Attachment: User Manual

For FCC statement please refer to user manual page 5.

SIEMENS NIXDORF

SCENIC Mobile

Operating Manual

Mobile 800

A26391-K82-Z100-1-7619
Mobile 800
Operating Manual
May 1998 edition

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Introduction

Innovative technology and ergonomic design make this notebook the ideal user-friendly and reliable travel companion. The removable keyboard now provides even more flexibility in the use of your notebook. Your operating system is pre-installed on the hard disk to facilitate the procedure when you use your notebook for the first time.

The energy-saving processor and the energy-saving functions that can be configured allow you to use the battery capacity of your notebook effectively. By using an additional battery instead of the disk drive, you can double the notebook's mobile operation time.

Your notebook has 32 - 256 MB of main memory installed, depending on the upgrade level. Data is saved on an Enhanced-IDE hard disk drive. Your notebook is also equipped with a 3 1/2" floppy disk drive and a CD-ROM drive. In addition, your notebook can be equipped with a DVD drive or with a 2nd or 3rd hard disk drive. Two PC card slots (CardBus or PCMCIA) enable simultaneous operation of two Type I/II/III PC cards (a maximum of one Type III and Type II each).

For mouse control the notebook provides a touchpad. A double-touch directly on the touchpad is all that is needed, for example, to open an application.

Your notebook has connectors for external devices such as, e.g. external monitor, television, printer and mouse. The parallel port (which supports ECP and EPP modes) is designed to accommodate bi-directional data transfer. You can connect peripherals such as, e. g. scanner, loudspeakers, gamepads, keyboard or mouse via the USB interface. The notebook disposes of a infrared interface for wireless data transfer. In addition, the notebook has a connection port for a QuickPort S

An audio controller, two loudspeakers, a microphone and an audio input and output provide your notebook with an audio capability. You can also connect an external microphone, external loudspeakers, a joystick or MIDI devices.

The system settings of the notebook can be configured via the user-friendly *BIOS Setup* program. Certain system settings (e.g. screen display, power-management functions) can be modified via various key combinations while you are using the notebook.

Your notebook has a number of security features to ensure that no unauthorized persons can access your data. As a result, access to your notebook is protected with a chipcard reader. The security functions in the *BIOS Setup* also allow you to protect your data by means of passwords.

This Operating Manual tells you how to put your notebook into operation and how to operate it in daily use.

Further information on this notebook is provided:

- in the "Safety Notes" manual which is included with your notebook
- in the documentation of your operating system
- on the SCENIC Mobile CD "Drivers & Utilities"
- in the information files (e. g. **.TXT, *.WRI, *.DOC, *.HLP*)
- on the Internet under *www.sni-pc.de/drivercd*

Notational conventions

The meanings of the symbols and fonts used in this manual are as follows:

Pay particular attention to texts marked with this symbol. Failure to observe this warning endangers your life, destroys the notebook, or may lead to loss of data.

This symbol is followed by supplementary information, remarks and tips.

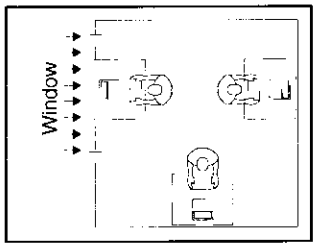
► Texts which follow this symbol describe activities that must be performed in the order shown.

Texts in italics indicate commands or menu item.

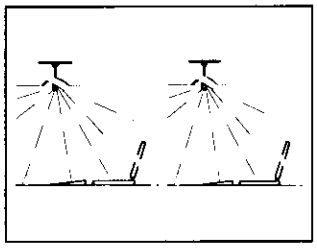
"Quotation marks" indicate names of chapters and terms that are being emphasized.

Installing an ergonomic video workstation

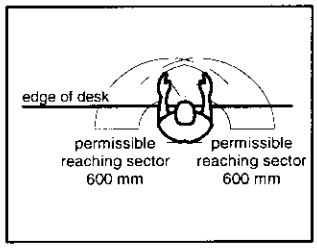
Before you set up your equipment you should select a suitable position for working at the monitor. Please observe the following advices when installing a video workstation.



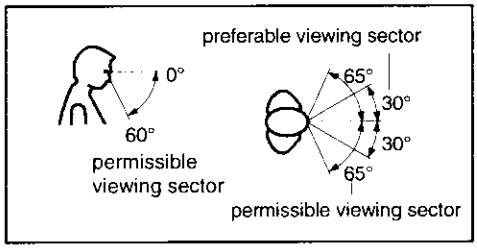
Avoid direct and reflected glare.



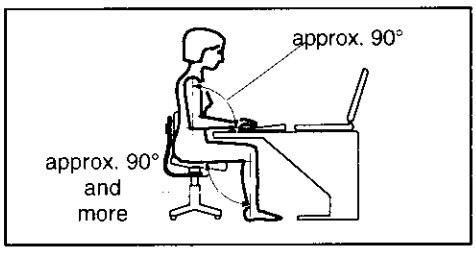
Avoid glare from electric lighting.



Position the keyboard where it is easiest to reach.



Position the monitor for optimum viewing. The viewing distance to the monitor should be approximately 50 cm.



Remember to maintain correct posture.

Important notes

In this chapter you will find information regarding safety which it is essential to take note of when working with your notebook. The manufacturer's notes contain helpful information on your notebook. This chapter also contains information on the licenses like CE certificate and RFI suppression of the notebook.

Safety

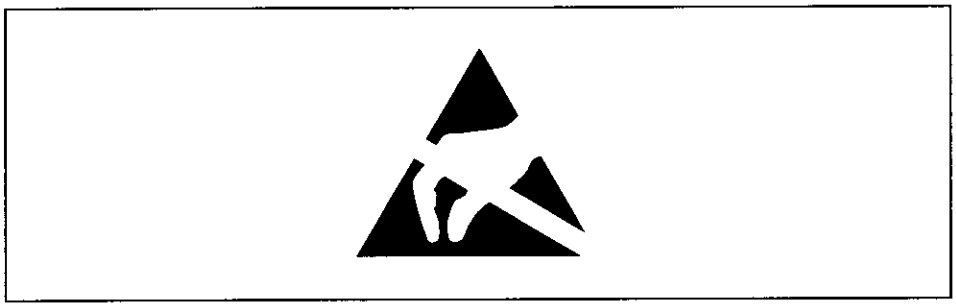
Pay attention to the information provided in the manual "Safety Notes".

- During installation and before operating the device, observe the instructions on environmental conditions in the chapter entitled "Technical data" as well as the instructions in the chapter "Preparation for use and operation".
- When cleaning the device, observe the relevant notes in the paragraph "Cleaning the notebook".
- Keep this Operating Manual together with your device. If you pass on the device to third parties, you should also pass on this manual.

Notes on installing and removing boards

Only qualified technicians may repair the device. Unauthorized opening or incorrect repair may greatly endanger the user (electric shock, fire risk).

Boards with electrostatic sensitive devices (ESD) may be identified by labels.



When you handle boards fitted with ESDs, you must observe the following points under all circumstances:

- You must always discharge yourself (e.g. by touching a grounded object) before working.
- The equipment and tools you use must be free of static charges.
- Only plug in or pull out boards in the deenergized state.
- Always hold boards with ESDs by their edges.
- Never touch pins or conductors on boards fitted with ESDs.

Manufacturer's notes

Energy saving

Make use of the device's power management features (see "Preparation for use and operation").

- If you will not be using your notebook, switch it off.
- The notebook uses less power when the power management features are enabled. You will then be able to work for longer before having to recharge the battery.

Energy saving under Windows 95

If a monitor with energy saving features is connected to your notebook, you can use the *Screen Saver* tab to set the energy saving features of the monitor. Select the following item in the start menu: *Settings - Control Panel - Display - Display Properties - Screen Saver - Energy saving features of monitor.* You can set additional energy saving functions in the *Start - Settings - System control - Energy - Extended* menu.

Disposal and recycling

This device has been manufactured to the greatest possible degree from materials which can be recycled or disposed of in a manner that is not environmentally damaging. The device is taken back after use, so that it can be recycled, provided that it is returned in a condition which is the result of normal use. Any components not recuperated will be disposed of in an environmentally acceptable manner.

For devices marked with this symbol Siemens Nixdorf Informationssysteme AG (SNI) offers a guarantee for **36 months** with a **Bring-in-Service**. The guarantee starts on the day of delivery (sale date) by SNI or an SNI partner.

We herewith declare that it will be possible to repair any device marked with the eco-label for at least 5 years after production of that device has discontinued.

Information on power management and energy saving mode can be found in chapter "Technical data".

Do not throw lithium batteries or accumulators into the trashcan. They must be disposed of in accordance with local regulations concerning special waste.

If you have any questions on disposal, please contact your local office, our service department, or, directly:

Siemens Nixdorf Informationssysteme AG
Recycling Center
D-33094 Paderborn

Tel.: ..49 5251 818013
Fax: ..49 5251 818015

CE certificate

CE The shipped version of this device complies with the requirements of the EEC directives 89/336/EEC "Electromagnetic compatibility" and 73/23/EEC "Low voltage directive".

FCC Class B Compliance Statement

If there is an FCC statement on the device, then:
The following statement applies to the products covered in this manual, unless otherwise specified herein. The statement for other products will appear in the accompanying documentation.

NOTE:

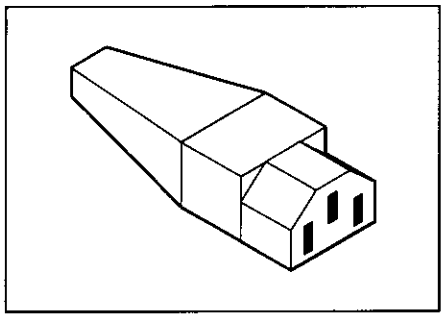
This equipment has been tested and found to comply with the limits for a "Class B" digital device, pursuant to Part 15 of the FCC rules and meets all requirements of the Canadian Interference-Causing Equipment Regulations. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in strict 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 equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Siemens Nixdorf Informationssysteme AG is not responsible for any radio or television interference caused by unauthorized modifications of this equipment or the substitution or attachment of connecting cables and equipment other than those specified by Siemens Nixdorf Informationssysteme AG. The correction of interferences caused by such unauthorized modification, substitution or attachment will be the responsibility of the user.

The use of shielded I/O cables is required when connecting this equipment to any and all optional peripheral or host devices. Failure to do so may violate FCC rules.

Power cord selection



The power cord for this unit has been packed separately and has been selected according to the country of destination. It must be used to prevent electric shock. Use the following guidelines if it is necessary to replace the original cord set.

The female receptacle of the cord set must meet CEE-22 requirements (see Figure 1).

Figure 1

For the United States and Canada

Use a UL listed and CSA labeled cord set consisting of a three conductor cord with a maximum length of 15 feet.

For units which stand on a desk or table, type SVT or SJT cord sets shall be used.

For units which stand on floor, only SJT type cord sets shall be used.

The cord set must be selected according to the current rating for your unit. Please consult Table A for the selection criteria for power cords used in the United States and Canada.

Table A:

Cord Type	Size of Conductors in Cord	Maximum Current Rating of Unit
SJT	18 AWG 16 AWG 14 AWG	10 Amps 12 Amps 12 Amps
SVT	18 AWG 17 AWG	10 Amps 12 Amps

For units set at 115 V:

use a parallel blade, grounding type attachment plug rated 15 A, 125 V (Figure 2).

For units set at 230 V (domestic use):

use a tandem blade, grounding type attachment plug rated 15 A, 250 V (Figure 3).

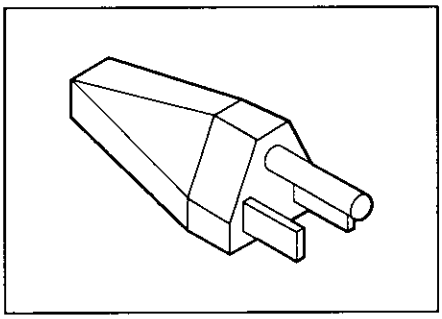


Figure 2

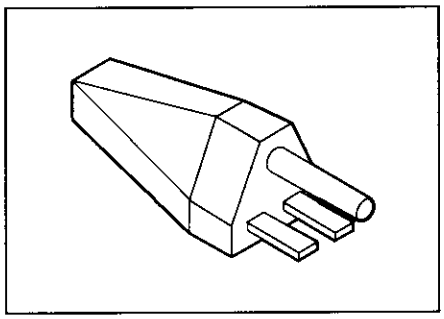


Figure 3

For units set at 230 V (outside of the United States and Canada):

use a cord set consisting of a minimum AWG according to Table A and a grounding type attachment plug rated 15 A, 250 V. The cord set should have the appropriate safety approvals for the country in which the equipment will be installed and should be marked HAR.

For the United Kingdom

Should the plug on the flexible cord not be of the type for your socket outlets, do not use an adapter but remove the plug from the cord and discard. Carefully prepare the end of the supply cord and fit a suitable plug.

WARNING

THIS APPLIANCE MUST BE EARTHED

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Green and Yellow:	Earth
Blue:	Neutral
Brown:	Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

- The wire which is coloured Green and Yellow must be connected to the terminal in the plug which is marked with the letter E or by the earth symbol or coloured Green or Green and Yellow.
- The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black.
- The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Red.

On the move with the notebook

Please observe the points listed below when transporting your notebook.

Transporting the notebook

- Do not carry the notebook by its open screen or by an empty slot.
- Switch the notebook off and close the covers for the ports.
- Remove all data carriers (e.g. floppy disk, CD) from the drives.
- Always use the bag supplied when transporting the notebook.
  If it needs to be shipped, use the original packaging or other suitable packaging to protect it from damage through mishandling.
- The carrying bag provided protects against dust, but offers no protection against jolts or impacts.
- Protect the notebook from severe shocks and extreme temperatures (e.g., direct sunlight in a car).

Before starting the journey

- Copy important data from the hard disk to a floppy disk.
- Remove all data carriers (e.g. floppy disk, CD) from the drives.
- If you wish to use your notebook during a flight, check first with the flight attendants if it is permissible to do so.
- If you are travelling abroad, ensure that the power adapter can be operated on the local line voltage. If this is not the case, obtain the appropriate power adapter for your notebook.
  Do not use any other voltage converter!

Cleaning the notebook

Switch the notebook off and pull the power plug of the power adapter out of the power socket.

Do not clean any interior parts yourself, leave this job to a service technician.

Do not use any cleaning agents that contain abrasives or may corrode plastic.

Ensure that no liquid enters the notebook.

Wipe the casing with a dry cloth. If particularly dirty, use a cloth which has been moistened in mild domestic detergent and then carefully wrung out.

To clean the keyboard and the touchpad, you can use disinfectant wipes..

Wipe the monitor casing with a soft, moistened cloth.

Preparation for use and operation

Pay attention to the chapter "Important notes".

You must charge the battery and install the application programs before you can work with the notebook. The operating system and required drivers are preinstalled.

When used away from a wall power outlet, the notebook runs on its built-in battery. You can increase battery life by enabling its power management features.

If you use the notebook in a normal office situation, you run it off the mains with the aid of the power adapter, or in a QuickPort S.

Refer to the chapter on "Connecting external devices" for instructions on how to connect external devices (e.g. mouse, printer) to the notebook.

Unpacking and checking the delivery

- ► Unpack all the individual parts.
- ► Check the delivery for damage incurred during transport.
- ► Check whether the delivery agrees with the details in the delivery note.
- ► Check whether all necessary details have been entered on the first page of the guarantee coupon booklet.

Should you discover that the delivery does not correspond to the delivery note, notify your local sales office immediately.

Do not discard the original packing material of the devices. Keep it for future transportation of the drive.

Choosing where to set up your notebook

Select a suitable location for the notebook before setting it up. Bear the following points in mind when looking for a location.

- We recommend that you place your notebook on a surface with good anti-slip qualities. In view of the multitude of different finishes and varnishes used on furniture, it is possible that the rubber feet of the devices will mark the surface they stand on.
- Do not expose the notebook to extreme environmental conditions. Protect it from dust, humidity and heat.
- Keep other objects 100 mm clear of the notebook and its power adapter to ensure adequate ventilation. The space between the notebook's feet must be clear. Do not place it on a soft surface (e.g., a carpet or soft furnishings). Do not cover the ventilation slots in the notebook and the power adapter.

- The power adapter must be at least 200 mm away from the notebook. It must be free-standing and may not be covered. Do not stand the power adapter on heat-sensitive material.
- For wireless data transfer you must align the notebook's infrared interface with that of the partner device (e.g. PC). The devices must not be more than one meter apart.

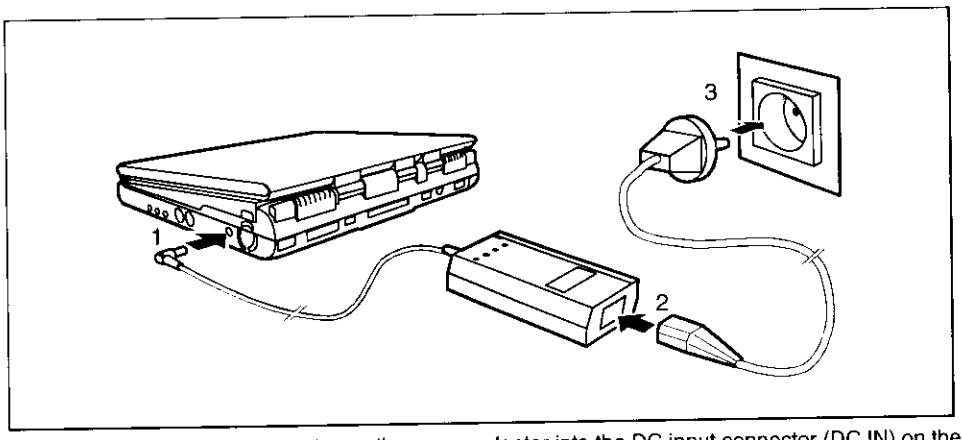
Preparing the notebook for use

The supplied power cord conforms to the requirements of the country in which you purchased your notebook. Make sure that the power cable is approved for use in the country in which you intend to use it.

The notebook and the power adapter should be at least 200 mm apart. Keep other objects 100 mm clear of the notebook and its power adapter.

Do not cover the ventilation slots in the notebook and the power adapter.

► Place the notebook on a level, stable surface.



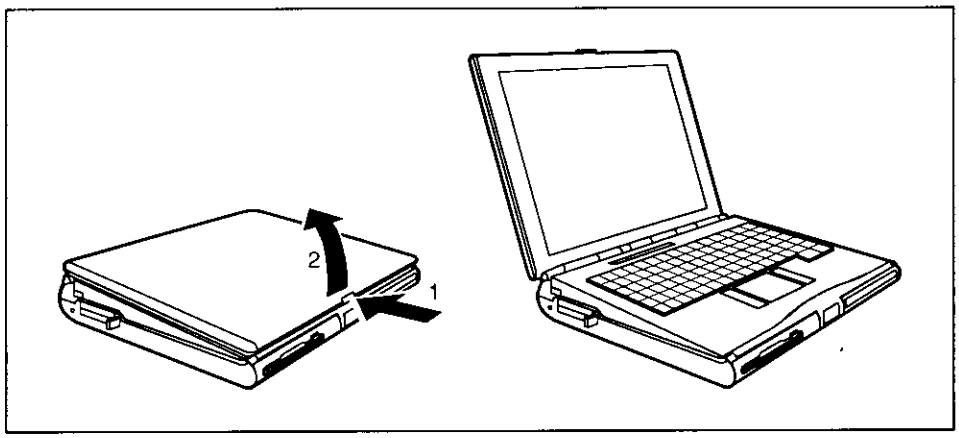
► Plug the DC output connector on the power adapter into the DC input connector (DC IN) on the notebook (1).

► Connect the AC power cable to the power adapter (2).

► Plug the power cable into the power outlet (3).

You can also make your notebook operational by connecting it to the optional car adapter (see "Charging, caring for and maintaining the notebook battery").

Opening the notebook



► Press the release button (1) and unfold the display upwards (2).

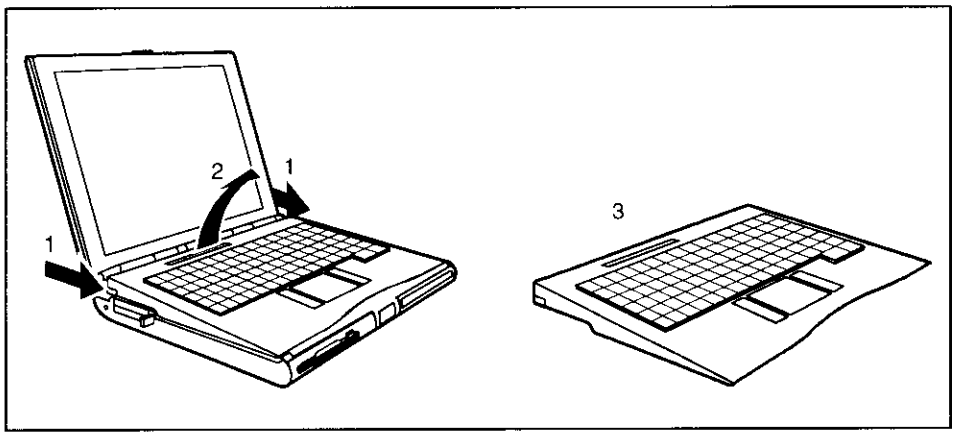
Removable infrared keyboard

The removable infrared keyboard now provides even more flexibility in the use of your notebook. You can lift the keyboard off the notebook and operate it in front of the notebook. The connection between the keyboard and the notebook is then via the infrared interface on the back of the keyboard and on the front of the notebook, as with a remote control unit. To operate the keyboard separately from the notebook, the battery in the keyboard must be charged.

Charge the battery before initial use. The battery in the keyboard is automatically charged when the notebook is connected to the mains supply and the keyboard is installed.

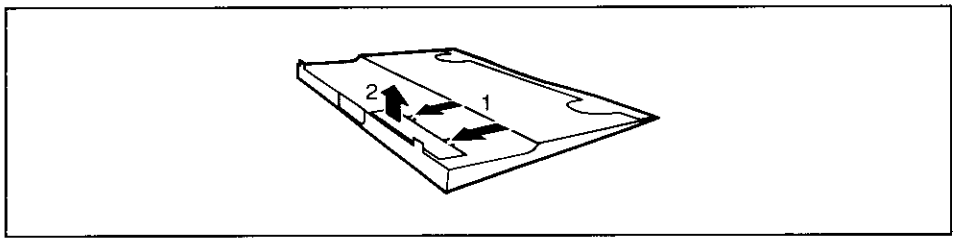
Installing keyboard battery

► Switch off the notebook.



► Push the locking slide forward (1).

► Lift the keyboard at the rear (2) and lay down the keyboard (3).



► Press the two tabs in the direction of the arrow (1).

► Lift the cover and pull it in the direction of the arrow (2) from the keyboard.

Use only the keyboard battery of the manufacturer.

The keyboard battery may only be charged with charging units approved by the manufacturer for the notebook.

If you do not use the device for longer periods, remove the battery from the keyboard.

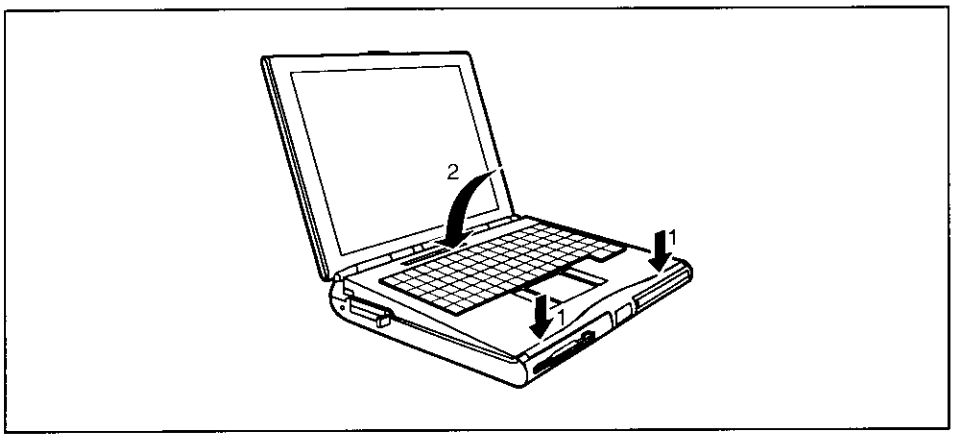
Store the battery in a cool, dry place.

The keyboard battery must not be:

- short-circuited
- thrown into fire or heat
- thrown into water
- exposed to rain or moisture
- opened
- loaded mechanically or damage

► Plug in the plug of the keyboard battery.

- ► Lay in the keyboard battery.
- ► Close the cover.



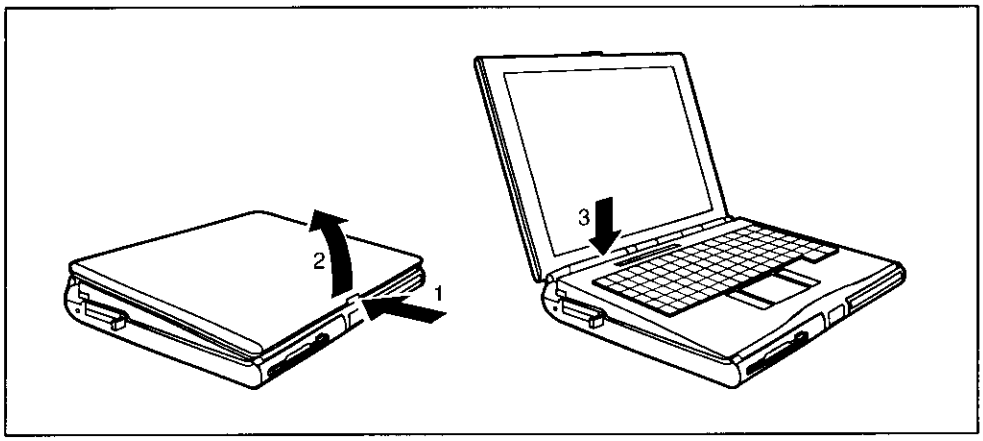
- ► Place the keyboard in the lugs on the notebook (1) and press the keyboard into the bracket provided until it is felt to engage (2).

Connecting infrared keyboard with cable

The infrared keyboard can be connected to the notebook or PC with an optional cable. This enables the keyboard and the touchpad to be used in the accustomed manner.

- ► Plug the round plug marked with the keyboard symbol into the keyboard connection and the second round plug into the mouse connection of the PC.
- ► Plug the two square plugs into the back of the infrared keyboard.

Switching on the notebook



- ► Press the release button (1) and unfold the display upwards (2).
- ► Press the ON/OFF switch (3) for roughly one second.

You must not switch off or warm-boot your notebook during first-time installation .

When you switch on your notebook for the first time the supplied software is set up and configured. Please follow the instructions on the screen.

If you want to partition your hard disk, please refer to chapter "Restoring the hard disk contents under Windows 95".

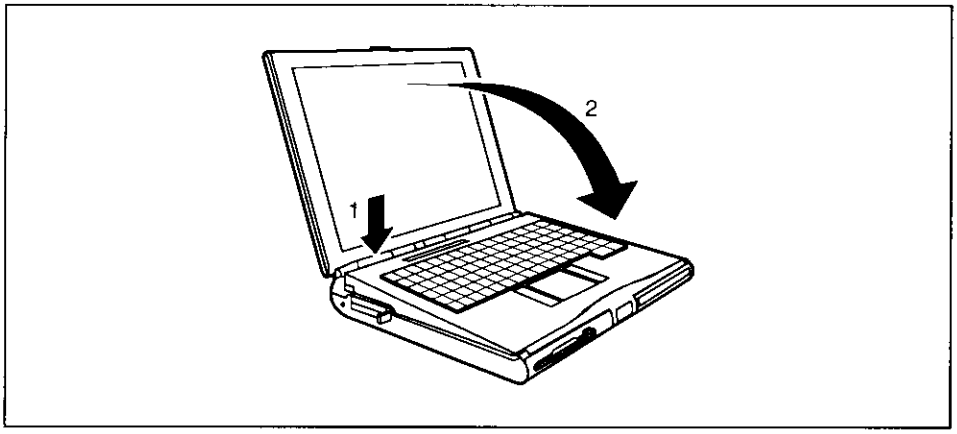
If you have assigned a password, you must enter this when requested to do so, in order to start the operating system.

Once you have installed the operating system and have generally familiarized yourself with the notebook, you should perform the battery learning cycle (see "Learning cycle for notebook batteries").

Information for Windows 95 and Windows NT

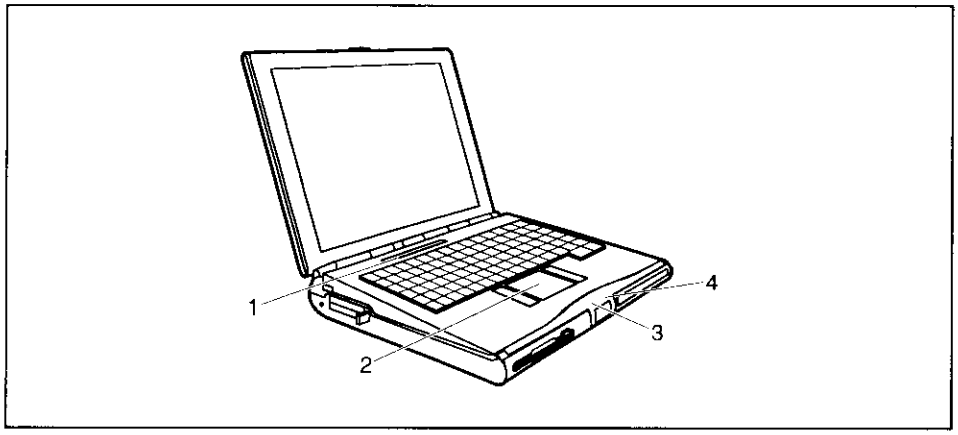
The license number for Windows 95 or Windows NT is printed on the front cover of the Windows 95/Windows NT manual supplied.

Switching off the notebook



- ► Shut down the operating system properly. If Windows 95 is installed on your notebook, the system is shut down and the notebook is switched off. If the notebook is not switched off automatically, press the ON/OFF switch (1) for approx. four seconds. If the On/Off switch is only pressed for approx. one second or the monitor is folded closed, the notebook switches into the Suspend mode (see Section "Suspend mode").
- ► Close the display of the notebook (2) so that it is felt to lock into place centered.

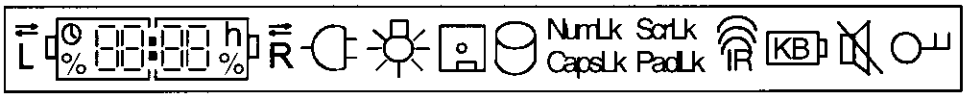
Indicators and input devices



1 = Display field
2 = Touchpad with touchpad buttons
3 = Battery operation/charging indicator
4 = Power-on indicator

Display field

Symbols and texts in the display field indicate the operating state of the notebook. The meaning of the symbols and texts are as follows:



The left battery is installed. When the symbol flashes, the left battery is drained or defective (for measures, see "Charging, caring for and maintaining the notebook battery").

The right battery is installed. When the symbol flashes, the right battery is drained or defective (for measures, see "Charging, caring for and maintaining the notebook battery").

Indicates the approximate operating time of the installed battery in percent.

Indicates the approximate operating time of the installed battery in hours and minutes.

The arrow shows whether the battery is being charged or drained.

The notebook is connected to an external power source (e.g. via the power adapter).

The notebook is switched to suspend mode.

The floppy disk in the floppy disk drive is being accessed. You must not remove the floppy disk when this symbol is visible.

A drive (hard disk drive, CD-ROM drive, DVD drive or Zip drive) is being accessed. When this symbol appears, do not remove the data carrier from the drive.

CapsLK — All the characters you type appear as uppercase. In the case of overlay keys, the character on the upper left on the keycap appears when that key is pressed. The CapsLock indicator appears when you press the ⇩ key.

ScrLK — The SCROLL LOCK key has been pressed. The effect this key has varies from program to program.

NumLK — The Pad Num key has been pressed. If PadLK is also visible in the function display, the blue numbers on the lower right on keys in the integrated numeric keypad are enabled.

PadLK — The key combination Fn + Pad Num has been pressed. This enables the blue editing functions on the upper right on keys in the integrated numeric keypad.

The infrared connection between the removable keyboard and the notebook is switched on. When this symbol flashes, the infrared connection is not sufficient. Check the position of the removable keyboard relative to the notebook (see "Removable infrared keyboard").

The "long-distance" infrared connection between the removable keyboard and the notebook is switched on.

The remaining charge of the battery in the removable keyboard is not sufficient for an infrared connection to the notebook. When this symbol flashes, install the removable keyboard in the notebook. The battery is only charged when the notebook is operating in the mains mode.

The built-in loudspeakers are disabled.

The chipcard reader is active.

Touchpad and Touchpad Keys

Make sure that the touchpad does not come into contact with dirt, liquids or grease.

Do not touch the touchpad if your fingers are dirty.

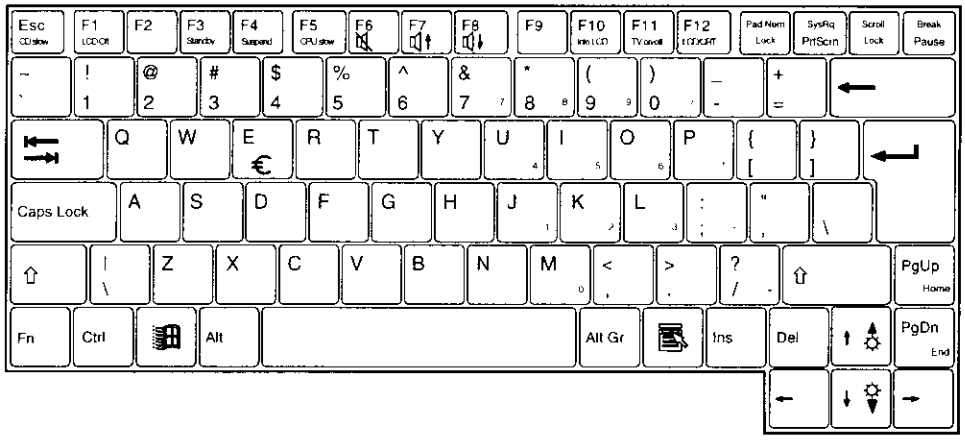
Do not rest heavy objects (e.g., books) on the touchpad or the touchpad buttons.

The touchpad enables you to move the mouse pointer on the screen. If, for example, you move one finger to the left over the touchpad, the mouse pointer also moves to the left.

A brief tap with the finger on the touchpad has the same effect as clicking with the left mouse button. A brief "double-tap" with the finger on the touchpad has the same effect as double-clicking with the left mouse button.

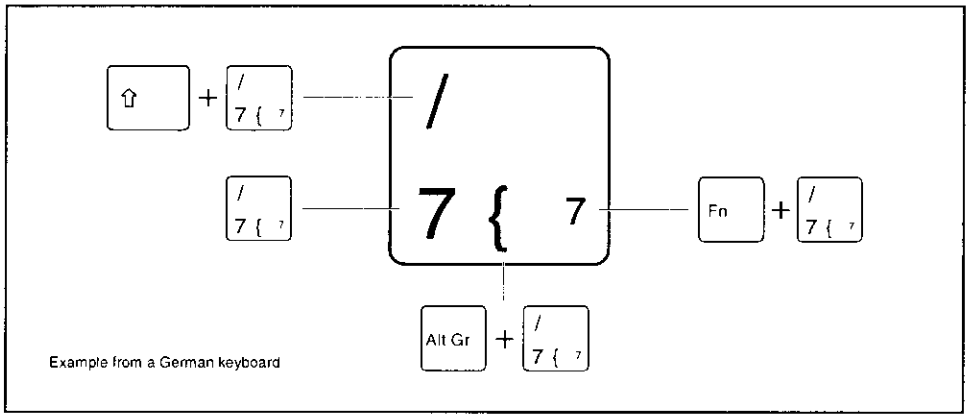
The left and right touchpad buttons have the same functions as the left and right mouse buttons.

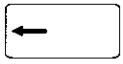
Keyboard



The following description of the keys applies for the Windows 95 operating system. Additional key functions are described in the application program manual.

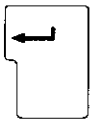
The figure below shows how to access the different characters and editing functions on keys with overlaid functions.
The keystrokes shown in the example only work if CapsLK, NumLK, and PadLK have not been enabled (i.e. they are not visible in the display field).



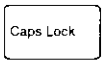


Backspace key
The Backspace key deletes the character to the left of the cursor.

Tab key
The Tab key moves the cursor to the next tab stop.



Enter key (return, enter, line feed, carriage return)
The enter key terminates a command line. The command you have entered is executed when you press Enter.



Caps Lock key
The Caps Lock key activates uppercase mode (CapsLK is shown in the display field). The Caps Lock function causes all the characters you type to appear as uppercase. In the case of overlay keys, the character on the upper left on the keycap appears when that key is pressed.
To cancel the Caps Lock function, simply press the Caps Lock key again.

Shift key
The Shift key causes uppercase characters to appear. In the case of overlay keys, the character on the upper left on the keycap appears when that key is pressed.

Alt Gr key
The Alt Gr key causes the characters in the lower middle of the keycap to appear (e.g. in the case of the 7 key).

Fn
The Fn key enables the special functions indicated in blue on overlay keys (see "Key combinations").
If the external keyboard does not feature a Fn key, you can simultaneously press the Ctrl + Alt keys instead.

Cursor keys
The cursor keys move the cursor in the direction of the arrow, i.e., up, down, left, or right.

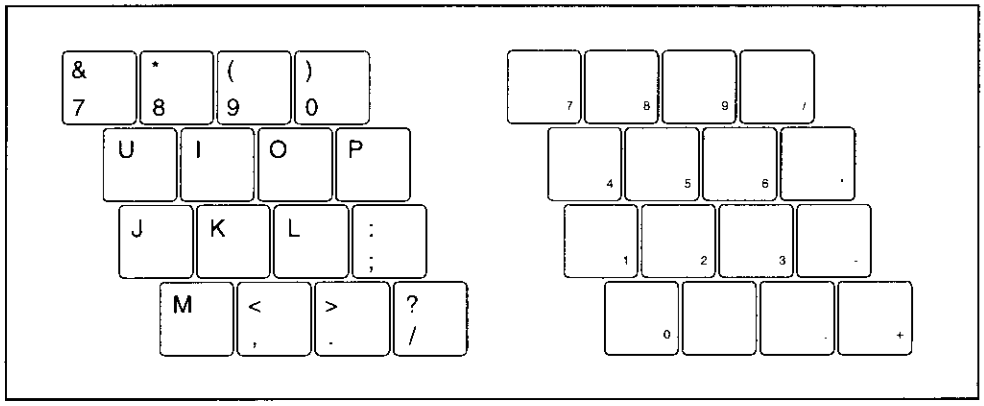
Pad Num key
When the numeric keypad is enabled (PadLK is visible in the display field), the Pad Num key causes this set of keys to produce numbers (NumLK appears in the display field). Pressing them produces the blue characters shown on the bottom right on the keycaps.

Pause key
The Pause key temporarily suspends display output. Output will resume when press any other key.

Start key
invokes the *START* menu of Windows 95.

Menu key
The Menu key invokes the menu for the marked item (Windows 95).

Numeric keypad



1 = Characters enabled when neither PadLK, nor NumLK are visible in the display field.
2 = Characters enabled when PadLK and NumLK are visible in the display field.

The key [Pad Num] enables and disables the integrated numeric keypad. If the numeric keypad is enabled (NumLK is shown in the display field) and you hold the [Fn] key down, you can output the characters printed in blue at the right bottom of the keys.

When the numeric keypad is enabled (NumLK is visible in the display field), pressing the key combination [Fn] + [Pad Num] enables and disables the numeric entry in the integrated numeric keypad. If numeric entry is enabled (NumLK and PadLK are shown in the display field), the blue characters at the bottom right of the keys are effective.

If the numeric keypad and numeric entry are both enabled (NumLK and PadLK are shown in the display field), you can also output standard characters with the numeric keypad. If you press and hold the key [Fn], the keys will produce lowercase letters and numbers indicated on the lower left of the keycaps. If you press and hold the key combination [Fn] + Shift, the keys will produce uppercase letters and the characters indicated on the upper left of the keycaps.

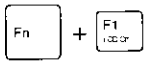
Key combination

The following description of key combinations applies to the Windows 95 operating system. Some of the key combinations may not be available in other operating systems and with other device drivers. Other key combinations are described in the relevant manuals supplied with your application programs.

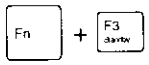
You enter key combinations as follows:

- ► Press and hold the first key in the combination.
- ► While keeping the first key pressed, press the other key or keys in the combination.

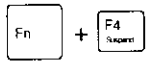
If the external keyboard does not feature a [Fn] key, you can simultaneously press the [Ctrl] + [Alt] keys instead.



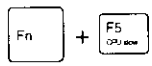
Switching monitor on/off
This key combination switches your notebook's display on and off. Doing so does not affect any running programs.



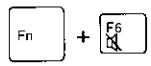
Enabling Standby mode
This key combination enables Standby mode. You can cancel Standby mode by pressing any key.



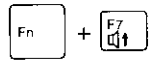
Enabling Suspend mode
This key combination switches the Suspend mode on (see Section "Suspend mode "). When you switch the notebook on again, it returns to the same place you were in the program that was running when you switched to Suspend mode.



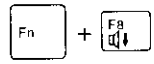
Reducing CPU speed
This key combination reduces the CPU speed by 50 %.



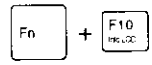
Switching the loudspeaker on/off
This key combination switches your notebook's integrated loudspeaker on and off.



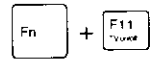
Increasing the volume
This key combination raises the volume of the integrated loudspeaker.



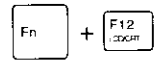
Reducing the volume
This key combination decreases the volume of the integrated loudspeaker.



Switching over battery indicator
This key combination switches the battery indicator in the display field between battery capacity in %, as time (notebook will still run xx:xx hours) or the battery charge level display.

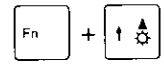


Switching TV out on/off
This key combination switches the video output (TV out) on or off.

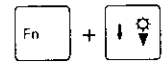


Switching between internal and external display
If an external display is connected to your notebook, you can switch to it with this key combination. You can opt to use:

- just the notebook's internal display
- just the external display
- both the internal and the external display
- just the television



Increasing the display brightness
This key combination increases the brightness of the display.



Reducing the display brightness
This key combination reduces the brightness of the display.

The notebook battery

The notebook is fitted with a battery (Lithium Ion battery) that provides it with power during mobile use. You can increase battery life by enabling its power management features.

In addition to the notebook standard battery, you can also use a second notebook battery. By using both notebook batteries, you can double the notebook's mobile operation time.

The notebook battery charge is indicated by the battery symbol in the display field (see the section "Indicators and input devices") When you switch on the notebook, it takes a few seconds before the battery status is displayed.

The battery will last for roughly 500 charge/discharge cycles.

To utilize the optimum charging capacity of the battery, you should regularly perform the battery learning cycle (see chapter "Learning cycle for notebook batteries").

Charging, caring for and maintaining the notebook battery

Only use notebook batteries designed for the this notebook.

The notebook battery can only be charged, when the ambient temperature is between 5°C and max. 40°C.

The notebook battery charge is indicated by the battery symbol in the display field.

A notebook battery is fully charged in approximately three hours if the notebook is switched on. After half the charging time, the battery has already reached a 70 % charge level. A notebook battery is fully charged in approximately five hours if the notebook is switched on. If the notebook is fitted with two notebook batteries, charging will take twice as long. The notebook batteries are charged successively. The battery which was connected first is charged first.

The notebook battery can be charged by:

- connecting the notebook to the power adapter
- connecting the notebook to the car adapter
- connecting the notebook to the QuickPort S

Before a notebook battery is used for the first time, the battery learning cycle should be performed (see also the section "Learning cycle for notebook batteries").

Work in the battery mode until an acoustic warning signal indicates the need for charging. The notebook battery should not be charged before this point.

If you do not use the notebook batteries for longer periods, remove them from the notebook. Never store the notebook batteries in the unit.

Notebook batteries are to be stored in a charged state of approximately 50% (two bars in the battery status indicator) over a long period of time (longer than two months). After six months, at the latest, you should run a learning cycle with the batteries again. If you store the batteries up to two months, the charge status of the batteries must be approximately 30% (one bar in the battery status indicator). The notebook batteries should be stored in a dry environment in temperatures between +10°C and +25°C.

Connecting the power adapter

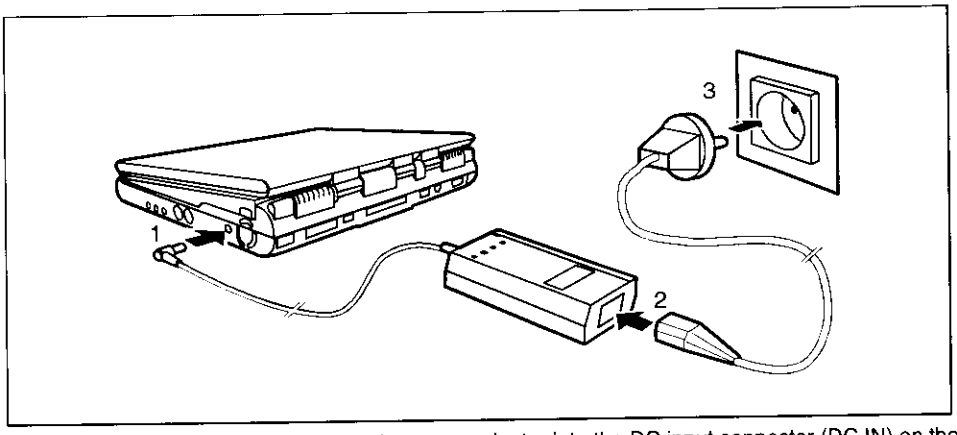
The supplied power cord conforms to the requirements of the country in which you purchased your notebook. Make sure that the power cable is approved for use in the country in which you intend to use it.

The notebook and the power adapter should be at least 200 mm apart. Keep other objects 100 mm clear of the notebook and its power adapter. Do not cover the ventilation slots in the notebook and the power adapter.

Do not stand the power adapter on heat-sensitive material.

The power adapter's AC cord may only be connected to a wall outlet if the notebook is connected to the power adapter.

- ► Switch off the notebook.
- ► Place the notebook on a level, stable surface.
- ► Install the battery.

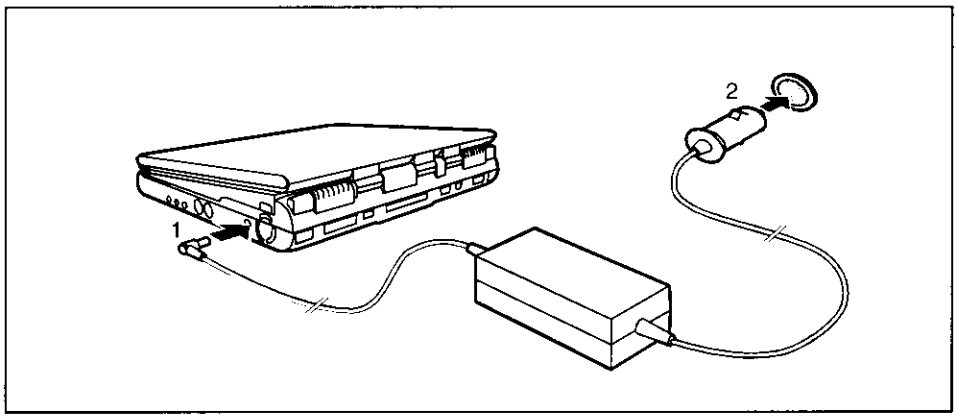


- ► Plug the DC output connector on the power adapter into the DC input connector (DC IN) on the notebook (1).
- ► Connect the AC power cable to the power adapter (2).
- ► Plug the power cable into the power outlet (3).
  The power adapter indicator lights up. After a few seconds the notebook's BATTERY indicator (a) lights up. The battery charges.

Connecting the car adapter

You can use the car adapter to charge your notebook's battery if the car has a 12V electrical system.

- ► Switch off the notebook.
- ► Place the notebook on a level, stable surface.
- ► Install the notebook battery.



- ► Plug the DC output connector on the car adapter into the DC input connector (DC IN) on the notebook (1).
- ► Start the car's engine.

You should only use the car adapter while the car's engine is running. You must not start the car's engine while the car adapter is connected to the car's electrical system.

Do not stand the car adapter on heat-sensitive material. When in operation, the car adapter must be free-standing and may not be covered.

Keep other objects 100 mm clear of the notebook. Do not cover the ventilation slots in the notebook.

- ► Plug the car adapter's input connector into the car's cigarette lighter (2).
  After a few seconds the battery operation/charging indicator on the front of the notebook glows. The notebook battery is being recharged.

Learning cycle for notebook batteries

Your notebook battery contains electronics which continuously monitors the notebook battery charging level and displays the current charging level. To compensate measuring errors of the electronics, and because the chemical properties of the battery change over time, the electronics must be recalibrated regularly. This calibration is carried out with the battery learning cycle. With the battery learning cycle, you ensure that the maximum battery capacity can always be used. During the learning cycle a defined charging cycle is carried out.

The notebook battery learning cycle lasts between four and six hours (please never abort the learning cycle).

The description of how to carry out the learn cycle for notebook batteries is contained in the *readme.txt* file on the *Battery Tool Diskette*, on the *Driver&Utilities* Mobile CD provided or on the Internet under *www.sni-pc.de/drivercd*.

Installing and removing notebook batteries and drives

The design of your notebook enables the flexible use of notebook batteries and drives. For example, the notebook batteries and drives can - with the exception of the CD drive and the DVD drive - be operated on both the left and on the right slot. The CD-ROM drive and the DVD drive can only be operated in the right slot.

The following modules are offered for your notebook:

- Notebook battery
- Floppy disk drive (maximum of one floppy disk drive)
- CD-ROM drive (only for the right slot)
- DVD drive (only for the right slot)
- second/third hard disk drive
- Zip drive

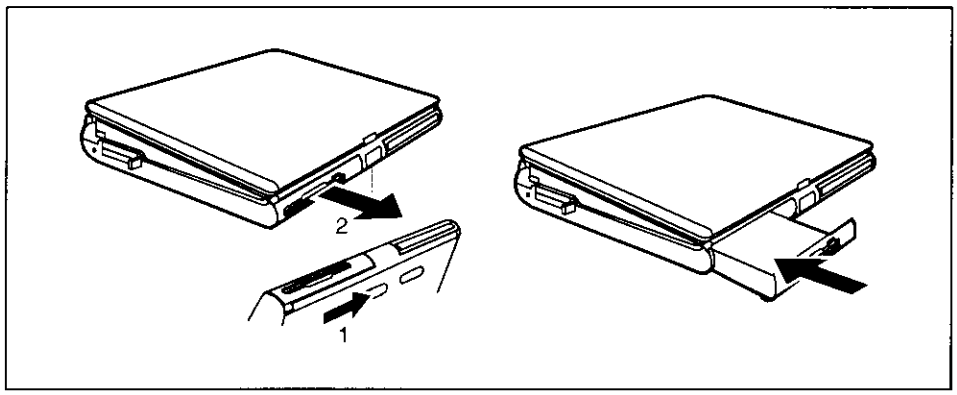
Only use modules designed for your notebook.

Do not use force when installing or removing the module.

Make sure that no foreign objects enter the slots.

► Before removing a notebook battery:
switch off the notebook. You can leave the notebook on provided the notebook battery in the left slot is not the notebook's only power source.

► Place the notebook on a level surface.



Disk drives can also be removed or installed while in operation (but not when the disk drive is being accessed).

Removing notebook battery/drive

- ► Push the release slide on the underside of the notebook inward (1).
- ► Pull the module out of the slot (2).

Installing notebook battery/drive

- ► Place the module in the slot with the connection contacts first and the sticker facing upward.

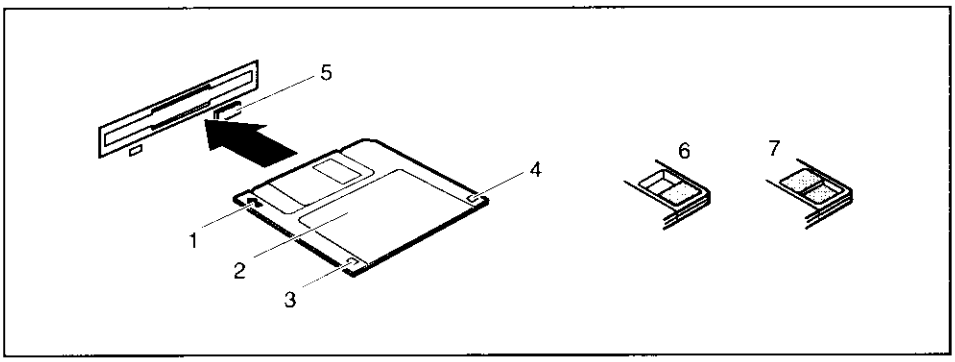
The CD-ROM drive and DVD drive can only be operated in the right slot.

- ► Push the module into the slot until you feel it locking into place.

Working with floppy disks

Follow the instructions supplied by the vendor of the floppy disks.

Never clean the floppy disk drives with cleaning disks. Even just one attempt would destroy the read/write head in the disk drive within 20 seconds.



1 = Insertion direction
2 = Label area
3 = Write protection tab for a 720 Kbyte or a 1,44 Mbyte floppy disk
4 = Identification of a 1,44 Mbyte floppy disk or write protect tab on a 120 Mbyte floppy disk
5 = Eject button for inserted floppy disks
6 = Floppy disk is write protected
7 = Floppy disk is not write-protected

- To insert a floppy disk, push it into the drive in the insertion direction (1) until it engages. The label should be facing upward.
- To remove the floppy disk, press the eject button (5).

The write-protect slider enables you to protect the data on the floppy disk from inadvertent overwriting or deletion.

- To protect the data on the floppy disk from being overwritten, push the write-protect slider to position (6). The hole is now visible.
- To remove write protection, push the slider to position (7). The hole is now covered.

Operating the CD-ROM drive and the DVD drive

This device contains a light-emitting diode, classified according to IEC 825-1:1993: LASER CLASS 1 (LUOKAN 1 LASERLAITE, KLASS 1 LASER APPARAT), and must not be opened.
Avoid touching the surface of a CD. Handle CDs only by their edges!

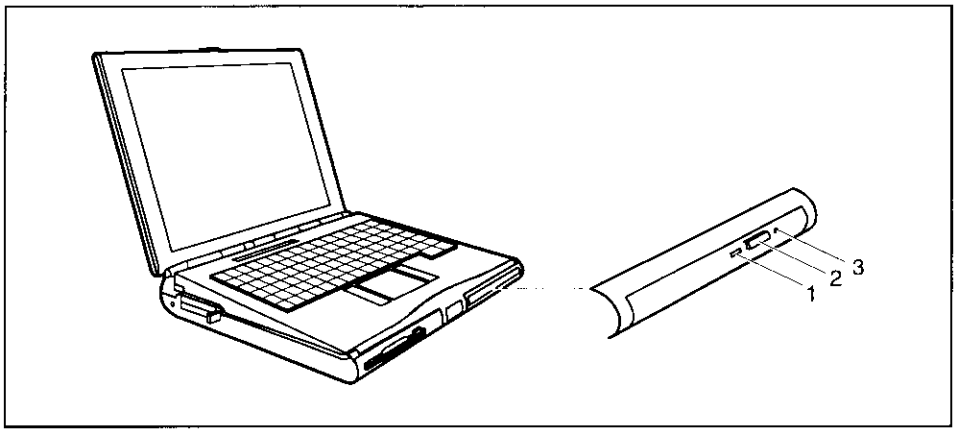
Always store CDs/DVDs in their cases. You avoid dust contamination, scratches, bending or other damage.

Protect your CDs/DVDs from dust, mechanical vibration and direct sunlight!

Avoid storing a CD/DVD in areas subject to high temperatures or humidity.

You may use both 8-cm and 12-cm CDs.

When using CDs/DVDs of minor quality vibrations and reading errors may occur.



1 = Power-on indicator
2 = Insert/Eject button
3 = Opening for manual ejection

Power-on indicator

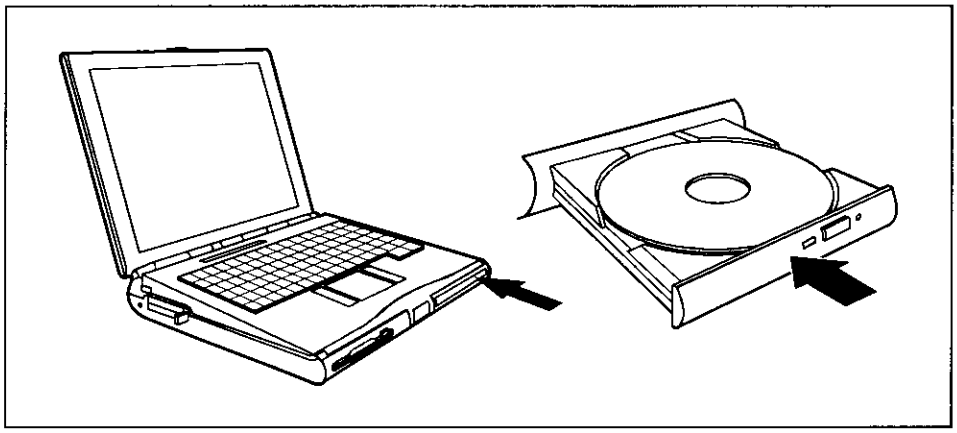
The power-on indicator (1) flashes when a CD/DVD is inserted. It goes out when the drive is ready for reading. It lights up when the drive is accessed.

If the power-on indicator does not go out after the CD/DVD is inserted, and continues to flash, the CD/DVD is probably damaged or dirty.

If the inserted CD/DVD vibrates and/or reading errors occur, then it may be possible to eliminate the vibrations or reading errors by reducing the rotating speed. Press the Insert/Eject button for roughly two seconds. Reducing the rotating speed also saves power.

Inserting or removing a CD/DVD

The notebook must be switched on.



► Press the Insert/Eject button for roughly one second.

The CD/DVD tray opens.

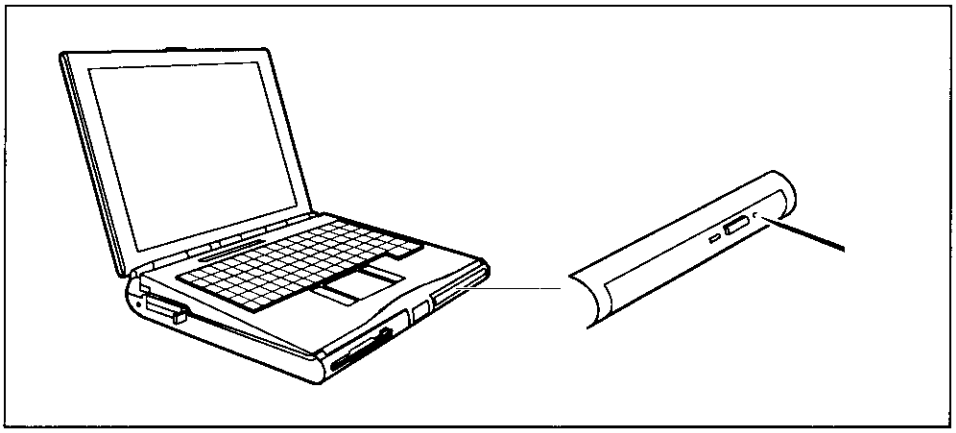
► Pull the CD/DVD tray completely out.

► Place the CD/DVD in the CD/DVD tray with the labeled side facing upwards, and carefully push the CD/DVD into the mount or remove an inserted CD/DVD.

► Push the CD/DVD tray in until you feel it locking into place.

Manual removal (emergency removal)

In the event of a power failure or damage to the drive it may be necessary to manually remove the CD/DVD.



- ► Switch off the notebook.
- ► Press a piece of wire (e. g. a paper clip) firmly into the opening.

The CD/DVD tray is unlocked. You can now pull it out of the drive.

Operating the Zip drive

Before the Zip drive can be used, you must install the Iomega software on your notebook. To do this, use the Iomega installation disk provided and the Zip disk "Iomega Tools".

Installing the Iomega software

- ► Install the Zip drive in a slot.
- ► Install the floppy disk drive in the other slot.
- ► Supply the notebook with power via the external power supply unit.
- ► Switch on the notebook and start Windows.
- ► Insert the Iomega installation floppy disk in the floppy disk drive.
- ► Start the *a:\setup.exe* program from the Iomega installation disk with *Start - Run* (Windows 95) or *File - Run* (Windows 3.1).
- ► Follow the instructions on the screen.
- ► Switch on the notebook again and start Windows.
- ► Insert the Zip disk "Iomega Tools" in the Zip drive.
- ► Follow the installation instructions displayed on the screen to finish the software installation.

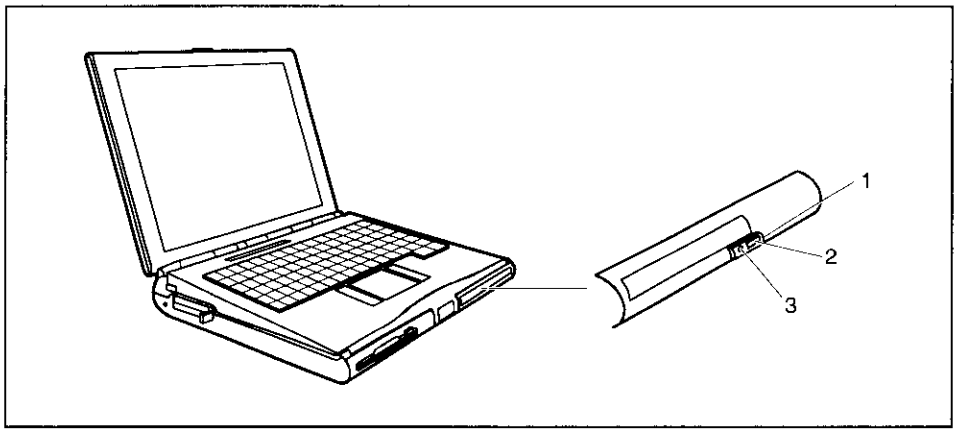
Reinstalling the Iomega software from the Zip disk

If the Zip drive of your notebook has already been assigned a drive letter in *My Computer* or in the *File Manager*, you can install the Iomega software directly from the Zip disk "Iomega Tools".

- ► Install the Zip drive.
- ► Switch on your notebook and start Windows.
- ► Insert the Zip disk "Iomega Tools" in the Zip drive.
- ► Open a search window for the Zip disk "Iomega Tools" with *My Computer* (Windows 95).
- ► Double-click on *INSTALL.EXE*.
- ► Follow the installation instructions displayed on the screen to finish the software installation.

Operation

Use the Zip drive like any other drive on your system. To be able to access the Zip drive, you must insert a disk and click on the Zip disk symbol or the Zip drive letter. Save and copy the files on the Zip drive with the same method used for other drives on your system.



1 = Eject button
2 = Drive indicator
3 = Opening for manual ejection

Handling Zip disks

Follow the instructions supplied by the vendor of the Zip disks and the following notes:

Always switch your computer on before inserting a Zip disk.

Never use force when inserting and removing Zip disks.

Never use ordinary 3.5" disks or cleaning disks in your Zip drive. This will damage the Zip drive.

Do not move the protection against accidental contact on the Zip disk.

Protect your Zip disk from dust, mechanical vibration, heat, direct sunlight and strong magnetic fields!

Do not drop the Zip disk.

Do not use the Zip disk during large fluctuations in temperature or humidity.

Always transport the Zip disk in its protective cover.

Never clean the Zip drive with cleaning disks. Even just one attempt would destroy the read/write head in the Zip drive within 20 seconds.

Inserting the Zip disk

- ► Switch on your notebook.
- ► Insert the Zip disk in the Zip drive.

The green drive indicator glows briefly and then goes out again.

Should the indicator continue to flash slowly, please press the eject button to remove the Zip disk and then insert it again.

Sleep mode of drive

The Zip drive is equipped with an automatic sleep mode. This is intended to reduce the power consumption, and thus to extend the operating time of the battery. In the sleep mode the speed of the disk is automatically reduced after an adjustable, inactive time (e.g. 3 minutes). If the drive is accessed, the speed of the disk is automatically increased again. The sleep mode time for the Zip drive is controlled via the system settings of your notebook.

Removing the Zip disk

► Gently push the eject button.

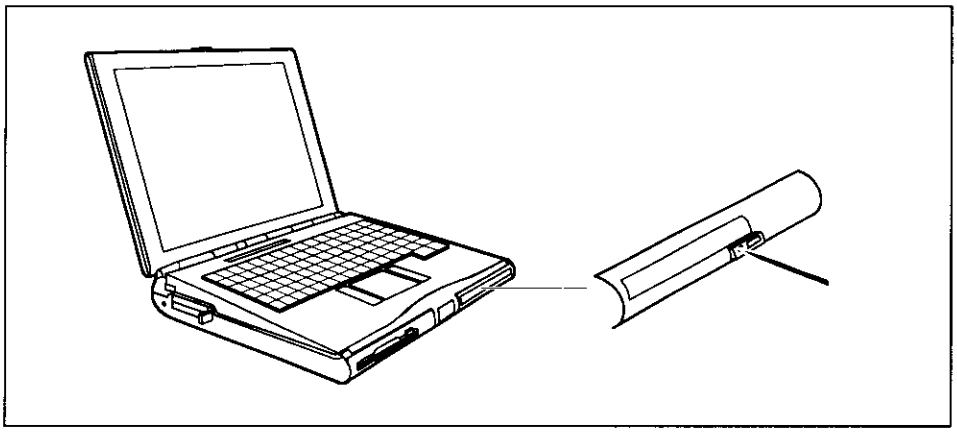
The green drive indicator lights up. After a few seconds the Zip disk is then ejected.

► Please lay the Zip disk in the protective case after removing it from the drive.

When the notebook is switched off, the Zip drive automatically ejects the Zip disk.

Manual removal (emergency removal)

For normal removal of Zip disks, the notebook must be switched on. If the power supply of the notebook is interrupted, the Zip disk can be removed manually.



► Switch off the notebook.

► Press a piece of wire (e. g. a paper clip) firmly into the opening.

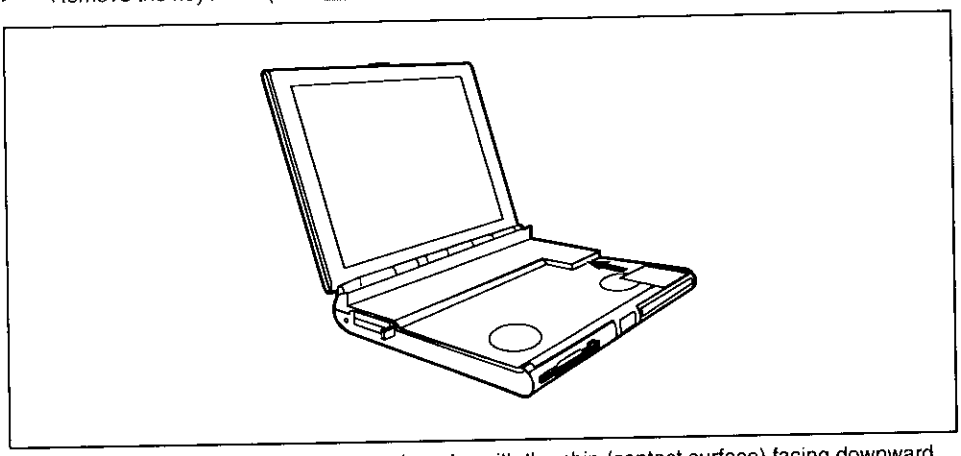
The Zip disk is unlocked. You can now pull it out of the drive.

Only use the disk emergency removal function when no battery is installed in the notebook and no power supply unit is connected to the notebook.

Chipcard reader

Access to your notebook is protected by a chipcard reader. The chipcard reader is located under the removable keyboard. The settings and operating instructions for PC-Lock are contained in the "BIOS Setup" manual in the chapter "PC-Lock".

► Remove the keyboard (see "Removable infrared keyboard").



► Push your chipcard into the chipcard reader with the chip (contact surface) facing downward.

PC Cards

Two PC card slots (CardBus or PCMCIA) enable simultaneous operation of two Type I/II/III PC cards (a maximum of one Type III and Type II each).

The PC card must not consume more than 600mA (at +5V) or 60mA (at +12V).

Consult the documentation supplied by the PC card's manufacturer and follow the instructions provided.

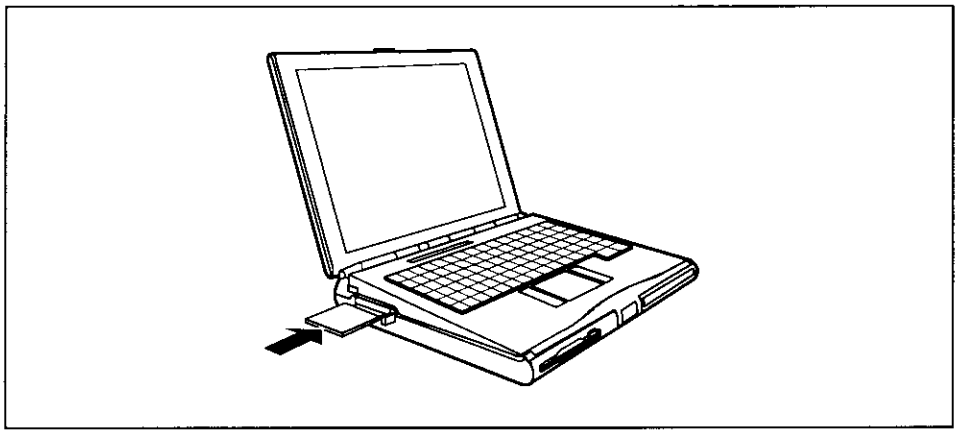
Never use force when inserting or removing a PC card.

Make sure that foreign objects do not fall into the PC card slot.

Zoomed video port

Your notebook is equipped with a Zoomed video port (ZV port). You can install an MPEG decoder or a TV and video grabber card in the two PC card slots, however only one is ready for operation at a time. Please contact one of our IT Service Shops or your local sales partner or office for advice on selecting a suitable ZV port card.

Installing a PC card



► Insert the PC card, contacts first, into the slot guides. The labeled side of the PC card must be facing upwards.

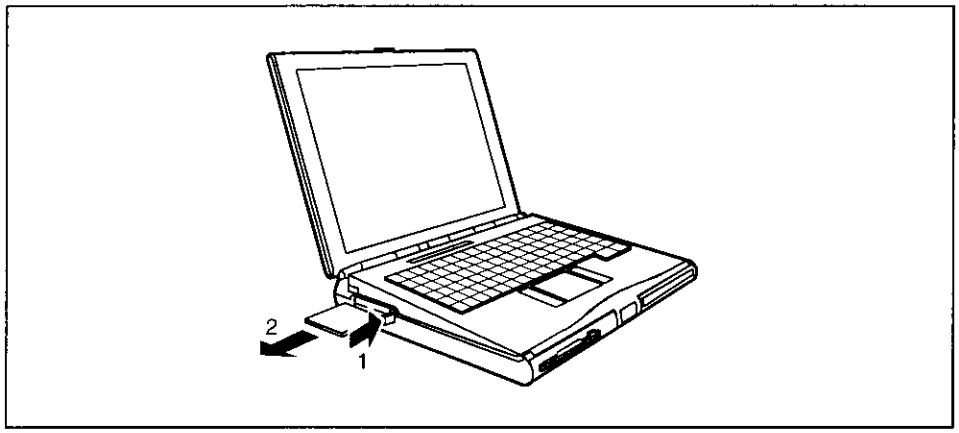
► Gently push the PC card into the slot until you feel it click into place.

Consult the documentation supplied with the PC card for information on how to install the necessary device drivers.

For further information refer to the information files (e.g. **.TXT*, **.DOC*, **.WRI*, or **.HLP*) provided with the PC card driver diskette or the information in the Windows 95 manual.

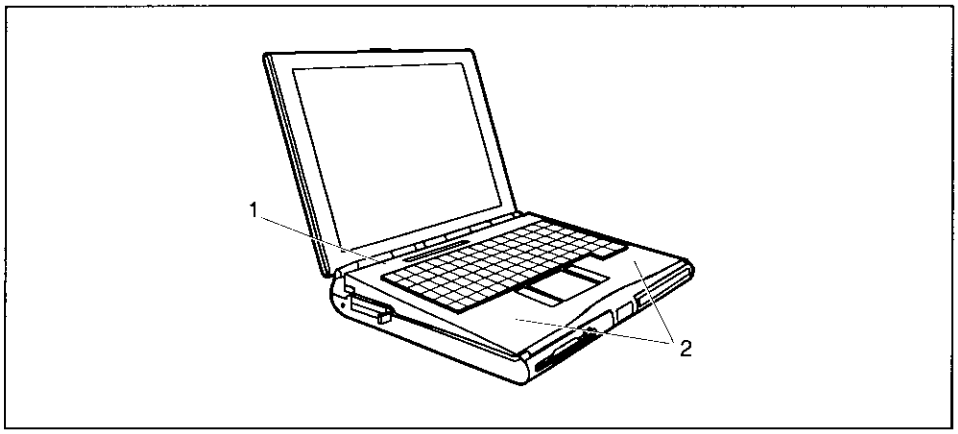
You can push the PC card slot eject buttons down flush into the notebook casing. Press the eject buttons until they snap in.

Removing a PC card



- ► Press the eject button (1). It will project further out of the notebook's case. If the eject buttons are pushed in flush with the notebook casing, they must first be snapped out. Press the eject buttons until they snap out.
- ► Slide the PC card out of the notebook (2).

Microphone and loudspeaker



1 = built-in microphone 2 = built-in loudspeaker

Your notebook contains a built-in microphone (1) and a loudspeaker (2).

If you attach an external microphone, the built-in microphone is disabled. If you attach an external loudspeaker, the built-in loudspeaker is disabled.

Using the power-management features

The notebook uses less power when the power management features are enabled. You will then be able to work for longer before having to recharge the battery.

If you will not be using your notebook for a longer period, switch it off. Reducing the brightness level of the display helps to reduce the amount of power consumed by the notebook.

If you enable one of the power-management options in the *Power* menu of the *BIOS Setup*, that option will still be enabled the next time you switch on your notebook (see manual "BIOS Setup").

Maximum Battery Life-Mode

The Maximum Battery Life mode uses all the available power-management features. The notebook uses little power and operates slightly slower than usual.

Activating

- In the *Power Setup* menu set the *Power Savings* field to *Maximum Battery Life*.
- Set the *PM Control* field in the *Power Setup* menu to *Always Enable* or to *Battery Powered Only*.

Deactivating

- In the *Power Setup* menu set the *PM Control* field to *Disabled*.

Standby mode

In Standby mode the notebook's system clock is suspended and its display and hard-disk motor are shut down.

Enabling: Fn + F3

Disabling: any key

Automatic activation

If the notebook is running and is not used for a predefined period of time, it switches into Standby mode. Any input causes the notebook to come out of Standby mode.

- In the *Power Setup* menu set the *Power Savings* field to *Customize* and set the time which has to elapse before the notebook switches to Standby mode in the *Standby Timeout* field.

or

- In the *Power Setup* menu set the *Power Savings* field to *Maximum Performance* or *Maximum Battery Life*.

Suspend mode

In suspend mode, all current data (active programs, files) is saved to the hard disk or buffered in the memory, and the notebook is switched off.

Enabling Suspend mode

Fn + F4

If your notebook is in Suspend mode:

- do not connect any external peripheral devices
- do not disconnect any external peripheral devices
- do not attempt to switch it on if the built-in battery is empty
- do not change or remove the floppy disk, if inserted
- do not add or remove RAM
- do not add or remove any PC cards.

Suspend to DRAM

The current data is buffered in the memory (DRAM). The data is stored for as long as the notebook is supplied with energy. If the notebook battery is full, the data is stored for a matter of days. Without a battery and without a power supply the data is stored for only around 5 minutes.

► Set the *Suspend Mode* field to *Save to DRAM* (see manual "BIOS Setup").

Suspend to Disk

The active data can only be saved if sufficient space is available on the hard disk (at least the main memory size + 2 Mbytes). If you are running the operating systems Windows NT or OS/2 Warp, you have to set up an additional FAT partition on the hard disk as drive C: (see the manuals supplied with the operating system in question).

► Set the *Suspend Mode* field to *Save to Disk* (see manual "BIOS Setup").

Deactivating

► Switch on the notebook.
The notebook reverts to the status it had prior to switching into Suspend mode.

Automatic activation

If the notebook is running and is not used for a predefined period of time, it switches into Suspend mode.

► In the *Power Setup* menu set the *Power Savings* field to *Customize* and set the time which has to elapse before the notebook switches to Standby mode in the *Suspend Timeout* field.

► Set the *Suspend Mode* field to *Save to Disk* or *Save to DRAM*.

or

► In the *Power Setup* menu set the *Power Savings* field to *Maximum Performance* or *Maximum Battery Life*.

► Set the *Suspend Mode* field to *Save to Disk* or *Save to DRAM*.

Decreasing reading speed of the CD-ROM drive

Decreasing the rotating speed of the CD-ROM drive saves power. Press the Insert/Eject button for roughly two seconds.

Display

Switching off the display does not affect running programs.

Enabling: Fn + F1

Disabling: Fn + F1

Automatic powerdown

You set this function in the *BIOS Setup* (see manual BIOS-Setup).
If the notebook receives no input for a predefined period of time, the display switches off automatically. It switches on again automatically as soon as the notebook receives input.

- In the *Power Setup* menu set the *Power Savings* field to *Customize* and set the time which has to elapse before the display switches off in the *Video Timeout* field.

or

- In the *Power Setup* menu set the *Power Savings* field to *Maximum Performance* or *Maximum Battery Life*.

Hard disk's power-management feature

If the hard disk is not accessed for a predefined period of time, its motor switches off automatically. It switches on again automatically the next time the hard disk is accessed.

Activating

- In the *Power Setup* menu set the *Power Savings* field to *Customize* and set the time which has to elapse before the motor of the hard disk switches off in the *Hard Disk Timeout* field.

or

- In the *Power Setup* menu set the *Power Savings* field to *Maximum Performance* or *Maximum Battery Life*.

Loudspeaker

Disabling: Fn + F6

Enabling: Fn + F6

Deactivating in BIOS Setup

- In the *Advanced Setup Integrated Peripherals* menu set the *On Board Audio* field to *Disabled* (see manual "BIOS Setup") .

Volume adjustment

Increasing the volume: Fn + F7

Decreasing the volume: Fn + F8

You can also adjust the volume of the loudspeaker in the audio program (e.g. mixer) or in the application program using the audio functions.

Changing display settings

You configure the basic display settings in the *Main Setup* (see manual "BIOS Setup").

You can change the settings using key combinations.

Switching between internal and external display

If an external monitor is connected to your notebook, you can switch between different display options. You can opt to use:

- just the notebook's internal display
- just the external display
- both the internal and the external display
- just the television

The setting you select with *Display Device Selection* in *Main Setup* is always active when you switch on your notebook.

► Press the key combination Fn + F12 until you find the display option you require.

Troubleshooting and tips

Take note of the safety hints in the chapter "Important notes", when you connect or disconnect cables.

If a fault occurs, try to correct it as described. If you fail to correct the problem, proceed as follows:

- Switch off the notebook.
- Make a note of the steps and the circumstances that led to the fault. Also make a note of any error messages displayed.
- Contact your sales office or customer service.

The POWER indicator does not light up when the device is switched on

If the POWER indicator remains off, it can have the following reasons:

The battery is not installed correctly

- Switch off the notebook.
- Check whether the battery is installed correctly in its compartment.
- Switch on the notebook.

The battery is dead

- Recharge the battery or install a fully charged battery.

The power adapter is not connected correctly

- Switch off the notebook.
- Check whether the power adapter is connected correctly to the notebook.
- Check whether the power cable is plugged properly into the power adapter and into the power outlet.
- Switch on the notebook. The indicator on the power adapter should light up.

The display of the notebook remains blank

If your screen remains blank this may have the following causes:

Monitor is switched off

- Press a key or enter the user password

The notebook's display is difficult to read

If the display is difficult to read, it can have the following reasons:

Reflexes

► Turn the notebook or alter tilt of the display.

Maximum screen resolution

The screen controller converts the current screen display for the entire screen size. As a result, a certain fuzziness cannot always be avoided.

Defective pixels on the screen

Pixel faults in the form of permanently lit, unlit or different-colored pixels can occur with LCD monitors. Up to ten pixel faults on the screen does not constitute grounds for exchanging the unit.

Exceptional cases are:

- if two pixel faults are lying directly beside each other
- if three pixel faults occur in a 5-mm diameter circle

In these exceptional cases, please contact our customer service.

The external monitor stays blank

If your screen remains blank this may have the following causes:

Monitor is switched off

► Switch the external monitor on.

Screen has been blanked

► Press any key to continue.

Brightness control is set to dark

► Set the brightness control to light. For detailed information, please refer to the Operating Manual supplied with your monitor.

The notebook has been configured to drive the internal display

► Press the key combination Fn + F12 or change the *Display Device Selection* in *Main Setup* to *CRT* or *LCD&CRT*.

The external display's power cable or data cable is not connected properly

► Switch off the external monitor and the notebook.

► Check whether the power cable is plugged properly into the power adapter and into the power outlet.

► Check whether the data cable is properly connected to the notebook and the external monitor (if it is plugged in with a connector).

► Switch on the external monitor and the notebook.

The external display is blank or the image is unstable

The wrong frequency has been selected for the external monitor or for the application program.

- ► Terminate the application program in Windows 95 with Alt + F4. If the error persists after the program has been terminated, switch the external monitor off, wait at least three seconds, and then switch the external monitor on again.
- ► Set the screen resolution required by the application. Select the *Start* button Select the *System control* item under *Settings*. Double-click on the *Display* symbol. Select the required screen resolution in the *Settings* register card of the *Resolution* field.

The notebook stops working

If the notebook stops working, this may have the following reasons:

The notebook is in Standby or Suspend mode

- ► Reactivate the notebook by pressing a key (Standby mode) or by switching it on (Suspend mode).

An application program has caused the malfunction

- ► Close the application program or restart the notebook by switching it on/off or with a warm boot.

The battery is dead

- ► Recharge the battery or install a fully charged battery.

The touchpad does not work

If the touchpad does not work, it can have the following reasons:

Incorrect setting in Setup

- ► Check whether the field *PS/2 Pointing Device* in the *Main Setup* is set to *Enabled* (see manual "BIOS Setup").

Touchpad dirty

- ► Clean the touchpad.

The mouse does not work

If the connected mouse does not work, it can have the following reasons:

Incorrect setting in Setup

- ► Check whether the *PS/2 Pointing Device* field is set to *Enabled* (for a PS/2 mouse) or *Disabled* (for a serial mouse) in the *Main Setup*.
- ► Check the *COM Port* field in the submenu *Integrated Peripherals* of the *Advanced Setup* to ensure that serial port is enabled and set correctly.

Mouse driver not loaded

- ► Check whether the required mouse driver is properly installed and is present when the application program is started. Detailed information can be found in the User Guides of the mouse or application program.

Mouse not connected

- ► Switch off the notebook.
- ► Check whether the mouse cable is connected correctly to the notebook. If you use an adapter or extension lead with the mouse cable, check the connector.
- ► Switch on the notebook.

The infrared keyboard does not function when removed

- ► Check whether the battery pack in the keyboard is charged (see "Display field").
- ► Check whether the battery pack in the keyboard is properly installed (see "Removable infrared keyboard").
- ► Check whether the keyboard is at the proper distance from and angle to the notebook (see "Transferring data with the infrared interface").

The floppy disk cannot be written

- ► Check whether that floppy disk is OK and is not write-protected.

The notebook's date or time is incorrect

- ► Set the time and/or date in the *Main Setup*.

If the date and time are repeatedly incorrect when you switch on the notebook, the CMOS battery that supplies the internal clock is dead. Please contact your customer service.

The printer does not print

- ► Make sure that the printer is switched on and on-line (see the manuals supplied with the printer).
- ► Check that the printer cable connecting the notebook and the printer is connected properly.
- ► Check that the correct printer driver is installed.
- ► Check the submenu *Integrated Peripherals* of the *Advanced Setup* to ensure that the port you are using is set correctly. The *COM Port* or *Parallel Port* or *Parallel Port Mode* setting, should match the settings in your application program under Windows 95.

Acoustic warnings

A beep sounds every few seconds

The battery is almost drained.

► Charge the battery.

A single continuous beep

The notebook cannot switch to standby or suspend mode because hard disk or diskette accesses take place or there is no space provided on the hard disk.

► Wait until the hard disk or diskette accesses have terminated, or set up the required storage space on the hard disk.

Three long beeps

The notebook cannot restore the programs that were active when it switched to Suspend mode.

Error messages on the screen

In the following the error messages are described which are output by the system BIOS (see BIOS Setup manual). Error messages displayed by the operating system or programs are described in the relevant manuals.

Diskette read failure - press F1 to retry boot

The inserted system disk is defective

► Insert another system disk.

► Press function key F1.

No boot device available - press F1 to retry boot

The operating system cannot be loaded

► Insert a system disk.

► Press function key F1.

No boot sector on fixed disk - press F1 to retry boot

The operating system is not installed on the hard disk or the hard disk has not been formatted.

► Insert a system disk.

► Press function key F1.

No devices detected

The PC card (PCMCIA) interface cannot be initialized.

► Set the *Plug & Play O/S* field to *No* in the *Advanced-Setup* of the *BIOS-Setup*.

Not a boot disk - press F1 to retry boot

The disk in the floppy drive is not a system disk.

► Remove the floppy disk from the drive.

► Press function key F1.

If you wish to boot from floppy disk:

- ► Insert a system disk.
- ► Press function key [F1].

Real time clock failure
Invalid configuration information - please run setup program
Press the F1 key to continue, F2 to run the setup utility

The system configuration information is incorrect.

- ► Press function key [F2].
- ► Reconfigure the system.

If the error message is displayed again, the notebook's backup battery is empty. Connect the notebook via its power adapter to a grounded wall outlet or install a fresh battery. The backup battery will charge fully in roughly two days.

Restoring the hard disk contents under Windows 95

If your notebook is equipped with a CD-ROM, you can reinstall Windows 95 with the Windows 95 OEM CD supplied. You must then reinstall all the drivers. To do this use the driver diskettes you created earlier using the *Create Driver Disks* icon.

Restoring the hard disk contents from CD

- ► Insert the Start-Disk for Windows 95-CD into the floppy disk drive and switch the notebook on.
- ► Follow the instructions on the screen.

Detailed PC knowledge is required for manual partitioning.

- ► Insert the Windows 95 OEM CD into the CD-ROM drive.
- ► Start the *Setup* program on the CD.
- ► You must then reinstall all the drivers. To do this use the driver diskettes you created earlier using the *Create Driver Disks* icon.

Memory expansion

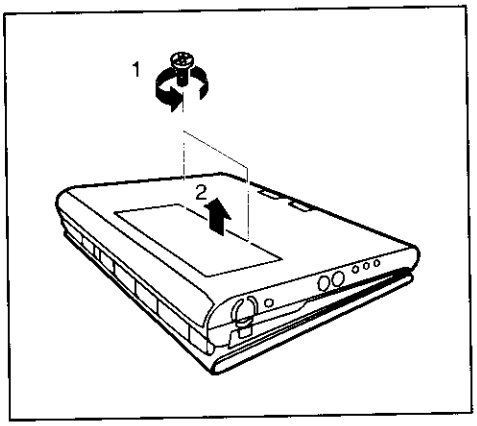
Install only memory expansions that satisfy the requirements and rules governing safety, RFI and electromagnetic compatibility and relating to telecommunications terminal equipment (see the chapter "Important notes").

Use only memory expansion which has been released for your notebook.

Never use force when installing or removing memory modules.

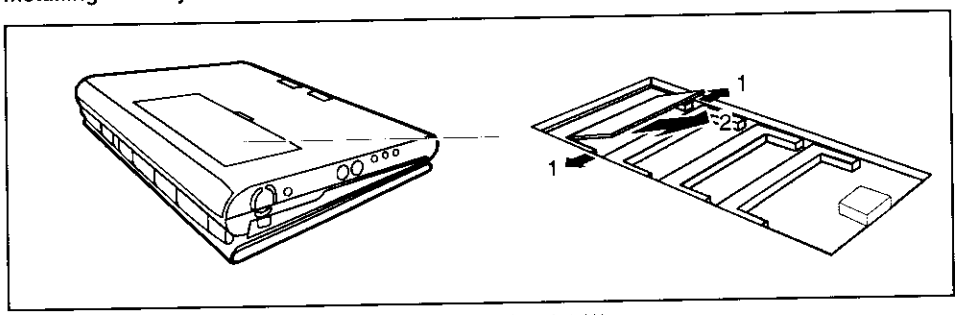
Make sure that foreign objects do not fall into the memory module compartment.

The main memory of your notebook can be expanded to 32 - 256 Mbyte using up to four 32 or 64 Mbyte memory modules. The memory modules may be mixed as required. The notebook will not start without memory modules, as no fixed main memory is installed.



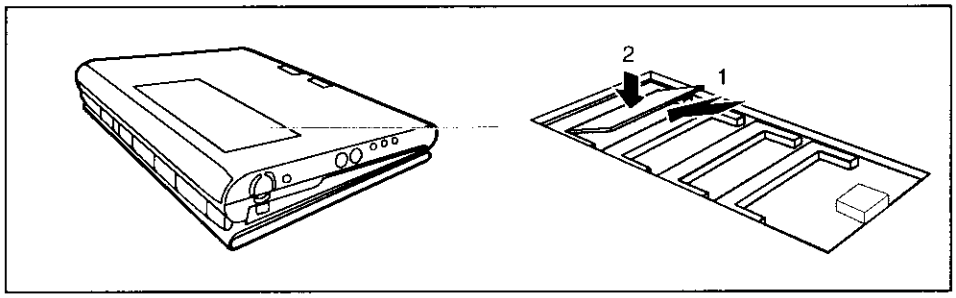
- ► Switch off the notebook.
- ► Remove the notebook batteries.
- ► Pull the power plug of the power adapter out of the power outlet.
- ► Close the display of the notebook so that it locks into place.
- ► Disconnect all cables connected to notebook.
- ► Place the notebook bottom-up on a flat surface.
- ► Remove the two screws (1).
- ► Lift the cover and pull it in the direction of the arrow (2) from the notebook.

Installing memory modules

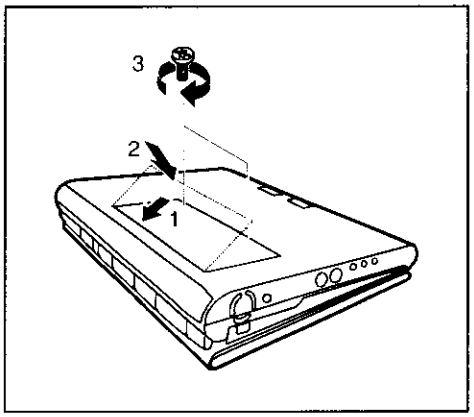


- ► Insert the memory modules, contacts first, into the slot (1).
- ► Carefully flap the memory module down (2) until you feel it latch in place.
- ► Install the other memory modules in the same way.

Removing memory modules



- ► Carefully push the two mounting clips outwards (1). The memory module flaps upwards.
- ► Slide the memory module out of its location (2).
- ► Remove the other memory modules in the same way.



- ► Place the cover on its mounting location (1) and flap it into place on the underside of the notebook (2).
- ► Fasten the cover with the two screws (3).
- ► Place the notebook bottom-down on a flat surface.
- ► Reconnect the cables that you disconnected before.
- ► Swing open the display.
- ► Install the notebook batteries again.

Connecting external devices

Disconnect all the devices from their respective power sources when you connect or disconnect a device. Read the documentation on the external device before connecting it.

Do not connect or disconnect cables during a thunderstorm.

Always take hold of the actual plug body. Never unplug a cable by pulling the cable itself!

Connect and disconnect the cables in the order described below.

Connecting cables

- Turn off all power and equipment switches.
- Pull all power plugs out of the grounded power outlets.
- Connect all the cables to the notebook and the external devices. Please observe under all circumstances the information provided in the chapter "Important notes".
- Plug all data communication cables into the utility sockets.
- Plug all power cables into the grounded power outlets.

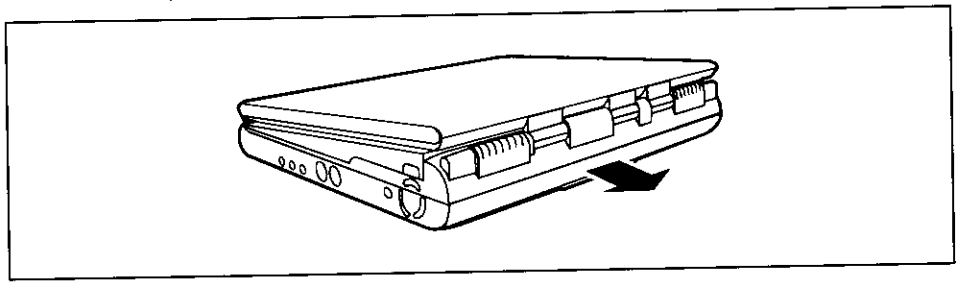
Disconnecting cables

- Turn off all power and equipment switches.
- Pull all power plugs out of the grounded power outlets.
- Unplug all data communication cables from the utility sockets.
- Disconnect all the cables from the notebook and the external devices.

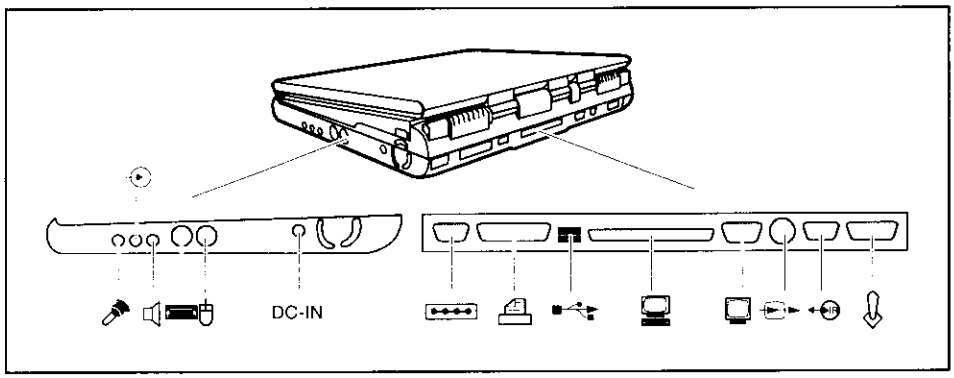
Port covers and connectors

If you have not attached any external devices, you should replace the port cover. You protect the port connectors from becoming soiled.

If you wish to connect an external display or a device with serial or parallel port, or a QuickPort S or an audio device, you must first remove the port cover:



► Remove the port cover.



	Microphone jack		Audio input (Line in)
	Audio output/Loudspeaker		Keyboard port
	PS/2 mouse port	DC IN	DC socket
	Serial port		Parallel port
	USB - Universal Serial Bus		Port for QuickPort S:
	Video connector		TV out
IR	IR Port		Game Port/MIDI Port

Connecting devices with serial or parallel port

► Connect the data cable of the external device to the appropriate port.

The serial port is configured by default as *COM1*. You can change the setting in the *COM Port* field in the *Integrated Peripherals* submenu in *Advanced Setup*. The parallel port is configured by default as *LPT1*. You can change the setting in the *Parallel Port* field in the *Integrated Peripherals* submenu in *Advanced Setup*.

Connecting an external monitor

An external monitor can be connected to the notebook. The notebook screen controller for an external monitor supports screen resolutions up to 1600 x 1280.

- ► Plug the data cable of the monitor into the monitor port.
- ► Connect the power cable of the external monitor to a power outlet and switch on the monitor.
- ► Switch on the notebook.
- ► Configure the display output in the *Display Device Selection* field in *Main Setup* or by pressing the key combination Fn + F12.
- ► Select the resolution for the external monitor. Ensure that the settings you choose for display resolution and refresh rate do not exceed the maximum values for your monitor (see monitor operating manual, "Technical Data" chapter).

Connecting the mouse

- ► Connect the mouse, depending on the type, to either the PS/2 mouse port or the serial port. The touchpad and the touchpad buttons are disabled when you connect a mouse.
- ► Switch on the notebook.
- ► Set the *PS/2 Pointing Device* field in *Main Setup* to *Disabled* if you want to use a serial mouse (e g. TrackMan).
- ► Install the necessary device driver (see the manual supplied with the mouse).

Connecting a television set

- ► Connect the S-VHS output of your TV or video device to the S-VHS socket of the notebook.
- ► If your TV or video device has no S-VHS socket, then plug the FBAS adapter into the S-VHS socket of the notebook. Then connect the adapter to the video input of your TV or video device.
- ► Connect the audio input of your TV or video device to the audio input of the notebook.

The required video and audio cables are available at specialized dealers.

Connecting an external keyboard

Connecting an external keyboard does not disable the notebook's built-in keyboard.

- ► Connect the external keyboard to the external keyboard port. If you wish to connect a keyboard with a 5-pin connector you will require an adapter from 5-pin DIN to 6-pin DIN mini connector.

Never press the keys on the external and internal keyboards at the same time.

If the external keyboard does not have an Fn key, you can press the right Ctrl key and the Alt key together instead.

For example, to enter the key combination Fn + F1 on the external keyboard you would press Ctrl + Alt + F1.

Connecting external audio devices

Do not put on headphones until the notebook has been switched on.

Before putting loudspeakers and headphones into operation, set the volume to a low setting and then adjust it to the desired volume after start-up.

If you attach an external microphone, the built-in microphone is disabled. If you attach an external loudspeaker, the built-in loudspeaker is disabled.

Connect the audio device (external microphone, external loudspeaker, audio output) to the appropriate port.

Connecting the QuickPort

The manual supplied with the QuickPort S describes how to connect the notebook.

Read the QuickPort S manual carefully before attempting to connect the notebook.

Make sure that no PC cards or extracting tools for PC cards are projecting from the notebook. No power adapter may be connected when you dock the notebook.

If you experience problems with the screen output on the external screen, test the settings in the *Display Device Selection* field of the *Main Setup*.

Makes sure that any PC card installed in the QuickPort S do not use I/O addresses, interrupts or DMA channels already used by the notebook. Details of the I/O addresses, interrupts and DMA channels are provided in the section "Technical data".

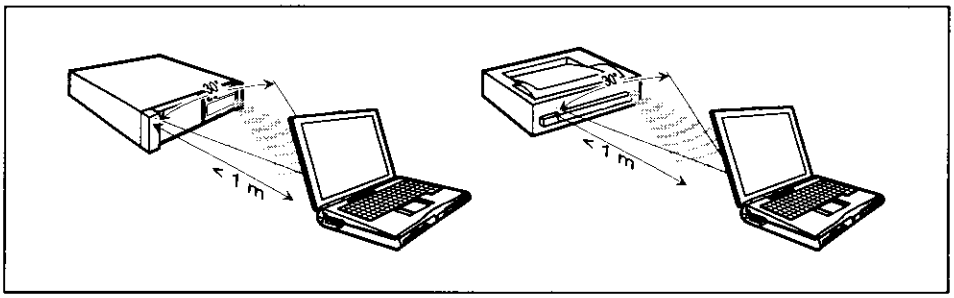
Transferring data with the infrared interface

The infrared interface (Fast IrDA) on the back of the notebook allows wireless serial data transmission from the notebook to a PC or printer. The infrared interface of the infrared keyboard enables wireless data transmission to the notebook.

Infrared data transmission from device to device

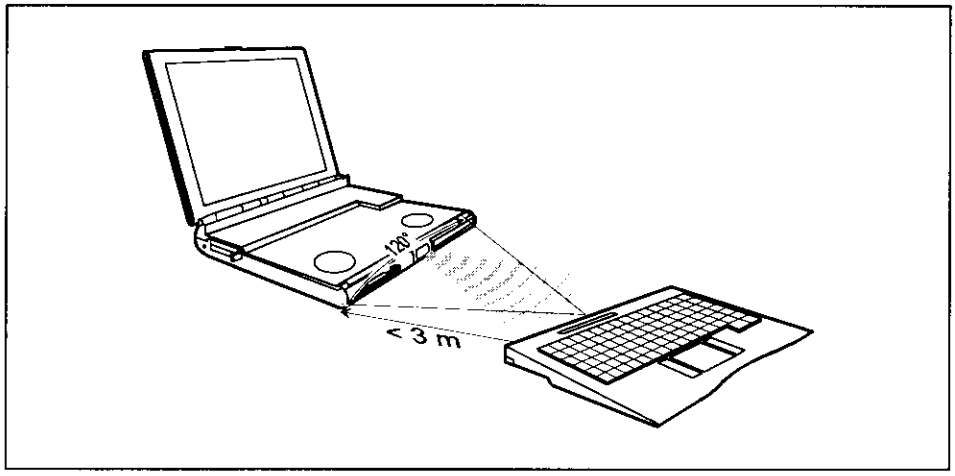
By default, the infrared interface is set to *COM2* in the setup. You can change the setting in the *IrDA Port* field in the *Integrated Peripherals* submenu in *Advanced Setup*.

i The infrared interface can only be used, when the infrared interface is enabled in the *IrDA Port* field in the *Integrated Peripherals* submenu in *Advanced Setup*.



► Set up the infrared transmitter and receiver as illustrated above. The devices may be no more than one meter apart. The infrared interface of one device must be in the range of influence (horizontally approx. 30° and vertically approx. 15°) of the infrared interface of the other device.

Infrared data transmission from infrared keyboard to notebook



The infrared transmission angle is approx. 120 ° up to a distance of one meter and decreases for distances up to three meters. The "long-distance" infrared connection between the removable keyboard and the notebook is displayed in the display field.

Technical data

Notebook

Processor	Pentium II MMX
Cache:	32 Kbyte integrated in processor 512 Kbyte synchronous Second Level Cache
Main memory (SD RAM 3.3 V):	32 - 256 Mbyte, JEDEC 144 pin SO-DIMM 4 slots for 32, 64 Mbyte modules, 64 bit
System ROM (flash EPROM):	512 Kbyte for system and video BIOS
Screen controller	ATI 3D Rage LTPro
• Video memory (EDO-RAM):	4 Mbyte
• supported resolutions on external display	640x480 / 16.7 million colors and 100 Hz 800x600/ 16.7 million colors and 100 Hz 1024x768 / 16.7 million colors and 100 Hz 1280x1024 / 16.7 million colors and 100 Hz 1600x1200 / 64K colors and 85 Hz
Disk drives:	Floppy disk drive for 3 1/2 inch floppy disks Hard disk drive 2.5 inch, max.17 mm height, CD-ROM drive 20 speed or more, optional: DVD drive, second/third hard disk drive, Zip drive

Electrical data

Regulations complied with:	EN 60950 / VDE 0805, UL 1950 CSA 22.2 No.950
Protection class:	I
Maximum power draw (notebook on with battery charging):	< 65 W *)
Minimum power draw in operation:	
reduced by Windows 95 *Power management advanced_*	< 37 W *)
Power draw in energy saving mode:	< 26 W *)
Power draw in the switched-off state:	< 2 W

*) These values only apply for a Mobile 800 with the configuration below. When additional components are incorporated, the power consumption in energy saving mode may exceed the requirements for the environment symbol ("Blue Angel") (30 W).

Processor (256 Kbyte cache):	Pentium II Processor MMX at 233 MHz
Main memory:	32 Mbytes
Floppy disk drive:	1.44 Mbytes
Hard disk drive:	2 Gbyte
Software:	Windows 95 *Power management - Advanced...*
CD-ROM drive	24fold

Display:

Backlit liquid-crystal transmissive display (LCD TFT)

• Display diagonal:	33.7 cm (13.3 inch) XGA 36.0 cm (14.1 inch) XGA
• Resolution / colors:	1280x1024 / 262.144 colors (18 bit)

Audio:

Soundchip ESS 1869

• Compatibility:	Soundblaster Pro, Ad lib, MS soundsystem
• A/D and D/A conversion:	16 bit, stereo

Input devices

• Keyboard:	86 keys
• Touchpad (Length, Width)	64 x 48 mm

Slots

PC card (CardBus/PCMCIA):	TI PCI 1250 1 x type III and 1 x type II simultaneously, CardBus compatible, Zoomed-Video-Port

Ports

• PS/2 mouse port:	6-pin mini DIN female connector
• Port for external keyboard:	6-pin mini DIN female connector
• Port for QuickPort S:	240-pin female connector
• Parallel interface:	25-pin female connector, bi-directional, EPP /ECP capable
• Port for external monitor:	15-pin female connector
• Serial port:	9-pin male connector, 16550 compatible
• Microphone jack:	connector, mono
• Audio input:	connector, stereo
• Port for external loudspeaker:	connector, stereo
• Game/Midi	
• Infrared interface (Fast IrDA)	
• USB (Universal Serial Bus)	15-pin female connector
• Video output:	FBAS Pal or NTSC

Environmental conditions

Environment class (3K2)	DIN IEC 721 part 3-3
Environment class (2K2)	DIN IEC 721 part 3-2

Temperature:

• Operating (3K2)	5 °C .... 40 °C
• Transport (2K2)	-25 °C .... 60 °C

Dimensions

Width/Depth/Height:	326 mm, 259 mm, 46/67 mm
Weight:	approx. 3.8 kg

Notebook battery

Rated voltage:	10.8 V
Rated capacity	63 Wh 5.8 Ah
Charging time (when not in operation):	3 hours (70% charging after 1.5 hours)
Operating time with a battery:	approx. 3.5 hours (depending on application)
Weight:	550 g

Power supply unit

Primary	
• Rated voltage:	100 V to 240 V (automatic)
• Frequency:	50 Hz to 60 Hz (automatic)
• max. rated current:	0.75 A / 1.5 A
Secondary	
• Rated voltage:	19 V
• max. rated current:	3.4 A

Car adapter

Primary	
• Rated voltage:	10 V to 15 V
Secondary	
• Rated voltage:	19 V
• max. rated current:	3.4 A

CD-ROM drive

Supported CD formats:	• CD-Digital Audio • CD-ROM (Mode 1 and Mode 2) • CD-ROM XA (Mode 2, Form 1 and Form 2) • CD-I (Mode 2, Form 1 and Form 2) • CD-I Ready • CD bridge • Photo-CD (Single- and Multisession) • Video-CD
Laser	
• Class 1 Laser Product	
• Type:	Semiconductor GaA/As
• Wave length:	780 nm
• Power output:	5 mW max.

DVD drive

Supported DVD/CD formats:

- DVD- 5: 4.377 Gbyte
- DVD- 9: 7.959 Gbyte
- DVD-10: 8.754 Gbyte
- DVD-18: 15.917 Gbyte
- CD (Mode-1): 656.5 Mbyte
- CD (Mode-2): 748.8 Mbyte

Laser

- Class 1 Laser Product
- Type: Semiconductor GaA/As
- Wave length: 650 nm
- Power output: 5 mW max.

Chipcard reader

- Processing of asynchronous processor chipcards:
  Protocols T=1 and T=14
- Processing of synchronous memory chipcards:
  SLE 4418, SLE 4428; SLE 4432, SLE 4442; SLE 4436; SLE 4439; SLE 553x and PCF 8582

Interrupt I/O addresses, and DMA assignment

Changeable internal settings:

Function	I/O address	IRQ	DMA
Soundchip ESS1869	**220h - 22Fh ***	**IRQ 5 * (LPT)**	*1. DMA:*
	240h - 24Fh	IRQ 7 (LPT)	**DMA 1 ***
	260h - 26Fh	IRQ 9	DMA 0
	280h - 28Fh	IRQ 10	DMA 3
	Midi Play Unit (MPU):	IRQ 11	
	330h - 331h		*2. DMA:*
	300h - 301h		**DMA 3 ***
	310h - 311h		DMA 0
	320h - 321h		DMA 1
	FM:		
	388h - 38Bh **		
	Gameport:		
	201h*		
	Control Interface:		
	800h-807h		
	810h-817h		
	820h-827h		
	830-837h		
Parallel port **LPT**	**378h - 37Fh*** =	**IRQ 7***	DMA 1 or DMA 3 in ECP-mode
	378h - 37Fh =	IRQ 5	
	3BCh- 3C5h =	IRQ 7	
	278h - 27Fh =	IRQ 5	
1. Serial port **COM**	**3F8h - 3FFh*** =	**IRQ 4 / COM1 ***	
	2F8h - 2FFh =	IRQ 3 / COM2	
	3E8h - 3EFh =	IRQ 4 / COM3	
	2E8h - 2EFh =	IRQ 3 / COM4	
2. Serial port **COM** = Fast **IrDA**	**2F8h - 2FFh *** =	**IRQ 3 / COM2 ***	**DMA 0 ***
	3E8h - 3EFh =	IRQ 4 / COM3	DMA 1
	2E8h - 2EFh =	IRQ 3 / COM4	DMA 3

* = default setting in *BIOS SETUP*

** = default setting, when Audio is enabled

Fixed internal settings:

Function	I/O address	IRQ	DMA
System Timer	040h-043h	0	
Keyboard	060h, 064h	1	
Interrupt controller	020h-021h, 0A0h-0A1h	2	
Floppy disk drive controller	3F0h-3F5h, 3F7h	6	2
System CMOS / Realtime clock	070h-071h	8	
PC card controller "TI1250"		10	
USB controller	120h-13Fh	11	
Synapsis touchpad		12	
Numeric processor	0F0h-0FFh	13	
Intel 82371AB PCI bus primary IDE controller	1F0h-1F7h, 3F6h, FCD0h-FCD7h	14	
Intel 82371AB PCI bus secondary IDE controller	170h-177h, 376h, FCD8h-FCDFh	15	
DMA controller	000h-00Fh, 081h-08Fh, 0C0h-0DFh		4
PCI bus	CF8h-CFFh		

Settings for external components (e.g. PC card):

Function	I/O address	IRQ	DMA
PC card (PCMCIA cards): max. 1x TypIII + 1x TypII or 2x TypII • I/O cards (modem, network board, COM, SCSI etc.) • memory cards (e.g. SRAM, FLASH) • ATA cards (e.g. Harddisk, Sundisk)	PC cards require an IRQ (**no** shared IRQ!), I/O addresses and/or a memory area and possibly DMA (see also the documentation on the PC card).		

* = default setting in *BIOS setup*
PnP = Plug and Play

Shared IRQ:

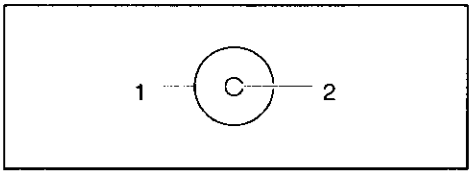
Several PCI components can **share one** free ISA-**IRQ** (assignment of the IRQs is automatic).

Under Windows 95 you can change the resource contentions manually with the "Device Manager".

Port assignment

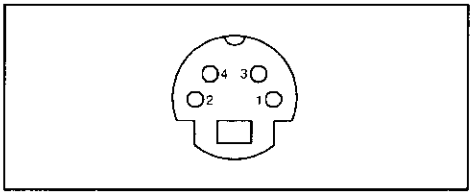
The assignment of the external ports are as follows:

DC jack (DC IN)



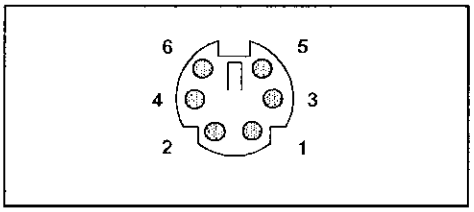
Pos.	Meaning
1	0 V
2	+19 V

TV out socket



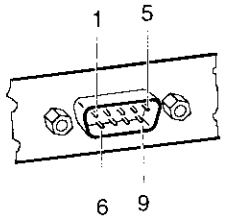
Pos.	Meaning
1	0 V
2	0 V
3	SVideo_Y_FBAS_MUX
4	SVideo_COL

Port for external keyboard and PS/2 mouse



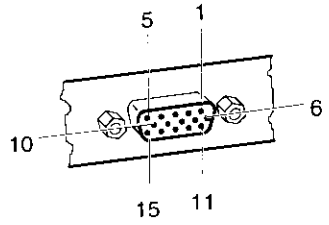
Pos.	Meaning
1	Data
2	free
3	0 V
4	+5 V
5	Clock
6	free

Serial port



Pos.	Signal name	Meaning
1	DCD (Data Carrier Detect)	Data Carrier Detect
2	RxD (Receive Data)	Receive Data
3	TxD (Transmit Data)	Transmit Data
4	DTR (Data Terminal Ready)	Data Terminal Ready
5	Signal Ground	Signal Ground
6	DSR (Data Set Ready)	Data Set Ready
7	RTS (Request to Send)	Request to Send
8	CTS (Clear to Send)	Clear to Send
9	Ri (Ring Indicator)	Ring Indicator

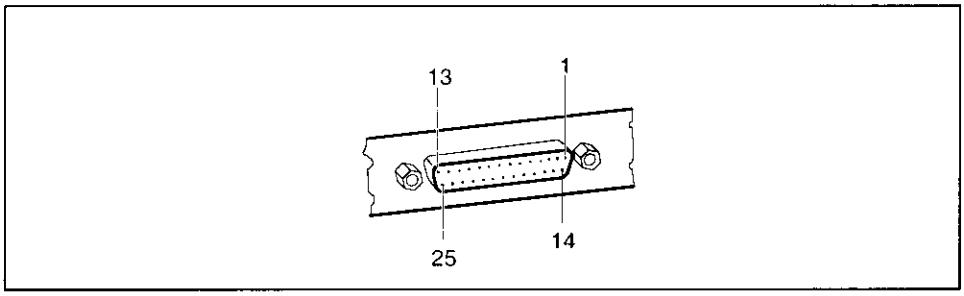
Port for external monitor



Pos.	Meaning
1	Video output red
2	Video output green
3	Video output blue
4	reserved
5	DDC ground
6	Video ground red
7	Video ground green
8	Video ground blue

Pos.	Meaning
9	+5V
10	logic ground
11	reserved
12	DDC data line (bi-directional)
13	horizontal synchronization
14	vertical synchronization
15	DDC clock signal line

Parallel port



The parallel interface supports three transfer modes: SPP, EPP and ECP. SPP mode (standard parallel port) is the mode traditionally used to drive a printer. EPP (Enhanced Parallel Port) and ECP (Extended Capabilities Port) modes are transfer modes that allow transfer rates of 2 and 2.4 Mbytes/s. These modes will only work in connection with peripheral devices which specifically support them. Cases where these transfer modes are used are, for example, interface conversions between Parallel and SCSI or Parallel and IDE. The pinouts are different in all three modes.

Pinout in SPP mode (Standard Parallel Port)

Pos.	Signal name	Meaning
1	STROBE	Data message
2-9	Data Lines 0-7	Data lines 0-7
10	ACKNOWLEDGE	Data acknowledgement
11	BUSY	Not ready to receive
12	PE	End of paper
13	SELECT	Device selection
14	AUTO	Automatic new line
15	ERROR	Device error
16	INIT	Reset/initialize
17	SELECT IN	Printer selection
18-25	GROUND	Ground

Pinout in EPP mode (Enhanced Parallel Port)

Pos.	Signal name	Meaning
1	Write	Output
2-9	Data Lines	Input/output
10	Intr	Input
11	Wait	Input
12	reserved	-
13	reserved	-
14	DStrb	Output
15	reserved	-
16	reserved	-
17	AStrb	Output
18-25	Ground	-

Pinout in ECP mode (Enhanced Capabilities Port)

Pos.	Signal name	Meaning
1	HostClk	Output
2-9	Data Lines 0-7	Input/output
10	PeriphClk	Input
11	PeriphAck	Input
12	AckReverse	Input
13	Xflag	Input
14	HostAck	Output
15	PeriphRequest	Input
16	ReverseRequest	Output
17	ECP-Mode	Output
18-25	Ground	-

Index

A
Accumulator, disposal 4
Acoustic warnings 45
Alt Gr key 19
Audio input 50
    connecting 52
Audio output 50

B
Backspace 19
Backspace key 19
Backup diskettes 46
Battery
    charging notebook battery 24
    disposal 4
    installing keyboard battery 12
    notebook battery 22, 25
        caring for/maintaining 22
        charging 22
        installing and removing 25
        learning cycle 25
        technical data 57
Battery charge, indicator 15
Battery indicator, switching over 21
Battery operation, indicator 15
Beep, error message 45
Board 3

C
Cable, infrared keyboard 13
Calculator keypad 18, 20
Caps Lock 19
Car adapter 24
    technical data 57
CardBus card, see PC card
CD-ROM 28
CD-ROM
    inserting 29
    opening the CD tray by hand 30
    removing 29
CD-ROM drive 25
    removing 25
    technical data 57
CE certificate 5
Chipcard 34
Chipcard reader 34
    technical data 58
Class B Compliance Statement 5

Connecting devices 49
Contents of delivery 9
Cover
  port 49
CPU speed 21
Cursor control keys 19
Cursor key 19

D
Damage during transport 9
Dark screen 41, 42
Data transfer 53
  via infrared interface 53
Date, not correct 44
Date/Time incorrect 44
DC IN (power cable) 61
DC socket 50
DC IN
  assignment 61
Difficult to read, display 42
Diskette 27
  cannot be read or written 44
  write-protection 27
Display 39
  blank 43
  brightness 21
  cleaning 8
  difficult to read 42
  field 15, 16
  image unstable 43
  off/on 21
  setting 40
  swing open 14
  switching off automatically 39
Disposal 4
DMA assignment 59
Drifting screen display 43
Drive 25
  removing 25
DVD 28
  inserting 29
  removing 29
  removing by hand 30
DVD drive 25
  removing 25
  technical data 58

E
ECP mode, assignment 64
Electrical data
  notebook 55
Electromagnetic compatibility 5
Emergency removal
  CD/DVD 30

Zip disk 33
Energy consumption 37
Energy saving 4
Energy saving function
CD-ROM drive 39
display 39
hard disk drive 39
installation under Windows 95 4
loudspeaker 39
Maximum Battery Life Mode 37
Standby mode 37
Suspend mode 38
Energy saving functions 37
Enhanced Parallel Port 63
Enter 19
Enter key 19
EPP mode, assignment 63
Ergonomic video workstation 2
Error message
acoustic 45
on the screen 45
ESD 3
Extended Capabilities Port 64

F
FBAS output 50
assignment 61
FCC statement 5
Floppy disk drive 25
removing 25
Fn key 19
Fn+F1 21
Fn+F10 21
Fn+F11 21
Fn+F12 21
Fn+F3 21
Fn+F4 21
Fn+F5 21
Fn+F6 21
Fn+F7 21
Fn+F8 21

G
Game port 50
Guarantee coupon booklet 9

H
Hard disk drive
second/third 25
removing 25
switching off automatically 39

I
I/O address 59

Important notes 3
Indicator
  battery charge 15
  battery operation 15
  POWER indicator fails to light 41
Indicators 15
Infrared data transmission
  device to device 53
  keyboard to notebook 54
Infrared keyboard 11
  cable 13
  does not work 44
Infrared transmission 53
Installing, Iomega software 30
Installing, keyboard battery 12
Installing, notebook battery 12
Interrupt assignment 59
Iomega software, installation 30
IR port 50
IRQ assignment 59

K
Key
  Alt Gr 19
  Backspace 19
  combination 20
  Cursor 19
  Enter 19
  Fn 19
  menu 19
  numeric keypad 20
  Pad Num 19
  Pause 19
  Shift 19
  Start 19
  Tab 19
Keyboard 18
  assignment 61
  cleaning 8
  connecting 51
Keyboard port 50

L
LCD display 16
Learning cycle, battery 25
Light screen 42
Line in 50
Location, for notebook 9
Lock
  PC card 36
Loudspeaker 39
  connecting 52
  internal 36
  switching off/on 21

M
Manual removal
CD/DVD 30
Zip disk 33
Maximum Battery Life mode 37
Memory
expansion 47
Memory modules, installing and removing 47
Menu key 19
Microphone
connecting 52
internal 36
Microphone jack 50
Mobile operation 8
Monitor
connecting 51
port assignment 62
Monitor port 50
Monitor screen
error message 45
Mouse
assignment 61
connecting 51
does not work 43
Mouse port 50
MPEG decoder card 34

N
No mouse pointer 43
No screen display 43
Notational conventions 2
Note 3
boards 3
CD/DVD 28
CE certificate 5
disposal 4
energy saving 4
keyboard battery 12
notebook battery 22
power cord selecction 6
Safety 3
Windows 95 14
Windows NT 14
Zip disk 32
Notebook
cleaning 8
closing 15
opening 11
setting up 9
stops working 41, 43
switching off 15
switching on 14
technical data 55
transporting 8
Notebook battery 22, 25

caring for/maintaining 22
charging 22
with car adapter 24
with power adapter 23
learning cycle 25
Numeric keypad 18, 20

O
On, power on indicator 15
Opening, notebook 11
Operating system, installing 14
Operating, Zip drive 31

P
Packing material 9
Pad Num key 19
Parallel interface 50
Parallel port
assignment 63
connecting 50
Pause key 19
PC card 34
installing 35
removing 36
PC-Lock 34
PCMCIA card, see PC card
Pixel fault 42
Port 49
assignment 49, 50, 61
audio input 52
cover 49
external devices 49
external keyboard 51
external loudspeaker 52
external microphone 52
external monitor 51
infrared 53
keyboard assignment 61
monitor assignment 62
mouse 51
parallel port 50
parallel, Assignment 63
PS/2 mouse assignment 61
QuickPort S 50, 52
serial assignment 62
serial port 50
TV device 51
Power cord selecction 6
POWER indicator, does not light up 41
Power supply unit 23
technical data 57
Power-on indicator 15
Preparation for use 9
Preparing notebook for use 10

Printer does not print 44
PS/2 mouse
    assignment 61
    connection 51
PS/2 mouse port 50

Q
QuickPort S
    connecting 52

R
Reading speed, CD-ROM drive 39
Recovery boot diskette 46
Recovery CD 46
Recycling 4
Removable infrared keyboard 11
Restoring, hard disk contents 46
Return 19

S
Safety 3
Saving power 4
Screen
    stays blank 41, 42
Screen output 21, 40
Select, power cord 6
Serial interface 50
Serial mouse
    connection 51
Serial port
    assignment 62
    connecting 50
    infrared 53
Shift 19
Shift key 19
Software installation, Iomega software 30
SPP mode, assignment 63
Standard Parallel Port 63
Standby mode 37
    switching off/on 21
Start key 19
Summer time 44
Suspend mode 38
    switching off/on 21
    switching on automatically 38
Suspend to Disk 38
Suspend to DRAM 38
S-VHS output 50
    assignment 61
Switching off, notebook 15
Switching on, notebook 14
Symbols, explanation of 2
System expansion 47

T
Tab key 19
Technical data
    DMA assignment 59
    I/O addresses 59
    interrupt assignment 59
    notebook 55
    port assignment 61
Time, not correct 44
Tips 41
Touchpad 15, 17
    buttons 17
    cleaning 8
    does not work 43
Transport 8
Troubleshooting 41
TV card 34
TV set, connecting 51
TV-out 50
    assignment 61
    switching on/off 21

U
USB, Universal Serial Bus 50

V
VGA assignment 62
Video workstation 2
Volume
    adjustment 40
    increasing 21
    reducing 21

W
Windows 95, note 14
Windows NT, note 14
Winter time 44
Wireless data transfer 53
Write protection, floppy 27

Z
Zip disk 32
    inserting 32
    manual removal 33
    removing 33
Zip drive 30
    operating 31
Zoom video port 34
ZV port 34

Contents

Introduction **1**
Notational conventions 2
Installing an ergonomic video workstation 2

Important notes **3**
Safety 3
Notes on installing and removing boards 3
Manufacturer's notes 4
Energy saving 4
Disposal and recycling 4
CE certificate 5
FCC Class B Compliance Statement 5
Power cord selection 6
For the United States and Canada 6
For the United Kingdom 7
On the move with the notebook 8
Cleaning the notebook 8

Preparation for use and operation **9**
Unpacking and checking the delivery 9
Choosing where to set up your notebook 9
Preparing the notebook for use 10
Opening the notebook 11
Removable infrared keyboard 11
Connecting infrared keyboard with cable 13
Switching on the notebook 14
Switching off the notebook 15
Indicators and input devices 15
Display field 16
Touchpad and Touchpad Keys 17
Keyboard 18
Key combination 20
The notebook battery 22
Charging, caring for and maintaining the notebook battery 22
Learning cycle for notebook batteries 25
Installing and removing notebook batteries and drives 25
Working with floppy disks 27
Operating the CD-ROM drive and the DVD drive 28
Operating the Zip drive 30
Chipcard reader 34
PC Cards 34
Zoomed video port 34
Installing a PC card 35
Removing a PC card 36
Microphone and loudspeaker 36
Using the power-management features 37
Maximum Battery Life-Mode 37
Standby mode 37
Suspend mode 38
Decreasing reading speed of the CD-ROM drive 39
Display 39
Hard disk's power-management feature 39
Loudspeaker 39

Contents

Volume adjustment 40
Changing display settings 40
Switching between internal and external display 40

Troubleshooting and tips 41
The POWER indicator does not light up when the device is switched on 41
The display of the notebook remains blank 41
The notebook's display is difficult to read 42
Defective pixels on the screen 42
The external monitor stays blank 42
The external display is blank or the image is unstable 43
The notebook stops working 43
The touchpad does not work 43
The mouse does not work 43
The infrared keyboard does not function when removed 44
The floppy disk cannot be written 44
The notebook's date or time is incorrect 44
The printer does not print 44
Acoustic warnings 45
Error messages on the screen 45
Restoring the hard disk contents under Windows 95 46

Memory expansion 47

Connecting external devices 49
Port covers and connectors 49
Connecting devices with serial or parallel port 50
Connecting an external monitor 51
Connecting the mouse 51
Connecting a television set 51
Connecting an external keyboard 51
Connecting external audio devices 52
Connecting the QuickPort 52
Transferring data with the infrared interface 53

Technical data 55
Notebook 55
Notebook battery 57
Power supply unit 57
Car adapter 57
CD-ROM drive 57
DVD drive 58
Chipcard reader 58
Interrupt I/O addresses, and DMA assignment 59
Port assignment 61
DC jack (DC IN) 61
TV out socket 61
Port for external keyboard and PS/2 mouse 61
Serial port 62
Port for external monitor 62
Parallel port 63

Index 65