Notebook PC User's Guide

Model: W730AT2-K8

First Edition: June 2004

NOTICE

Specifications and information found in this guide are subject to change **without** notice. Any changes therefore will be incorporated in future editions. The manufacturer assumes **no** responsibility for errors or omissions in this document.

TRADEMARKS

Windows® XP is the trademark of *Microsoft Corporation.*

Intel® is the trademark of *Intel Corporation*.

AMD® is the trademark of *AMD Corporation*.

Other trademarks are properties of their respective owners.

Standards

The following standards are adopted throughout this guide:

- ■ Notebook in **boldface** (with or without capitalization) refers to the notebook computer that you have purchased.

- ■ **Boldface** type is also used to highlight **important information** in this document.

- ■ The messages that appear on the **Notebook** screen will be boxed when they are referenced.

- ■ Whenever extra caution is called for, the information will be boxed in a dark frame preceded by "**Note:**" or "**Warning:**"

- ■ Usually after performing a step-by-step instruction, you will be asked to:

    Press the **Esc** key
    Which means you should press the Esc key located at the upper left-hand corner of the keyboard.
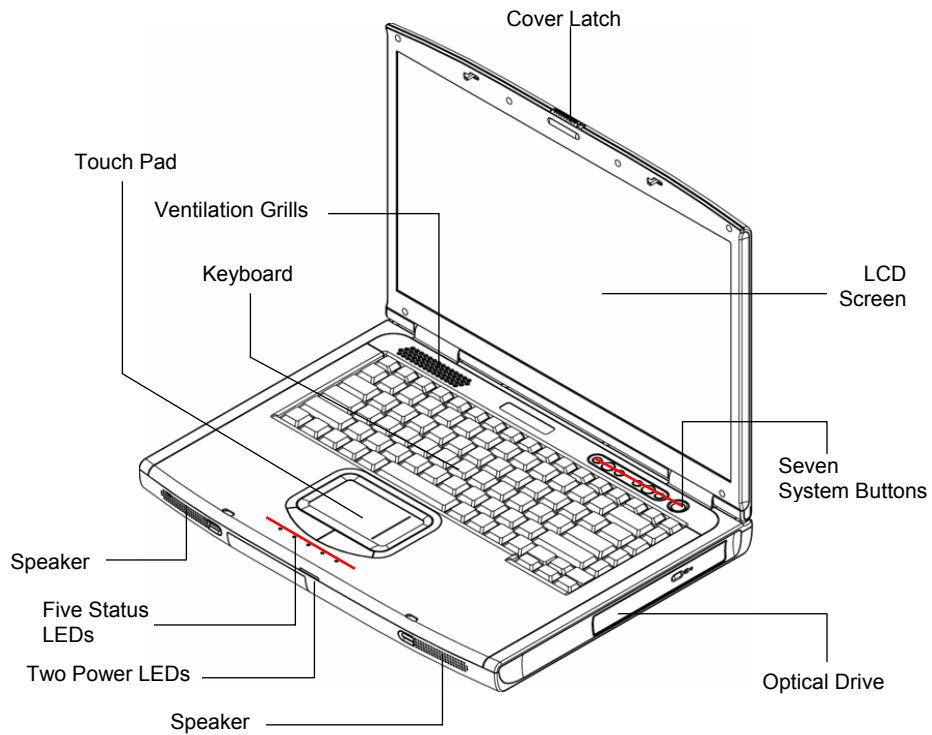
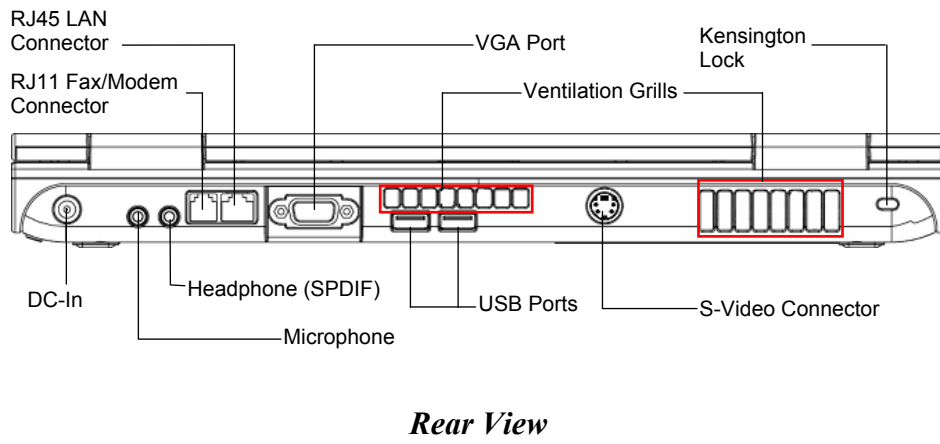# CONTENTS

Chapter 1 Before You Begin

Please read this section before you start using your computer.

1.1   Examining Your Computer

Before you start using your computer, you need to get acquainted with your **notebook**'s main features and interfaces:

Panoramic View

Cover Latch

Speaker   HDD Drive   Speaker

Woofer   Woofer

Front View

RJ45 LAN
Connector   VGA Port   Kensington
                                                            Lock
RJ11 Fax/Modem
Connector   Ventilation Grills

DC-In   Headphone (SPDIF)   S-Video Connector
                                    USB Ports

              Microphone

Rear View

CF Card Eject Handle

CF Card Socket Door

4-in-1 Socket Door
(for MMC/MS/SD/CF Cards)

Ventilation Grills

IEEE1394 Connector   USB Ports

PCMCIA
Socket Door

PCMCIA
Eject Handle

Left View

ODD LED

Eject Button

Optical Drive   Emergency Hole

Right View

Mini-PCI
Door

DDR Memory
Door

Battery
Pack

Ventilation
Grills

Two Battery
Latches

HDD Door

Bottom View

Stereo Connector:
Your *headphone* jet should
have this type of connector
as shown here

Mono Connector:
Your *microphone* jet should
have this type of connector
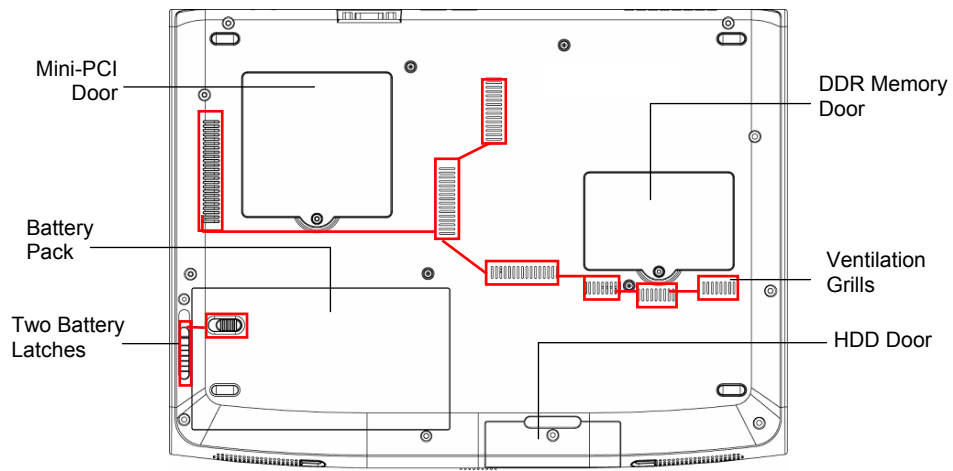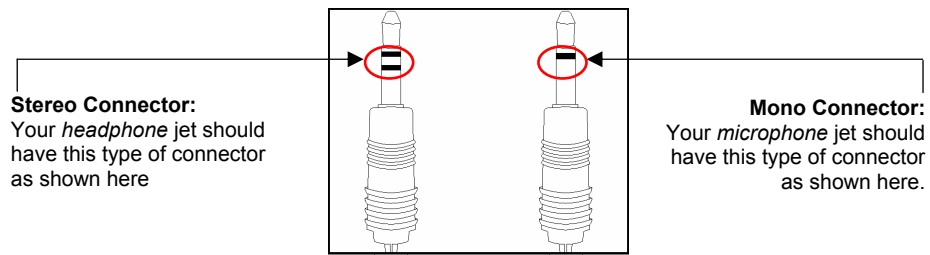as shown here.

Two Types for Audio Jet

1.2   The Five Status LEDs

The AC Adapter LED
This LED would be lit when system is connected to an AC adapter.

The Wireless LED
This LED would be lit when the wireless function is activated.

The Caps Lock LED
The LED would be lit when the keyboard is in **Caps Lock** mode. In this mode, all characters you type are in uppercase.

The Num Lock LED
This LED would be lit when the keyboard is in **Num Lock** mode. In this mode, the embedded numeric keypads can be used.

The HDD Access LED
This LED would be lit when system is accessing the HDD.

Note: The **Five Status LEDs** are located near the two click buttons of the touch pad. For exact location, please refer to the **Panoramic View** diagram in *Chapter 1.2*.
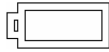
1.3   The Two Power LEDs

The Power On LED
Below is how the LED would behave in different situations:

Off	System is powered off, or in **Hibernate** mode.
On	• System is powered by AC adapter, and/or • System is in full operation.
Blinking	System is in **Standby** mode.

The Battery Pack LED
Below is how the LED would behave in different situations:

On	Battery pack is being recharged: fast-charge or pre-charge.
Blinking	• Battery pack is consuming down to 10% level. • Battery pack is waiting for recharge when battery temperature is too high after discharge. • Battery pack error.
Off	Battery pack is not under recharge.

Note: The **Two Power LEDs** are located near the **Five Status LEDs**. For exact location, please refer to the **Panoramic View** diagram in *Chapter 1.2*.

For more details on **Standby** and **Hibernate**, please refer to **Power Options** (for Windows Systems) in the **Control Panel** of your Microsoft Windows operating system.

1.4   The Seven System Buttons

The Power Button
This **Power Button** is programmable by user. For detail on how to program this button, please refer to the **Power Options** of **Control Panel** in **Windows System.**

Search Button
Press this button to activate the search function.

Internet Button
Press this button to activate the internet function.

Email Button
Press this button to activate the email function.

Volume Up Button
Press this button to increase volume.

CD Play Button
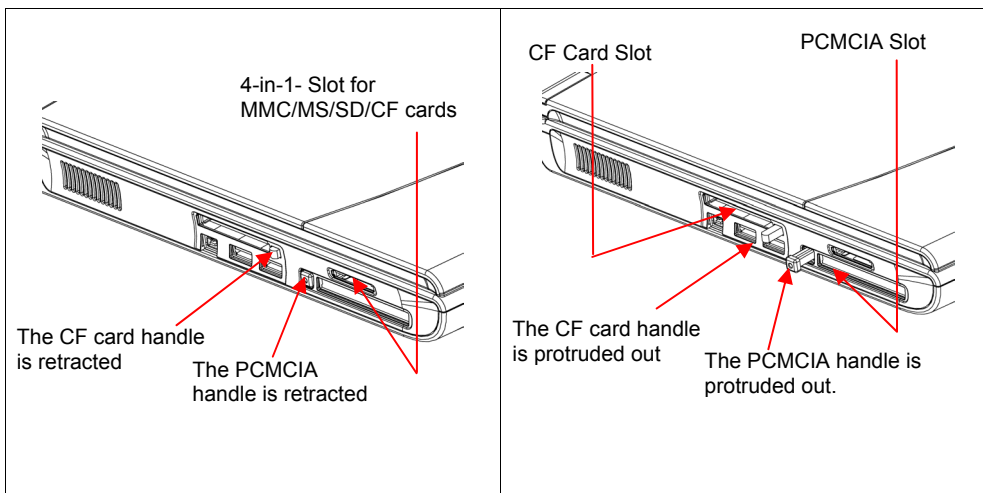Press this button to playback audio CD.

Volume Down Button
Press this button to decease volume.

Note: When the two system buttons, **Volume Up Button** and **Volume Down Button**, are pressed together, the sound volume would be muted.

Note: The **Seven System Buttons** are located near top right of keyboard. For exact location, please refer to the **Panoramic View** diagram in *Chapter 1.2*.

1.5   Attention On Handles And Socket Doors

Please observe below safety measures:
- Make sure the PCMCIA eject handle does not protrude out at all the time, unless you are using the handle to eject PCMCIA card. A protruded handle is prone to external interference; such as ramming by an inkjet printer or external keyboard.
- When PCMCIA card is not inserted into the PCMCIA socket, make sure this socket is covered by the "PCMCIA socket door" as supplied together with this **notebook**. The purpose of this "PCMCIA socket door" is to prevent foreign matters from entering into the system unit through this socket, when PCMCIA card is not inserted.
- Make sure the CF card eject handle does not protrude out at all the time, unless you are using the handle to eject CF card. A protruded handle is prone to external interference; such as ramming by an inkjet printer or external keyboard.
- When CF card is not inserted into the CF card socket, make sure this socket is covered by the "CF card socket door" as supplied together with this **notebook**. The purpose of this "CF card socket door" is to prevent foreign matters from entering into the system unit through this socket, when CF card is not inserted.
- When no card (Multi-Media Card/Memory Stick/SD Card/CF Card) is not inserted into this 4-in-1 socket, make sure this socket is covered by the "4-in-1 socket door" as supplied together with this **notebook**. The purpose of this "4-in-1 socket door" is to prevent foreign matters from entering into the system unit through this socket, when no card is inserted.

1.6   The <Fn> Key

The <**Fn**> Function Key is located near the bottom-left corner of the keyboard. This key is used together with other keys to activate certain pre-defined functions. To activate these functions, press and hold down **<Fn>** together with the keys described below:

LED Toggle
Press this key combination (*Fn+F1*) would toggle on and toggle off all LED lights. To minimize visual distractions, you may like to toggle off all LED lights during DVD software playback.

Wireless LAN
Press this key combination (*Fn+F2*) to activate the wireless LAN function.

Suspend
Press this key combination (*Fn+F3*) to have system enter the **Suspend** mode. In **Suspend** mode, the black light of the display panel would be turned off and a host of internal devices would enter into a stage of lower power consumption. Press any keycap on the keyboard to resume normal operation.

LCD/CRT Switch
Press this key combination (*Fn+F4)* to switch between LCD only, CRT only, and LCD/CRT simultaneously.

Brightness Decrease
Press this key combination (*Fn+F7*) to decrease the brightness of the LCD display.

Brightness Increase
Press this key combination (*Fn+F8*) to increase the brightness of the LCD display.

Play/Pause
This hot-key is for audio CD disc playback. Press this key combination (*Fn+F9*) to play or pause audio play back.

Stop
This hot-key is for audio CD disc playback. Press this key combination (*Fn+F10*) to stop audio playback.

Previous Track
This hot-key is for audio CD disc playback. Press this key combination (*Fn+F11*) to skip to the previous track.

Next Track
This hot-key is for audio CD disc playback. Press this key combination (*Fn+F12*) to skip to the next track.

Chapter 2 Battery

2.1   Battery Pack

Your **notebook** is equipped with a high energy rechargeable **Lithium Ion** (**Li-Ion**) battery pack. In general, a fully charged battery pack can support around 2.0~3.0 hours of operation, with Windows' Power Management option enabled. However, difference in configuration (CPU, HDD, Memory etc.) and system utilization (especially I/O activities) can affect the operation time greatly.

2.2   Recharging the Battery Pack

Your **notebook** supports both on-line and off-line recharge. Follow the procedure below to recharge battery:

- Make sure the battery pack is installed in the **notebook**.
- Connect the AC adapter to the **notebook** and to an electrical outlet.

When a battery pack is being recharged, its battery LED (located near the **Five Status LEDs**) would be lit up. For details on the LEDs, please refer to *Chapter 1.3*. When the notebook is OFF, a depleted Li-Ion battery will take three hours to recharge.

2.3   Questions and Answers

Q: I can feel the heat next to the **Touch Pad** during recharge. Is it normal?

A: The battery will generate heat during recharging and discharging. There is a protection circuit inside the **notebook** to prevent overheating. User needs not to worry.

Q: My battery operation time is not as long as it should be. Why?

A: The battery is heat sensitive and can only be charged to its maximum if the battery and its environmental temperature remain within 15-25°C (59-77°F). The more the temperature deviates from this range during recharging, the less chance there is for the battery to be fully charged. In order to recharge the pack to its full capacity, users are requested to cool down the unit by unplugging the AC Adapter. Wait until it is cooled down. Then plug in the AC Adapter to start recharging again.

Q: I did not use my spare battery for a few days. Even though it was fully recharged, there wasn't as much power left as a newly charged one. Why?

A: The batteries will self-discharge (1% per day for Li-Ion) when they are not being recharged. To make sure a battery pack is fully charged, recharge before use. Always keep the battery inside the **notebook** and have the AC adapter connected whenever possible.

Q: I did not use my spare battery for months. I have problem in recharging it.

A: If you happen to leave your battery pack to go through an extended period of self-discharge, say more than three months, the battery voltage level will become too low and needs to be **Pre-Charged** (to bring the battery voltage level high enough) before it automatically (for Li-Ion only) resumes its normal **Fast Charge**. **Pre-Charge** may take 30 minutes. **Fast Charge** usually takes 2~3 hours.

2.4   Battery Maintenance

To maintain the battery pack's maximum capacity, you should occasionally let the **notebook** deplete its battery power completely before recharging.

To carry out a complete depletion of the battery, disconnect the AC adapter and let your **notebook** consume the remaining battery power. To speed up the depletion, use the HDD as much as possible, and the LCD should be set as bright as possible. When the battery is empty, wait for the **notebook** to cool down (especially the battery). The temperature should be within 15-25°C (59-77°F). Then insert the AC adapter to recharge the battery.

2.5   Power Consumption

The **Windows® XP**, the latest Windows operating systems, has incorporated the latest state-of-the-art **ACPI** (**Advanced Configuration Power Interface)** power management methodology. In order to fully utilize the power of your battery pack, it would be a good idea for you to spend sometime to acquire a basic understanding of the power management concept from your operating system.

In **Windows® Operating Systems**, you can go through **Power Options** of the **Control Panel** according to the version of **Windows® Operating System** the **notebook** applies. We shall not describe them in details. The **Power Options** in **Windows® XP** are further divided into as below:
- Power Schemes
- Alarms
- Power Meter
- Advanced
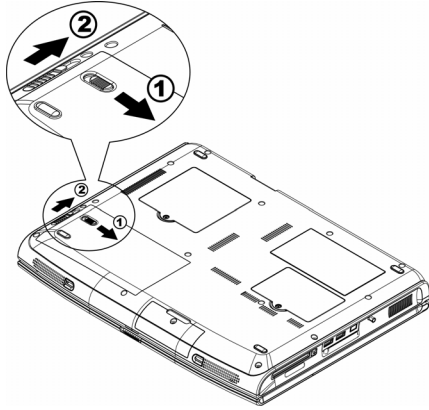- Hibernate

2.6 Reducing Power Consumption

Although your **notebook** (together with the operating system) is capable of power conservation, there are measures you can take to reduce the power consumption:

- Use the AC power whenever possible.
- Lower the intensity of the LCD backlight. A very bright screen translates to higher power usage.
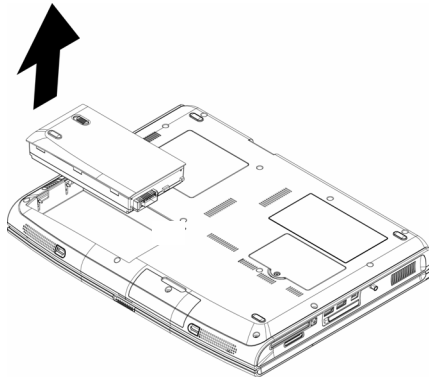- Try to use the HDD or the PCMCIA drive to read and write files, instead of using the external USB FDD.

Note: The battery pack should be locked in the battery compartment all the time.

2.7   Removing The Battery Pack

This battery pack can easily be removed and replaced. Make sure that the computer is properly shutdown before changing the battery pack. If you would like to change the battery pack while power is on, make sure this battery pack is not the only electrical source to the system unit. Follow the steps below to remove the battery pack.

- Make sure the system is properly shutdown.
- Flip the system upside down.
- Push the two battery latches to the unlock position as shown by *#1* and *#2* (*Enlarged Diagram*).

- Maintain the latch in the unlock position.
- Remove the battery pack as shown.

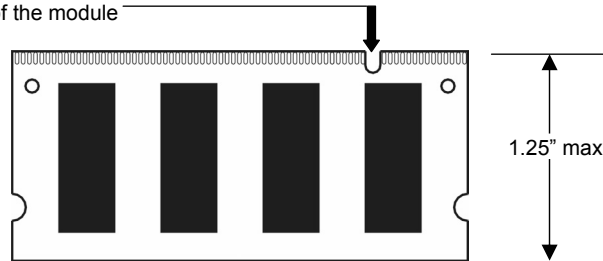To insert the battery pack, reverse the steps above.

Chapter 3 Memory

Your **notebook** is equipped with a configurable memory unit. The industry standard **JEDEC DDR S.O.DIMM** memory module socket is available for memory upgrade to 1024MB. The table below illustrates all the possible ways system memory can be configured.

Two types of **DDR S.O.DIMM** are available in the market: PC2100 (DDR266) and PC2700 (DDR333). If it occurs that system is installed with both the PC2100 and PC2700 **S.O.DIMM**'s, the overall speed would be downgraded to DDR266.

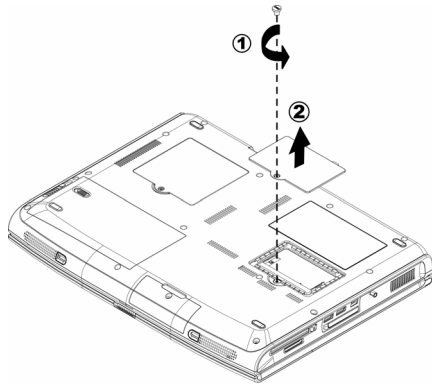| Total Memory	In-System Memory	SODIMM Memory
256MB	256MB	0MB
384MB	256MB	128MB
512MB	256MB	256MB
768MB	256MB	512MB
512MB	512MB	0MB
640MB	512MB	128MB
768MB	512MB	256MB
1024MB	512MB	512MB

Groove for indicating the orientation of the module

1.25" max

DDR S.O. DIMM Memory Module

3.1   Removing Memory Module

Below is the procedure on how to remove the memory module.

- Make sure the system is properly shutdown.
- Flip the system upside down.
- Remove the screw as shown by *#1*.
- Remove the compartment door as shown by *#2*.

The Groove

- Press the spring-locks sideways as shown by *#1*.
- The memory module would pop up as shown by *#2*.
- Remove the memory module as shown by *#3*.

To insert the memory module, reverse the steps above.

Chapter 4 Mini-PCI Module

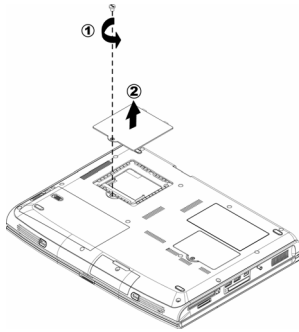Your **notebook** is equipped with a Mini-PCI module. The Mini-PCI supports wireless LAN function.

4.1 Removing Mini-PCI Module

Below is the procedure on how to remove the Mini-PCI module.

- Make sure the system is properly shutdown.
- Flip the system upside down.
- Remove the screw as shown by **#1**.
- Remove the compartment door as shown by **#2**.

The Groove

- Press the spring locks sideways as shown by **#1**.
- The Mini-PCI module would pop up as shown by **#2**.
- Disconnect the two cables as shown by **#3**. Note, there are two types of mini-PCI module. Externally, they look slightly different; especially on the locations of the cable connections.

To insert the Mini-PCI module, reverse the steps above.

Chapter 5 The HDD Drive

Your **notebook** is equipped with an industry standard 2.5"/9.5mm hard disk drive.

5.1   Removing The Hard Disk Drive

Below is the procedure on how to remove the hard disk drive.

- Make sure the system is properly shutdown.
- Flip the system upside down.
- Remove the screw as shown by **#1**.
- Remove the HDD drive as shown by **#2**.

To insert the hard disk drive, reverse the steps above.

Appendix A- Agency Regulatory Notices

A.1   Safety Instructions

CAUTION: Please read these safety instructions carefully.

CAUTION: Please keep this User's Manual for future reference.

CAUTION: Please disconnect this equipment from AC outlet before cleaning. DO NOT use liquid or sprayed detergent for cleaning. Use a clean moistened cloth.

CAUTION: The wall socket used should be positioned near the equipment and should be easily accessible.

CAUTION: Please keep this equipment free from humidity.

CAUTION: Place the equipment on a reliable surface at all times. A drop or fall can cause severe damage.

WARNING: The openings of the enclosure are for air ventilation and are meant to protect the equipment from overheating. DO NOT COVER THE VENTILATION OPENINGS.

⚠ **CAUTION:** Verify the voltage of the power source before connecting the unit to any power outlet.

⚠ **WARNING:** DO NOT step on or place anything over the power cord.

⚠ **CAUTION:** All cautions and warnings on the equipment should be noted.

⚠ **WARNING:** If the equipment is not used for a long period of time, disconnect the equipment from the power source to avoid damage from power spikes.

⚠ **WARNING:** NEVER pour any liquid into any openings; a fire or electrical shock is possible.

⚠ **WARNING:** For safety reasons, other than pre-designated ports, doors, and the equipment should be opened only through qualified service personnel.

⚠ **CAUTION:** If one of the following situations should arise, the equipment should be checked by an authorized technician:
- a. The power cord or plug is damaged.
- b. Liquid has penetrated into the equipment.
- c. The equipment has been exposed to excessive moisture.
- d. The equipment does not work well, or you fail to get it to work according to user's manual.
- e. The equipment has been dropped or damaged.
- f. The equipment has obvious signs of breakage.

⚠ **CAUTION:** DO NOT LEAVE THE EQUIPMENT IN TEMPERATURES BELOW -20°C(-4°F) OR ABOVE 60°C(140°F). IT MAY CAUSE DAMAGE TO THE EQUIPMENT.

⚠ **WARNING:** Never install modem/telephone wiring during a lightning storm.

⚠ **WARNING:** Never install modem/telephone jacks in wet locations unless the jack is specially designed for wet locations.

⚠ **WARNING:** Never touch un-insulated modem/telephone wires or terminals unless the modem/telephone line has been disconnected at the network interface.

⚠ **CAUTION:** Use caution when installing or modifying modem/telephone lines.

⚠ **WARNING:** Avoid using a modem/telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.

⚠ **WARNING:** This **computer** contains an internal lithium battery-powered real-time circuit. There is a risk of explosion and injury if the battery is incorrectly replaced or handled. Do not attempt to recharge, disassembled, immerse in water, or dispose of it in fire. Replacement should be done through your notebook dealer.

⚠ **WARNING:** THE **CD-ROM/DVD-ROM** IN THIS **NOTEBOOK** EMPLOYS A **LASER** SYSTEM.
   a. To ensure proper use of this product, please read the relevant instructions carefully and retain for future reference.
   b. Should the unit ever require maintenance, contact your local dealer.
   c. Use of controls, adjustments or the performance of procedures other than those specified may result in hazardous radiation exposure.
   d. To prevent direct exposure to Laser Beam, do no try to open the enclosure.

⚠ **CAUTION:** The internal CD-ROM/DVD-ROM drive is classified as a **CLASS 1 LASER PRODUCT**. Label is located on the outside of the CD-ROM/DVD-ROM drive with the following wordings:

> **CLASS 1 LASER PRODUCT**
> **KLASSE 1 LASER PRODUKT**

⚠ **WARNING:** Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer.

Dispose of used batteries according to the manufacturer's instructions.

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

⚠ **WARNING:** Your **notebook** contains a Ni-MH or Li-Ion battery pack. There is a risk of fire and chemical burn if the battery pack is handled improperly. Do not disassemble, crush, puncture, short external contact, dispose of in water or fire, or expose it to temperature higher than 60°C.

⚠ **WARNING:** Handle the battery pack very carefully. Avoid touching the metal leads on the connector of the battery case.

⚠ **CAUTION:** Use only approved AC Adapter with your notebook. Using the wrong type of AC Adapter may cause serious damage to your notebook.

⚠ **CAUTION:** The AC Adapter can accept a line voltage ranging from 100V to 240V and is compatible with most international power sources. If you are unsure whether your power source is compatible, please contact the local dealer for assistance.

⚠ **CAUTION:** To reduce the risk of fire, use only No. 26 AWG or larger telecommunication line cord.

⚠ **CAUTION:** For Continued Protection Against Risk of Fire, Replace Only with same Type and Rating of Fuse.

⚠ **CAUTION:** If the **computer** is not sold to German area, please use only the local recognized power supply cords that are recommended by the manufacturer.

A.2 Agency Notice

Federal Communications Commission Notice

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 or more 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 or television technician for help.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by the manufacturer responsible for compliance may void the user's authority to operate the equipment.

Cables

Connections to this device must be made with shielded cables with metallic RFI/EMI connector hoods to maintain compliance with FCC Rules and Regulations.

FCC RF Radiation Exposure Statement

- This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
- This equipment complies FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

USA and Canada Safety Requirements And Notices

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

The following safety precautions should be observed:

- Do not touch or move antenna while the unit is transmitting or receiving.
- Do not hold any component containing the radio such that the antenna is very close or touching any exposed parts of the body, especially the face or eyes, while transmitting.
- Do not operate the radio or attempt to transmit data unless the antenna is connected; if not, the radio may be damaged.

Use in specific environments:

- The use of wireless devices in hazardous locations is limited by the constraints posed by the safety directors of such environments.
- The use of wireless devices on airplanes is governed by the Federal Aviation Administration (FAA).
- The use of wireless devices in hospitals is restricted to the limits set forth by each hospital.

Antenna use:

- In order to comply with FCC RF exposure limits, low gain integrated antennas should be located at a minimum distance of 20 cm (8 inches) or more from the body of all persons.
- High-gain, wall-mount, or mast-mount antennas are designed to be professionally installed and should be located at a minimum distance of 30 cm (12 inches) or more from body of all persons. Please contact your professional installer, VAR, or antenna manufacturer for proper installation requirements.

Explosive Device Proximity Warning

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

Use On Aircraft Caution

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

Canadian Notice

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

Avis Canadien

Cet appareil numerque de la classe B respecte toutes les exigences du Reglement sur le materiel brouilleur du Canada.

Canada Radio Frequency Interference Requirements

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

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

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

"Pour empêcher que cet appareil cause du brouillage au service faisant l'objet d'une licence, il doit être utilisé à l'intérieur et devrait être placé loin des fenêtres afin de fournir un écran de blindage maximal. Si le matériel (ou son antenne d'émission) est installé à l'extérieur, il doit faire l'objet d'une licence."

European Union CE Notice

Product with the CE Marking comply with the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community and if this product has telecommunication functionality, the R&TTE Directive (1999/5/EC).

Compliance with these directives implies conformity to the following European Norms (in parentheses are the equivalent international standards and regulations):

- EN55022 (CISPR 22)— Electromagnetic Interference
- EN55024 (IEC61000-4-2,3,4,5,6,8,11)— Electromagnetic Immunity
- EN61000-3-2— (IEC61000-3-2)-Power Line Harmonics
- EN61000-3-3— (IEC61000-3-3)-Power Line Flicker
- EN60950 (IEC60950) — Product Safety

For devices with built-in wireless equipment, the following additional standards apply:

- ETSI301489-17: General Emissions for Radio Equipment
- EN60950: Safety

- ETSI300328-2: Technical Requirements for Radio Equipment

CE Caution: Due to the fact that the frequencies used by 802.11b wireless LAN devices may not yet be harmonized in all countries, 802.11b products are designed for use only in specific countries or regions, and are not allowed to be operated in countries or regions other than those of designated use. As a user of these products, you are responsible for ensuring that the products are used only in the countries or regions for which they were intended and for verifying that they are configured with the correct selection of frequency and channel for the country or region of use. And deviation from permissible settings and restrictions in the country or region of use could be an infringement of local law and may be punished as such.

U.K. Modem Compliance Information

This modem is approved by the secretary of state at the **D**epartment of **T**rade and **I**ndustry for connection to a single exchange line of the public switched telephone network run by certain licensed public telecommunication operators or system connected there to (Direct exchange lines only, not shared service or 1-1 carrier systems).

This modem is also suitable for connection to **P**rivate **A**utomatic **B**ranch E**x**change (**PABX**), which return secondary proceeding indication.

If this modem is to be used with a PBX which has extension wiring owned by BT, connection of the modem the PBX can only be carried out by BT; or by the authorized maintainer of the PBX unless the authorized maintainer has been given 14 days written notice that the connection is to be made by another person; and that period of notification has expired.

This modem is suitable for use only on telephone lines proved with Loop Disconnect or Multi-Frequency Dialing Facilities.

Users of this modem are advised that the approval is for connection to the **PSTN** via the telephone line interface supplied with it. Connection of a modem to the **PSTN** by any other means will invalidate the approval.

There is no guarantee of correct working in all circumstances. Any difficulties should be referred to your supplier.

Some network operators require that intended users of their network request permission to connect and for the installation of an appropriate socket.

The **R**inger **E**quivalence **N**umber (**REN**) of this modem is 1. **REN** is guide to the maximum number of apparatus that can simultaneously be connected to one telephone line. The **REN** value of each apparatus is added together, and should not exceed 4. Unless otherwise marked, a telephone is assumed to have a **REN** of 1.

This modem is only approved for use of the following facilities:
- Storage of telephone numbers for retrieval by a predator mined code.
- Initial proceed indication detection.
- Automatic calling / automatic answering.
- Tone detection.
- Loud-speaking facility.

This modem is not approved for connection to U.K./private speech-band services. This modem does not support an automatic re-dial function. Any other usage will invalidate the approval of your modem, if as a result, it then ceases to confirm to the standards against which approval was granted. The approval of this modem is invalidated if the apparatus is

subject to modification in any material way not authorized by the **BABT** or if it is used with, or connected to external software that have not been formally accepted by **BABT**.

Appendix B- Environment

ENVIRONMENT

Operating Temperature	: 10°C to 35°C.
Non-Operating Temperature	: -20°C to 60°C.
Humidity	: 20% to 80% non-condensing.
Shock	: 5G operating, 60G non-operating.
Vibration	: 3-200Hz @ 1.0G operating.
	: 3-200Hz @ 1.5G non-operating.

Warning: Don't expose your **notebook** to excessive heat or coldness (frost). Don't drop, spill fluids or open the exterior of the case. This can damage the **notebook** and void the warranty.