NOTEBOOK COMPUTER

MANUAL

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Table of Contents:

INTRODUCTION

NOTES ON THIS MANUAL

This manual is divided into sections to help you find the information you require. Along with the Table of Contents, an Index has been provided to help you locate information. Please read the chapters "**Operational Safety**" (page 5 and following) and "**Getting started**" (page 20 and following).

In addition, many application programs include extensive help functions. As a general rule, you can access help functions by pressing F1 on the keyboard. These help functions are available to you when you use the Microsoft Windows® operating system or the various application programs.

AUDIENCE

These instructions are intended for both the novice and advanced user. Regardless of the possible professional utilization, this Notebook is designed for day-to-day household use. The functions and applications for use with this Notebook have been designed with the entire family in mind.

DOCUMENT YOUR NOTEBOOK

It is important to document the details of your Notebook purchase in the event you need warranty service. The serial number can be found on the back of the Notebook:

Serial Number   ....

Date of Purchase   ....

Place of Purchase   ....

QUALITY

We have selected the components in this computer for their high level of functionality, ease of use, safety and reliability.

Through balanced hardware and software design we are able to provide you with an innovative personal computer useful for applications relating to both work and leisure.

We are pleased to welcome you as our newest customer. **Thank you for choosing our company.**

SERVICE

We are pleased to provide individualized customer service throughout the life of your Notebook. Please feel free to contact a customer service representative with any questions relating to this Notebook. A separate section on Customer Service is included in this manual, starting on page 56.

FINDING MORE INFORMATION

There are many kinds of help and information for using your PC. This section tells you where to get help with the Microsoft® Windows® XP operating system, software programs, and the Multimedia PC.

GETTING TO KNOW WINDOWS XP

WINDOWS XP MANUAL

This printed manual provides general information about the operating system. We recommend that all beginning users or users of previous versions of Windows read this information. It can be found with the CDs in the accessory box that came with your PC.

WINDOWS XP TOUR

Windows XP includes a tour that you can take to familiarize yourself with the operating system. This tour can usually be found by clicking on the **Start** menu. You can also find the tour by selecting **All Programs**, then **Accessories**.

MICROSOFT INTERACTIVE TRAINING
Training is the most powerful way to acquire skills that help you perform a specific task efficiently. On the **Start** menu, choose **All Programs**, choose **Accessories**, and then choose **Microsoft Interactive Training**.
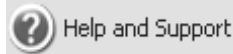
WINDOWS XP HELP AND SUPPORT Help and Support
An answer to almost every question can be found in this program. You'll find it in the **Start** menu.

SOFTWARE HELP

Many software programs incorporate extensive help functions. As a general rule, you can access help functions by pressing F1 on the keyboard. Many software programs include Help as an option on the menu at the top of the screen or window. They may also provide an icon (or icons) with a question mark on them that you can click to access more information.

DEVICE DRIVERS

If you install external devices, such as printers or digital cameras, you may also need to install device drivers. The drivers will be included with your peripheral devices. These are occasionally updated by the manufacturer. Check with the manufacturer of your peripheral device to find out if you have the most recent version of your device drivers.

INFORMATION ABOUT YOUR PC

Clicking on **Start** and then on **Information about your PC** will bring up more extensive information about your PC, as well as useful links to software tools and other resources. It also contains any last minute information about your PC that may not be included in this manual.

SAFETY

SAFETY INSTRUCTIONS

This manual contains important information on the safe and proper setup, use and care of your Notebook computer. Please read this manual carefully and follow all instructions. These instructions should be kept with your computer at all times. Proper set up, use and care can help extend the life of your Notebook. In the event that you transfer ownership, please provide these instructions to the new owner.

Please follow the instructions in this section for the safe operation of your Notebook:

DATA SECURITY

How important is the information you will be storing on your Notebook? You need to guard against the loss of your data by making backup copies. You can backup your data onto CD, floppy disk, or other media such as Zip drives. It depends upon how much data you have. In this way, if something happens to the hard drive in your Notebook, you have another copy of your data.

> The supplier does not assume liability for data loss or damage to data storage units, and no claims can be accepted for damages resulting from the loss of data or consequential losses.

OPERATIONAL SAFETY

It is important to follow all of the safety instructions in this manual to ensure the safety of you and your Notebook.

> - **DO NOT** open the case of the Notebook, the battery or the power adaptor. When the case is open there is a danger of severe electric shock.

- **DO NOT** insert objects through the slots and openings of the Notebook. This may lead to electric shock, electrical short-circuit or fire that will damage your Notebook.
- **DO NOT** allow small children to play unattended with electrical equipment.

- **DO NOT** cover the slots and openings of the Notebook. These openings are for ventilation purposes. Covering these vents may lead to overheating.
- **This Notebook is NOT designed for use within industrial environments.**

GENERAL SAFETY INFORMATION

If you find that:

- the power cord/power adapter is worn or damaged.
- liquid is spilled on the unit.
- the Notebook fails to work properly.
- the Notebook is dropped or the housing is damaged.

You should:

- shut-down your Notebook immediately.
- remove the power cord from the socket.
- contact Customer Service.
- do not restart unless you have contacted Customer Service.

AMBIENT TEMPERATURE

- The Notebook is most reliably operated at an ambient temperature between **+41°** and **+104° F** and at a relative humidity between **30%** and **70%** (without condensation).
- When powered off, the Notebook can be stored at temperatures between **32°** and **140° F**.

CD-ROM/CD-RW/DVD/DVD-RW Drive Safety

- CD-ROM-/CDRW-/DVD-drives are **Laser Class 1** devices. These lasers **must** remain in their sealed casing.

- **Danger** — Invisible laser radiation when open. Avoid direct exposure to beam. This product is certified by the manufacturer to comply with DHHS rules 21CFR, Chapter 1, Subchapter J, applicable at date of manufacturer. Refer to optical drive labels for additional details.

- **DO NOT** remove the drive covers, as exposure to the lasers may be harmful**.**

- **DO NOT** look directly into the laser, even when wearing eye protection.

TFT Display Safety

- To avoid damage to the TFT Display, **never** open it a full 180º. **Do not** forcibly open it.

- In order to avoid damage to the display, **do not** touch it with your fingers or sharp objects.

- **Never** lift the Notebook by the TFT Display; doing so could break the hinges.

- There is a risk of injury if the **TFT display breaks**. Use **protective gloves** to pack up the broken pieces and contact customer service to arrange for proper disposal.

  It is important to thoroughly wash your hands after handling a broken TFT display. There is a chance that **chemicals** may have been released.
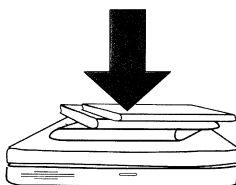
- **Never** place objects on top of the Notebook that would exert any pressure on the display. There is a danger that even slight pressure may break the TFT display.

POWER ADAPTER

- Do not open the power adapter housing. When the housing is open there is a **danger** of severe electric shock. It contains no user-serviceable parts.

- The electric outlet must be in the vicinity of the Notebook and within reach of the power adapter cables. **DO NOT** stretch the power cables tightly to reach an electric outlet.

- To disconnect your Notebook from the power source, or set the Notebook to battery operation, remove the power cord from the Notebook's power socket.

- Only use the Notebook with a power adaptor (**FSP090-1ADC21**) operating at **AC 115V~/60 Hz.** In European countries use the Notebook at **AC 220-240V~/50 Hz.**

  For details on power consumption, please refer to the rating plate on the rear of your Notebook. If you are unsure of the type of power supply available at the point of use, ask your local power company.

- Use **only** the supplied power cord and power adapter.

- If using an extension cord, make certain that it meets your local safety requirements. If in doubt, consult an electrician.

- To provide additional protection against electric shock, power surges, lightning strikes, or other electrical damage to your Notebook, we recommend the use of a **surge protector**.

BATTERY OPERATION

To extend the life and power of your battery and guarantee secure operation, the instructions below should be followed:

- Never expose the battery to **direct sunlight** or **heat** for long periods.

- **Do not** dispose of the battery by fire as they may explode. Check with local codes for possible special disposal instructions.

- **Do not** open the battery housing; it contains no user-serviceable parts.

- Disregarding these instructions will lead to damage and under some circumstances may even cause the battery to **explode**.

- Keep the battery away from electrically conductive materials, chemical substances and cleaning agents.

- Only use the originally supplied power adapter to charge the battery (**FSP090-1ADC21**).

- Fully discharge the battery before recharging it.

- Replace the battery **only** with the same type or an equivalent type recommended by the manufacturer.

- Charge the battery only until the battery charging light goes out. Also, refer to the instructions under "Charging the Battery" on page 27 for instructions on checking the battery level.

- Only change the battery when the unit is switched off.

- **Batteries are classified as special waste** and should always be disposed of properly. Contact Customer Service for more details.

- Keep batteries away from children at all times.

- Use only the batteries and power adapter/cord indicated in this manual.

MODEM

- If your system has a modem, please make sure you connect it to an **analog** telephone line only. Connecting to a digital PBX, a digital line designed for broadband services or ISDN, a shared service line or a payphone will damage the modem or the devices to which it is connected.

TOUCH PAD

- Light pressure with the tip of your finger is all that is required to operate the touch pad. Because the touch pad is electrostatic sensitive, objects cannot be used in place of your fingers. Using a pen or other object can damage the touch pad or cause the Notebook to malfunction.

CABLING

- Arrange cables so no one can walk on or trip over them.
- **DO NOT** place objects on any of the cables.

> **Caution** – To reduce the risk of fire, use only No. 26 AWG or larger telecommunication cords (applies to American Standards).

SET-UP LOCATION

- Keep your Notebook and all connected peripherals away from moisture, dust, heat and direct sunlight. Failure to do so can lead to Notebook malfunction or damage.
- It is highly recommended you do not use the Notebook outdoors.
- Operate the Notebook and all peripherals on a stable, balanced and vibration-free surface.
- **Do not** leave the base of your Notebook on your lap or any part of your body for a long period of time while the Notebook is turned **ON** or is charging. The Notebook can become very warm while it is turned on or charging and can cause discomfort or injury from heat exposure.

IMPORTANT ADDITIONAL SAFETY INSTRUCTIONS

When using any electronic equipment, basic safety precautions should always be taken. Following the guidelines below can reduce the risk of fire, electric shock and personal injury:

- Do not use this product near water (e.g., near a bathtub, lavatory or kitchen sink, in a wet basement or near a swimming pool).

- Avoid using a telephone/modem (other than a cordless type) during an electrical storm. There is a remote risk of electric shock from lightning.

- Do not use the telephone/modem to report a gas leak in the vicinity of the leak.

> ⚠ Lithium batteries cannot handle intense pressure, high temperatures or fire. Danger of explosion if replaced incorrectly. Replace batteries with a compatible type as recommended by the manufacturer. Lithium batteries are **hazardous waste** and require proper disposal. Contact the **Service Center** for additional information on battery disposal.

UPGRADES AND REPAIRS

- Only a qualified Service Engineer should perform upgrades and repairs to your Notebook.

- If you do not have the necessary qualifications, go to an appropriate **Service Engineer**. Please contact the **Service Center** if you are experiencing technical problems with your Notebook.

NOTES FOR SERVICE ENGINEERS

- Before opening the housing, disconnect the Notebook from all power sources and remove any connecting cables. If the Notebook has not been disconnected from the power outlet before being opened, there is a **danger** of severe electric shock. There is also a risk of damage to the components.
- Internal components of the Notebook may be damaged by **electrostatic discharge** (ESD). Perform system upgrades and changes in an **ESD-protected work area**. If no such work area is available, wear an **antistatic wrist strap** or touch a highly conductive metal object. Your service center can repair damage sustained by inappropriate handling for a fee.
- Use only **original spare parts**.

CAUTION: The CMOS lithium batteries cannot tolerate intense pressure, high temperatures or fire. Keep away from children! Danger of explosion if replaced incorrectly. Only replace with a compatible type (CR2032) as recommended by the manufac-turer. Lithium-Batteries are **hazardous waste** and need to be disposed of properly. If necessary, we will take back your used CMOS lithium battery.

Notes on Laser Radiation :

Laser devices of Laser Class 1 to Laser Class 3b may be used in the Notebook. Where the Notebook housing remains closed, the device meets the requirements of **Laser Class 1.** By opening the Notebook housing you will gain access to laser devices of up to Laser Class 3b.

- The CD-ROM/CD-RW/DVD/DVD-RW drive contains no user-serviceable parts. Only the **manufacturer** should perform repairs to the CD-ROM/CD-RW/DVD/DVD-RW drives.

When removing and/or opening laser devices, the following guidelines must be observed:

- **DO NOT** look into the laser beam, even while wearing opti-cal protection.
- **DO NOT** allow yourself to be exposed to the laser beam. Avoid exposure of the eyes or skin to direct or stray radiation.

MAINTENANCE

MAINTENANCE INSTRUCTIONS

This section provides information on the proper maintenance and care of your Notebook. Following these measures can extend its lifetime.

CLEANING AND CARE

- **Warning!** There are no user-serviceable or user-cleanable parts inside the Notebook housing. Never open the Notebook housing.

- **DO NOT** use any solvents, corrosive or gaseous cleaning agents.

- **DO NOT** use CD-ROM cleaning disks or similar products that clean the lens of the laser to clean your CD-ROM/CD-RW/DVD/DVD-RW drive.

- Before cleaning, always remove the power adapter plug and all connecting cables.

- Only use a damp, lint-free cloth to clean the Notebook.

CARE OF THE TFT DISPLAY

- Always close the Notebook when not in use. Avoid touching or scratching the surface of the screen as it is easily damaged.

- Make sure that no water drops are allowed to remain on the screen. Water can cause permanent discoloration.

- Clean the screen with a dry, soft, lint-free cloth.

- Do not expose the screen to bright sunlight or ultraviolet radiation.

TRANSPORTING THE NOTEBOOK

Please use the following guidelines when transporting the Notebook:

- Switch off the Notebook. This will prevent damage to the hard disk. When the Notebook is turned off, the hard disk heads are moved into a safe area.

- Remove any CDs and floppy disks. This will prevent damage to the disks or to the drive heads.

- Close the Notebook and ensure that the cover locks shut.

- Always use the Notebook carrying case. This helps to protect the Notebook from dirt, moisture, jolts and scratches.

- Fully charge your battery and any spare batteries immediately before a long journey.

- Should you need to ship your Notebook, always use the original packaging and make certain the shipper knows the contents contain fragile electronic equipment.

- Wait until the Notebook has reached ambient (room) temperature before turning it on or connecting it to the power adapter. Drastic variations in temperature and humidity can create condensation within the Notebook and may cause it to short-circuit.

SECURING YOUR NOTEBOOK

SETTING A USER PASSWORD

You can prevent unauthorized access to your Notebook by setting a User Password. If a User Password is set, you will be prompted for the password each time the Notebook is started. The User Password is set in the **BIOS** (page 55).

> **Attention:** It is important to record your password in a safe place. If you forget your password, you will not be able to cancel it or access the software on your Notebook. If this happens, you will need to contact your service center.

USING A SAFETY LOCK

You can prevent theft by using a special type of lock called a **Kensington lock**, which can be bought at your local retailer.

A Kensington lock has a cable that wraps around a stationary object and a "T" shaped end that inserts into the Kensington lock port on your Notebook. Either a key or combination dial is used to secure the lock in place.

VIEWS OF THE NOTEBOOK

OPEN NOTEBOOK
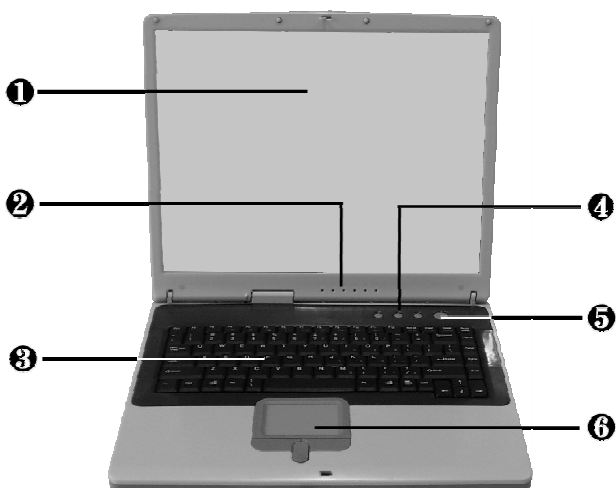
❶	TFT display (⇨ p. 30)
❷	Operating system states indicators (⇨ p. 19)
❸	Keyboard (⇨ p. 32)
❹	Easy Button
❺	Power ON/OFF (⇨ p. 25)
❻	Touch pad (⇨ p. 33)

FRONT VIEW
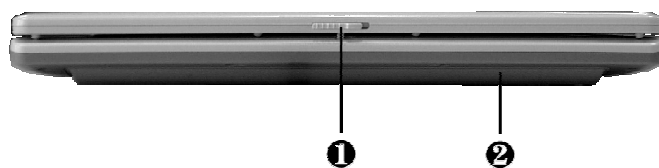
❶	Display catch (⇨ p. 30)
❷	Battery

LEFT SIDE
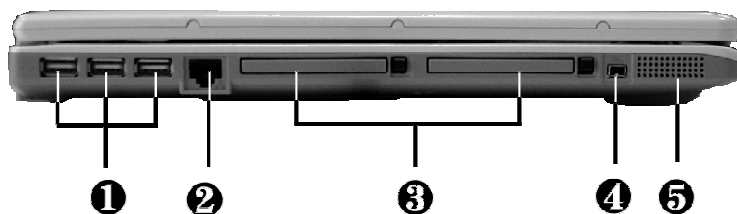
❶	USB ports (⇨ p. 50)
❷	LAN port (RJ-45) (⇨ p. 44)
❸	PC card slot PCMCIA (⇨ p. 48)
❹	IEEE1394 (4-pin) (⇨ p. 51)
❺	Speakers

RIGHT SIDE
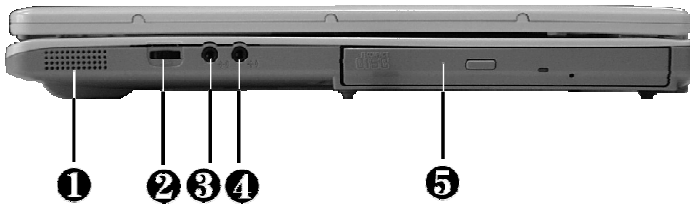
❶	Speakers
❷	Volume Control
❸	Microphone / Line in (⇨ p. 42)
❹	Line out (⇨ p. 42)
❺	Optical Drive (⇨ p. 36)

REAR SIDE
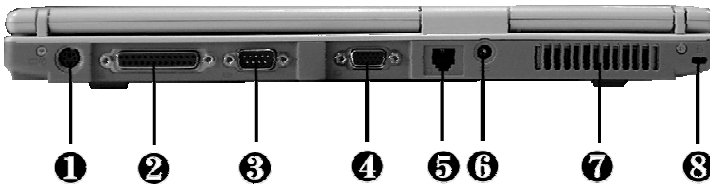
❶	PS/2 port (⇨ p. 51)
❷	Parallel port (⇨ p. 50)
❸	Serial port (⇨ p. 50)
❹	External monitor (VGA) (⇨ p. 31)
❺	Modem port (RJ-11) (⇨ p. 43)
❻	Power socket (⇨ p. 25)
❼	Fan slot*****
❽	Kensington lock (⇨ p. 15)

*Caution! Do not cover when in use!

INDICATORS
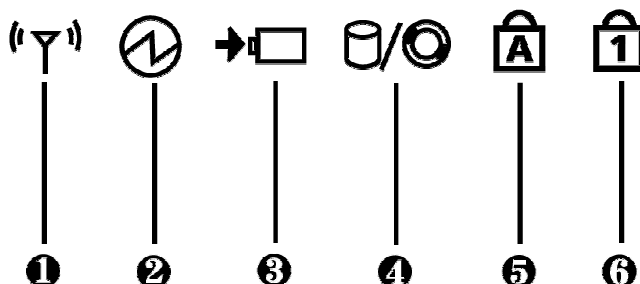
LED's indicate the power and operating system states of the Notebook. The meaning of each LED is:

❶	This LED lights when Wireless LAN is active (optional feature).
❷	**Lights green** when the notebook is powered on. **Blinks green** in Standby mode.
❸	**Lights off**, when battery is fully charged. **Lights green**, when the battery is charging.
❹	This LED lights when the Notebook is accessing the hard disc or the optical drive.
❺	This LED lights when CAPS Lock has been activated. This sets the keyboard to capital letters.
❻	This LED lights when NUM Lock has been activated. It sets the keyboard so that numbers are assigned to certain characters, simplifying numerical data input.

EASY BUTTONS
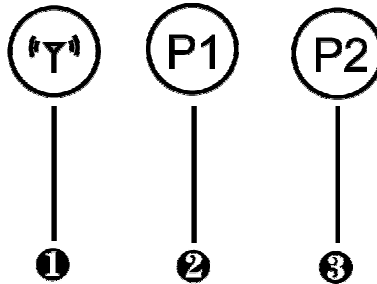
❶ Wireless LAN Button

Push this button to activate or inactivate the Wireless LAN. When you activate the wireless LAN function, it will search the wireless LAN signal automatically if you had installed the driver.

❷ Easy Button 1

You can define the specific function by yourself to active the program.

❸ Easy Button 2

You can define the specific function by yourself to active the program.

GETTING STARTED

Before you get started using your notebook, first take a few moments to read the important section on **Safety**.

This Notebook comes with software **fully pre-installed**. You do not have to install any of the CDs supplied. However, with many programs (e.g., telephone CDs or encyclopedias) it is necessary to insert the corresponding CD to access the data that is stored on it. The software will prompt you to do this when necessary.

STEP 1

Before starting the Notebook please insert the battery. For further information read the section titled "Power Supply" starting on page 25. Open the display (see page 30) and switch on the Notebook using the On/Off switch (see page 16.)

> If the battery level is insufficient, connect the power adapter.

> **Note:** Make sure there is no bootable CD (e.g., the Recovery CD) in the CD-ROM drive. Such disks will prevent the operating system from loading off the hard drive.

Your operating system is finished loading when a welcome screen is shown on your display.

STEP 2

The greeting procedure will guide you through a series of dialogue boxes. The information in each dialogue box will explain the steps that need to be taken.

Should you have any questions just click on ⓘ.

Enter Personal Details

In one of the initial start-up dialog boxes a request will appear on the screen for you to enter your personal details. Please enter the requested information in the white input fields. You can select the fields by clicking on them with the mouse. When you press Enter, or click on the Continue button you progress to the next window.

Mouse Familiarization Program

The greeting procedure will also take you through a mouse familiarization program. Use this program if you need to learn how to operate the mouse. When ready, quit the program by pressing the **ESC** (escape) key on the top left of the keyboard.

License Agreement

The greeting procedure also displays the license agreement. Please read this carefully. It contains important legal information on the use of your software. In order to see the full text, use the mouse and the scroll bar on the right side of the screen to move downwards until you have reached the end of the document. You accept the agreement by clicking on the **I accept the agreement** option field. Only by doing so will you be entitled to use the product under lawful terms and conditions and be entitled to open the sealed Windows® manual.

Step 3

After the login procedure the Windows® desktop appears on your screen. This can be adjusted so that the screen of your computer looks different.

THE WINDOWS XP DESKTOP

After the login procedure the Windows XP desktop appears on your screen. (Your desktop might not look exactly like the one shown here.)
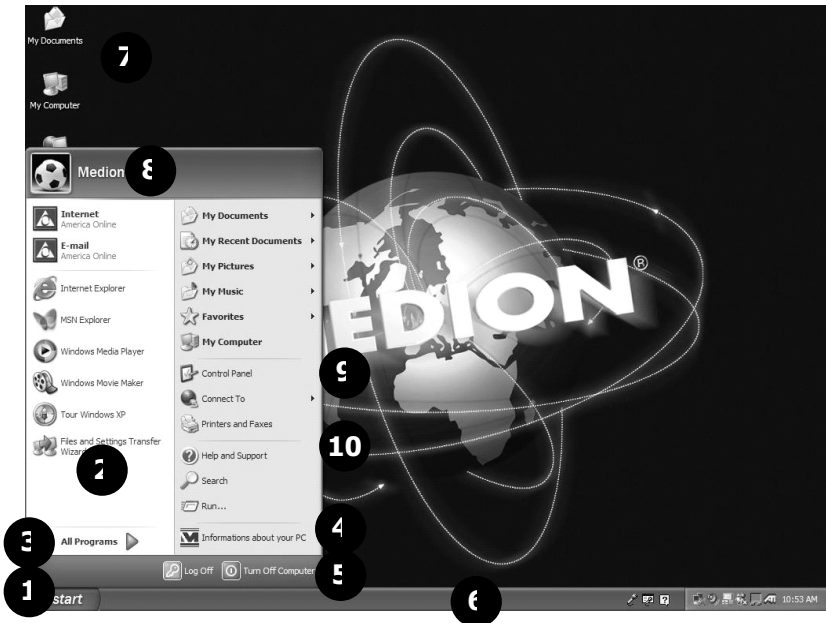
1. Start Button

Clicking the Start button brings up a menu where you can access help, software programs, files, and settings. For more information, click **Windows XP Tour** on the **Start** menu.

2. Program Bar

The most commonly used software programs are listed here.

3. All Programs

All of the software programs installed on your Notebook are ordinarily listed here. Click **All Programs** to reveal an extensive menu.

4. Information about your PC

Click this button to receive important information about your Notebook as well as valuable hints and additional assistance.

5. Turn Off Computer

Click this button to shut down Windows XP and the Notebook.

6. Task Bar

Here you receive information and status reports about Windows XP and which programs are running.

7. Desktop Icons

Desktop icons link to their respective programs. To start a program, double-click its desktop icon.

8. Logged in User

This tells you which user is logged in to your Notebook.

9. Control Panel

You can use the icons in Control Panel to change the appearance and functionality of Windows XP. These icons represent options for configuring your Notebook.

10. Windows XP Help

Here you can find information on using your Notebook, networking, backup, and many other tasks.

POWER SUPPLY

ON/OFF BUTTON

The On/Off button (page 16) is used to power up/down the Notebook. Pressing the button briefly will turn off your computer using the operating system. This is the same as clicking **Start** then **Turn Off Computer**. If the button is held down for longer than 4 seconds, it will force the notebook to power down without going through the operating system shut down process. This may be useful if your computer has crashed or stalled.

> **WARNING!** Do not switch off your Notebook while the **hard disk** or the optical drive is running and the corresponding **media activity LEDs** are lit. Otherwise data may be lost. To protect the hard disk you should always wait for 20 seconds after powering down the Notebook before powering it up again.

POWER ADAPTER

Your Notebook is supplied with a universal AC power adapter, which automatically adjusts to the available power source. The following levels are supported: **AC 100-240V~/ 50-60 Hz.** Please follow the power supply **safety instructions** found on page 8.

The power adapter is connected via a power cord to an AC outlet. The DC power lead from the power adapter is connected to the rear side of the Notebook (see page 18).

The adapter provides the Notebook with power and also charges the battery. The power supply indicators of the Notebook (see page 19) provide details on the operating state. The battery is also being charged when you are working on your Notebook with the power adapter.

The power adapter is still live if the Notebook is not connected with it. You should therefore unplug the power adapter from the outlet if it is not connected to the Notebook.
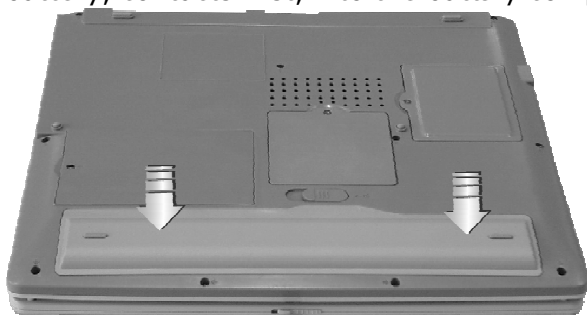
> ⚠️ **WARNING!** Use only the power adapter and power cord supplied with your Notebook.
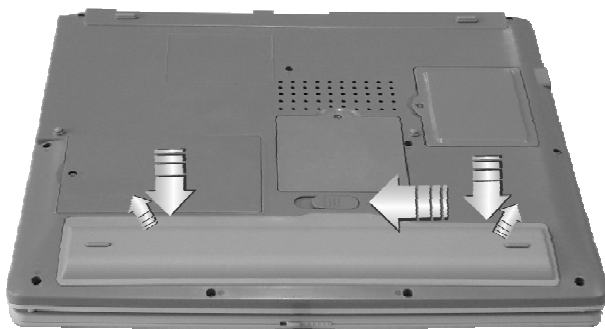
BATTERY OPERATION

In order to extend the life and power of your battery, and to guarantee reliable operation, it is essential that the safety instructions on page 9 are followed.

INSERTING THE BATTERY

Slide the battery, contacts first, into the battery compartment.

REMOVING THE BATTERY

WARNING! Do not remove the battery while the Notebook is running on battery power. You increase the possibility of losing data.

CHARGING THE BATTERY

The battery is charged via the power adapter. If the power adapter is connected, it charges the battery automatically, whether the Notebook is turned on or not.

When the Notebook is switched off, full charging takes a few hours. If the Notebook is switched on, the charging process takes a significantly shorter time. However, it is recommended that from time to time you discharge the battery completely and recharge it afterwards with the Notebook switched off. You can discharge the battery without losing data, if you turn your notebook on without using any application and no power adapter. As soon as the battery is empty your notebook will enter the hibernate mode. We recommend doing this procedure every time you think the battery power is losing efficiency.

BATTERY POWER

A fully charged Li-Ion battery will provide power for around 2 hours of operation. However, the battery life will vary according to how the power saving functions are set, the way you work, the size of the main memory and the display type.

When working in Windows an audible warning signal will be given off as soon as the battery level drops below a set minimum value. When this happens, the processing power is reduced in order to save power.

NOTE: Battery warning signals and "Low-Battery" mode will be heard immediately when the power pack is first connected.

CHECKING THE BATTERY LEVEL

In order to check the current level of the battery, move the cursor over the power symbol in the taskbar. 🔋◌◌ 14:18

When in battery mode, a battery symbol is displayed and when the power adapter is in use a power connector is displayed. If the battery is being charged the power connector has a lightning symbol superimposed over it. Further information on power settings can be obtained by double clicking on the symbol.

> **NOTE:** If you ignore the warning signal when the battery level is low, your Notebook goes into suspend mode. (Depending on the BIOS/OS setting this will be Save-to-Disk or Save-to-RAM).

> **WARNING!** If the battery is empty, your data will not be retained for long in Standby/Save-to-RAM mode.
>
> **WARNING!** Never remove the battery while the Notebook is switched on or if the Notebook has not yet gone into suspend mode, as this may lead to loss of data.

POWER MANAGEMENT

Your Notebook offers automatic and modifiable power saving functions that you can use to maximize battery life and reduce overall operating costs. The power saving modes are known as standby mode and suspend (hibernate) mode.

STANDBY MODE

When in standby mode, the contents of the RAM of your Notebook are preserved while practically all other components of your Notebook are shut down, reducing your power consumption to a minimum. By pressing any key on the keypad, you can bring your Notebook back to the fully operational state. You will restart at precisely the line in which you were working prior to the interruption. The computer takes less time to go into and come out of standby mode, but uses more power than suspend (hibernate) mode.

SUSPEND (HIBERNATE) MODE

The hibernate mode is an alternative to a complete shutdown of the Notebook. In this mode all data from RAM (system and graphic data) are copied to the hard disk as a file. As soon as the data has been safely saved, the Notebook powers down. When the Notebook is switched on again, this file is written back to RAM by the BIOS. In a few moments the Notebook is in the exact state as when it was last used. If while working on a document the Notebook is closed (assuming the correct ACPI setting), the Notebook saves the data in RAM for you automatically. You will restart at precisely the line in which you were working prior to the interruption. The computer uses no power while it is in suspend (hibernate) mode, but it takes a little longer for the computer to go into and come out of hibernation compared to standby.

DISPLAY

Unlike a normal monitor, the TFT display does not produce either radiation or flicker.

OPENING AND CLOSING THE DISPLAY

A display catch keeps the display closed when the Notebook is not in use. To open, use your thumbs to slide the bar left then lift the display with your thumbs and index finger and position it as desired.

⚠	**WARNING!** The display should **not** be opened fully to 180°. Do not try to forcibly open it.

The opening and closing of the display can be assigned various functions via the Power management feature. For example, the Notebook can be programmed to power down when the display is closed.

SCREEN RESOLUTION

The integral screen has a native resolution of 1024 x 768 pixels. Using a higher resolution can lead to distortion of the display, especially with text. Using a lower resolution may cause the display to use only a portion of the screen area.

CONNECTING AN EXTERNAL MONITOR

The Notebook has a VGA port for connecting an external monitor. To connect and configure an external monitor:

1. Shut down your notebook.

2. Connect the video signal cable of the external monitor to the VGA port of the Notebook (see page 18).
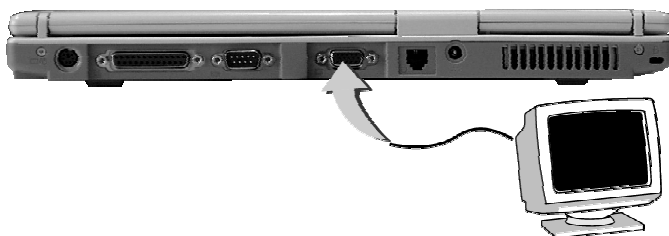
3. Connect the external monitor to the electrical socket, power it up and start your notebook.
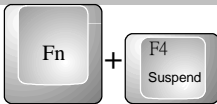
DATA ENTRY

THE KEYBOARD

By dual assignment of certain keys you have the same range of functions available to you as with a normal Windows keyboard. Some functions are input using the FN key, which is normal on notebook computers.

NOTEBOOK-SPECIFIC KEY COMBINATIONS
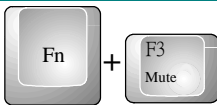
Fn + F3 Mute		Enables or disables the built-in system speaker
Fn + F4 Suspend		Power saving functions. This key combination is set to **power down** by default. To adjust this key to your own needs go to display **properties** in **power saving**.
Fn + F7 CRT		Toggles the external monitor output on and off.
Fn + F8 ☼−		Decreases brightness. This is used if the display is too bright.
Fn + F9 ☼+		Increases brightness. This is used if the display is too dark.
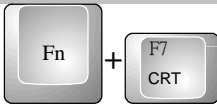
TOUCH PAD

The touch pad's primary function is to move the cursor around or select items displayed on the screen with the use of your fingertip instead of a mouse. It is positioned in front of the keyboard (see page 16). The pointer follows the direction which is specified by moving your finger or thumb over the touch pad.

DO NOT use a ball-point pen or other object on the touch pad, as this could damage or cause a malfunction of your touch pad.

Below the touch pad are the left and right mouse buttons which can be used as on a normal mouse. You can also perform a direct click or double click using the touch pad by tapping the surface briefly once or twice.

In the Windows Control Panel you will find a number of useful settings that will make using the touch pad easier. If the Control Panel is in category view, click **Printers and Other Hardware** and then **Mouse**. In classic view, double-click **Mouse**.

MAIN COMPONENTS

THE HARD DRIVE

The hard drive is the main storage medium combining large storage capacity and rapid data access.

The Windows operating system cannot use the full capacity of the hard drive, which means that there will be a difference between the capacity that the BIOS displays and what the operating system displays.

The hard drive contains the operating system of the computer, other application programs and backup files. These programs and files are pre-installed on your Notebook, so you may note that some of the space on your hard drive is already taken.

Whenever the computer is accessing the hard disk, the corresponding LED illuminates (see page 16.)

> ⚠️ **WARNING!** Never switch off the computer while the busy indicator is lit since this may result in loss of data.

If you are looking for a file on the hard drive and you know the name, go to Search on the Start menu to find the file. Following is some general information on where you might find some common files.

Usually your hard drive is divided into several partitions, as shown below. The partitions of your hard drive may vary from what is shown here.

Local Disk	C:	Windows XP Software programs Your documents
Recovery	D:	Drivers for internal PC components Restore software Installation files for software that came with your PC

IMPORTANT DIRECTORIES

The most important directories preinstalled on your Notebook are shown below. These directories may vary from what is shown here.

Caution: Don't delete files unless you know what they are. Windows XP might require these files for your computer to operate correctly. Also, do not alter or resize the partitions – this will make it difficult to restore your Notebook to the factory settings.

C: This is the main hard disk drive partition for your Notebook. It is where your program files, settings, and documents are stored, as well as files necessary for running Windows XP.

C:\Program Files Includes files belonging to software programs.

C:\Windows The main directory for Windows XP.

C:\Documents and Settings Includes the settings and documents for all users.

D: Includes files for restoring hardware components, software programs, or the entire Notebook to working order.

D:\Driver Drivers for internal Notebook components.

D:\Tools Includes installation files for software that came with your Notebook.

THE OPTICAL DRIVE

Depending on the model, your Notebook will be fitted with a CD-ROM, a DVD-drive, a CD-Rewriter, a Combo drive or a Super Combo drive.

CD-ROM DRIVE

This drive can play music CDs or read data CDs. It can also run software programs from CDs.

DVD-ROM DRIVE

This drive can play both movie DVDs and music CDs. It can read data DVDs and CDs. It can also run software programs from both CDs and DVDs.

CD-RW/DVD-ROM COMBO DRIVE

This drive can play everything that the DVD-ROM drive can play. It can also run software programs from CDs. In addition, this drive can write data and music CDs and copy CDs. It writes to CD-R or CD-RW.

DVD-RW/CD-RW SUPER COMBO DRIVE

This drive can do everything that a CD-RW/DVD-ROM Combo Drive can do, and can also write to certain DVD formats.

> ⚠️ **WARNING!** In order to write to a DVD, you must select a disc that matches the type of drive on your Notebook. DVD-RW drives use DVD-RW or DVD-R discs. DVD+RW drives use DVD+RW or DVD+R discs.

HANDLING DISCS

To maintain the life of CD and DVD discs, observe these guidelines.

- Avoid radiation by direct sunlight (UVA/UVB).

- Avoid scratches and damage to the disc surface.

- Avoid extreme temperatures.

- Do not attach labels or paper to DVD discs.

- Do not use record-cleaning or anti-static agents to clean your discs.

We also recommend that you avoid specially shaped discs such as hearts or polygons, or discs that are not standard size. Do not use warped or cracked discs as they may cause damage to your drive.

LOADING A DISC

1. Press the eject button on the front of the drive to open the tray.
2. Place the disc on the tray so that it lays flat with the label facing upward.

3. Gently push the tray in to close it.

Many discs automatically start when they are loaded and launch a playback software program. In some cases you might need to start a program (for example, a DVD player program).

REMOVING A DISC

Press the eject button on the front of the drive to open the tray.

 WARNING! While the Notebook is accessing the CD-ROM drive the media activity indicator is lit. Do not try to remove the CD from the drive while this LED is lit.

PLAYING MUSIC CDS

Windows Media Player can be used to play music CDs. Please refer to the documentation for this program to decide which program you would like to use.

PLAYING DVD MOVIES

To play DVD movies on your Notebook, you need a DVD playback software program, such as CyberLink's award-winning PowerDVD. To play DVD movies using this software, insert a movie DVD into the DVD-ROM or DVD-RW drive, then click **Start**, then **All Programs** and select PowerDVD.

In spite of the high storage capability of the DVD, the data must be extremely compressed in order for a complete feature film to be stored. This extreme compression combined with exceptional picture quality is provided by the MPEG2 image coding method on the DVD. This places high demands on the Notebook's processor, so when playing a DVD please close all other applications. To increase Notebook performance, you may also wish to purchase a plug-in MPEG2 decoder card, which has its own decompression processor and will thus free the Notebook's processor.

 NOTE: The decoding software included with your Notebook may be changed for regional DVD decoding up to five times, after which the drive will only play DVD movies for the region setting last entered.

WRITING CDs

If included with your Notebook, you can use your CD-RW, DVD-RW, or DVD+RW drive to write ("burn") data and music CDs.

A data CD is a compact disc (CD) used to store PC data (for example, files and folders you have on your hard disk).

A music, or audio, CD is a compact disc (CD) used to record music that you can play on your home or car stereo CD player. Using a CD-R instead of a CD-RW for music CDs will help ensure a greater level of compatibility with conventional CD-players.

There are several different options for burning CDs. The first step for using any of these options is to insert a blank recordable CD into your CD-RW, DVD-RW, or DVD+RW drive.

Nero Burning ROM can create different types of audio, video, and data CDs quickly and easily. Click **Start**, then **All Programs**, then **Ahead Nero** to access Nero Burning ROM. Follow the step-by-step instructions given by the software wizard to create a CD.

Windows XP includes functionality for quickly and easily creating data CDs:

1. Select the files or folders you would like to write to your CD. To select more than one file, hold down the CTRL key while you click the files you want.

2. In the File and Folder Tasks menu on the left (Picture Tasks if the files are located in My Pictures), click **Copy this file**, **Copy this folder**, or **Copy the selected items**. If you do not see the File and Folder Tasks menu, select **Tools** on the main menu, then **Folder Options**. Under Tasks on the General tab, select **Show common tasks in folders**.

3. In the Copy Items dialog box, click the CD-RW, and then click **Copy**.

4. Double-click **My Computer**, then the CD-RW. Windows displays a temporary area where the files are held before they are copied to the CD. Verify that the files and folders that you intend to copy to the CD appear under Files Ready to be Written to the CD.

5. Under CD Writing Tasks, click **Write these files** to CD. Windows displays the CD Writing Wizard. Follow the instructions in the wizard.

Media player programs (such as Windows Media Player) often offer alternatives for burning audio CDs. Refer to the help within the program for more information.

You can also purchase third-party CD burning software for writing files to a CD-R or CD-RW disc.

More information about copying CDs reliably can be found in the "Technical Reference" section of this manual under "CD Facts."

WARNING! Unless you own the copyright or the permission of the owner of the copyright, unapproved copying of copyrighted CDs or DVDs violates national and/or international laws and can result in serious punishment.

WRITING DVDS (OPTIONAL)

A DVD-RW drive can not record to a DVD+RW disc, and vice versa. The media (discs) that you can use with your PC depend on the drive that it uses. Please double-check the carton box to determine the type and speed of drive that comes with your Notebook.

A DVD-RW drive can record to DVD-RW discs. It can also record to DVD-R General discs, but not to DVD-R Authoring discs.

A DVD+RW drive can record to DVD+R or DVD+RW discs.

Both DVD-RW and DVD+RW drives can record to CD-R or CD-RW.

Not all DVD formats are compatible with all DVD players.

Do not use media that exceeds the speed of your drive. For example, do not use 4x DVD-R discs in a 2x DVD-RW drive. Please note that the speed at which your drive records depends on both the speed of the drive and the speed of the media. For example, a 4x DVD-R drive will record at 2x speed if a 2x DVD-R is used in the drive.

If included with your PC, you can use your DVD-RW drive to write to DVDs. Nero Burning ROM allows you to burn data to DVDs. The process is very similar to burning CDs.

Video editing and/or DVD authoring programs often include options for burning your movies to DVD. Please refer to the documentation for your software programs for more information.

THE SOUND CARD

Your Notebook has an integrated stereo sound card (on-board) with 16-bit and 3D spatial sound effects (3D). The sound card is compatible with the industry standard **Sound Blaster** and **Microsoft Sound System Version 2.0**. This guarantees optimal support for all popular programs and games.

If you wish to alter the base volume, click on the loudspeaker symbol in the task bar. A double click opens the sound mixer.

EXTERNAL AUDIO PORTS

Audio in / Microphone in	For recording via an external audio source or an external microphone. (It is set through the audio properties) (⇨ p. 17)
Stereo out / SPDIF (optional)	For sound reproduction via external stereo equipment such as loudspeakers or headphones. Connection to a sound system (analog/digital*) is also via this output. The notebook automatically recognizes if an analog (3.5mm stereo plug) or a digital (optical) link has been created. The internal loudspeakers are switched off when this port is used. (⇨ p. 17)

Your Notebook has a loudspeaker, so you can always play-back sounds without additional equipment. The connection of a Hi-Fi system increases the sound quality significantly.

MODEM

The modem is fitted with an RJ-11 interface, into which a standard telephone lead can be plugged.

 WARNING! Use only with an analog telephone line. The modem cannot withstand the voltage levels of digital telephone systems such PBX or lines such as ISDN or Broadband services.

MODEM PORT

Insert one end of the RJ11-connection (telephone plug connector) into the modem/network interface and the other into an analog telephone socket that is easily accessible.

 NOTE: Do not place the Notebook in Suspend (or Sleep) mode if you are connected to your Internet provider, since this will cause the modem connection to be lost.

THE NETWORK

WHAT IS A NETWORK?

A network means connecting your Notebook to one or several other computers. Users can transfer data between computers and share resources such as printers, modems and hard disk drives.

Here are some practical examples:

- You can exchange E-mail and manage appointments in an office.
- Users can share a printer in a network and save their data on a central server.
- Users can share one modem or one ISDN card among computers for Internet access.
- Two or more computers can be connected to play network games or share data.

FAST ETHERNET-NETWORK

Your PC has a Fast Ethernet Network connection. You can use this to connect to a network.

The Windows XP Help and Support Center offers extensive information about networking your PC. You can access this information by clicking on **Start**, then **Help**

WHAT DO YOU NEED FOR NETWORKING?

Some requirements have to be fulfilled to successfully network computers:

1. The Notebook must have a network card that supports the same network technology as the other computers on the network. Unless otherwise quoted, your Notebook will support the current **Fast Ethernet** (10/100 Mbit) standard.

2. The network cards must be connected. You need a Shielded Twisted Pair-cable (CAT5) that has an **RJ-45**-connector.

   - If you want to directly connect two PCs you need a **Cross-Link** cable.

   - If more PCs must be connected you need a supplementary distributor (**Hub** or **Switch**) and a Patch cable.

3. All connected PCs need a network **operating system**. Windows® can act as a network operating system.

4. All networked PCs must speak the same "language" to understand one another. They use protocols for this purpose. The setting of protocols, therefore, must be the same for all networked PCs.

TROUBLESHOOTING WITHIN THE NETWORK

? Why does an error message appear when I click on the network environment?

> **!** The **computer name** must be unique on the network and may not be the same as the **task group**.

? It appears that the network boards are unable to communicate. What might be the problem?

> **!** Maybe one of the used network boards works with a **different speed** (e. g. 10 instead 100 Mbit) and your network computer is unable to recognize this. If necessary, set the network driver to the compatible speed.
>
> If two PCs should be linked you require a **cross-link cable**, otherwise use a **patch** cable.
>
> In addition, check the **protocols** and the **configuration**.

? The data transmission is incorrect or very slow. What might be the problem?

> **!** Maybe you have the wrong cable (UTP / CAT3 or lower) or the problem is the proximity of a power cord or another source of interference.

For further hints on troubleshooting search for "network errors" in Windows Help and Support.

WIRELESS LAN

Wireless LAN is an optional feature. This function allows you to create a wireless network link with a partner.

CONDITIONS

The partner used can be a wireless **access point**. An access point is a wireless transmitter that communicates with your notebook and controls access to the network connection (e.g., a home network or a broadband connection such as DSL).

Wireless access points are often found in offices, airports, universities or Internet cafés. They offer access to enterprise services and networks or to the Internet. **Access authorizations** are normally needed. A fee may be required to use a public access point.

To set up a wireless network to share Internet access, files, and printers at home, you will need an access point, a router, and a broadband (DSL or cable) modem. Some access points can also serve as a router and/or a broadband modem. Check with your retailer to find the best solution for your needs.

A link to another computer with wireless LAN functionality can also be created **without an access point**. This will allow you to share files, but you will need an access point and a router to share an Internet connection.

The wireless network link works according to standard **IEEE 802.11b**. Other standards (802.11a, 802.11g etc.) are not supported.

If encrypted transmission is used, this must operate according to the **same principle on all devices**. Encryption is a method of protecting the network from unauthorized access.

The transmission speed (max. 11 Mbps) can vary according to **distance** and other factors.

Search for "wireless networking" in Windows Help and Support for more information.

THE PC CARD SLOT

The PC card slot on the left side (see page 17) of the Note-book can be used to operate credit card-sized PC cards. Most PC cards are communications or interface devices such as ISDN-, Faxmodem-, Network- or SCSI-adapters.

Some PC cards contain memory chips or hard disks for data storage. If you use such cards with your Notebook, the sys-tem assigns the card a drive name, so that you may access the resources. The PC card drive in your Notebook supports PCMCIA 2.1 - (Type II), and CardBus (Type I) cards. Cards of Type I are 3.3 mm, and Type II 5 mm thick.

32-BIT CARDBUS PORT

CardBus cards have a 32-bit architecture with which high data transfer speeds of up to 132 MB can be achieved, simi-lar to PCI. In this way your Notebook can also support data intensive devices such as 100Mbps Fast Ethernet, Fast SCSI peripherals and video conferencing devices.

The CardBus port is backward compatible with 16-bit PC cards with a 5V power supply, though the CardBus only re-quires a power-saving 3.3V.

USE OF PC-CARDS

In order to run a PC card, special software is needed (driv-ers, etc.). The card manufacturer usually supplies this soft-ware. Support for the card port is a component of Windows® and at present represents the optimum in operational smoothness. You should consider this point when choosing between alternative operating systems.

INSTALLING A PC CARD

Follow the PC card installation instructions that are given for use under Windows® and have the necessary driver software ready. Once you have started Windows®, slip the card carefully into the slot provided.
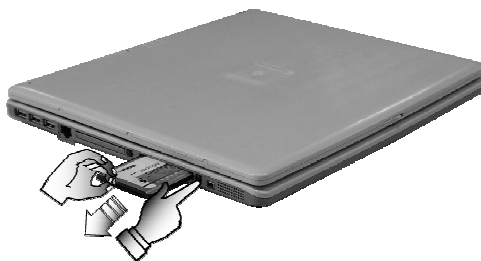

When the card is fully inserted two audible signals will be heard, provided it has been correctly recognized and successfully configured.

In your taskbar will appear the icon .

If only one signal is heard, this signifies a problem with the card recognition. In this case, follow the instructions that accompany your new PC card.

REMOVING A PC CARD

To remove your PC card:

    1. Press the corresponding eject button next to the slot.

CONNECTION OPTIONS

The Notebook has a number of input and output interfaces for connection of peripheral devices such as a printer, scanner, keyboard, and so on. This section presents the individual ports. For further information, refer to page 18, where the positions of the respective ports are described.

SERIAL INTERFACE

The 9-pin serial interface is used as the port for serial devices such as modems, card readers or mice. The interfaces are addressed as **COM1** and are FIFO 16550-compatible.

PARALLEL INTERFACE

You can connect a printer or a device such as a scanner or ZIP drive to this 25-pin parallel interface. The parallel interface supports Standard/EPP/ECP. You can set the desired mode in the computer's BIOS, though this parameter will already be correctly preset.

UNIVERSAL SERIAL BUS (USB) PORT

USB ports provide an easy way to connect many peripheral devices to your PC. You can use any USB device with any USB port. Some USB devices require that you reinstall software drivers when you connect the device to a different USB port than the one originally used. This can be avoided by always using the device with the same USB port. Devices connected directly to the USB bus should not draw more than 500 mA. Should the devices need more power than this, it will be necessary to provide a hub (distributor / booster). The data transfer speed is 1.5 Mbit or 12 Mbit, depending on the device connected.

PS/2 INTERFACE

This port is used to connect devices that use the PS/2-Standard, such as keyboards and pointing devices.

IEEE 1394 (FIREWIRE®)

IEEE 1394 (also known as iLink® or FireWire®) ports provide an easy and high-performance way of connecting high-speed storage, imaging, and many new types of audio/video devices easily. FireWire devices (not included) are either 6-pin or 4-pin. Identify which of the connections your device requires and use the corresponding FireWire port on your Notebook.

SOFTWARE

The software included with the Notebook was pre-installed at the factory.

During software installations, important files can be changed or even deleted. We recommend that you set a Windows XP recovery point before installing software (p. 64).

For specific installation information, refer to the documentation that came with the software program. Here is a typical installation procedure.

1. Load the software program installation disc in an optical drive (CD-ROM, CD-RW, DVD-ROM, DVD-RW, etc.). If your installation disc is a DVD, make sure that the drive that you use can read DVDs.
2. Most installer programs start automatically after a few moments.

   If the installer program does not start automatically, you can manually start it by double-clicking My Computer, and then double-clicking the drive letter where you loaded the software program installation disc.

3. Follow the instructions given by the program.

DIGITAL SIGNATURES

When installing software or drivers, you may receive the message "The software you are installing has not passed Windows Logo testing to verify its compatibility with Windows XP." Although the software lacks the digital signature, it may work properly. Click on "Tell me why this testing is important" to get detailed information. Click on "Continue Anyway" to continue to install your software.

To set file signature verification options for Windows XP:

1. Click **Start**, then **Control Panel**. Double-click **System**.
2. On the **Hardware** tab, select **Driver Signing**.

3. Under **File Signature Verification**, select one of the following:

    Ignore allows all device drivers and software to be installed on this PC regardless of whether they have a digital signature.

    Warn displays a warning message when you attempt to install a software program or device driver without a digital signature.

    Block prevents installation programs from installing device drivers without a digital signature.

If you are logged on to your PC as an administrator, you can click **Apply setting as system default** to apply the selected setting as the default for all users of your PC.

> **WARNING!** During software installation important files can be changed or deleted. To avoid problems in using older files after installation, make sure to safeguard your hard disk.

WINDOWS ACTIVATION

Microsoft is committed to the protection of intellectual property rights and the reduction of software piracy. Windows XP contains software-based product activation technology. Your copy of Windows XP has already been activated for your Notebook. However, product activation is needed if some components of your Notebook have been replaced or you use non-authorized BIOS. If necessary, you can activate Windows XP as often as needed.

You will probably need to activate Windows XP by telephone even if Internet Activation is available. This is due to the pre-activated SLP version that runs with a special Product-ID. However, activation needs your unique Product ID that can be found on the **Certificate of Authenticity** sticker on your Notebook housing. When you call, please inform the agent that you are running an OEM (SLP) version of the software.

THE BIOS SET-UP-PROGRAM

In BIOS setup (Basic Configuration) there are a number of configurable parameter settings available for your Notebook. For example, you can change the operating mode of the interfaces, security features or power management.

> **WARNING!** The Notebook is factory pre-set to guarantee optimum operation. Only modify the parameters if necessary and if you are familiar with the configuration options.

RUNNING THE BIOS SET-UP

You can only run the BIOS configuration program at system start-up. If the Notebook has already started, power it down and then up again. Press the **F2** function key in order to start the BIOS-SET-UP.

NAVIGATING THE BIOS UTILITY

There are six menu options: System Information, Basic System Settings, Start up Configuration, Onboard Devices Configuration, System Security and Load Default Settings.

To enter a menu, highlight the item using the cursor up/down keys; then press **Enter**.

While in a menu, follow these instructions:

- Press the cursor up/down keys to move between parameters.
- Press the cursor left/right keys to change the value of a parameter.
- Press Esc while you are in any of the menus to return to the main menu.

> **Note:** If you are unsure if your parameter settings are correct, you should load the "**Set-up-Defaults**".

CUSTOMER SERVICE

DATA AND SYSTEM SECURITY

The programs described below are part of your Windows operating system. You will find additional information on these programs in the Windows Help file.

DATA SECURITY

Back up data regularly on external media such as a CD-R or CD-RW. Windows offers both a **Backup** program and a **Files and Settings Transfer Wizard**.

Both programs are found in **Accessories/System Tools** within the Start menu. You should make a backup disk with all your passwords and the operating system's original configuration.

MAINTENANCE PROGRAMS

You can avoid some hardware and software errors with disk maintenance programs such as **Disk Defragmenter** and **Disk Cleanup**. The program **System Information** can also be helpful since it gives you detailed information about your system configuration. You will find these programs in **Accessories/System Tools**.

SYSTEM RECOVERY

Before performing a recovery, you should review the "Troubleshooting" section in this manual to see if you can resolve the problem. If not, it is possible that a software file required by Windows XP to operate the computer was damaged or deleted.

RESTORING MICROSOFT WINDOWS XP

Windows XP System Restore allows you to set "recovery points." This feature enables you to take a snapshot of the current system configuration, which you can return to should an application, device, or driver cause instability in the system.

While Windows XP automatically creates recovery points, you can also set them manually. In addition, you can configure the maximum amount of memory used for this.

To use System Restore to set recovery points or restore your system, click the **Start** menu, then choose **All Programs**, then choose **Accessories**, then choose **System Tools**, then choose **System Restore**. Select the task that you would like to perform and follow the on screen instructions. For detailed information refer to Windows XP Help and Support.

System Restore includes various functions to help ensure that your Notebook and installed applications and devices work correctly. These functions assist you in solving the problems which might occur by adding, deleting or replacing files required for proper functioning of Windows XP, and your software and devices. The restore function you use depends on the type of problem or error.

In general, it is a good idea to set a recovery point before installing a new software program or driver. If the system becomes unstable during or after the installation, you can usually return to a workable configuration without deleting newly created documents.

FAQ – QUESTIONS FREQUENTLY ASKED

When do I have to activate Windows?

Your software has been preactivated in the factory. An activation will only be required, if ...

... several components are replaced by others.

... your installed a new motherboard.

... a different BIOS version has been installed.

... you install the software to another computer.

What is the Windows activation?

Your operating instructions include a chapter about this subject.

How do I perform a data backup?

Use the program Backup for this.

It is important that you follow the operating instructions of these programs.

Make a backup and another backup of selected data to an external medium (CD-R, CD-RW, DVD-R, DVD-RW, SD card, etc.), to familiarize yourself with the technique.

A backup is unsuitable if you are not able to recover the data, the medium (floppy disk, CD-R, etc.) is defective or no longer available.

Do I still have to install the enclosed CDs/DVDs?

No. Basically all programs are already preinstalled. The disks are only intended as backup copies.

When is the recovery of the factory setting recommended?

This method should be chosen as the last resort. Read chapter "**System recovery**" on page 57 concerning the alternatives possible.

Why is the boot partition missing when booting from the support/ application CD?

The first partition is formatted with the file system NTFS. Compared to FAT32 this file system offers more security and a more efficient access. However, NTFS partitions can only be read from operating systems supporting this. This is not the case in the aforementioned CD.

TROUBLESHOOTING

LOCALIZE THE CAUSE

Errors can have simple causes, but sometimes they are caused by faulty equipment. We would like to give you some tips to help solve common problems. Should these instructions not lead to success, please feel free to call us.

CHECK CABLES AND CONNECTIONS

Visibly check all cables and connections. Should all lights be off, check whether all equipment is supplied with power.

➢ In battery mode, connect the Notebook to the power adapter and ensure that the battery is charged up.

➢ If you are operating the Notebook with the power adapter, check the electrical socket, power cord and all switches in the circuit of the electrical socket.

➢ Switch off the Notebook and check all cable connections. Check the connections to peripherals. Do not exchange cables, even though they may look similar. The polarity in the cables may be different. When it is confirmed that the Notebook has power and all connections are correct, turn the Notebook on again.

THE POWER ON SELF TEST (POST)

The Power On Self Test (POST) is executed during each boot process to test the memory, motherboard, display, keyboard and other components. If the Notebook does not pass the POST but beeps several times, or if the screen remains blank, call your Notebook support technician.

ERRORS AND POSSIBLE CAUSES

The display is blank:
- Confirm that the system is not in stand-by mode. Press any key on the keyboard to test this.

Wrong Date and Time:
- Double-click the clock on the taskbar and correct the date and time.

An error message appears during boot-up:
- You may have a floppy disk in the disk drive so the system is looking for an operating system on that floppy. Remove the disk and press any key.

No data can be accessed from the optical Drive:
- Check whether the CD is inserted correctly.
- Is the CD-ROM displayed in Windows Explorer? If so, test another CD.

The Printer does not work:
- Check the printer cable.
- Do a Printer Self Test.
- Should several pieces of equipment be operating from the same port, check all peripherals and reinstall the drivers.
- If you have access to the Internet, download and install the latest drivers from the manufacturer's Web site.

The mouse does not work.
- Check the cable connection.
- Check to see if the mouse works in another application program and if there is a problem of compatibility between the mouse (e.g. Microsoft Intellimouse) and the touch pad.

ADDITIONAL SUPPORT

If the suggestions in the above section have not solved your problem, please contact the customer service hotline and we will attempt to help you solve the problem. Before you call, however, please have the following information available:

- How is your computer configured?

- What additional peripherals do you use?

- What messages, if any, appear on your screen?

- What software were you using when the error occurred?

- What steps have you already undertaken to solve the problem?

- Have you upgraded or removed drivers or hardware?

- Can you manually repeat the problem?

- If you have been given a customer number previously, please have this available.

DRIVER SUPPORT

This Notebook has been extensively tested in our laboratories with a large number of compatible devices. It fulfils all required standards and complies with the standard "Designed for Windows", which certifies utmost compatibility. However, the software drivers for individual components are updated from time to time. This is a regular process provided by the manufacturer to mend possible compatibility problems that may occur with components (e.g., programs or hardware) that were not tested at the time of your Notebook's manufacture. Driver updates and the latest information on your product are available on the Internet.

STANDARDS

This Notebook meets the requirements of the following standards:

ELECTROMAGNETIC COMPATIBILITY

This Notebook meets the following requirements for standards of electromagnetic compatibility and electrical safety:

EN 55022	Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement.
EN 55024	Information technology equipment - Immunity characteristics - Limits and methods of measurement.
EN 61000-3-2	Limits - Limits for harmonic current emissions (equipment input current up to and including 16 A per phase).
EN 61000-3-3	Limits - Limitation of voltage fluctuations and flicker in low-voltage supply systems for equipment with a rated current up to 16 A.

- Keep the Notebook at least one meter (approximately three feet) away from **high frequency** and **magnetic interference sources** (e.g., televisions, loudspeaker cabinets, mobile telephones, etc.) in order to avoid malfunctions and/or loss of data.

- Please note that only **shielded** cables shorter than 3 meters (9.84 ft) should be used for the LPT, COM, USB, IEEE 1394, audio, video and network interfaces with this Notebook.

- When connecting additional components, please observe the *Guidelines on Electromagnetic Compatibility (EMC)*.

ELECTRICAL SAFETY

EN 60950	Safety of information technology equipment.

- The connection of devices is limited to equipment that complies with EN60950 "Safety of information technology equipment" or EN60065 "Audio, video and similar electronic apparatus. Safety requirements"
- For U.S. / Canadian purposes: The Notebook should only be connected to equipment which complies with UL 60950 / CAN CSA 22.2 No 60950

ERGONOMICS

EN 29241-3	Ergonomic requirements for office work with visual display terminals (VDTs). Visual display requirements.
EN ISO 9241-8	Ergonomic requirements for office work with visual display terminals (VDTs). Requirements for displayed colors.

SUPPLEMENTARY INFORMATION

This product complies with the requirements of the R&TTE Directive 1999/5/EC and carries the CE-marking accordingly.
CE 0682 (!)

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