# Appendix C

# User Manual

# Notebook

USER GUIDE

Notebook

USER GUIDE

**FCC Compliance Statement:**

This equipment has been tested and found to comply with 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 residential installations. 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 interference to radio or television equipment 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
-Move the equipment away from the receiver
-Plug the equipment into an outlet on a circuit different from that to which the receiver is connected
-Consult the dealer or an experienced radio/television technician for additional suggestions

Only equipment certified to comply with Class B should be attached to this equipment to continuing compliance with FCC emission limit, and must have shielded interface cables.

You are cautioned that any change or modifications to the equipment not expressly approved by the party responsible for compliance could void your authority to operate such equipment.

Notebook Computer User Guide
Original Issue: May, 1999

This manual guides you in setting up and using your new notebook computer. Information in this manual has been carefully checked for accuracy and is subject to change without notice.



## Trademarks

## FCC Notice

This device has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules, These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with instructions, may cause interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be determined by turning the device off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the device and receiver
- Connect the device into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

## Shielded Cables Notice

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

## Peripheral Devices Notice

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

## CD-ROM Notice

The CD-ROM is a Class One Laser Product.

## Canadian Users Notice

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

## Caution

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

## Use Conditions

This part complies with Part 15 of the FCC Rules. Operation is subject to the following 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.

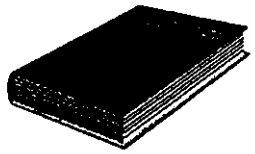
# About Your Notebook Computer

Congratulation for having purchased your new Professional Multimedia Notebook. This notebook incorporates the strongest features which integrate the latest technologies available in the notebook industry.

Your new notebook computer not only drives today multimedia applications but also be ready for tomorrow exciting new software.

This Professional Multimedia Notebook is a freedom, flexibility, and functionality notebook which users are demanding for a long time.

# About Your User Guide



Welcome to your Professional Multimedia Notebook User Guide. This manual covers everything you need to know in learning how to use your computer. This manual also assumes that you know the basic concepts of Windows and the PC. You will start doing a lot of great and fun things with your computer.

This manual is divided into eight chapters.

| | |
|---|---|
| Chapter 1 | gives introduction on your computer features. |
| Chapter 2 | provides step-by-step instructions to help you begin using your notebook as quickly as possible. |
| Chapter 3 | describes how to operate the standard features of your computer. |
| Chapter 4 | illustrates how to integrate video and sound chips into impressive presentation. |
| Chapter 5 | illustrates how to connect external device to your computer. |
| Chapter 6 | explains how to use the System BIOS Setup program. |
| Chapter 7 | explans how to use the external PortBar and internal module options of your computer. |
| Chapter 8 | offers instructions on how to care and maintain your notebook. |

# Table of Contents

1 INTRODUCTION ..... 1-1

1.1 FEATURE HIGHLIGHT ..... 1-2
1.2 UNPACKING THE COMPUTER ..... 1-3
1.3 THE FRONT SIDE OF THE NOTEBOOK ..... 1-4
*LVDS Panel* ..... *1-4*
*Control Panel* ..... *1-8*
*Status Icons* ..... *1-9*
*Keyboard Panel and Base Unit* ..... *1-10*
1.4 THE REAR SIDE OF THE NOTEBOOK ..... 1-11
1.5 THE LEFT SIDE OF THE NOTEBOOK ..... 1-14
1.6 THE RIGHT SIDE OF THE NOTEBOOK ..... 1-16
1.7 THE UNDERSIDE OF THE NOTEBOOK ..... 1-18
1.8 NOTEBOOK ACCESSORIES ..... 1-19
1.9 NOTEBOOK OPTIONS ..... 1-20

2 GETTING STARTED ..... 2-1

2.1 USING THE BATTERY PACK ..... 2-2
*Extending Battery Life* ..... *2-4*
2.2 CONNECTING THE AC POWER SOURCE ..... 2-4
2.3 STARTING YOUR COMPUTER ..... 2-5
2.4 ADJUSTING THE DISPLAY CONTROLS ..... 2-6
2.5 INSTALLING THE NOTEBOOK DEVICE DRIVERS ..... 2-6
*Installing the CD-ROM/DVD-ROM Driver* ..... *2-7*
*Installing the VGA Device Driver* ..... *2-9*
*Installing the Audio Device Driver* ..... *2-11*
*Installing the PCMCIA Device Driver* ..... *2-14*
*Installing the Glidepad Mouse Driver* ..... *2-14*
*Installing the Fast IrDA Driver* ..... *2-16*

2.6 Turning off Your Computer ..... 2-19

3 USING YOUR NOTEBOOK ..... 3-1

3.1 Starting Your Operating System ..... 3-2
3.2 Knowing the Status of Your Computer ..... 3-2
3.3 Understanding the Keyboard Functions ..... 3-4
*Basic Keyboard Functions* ..... *3-6*
*Cursor Control Keys* ..... *3-8*
*Screen Control Keys* ..... *3-9*
*Windows 95 Hot Keys* ..... *3-9*
*Special Function Keys* ..... *3-10*
3.4 Using the Glide Pad Pointing Device ..... 3-12
3.5 Configuring Your Screen Display ..... 3-14
*Possible Display Configurations* ..... *3-15*
*Changing the Display Properties under Windows 95/98* ..... *3-16*
3.6 Knowing the Power Saving Features ..... 3-16
3.7 Using the FDD ..... 3-18
3.8 Working With the Built-in HDD ..... 3-19
3.9 How to Access the CD-ROM/DVD-ROM Drive ..... 3-20
3.10 Using PCMCIA Cards ..... 3-21
*What is PCMCIA?* ..... *3-21*
*What is CardBus?* ..... *3-25*
*What is ZV Port?* ..... *3-25*
*Setting Up the PCMCIA Controller* ..... *3-26*
*Inserting and Removing a PCMCIA Card* ..... *3-26*
*Making PC Cards Work* ..... *3-28*
*Hot Swapping PC Cards* ..... *3-29*

4 FUN WITH MULTIMEDIA ..... 4-1

4.1 Notebook Multimedia Features ..... 4-2
4.2 Audio Sound System Features ..... 4-2





4.3 Setting Up the Audio Driver Properties ..... 4-3
4.4 Windows Multimedia Programs ..... 4-3
4.5 Recording Sounds ..... 4-4
*Using the Built-in Microphone* ..... *4-7*
*Using an External Microphone* ..... *4-8*
*Using the Built-in CD-ROM Drive* ..... *4-8*
*Using an External Audio Input Device* ..... *4-9*
4.6 Playing Audio and Sound ..... 4-10
*Using the Media Player* ..... *4-10*
4.7 Playing Video and MPEG Files ..... 4-11
4.8 Using PC Cards with ZV Port ..... 4-12
4.9 Using DVD ..... 4-12

5 CONNECTING TO PERIPHERALS ..... 5-1

5.1 Using a Serial Mouse ..... 5-2
5.2 Using an External Keyboard (PS/2) ..... 5-3
5.3 Using the USB Port ..... 5-4
5.4 Connecting a Parallel Printer ..... 5-5
5.5 Using an External Monitor (VGA Port) ..... 5-6
5.6 Using the IR Port ..... 5-7
5.7 Using the External Audio System ..... 5-8

6 CUSTOMIZING YOUR NOTEBOOK ..... 6-1

6.1 Running the BIOS Setup Program ..... 6-2
6.2 Using the Main Menu Setup ..... 6-4
*6.2.1 Internal HDD Sub-Menu* ..... *6-7*
6.3 Using the Advanced CMOS Setup ..... 6-8
6.3.1 Peripheral Sub-Menu ..... 6-9
6.4 Security Menu Setup ..... 6-11
6.5 Using Power Saving Setup ..... 6-13
6.6 Using the Boot Setup ..... 6-17

6.7 How to Exit the Setup Program ..... 6-18
6.8 How to Upgrade the BIOS ..... 6-19

7 USING OPTIONS ..... 7-1

7.1 LAN Module Option ..... 7-2
*Connecting the Internal LAN Module* ..... 7-2
7.2 Modem Module Option ..... 7-2
*Connecting the Internal Modem* ..... 7-3
7.3 PortBar Options ..... 7-4
*Features of the PortBar* ..... 7-4
*Connecting the PortBar to Your System* ..... 7-5
7.4 System Upgrade ..... 7-6
*Memory Upgrade Procedure* ..... 7-6
*Installing Memory Module* ..... 7-7

8 CARING FOR YOUR NOTEBOOK ..... 8-1

8.1 Important Safety Instruction ..... 8-2
8.2 Cleaning Your Computer ..... 8-4
8.3 Maintaining the LCD Quality ..... 8-5
8.4 Maintaining Your Hard Disk ..... 8-5
8.5 Battery Care Guidelines ..... 8-6
8.6 When You Travel ..... 8-7

APPENDIX A HARDWARE SYSTEM INFORMATION ..... A-1

A.1 System Specification ..... A-2
*Processor Unit* ..... A-2
*System Memory* ..... A-2
*LCD Display* ..... A-2
*VGA System* ..... A-2
*Disk Drives* ..... A-3
*Audio System* ..... A-3





*PCMCIA* ..... A-4
*Glide Pad* ..... A-4
*Keyboard* ..... A-4
*Flash BIOS* ..... A-4
*I/O Ports* ..... A-4
*Infrared Port* ..... A-5
*AC/DC Power Supply Adapter* ..... A-5
*Battery* ..... A-5
*Weight and Dimension* ..... A-5
A.2 IRQ Usage Summary (Windows 95/98) ..... A-5
A.3 DMA Channel Usage Summary ..... A-6
A.4 I/O Port Usage Summary (Window 95/98) ..... A-7
A.5 Memory Usage Summary (Window 95/98) ..... A-8

# 1 Introduction

Your Notebook PC is a fully IBM compatible portable personal computer. With the latest features in mobile computing and multimedia technology, this notebook makes a natural traveling companion. Lightweight and compact, your Notebook PC runs on a whole wide range of general business, personal productivity, entertainment, and professional applications. It is ideal for use in the office, at home, and on the road.

With its all-in-one design, full functionality is built-in with no need to change external devices. Your Notebook PC makes an ideal choice for use in the office, the schoolroom, at home, on the road and all other occasions.

# Feature Highlight

Before we go to identify each part of your Notebook PC, we will first introduce you to other notable features of your computer.

*Processing Unit*

- Your notebook runs on Intel Mobile Pentium II microprocessor, with or without APG2X, integrated with 256KB L2 Cache; or Intel Mobil Celeron microprocessor integrated with 128KB L2 cache. Check with your dealer on the CPU type and speed.
- Fully compatible with an entire library of PC software based on operating systems such as MS-DOS, Windows 95/98, OS/2, and Windows NT. It also runs on future versions of Windows.

*Memory*

Except one built-in memory slot, this notebook provides another memory slot for installing 144-pin SODIMM modules up to 256MB using 32MB, 64MB, and 128MB SDRAM modules.

*PCMCIA*

Provides two PCMCIA slots that allows you to insert either two Type II or one Type III cards.

*PCI Local Bus Architecture*

- AGP 2X video local bus and Windows graphics accelerator with 4MB RAM. Supports Zoomed Video (ZV) Port technology for smooth full-screen motion picture playback capabilities.



- 32-bit PCI Enhanced IDE optimizes the data transfer between the CPU and disk drives. Support disk drives with ultra DMA and PIO Mode up to PIO Mode 4.
- 32-bit PCMCIA CardBus PCI technology that is also backward compatible with 16-bit PC cards.

*Audio System*

Full-duplex 16-bit stereo audio system with wavetable function and Plug-and-Play features. Sound Blaster and Sound Blaster Pro compatible.

*Flash BIOS*

Flash EPROM BIOS allows you to easily upgrade the System BIOS using the Phoenix Flash utility program.

*Power and System Management*

- Integrated SMM on system chipset that shuts down components not in use to reduce power consumption. Power Management user control on System BIOS SETUP allows you to activate and deactivate power saving features.
- Auto Suspend hot-key allows you to suspend the system operation instantly and resume at the press of the power button.
- System Password for User and Supervisor included on the BIOS SETUP Program to protect unauthorized use or your computer.

## 1.2 Unpacking the Computer

Your computer comes securely packaged in a sturdy cardboard shipping carton. Upon receiving your computer, open the carton and carefully

remove the contents. In addition to this User Manual, the shipping carton should also contain the following items:

- ☑ The Notebook Computer
- ☑ An AC Adapter and AC Power Cord
- ☑ Li-Ion or NiMH Battery Pack(s)
- ☑ Utility Diskettes/CD
- ☑ Quick Setup Manual

Carefully inspect each component to make sure that nothing is missing and/or damaged. If any of these items are missing or damaged, notify your dealer immediately. Be sure to save the shipping materials and the carton in case you need to ship the computer or if you plan to store the computer away sometime in the future.

# 3 The Front Side of the Notebook

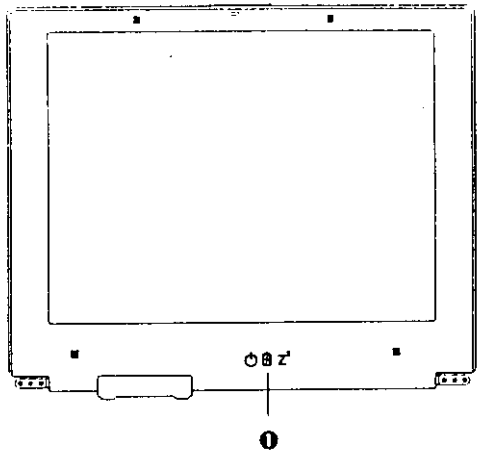
The notebook computer is compact with features on every side. First, look at the front of the system. The following sections describe front features, beginning with the LVDS panel.

## LVDS Panel

The notebook computer comes with a color LCD that you can adjust for a comfortable viewing position. The LCD can be a 12.1" or 14.1" TFT (Thin Film Transistor) color LVDS with 1024x768 XGA (Extended



Graphics Array) or 800x600 SVGA (Super Video Graphics Array) resolution panels. The features of the LVDS panel are described after the figure.



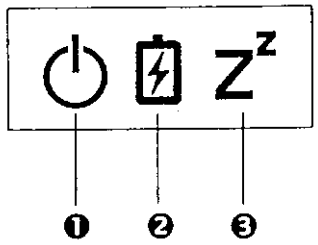

❶. Power and Suspend to RAM LEDs

### LCD Panel

- Color LCD Display
  - TFT color LVDS with 1024x768 XGA or 800x600 SVGA resolution panels.
  - Capable of displaying 64K colors (32-bit high color) on either SVGA or XGA LVDS panels.
  - LVDS display control hot-keys allow you to adjust the contrast of the LCD.
  - Simultaneous display capability for LCD and external desktop computer monitor.
  - LCD display can be upgraded from 12.1" to 14.1" TFT.

### *Power/Suspend to RAM LEDs*

These LEDs (identified by icons) are located just under the front of the LVDS panel. These LEDs are duplicated on the back of the LVDS panel to allow viewing when the panel is closed. Each LED from left to right indicates different power status as indicated below.




❶. Power LED ❷. Battery Charging LED

❸. Suspend to RAM LED

Power/Suspend to RAM LEDs

- Power LED
  Lets you know that power to the system is turned on. This LED is positioned so that you can see the power state whether the LVDS panel is opened or closed.
  - Lights green when the system is powered on using the AC adapter or battery.
  - Lights yellow when battery is warning in low battery power.

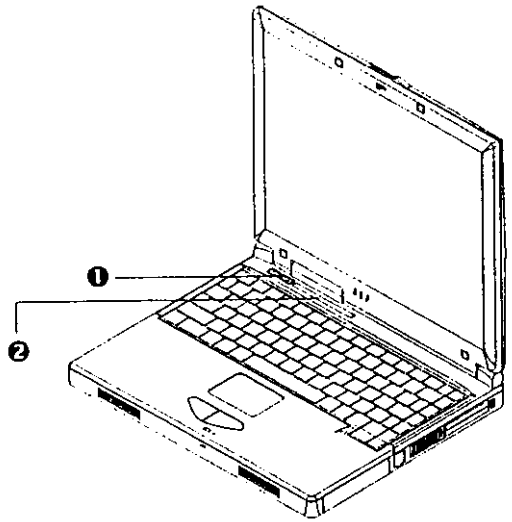


  - Lights amber when in Suspend to RAM (or Suspend to Disk if you already created Save to Disk partition in HDD by using PHDISK utility in the MS-DOS) mode and critically low battery power. We strongly recommend that users create Save to Disk partition as this will prevent your data from loss when power is critically low.
- Battery Charging LED
  Lights to indicate battery charging status.
  - Lights amber to indicate the battery is charging.
  - Lights off to indicate the battery is fully charged.
- Suspend to RAM LED
  LED is blinking with green color when in Suspend to RAM mode and off in full on or power off mode.

☞ ***When the system will respond to the low battery power or the critically low battery power state depends on the settings of remaining battery level (represented in percentage) that activates power management function.***

## CONTROL PANEL

The notebook computer's control panel provides the features shown in the following figure. The control panel features are described after the figure.




❶. Power On/Resume Button ❷. Status LEDs

Control Panel

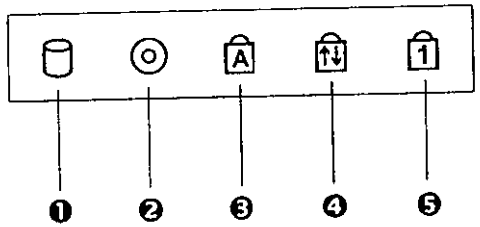
- Power on/Resume Button
  Switches the computer power on and off, or resumes whenever it is in Suspend mode.



- Status LEDs
  keep you informed of your notebook computer's current operating status. Descriptions of the status icons appear in the following section.

## STATUS ICONS

The notebook computer uses status lights marked with icons to communicate system status. See the following figure and list for each icon's meaning.




❶. Drive Access ❷. Diskette Drive Access
❸. Caps Lock ❹. Scroll Lock
❺. Num Lock

Status LED Icons

- Drive Access
  When LED in green light indicates that the system is accessing either the CD-ROM or DVD-ROM.

- Diskette Drive Access
  When LED in green light indicates that the system is accessing data from or is retrieving data to the floppy diskette drive.
- Caps Lock
  When LED in green light indicates that the Caps Lock key on the keyboard is activated. When activated, all alphabet keys typed in will be in upper-case or capital letters.
- Scroll Lock
  When LED in green light indicates that the Scroll Lock key on the keyboard is activated. The Scroll Lock key has different functions depending on the software you are using.
- Num Lock
  When LED in green light indicates that the Num Lock key on the keyboard is activated. When activated, the embedded numeric keypad will be enabled.

### KEYBOARD PANEL AND BASE UNIT

The notebook computer's keyboard panel and base unit contain the following features.

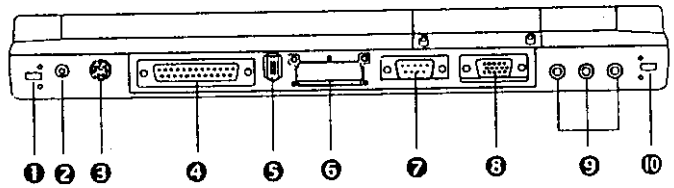
- Keyboard
  - Standard QWERTY-key layout and full-sized 86/87 keys keyboard with Windows 98 hot-keys, embedded numeric keypad, 12 function keys, inverted "T" cursor arrow keys, and separate page screen control keys.
  - Wide extra space below the keyboard panel for your wrist or palm to sit-on comfortably during typing.



- Glide Pad
  Microsoft and IBM PS/2 mouse compatible with two select buttons. Supports tapping selection and dragging function. It works like a standard computer mouse. Simply move your fingertip over the Glide Pad to control the position of the cursor. Use the selection buttons below the Glide Pad to select menu items.
- Microphone
  Lets you connect an external microphone to record monophonic sound directly into your notebook computer.
- Built-in Stereo Speakers
  Integrated left and right mini stereo speakers for sound and audio output for your multimedia presentations or listening pleasure.

## 1.4 The Rear Side of the Notebook

You'll find system ports for connecting optional devices (like a printer or external monitor) to the back of your notebook computer. The ports are described after the figure.




❶ ⓫. PortBar Notches
❷. AC Power Port
❸. PS/2 Port
❹. Parallel Port
❺. USB Port
❻. Expansion Port
❼. Serial Port
❽. Monitor (Video) Port
❾. Audio Ports

- PortBar Notches
  Use these notches to secure the PortBar to the back of the system. There are two PortBar notches located at the both ends of the rear side of the system.

- AC Power Port
  Lets you connect the AC power adapter in supplying continuous power to your notebook and recharging the battery.

- PS/2 Port
  Lets you connect an external PS/2-style mouse, PS/2-style keyboard, or PS/2-style numeric keypad to the system. With an optional Y-cable adapter, you also can connect any combination on two of these devices simultaneously.

- Parallel Port
  Use this port to connect a parallel printer or other parallel device. The parallel port supports Enhanced Capabilities Port (ECP) standard. The standard provides you with a greater processing speed than the conventional parallel port. The port also supports bi-directional and uni-directional protocols.

☞ *The default setting for the parallel port on your notebook computer is set to Enhanced Capabilities Port (ECP). Some older parallel devices may not function with the ECP default setting. You may need to adjust the setting to accommodate your parallel device by changing the BIOS setting.*

- USB Port
  The Universal Serial Bus (USB) port allows you to connect up to 127 USB-equipped peripheral devices (for example, printers, monitors, scanners and so on) to your notebook computer.

- 80-Pin Expansion Port
  Lets you connect to the notebook PortBar.





- Serial Port
  Lets you connect a 9-pin external pointing device such as a high-speed modem, mouse, or other serial devices.

- Monitor (Video) Port
  Lets you attach an external CRT monitor for wider display. You can run the LCD display and the external CRT monitor simultaneously or switch it to CRT only using the display hot-key.

- Audio Ports
  From left to right, the jacks are Microphone, Line In & Headphones described as follows:

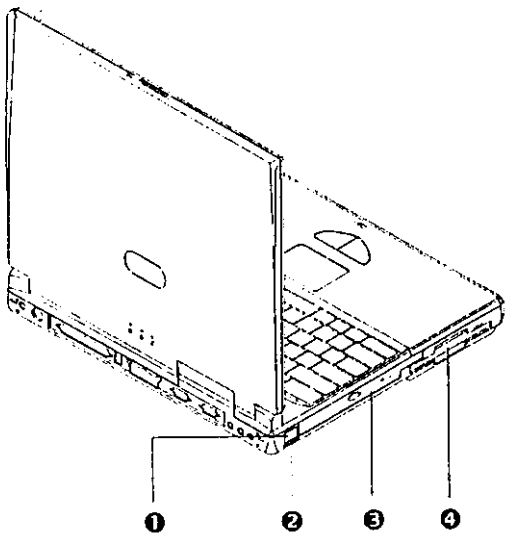
  - Microphone Jack
    Allows you to connect an external microphone for monophonic recording or amplification through the unit. Plugging in an external microphone disables the built-in microphone.

  - Stereo Line-In Jack
    Lets you connect an external audio device such as CD player, a tape deck, or a synthesizer as an input source. Use a cable to connect to the Line-Out port on the other audio system to record or play.

  - Headphone Jack
    Lets you plug in a stereo headphone, powered speakers, or earphone set with 1/8 inch phono plug for personal listening.

# The Left Side of the Notebook

The left side of your notebook computer provides the features shown in the following figure.




❶. IR Port

❷. Volume Control

❸. CD-ROM or DVD-ROM

❹. Diskette Drive

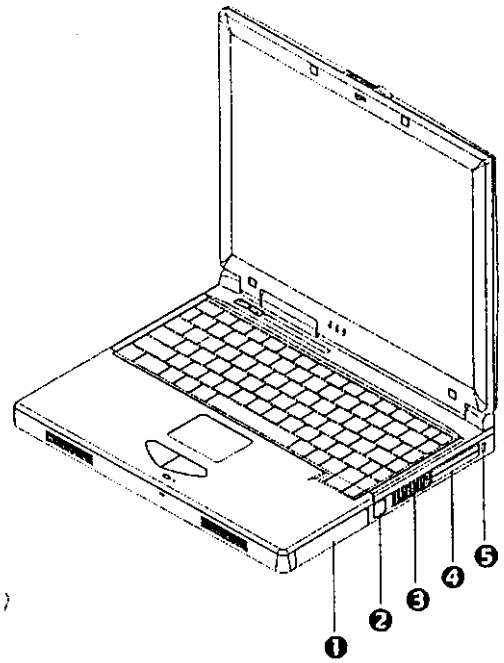
**Left Side Features**



- IR Port
  Wireless data transfer of files between your notebook computer and an IR-equipped device or notebook computer. You can also print to an IR-equipped printer without using cables. Use the IRMON utility in Windows 98 with your IR-equipped printer. The Fast IR (FIR) mode provides up to 4Mbps of data transfer rate.
- Thumb Wheel Volume Control
  Allows you to control the speaker volume.
- CD-ROM/DVD-ROM
  Allows you to load and start programs from a compact disc (CD) or a digital video disc (DVD) and play conventional audio CDs.
- Diskette Drive
  A 3.5-inch floppy diskette drive comes installed in the notebook computer. The drive accepts 1.44 MB/1.2MB floppy diskettes.

# The Right Side of the Notebook

The right side of the notebook computer offers the features shown in the following figure.




❶. Battery Bay
❷. Modem / LAN Port
❸. Cooling Fan Vent
❹. PC Card Slots
❺. Kensington Lock

**Right Side Features**



- Battery Bay
  Stores the Nickel Metal-Hydride (NiMH) or Lithium-Ion (Li-Ion) battery pack for off-the-cord operation or battery recharging.

- Modem/LAN Port
  If you purchase an internal fax modem, a 56K internal voice/fax/data modem is installed. It keeps you connected to the outside world through networks.
  If you purchase an internal 10/100 Base T LAN module, it connects your computer to other computers/networks through a local area network (LAN).
  Modem and LAN modules are available as option.

- Cooling Fan Vent
  Emits the heat out of your computer and keeps it within operating temperature.

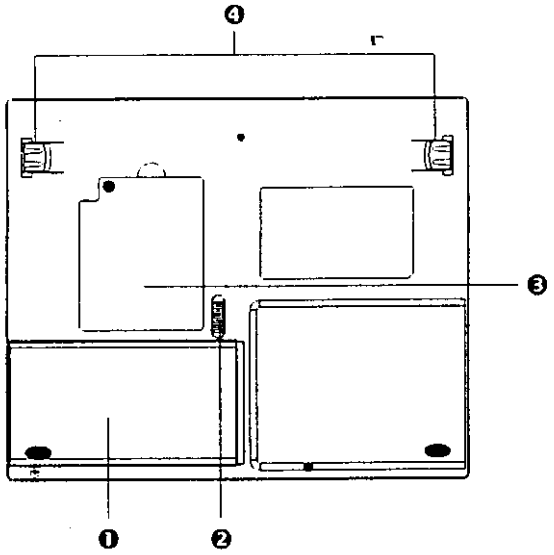
☞ ***Do not block the fan while the notebook is in use.***

- PCMCIA Slot
  - Lets you connect various PC cards such as Modem cards, Ethernet LAN cards, and SCSI cards.
  - Double-deck PCMCIA slots that support two Type II PC cards at the same time, or one Type III PC card in the bottom slot.
  - Supports both 5V and 3V 32-bit CardBus and 16-bit PC cards including PC cards with ZV function. The Zoom Video (ZV) port is supported in the top slot only.

- Locking Device Keyhole
  Lets you attach a Kensington security system or a compatible lock to secure your notebook computer.

## 7 The Underside of the Notebook

The bottom of the notebook computer offers the following features.




❶. Battery Bay
❷. Battery Release Latch
❸. Memory Compartment
❹. Tilt Foot

Bottom of the System

- Battery Bay
  Equipped with a rechargeable Nickel-Metal-Hydride (NiMH) or Lithium-Ion (Li-Ion) battery.



- Battery Release Latch
  Slide the latch to the other end and hold it. While holding the latch, slide the battery bay outwards to remove the battery.
- Memory Compartment
  Remove the screw to find two DIMM slots. One is inserted with SDRAM memory board configured by the factory. The other is empty for upgrade use.
- Tilt Foot
  Provides flexible keyboard angle.

## 1.8 Notebook Accessories

### *AC Adapter*

The AC Adapter supplies external power to your notebook computer and charges the internal battery pack simultaneously. The AC adapter has an auto-switching design that can connect to any 100VAC ~ 240VAC power outlets. You just change the power cord if you are going to use your notebook in other countries with different connector outlets.

When you connect the AC adapter, it charges the battery whether or not the notebook computer is powered on.

### *Battery Pack*

Aside from the AC adapter, your computer can also be powered through the internal battery pack. The battery pack uses rechargeable Nickel-Metal Hydride (NiMH) or Lithium-Ion (Li-Ion) battery cells that provide long computing hours when fully charged and power management enabled. You should always leave the battery inside your computer even when

using the AC adapter as it also acts as a back-up power supply in case power from the AC adapter is cut off. It is also very important to have the battery pack always charged to prevent battery cell degradation.

# 9 Notebook Options

*DVD-ROM Device Pack*

This device pack option plugs into the Device Bay 2 (left bay) and used for reading DVD or playing DVD titles. DVD-ROM drives are also backward compatible with CD-ROM, so you can also use any audio CDs, video CDs, photo CDs, and recorded CD (CD-R).

*Internal Ethernet LAN module*

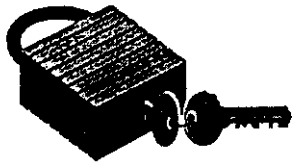
This notebook comes with an optional 10/100Base-T LAN module that supports data transfer rates at 10Mbps and can be up to 100Mbps.

*Internal Modem Module*

This notebook comes equipped with a 33.6K/56K capable internal voice/fax/data modem that allows you to communicate with others via fax, email, or connect to an online service or bulletin board.

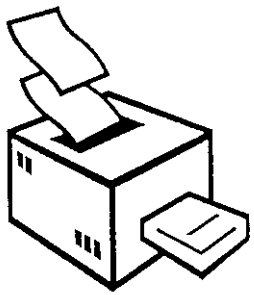


# 2 Getting Started



Your Notebook is designed and pre-configured for easy setup and use. This chapter describes the installation steps you should follow to get the notebook up and running as quickly as possible. Contact your dealer if they have pre-installed all the needed drivers to fully operate your computer or if there is an update on the driver installation of the notebook.

# APPENDIX A
# Hardware System Information



This appendix gives information on the technical and hardware specifications of your computer. Please note that the information mentioned here may not be exactly the same with your computer as specification is subject to change without notice or modifying this manual.

Designed with an advanced modular architecture, your Notebook PC also allows you for several levels of customization and expansion that are previously available only on desktop PCs.

# .1 System Specification

## Processor Unit

- Pentium II Dixon or Celeron.
- Supports CPU clock speed of up to 366MHz
- 128KB or 256KB internal pipelined-burst L2 cache
- 64-bit Data Bus GTL+ Architecture

## System Memory

- Two 64-bit 144-pin memory slot
- User-upgradable to maximum 128MB using 144-pin SODIMM 32MB, 64MB, and 128MB module
- Supports SDRAM modules

## LCD Display

- XGA (1024x768) or SVGA (800x600) Color LCD
- Maximum 16M true colors on all LCD display

## VGA System

- 32-bit AGP Local Bus VGA Accelerator (32-bit internal)
- Includes Zoomed Video (ZV) Port Technology for supporting ZV PCMCIA cards
- 2MB video memory



- Simultaneous LCD and external monitor (CRT) display
- Maximum 16 million colors on CRT only display at 800x600 resolution (Non-Interlaced)
- Maximum 1024x768 resolution on CRT display at 16M colors

## Disk Drives

- 32-bit PCI Enhanced IDE interface with LBA mode
- Removable 24X-speed Enhanced IDE bootable CD-ROM drive module
- Built-in and user-upgradable 2.5-inch IDE hard drive
- Optional DVD-ROM drive that can be swapped with CD-ROM

## Audio System

- Full-duplex 16-bit stereo audio with wavetable support and Plug-and-Play features
- Sound Blaster Pro compatible
- Built-in dual speakers
- Integrated full-duplex microphone
- Audio input jacks for microphone (MIC) and stereo device (Line-In)
- Audio output jack for external speaker or headphone (Line-Out)
- Earphone or headphone jack for audio output
- Built-in Thumb Wheel Volume Control control

## PCMCIA

- 32-bit CardBus PCI Local Bus PCMCIA controller
- Double-deck PCMCIA slots supports 2 x Type II PC card at the same time or 1 x Type III PC Card
- Supports Zoomed Video (ZV) Cards, 32-bit Cardbus Cards, and 16-bit PC Cards

## GLIDE PAD

- Integrated Glide Pad (PS/2 mouse) pointing device with palm-rest typing surface

## KEYBOARD

- Full-sized 86/87-keys keyboard with Windows 95/98 hot-keys, inverted T-cursor keys, 12 function keys, and embedded numeric keypad
- Provides international language keyboard

## FLASH BIOS

- 512K Flash ROM BIOS for easy BIOS upgrade

## I/O PORTS

- 1 x Universal Serial Bus (USB)
- 1 x 9-pin RS-232 Serial (COM1)
- 1 x 25-pin Parallel (LPT1)
- 1 x 15-pin VGA (CRT)





## INFRARED PORT

- 1 x Fast IR (IrDA) port at 4Mbps

## AC/DC POWER SUPPLY ADAPTER

- Universal auto-switching 50W (100V~240V) adapter

## BATTERY

- Rechargeable 8 Cells NiMH or Li-ion battery pack with Smart Battery function
- Over 2 hours of usage (when run Battery Mark2.0 diagnostic program)
- 3 hours quick charge (computer turn off)

## WEIGHT AND DIMENSION

- 11.7" (W) x 9.7" (D) x 1.5" (H)
- 6.21 lbs (12.1" LCD with FDD, CD-ROM, and one Li-Ion battery)

# A.2 IRQ Usage Summary (Windows 95/98)

| IRQ | Used Device |
|---|---|
| IRQ0 | System Timer |
| IRQ1 | Keyboard |
| IRQ2 | Programmable Interrupt Controller |
| IRQ3 | FIR |
| IRQ4 | Serial Port Communications Port [COM 1] |

| IRQ | Used Device |
|---|---|
| IRQ5 | Audio & Intel 82371 AB/EB PCI to USB Universal Host Controller |
| IRQ6 | Floppy Disk Drive |
| IRQ7 | Parallel Port |
| IRQ8 | RTC Alarm |
| IRQ9 | LAN/VGA |
| IRQ9 | FAX/Modem |
| IRQ10 | CardBus Controller |
| IRQ12 | PS/2 Mouse |
| IRQ13 | Numeric data processor |
| IRQ14 | Hard Disk Drive |
| IRQ15 | CD-ROM |

## A.3 DMA Channel Usage Summary

| DMA Channel | Used Device |
|---|---|
| DMA0 | FIR |
| DMA1 | Audio |
| DMA2 | Floppy Disk |
| DMA3 | DHA Controller |
| DMA4 | Unused |
| DMA5 | Unused |
| DMA6 | Unused |
| DMA7 | Unused |





## A.4 I/O Port Usage Summary (Window 95/98)

| I/O Address | Used Device |
|---|---|
| 000 - 01F | DMA Controller |
| 020 - 021 | Programmable Interrupt Controller |
| 040 - 043 | SystemTimer |
| 060 - 060 | Keyboard |
| 070 - 071 | RTC & NMI Mask |
| 081 - 08F | DMA Controller |
| 0A0 - 0A1 | Programmable Interrupt Controller |
| 0C0 - 0DF | DMA Controller |
| 0F0 - 0FF | Numeric data processor |
| 1F0 – 1F7 | Standard Dual PCI IDE Controller |
| 1F0 - 1F7 | Primary IDE Controller |
| 220 - 22F | Audio Device |
| 2F8 - 2FF | FIR |
| 0330 - 0331 | Audio Device |
| 378 - 37F | Parallel Port |
| 388 - 38B | Audio Device |
| 3C0 - 3DF | VGA |
| 3F0 - 3F7 | Standard Floppy Disk Controller |
| 3F8 - 3FF | Communication Port |
| CF8 - CFC | PCI BUS |
| 1000 ~ 10FF | Motherboard resource |
| 1060 ~ 107F | Intel 82371 AB/EB PCI to USB Universal Host Controller |

# 5 Memory Usage Summary (Window 98)

| Address Range | Length | Used Device |
|---|---|---|
| 00000 ~ 9FFFF | 640 KB | System board extension for PnP BIOS |
| A0000 - BFFFFh | 128 KB | Video Memory |
| C0000 - C9FFFh | 40 KB | Video ROM |
| CA000 - DFFFFh | 88 KB | Unused |
| E0000 ~ E7FFF | 32 KB | Motherboard resource |
| E8000 ~ FFFFF | 96 KB | System board extension for PnP BIOS |
| 400000 ~ 4001FFF | 8 K | CardBus Controller |