K fax/data modem card is included with your system. Refer to the *'Internal Modem'* and to the *'Specifications'* sections for more information.
- **LAN Port (H)** - a 10/100 Mbps LAN feature is included with your system. Refer to the *'Internal LAN'* and to the *'Specifications'* sections for more information.
- **Fan Vents (I)** - allow your system to cool properly and maintain a safe operating environment.

Warning: do not block the fan vents while the Versa is in use.

- **Kensington Lock Latch (J)** - this latch allows you to attach a Kensington security lock or any other compatible lock to secure the notebook from theft. For more information, refer to the *'Using your Versa'* section of this guide.

Around the Left Side of the System



The left side of your Versa provides the features shown in the figure.

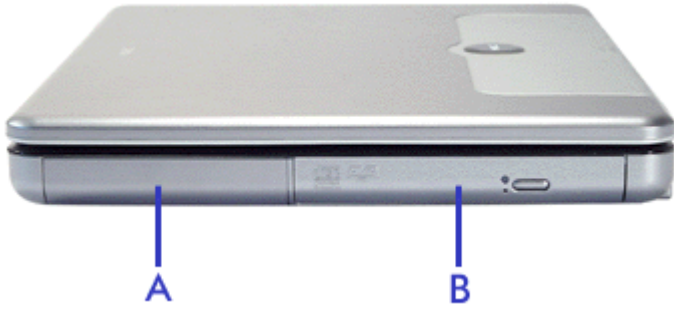
■ **Fan Vents (A)** - allow your system to cool properly and maintain a safe operating environment.

Warning: do not block the fan vents while the Versa is in use.

■ **PC Card Slots (B)** - two PC card slots allow you to insert two Type II PC cards or one Type III PC card in the bottom slot. Refer to the ['PC Cards'](#) section of this guide for more information.

■ **Floppy Disk Drive (C)** - A 3.5-inch, 1.44-MB [floppy disk drive](#) is installed in your system.

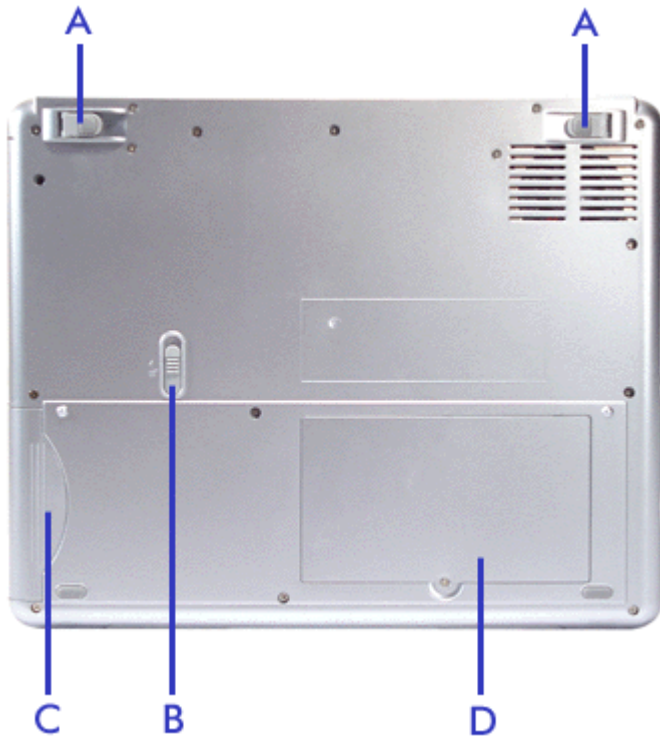
Around the Right Side of the System



The right side of the Versa offers the following features.

- **Battery Bay (A)** - equipped with a rechargeable [battery](#).
- **Optical Disc Drive (B)** - allows you to load and start programs from an optical disc, and play audio CDs. Depending on your configuration, your system is equipped with a [CD-ROM drive](#), a [DVD-ROM drive](#), or a [DVD-ROM/CD-R/CD-RW combination drive](#).

Around the Bottom of the System



The bottom of the Versa offers the following features.

- **Tilt feet (A)** - Adjust to provide flexible keyboard angle.
- **Battery Bay Release Latch (B)** - slide the latch to the right of the system and hold it while you slide the battery out of the system. 
- **Battery Bay (C)** - equipped with a rechargeable [battery](#).
- **Memory & Mini-PCI Bay (D)** - remove the screw to find the SO-DIMM and Mini-PCI expansion slots. Refer to the '[Memory Modules](#)' section of this guide for more information on adding memory, and to the '[Mini-PCI Slot](#)' section for more information on adding a Mini-PCI card.

Optional Accessories



Auto Adapter



AC Adapter



Batteries



Port Replicator



Memory Upgrades



DiskOnKey



Carrying Case



Remote Control



USB Mouse



USB Keyboard



USB Numeric Keypad



802.11b Access Point

Optional Accessories

NEC has developed a complete range of accessories for your portable computer. You will find below an introduction to the most popular ones.

Note: the accessories described below may not be available for all notebooks. Refer to the *Accessories Leaflet* delivered with your Versa to check which accessories are available for your notebook. To order these accessories, reference their Part Numbers, and contact your local sales representative.

Auto Adapter

Use your computer while you travel, without running down your battery. Plug the Auto Adapter into a standard cigarette lighter socket and operate or charge your computer from the vehicle's battery.



AC Adapter

Connects your computer to an AC power socket to provide power when using the computer or charging the battery. We recommend you to leave an AC Adapter at the office, connected to your Port Replicator, and to keep a spare at home or in your carrying case.



Batteries

Either for peace of mind when working long hours on an important document, or just extra independence, an additional battery will increase the time you can use your computer without returning to a power socket. You can even gain enough time to watch a DVD movie while far from home!



Port Replicator

The PortBar or Port Replicator duplicates many of the ports found on your computer, usually even adding additional ports. Your PortBar can stay connected to your peripherals at the office

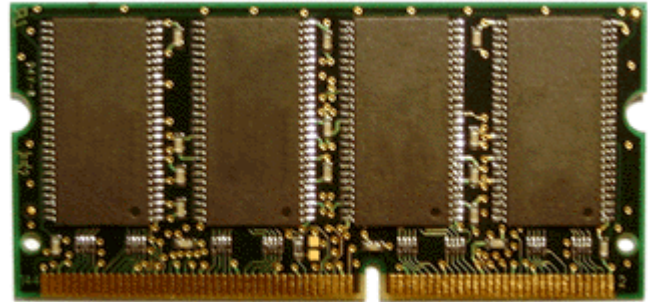
Optional Accessories

while you are on the move, meaning you don't have to reconnect all your peripherals everytime you return to your desk.



Memory Upgrades

Extra memory allows your computer to speed through memory intensive presentations, games or calculations.



DiskOnKey

DiskOnKey operates as a secure, reliable, removable disk, using a standard Universal Serial Bus (USB) device interface. It is available in 8, 16, 32, 64, and 128 MB capacities. The device is automatically detected as a removable disk and is assigned a drive letter.

No bigger than a pen, you only need to remove the cap and insert the DiskOnKey into the USB port to access the device.



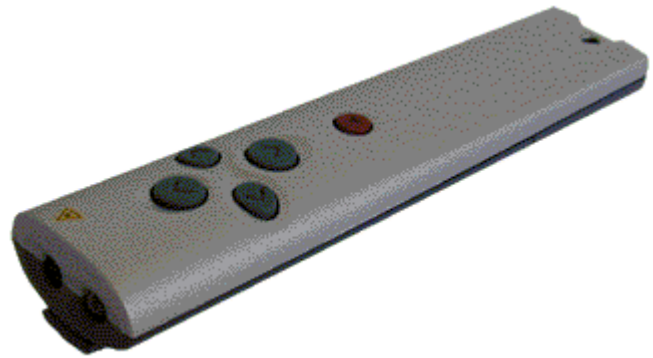
Carrying Case

Take your Versa anywhere in a specially designed carrying case (several models may be available).



Remote Control

Use this remote control to browse forward or backward in your slides during a presentation, for instance. An integrated laser pointer will also prove extremely useful to liven up your presentation.



USB Mouse

While working at your desk, plug the mouse into one of your Versa's USB port to increase your efficiency and create an ergonomic workplace.

This USB mouse uses the optical technology; the conventional ball and roller mechanisms of a traditional mouse with a light source and motion sensor. That way, you can use the mouse on most surfaces without worrying about the mouse pad, dirt accumulation or cleaning issues associated with a mechanical mouse.



USB Keyboard

While working at your desk, plug the keyboard into one of your Versa's USB port to increase your efficiency and create an ergonomic workplace.



USB Numeric Keypad

Optional Accessories

If you need to enter long list of numbers, this numeric keypad will prove extremely useful. Simply plug the numeric keypad into one of your Versa's USB port and immediately increase your efficiency.



802.11b Access Point (PC Card interface)

If your Versa features 802.11b Wireless LAN capabilities, you may want to purchase an access point in order to benefit from the services provided by your usual wired network, such as printers, file servers, internet access...

Please note that the 802.11b standard defines two modes:

- In infrastructure mode, the wireless network consists of at least one access point connected to the wired network infrastructure and a set of wireless end stations. Since most corporate WLANs require access to the wired LAN for services, they will operate in infrastructure mode.
- In Ad hoc mode (also called peer-to-peer mode or an Independent Basic Service Set), a set of 802.11 wireless stations communicate directly with one another without using an access point or any connection to a wired network. This mode is useful for quickly and easily setting up a wireless network anywhere that a wireless infrastructure does not exist or is not required for services, such as a hotel room, convention centre, or airport, or where access to the wired network is barred (such as for consultants at a client site).



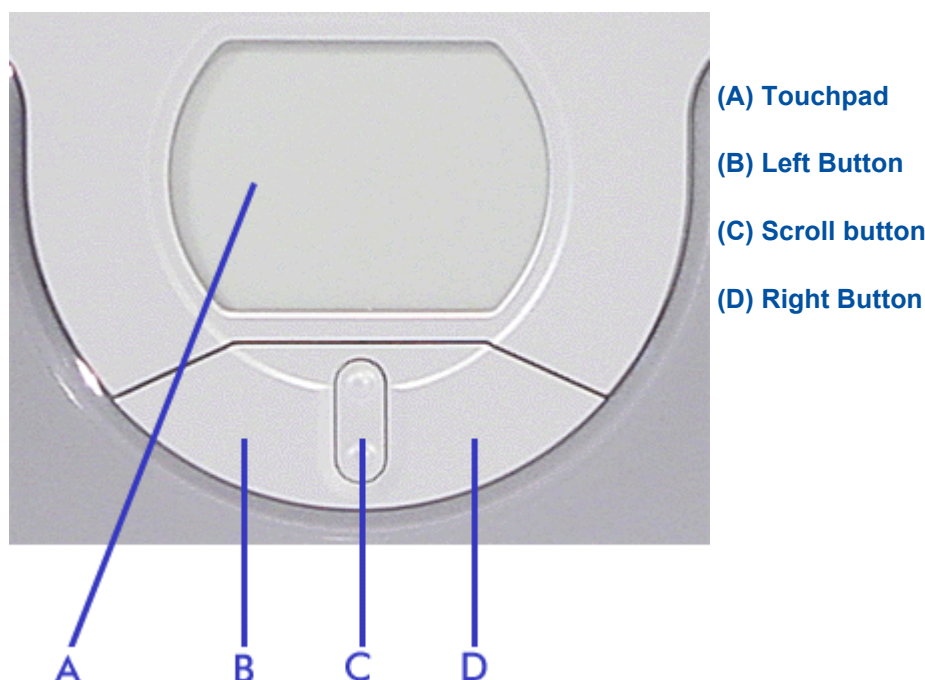
Note: the actual accessories may differ from the pictures shown above.

Using the Touchpad

The touchpad is an easy way to control the cursor with your finger. Lightly glide your finger across the touchpad and the cursor follows.

To use the touchpad, you can:

- Single tap to the touchpad, or single click on the left button, equivalent to a single click of the primary mouse button.
- Double tap to the touchpad, or double click on the left button, equivalent to a double click of the primary mouse button.
- Click and hold, then drag your finger across the touchpad, equivalent to a click and drag of the primary mouse button.
- Press the scroll button up, down, left or right, to scroll your document or screen.



If you find the double tap difficult to use, go to the next section for general directions about adjusting the touchpad properties.

Note: if you install another mouse driver over the shipping default, the double-tap capability may be lost.

Making Touchpad Adjustments

The touchpad offers a number of options that let you customise how it functions. To access these options, locate the **Control Panel** and double click the **Mouse** icon. (In Windows XP, the **Mouse** icon is classified in the **Printers and Other Hardware** category).

The options let you control the size and colour of the cursor, cursor speed, the accepted double-click speed, and selection button orientation.

Touchpad Tips

Follow these basic ergonomic tips while working:

- Use a light touch on the touchpad surface.
- Set up the Versa with your keyboard and touchpad at a comfortable height. Keep your forearms parallel to the floor. Your wrists should be relaxed and straight.

Using the Touchpad

- While using the keyboard and touchpad, keep your shoulders and arms as relaxed as possible.
- Take regular breaks from the computer to rest your eyes. Perform stretching exercises to relax your fingers, hands, wrists, forearms and shoulders.

See '[Setting Up a Healthy Work Environment](#)' for more information.

Power Sources

The Versa can be powered using three different sources, making it a truly portable system.

Operate your Versa just about anywhere using one of the following power sources:

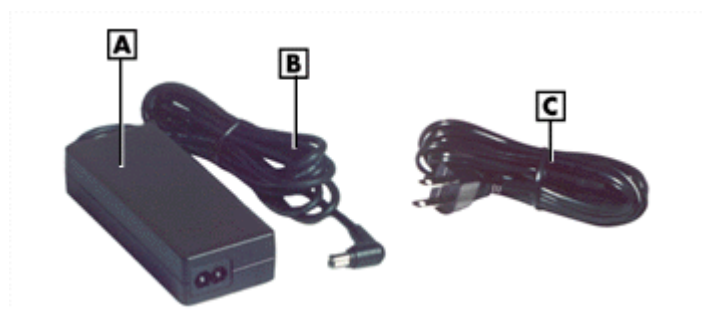
- the AC adapter connected to an electrical wall outlet (using AC power),
- the [battery pack](#),
- the optional [Auto adapter](#) (for details about its use, refer to the booklet that ships with the option).

Read the following sections for specific information about using the power sources.

AC Adapter

Use the AC adapter and power cable that came with your Versa to run your computer on alternating current (AC) power, or to recharge the battery pack. Use the AC adapter whenever a wall outlet is nearby.

Keep the adapter connected whenever possible. The AC adapter charges the battery when it is connected, whether the Versa is powered on or off.



(A) AC Adapter
(B) Adapter Cable
(C) Power Cable

Warning: do not attempt to disassemble the AC adapter. The AC adapter has no user-replaceable or serviceable parts inside. Dangerous voltage in the AC adapter can cause serious personal injury or death. The AC adapter is intended for use with a computer and must meet EN609050 standards.

Connecting the AC Adapter

Connect the AC adapter as follows:

1. Connect the AC adapter cable to the power port on your Versa.
2. Plug one end of the AC power cable into the AC adapter and the other end into a properly grounded 120- or 240-volt, 50 or 60-Hz wall outlet.



Caution: do not cover or place objects on the AC adapter. Keeping the adapter clear of objects

lets the adapter cool properly during use.

only use the AC adapter that comes with your Versa. Although other adapters look similar, using them can damage your system.

Powering The System On and Off

To power on, locate the [power button](#) above the keyboard and press it.

For more information on how to power off the system, refer to the ['Tips'](#) section relevant to your operating system.

Caution: this equipment uses an ungrounded power cable. Replace the cord if it becomes damaged. The cord must be rated for at least 250VAC at 10 amps, and must indicate international safety agency approval. The plug must be a type appropriate for the country where it is used. Check with your local dealer for HAR type 18 AWG, 2 conductor cord, or better. Obtain replacement cords at an authorised service centre. The replacement must be of the same type and voltage rating as the original cord.

Using the Battery

The Versa system comes with a rechargeable battery. Refer to the ['System Specifications'](#) chapter for more information.

Battery packs are easy to install and remove.

Note: although the battery is fully charged at the factory, transit and shelf time may reduce the initial battery charge. We recommend that the first time you use your system, you connect it to AC power using the AC adapter. This also recharges your battery.

When battery power reaches 10%, the Battery Charge Indicator blinks and the system beeps a warning. Always respond by immediately saving your data, and connect your system to the AC adapter. If an AC adapter is not available, change the battery using the battery replacement procedure described below.

If you do not take any action, the system will beep for two minutes, and then automatically go into Hibernation (Save To File) mode.

Warning: to prevent accidental battery ignition or explosion, adhere to the following:

-  Keep the battery away from extreme heat.
-  Keep metal objects away from the battery terminals to prevent a short circuit.
-  Make sure the battery is properly installed in the battery bay.
-  Read the precautions printed on the battery, and/or on the Warning Leaflet inserted between your keyboard and LCD screen.

Charging the Battery

Charge time depends on whether or not you are using the system. When the system is off and the AC adapter is connected, charge time is approximately 3 hours.

For maximum battery performance, fully discharge the battery before recharging it. To do so, unplug the AC adapter, turn off power management features (through BIOS Setup and Windows power management), and turn on the system. Once the battery is fully discharged, plug in the AC adapter and recharge the battery.

The warning beep that sounds when battery power becomes critically low is always a true indicator that battery power is low. Be sure to save your data when you hear the beep and take proper steps to provide power to your system.

Refreshing the Battery

If you detect that your battery is draining more quickly than expected, you can try a couple of things to refresh its performance:

-  Remove and then reinstall the battery.
-  Fully recharge the battery (to 100%).
-  Refresh the battery, by completely discharging and then recharging it. To do so, follow the instructions below:
 - Unplug your AC adapter, and power on your computer.
 - Press the **F2** key when prompted by the start-up screen.
 - In the **Exit** menu, select **Battery Refresh** and press **Enter**.
 - When prompted to continue battery refresh, press **Enter**.
 - The system will automatically discharge the battery. When the countdown reaches 0%, the system will automatically shutdown.

Note: if the battery was completely charged, this process may take several hours to complete.

- To finish the refresh process you will have to recharge the battery. Plug the AC adapter and charge the battery until the Battery Charge LED turns off. You may use the computer during this time.

Precautions for Recharging the Battery

Adhere to the following precautions when recharging the battery.

- Use only the battery charger designed for your Versa battery type. Different Versa models require different batteries and battery chargers.
- Charge the battery for the specified charge time only.
- During charging, keep the environmental temperature between 5°C and 35°C.
- Read the instructions that came with the battery charger before charging the battery.

Low Battery Power

When battery power gets low, connect your system to the AC adapter.

If no AC adapter is available, change the battery using the battery replacement procedure. [Click here](#) for more information.

Conserving Battery Power

The battery performance is affected by the following conditions:

- when it is new and fully charged.
- when no peripherals are connected to your Versa.
- when you have no options installed.

While on the road, it is important to be aware of the simple things you can do to extend the life of the system's main battery. For instance, turning down the screen brightness (**Fn-F9**) extends battery life.

Power Management Features

Enabling power management features increases battery life.

The Hibernate power management state, also known as Save-To-File (STF), saves the system's current working environment to the system's hard drive, then powers down the system to conserve battery power. You can configure your power management settings to enter hibernation when your system reaches a critical low battery state.

[Click here](#) for more information on the power management settings relevant to your operating system.

Battery Precautions

To prevent accidental battery ignition, rupture, or explosion, adhere to the following precautions.

WARNING: there is a danger of explosion if the 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.

To avoid personal injury and property damage, read these battery precautions on handling, charging and disposing batteries.

■ Keep the battery away from heat sources including direct sunlight, open fires, microwave ovens, and high-voltage containers. Temperatures over 60°C may cause damage.

■ Do not drop or impact the battery.

■ Do not disassemble the battery.

■ Do not solder the battery.

■ Do not puncture the battery.

■ Do not use a battery that appears damaged or deformed, has any rust on its casing, is discoloured, overheats, or emits a foul odour.

■ Keep the battery dry and away from water.

■ Keep metal objects away from battery terminals. Metal objects in contact with the connectors can cause a short circuit and damage.

Using the Battery

If the battery leaks:

 If the battery leaks onto skin or clothing, wash the area immediately with clean water. Battery fluid can cause a skin rash and damage fabric.

 If battery fluid gets into eyes, DO NOT rub; rinse with clear water immediately and consult a doctor.

 Take extra precautions to keep a leaking battery away from fire. There is a danger of ignition or explosion.

Replacing the Battery

Battery packs are easy to install and remove.

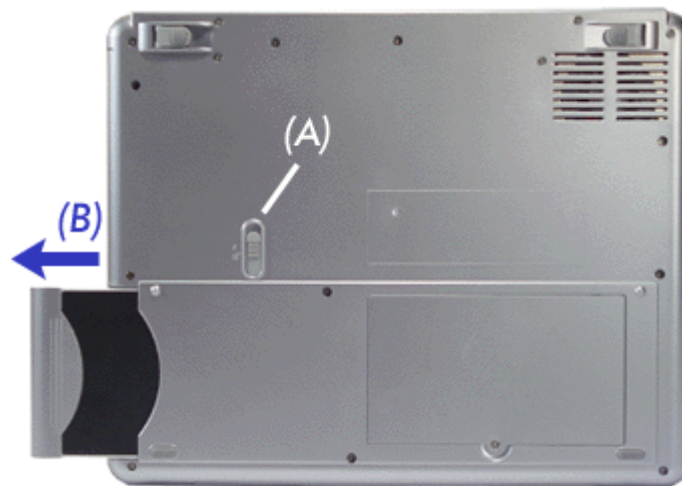
Warning: to prevent accidental battery ignition or explosion, adhere to the following:

-  Keep the battery away from extreme heat.
-  Keep metal objects away from the battery terminals to prevent a short circuit.
-  Make sure the battery is properly installed in the battery bay.
-  Read the precautions printed on the battery, and/or on the Warning Leaflet inserted between your keyboard and LCD screen.

Installing the Battery in your System

Caution: be sure to save your data before replacing the battery pack or connecting the AC adapter. Failure to do so can result in data loss.

1. Save your files, exit Windows, and turn off system power.
2. Close the LCD panel and turn the system over.
3. Remove the battery as follows:
 - Slide the battery release latch upwards and hold it firmly in place (A).
 - Slide the battery pack out of its compartment (B), and set it aside.



4. Insert the new battery as follows:
 - Slide the battery pack in its compartment until it locks into place.
5. Turn the system over.

Handling the Battery

Review the following before handling the system battery.

Caution: use the battery only in the Versa computer for which it is designed. Mixing other Versa batteries, other manufacturer's batteries, or using a combination of very old and new batteries can deteriorate battery and equipment performance.

-  Turn off power to the system after use.

Replacing the Battery

- Clean the battery connectors with a dry cloth if they get dirty.
- When not in use, store the battery in a cool dry area.

The following symptoms indicate that battery life is nearing an end. Discard batteries that display these symptoms:

- shorter work times
- discolouration, warping
- hot to the touch
- strange odour.

Disposing of the Battery

Before disposing of the battery, put adhesive tape on the connectors. Contact your local waste management officials for information regarding environmentally sound collection, recycling and disposal of batteries.

CMOS Battery

The CMOS battery provides power to maintain system configuration settings.

This battery provides battery backup and prevents data loss in the system's complementary metal-oxide semiconductor (CMOS) RAM. This memory area contains information on the system's configuration, for example, date, time, drives and memory.

Please contact your service representative or your Technical Support Centre if this CMOS battery needs to be replaced.

Introducing BIOS Setup

Your Versa computer comes with a hardware program called BIOS Setup that allows you to view and set system parameters. BIOS Setup also allows you to set password features that protect your system from unauthorised use.

Use BIOS Setup to:

- set the current time and date
- customise your operating system to reflect your computer hardware
- secure your system with a password
- balance your performance needs with power conservation.

Entering BIOS Setup

Access the BIOS utility at power-on. Just press **F2** when the following prompt appears.

Press <F2> to enter BIOS Setup

When you press **F2** to enter BIOS Setup, the system interrupts the Power-On Self-Test (POST) and displays the current CMOS RAM settings.

If the system detects an error during POST, it prompts you with a double beep and a message: "Press <F1> to resume." If you press **F1**, the system enters BIOS Setup automatically. If you want to fix the error, carefully read the error message that appears above the prompt (taking notes if you want), and press **F2**. You will see this message if your CMOS battery becomes fully discharged.

BIOS Setup Menus

After you press F2, the system displays the BIOS Setup Main Menu screen. Use the left and right arrow keys (located on the lower right corner of the keyboard) to toggle through the BIOS Setup menu items.

The Setup utility features five menus which are listed on the menu bar at the top of the screen.

- **Main** - use this menu for basic system configuration.
- **Advanced** - use this menu to set various boot and DOS-mode options.
- **Security** - use this menu to set user and supervisor passwords and password on boot.
- **Boot** - use this menu to set the boot sequence.
- **Exit** - use this menu to exit the Setup utility with various save or discard options.

Use the keys listed in the legend bar on the bottom of the Setup menu to make the selections or exit the current menu.

Note: for more detailed information about these menus, please click on the PDF button below. This will open a PDF file, which we recommend you to print and store for future use. If you need to make any changes to the default configuration of the BIOS Setup menus, write these down on the printout of the PDF file.

BIOS Setup Utility - System Parameters and Standard Settings

Updating the BIOS

The BIOS is the code transmitted onto your system's Flash ROM. As indicated in this chapter, you use the BIOS Setup utility to configure your system's software and hardware features. Only use the BIOS update files for your specific model to update your Versa system BIOS.

Caution: you only need to update the BIOS if significant improvements or fixes have been made to the current system BIOS. Your authorised dealer or Support Services representative can help you determine this.

Obtaining the BIOS Update

If you are informed that the default BIOS needs an update, you can access the Web site, www.nec-online.com to obtain a copy of the BIOS update. You will need to download three files:

- Winflash.exe, which is the Windows-based utility used to flash the BIOS,
- a ROM file, which contains the BIOS settings,
- a system file.

Download these files in the same directory on your hard drive, and make sure to note the exact path where you save them.

Note: for your convenience, these files may have been stored in a single zip archive. In this case, download the archive and extract the files in the directory of your choice under Windows XP.

Performing the BIOS Update

Follow these steps to perform the BIOS update.

1. Open the directory where you saved the files downloaded on the internet, and double-click on the *WinFlash* application to open it.
2. On the main screen, in the *WinPhlash Operation* area, select **Backup BIOS and Flash BIOS with new settings**. This option saves a backup copy of the current BIOS before upgrading it.
3. Click on the **Flash BIOS** button. When prompted, click on **OK** to confirm (if applicable, close any other software application you may be running).

Note: the BIOS update will take about 30 seconds; do not use your computer in the meantime.

4. Once the update is finished, your notebook will reboot automatically.
5. When prompted, press **F2** at start-up to enter the BIOS Setup.
6. Press **F9** on your keyboard to load the BIOS default settings.
7. Press **F10** to save current changes and exit the BIOS Setup.

Operating Systems Introduction

The operating system is the most important program that runs on a computer. Every computer must have an operating system to run other programs. Operating systems perform basic tasks, such as recognizing input from the keyboard, sending output to the display screen, keeping track of files and directories on the disk, and controlling peripheral devices such as disk drives and printers.

Your Versa may come pre-installed with one of several operating systems.

Microsoft® Windows® Operating Systems

The Microsoft® Windows® operating systems provide a means of running applications, navigating through your file structure, and using your notebook computer. Each operating system offers its own look and tools through an easy-to-use graphical interface.

Introduction

Select your operating system from the list and click the **Next** button

Managing System Power

Select your operating system from the list and click the **Next** button

Tips

Select your operating system from the list and click the **Next** button

Utilities

For more information, select the utility and click the **Next** button

Applications

For more information, select the application and click the **Next** button

FreeDOS Operating System

FreeDOS aims to be a 100% MS-DOS compatible operating system. FreeDOS is released under the GNU General Public License. The GNU license, created by the Free Software Foundation, means you have access to the source code for all FreeDOS programs.

For more information about FreeDOS, please refer to the www.freedos.org internet site.

Microsoft® Windows® XP

Microsoft® Windows® XP features include a Desktop with room to manoeuvre, a taskbar for quick access to a variety of system functions, state-of-the-art plug and play support, powerful system utilities, enhanced entertainment features and a fully integrated Internet experience.

Among the new features are:

- **Fast User Switching** - You may now switch users more easily, as a new user can log in while retaining the other user's system state. A user does not have access to the other user's running applications.
- **Explorer** - Explorer windows have also had their functionality expanded. Explorer windows now are 3-paned windows, with extra information and functionality in the middle window.
- **Preview Applet** - For viewing and editing images is included an enhanced Preview Applet that lets you view, zoom in and out, rotate, print, save (as), and delete images. Are supported the Windows Bitmap, JPEG, GIF, TIF and PNG formats.

Professional versus Home Edition

Your system may feature either the Windows XP Professional or the Windows XP Home edition. Note that all the features available in the Home edition are also included in the Professional edition.

The Professional edition also includes support for:

- **Remote Desktop** - allows you to remotely access your system from another PC in order to work with all of your data and applications while away from your office.
- **Offline Files and Folders** - allows you to access files & folders on a network share when disconnected from the server.
- **Encrypting File System** - protects sensitive data in files that are stored on disk using the NTFS file system.
- **Access Control** - restricts access to selected files, applications, and other resources.
- **Multi-processoring.**
- **Microsoft Windows Servers and management solutions.**

Desktop Icons

With Windows XP, the following icons* are installed on your Desktop:

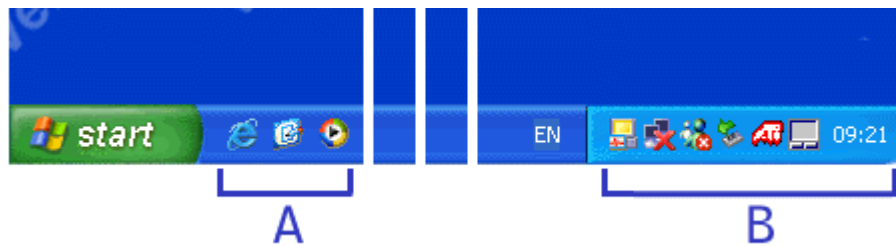
- **Recycle Bin** - Gives you a container in which to put and discard unwanted files or allows you to restore these same files back to their original location.
- **Internet Explorer** - Provides your default Internet program.

Note: depending on your configuration, you may also find a **Release Notes** icon on the desktop. Double-click on this icon to read last-minute information that was not yet available when this online documentation was written.

Taskbar Icons

With Windows XP, a number of icons appears on the taskbar. Use the cursor to hover over the icon and display its function. Right-click on the icon to display its menu options, or double-click on the icon to launch it.

Right click an empty area of the taskbar and select **Properties** to customise the taskbar (refer to the ['Tips'](#) section for more information). The quick launch (A), i.e the left hand side of the taskbar can be hidden or active. The notification area (B), i.e the right hand side of the taskbar, can be easily configured, for instance, to hide icons that are not used frequently. Some hardware items or software titles will place a small icon in this area, allowing you to easily customise and control their settings or status (examples are virus scanners, printers, PC cards...).



The following icons* normally appear in the notification area:

- **Time Clock** - Allows you to adjust the time and date, select your time zone, and offers the possibility to automatically synchronise the time with an internet time server.

For more information about the Desktop and taskbar icons, refer to the Windows XP online help. To do this, click on **Start**, and select **Help and Support**.

** Depending on the version of Windows XP installed on your Versa or if you have deactivated certain programs, the icons described here may differ slightly and/or may be accompanied by others.*

Start Menu

The **Start** menu features a whole new look and feel. The *Internet Explorer* and *Outlook Express* icons have a prominent place now. You will also notice that Windows XP places your frequently used programs in the white area of the Start menu. It is safe to remove an item from this list by right-clicking the icon and selecting **Remove from this list**, as the software program itself will not be deleted.

You can access your installed software and other Windows programs by selecting **All Programs**. Recently installed programs are highlighted.

Technical Support Information

The technical support phone numbers for your country are also quickly available in Windows XP.

1. Select **Start**, right-click on **My Computer** and select **Properties**.
2. On the **General** tab, click on the **Support Information** button.

Note: refer to the ['If you need assistance'](#) section for more information about your system's warranty and to the ['Frequently Asked Questions'](#) for more information on how to contact the technical support teams.

Managing System Power (Windows XP)

In the Windows XP environment, your Versa manages its power resources using the Advanced Configuration and Power Interface (ACPI) while the system is powered on using AC or battery (DC) power. ACPI enables the operating system to manage the power given to each attached device and to turn off a device when not in use.

Take advantage of the opportunity to manage power on your system to:

- Minimise battery drain.
- Preserve the life of your Versa.
- Save time. When you return from that urgent call or meeting, you don't have to reboot, just press the Power button to resume system operation.

Windows XP Power Options Properties

In Windows XP, most ACPI power management settings are controlled through Windows Power Options Properties, not through the BIOS Setup utility, unless otherwise noted. To access Windows Power Options Properties, go to **Start**, **Control Panel**, select **Performance and Maintenance**, and click on **Power Options**.

The Power Options Properties are broken down as follows:

Power schemes

Use the **Power Schemes** tab options to define the appropriate power scheme for your system, and to set timeouts for standby, monitor, and hard disk.

Parameter	Options	Description
Power Schemes	Portable/laptop Home/office desk Always On	Defines the most appropriate power scheme for your computer.
Turn off monitor (plugged in)	1/2/3/5/10/ 15 /20/25/30/45 minutes 1/2/3/4/5 hours Never	Selects the time delay before your LCD panel turns off.
Turn off monitor (running on batteries)	1/2/3/ 5 /10/15/20/25/30/45 minutes 1/2/3/4/5 hours Never	Selects the time delay before your LCD panel turns off.
Turn off hard disks (plugged in)	3/5/10/15/20/25/ 30 /45 minutes 1/2/3/4/5 hours Never	Selects the time delay before your hard disk(s) power down.
Turn off hard disks (running on batteries)	3/ 5 /10/15/20/25/30/45 minutes 1/2/3/4/5 hours Never	Selects the time delay before your hard disk(s) power down.
System Standby (plugged in)	1/2/3/5/10/15/ 20 /25/30/45 minutes 1/2/3/4/5 hours Never	Selects the system standby timeout period for your system when running under AC power.
System Standby (running on batteries)	1/2/3/ 5 /10/15/20/25/30/45 minutes 1/2/3/4/5 hours Never	Selects the system standby timeout period for your system when running under DC power.

Managing System Power (Windows XP)

System Hibernates (plugged in)	25/30/45 minutes 1/2/ 3 /4/5/6 hours Never	Selects the system hibernation timeout period for your system when running under AC power.
System Hibernates (running on batteries)	10/15/20/25/30/45 minutes 1/ 2 /3/4/5/6 hours Never	Selects the system hibernation timeout period for your system when running under DC power.

Default settings are shown in red.

Alarms

Use the **Alarms** tab to define the point at which the battery alarm activates. Define the alarm to either sound, display a warning message, or invoke Standby, Hibernate or Shutdown.

Parameter	Options	Description
Low battery alarm	10% 0-100%	Allows you to define a low battery alarm percentage, notification, and system action.
Notification	Display message Sound alarm	Allows you to define whether the alarm is visual or auditive.
Alarm Action	Standby Hibernate Shut down No action	Allows you to define which action is taken by the system when the alarm goes off.
Run a program	None	Allows you to define which program is launched when the alarm goes off.
Critical battery alarm	3% 0-100%	Allows you to define a critical battery alarm percentage, notification, and system action.
Notification	Display message Sound alarm	Allows you to define whether the alarm is visual or auditive.
Alarm Action	None Standby Hibernate Power off	Allows you to define which action is taken by the system when the alarm goes off.
Run a program	None	Allows you to define which program is launched when the alarm goes off.

Default settings are shown in red.

Power Meter

The **Power Meter** tab displays the remaining battery power and charging status for the primary and secondary batteries (if applicable). Choose to display either a percentage progress bar or a battery icon with percentage indicator for your battery status information.

Advanced

The **Advanced** tab allows you to select the power-saving settings you want to use.

Parameter	Options	Description
Always show icon on taskbar	Checked Unchecked	determines whether or not the Power Meter icon displays on the taskbar.
Prompt for password when computer resumes from standby	Checked Unchecked	Determines whether or not the system prompts for your Windows password when resuming from Standby.
When I close the lid on my computer	Standby Do nothing Hibernate	Defines the system action when the LCD panel is closed.
When I press the Power button on my computer	Shut down Standby Hibernate Do nothing Ask me what to do	Defines the system action when the Power button is used.

Default settings are shown in red.

Hibernate

Use the **Hibernate** tab to enable hibernate support, see the amount of free disk space, and the amount of disk space required to hibernate. When your system hibernates it performs a save-to-disk or save-to-file (STF). Your current working environment is saved to the hard disk. Use the Power button to resume from hibernation and your system returns to its previous state.

Windows XP Power Management States

The Advanced Configuration and Power Interface (ACPI) uses different levels or states of power management. These power management states occur automatically, based on the system's default settings, or manually, when invoked.

The Windows XP ACPI power management states include:

- **Monitor timeout** - manages power at the lowest level by shutting down the monitor.
- **Standby** - also known as Save-to-RAM (STR), Standby manages power by saving your current working environment to memory and shutting down most system devices.
- **Hibernation** - also known as Save-To-Disk, or Save-To-File (STF), Hibernation manages power by saving the current working environment to an area on your hard disk before turning off your computer. When you restart the computer, any programs and documents that were open when you turned the computer off are restored on the Desktop.

Recognising the Power Management States

It is important to recognise your system's behaviour when in each of these power management states. The following table describes the system behaviour for each power management state.

	LCD Timeout	Standby (STR)	Hibernate (STF)
Default Setting	5 minutes, DC power 15 minutes, AC power	5 minutes, DC power 20 minutes, AC power	2 hours, DC power 3 hours, AC power

Managing System Power (Windows XP)

Manually Invoke	-	Go to Start, Turn off computer, Standby Close the LCD panel (1) Press or slide the power button (1).	Close LCD panel (1) Press or slide the power button (1) Right-click on the taskbar, select Task Manager, Shut Down , and Hibernate . Go to Start, Turn off computer , and hold the Shift key as you select Standby .
System Behaviour	LCD panel is blank Power LED (AC or battery) lights green	LCD panel is blank Power LED (AC or battery) blinks green	LCD panel is blank Power LED (AC or battery) turns off Progress bar indicates that current working environment saved to hard disk.
Resume	Press any key	Press or slide the power button	Press or slide the power button

(1) Only when set in Advanced Windows Power Management Properties.

Tips for Using Microsoft® Windows® XP

Click on one of the links below to jump to the related tips.



Booting

- [Booting in Safe Mode](#)
- [Creating a Startup Disk](#)



Using

- [Changing the Autoplay Setting](#)
- [The Internet Connection Wizard](#)
- [Changing the Display Resolution](#)
- [Establishing Passwords](#)
- [Customising the Taskbar](#)
- [Customising the Desktop](#)



Shutting down

This section provides various tips that should help you get the most of your Microsoft® Windows® XP operating system.

Note: if you are familiar with previous versions of Microsoft Windows, we advise you to check out the new features specific to Windows XP. To do so, click on **Start**, click on **Help and Support**, and pick the **What's new in Windows XP** topic.

Booting in Safe Mode

Safe mode helps you diagnose problems. If a symptom does not reappear when you start in safe mode, you can eliminate the default settings and minimum device drivers as possible causes. If a newly added device or a changed driver is causing problems, you can use safe mode to remove the device or reverse the change.

In safe mode, you have access to only basic files and drivers (mouse, monitor, keyboard, mass storage, base video, default system services, and no network connections)

There are circumstances where safe mode will not be able to help you, such as when the system files that are required to start the system are corrupted or damaged. If your computer does not start successfully using the safe mode, you might need to use either the Windows *Recovery Console* feature (click on **Start**, **Help and Support** for more information), or to restore your system using the *Recovery Program* (refer to the Quick Start Guide delivered with your notebook).

Restarting in Safe Mode

1. Click on **Start**, **Turn Off Computer**, and then click on **Restart**.
2. When you see the message *Please select the operating system to start*, press **F8**.
3. Use the arrow keys to highlight the appropriate safe mode option, and then press **Enter**.
 - **Safe Mode** - starts using only the basic files and drivers (see above). Use this mode to run the system tools, such as the Disk Defragmenter.
 - **Safe Mode with Networking** - starts using only the basic files and drivers (see above), and network connections.
 - **Safe Mode with Command Prompt** - starts using only the basic files and drivers (see above). After logging on, the command prompt is displayed instead of the graphical user interface. You will be asked to choose a user, or to log on as administrator. Depending on what you choose, the default directory of the command prompt will be different.
 - **Enable Boot Logging** - the system creates a log file (Ntbtlog.txt) that records the loading of each service and device. The boot log is useful in determining the exact cause of system start-up problems.
 - **Enable VGA Mode** - starts Windows using the basic VGA driver.
 - **Last Known Good Configuration** - starts your computer using the registry information and drivers that was saved at the last shutdown. Any changes made since the last successful start-up will be lost.

Note: the **Directory Services Restore Mode (Windows domain controllers only)** and **Debugging Mode** are not relevant for notebooks.

- **Debugging Mode**
- **Start Windows Normally** - normal Windows start-up.
- **Reboot** - reboots the system, and starts Windows XP.

4. If you have a dual-boot or multiple-boot system, choose the installation that you need to access using the arrow keys, and then press **Enter**.

Creating a Startup Disk

In some cases, you may need to create a startup disk that will allow you to boot into MS-DOS mode.

1. Insert a blank high-density floppy disk in your floppy disk drive.
2. Click on **Start, My Computer**.
3. Right-click on the **3 ½ Floppy Disk Drive** icon, and select **Format** in the pop-up menu.
4. Put a check mark in front of the *Create an MS-DOS startup disk*, and click on **Start**.
5. Click on **OK** when prompted, and on **Close** when the floppy disk is created.

Using your Versa

This guide provides the information on how to use your Versa. Some of the information provided includes:

Drives and Bays

Select the type of drive and click the **Next** button

Taking Care of Your System

Select the topic and click the **Next** button

Security

■ **BIOS** - refer to the relevant [BIOS chapter](#) for more information on how to set Supervisor and User passwords.

■ **Operating System** - refer to the '[Tips](#)' section relevant to your Microsoft operating system for more information on how to set user accounts and passwords.

■ **Hardware** - Your notebook may feature a Kensington Lock slot (refer to the description of your notebook for more information). This lock prevents your computer from being moved or stolen.

Install an optional Kensington Lock as follows:

1. Select the object in the room to which you will secure your computer. Choose an immovable piece of furniture or fixture (a table or desk leg with a cross bar).
2. Take the looped end of the steel cable (optional) and wrap around an immovable object. Choose an object that prevents an intruder from slipping the cable out from under the object.
3. Feed the locking device through the looped end of the cable.
4. To install the Kensington Lock, make sure that the lock is in the unlocked position. To do so, insert the key into the lock and, holding the locking device stable, turn the key clockwise to the unlocked position.
5. Insert the locking device into the Kensington Lock slot in your computer. Turn the key 90° counter-clockwise to lock and remove the key. Check that the Kensington Lock is secure by gently pulling on the locking device.

Floppy Disk Drive

LEDs and Controls

The front bezel of the floppy disk drive may feature the following LEDs and controls:

-  **Diskette release button** - press this button to release a diskette from the floppy disk drive.
-  **Floppy disk drive busy lamp** - lights when the diskette drive is reading from or writing to a diskette.

Using Floppy Disks

Follow these steps to insert a 3.5-inch floppy disk in the standard floppy disk drive.

1. Hold the floppy disk at its top edge and insert the diskette label side facing up.
2. Insert the floppy disk all the way into the drive until you hear a click.

Note: if your floppy disk did not come formatted, you must format it before storing information on it. See your operating system documentation for information about formatting a diskette.

To remove a diskette from the diskette drive, press the release button on the 3.5-inch diskette drive.

Caution: do not remove a diskette from the diskette drive when the diskette drive lamp is lit. Doing so can damage both the data on the diskette and the drive. Do not turn off the system power while the diskette is being accessed.

CD-ROM Drive

Your Versa may ship with a CD-ROM drive that features the latest in CD-ROM technology. The CD-ROM drive is assigned an available drive letter.

Use the CD-ROM drive to load and start programs from a compact disc (CD). You can also use the CD-ROM drive to play your audio CDs. The CD-ROM drive is fully compatible with Kodak Multisession Photo CDs™ and standard audio CDs.

The CD-ROM drive operates at different speeds depending on whether the CD you are using contains data or music. This allows you to get your data faster and to see smoother animation and video.

LEDs and Controls

The front bezel of the CD-ROM drive may feature* the following LEDs and controls:



- **Status LED (A)** - lights during data read operations. Do not eject the CD or turn off the Versa when the indicator is lit.
- **Emergency Eject Hole (B)** - allows you to manually remove a disc from the CD-ROM drive if the eject function is disabled by software or a power failure occurs. To remove a disc, insert the end of a paper clip into the eject hole, and push in until you hear a click. Manually open the drawer.
- **Release Button (C)** - ejects the disc tray. Press this button when power is on to insert a CD into or remove a CD from the drive.

** Please note that the CD-ROM drive included with your system may differ slightly from the one shown in the picture.*

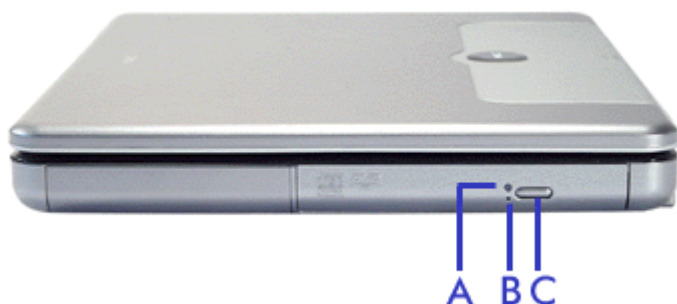
DVD-ROM Drive

Your Versa may ship with a DVD-ROM drive that features the latest in DVD-ROM technology. The DVD-ROM drive is assigned an available drive letter.

Please note that a DVD Player is provided with your system, allowing you, for instance, to watch full-length movies on your Versa notebook.

LEDs and Controls

The front bezel of the DVD-ROM drive may feature* the following LEDs and controls:



- **Status LED (A)** - lights during data read operations. Do not eject the disc or turn off the Versa when the indicator is lit.
- **Emergency Eject Hole (B)** - allows you to manually remove a disc from the DVD-ROM drive if the eject function is disabled by software or a power failure occurs. To remove a disc, insert the end of a paper clip into the eject hole, and push in until you hear a click. Manually open the drawer.
- **Release Button (C)** - ejects the disc tray. Press this button when power is on to insert a disc into or remove a disc from the drive.

** Please note that the DVD-ROM drive included with your system may differ slightly from the one shown in the picture.*

Features

The DVD-ROM drive offers many improvements over the standard CD-ROM technology including superior video and audio playback, faster data access, and greater storage capacities. The drive uses the latest DVD technology which reads from specially designed DVD discs as well as standard audio and video CDs.

If your computer is equipped with a DVD drive, you can watch feature length films wherever your computer may be!

The DVD Player allows you to watch DVD films on your computer. DVD films offer a range of advantages over VHS or laser disk formats, for instance:

- DVD titles are divided into several chapters allowing easy retrieval.
- Parental control allows lockout of content that is not appropriate for children.
- Choice between several languages (up to 8) for dialogue and subtitles.
- Full support for several video standards.
- Multi-angle support for scenes filmed with different cameras.

Notes:

- it is not recommended that you use the DVD player while other programs are active. This will affect the performance of the player, reducing display quality.
- when you insert a DVD disc it may take a while before it is recognised and the DVD player is launched. Please be patient and wait for a few seconds when starting a DVD title.

Region Coding Note

Region coding is a requirement by the DVD specification that prevents DVD content from being played in areas of the world for which it was not intended. This allows films to be released on DVD in one area, while still playing in cinemas in others. The region code on DVD discs you purchase should correspond to the region code of your DVD drive. For European countries this code is **2**.

If you purchase a DVD disc from any other region, **it will not function on your system**. Discs coded for other regions are found in the "import" section of some shops that sell DVD discs, or abroad. The region code should be shown on the back of the DVD case. It is represented by a small map of the world, with a number super-imposed over the top; this number is the region code. If you cannot find this, ask a sales assistant.

Combination DVD-ROM and CD Read/Write Drive

Your system may ship with a combination DVD-ROM and CD Read/Write drive.

Use the drive to load and start programs from a compact disc (CD) or to play your audio CDs, write information to a CD, or play digital videodiscs (DVDs).

For information on these features, see the sections entitled ['CD-RW Drive'](#) and ['DVD-ROM Drive'](#).

Hard Disk Drive

The hard disk drive can be upgraded to a larger capacity drive. Refer to the ['Specifications'](#) chapter for more information on your hard disk drive.

Note: please contact your authorised service representative if you wish to replace your hard disk drive. This procedure should only be performed by a qualified technician.

Memory Modules

The notebook computer offers two 64-bit memory slots using 144-pin SO-DIMM (Small Outline Dual Inline Memory Module). This configuration supports single SO-DIMM module insertion in the memory slot.

For more information about the type of memory supported by your Versa, refer to the ['System Specifications'](#) chapter.

Follow these steps to upgrade the system memory.

1. Power off the system and disconnect the AC power cord from the wall and the system. Disconnect any other external devices.
2. On the bottom of the Versa, remove the screw (A) securing the Memory and Mini-PCI bay cover.
3. Lift the bay cover and set it aside.

Note: you may need to use the tip of a small knife to pop up the slot cover. Gently insert the blade under the screw hole, and slide the blade outwards to the left until the tab is released. Repeat this operation sliding the blade to the right to release the second tab.

4. Locate the available memory bay, here shown as (B) in the picture.
5. Align the notch with the notch in the bay connector and install the module as follows:

■ Hold the SO-DIMM module at a 60-degree angle and align the SO-DIMM connector with the slot in the system. Push the connector into the slot.

■ Press down on the edge of the SO-DIMM module until the locking tabs on the sides snap into place, securing the module.

Note: to remove a SO-DIMM module, press the locking tabs away from the sides of the module until the module pops up. Then, remove the SO-DIMM module.

6. Replace the memory bay cover, making sure the three tabs on the back edge are lined up in their respective slots, and press on the two tabs located on each side of the screw hole in order to secure the cover.
7. Secure the screw that was removed during step 2.

Mini-PCI Slot

Your notebook computer features a Mini-PCI slot which supports the installation of an additional expansion card.

Note: if your notebook features Wireless LAN capabilities, this slot cover is not available; it is already fitted with the Wireless LAN expansion card.

Installing a Mini-PCI Card

1. Power off the system and disconnect the AC power cord from the wall and the system. Disconnect any other external devices.
2. On the bottom of the Versa, remove the screw (A) securing the Memory & Mini-PCI Bay cover.
3. Lift the bay cover and set it aside.

Note: you may need to use the tip of a small knife to pop up the slot cover. Gently insert the blade under the screw hole, and slide the blade outwards to the left until the tab is released. Repeat this operation sliding the blade to the right to release the second tab.

4. Align the notch on the expansion card with the notch in the slot connector and install the card as follows:
 - Hold the card at a 60-degree angle and align its connector with the slot in the system. Push the connector firmly into the slot.
 - Press down on the edge of the card opposite to the connector until the locking tabs on the sides snap into place, securing the card.
5. Replace the Memory & Mini-PCI Bay cover, making sure the three tabs on the back edge are lined up in their respective slots, and press on the two tabs located on each side of the screw hole in order to secure the cover.
6. Secure the screw that was removed during step 2.

Removing a Mini-PCI Card

1. Power off the system and disconnect the AC power cord from the wall and the system. Disconnect any other external devices.
2. On the bottom of the Versa, remove the screw (A) securing the Memory & Mini-PCI Bay cover.
3. Lift the bay cover and set it aside.

Note: you may need to use the tip of a small knife to pop up the slot cover. Gently insert the blade under the screw hole, and slide the blade outwards to the left until the tab is released. Repeat this

Mini-PCI Slot

operation sliding the blade to the right to release the second tab.

4. If applicable, unplug any cables connected to the motherboard.
5. Press the locking tabs away from the sides of the Mini-PCI card until the card pops up. Carefully remove the card from the system.
6. Replace the Memory & Mini-PCI Bay cover, making sure the three tabs on the back edge are lined up in their respective slots, and press on the two tabs located on each side of the screw hole in order to secure the cover.
7. Secure the screw that was removed during step 2.

System Care

Your system is a durable, dependable computer built for heavy use. With protective measures and proper care, you can prevent problems and promote the successful operation and long life-span of your computer.

Protecting Your System From Power Outages

Fortunately, there are tools that can help when power supply is interrupted. Basically there are two types of protection against power problems, a passive form such as those provided by surge suppressors and a multi-featured back-up power source like the Uninterruptible Power Supply (UPS).

- **Surge Suppressors** - although computers are equipped with some surge protection, it is wise to acquire a separate surge suppressor for added protection. A surge suppressor protects power supplies and communication lines from electrical surges but does not offer a back-up power source. While some suppressors have a manual on-off switch, other types combine switched and unswitched circuits. A mix of switched and unswitched circuits can be a useful feature since you can keep, for instance, a battery charger while shutting off the power for other equipment.
- **Back-UPS units** - equipped with a battery to maintain power during outages, the UPS allows users to save data and properly shut down the computer. Most UPS also include surge protection as a feature. There are two basic UPS types, the standby power supply (the least expensive choice) and the multi-featured on-line UPS systems.

Below are tips on power protection and some hardware features to consider before buying these devices:

- Be sure to unplug your PC, including the line to the modem, during lightning storms.
- Always use a proper power cord to plug your system to the line power. When using an extension cord make sure it is a reliable cord.
- Look into the energy absorption features. Surge suppressors are rated by the amount of energy they can absorb, which is measured in joules. The higher the surge ratings the better the unit. Experts say around 200 joules is basic protection, 400 joules provide good protection and 600 joules or more is far better.
- Check if a surge suppressor has a circuit breaker or fuse. Many suppressors are equipped with either a circuit breaker or fuse that will blow or trip in case of a short circuit and severe surges. Compared to fuses, circuit breakers are preferred because fuses have to be replaced when damaged by a short circuit.

Protecting Your System From Damage

There are several ways in which you can protect your computer from possible damage. We strongly recommend the following protective measures:

- Connect a Back-UPS unit (see '*Protecting Your System From Power Outages*' above) between your computer and the grounded wall outlet. A Back-UPS unit protects your system from sudden transient increases and decreases in electrical power.
- Be sure to connect all peripherals, such as your monitor and printer, to the Back-UPS unit that should be the only device that you plug into the wall outlet.
- Avoid repeated power-on cycles. These subject the system components to temperature variations and stress.
- Disconnect your system from telephone, LAN and power lines when an electrical storm threatens. If you have a fax/modem, lightning can travel in on the phone line and can damage both the fax/modem and the system unit. Lightning can also travel in on power lines and damage your monitor and system unit.

Note: please note that the product warranty does not apply if damage to your computer is the result of a lightning strike.

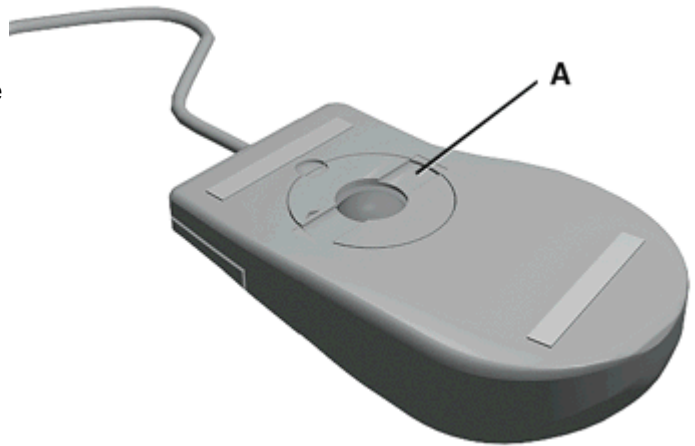
- Be sure that system power is off before you connect or disconnect a cable (except USB and IEEE 1394 devices, that can be hot-swapped and hot-plugged). Never make cable changes when the system power is on. Doing so could damage your system and its peripherals.
- Use appropriate virus detection software regularly to protect your system from computer viruses.
- Place your computer away from direct sunlight and extreme temperatures. Operate and store your system within the recommended temperatures and humidity levels (refer to the '[System Components](#)' section for more information).
- After turning off power, wait about five seconds for the hard disk to spin down before you power on again.
- Be sure that nothing is placed on top of your AC adapter and system power cables.
- Prevent dust from entering your system by covering it when it is not in use.

Keeping Your System in Good Condition

Maintain the condition of your system by periodically using the following general procedures.

Warning: for safety, power off and unplug your system, monitor and any external devices before cleaning them.

- Clean the outside of the computer with a soft clean cloth. You can remove stubborn stains with a cloth slightly dampened with a mild detergent. Never use a strong cleaner or solvent on any part of the system.
- Keep food and liquids away from your computer.
- Periodically clean the keyboard with a vacuum cleaner brush attachment. Do not use any liquid cleaners on the keyboard as they can damage it.
- Clean the monitor screen with a monitor glass cleaner and wipe it with a clean, lint-free cloth.
- If you connect an external mouse to your notebook, periodically clean the mouse as explained below:
 - Power off your computer and any peripherals attached to it.
 - Invert the mouse. Locate the mouse ball cover (A).
 - Rotate the ball cover counterclockwise and remove the cover.
 - Turn the mouse over so that the cover and ball fall into your palm.
 - Clean the mouse as follows; first use tap water, or tap water and a mild detergent, to clean the mouse ball. Use a clean, lint-free cloth to dry the ball, and blow into the mouse socket to remove remaining dust or lint.
 - Gently put the ball back into the mouse.
 - Fit the ball cover back into the mouse and turn the cover clockwise until it locks in place.



Operating Environment

Caring for your system also requires taking into account the effect of temperature, humidity, and moisture on computer components. Like any other electronic products, notebooks are vulnerable to drastic changes in temperature, and especially moisture on system components.

Please follow the tips below regarding the recommended operating environment:

- **Avoid using your computer in high humidity** - computers are best used in moderate humidity conditions. Although PCs are more sensitive to temperature than to humidity, using a PC in a humid environment can present problems especially when the humidity reaches extreme levels. A few humid days is not really a cause for concern but using, for instance, a laptop in a tropical jungle can present wear-out issues. Humidity hastens corrosion and increases the risk of condensation that can damage certain PC parts. Going directly from a cold to a warm environment leads to condensation. Cooling a PC is also difficult when humidity is high.
- **Before switching on, allow the computer to adjust to room temperature** - in general, electronic equipments that have been exposed or stored in very low temperatures should adjust gradually to room temperature before they are switched on. Immediately powering on a PC that has been stored for some time at low temperatures in an environment with high temperatures increases the risk of damaging parts.
- **Do not expose the computer to moisture and spills** - users tend to stretch the limits by using and leaving their notebooks at the most unlikely places like the kitchen, the bathroom, on the garden table or by the swimming pool where the chance of it getting wet is high. Placing a notebook near an open window is also not advisable since it can easily collect and expose some parts to moisture. Be wary of liquid spilling into the power supply since it may trigger an electric short-circuit.
- **Keep your system cool** - the key components in your system that require special attention when it comes to cooling and proper ventilation are the power supply, the central processing unit (CPU), the hard drive and the motherboard.
 - The fan in the power supply is designed not only to provide better airflow to the entire case, but also to cool parts of the power supply that easily heat up.
 - CPUs are equipped with sophisticated heat sinks and fans to increase reliability and prevent cooling-related problems like system lockups.
 - Fans do not directly cool the hard drive and components of the motherboard, but provide better airflow to these parts. Cleaning the box and removing dust are beneficial since accumulated dust can insulate the notebook making it difficult to cool the system.
- **Ensure effective ventilation for your computer** - even with sophisticated power supply and CPU fans it is still important to install your system where there is good ventilation to avoid overheating. Airflow, obviously, is more important in a warm room than in a cool area. Pay attention to the obvious, such as providing space for the power supply fan to blow freely and by not blocking the air vents that keeps your PC, monitor and other devices from overheating. Good operating temperatures would be from 15 to 25°C, and cooler temperatures are generally better than higher temperatures.

Preventive Maintenance

The following information will help you to set up a preventive maintenance plan in order to prevent system problems. Depending on what your computer is being used for, adapt them to your own needs.

These suggestions are classified according to the recommended frequency.

First Time Use

Back up your BIOS settings: these parameters saved in the CMOS memory define how your computer works and minor changes to them can modify the way your computer functions. To back up the BIOS settings, take a piece of paper, [enter the BIOS](#) and note the settings and their values.

Note: do not forget to modify what is written on this piece of paper each time you modify the BIOS settings.

Every Day

Note: the suggestions below are only relevant to Microsoft operating systems.

Scan for viruses: your system is delivered with an [antivirus software](#) pre-installed on your hard drive. For better security we recommend you use the automatic scanning option and perform on-demand scanning. Refer to the software documentation for more information.

Caution: update the virus definition files at least every month, and as soon as you hear about a new virus.

Back up your data on a regular basis: you can use the *Microsoft® Backup* tool to save your files from your computer to media such as a floppy diskette, a CD or a removable hard disk. Refer to the Windows online help for more information.

Every Week

Note: the suggestions below are only relevant to Microsoft operating systems.

Scan for hard disk logical and physical errors: to do so, use *Microsoft® ScanDisk*, also known as the *Error-checking* tool (depending on the operating system). Refer to the Windows online help for more information.

Clean up your hard drive by using the *Disk Cleanup* option in Windows.

Defragment your hard drive: it will allow your computer to run at peak performance. You can use *Microsoft® Disk Defragmenter* to perform this process. Refer to the Windows online help for more information.

General Information about Optical Discs

Disc Loading

To insert a disc into the optical disc drive, follow these steps.

1. Press the Release button. The disc tray emerges a short way out of the drive door.
2. Gently pull the tray out until you can easily position a disc in the tray.
3. Put the disc, printed side up, into the circular impression in the tray.
4. Push the disc tray in until it clicks shut.

Note: some discs vibrate when playing. This does not affect the optical disc drive.

Disc Care

When handling optical discs, keep the following guidelines in mind.

- Hold optical discs by the outer edge and the inner hub to avoid damaging the surface. Avoid direct contact with the disc's surface.
- Avoid scratching or soiling both sides of the disc.
- Do not write on or apply labels to either side of the disc. Never write with a ballpoint on the surface of the disc.
 - Do not use stickers, labels or write on both sides of a disc. Unless you use specific label kits, never use a tape or sticky material to label optical discs. Since the data layer of a disk is right beneath the printed label, writing with a pen can scratch the thin reflective aluminium coating. Use soft-tip pens especially for re-writable disks that are even more sensitive.
 - Do not scratch or polish the label side. The pits and lands (microscopic holes and flat areas) that encode the information in the CD are on the label side, and not on the surface read by the lens. Large scratches on the underside, however, can often be repaired using special polishing kits. Most of the time, the laser, which focuses on a layer within the clear base, is able to see past small scratches, in much the same way the human eye can focus on objects outside when looking through a window.
- Keep the disc away from direct sunlight, high temperatures, and humidity.
 - Keep optical discs away from high temperatures. Don't subject disks at temperature levels exceeding 37°C. Exposure to direct sunlight over long periods easily warps a disk. Low temperatures are not a hazard, but wait for a stable temperature before loading a disk. Disks burned using CD-writer drives are more sensitive and should be stored at room temperature whenever possible.
 - Moisture does not affect other types of discs, but avoid exposing re-writable disks to liquids. In case of accidental spills on discs, rinse it off with lukewarm water and wipe dry with a soft cloth. Be careful with sticky or oily substances that trap dirt and dust.
- Proper cleaning is important to achieve optimal performance. Using a soft, slightly damp cloth, wipe the disc from inside the disk and rub outwards. Do not wipe in circles but clean in the same outward direction. Wiping the label side in circles can scratch a section of the data track. Slightly dipping the cloth in warm water is enough. Using cleaners and solvents can do damage.

Caution: since discs are coated with thin layers of aluminium and plastic, avoid using benzene, paint thinner, record cleaner, static repellent, or any other chemical to clean the disc. Chemicals and cleaners can damage the disc.

Optical Disc Drive Care

To get the most from your optical disc drive, keep the following guidelines in mind.

- Never forcibly pry open a drive whenever a disc gets stuck. The plastic tray is a relatively fragile and vulnerable mechanism. Loading a CD off-centre is a common mistake that can jam the tray. If this happens use the eject button, or the emergency eject hole (refer to the relevant [optical disc drive](#) for more information on these features). If that fails, ask for professional help.
- Avoid excessive dirt and dust build-up on optical discs. Optical discs can tolerate accumulated dirt and dust much better than floppy disks since CDs are not read by direct contact with the read lens. Excessive dirt, however, will eventually affect the drive's performance. Thoroughly clean the discs whenever necessary.

Shipping Your System

Use these steps to prepare your system for shipping:

1. Back up the files on the hard disk drive to diskettes, Zip disks, or CDs.

Note: be sure to take precautions for storing and transporting Zip disks, floppy disks, or CDs so that they are not exposed to magnetic fields or electrical impulses.

2. Remove any media from its respective drive.
3. Turn off the system unit and any external options connected to it.
4. Unplug the AC adapter from the wall outlet or Back-UPS unit, then from the notebook itself.
5. Pack the system components in the original shipping materials and cartons. If these are not available, be sure to use adequate packing materials to protect the components.

PC Cards

Your Versa system is equipped with two PC card slots that support both Type II and Type III PC cards.

PC cards are all approximately the same size and vary only in thickness. All have a standard 68-pin connector. Your Versa supports the installation of the PC cards described next.

Type II Cards

Type II cards have a thickness of 5.0 millimetres (mm). Type II cards are often storage or communication devices such as Static Random Access Memory (SRAM), Read Only Memory (ROM), Flash Memory, LAN, and Small Computer System Interface (SCSI). Typically Type II cards include input/output (I/O) features such as modems.

Type II Extended Cards

Many PC cards are Type II extended cards. The extended card has an additional physical component that protrudes beyond the traditional card size. The extension can be as large as 40 mm deep by 9.65 mm high. This extension provides room for additional electronics as well as a location for external connectors.

Type III Cards

Type III cards are thicker (10.5 mm) than Type II cards. Type III card uses include advanced function I/O cards with additional features such as wireless modems, multimode cards (cards with more than one function such as a combined LAN/modem card), and small hard drive storage.

PC Card Slots

Your Versa notebook integrates two PC or CardBus slots for inserting two Type II PC cards or one Type III PC card.

Using the system's PC card slots, you can add optional PC cards and connect external devices to your Versa. These devices include peripheral devices, such as modems, LAN cards and storage cards.

Inserting a PC Card

To insert a PC card, follow these steps.

1. Align the card so that the 68-pin connector points towards the slot and the arrow shows on the top face of the card.
2. Slide the card into the slot. A low tone followed by a high tone lets you know that the card is fully inserted and recognised. (If you turn off the sound through the function keys or volume control, no sound is emitted.)

Caution: other tone sequences such as high, then low tones, indicate that the card is inserted, but the card type is unknown.



Removing a PC Card

1. Double-click on the **Safely Remove Hardware** (A) icon located in the notification area of the taskbar.



2. In the *Safely Remove Hardware* window, select the PC card you wish to remove, and click on the **Stop** button.
3. When prompted, click **OK** to confirm.
4. Press the button on the side of the PC card slot, and eject the card.
5. Click on **Close** to close the *Safely Remove Hardware* window.

Internal Modem

The Versa may come equipped with a 56K capable fax/data modem that allows you to communicate with others via fax, e-mail, or connect to an online service or bulletin board. (The modem is only available on some models.)

Note: due to FCC regulations in effect at the time this document was printed, the 56K modem transmits at a maximum speed of 52K.

The speed of data transmission is dependent on the quality of telephone lines. Digitally terminated lines improve the speed of data transmission. Contact your service provider for more information.

Note: in some instances, your modem may not detect the correct country as your default country settings. In this case, you will need to change the country settings manually.

(1) In Windows XP, select **Start, Control Panel**, click on **Printers and Other Hardware, Phone and Modem Options**, and click on **Edit** to change the dialling settings for the specified location.

(2) In Windows 2000, select **Start, Settings, Control Panel**, double-click on **Phone and Modem Options**, and click on **Edit** to change the dialling settings for the specified location.

(3) In other Windows operating systems, select **Start, Settings, Control Panel**, and double-click on **Modems**. Click on the **Dialing Properties** button to specify the relevant location information.

Connecting the Modem

The fax/data modem provides one standard phone connector. We provide one analogue cable for your convenience.

Note: when using a modem outside your country, you might need an international telephone adapter, available at most electronics supply shops.

Warning: use only 26AWG phone line when connecting the modem.

Use the following steps to connect the analogue phone cable to your modem.

Note: when using a modem outside of the country where you purchased it, you might need an international telephone adapter, available at most electronics supply stores.

1. Locate the analogue phone cable that ships with the Versa. Each end of the cable is fitted with a RJ-11 connector.
2. Connect one end of the cable into a standard telephone wall outlet.
3. Connect the other end of the cable into the modem port on your Versa.

Internal LAN

Your Versa system may ship with an internal LAN feature that allows you to connect your system to a local area network. The internal LAN feature allows a 10/100 Ethernet LAN connection and supports Wake-on-LAN and network boot functions.

Follow these steps to take advantage of the internal LAN feature.

1. Locate the LAN port on the Versa.
2. Plug one end of your LAN cable into the LAN port jack.
3. Plug the other end of the LAN cable to a local area network.

802.11b Wireless LAN Card

Some Versa notebooks come with built-in wireless LAN capabilities featuring the Wi-Fi™ (wireless fidelity) IEEE 802.11b High Rate (HR) standard for business users. Wireless LAN eliminates the need for connecting cables between your computer and your local area network, facilitating mobility, minimising downtime, and improving your productivity.

The Wi-Fi compliant radio technology provides high-speed (11 Mbps) wireless networking with the performance capabilities of a wired 10BaseT LAN connection.

See the following sections for information about using the wireless LAN solution, and the corresponding ['Frequently Asked Questions'](#) section for additional information about wireless networking.

Caution: as explained in the *Quick Start Guide*, your notebook features several ways to perform a recovery process, should it be necessary. Depending on your configuration, you may choose to restore from the hard disk drive, from a set of master CDs, or from a network. However, we recommend you to NOT select **Recovery From a Network**. As no DOS drivers are available for the wireless LAN feature, you will not be able to recover your system from a network.

Enabling Wireless LAN

Use the [Wireless on/off button](#) to enable or disable the 802.11b Wireless LAN feature. A LED located on the right side of your Versa, near the volume control knob lights up green when the Wireless LAN feature is available.

Connecting to a Wireless Network

1. Make sure that the Wireless on/off button is set to **ON**.
2. Locate in the notification area of the taskbar the **Wireless Connection** icon (identical to the Local Area Network icon), and right-click on it.
3. Click on **View Available Wireless Networks**; the *Connect to Wireless Network* window opens.
4. Select the available network of your choice, and click on **Connect**.

Note: later on, your notebook may automatically reconnect to your preferred network. Click on the **Advanced** button, and add the network in your *Preferred networks* list.

To disconnect from a wireless network, slide the Wireless on/off button to **OFF**.

Wireless LAN Software Interface

Client Manager

Click on **Start**, select **All Programs**, **Wireless** and click on **Client Manager**.

Use the *Client Manager* to display or edit the current configuration profile (opens the *Wireless Network Connection Properties* window), but also to diagnose wireless connection troubles resulting from hardware problems or radio signals quality.

Help is available by pressing **F1**, clicking on the **Help** button or on **Help** in the menu bar.

Wireless LAN Regulations

Specific regulations apply when using wireless LAN products. [Click here](#) for more information on these regulations.

Preparing for Travel

The Versa computer makes a natural travelling companion. With a little preparation you can use the computer anywhere you go, to prepare your business documents, confirm your travel plans, surf the Internet, or simply stay in touch with those back home!

Here is what you should do before you leave home:

Note: speed the trip through airport security by carrying a charged system. Inspectors want to see the screen display a message. The boot message is usually sufficient.

If your system is fully charged, the inspection only takes a minute or so. Otherwise, be prepared to attach the AC adapter and power cable. And if you don't have these, the inspection might include a disassembly of the system.

- Back up your Versa's hard disk.
- Insert a fully charged battery to make sure your system is ready to quickly boot up at the airport security check.
- Fully charge all your batteries.
- Tape your business card to your Versa, AC adapter, and batteries.
- If you run your system with battery power, maximise battery life by using power-saving features whenever possible.
- Take along any application or data files on diskette that you might need.
- Check that you have everything you need before you leave on a trip.

What To Take

The following are what you should take with you when you travel with your Versa.

- Extra fully charged batteries.
- Single-outlet surge protector.
- Appropriate AC plug adapter for international voltage requirements.
- AC extension cord.
- Extra phone cord to reach wall jacks.
- Copy of proof of purchase for your computer and other equipment or customs registration form for customs check.
- The UltraCare Technical Support Pocket Memo, detailing the international technical support phone numbers.
- Customer support phone numbers for your software.
- Your notebook's Quick Start Guide.

Power Connections

With the right accessories, you can run your Versa almost anywhere! Your system self-adjusts to various power sources. The United States, Canada and most of Central and South America use 120-volt alternating current (AC). Most other countries of the world use 240-volt AC. Make sure the power source falls within the system compatible range.

There are a few countries with areas that use direct current (DC) as their main power source. You need a DC-to-AC converter in particular areas of Argentina, Brazil, India, Madeira and South Africa.

To use your system outside of your country, you need an adapter plug. There are several different plugs available worldwide. You can buy these at an electronics supply store.

Getting Through Customs

With so many countries in the world, you can be sure that there are a variety of customs regulations. Plan wisely to get your Versa notebook computer through customs by carrying the appropriate documentation to assure the customs agent that your system is not a recent purchase.

Travellers are often asked, when returning to their home country, whether or not they purchased the computer while outside the country. Sometimes, the proof of purchase such as a bill of sale, insurance policy, or purchase receipt is sufficient. Taking along the purchase receipt for your notebook may sound practical, but may not always suffice, particularly when the purchaser of the computer is your company and the original receipt is not available to you.

Connecting Using Your Modem (if applicable to your system)

Whether you are on a business trip or on holiday, connecting to the Internet while you travel can be expensive and frustrating unless you are prepared.

Here are some tips on how to avoid frustration and expenses while on the road.

1. Before leaving home, check with your Internet Service Provider to see if it has:
 - a local access number at your point of destination.
 - a toll-free number that can also save you money.
 - in the absence of a local ISP access number or toll-free number, charging the call to your home phone can be less expensive than charging the call to your hotel room.
2. Prepare your system for phone line access in another country.
 - Line access outside of a hotel may require an additional digit preceding the phone number string. Be sure to modify your dial-up connection, as required.
 - To avoid unusual dialling tone sounds sometimes encountered in hotels, you may have to modify a modem configuration setting to ignore the dialling tone.
3. Always check the phone line to determine whether or not it is digital or analogue. The internal modem in your Versa system has built-in protection that detects the presence of a digital phone line and displays a warning message to alert you.

Connecting Using a LAN (if applicable to your system)

Many hotels and Convention Centres now offer direct Internet access for a nominal fee. If your hotel provides this service, follow these guidelines for connecting and configuring your system.

Many hotels can provide a LAN cable by prearrangement, so you can travel with a minimum of accessories.

1. Plug the LAN cable into your system and the LAN connector in the room or hall where you want to access the Internet.
2. After connecting the LAN cable, connect your system to an AC power outlet (if desired) and power on your system.
3. Try launching your browser (Microsoft *Internet Explorer*, or *Netscape Communicator*, for example):
 - If your TCP/IP network settings are already configured to "Use DHCP for WINS Resolution" you should be able to access the Internet.
 - If your TCP/IP network settings are not set to use DHCP, a help screen may appear, or you may be directed to call the LAN provider for assistance configuring your system.

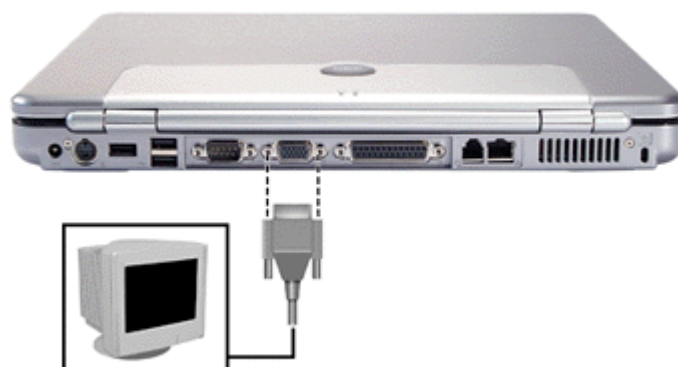
Follow the instructions that are provided to you completely, so your settings work effectively with the provider's system.

External Monitor

You can add a standard external monitor to your Versa system using a display signal cable (usually provided with the monitor). One end of the cable must have a 15-pin connector for the system.

Connect an external monitor to your system as follows.

1. Check that the Versa is powered off and the monitor power switch is turned off.
2. Attach the 15-pin cable connector to the monitor port on the system. Secure the cable connection with the screws provided.



3. Connect the monitor power cable and plug it into a properly grounded wall outlet.
4. Follow any set-up instructions in the monitor's user's guide.
5. Turn on power to the system and device.
6. Use **Fn-F3** to toggle through the different display modes (LCD only, CRT only, LCD/CRT simultaneous display, and TV-Out mode).

Display Properties window

Should it be necessary, you can also switch to the CRT display or LCD/CRT simultaneous display using the *Display Properties* window.

1. Open the *Display Properties* window, and click on the **Settings** tab. (For more information on how to open this window, refer to the ['Tips'](#) section of this guide relevant to your operating system.)
2. Click on the **Advanced** button, and select the **Displays** tab.
3. In the **Display Devices** area, select the **Monitor**, click on **Apply** and then on **Yes**.

Using the Extended Mode

Using two display devices connected at the same time, such as a CRT monitor and your notebook LCD, you can extend your Windows XP desktop on both these display devices, allowing you to display for instance your email software application on one screen, and to work in a word processor on the second screen.

Follow the steps below to benefit from the extended mode:

1. Connect an external display device following the steps 1 to 6 detailed above.
2. Use **Fn-F3** to toggle to the LCD/CRT simultaneous display mode.
3. Open the *Display Properties* window, and click on the **Settings** tab. (For more information on how to open this window, refer to the ['Tips'](#) section of this guide relevant to your operating system.)
4. The monitor **1** is selected by default. Click on the monitor **2**, select the option **Extend my Windows desktop onto this monitor**, and click on **Apply**.
5. Both displays are now active, the monitor 2, being the extension of the monitor 1. Click on **Identify**

to display temporarily on each screen which is 1 and which is 2.

6. On the Settings tab, notice that the monitor 2 is virtually located to the right of the monitor 1. To understand this point, drag the *Display Properties* window to the right of your monitor 1 screen. You should see it appear on the left of the monitor 2 screen...
7. Drag the window back on the monitor 1, and on the Settings tab, drag the monitor 2 icon to the left of the monitor 1. Click on **Apply**. Now, if you drag any item from the monitor 1 desktop fully to the left, you should see it appear on the right of the monitor 2 screen.

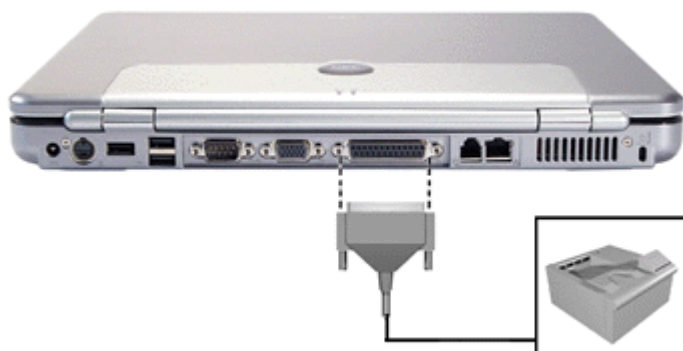
Note: to change the display resolution of a monitor, select the monitor via the **Display** drop-down box, and drag the cursor to the resolution of your choice in the *Screen resolution* area.

Parallel Devices

Note: in Windows, when you connect a printer, be sure to install the appropriate printer driver through the Control Panel.

Connect a parallel device to your system as follows.

1. Check that power to both the Versa and the device is off.
2. Align and connect the 25-pin parallel cable (small end) connector to the port on the system and either lock the connector clips or secure the thumb screws.
3. Align and connect the other end of the cable to the parallel port on the device. Either lock the connector clips or secure the thumb screws.



4. Connect the power cable to the device and a properly grounded wall outlet.
5. Follow any specific set-up instructions in the device's user's guide.
6. Turn on power to the system and the device.

Note: check that the device is online before you try to use it. Refer to the device's documentation for instructions.

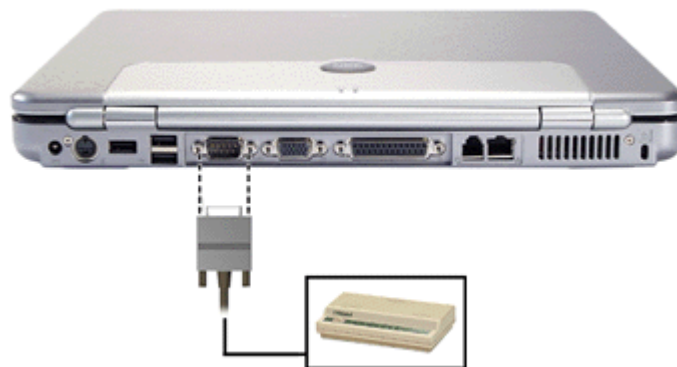
Serial Devices

To install a serial device such as a printer or an external modem, you need a cable with a female 9-pin connector.

Note: in Windows, when you connect a printer or modem, be sure to install the appropriate driver through the Control Panel.

Connect a serial device to your system as follows.

1. Check that power to both the Versa and the device is off.
2. Align and connect the 9-pin connector with the serial port on the system. Secure the connection with the screws provided.
3. Align and connect the other end of the cable to the appropriate port on the device. Secure the connections with the screws provided.



4. Connect the power cable to the device and a properly grounded wall outlet.
5. Follow any specific set-up instructions in the device's user's guide.
6. Turn on power to the system and the device.

Note: make sure your device is online before trying to use it. Refer to the device's documentation for instructions.

Television Connection

Your Versa is equipped with an S-Video out port that allows you to use a television as an external display device in the Windows environment.

Note: if possible, you should avoid using an adapter cable that changes the connection type (e.g. S-Video to RCA), since this can effect image quality. Furthermore, some S-Video to RCA adapter cables may not be supported. Please contact an authorised sales representative for more information.

The TV out port supports 640x480, 800x600, and 1024x768 display settings. However, for optimal resolution when using the TV out port, select the following settings:

- 640x480 or 800x600 when the video output device is a television.
- up to 1400x1050 (Versa with SXGA 15-inch screen) or 1024x768 (Versa with 14-inch or 15-inch XGA screen) when the video output device is an LCD panel or an external monitor (CRT).

Note: the Versa does not support the SECAM signals used in some countries.

Follow these steps to connect your television as an external display device.

1. Connect one end of the standard composite cable into the S-Video Out port on your Versa and the other end of the cable into the standard S-Video connector on your television or VCR.



2. Switch on your television and computer.
3. Use **Fn-F3** to toggle through the different display modes (LCD only, CRT only, LCD/CRT simultaneous display, and TV-Out mode).

Display Properties window

Should it be necessary, you can also switch to TV-Out mode using the *Display Properties* window.

1. Open the *Display Properties* window, and click on the **Settings** tab. (For more information on how to open this window, refer to the ['Tips'](#) section of this guide relevant to your operating system.)
2. Click on the **Advanced** button, and select the **Displays** tab.
3. In the **Display Devices** area, select the **TV**, click on **Apply** and then on **Yes**.

USB Ports

Your Versa is equipped with two USB ports that increase your connectivity choices. The USB ports allow you to connect up to 127 USB-equipped peripheral devices to your Versa notebook computer. These peripherals may include a digital camera, scanner, printer, CD-ROM drive, modem, mouse, keyboard, telephone, or game device.

USB devices called USB hubs can serve as connection ports for other USB peripherals. Only one device needs to be plugged into your Versa. Additional peripherals can be connected in a daisy chain configuration where one device is connected to another in a series. Up to 127 devices can be connected together in this way.

Note: some USB devices draw their power from the notebook power system, thereby reducing battery life. Always connect your system to an AC power source before connecting these devices.

Connect an external USB device to your system as follows.

1. Locate any of the USB ports on your system.
2. Follow any specific set-up instructions in the device's user's guide.

Note: USB devices can be hot-swapped or plugged, meaning that you do not need to turn off your system before plugging or removing USB devices.

3. Plug the USB device into one of the USB ports. Another USB device can be plugged into the other port.



Note: refer to the device's documentation for any additional instructions.

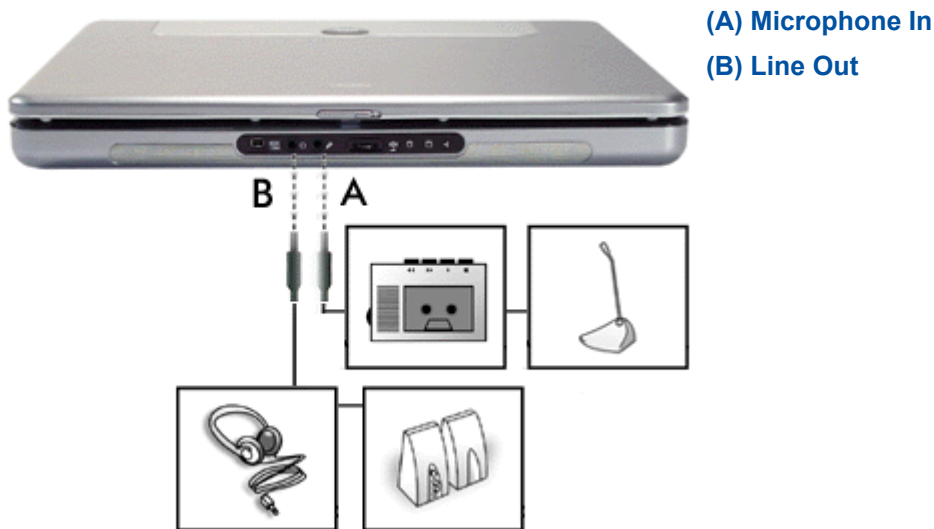
Audio Options

The Versa comes equipped with built-in audio ports that let you record and play sound.

Note: for more information on Audio features, refer to the ['Audio'](#) section of this guide.

Connect audio jacks, like a microphone, headphones, or external speakers to the audio ports as follows.

1. Locate the audio port that you want to use.
2. Plug the jack into the appropriate port on the Versa.



Note: if you are using external speakers or an external microphone and experience sound distortion or feedback, lower the volume.

Some feedback is caused by having the microphone and speakers too close to each other, so moving the external audio option away from the unit may also help.

IEEE 1394 Devices

Your Versa is equipped with an IEEE 1394 port that increases your connectivity choices. This port allows you to daisy chain up to 63 IEEE 1394 devices to your system. IEEE1394 devices support Plug and Play connectivity for transfer rates of up to 400 Mbps. These peripherals may include a digital camera, scanner, printer, or other device.

Note: IEEE 1394 connectors of two types (4-pin, also known as Mini-IEEE 1394, or 6-pin) are widely available. Make sure that your IEEE 1394 cable is equipped with the plugs that fit in your notebook and IEEE 1394-compliant device. Both devices must not necessarily be equipped with the same type of plug.

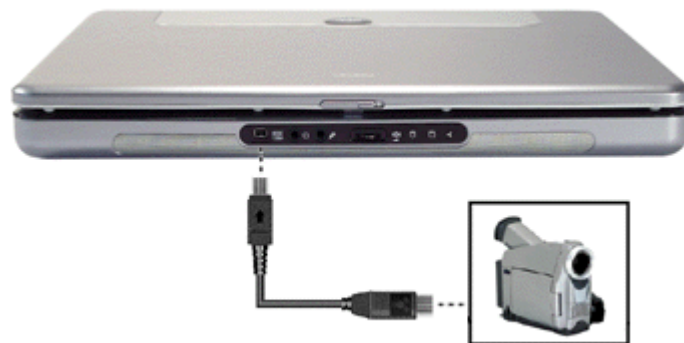
Connect a IEEE 1394 device to your system as follows.

1. Install the drivers for your device in Windows.
2. Locate the mini-IEEE 1394 port on your system.

Note: some IEEE 1394 devices draw their power from the notebook power system, thereby reducing battery life. Always connect your system to an AC power source before connecting these devices.

3. Plug the IEEE 1394 device into the mini-IEEE 1394 port.

Note: IEEE 1394 devices can be hot-swapped or plugged, meaning that you do not need to turn off your system before plugging or removing IEEE 1394 devices.

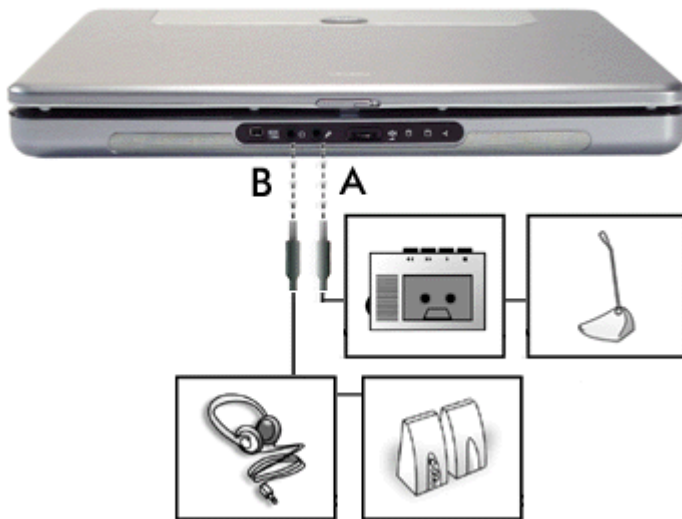


Note: refer to the device's documentation for any additional instructions.

Audio

The Versa provides entertainment-level sound quality through internal stereo speakers. It handles MIDI files and digital audio files recognising .WAV, .MID, .MP3 and other formats. The system also provides PC99 compliant audio.

Audio Controls on your Versa



■ **Microphone In (A)** - allows you to connect an external microphone for monophonic recording or amplification through the unit.

You can capture and record sounds through the internal microphone on the Versa or through an external microphone that connects to the system through the line in port. You can record voice-overs for narration, reminders, or special instructions. Plugging in an external microphone disables the built-in microphone.

See the 'Recording' section below for details about recording sound with the microphone.

■ **Line Out (B)** - lets you plug in stereo headphones or powered speakers.

Recording

The following procedure describes how to use the *Microsoft Sound Recorder* to record sound into a file on the Versa. (For details, see the online help that is available when you open the *Sound Recorder*.)

1. Locate the *Sound Recorder* by sliding the cursor over **Start, Programs/All Programs, Accessories, Entertainment** and select the **Sound Recorder** line.
2. Use the touchpad to press the **Record** button on the screen. The Record button has a red circle in the middle.
3. Speak into the microphone to create a sound file.
4. When you finish recording, press the **Stop** button. Be careful when recording; audio files can become quite large.

Compact Disc Input

You can record music and sound effects from a CD (compact disc) and store them on your hard disk. The audio signal from the CD-ROM or DVD-ROM drive connects directly to your Versa.

Simply follow the instructions below to record sound from an audio CD.

1. Go to **Start, Programs/All programs, Accessories, Entertainment** and select the **Windows**

Media Player.

2. Click on **Copy from CD** on the taskbar located on the left of the application window.

Note: help bubbles can be displayed for any item that is shown on the *Windows Media Player* window. Let the mouse cursor hover for a second over any button to display the corresponding help bubble.

3. Insert an audio CD in the optical disc drive. The notebook will automatically start playing the first track located on the CD. Click on the **Stop** button located on the bottom of the window to stop the playback.
4. Select the tracks you wish to record on your hard disk drive (by default, all the tracks are selected).
5. Click on the **Copy Music** button located above the tracks. The selected tracks will be automatically copied to the Media Library.

Note: to select the Media Library path, click on **Tools**, select **Options**, and make the relevant changes on the **Copy Music** tab.

Later on, if you wish to listen to the tracks you recorded to your hard drive, click on **Media Library** on the taskbar located on the left of the application window, select the track(s) of your choice, and click on the **Play** button.

For more information on the *Windows Media Player*, press **F1** or click on **Help** in the *Windows Media Player* menu bar.

Playing Back

You can play back your recorded soundtrack through stereo headphones, the internal Versa stereo speakers, or external stereo speakers. You can play several types of audio files as well as audio CDs.

Play audio from files or audio devices as follows*.

1. Go to **Start, Programs/All programs, Accessories, Entertainment** and select the **Windows Media Player**.
2. Click **File, Open**, and select the file of your choice. Click on **Open**. The selected file will automatically start playing. Press the **Stop** button to stop the playback.

Note: if the audio files were stored in the *Windows Media Player* Media Library, you can easily access them by clicking on **Media Library** on the taskbar located on the left of the application window.

* This example shows how to use the *Windows Media Player* application in **Accessories**. You can also play audio through the *Sound Recorder*. See the *Sound Recorder* help files for details on its use.

Adjusting the volume

Use any of the following means to adjust the playback volume:

-  volume control feature that can be found in the **Accessories** menu or on the toolbar,
-  volume control knob located on your Versa,
-  volume control located on the external speakers (if applicable).

Using Headphones

The Versa headphones port delivers sound at half a watt. Stereo headphones (available at an electronics supply store) plug in through the Line Out jack located on the Versa.

Note: using headphones disables the internal speakers.

Using the Built-In Speakers

The Versa has built-in stereo speakers that are available wherever you take it.

Using External Stereo Speakers

Audio

For full stereo sound impact, you can plug a pair of stereo speakers into the headphones jack.

Note: using external speakers disables the internal speakers.

Video

The Versa features a TFT panel and superior resolution, allowing for sharp effective visuals right on the system or projected onto an external CRT monitor.

Use your Versa to run full motion, full-screen MPEG video.

Using Digital Video Files

Your Versa may feature an IEEE 1394 port that allows you to plug any video device, including VCRs, televisions, camcorders and laser disc players into your Versa and record motion graphics to your hard drive. For more information on these features, please refer to the corresponding ['Frequently Asked Questions'](#) section.

Using Animation Files

You can create a dynamic presentation using an animation application. Animation can illustrate a concept, drive home an important point, or command attention. Graphics animation can add punch to a presentation with an animated illustration, a flashing arrow, or a flying logo.

Multimedia Applications

A growing number of multimedia applications are available for PC/Notebook users. These multimedia software packages include graphics packages, animation software, and presentation authoring systems as follows:

- Animation software allows you to create 3-D effects and 3-D titles and add interest to an otherwise static presentation.
- Authoring packages let you pull all the elements of your design into an exciting, interactive multimedia presentation.

Setting Up a Healthy Work Environment

Click on one of the links below to jump to the related section.



Arrange Your Equipment

- Your Chair
- Your Desk
- Your Input Devices
- Your Screen or Monitor



Reducing the Risk of Injuries

- Vary Your Workday
- Practice Some Stretching Exercises



Potential Medical Conditions

- Repetitive Strain Injury
- Pre-Existing Conditions and Psychosocial Factors

Arrange Your Equipment

You will find below explanations on how to set up your computer to fit your physical needs. This information is based on ergonomics - the science of making the workplace fit the needs of the worker.

Warning: prolonged or improper use of a computer workstation may pose a risk of serious injury. To reduce your risk of injury, set up and use your computer in the manner described below. Please note that some people are more susceptible to developing these disorders due to pre-existing conditions or psychosocial factors (see ['Pre-existing Conditions and Psychosocial Factors'](#)), and that precautions can be taken in order to prevent physical discomfort (see ['Reducing the Risk of Injuries'](#)).

Note: to increase your comfort and safety when using your notebook computer as your primary computer system at your home or office, note the following recommendations:

-  use a separate, external keyboard attached to your notebook computer
-  use a separate, external monitor attached to your notebook computer.

Arrange your equipment so that you can work in a natural and relaxed position. Place items that you use frequently within easy reach. Adjust your workstation set-up to the proper height (as described below) by lowering the table or stand that holds your computer equipment or raising the seat height of your chair. Position your notebook computer directly in front of you for increased safety and comfort.

Your Chair

Your chair should be adjustable and stable. Vary your posture throughout the day.

Check the following:

-  Keep your body in a relaxed yet upright position. The backrest of your chair should support the inward curve of your back.
-  Use the entire seat and backrest to support your body. Tilt the backrest slightly (90° to 105°). The angle formed by your thighs and back should be 90° or more.
-  Your seat depth should allow your lower back to comfortably contact the backrest. Make sure that the backs of your lower legs do not press against the front of the chair.
-  Extend your lower legs slightly so that the angle between your thighs and lower legs is 90° or more.
-  Place your feet flat on the floor. Only use a footrest when attempts to adjust your chair and workstation fail to keep your feet flat.
-  Be sure that you have adequate clearance between the top of your thighs and the underside of your workstation.
-  Use armrests or forearm supports to support your forearms. If adjustable, the armrests or forearm supports should initially be lowered while all the other adjustments discussed in this section are made. Once all these adjustments are completed, raise the armrests or adjust the forearm supports until they touch the forearms and allow the shoulder muscles to relax.



Your Desk

There is no specific height recommended for your desk. This can vary between 60 to 70 cm, depending upon your size. The standard workaround is that it should be at approximately your elbow height.

The desktop should be clean and organized in such a way that frequently used objects are close enough without excessive reaching. If you use a document holder, it should be placed at approximately the same

height as the monitor and at the same distance from the eyes to prevent frequent eye shifts.

The area underneath the desk should be clean to accommodate your legs and allow for stretching.

Your Input Devices

Note the following points when positioning your notebook computer or any external input devices.

- Position your keyboard directly in front of you. Avoid reaching when using your keyboard or mouse.
- If you use a mouse, position it at the same height as the keyboard and next to the keyboard. Keep your wrists straight and use your entire arm when moving a mouse. Do not grasp the mouse tightly. Grasp the mouse lightly and loosely.
- Adjust the keyboard height so that your elbows are near your body and your forearms are parallel to the floor, with your forearms resting on either armrests or forearm supports, in the manner described previously. If you do not have armrests or forearm supports, your upper arms should hang comfortably at your sides.
- Adjust the keyboard slope so that your wrists are straight while you are typing.
- Type with your hands and wrists floating above the keyboard. Use a wrist pad only to rest your wrists between typing. Avoid resting your wrists on sharp edges.
- Type with your wrists straight. Instead of twisting your wrists sideways to press hard-to-reach keys, move your whole arm. Keep from bending your wrists, hands, or fingers sideways.
- Press the keys gently; do not bang them. Keep your shoulders, arms, hands and fingers relaxed.

Your Screen or Monitor

Correct placement and adjustment of the screen or external monitor can reduce eye, shoulder, and neck fatigue. Check the following when you position the screen or external monitor.

- Adjust the height of your screen or external monitor so that the top of the screen is at or slightly below eye level. Your eyes should look slightly downward when viewing the middle of the screen or external monitor.
- Position your screen or external monitor no closer than 30cm and no further away than 75cm from your eyes. The optimal distance is between 35cm and 45cm inches.
- Rest your eyes periodically by focusing on an object at least 6 metres away. Blink often.
- Position the screen or external monitor at a 90° angle to windows and other light sources to minimise glare and reflections. Adjust the monitor tilt so that ceiling lights do not reflect on your screen or external monitor.
- If reflected light makes it hard for you to see your screen or external monitor, use an anti-glare filter.
- Clean your screen or external monitor regularly. Use a lint-free, non-abrasive cloth and a non-alcohol, neutral, non-abrasive cleaning solution or glass cleaner to minimise dust.
- Adjust the screen or external monitor's brightness and contrast controls to enhance readability.
- Use a document holder placed close to the screen or external monitor.
- Position whatever you are looking at most of the time (the screen or reference material) directly in front of you to minimise turning your head while you are typing.
- Get regular eye check-ups.

System Components

Click on one of the shortcuts below to jump to the selected piece of information.



System Processor



Random Access Memory (RAM)



Read-Only Memory (ROM)



Calendar Clock



Audio



Input/Output (I/O) Facilities



PC Card Slots



LCD Panel



Keyboard



Internal Hard Disk Drive



24x CD-ROM Drive (depending on the model)



8x/24x DVD-ROM Drive (depending on the model)



8x/10x/16x/24x DVD-ROM/CD-RW Combination Drive (depending on the model)



LAN Feature



MDC Modem



Mini-PCI 802.11b Wireless LAN card (depending on the model)



Power



Dimensions



Weight



Recommended Environment

System Components

The following system component specifications are standard except where noted.

Note: the specifications listed here vary according to the model and are subject to change without notice.

System Processor

Depending on the model:

- Intel® Pentium® 4 Processor-M 1.6 GHz or higher
- Mobile Intel® Celeron® processor 1.4 GHz or higher

Random Access Memory (RAM)

- 1 memory slot available for expansion
 - Minimum of 128 MB installed
 - un-buffered PC2100 compatible DDR SO-DIMM (bus speed fixed at 133 MHz)
 - Expandable in 128 MB, 256 MB, or 512 MB increments
 - Maximum 1024 MB total
- Video RAM - 32 MB shared with system memory
- Cache Memory: either 256 KB (Celeron®) or 512 KB (Pentium® 4 Processor-M) L2 cache

Read-Only Memory (ROM)

- 4 Mb Flash ROM

Calendar Clock

- Year/month/day/hour/minute/second maintained by internal back-up battery

Audio

- PCI based, AC97 Codec rev 2.1 compliant
- SoundBlaster compatible

Input/Output (I/O) Facilities

Integrated industry-standard interfaces

System Components

- **DC In** - 1 port, for AC adapter cable
- **TV out** - 1 port, RCA signal
- **USB port** - 3 ports, 4 pin
- **Serial port** - 1 port, 9-pin D-sub
- **VGA port** - 1 port, 15-pin high-density D-sub
- **Parallel port** - 1 port, 25-pin D-sub
- **Modem port** - 1 port, RJ-11 jack (depending on the model)
- **LAN port** - 1 port, RJ-45 jack (depending on the model)
- **IEEE 1394** - 2 ports, 4 pin
- **Microphone** - 1 port, 3-pin, Mini Pin jack
- **Headphones** - 1 port, 3-pin, Mini Pin jack
- **PC Card** - see below for more information

PC Card Slots

- Two 32-bit card slots for two Type II PC cards or one Type III PC card, 5 V or 3.3 V interface

LCD Panel

- **Panel:**
 - 14 or 15-inch Thin Film Transistor (TFT) Extended Graphics Array (XGA) colour
- **Supported resolutions:**

Output device	Recommended resolution	Maximum resolution
LCD screen	1024 x 768	2048 x 1536
CRT monitor	1024 x 768	2048 x 1536 (depends also on the CRT screen used)
Tv-out mode	800 x 600	800 x 600

Keyboard

Membrane keys with standard QWERTY-key layout (depending on the model)

- **Function keys** - 12 keys
- **Cursor Control keys** - 4 keys; arrow keys arranged in inverted T layout
- **Numeric keypad** - embedded
- **Special Windows key set**
- **Fn key** - function key for ROM-based key functions

Internal Hard Disk Drive

Specifications vary depending upon model:

- Internal, 2.5 inch, IDE
- Capacity: 20, 30, 40 GB or higher

24x CD-ROM Drive (depending on the model)

- Thin-type CD-ROM Pack
- Burst Transfer Rate:
 - PIO Mode 4/Multiword DMA mode 2: 16.7 MB/s
 - Ultra DMA mode: 33.3 MB/s
- Read Rate
 - CD, approx 3600 KB/sec
- Average Access Time
 - Random: 110 ms typical
 - Full Stroke: 220 ms typical
- Data Buffer: 1 MB
- Interface: IDE (ATAPI)
- CD Compatibility: CD-DA, CD-ROM, CD-XA, Multi-session Photo CD, CD-I, CD-Plus, CD-R, and CD-RW discs.

8x/24x DVD-ROM Drive (depending on the model)

- Burst Transfer Rate:
 - Ultra DMA 33: 33.3 MB/s
- Transfer Rate
 - CD, 3600 KB/sec max
 - DVD-ROM (single layer), 10800 KB/sec max
 - DVD (dual layer), 10800 KB/sec max
- Average Access Time
 - DVD-ROM (single layer), 90 ms (Random)
 - DVD-ROM (dual layer), 130 ms (Random)
 - CD, 85 ms (Random)
- Data Buffer: 512 KB
- Interface: IDE (ATAPI)
- CD Compatibility: CD-Audio, CD-ROM, CD-ROM XA (mode 2, form 1, form 2), CD-R, CD-RW, Photo CD, CD-Extra, CD-I
- DVD Compatibility: DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18), DVD-R (3.95 and 4.7 GB/side), DVD-RW (4.7 GB/side), DVD+RW (4.7 GB/side), DVD-RAM (2.6 and 4.7 GB/side)

DVD-ROM/CD-RW Combination Drive (depending on the model)

8x DVD/ 10x CD-RW/ 16xCD-R/ 24x combination drive

■ Speed

- Read, 24X max (CD), 8X max (DVD)
- Write, 16X (CD-R), 10X (CD-RW)

■ Read Transfer Rate

- CD, 3600 KB/s max (mode1)
- DVD, 10800 KB/sec max

■ Average Access Time - 180 ms (DVD), 130 ms (CD)

■ Data Buffer - 2MB

■ CD Compatibility - CD-DA, CD-ROM, CD-ROM XA, CD-I Ready, Photo CD, Video CD, Multisession CD, CD-R, CD-RW, CD-Extra, CD-text

■ DVD Compatibility - DVD-Video, DVD-ROM, DVD-5, DVD-9, DVD-10, DVD-18, DVD-R (3.9 GB, 4.7 GB)

LAN Feature

■ 10BASE-T and 100BASE-TX compatible

■ Remote Power On, Wake on LAN

■ LAN Boot support and WFM 2.0 compliant

MDC Modem (depending on the model)

■ Internet connection rates up to 56 kbits/s

■ Data modem: supports ITU-T V.92, V.90 (56 kbits/s), V.34 (33.6 kbits/s). Backward compatibility with previous standards.

■ Fax modem: supports ITU-T V.17 (14,4 kbits/s), V.29. Backward compatibility with previous standards.

■ Data compression V.42bis, MNP Class 5

■ Error correction V.42 LAPM and MNP 2-4

■ AT Command set: TIA/EIA 602 standard

■ Telephony: Dual Tone Multi Frequency (DTMF) compliant

■ Mobile Daughter Card (MDC) V1.0 form factor

■ AC'97 2.1 compliant

■ Wake on Ring support

Mini-PCI 802.11b Wireless LAN card (depending on the model)

System Components

- Up to 11Mb/s data transfer rate by incorporating Direct Sequence Spread Spectrum. The rate can be manually set to 11, 5.5, 2, 1 or the Fully Auto transmit rate.
- IEEE 802.11b compatible.
- Connect to Access Point mode: the PC can access the LAN or WAN by connecting automatically to the access point set within the proper range of the system.
- Peer-to-Peer mode: PCs can easily build an Ad Hoc wireless LAN by using Ad Hoc mode with the same channel and SSID, and without any access point.

Specifications:

- Frequency band: 2400 to 2497 MHz (2.4 GHz band)
- Channel support:
 - US/Canada: 11 (1 to 11)
 - Major European countries: 13 (1 to 13)
 - France: 4 (10 to 13)
 - Spain: 2 (10 to 11)
 - Japan: 14 (1 to 14)
- Current consumption:
 - Transmitting: 380 mA max
 - Receiving: 215 mA max
 - Standby: 90 mA max
- Radio power: 14 dBm $\pm$ 2 dBm
- Operating range:
 - Indoor: 37 meters at 11Mb/s
 - Outdoor: 122 meters at 11Mb/s
- Mini-PCI V1.0 compliant

Power

AC Adapter

- Input Voltage: 110 to 240 volts (V) AC, 47/63 Hz (auto-switching)
- Output Voltage: 19.0 volts DC, 3.16 A

Main Battery

- Type: Lithium-Ion (Li-Ion), 8 cells
 - Output Voltage: 14.8 v
 - Capacity: 4000 mAh
- Recharging Time:
 - approximately 2.5 hours when the system is not in use
 - approximately 5 hours when the system is in use.

Dimensions

- Width: 329 mm
- Depth: 265 mm
- Height: 36,5 mm

Weight

- 2,77 kg

Recommended Environment

Operation

- Temperature: 5°C to 35°C (41°F to 95°F)
- Relative Humidity: 20% to 80% (Non-condensing)

Storage

- Temperature: -20°C to 40°C (-4°F to 104°F)
- Relative Humidity: 20% to 80% (Non-condensing)

Memory Map

The system supports system and video shadowing, both controlled through complementary metal oxide semiconductor (CMOS). The system supports BIOS as a cacheable area with write protection.

If you need to check the memory allocations, follow the procedure described below.

1. Click on **Start**, and right-click on **My Computer**. Click on **Properties**.
2. In the *System Properties* window, click on the **Hardware** tab. Click on the **Device Manager** button.
3. In the *Device Manager* window, click on the **View** menu, and click on **Resources by type**.
4. Click on the + sign in front of **Memory**.

Interrupt Controllers

The Interrupt Controllers are automatically assigned by Windows XP. If you need to check which IRQ is assigned to a specific device, follow the procedure described below.

1. Click on **Start**, and right-click on **My Computer**. Click on **Properties**.
2. In the *System Properties* window, click on the **Hardware** tab. Click on the **Device Manager** button.
3. In the *Device Manager* window, click on the **View** menu, and click on **Resources by type**.
4. Click on the **+** sign in front of **Interrupt request (IRQ)** to display a list of IRQs and their assignments.

Problem Checklist

First check the items in the following list. If these items don't help, see the table that follows the list.

- Power to the computer is on.
- The electrical outlet to which your AC adapter is connected is working. Test the outlet by plugging in a lamp or other electrical device.
- All cables are tightly connected.
- The display setting is configured correctly.
- The display brightness control is adjusted properly.
- If using battery power, check that the battery pack is properly inserted and fully charged.

Problem	Resolution
The system does not power on	If you are operating the system with battery power, check that the battery pack is correctly inserted. Attach the AC adapter to recharge the battery. If you have the AC adapter attached, check that you are using a working electrical outlet.
LCD screen is dark and blank	Power-saving mode has shut off the backlight. Press a keyboard key. The built-in LCD may not be selected. Press Fn-F3 once or twice to select the LCD video mode. Screen brightness needs adjustment. Use the Fn-F8 and Fn-F9 functions keys. The system entered Standby mode due to low battery power. Plug in the AC adapter before resuming operation.
Battery power does not last long	Use power-saving modes. Refer to the <i>'Managing System Power'</i> chapter relevant to your operating system. Fully charge and discharge the battery several times to recondition it. Refer to the <i>'Using the Battery'</i> chapter for more information. Replace the battery.
Information on the LCD is difficult to see	Use the Fn-F8 and Fn-F9 functions keys to adjust the brightness control. Tilt the LCD screen slightly forward or backward.
An optional component does not work	Make sure the component is securely installed or connected. Refer to the optional component documentation.
The Standby/Resume function does not work.	If the system does not enter Standby mode, a disk drive might be busy. Wait until the disk drive stops and try again. If system does not resume, it may have auto suspended on a low battery. Attach the AC adapter and try again.

Start-Up Problems

The system displays an invalid configuration error message at power on when there are the following conditions:

- the current configuration information doesn't match configuration information stored in Auto Setup, such as when an internal option is added.
- the system loses configuration information.

If either condition is true, the system displays an "invalid configuration information" message.

To continue start-up procedures, press **F2** (or **F1** when prompted) and run the Setup utility to set current system parameters.

If an error message appears before the operating system starts, look up the error message in the following table. Follow the instructions. If you see other error messages, the hardware might need repairing.

If the system frequently loses the Setup configuration data, the internal CMOS battery may need to be replaced at an authorised repair centre.

Post Error Messages

The Versa notebook has a built-in checking program that automatically tests its components when you turn the system power on. This diagnostic test is called the Power-On Self-Test (POST). If the system finds a problem during the POST, the system displays an error message. If this happens, follow the instructions in the POST Error Messages table.

Message	Resolution
Failure Fixed Disk	Fixed disk is not configured or working properly. Check to see if the fixed disk is attached properly. Run Setup . Find out if the fixed-disk type is correctly identified.
Stuck Key	A key is stuck on the keyboard.
Keyboard error	The keyboard is not working. Try replacing it.
Keyboard Controller failed	The keyboard controller failed test. You may have to replace the keyboard controller.
Extended RAM Failed at offset: nnnn	Extended memory not working or not configured properly at offset nnnn.
System RAM Failed at offset: nnnn	System memory not working or not configured properly in the 64k block in which the error was detected.
Shadow RAM Failed at offset: nnnn	Shadow memory not working or not configured properly in the 64k block in which the error was detected.
System battery is dead - Replace and run Setup	The CMOS clock battery indicator is dead. Contact your authorised service representative to replace the battery.
System CMOS checksum bad - replace and run SETUP	CMOS has been corrupted or modified incorrectly, perhaps by an application program that changes data stored in CMOS. Run Setup and reconfigure the system either using the Default Values and/or making your own selections.
System CMOS checksum bad - Default configuration used	CMOS has been corrupted or modified incorrectly, perhaps by an application program that changes data stored in CMOS. The BIOS used the default values. If necessary, run Setup and reconfigure the system by making your own selections. If the error persists, contact your authorised service representative.
System timer error	The timer test failed. Requires repair of the system board.
Real time clock	Real-time clock fails BIOS test. It may require board repair.

Start-Up Problems

error	
Check date and time settings	The BIOS found the system time out of range and reset the Real Time Clock. Run Setup and reconfigure the date and time.
Previous boot incomplete - Default configuration used	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 wait states, improper Setup settings can also terminate POST and cause this error on the next boot. If applicable, run Setup and verify that the wait-state configuration is correct. This error is cleared the next time the system is booted
Diskette drive A error.	Drive A: is present but fails the BIOS POST diskette tests. Check to see that the drive is defined with the proper diskette type in Setup .
Incorrect Drive A type - run Setup	Type of floppy drive A: not correctly identified in Setup.
System cache error - cache disabled	The RAM cache failed, and the BIOS disabled the cache. Contact your authorised service representative.
Failing Bits: nnnn	The hex number nnnn is a map of the bits at the RAM address (in System, Extended, or Shadow memory) which failed the memory test. Each 1 (one) in the map indicates a failed bit.
Operating system not found	An 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 nnnn	A parity error was found in the system bus. The BIOS attempts to locate the address. If it cannot locate the address, it displays ????.
Parity Check 2 nnnn	A parity error was found in the I/O bus. The BIOS attempts to locate the address. If it cannot locate the address, it displays ????.

Federal Communication Commission Interference Statement

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

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.

Statement Needed to be Shown on End Product

Since this module is installed inside the end product, the end product should be affixed a label on visible area showing that this product contain a RF module, and also its FCC ID.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

If You Need Assistance

If you have a problem with your computer, first review the ['Checklist'](#) and the ['Start-Up Problems'](#) troubleshooting table. You may also want to check out the ['Frequently Asked Questions'](#) section.

Note: reference the *NEC UltraCare Warranty Terms and Conditions* guide and its included *UltraCare Pocket Memo*, or *UltraCare Standard Warranty Sheet* to find out how to contact the local office in your country.

For technical support such as BIOS upgrades, consult our Web site at the following address: www.nec-online.com.

Frequently Asked Questions

Click on one of the shortcuts below to jump to the corresponding FAQs.

 [Technical Support](#)

 [Boot Problems](#)

 [PC Cards](#)

 [Floppy Disk Drive](#)

 [Computer Viruses](#)

 [Internet](#)

 [Miscellaneous](#)

 [Wireless Communication Protocols](#)

 [Digital Video and IEEE 1394 Devices](#)

These Frequently Asked Questions are common to a wide range of notebooks; please note that some may not be relevant to your Versa.

Wireless Communication Protocols

Note: your Versa may feature Wireless LAN 802.11b and/or Bluetooth support. Please refer to the '[System Components](#)' section for the detailed specifications of your wireless card (if applicable).

Basically, wireless communication can be divided in three categories:

- **Wireless Personal Area Network (WPAN)** - connecting personal wireless products to your computer, for instance synchronising a personal digital assistant (PDA) to a personal computer. This can be achieved via the Bluetooth standard. The range of this connectivity is about 10 meters in ideal conditions.
- **Wireless Local Area Network (WLAN)** – a wireless connection to an office or campus. There is still an existing Ethernet network, but the connection to the PC is wireless. This way, a person can take a portable PC around an office or campus while remaining connected to the network. The range of this wireless connectivity will be about 100 meters in a place with buildings and walls. This can be achieved via the 802.11b standard.
- **Wireless Wide Area Network (WWAN)** – access to the Internet/Intranet on the road or elsewhere, away from an office or campus. This type of wireless connection offers slower data rates but broad availability. This can be achieved via the third generation of mobile phones (such as GPRS and UMTS).

Bluetooth™

What is Bluetooth?

Bluetooth is a high-speed wireless (maximum 723 Kb/s) link system that is designed to work with portable equipment such as laptops, PDAs, cell phones or wired telephone access points.

How does it work?

Bluetooth operates in the unlicensed Industrial, Scientific and Medical (ISM) band at 2.45GHz, which is globally available for products. The link constantly switches channel to avoid interference, roughly about 1600 times a second through 79 frequency bands (83MHz bandwidth). All devices on a piconet (2 or more Bluetooth units sharing a channel) are synchronised and controlled by a master device to prevent simultaneous operation on the same frequency. Any device can be master, and is elected dynamically when the link starts up.

802.11b

What is 802.11b?

The Institute of Electrical and Electronics Engineers (IEEE) ratified the 802.11b standard (also known as 802.11 High Rate) for wireless LAN transmissions of up to 11 Mbps (5.5 and 11 Mb/s).

How does it work?

This standard defines two modes:

■ In infrastructure mode, the wireless network consists of at least one access point connected to the wired network infrastructure and a set of wireless end stations. This configuration is called a Basic Service Set (BSS). An Extended Service Set (ESS) is a set of two or more BSSs.

■ In Ad hoc mode, also called peer-to-peer mode or an Independent Basic Service Set (IBSS), a set of 802.11 wireless stations communicate directly with one another without using an access point or any connection to a wired network.

Technical Support

Refer to the *UltraCare Warranty Terms and Conditions Guide* for more information about your system's warranty.

Note: depending on your configuration, you may not benefit from this warranty.

Where can I find the call centre phone number?

The technical support phone numbers for your country can be found on the *UltraCare Pocket Memo*.

If your system features Windows XP, you may also select **Start**, right-click on **My Computer** and select **Properties**. On the **General** tab, click on the **Support Information** button.

Is there a technical support web site?

Yes. Connect to the following web site for any technical information on your computer system. The web site features a Frequently Asked Questions (FAQ) database, a new drivers and utilities download section, as well as a documentation library.

While connected to the internet, go to www.nec-online.com, select your country, and click on the **Support** icon on top of the page.

Can I get help by email?

Yes. While connected to the internet, go to www.nec-online.com, select **Europe**, and click on the **Contacts** icon on top of the page. Under the **Technical Support** section, click on your country. This will create a mail message directly addressed to the relevant technical support team.