SIEMENS NIXDORF

PCD-4NL

Operating Manual

Introduction

Important notes

Getting started

Operation

System configuration

System expansion

Troubleshooting

System specifications

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March 1995 edition

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Introduction

Innovative technology and ergonomic design make this subnotebook the ideal user-friendly and reliable travel companion. The MS-DOS operating system, Windows for Workgroups and Software Utilities are pre-installed on the hard disk to facilitate the procedure when you use your subnotebook for the first time.

The power-management SL-enhanced processor coupled with power-management functions (APM = **A**dvanced **P**ower **M**anagement) ensure effective use of the battery life of the subnotebook. The battery can be simply replaced or recharged using the optional auto adapter should it drain while you are on the move. To allow you to utilize the optimum capacity of the battery, you should deep-discharge and recharge it at regular intervals.

The subnotebook is equipped with a 4 MB main memory which can be upgraded to 8, 12 or 20 MB. Data is saved on an IDE hard disk drive. An external disk drive can be connected to the parallel port of the subnotebook if you wish to work with floppy disks. The subnotebook also features two PCMCIA slots for using PCMCIA cards (types 1, 2 and 3). The drivers for PCMCIA cards are included on the PCMCIA Utility floppy disk supplied.

Connections for external devices such as screen, printer and mouse are located on the rear panel of the subnotebook. The PS/2 port recognizes the input device (e.g. external keyboard, mouse) which has been connected. The parallel port (which supports ECP and EPP modes) is designed to accommodate bi-directional data transfer.

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

The subnotebook also features security functions to protect your data against unauthorized access. Booting the operating system or access to the Setup program can thus be protected by means of passwords.

For additional information on this subnotebook PC, refer to:

– *INFO* in MS Windows (utilities and drivers)

– the information files (e.g., **.DOC, *.TXT, *.WRI, *.HLP*)

Notational conventions

The characters and typefaces used in this manual have the following meaning:

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

describes additional information, hints and tips.

▶ indicates an operational step which you should carry out.

␣ indicates that you must enter a blank.

↵ indicates that you must press the Enter key after the characters you have entered.

`Text in a typewriter font` represents screen output.

`Text in a bold typewriter font` has to be typed at the keyboard.

Text in italics denotes commands or menu options.

"Quotation marks" indicate special emphasis and chapter names.

Important notes

In this chapter you will find information regarding safety which it is essential to take note of with your subnotebook. The chapter also contains information on the licenses issued for your subnotebook.

Safety

This device complies with the relevant safety regulations for data processing equipment, including electronic office machines for use in an office environment. If you have any questions, contact your sales office or our customer service.

– Always use the bag supplied when transporting the subnotebook.
  If it needs to be shipped, use the original packaging or other suitable packaging to protect it from damage through mishandling.

– If the device is brought into the installation site from a cold environment, condensation can form. Before operating the device, wait until it is absolutely dry and has reached approximately the same temperature as the installation site.

– Read the information on environmental conditions before setting up and using the subnotebook (see the sections "Preparation for use" and "System specifications").

– Only run the subnotebook off the battery or power supply unit included, or off authorized accessories (car adapter).

– The power supply unit has a specially approved power cable and must only be connected to a grounded wall outlet.

– Ensure that the power socket on the power supply unit or the grounded wall outlet is freely accessible.

– To disconnect the device from the line voltage, you must pull out the power plug.

– Lay all cables so that nobody can stand on them or trip over them. When attaching the PC, observe the relevant notes in the chapter "System expansion".

– No data transmission cable should be connected or disconnected during a thunderstorm.

– Please ensure that no objects (e.g., necklaces, paperclips etc.) or liquids can get into the interior of the device (electrical shock, short circuit).

– In emergencies (e.g. damaged casing of subnotebook, car adapter or power supply unit, elements or cables, penetration of liquids or foreign matter), switch off the subnotebook immediately, remove the power connector, remove the battery, and contact your sales office or customer service.

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

– When cleaning the system unit, observe the relevant notes in the chapter "Operation".

– Switch the subnotebook off and disconnect it from the mains before installing/removing the battery, a memory upgrade or the hard disk or before connecting and disconnecting external devices.

– Install only system expansions that satisfy the requirements and rules governing safety and electromagnetic compatibility and relating to telecommunications terminal equipment. If you install other expansions, you may damage the system or violate the safety regulations and regulations governing RFI suppression. Information on which system expansions are suitable can be obtained from the customer service or your sales office.

– You may use the battery only for this PC.
  The battery must only ever be charged via the power supply unit supplied or the optional auto adapter.

  Take care not to drop the battery or otherwise damage its housing (risk of fire).
  If the battery fails, do not use it in the subnotebook.
  Never interconnect the positive and negative terminals of the battery.
  Used batteries must be disposed of in accordance with local regulations (special refuse).

– If the LCD display is damaged (e.g. glass broken), do not allow any escaping liquid to come into contact with skin, mucous membranes (eyes, mouth). Do not inhale vapors.
  Clean parts of the body and clothing that have already come into contact with such liquids with plenty of water and soap.

– The warranty expires if the subnotebook is damaged during the installation or replacement of system expansions.

– You may set only those resolutions and refresh rates specified in the chapter "System specifications" or in the operating manual of the monitor description. Otherwise you may damage your monitor. If you are in any doubt, contact your sales office or customer service.

– The subnotebook includes a lithium battery which may be replaced only by authorized personnel. Incorrect handling may lead to a risk of explosion.
  The lithium battery may be replaced only with an identical battery or with a type recommended by the manufacturer.
  The battery must be disposed of in accordance with local regulations concerning special waste.

For Finland

VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu. Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

Manufacturer's notes

If there is a CE symbol on the device, then:

CE The device complies with the requirements of the EEC directive 89/336/EEC with regard to "Electromagnetic compatibility".

If there is not a CE symbol on the device, then:
This is to certify that the above-mentioned device has been tested for RFI suppression pursuant to BMPT Directive 1046/84 / 243/91. The German PTT authorities have been notified that this device has been introduced onto the market, and grants them the right to inspect series production of this type of device.

Note on RFI suppression

All other devices connected to this product must have RFI suppression in accordance with EC directive 89/336/EEC. Products meeting these requirements are accompanied by a certificate issued by the manufacturer and carry the CE symbol.

In Germany, products not complying with these requirements can be operated only after a special authorization has been granted by the BZT.

Energy saving

Make use of the subnotebook's power management features (see "Operation").

The subnotebook 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.

Optimum battery capacity

To allow you to utilize the optimum capacity of the battery, you should deep-discharge and recharge it at regular intervals (see the chapter entitled "Operation - Deep-discharging/recharging the battery)

On the move with the subnotebook

Please observe the points listed below when transporting your subnotebook PC.

Transporting the subnotebook

– Do not carry the subnotebook by its open screen or by its battery compartment if the battery is removed.

– Switch the subnotebook off and close the LCD display and the covers for the ports and the PCMCIA cards.

– Use the optional bag to transport the subnotebook.

– Protect the subnotebook 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.

– If you wish to use your subnotebook 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 supply unit can be operated on the local mains voltage. If this is not the case, obtain the appropriate power supply unit for your subnotebook.
  Do not use any other voltage transformers!

Class B

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. 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 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.

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus", ICES-003 of the Canadian Department of Communications.

Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe B prescrites dans la norme sur le matériel brouilleur: "Appareils Numériques", NMB-003 édicté par le ministre des Communications du Canada.

Important notice concerning 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.

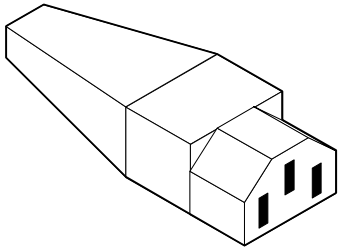


Figure 1

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

For the United States and Canada

Use a UL listed and CSA labelled 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).

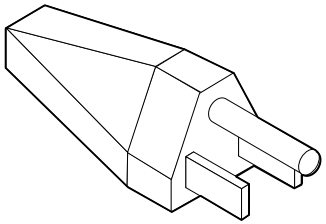


Figure 2

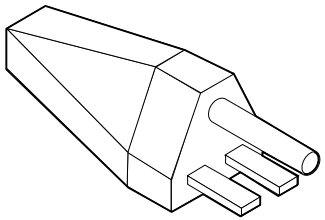


Figure 3

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 colored in accordance with the following code:

Green and Yellow:	Earth
Blue:	Neutral
Brown:	Live

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

– The wire which is colored 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 colored Green or Green and Yellow.

– The wire which is colored Blue must be connected to the terminal which is marked with the letter N or colored Black.

– The wire which is colored Brown must be connected to the terminal which is marked with the letter L or colored Red.

Getting started

Pay attention to the information provided in "Important notes" in the previous chapter.

You must install and change the battery and install the operating system, application programs and drivers before you can work with the subnotebook.

Refer to the chapter on "System expansions" for instructions on how to connect external devices (e.g. mouse, printer, disk drive) to the subnotebook.

Unpacking and checking the subnotebook

- Unpack all the parts.

The subnotebook package comprises the following components:
- Subnotebook PCD-4NL
- Battery
- Power supply unit
- Power cable
- Data line for the parallel port
- PCMCIA utility disk
- Operating instructions and manuals
- Warranty coupon booklet
- Upgrade order form

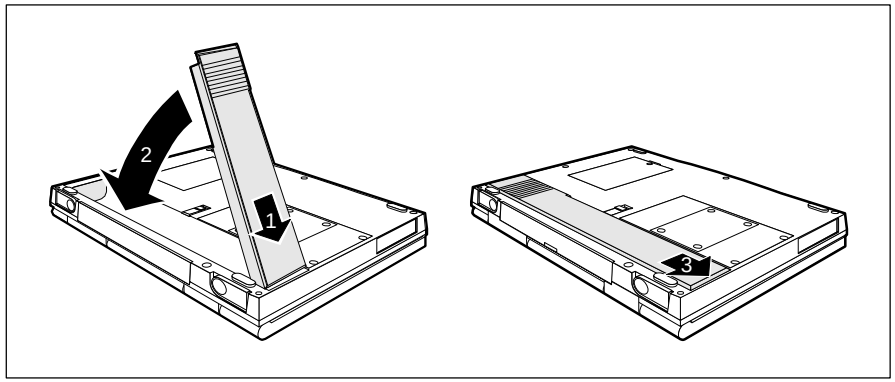
- Check the contents of the shipment for visible damage incurred during transportation.
- Check that the shipment matches up with the delivery note.
- Check whether all the necessary details have been entered on the first page of the guaranty booklet or on the guaranty card.

If you discover damage or notice discrepancies between the delivery papers and the contents of the shipment, please contact your sales office.

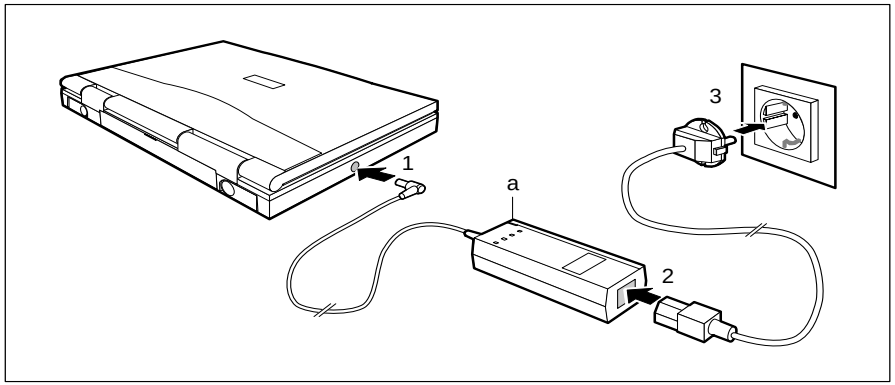
We recommend that you keep the original packaging in case you need to ship the equipment again.

Preparing for use

- Place the subnotebook bottom-up on a flat surface.
- If necessary, remove any foreign objects from the battery compartment.



- Insert the battery in the battery compartment in the direction of the arrow (1). The contacts of the battery must be facing to the front of the subnotebook.
- Shift the battery downwards until it is positioned in the battery compartment (2).
- Press the battery in the direction of the arrow (3) until it clicks into place.
- Place the subnotebook bottom-up on a flat, stable surface.



- Plug the DC output connector on the power supply unit into the DC input connector on the subnotebook (1).

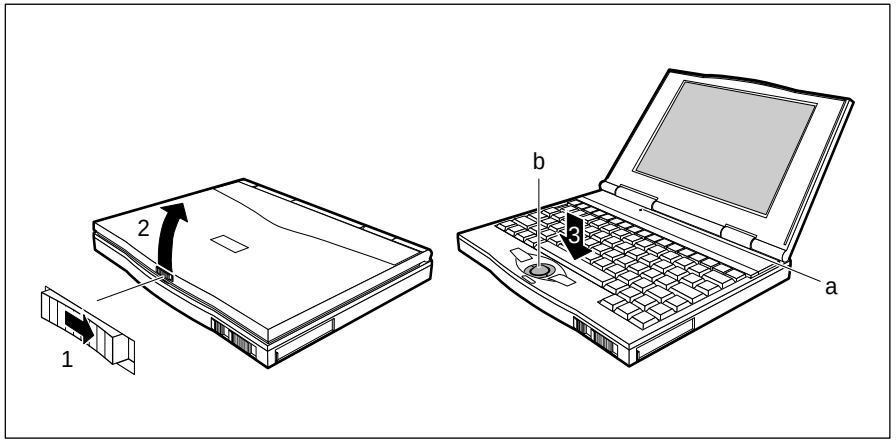
The supplied power cord conforms to the requirements of the country in which you purchased your subnotebook. Make sure that the power cable is approved for use in the country in which you intend to use it.

The subnotebook and the power supply should be at least 200 mm apart. Keep the area within 100 mm of the subnotebook and the power supply unit clear.

- Connect the AC power cable to the power supply unit (2).
- Connect the AC power cable to a grounded wall outlet (3).
  The LED on the power supply unit (a) and BATTERY LED on the subnotebook light up.

The battery charges. When the subnotebook is not running, the battery takes roughly two hours to charge. When the subnotebook is running, it takes roughly five hours to charge. You can install the operating system and the application programs while the battery is charging.

Installing the operating system



a = LED indicator b = Trackball

- Slide the release tabs to the right (1) and release the cover (2).

The LED indicator (a) remains illuminated while the battery is charging.

When you install software you have to work with the keyboard and the trackball. If you are unfamiliar with using floppy disks or input devices, see "Displays and input devices" in the "Operation" section.

You must not power-cycle or warm-boot your subnotebook during first-time installation.

- Press the space bar for roughly one second.
- Wait until a choice of different languages is displayed on screen.
- Select the language to be used for the installation procedure by pressing the appropriate function key (e.g. press the F2 function key for language 2).
- Select the language in which the operating system is to be installed by pressing the appropriate function key.

- Once the correct language is displayed, press the Enter key.
  Note that your choice of language is final and cannot be reversed.

The operating system is installed. Once it has finished installing, the start-up program appears on screen. You can use the trackball and/or the keyboard to operate the start-up program.

If a choice of different language-specific keyboard layouts is displayed on screen, you can select either the default keyboard layout or one of the others indicated.

- Confirm the default keyboard layout.

Or

- Choose one of the other country-specific keyboard layouts listed.

The registration screen appears.

- Fill in the relevant fields to register as the user of the installed software.

Once you have finished registration, the system asks if you would like to run through a Microsoft Windows tutorial. Once you have finished the tutorial, you return to the start-up program.

- Continue with the start-up program.

A number of different menu options are displayed on screen.

On-line help is available; to access it, select the information menu item.

- Select all the menu options shown on screen in the sequence indicated.
  The system disk and backup menu options can only be executed once if you have connected an external disk drive or another storage medium (e.g. PC) to your subnotebook. As this is not the case, you should execute the remaining menu options.
- Quit the start-up program.

You should create a system disk and a backup copy. You will require approximately 10 floppy disks for this purpose.

- Connect the external disk drive to the subnotebook (see chapter on "Memory upgrades - connecting external devices").
  Please read the chapter entitled "Functions for your laptop" in the MS-DOS manual if you wish to use the disk drive of a PC instead of the external disk drive.
- Switch the subnotebook on and call the *SNIStart* program under MS Windows.
- Execute the system disk and backup menu options.

You can now begin to work with your subnotebook or continue to install additional software.

Follow the instructions contained in the manuals and the information files provided with your application programs and drivers.

Once you have installed the operating system, the application programs and drivers, and have generally familiarized yourself with the subnotebook, you should deep-discharge and recharge the battery. Deep-discharging and recharging the battery ensures that you obtain optimum capacity. This is described in the section "Operation - The battery".

Operation

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

If you use the subnotebook in a normal office situation, you run it off the mains with the aid of the power supply unit. This conserves battery power for mobile use.

Choosing where to set up your subnotebook

Select a suitable place at which to set up your subnotebook. We recommend the following:

– Choose a stable, non-slip surface on which to set up the subnotebook. Set it up with care: the subnotebook's plastic feet might conceivably scratch or damage the finish on different types of furniture.

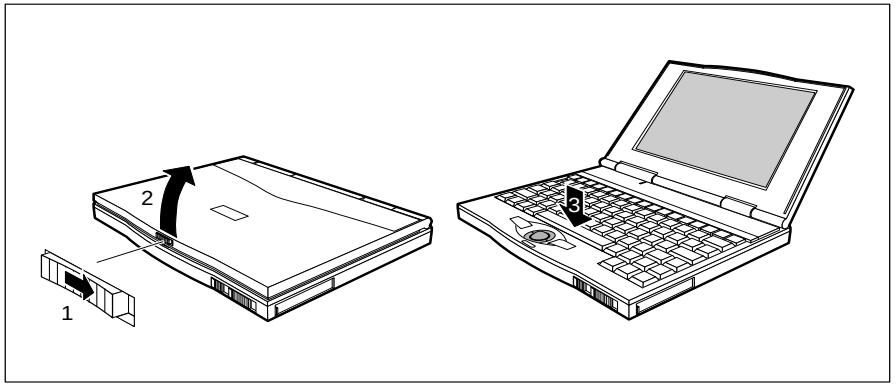
– Do not use the subnotebook in environments with high dust, humidity or heat levels.

– Keep other objects 100 mm clear of the subnotebook and its power supply unit to ensure adequate ventilation. The space between the subnotebook's plastic feet must be clear. Do not place it on a soft surface (e.g., a carpet or soft furnishings).

– The power supply unit must be at least 200 mm away from the subnotebook.

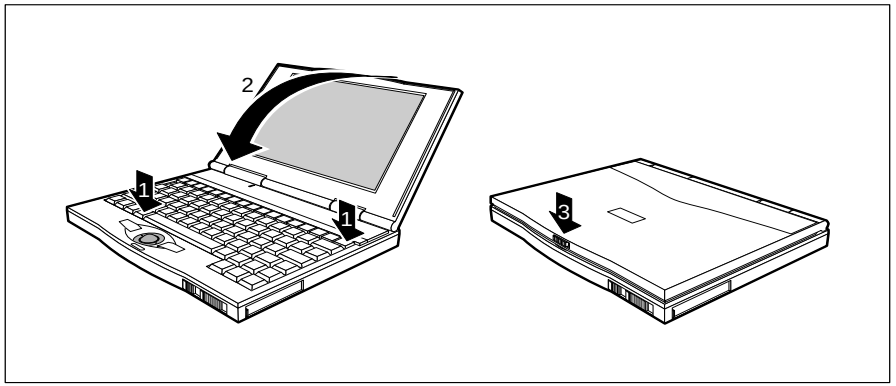
i The rear panel of the subnotebook features two fold-away plastic feet. You can increase the keyboard tilt of the subnotebook by unfolding these feet.

Switching on the subnotebook



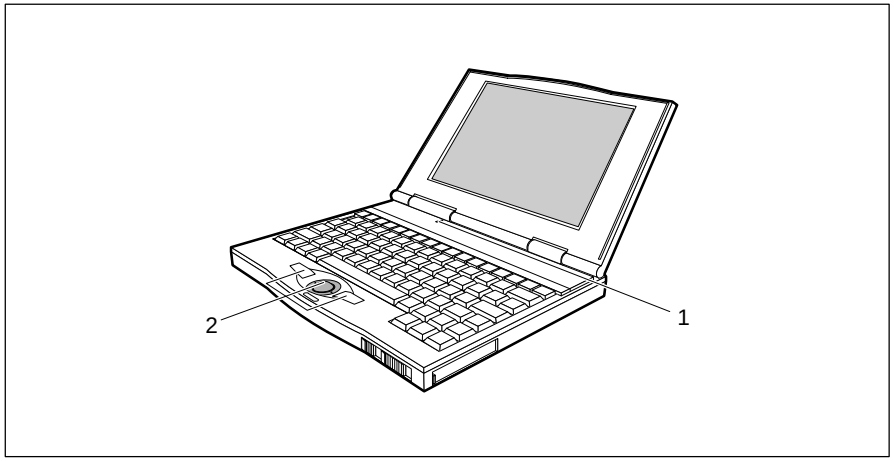
- Slide the release tabs to the right (1) and swing open the cover (2).
- Press the space bar (3) for roughly one second.

Switching off the subnotebook



- Press the **Fn** and **Pause** (1) keys simultaneously.
- Close the cover of the subnotebook (2) so that it locks into place (3).

Displays and input devices



1 = LED indicator 2 = Trackball and trackball buttons

Displays

The subnotebook features an LED indicator and displays status messages on the screen. The status displays indicate the current operating status of the subnotebook. The displays for MS-DOS and MS Windows for Workgroups differ.

LED indicator

The display is not illuminated if the battery is charged or is not installed.

The display is on when the battery is charging.

The display flashes at two-second intervals is a password is required.

The display flashes at six-second intervals if Standby mode is active.

The display flashes twice a second if the battery charge level is less than 10% of its capacity.

The frequency with which it flashes increases before the subnotebook shuts itself down.

Status displays under MS-DOS

`cnsp CF C:` The status display appears in the lowest screen line under MS-DOS. The status display comprises three blocks:
1st block provides information regarding the keyboard
2nd block provides information regarding the battery
3rd block provides information regarding drive access.

First block (keyboard)

`C` means that all letters produced are uppercase (uppercase mode). In the case of overlay keys, the upper left character is produced. `C` is displayed when the **Caps Lock** key is pressed.

`c` means that uppercase mode has been disabled.

`N` appears when you press the Pad Num key if the integrated numeric keypad has been enabled. The blue characters indicated on the bottom right on the keycaps are produced when the keys of the integrated numeric keypad are actuated.

`n` means that the blue editing functions indicated on the upper right on the keycaps of the integrated numeric keypad are performed if the integrated numeric keypad has been enabled.

`S` appears if you have enabled the "scroll ON" function by pressing the **Scroll** key. The contents of the screen, and not the cursor, are moved when the "scroll" function is enabled.

`s` means that the "scroll" function has been disabled.

`P` appears when you press the **Fn** + **Pad Num** key combination. The blue editing functions indicated on the upper right on the keycaps are performed when the keys of the integrated numeric keypad are actuated.

`p` means that the integrated numeric keypad has been disabled.

Second block (battery)

`AC` means that a battery has not been installed and the subnotebook is powered via the power supply unit.

`BF` means that the subnotebook is powered by the battery. The battery charge level is between 90% and 100% of its capacity.

`BH` means that the subnotebook is powered by the battery. The battery charge level is between 60% and 90% of its capacity.

`BL` means that the subnotebook is powered by the battery. The battery charge level is less than 10% of its capacity.

`BM` means that the subnotebook is powered by the battery. The battery charge level is between 30% and 60% of its capacity.

`BW` means that the subnotebook is powered by the battery. The battery charge level is between 10% and 30% of its capacity.

`CA` means that the subnotebook is powered via the power supply unit. The installed battery is defective.

`CF` means that the subnotebook is powered via the power supply unit. The battery charge level is between 90% and 100% of its capacity.

`CH` means that the subnotebook is powered via the power supply unit. The battery charge level is between 60% and 90% of its capacity.

`CL` means that the subnotebook is powered via the power supply unit. The battery charge level is less than 10% of its capacity.

`CM` means that the subnotebook is powered via the power supply unit. The battery charge level is between 30% and 60% of its capacity.

`CU` means that the subnotebook is powered via the power supply unit. The installed battery is defective.

`CW` means that the subnotebook is powered via the power supply unit. The battery charge level is between 10% and 30% of its capacity.

Third block (drive access)

`A:` means that the floppy disk in the external disk drive is being accessed. Do not remove the floppy disk from the external disk drive while A: is displayed.

`C:` means that the hard disk of the subnotebook is being accessed.

To ensure that the status can be displayed under MS-DOS, the *STATUS_D.EXE* program must be loaded.

In order to load the *STATUS_D.EXE* program automatically when starting the subnotebook, add the following line to the CONFIG.SYS file:
`DEVICE=C:\SNI\UTIL\STATUS_D.EXE` Parameter

If the line is not included in the CONFIG.SYS file you may start the program by entering at MS-DOS level:
`C:\SNI\UTIL\STATUS_D.EXE` Parameter

You can replace the "Parameter" variable with the parameters for the individual blocks of the status display, thus defining when the relevant block is displayed. If no parameters are entered for a given block, the relevant block is always displayed.

Parameters for the first block (keyboard)

`/K=D` the first block is not displayed.

`/K=E` the first is always displayed.

`/K=L` the first block is displayed if the integrated numeric keypad has been enabled.

Parameters for the second block (battery)

`/P=B` the second block is displayed if the subnotebook is powered by the battery.

`/P=C` the second block is displayed if the subnotebook is powered via the power supply unit.

`/P=D` the second block is not displayed.

`/P=E` the second block is always displayed.

`/P=L` the second block is displayed if the battery charge level drops below 10% of its capacity.

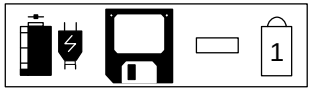
`/P=W` the second block is displayed if the battery charge level is between 10% and 30% of its capacity.

Parameters for the third block (drive access)

`/P=A` the third block is displayed if the appropriate drive is being accessed.

`/P=B` the third block is not displayed.

Status displays under MS Windows



The status display appears in the bottom, right-hand corner of the screen. The individual symbols provide information regarding the battery, drive access and the keyboard.

means that the subnotebook is powered by the battery. The battery charge level is between 90% and 100% of its capacity.

means that the subnotebook is powered by the battery. The battery charge level is between 60% and 90% of its capacity.

means that the subnotebook is powered by the battery. The battery charge level is between 30% and 60% of its capacity.

means that the subnotebook is powered by the battery. The battery charge level is between 10% and 30% of its capacity.

means that the subnotebook is powered by the battery. The battery charge level is less than 10% of its capacity.

means that the subnotebook is powered via the power supply unit. The battery is not installed.

means that the subnotebook is powered via the power supply unit. The battery charge level is between 90% and 100% of its capacity.

means that the subnotebook is powered via the power supply unit. The battery charge level is between 60% and 90% of its capacity.

means that the subnotebook is powered via the power supply unit. The battery charge level is between 30% and 60% of its capacity.

means that the subnotebook is powered via the power supply unit. The battery charge level is between 10% and 30% of its capacity.

means that the subnotebook is powered via the power supply unit. The battery charge level is less than 10% of its capacity.

means that the subnotebook is powered via the power supply unit. The battery is defective.

means that the subnotebook is powered via the power supply unit. The battery is defective.

means that the floppy disk in the disk drive is being accessed.
You must not remove the floppy disk from the disk drive while this symbol is displayed.

means that the disk drive is not in use.

means that the subnotebook hard disk is being accessed.

means that the hard disk is not being accessed.

means that all letters produced are uppercase. In the case of overlay keys, the upper left character is produced. The symbol appears when the **Caps Lock** key is pressed.

means that the blue characters on the bottom right on the keycaps are produced when the keys of the numeric keypad are actuated. The symbol appears when you press the **Pad Num** key if the integrated numeric keypad has been enabled.

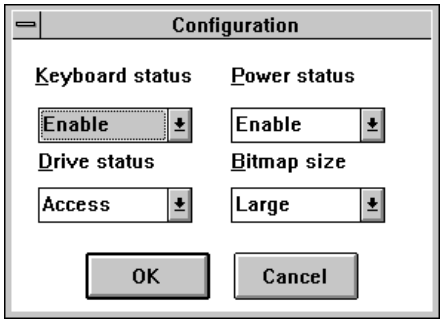
appears when you enable the "scroll ON" function with the **Scroll** key. The cursor keys move the contents of the screen, and not the cursor, when the scroll function is enabled.

means that the blue editing functions on the upper right on the keycaps are performed when the keys on the integrated numeric keypad are actuated. The symbol appears when you enable the integrated numeric keypad by pressing the **Fn** + **Pad Num** key combination.

means that the integrated numeric keypad, the capital mode and the scroll function have been disabled.

The status is displayed if the *Notebook Status* Windows application (program C:\SNI\UTIL*STATUS.EXE*) is started under MS Windows (e.g. in the *Autostart* window).
You can move the status displays to any location on the screen by holding the right key on the pointing device depressed.

The status displays can be closed like any other Windows application.



A configuration menu is displayed if you double-click on the status display. You can use this menu to define the status display symbol to be displayed.

You can edit the settings in the configuration menu with the pointing device or via the keyboard (Alt key + the underlined letter key in each case). You must close the configuration menu by clicking the OK box in order to store the changes.

The following settings can be selected in the configuration menu:

Settings under keyboard status

Disable the symbol for uppercase mode, integrated numeric keypad and the "scroll" function is not displayed.

Lock the symbol for uppercase mode, integrated numeric keypad and the "scroll" function is displayed if the corresponding function has been enabled.

Enable the symbol for uppercase mode, integrated numeric keypad and the "scroll" function is always displayed.

Settings under drive status

Disable the symbols for drive access are not displayed.

Access the symbols for drive access are displayed if the drive in question is being accessed.

Enable the symbols for drive access are always displayed.

Settings under power status

Disable the power supply symbols are not displayed.

Battery Low the power supply symbols are displayed if the charge level of the battery drops below 10% of its capacity.

Battery Warn the power supply symbols are displayed if the charge level of the battery is between 10% and 30% of its capacity.

Battery Only the power supply symbols are displayed if the subnotebook is powered by the battery.

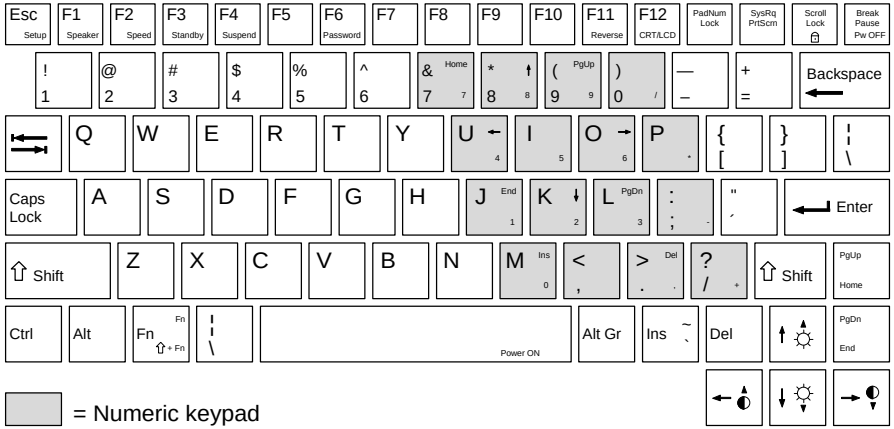
Enable the power supply symbols are always displayed.

Settings under bitmap size

Large the size of the status display is standard.

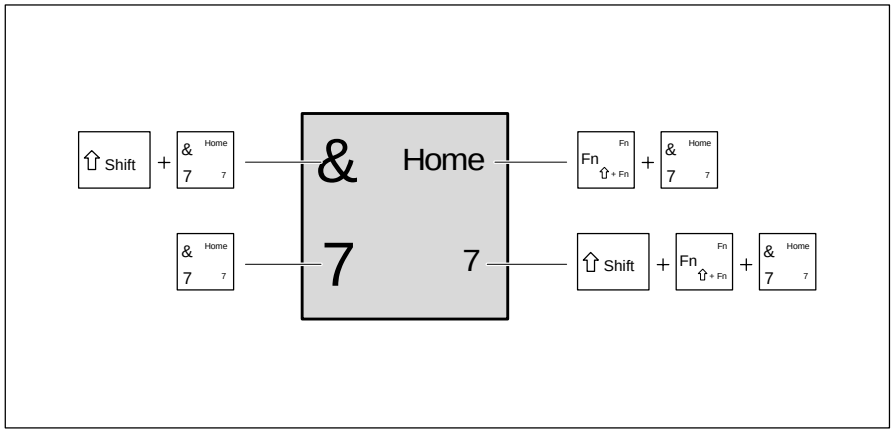
Small the size of the status display is reduced.

Keyboard



The following description of key functions applies to systems running the MS-DOS operating system. Additional functions supported by the keys are described in the relevant manuals supplied with your application programs.

The figure below shows how to access the different characters and editing functions on keys with overlaid functions.



Backspace

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

Tab

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

Enter

Enter key (also, Return or Carriage Return)
The Enter key tells the computer that the command line entered is complete. The command you have entered is executed when you press Enter.

Caps Lock

Caps Lock
The Caps Lock key shifts the alphabetic characters on the keyboard to 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

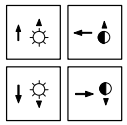
Shift
The Shift key causes uppercase characters to appear. In the case of overlay keys, the character on the upper left on the keycap appears when that key is pressed.

Alt Gr

Alt Gr
The **Alt Gr** key causes the characters in the lower middle of the keycap to appear (e.g., on the German keyboard { in the case of the 7 key).

Fn

Fn
The **Fn** key enables the special functions indicated in blue on overlay keys (see "Key combinations").



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

PadNum Lock

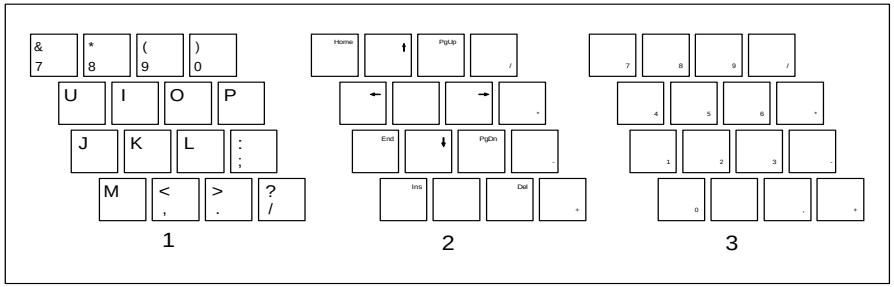
Pad Num
When the key combination **Fn** + **Pad Num** enables the integrated numeric keypad, the **Pad Num** key causes this set of keys to produce numbers. Pressing them produces the blue characters shown on the bottom right on the keycaps.

Break Pause Pw OFF

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

Integrated numeric keypad

The status display indicates the current status of the integrated numeric keypad.



1 = valid characters if the integrated numeric keypad is disabled.
2 = valid editing functions if the integrated numeric keypad is enabled.
3 = valid characters if the **Pad Num** key is pressed when the integrated numeric keypad is enabled.

The key combination **Fn**+**Pad Num** enables and disables the integrated numeric keypad. The keys in the integrated numeric keypad then perform the editing functions indicated in blue on the upper right of the keycaps.

You can also produce letters and standard characters with the integrated numeric keypad when it is enabled.

If you press and hold the **Fn** key, the keys will produce lowercase letters and numbers.
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 combinations

The description of key combinations that follows applies to systems running the MS-DOS operating system. 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.

The following key combinations can also be entered via the external keyboard. If the external keyboard does not feature an **Fn** key, you can simultaneously press the **Alt** and **Shift** keys instead.

If, for example, you wish to enter the key combination **Fn**+**F1**, press the **Shift**+**Alt**+**F1** key combination on the external keyboard.

Fn + Esc (Setup)

Start the Setup program
If the message `Press Fn + Esc for Setup` appears when you start your subnotebook, run the *Setup* program by pressing the key combination indicated.

Fn + F1 (Speaker)

Enable/disable the speaker
This key combination switches the subnotebook's built-in speaker on/off.

Fn + F2 (Speed)

Enable/disable Low Power mode
This key combination enables and disables Low Power mode (slower CPU speed, half-bright display backlight).

Fn + F3 (Standby)

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

Fn + F4 (Suspend)

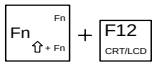
Enable Suspend mode
This key combination enables Suspend mode. When you switch the subnotebook on again, it returns to the same place you were in the program that was running when you switched to Suspend mode.

Fn + F6 (Password)

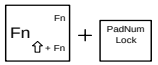
Load the setup password
This key combination loads the setup password from the *system utility* disk (see "Starting the setup program")

Fn + F11 (Reverse)

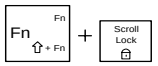
Switch between normal and reverse video
If your subnotebook has a monochrome display, this key combination switches it between normal and reverse video.



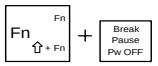
Select internal/external display
If an external display is connected to your subnotebook, you can switch to it with this key combination. You can opt to use:
– just the subnotebook's internal display
– just the external display
– both the internal and the external display.



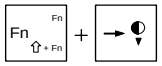
Enable/disable the integrated numeric keypad
This key combination enables and disables the integrated numeric keypad. The editing functions indicated in blue on the keycaps are enabled.



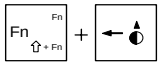
Keyboard lock
If you set *Keyboard Lock* to *Enable* in the *Setup* program, this key combination locks the keyboard, the trackball and, if connected, an external PS/2 mouse; it also switches off the display. This does not affect any programs that are running.
To cancel the keyboard lock, enter the system password.



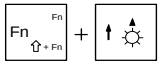
Switching off the subnotebook
This key combination switches off the subnotebook.



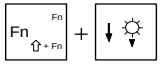
Reduce the display contrast
This key combination reduces the display contrast.



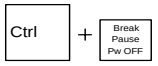
Increase the display contrast
This key combination increases the display contrast.



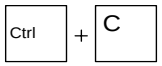
Increase the display brightness
This key combination increases the brightness of the display.



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

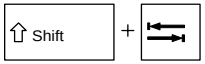


Halt the current operation
This key combination can be used to halt an operation instantly (its effect depends on the program that is running).



Halt the current operation
This key combination can be used to halt an operation instantly without clearing the keyboard buffer.

Warm boot
This key combination triggers a reset and warm-boots the subnotebook.



Backtab (Shift+Tab)
This key combination moves the cursor back to the previous tabular stop.

Trackball and trackball buttons

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

Do not touch the trackball if your fingers are dirty.

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

You use the trackball to position the mouse pointer on the screen. For example, when you roll the trackball to the left, the pointer moves to the left.

The left and right trackball buttons function in the same way as the left and right buttons on a mouse.

If you attach and install an external mouse, the trackball and its buttons are disabled.

Using the power-management features

The subnotebook supports power-management functions in accordance with the APM standard (**A**dvanced **P**ower **M**anagement). If you use the subnotebook's power-management features, it will use less power. This will increase battery life, allowing you to work longer before having to recharge the battery.

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

i If you enable one of the power-management options in the *Power Management* menu in the *Setup* program, that option will still be enabled the next time you switch on your subnotebook.

Enabling the Long Life mode

Long Life mode uses all the available power-management features. The subnotebook uses little power and operates slightly slower than usual.

- Start the *Setup* program.
- Choose *Power Management*.
- Press the F4 function key.
- Press the F10 function twice.

Enabling Doze mode

In Doze mode the subnotebook reduces its processor speed if it is inactive for a longer period. The processor speed is increased as soon as the system is used again.

Doze mode is available if *Power Management* has been set to *Enable* in *Power Management Setup*.

- In *Power Management Setup*, set *Hardware Doze Mode* to *Enable*.

Enabling Standby mode

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

- Press the key combination Fn + F3.

To revert to normal operation from Standby mode:

- Press any key.

Automatic activation

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

This feature is available if *Power Management* has been set to *Enable* in *Power Management Setup*.

- In *Power Management Setup*, set the time which has to elapse before the subnotebook switches to Standby mode in *System Auto Standby*.

Enabling Suspend mode

In Suspend mode all the active data (active programs and files) is saved to the hard disk and the subnotebook is switched off. The active data can only be saved if sufficient space is available on the hard disk (at least the main memory size + 1 Mbytes).

If you are running a operating system without FAT file system (e.g. OS/2 or Windows NT), you have to set up an additional FAT partition on the hard disk (see the manuals supplied with the operating system in question).
Create a backup copy of your data and then set up the FAT partition on your hard disk with the C:\SNI\UTIL*STDUTL.EXE* program. The partition must be at least the size of the main memory + 1 Mbyte.

! If your subnotebook 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 the configuration with the *Setup* program
– do not change or remove the floppy disk, if inserted
– do not add or remove RAM
– do not add or remove any PCMCIA cards.

▶ Press the key combination Fn+F4.

To revive the subnotebook from Suspend mode:

▶ Switch the subnotebook on.
The subnotebook reverts to the status it had prior to switching into Suspend mode.

Automatic activation

If the subnotebook is not used for the predefined period of time, it switches from Standby mode to Suspend mode.

This feature is available if *Power Management* has been set to *Enable* in *Power Management Setup* and you have specified a time in *System Auto Standby*.

▶ In *Power Management Setup*, set the time which has to elapse before the subnotebook switches to Suspend mode in *System Auto Suspend*.

Switching off the display

You set this function up in the *Setup* program.
If the subnotebook receives no input for a predefined period of time, the displays switches off automatically. It switches on again automatically as soon as the subnotebook receives input.

▶ In *Power Management Setup*, set the time which has to elapse before the display switches off in *LCD Powerdown*.

Enabling the 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.

▶ In *Power Management Setup*, set the time which has to elapse before the hard-disk motor switches off in *Hard Disk Powerdown*.

Disabling the serial port

The serial port can be disabled and enabled in the Setup program.

▶ Set the Serial Port field under Power Management Setup to Disable.

Reducing the CPU speed

The CPU speed can be selected in the Setup program.

▶ Set the CPU Speed field under Power Management Setup to Low.

If you wish to increase the CPU speed again:

▶ Press the Fn + F2 key combination or set the CPU Speed field under Power Management Setup to High.

Enabling Low Power mode

In Low Power mode the subnotebook reduces its processor speed and halves the brightness of its display backlight.

▶ Press the key combination Fn+F2.

To cancel Low Power mode:

▶ Press the key combination Fn+F2.

Disabling the system speaker

▶ Press the key combination Fn+F1.

To re-enable the system speaker:

▶ Press the key combination Fn+F1.

You can also disable the speaker in the *Setup* program.

▶ In *Power Management Setup*, set *System Speaker* to *Disable*.

Changing display settings

You configure the basic display settings with *Video Setup* in the *Setup* program (see the section "System configuration").

If the application program requires a VESA compatible video driver, activate the driver with the program C:\SNI\VGA\VESA*VESA530.COM*.

You can change the settings listed below using key combinations.

Switching between normal and reverse video

If your subnotebook has a monochrome display, you can switch between normal and reverse video. You can select a normal display (dark characters on a light background) or a reverse display (light characters on a dark background).

▶ Press the key combination Fn + F11.

The setting you select with *Reverse Video* in *Video Setup* is always active when you switch on your subnotebook.

Switching between internal and external displays

If an external display is connected to your subnotebook, you can switch between different display options:
– just the subnotebook's internal display
– just the external display
– both the internal and the external display.

The setting you select with *Display Device* in *Video Setup* is always active when you switch on your subnotebook.

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

Setting the display contrast

If you find the display blurry or too crisp, you can adjust the contrast.

Increasing the contrast

▶ Press the key combination Fn + ← until you find the right display contrast.

Reducing the display contrast

▶ Press the key combination Fn + → until you find the right display contrast.

Setting the display brightness

If you find the display too bright or too dark, you can adjust the brightness.

Increasing the brightness

▶ Press the key combination Fn + ↑ until you find the right brightness level.

Reducing the brightness

Reducing the brightness also reduces the subnotebook's power consumption.

▶ Press the key combination Fn + ↓ until you find the right brightness level.

Using the security features

Your subnotebook has security features which prevent unauthorized access to your data.

You can set up the security features with *Security Setup* in the *Setup* program. The security features and the necessary settings are summarized below.

For details of how to set them up, see the section "System configuration".

You must enter a password if the LED indicator of the subnotebook is flashing at two-second intervals.

Preventing the subnotebook from booting from floppy disk

The operating system cannot be started from drive A: with a boot disk.
The system is booted exclusively from the hard disk drive.

- Set *Boot Device* to *Hard Disk* in *System Setup*.

System Lock

When this feature is enabled, the user password has to be entered before the subnotebook will start from a cold boot, a warm boot, or Suspend mode. The user password is not echoed on screen when it is entered.

You can enable this security feature if you have specified a user password in *Security Setup*.

- In *Security Setup*, set *System Lock* to *Enable*.

Setup Lock

The Setup program will only start if you enter the setup password. The setup password is not echoed on screen when it is entered.

You can enable this security feature if you have specified a user password or a setup password in *Security Setup*.

- Enter a password in the Setup Password field in Security Setup.

Keyboard Lock

You can lock the input devices and switch off the display by pressing the key combination Fn + Scroll . You can set up the subnotebook to automatically apply this lock if it receives no input for a predefined period of time.

The lock is released by entering the user password. The user password is not echoed on screen when it is entered.

You can enable this security feature if you have specified a user password in *Security Setup*.

- In *Security Setup*, set *Keyboard Lock* to *Enable*, or specify the time after which the lock is to be applied.

Preventing write operations to floppy disk

Write operations to floppy disks in the subnotebook are impossible. Floppy disks cannot be overwritten or deleted.

- In *Security Setup*, set *Diskette Write* to *Disable*.

Locking the serial port

Data cannot be transferred via the serial port.

- In *Power Management Setup*, set *Serial Port* to *Disable*.

The battery

The subnotebook is fitted with a nickel hydride battery that provides it with power during mobile use. You can increase battery life by enabling the subnotebook's power-management features.

The LED indicator of the subnotebook flashes if the battery charge level drops below 10% of its capacity (see "Displays and input devices").

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

i Deep-discharge and recharge the battery at regular intervals (see "Deep-discharging the battery").

Charging the battery

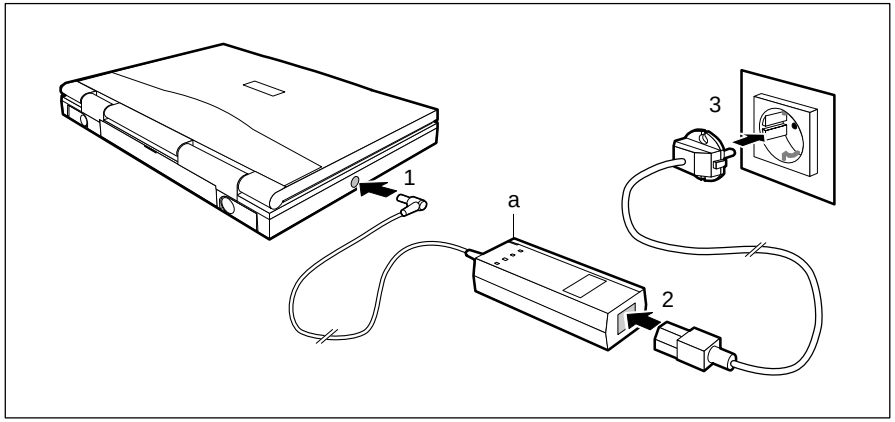
Only charge the battery when the ambient temperatures is between 5 ˚C and 35 ˚C.

When the subnotebook is not in use, the battery will charge in roughly two hours. If the subnotebook is switched on, it will trickle-charge in roughly five hours. The battery heats up while it is charging.

You can charge the battery by connecting the subnotebook to the power supply unit or the auto adapter.

Connecting the power supply unit

- Switch off the subnotebook.
- Place the subnotebook on a level, stable surface.



- Plug the DC output connector on the power supply unit into the DC input connector on the subnotebook (1).

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

The subnotebook and the power supply should be at least 200 mm apart. Keep the area within 100 mm of the subnotebook and the power supply unit clear.

The power supply unit's AC cord may only be connected to a grounded wall outlet if the subnotebook is connected to the power supply unit.

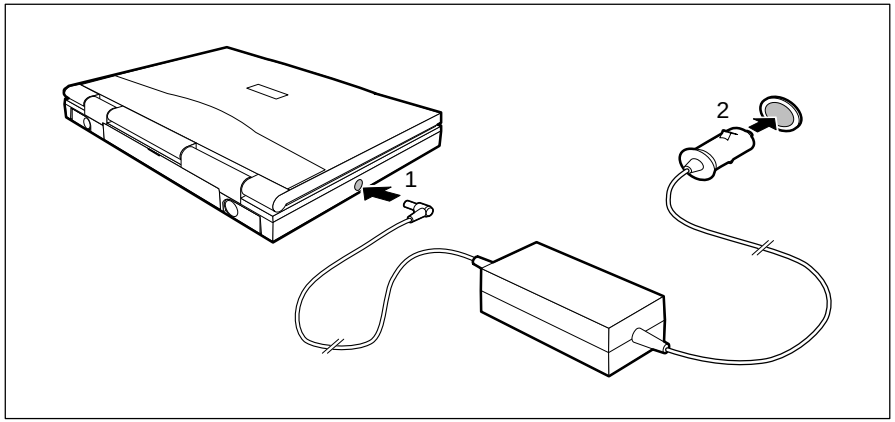
- Connect the AC power cord to the power supply unit (2).
- Connect the AC power cord to a grounded wall outlet (3).
  The LED on the power supply unit goes on (a). The LED indicator of the subnotebook lights up after a few seconds. The battery begins to charge.

! Switch the subnotebook off before you disconnect it from its power supply unit.

Connecting the auto adapter

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

- Switch the subnotebook off.
- Place the subnotebook on a level, stable surface.



- Connect the auto adapter's cord to the subnotebook's DC input (1).
- Start the car's engine.

You should only use the auto adapter while the car's engine is running.

You must not start the car's engine while the auto adapter is connected to the car's electrical system.

Ensure that the area within 100 mm of the subnotebook is kept clear.

- Insert the auto adapter's input connector to the car's cigarette lighter (2).
  The LED indicator of the subnotebook lights up after a few seconds. The battery begins to charge.

Switch off the subnotebook before you disconnect it from the auto adapter.

Inserting and removing batteries

Only use batteries designed specifically for this subnotebook.
Never use force when inserting or removing a battery.

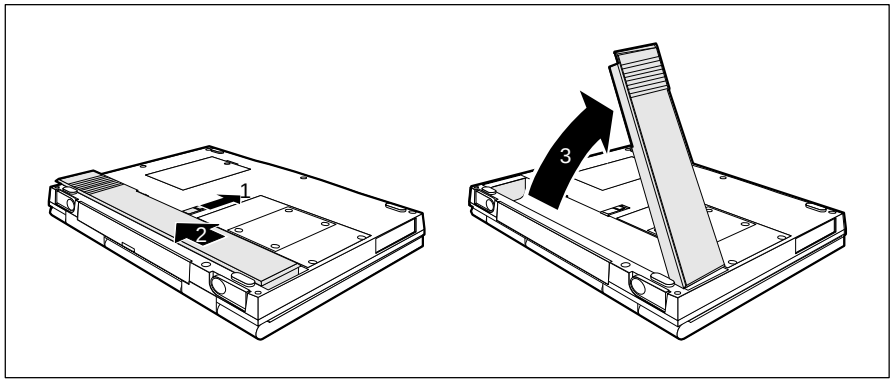
Make sure that foreign objects do not fall into the battery compartment.

Removing the battery

- Switch off the subnotebook.

Pull the power plug of the power supply unit out of grounded wall outlet.

- Close the cover of the subnotebook so that it locks into place.
- Disconnect any cables attached to the subnotebook.
- Place the subnotebook bottom-up on a flat surface.



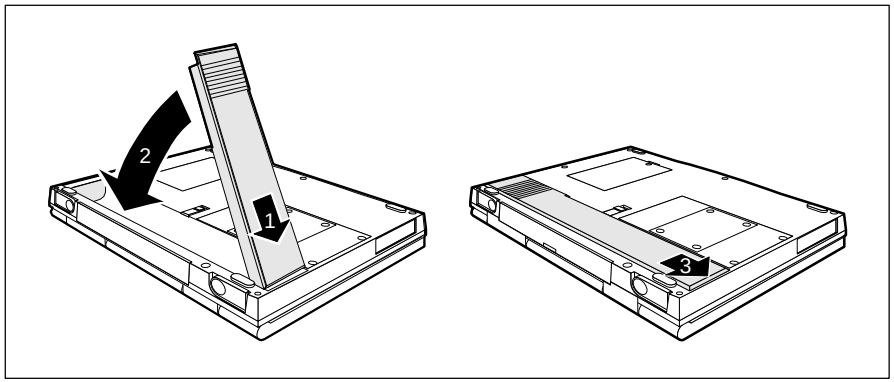
- Push the battery compartment's release tab in the direction of the arrow (1).
- Pull the battery in the direction of the arrow (2).
- Take the battery out of subnotebook (3).

Installing the battery

- Switch off the subnotebook.

Pull the power plug of the power supply unit out of grounded wall outlet.

- Close the cover of the subnotebook so that it locks into place.
- Disconnect any cables attached to the subnotebook.
- Place the subnotebook bottom-up on a flat surface.



- Insert the battery in the battery compartment in the direction of the arrow (1). The contacts of the battery must be facing the front of the subnotebook.
- Press the battery downwards until it is positioned in the battery compartment (2).
- Push the battery in the direction of the arrow (3) until it clicks into place.
- Turn the subnotebook over and place it on a flat surface with the underside facing downwards.
- Reconnect the cables you previously disconnected.

Deep-discharging/recharging the battery

The process of fully discharging and recharging the battery is necessary to ensure that the battery charges fully. You should carry this out once a month and

- after charging the battery for the first time (e.g., when you use the subnotebook for the first time)
- if you have not used the subnotebook for a longer period of time (e.g., a week)
- if the battery charge does not last as long as usual
- if the battery gets hot while charging.

- Switch off the subnotebook.

Pull the power plug of the power supply unit out of grounded wall outlet

- Disconnect any cables attached to the subnotebook.
- Run the *Setup* program.
- Choose *Power Management Setup* and set *Deep Discharge* to *Enable*.
- Press twice the function key **F10** .
  The battery begins to discharge.
- Leave the subnotebook switched on.
  The subnotebook switches itself off when the battery is empty.
- Fully recharge the battery.

i If necessary, repeat the process.

If the battery becomes hot in spite of discharging and recharging the battery or if the battery charge does not last as long as usual, the battery should be replaced. When disposing of the old battery, pay attention to the safety instructions in the section "Important notes".

Cleaning the subnotebook

Switch off the subnotebook and disconnect the power supply unit cable.

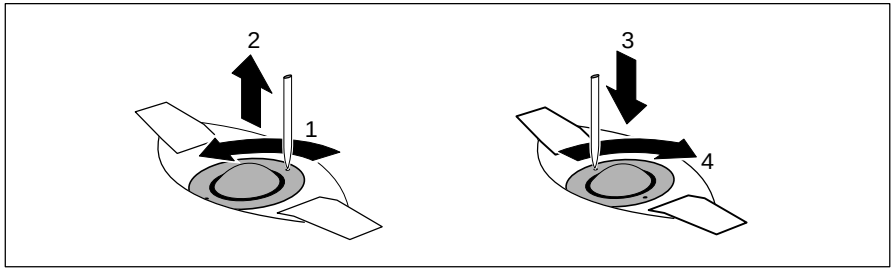
Only authorized service personnel may clean the inside of the casing.

Do not use scouring powder or cleaning agents that attack plastics.

Make sure that no liquids penetrate the subnotebook's casing.

Use a clean, dry cloth to clean the casing. If it is especially dirty, use a cloth lightly moistened in water and mild washing-up liquid.
To clean the keyboard, you can use disinfectant wipes.
To clean the display, you can use a soft, lightly moistened cloth.

Cleaning the trackball mechanism



- Insert a pointed object (e.g., a ballpoint pen) into the recess in the retaining ring and push the ring counterclockwise a quarter-turn (1).
- Remove the retaining ring and the trackball from the subnotebook (2).
- Clean the trackball mechanism and the trackball with a lint-free cloth.
- Put back the trackball and the retaining ring (3).
- Insert the pointed object or ballpoint pen in the recess in the retaining ring and push the ring clockwise a quarter-turn (4). You should feel it click into place.

Creating system utility disk

To create the system utility disk you need one unformatted 3 1/2-inch floppy disk. You can store the setup password in encrypted form on the system utility disk.

- Insert the disk in the external disk drive A:.
- Enter the following command at the MS-DOS level:
  `FORMAT A: /u /v:sys_utl` ↵
- Wait until the format procedure is complete and remove the disk from the external disk drive.
- Write "System Utilities" on the floppy disk.

Rebuilding the hard disk

If you have created a bootable system disk (floppy disk) and have backed up the hard disk, you can reformat and rebuild the hard disk, and restore the versions of directories and files stored on the hard disk at the time you performed the backup.

- Use the system disk to boot the PC from the floppy disk drive.
- Use the MS-DOS command *FDISK* to partition the hard disk. (This requires sound knowledge of the system.)
- Use the MS-DOS command *FORMAT* with the */s* option (e.g., **`FORMAT C:/s`**) to format the hard disk.
  The */s* option causes the system files that start the operating system to be transferred to the hard disk.
- Copy the files of the backup program *MSBACKUP* from the system disk to the hard disk (e.g., **`COPY␣A:\MSB*.*␣C:\`** ↵).
- Switch to the hard disk (e.g., **`C:`** ↵).
- Start the backup program *MSBACKUP* (**`MSBACKUP`** ↵).
- Restore your files from your backup disks to the hard disk with the backup program's *RESTORE* function.

If these steps fail to correct the problem with your hard disk, it will have to be replaced.

Code table for the standard character set

To display one of the following characters on screen, proceed as follows:

- Enable the numeric functions of the integrated numeric keypad (press the **Fn** + **Pad Num** key combination followed by the **Pad Num** key).
- Press and hold the **Alt** key.
- Enter the appropriate three-digit code for the character you require.

Characters 000 through 031 are displayed on screen as characters, but they are really control characters and are therefore not included in the table below.

032 =	064 = @	096 = `	128 = Ç	160 = á	192 = └	224 = α
033 = !	065 = A	097 = a	129 = ü	161 = í	193 = ┴	225 = β
034 = "	066 = B	098 = b	130 = é	162 = ó	194 = ┬	226 = Γ
035 = #	067 = C	099 = c	131 = â	163 = ú	195 = ├	227 = π
036 = $	068 = D	100 = d	132 = ä	164 = ñ	196 = ─	228 = Σ
037 = %	069 = E	101 = e	133 = à	165 = Ñ	197 = ┼	229 = σ
038 = &	070 = F	102 = f	134 = å	166 = ª	198 = ╞	230 = µ
039 = '	071 = G	103 = g	135 = ç	167 = º	199 = ╟	231 = τ
040 = (	072 = H	104 = h	136 = ê	168 = ¿	200 = ╚	232 = Φ
041 =)	073 = I	105 = i	137 = ë	169 = ⌐	201 = ╔	233 = Ξ
042 = *	074 = J	106 = j	138 = è	170 = ¬	202 = ╩	234 = Ω
043 = +	075 = K	107 = k	139 = ï	171 = ½	203 = ╦	235 = δ
044 = ,	076 = L	108 = l	140 = î	172 = ¼	204 = ╠	236 = ∞
045 = –	077 = M	109 = m	141 = ì	173 = ¡	205 = ═	237 = ∅
046 = .	078 = N	110 = n	142 = Ä	174 = «	206 = ╬	238 = ∈
047 = /	079 = O	111 = o	143 = Å	175 = »	207 = ╧	239 = ∩
048 = 0	080 = P	112 = p	144 = É	176 = ▒	208 = ╨	240 = ≡
049 = 1	081 = Q	113 = q	145 = æ	177 = ▒	209 = ╤	241 = ±
050 = 2	082 = R	114 = r	146 = Æ	178 = ▓	210 = ╥	242 = ≥
051 = 3	083 = S	115 = s	147 = ô	179 = │	211 = ╙	243 = ≤
052 = 4	084 = T	116 = t	148 = ö	180 = ┤	212 = ╘	244 = ⌠
053 = 5	085 = U	117 = u	149 = ò	181 = ╡	213 = ╒	245 = ⌡
054 = 6	086 = V	118 = v	150 = û	182 = ╢	214 = ╓	246 = ÷
055 = 7	087 = W	119 = w	151 = ù	183 = ╖	215 = ╫	247 = ≈
056 = 8	088 = X	120 = x	152 = ÿ	184 = ╕	216 = ╪	248 = °
057 = 9	089 = Y	121 = y	153 = Ö	185 = ╣	217 = ┘	249 = ∙
058 = :	090 = Z	122 = z	154 = Ü	186 = ║	218 = ┌	250 = –
059 = ;	091 = [	123 = {	155 = ¢	187 = ╗	219 = ▉	251 = √
060 = <	092 = \	124 = ¦	156 = £	188 = ╝	220 = ▄	252 = n
061 = =	093 =]	125 = }	157 = ¥	189 = ╜	221 = ▌	253 = ²
062 = >	094 = ^	126 = ~	158 = Pt	190 = ╛	222 = ▐	254 = ■
063 = ?	095 = _	127 =	159 = ƒ	191 = ┐	223 = ▀	255 =

System configuration

You use the *Setup* program to configure your subnotebook's hardware and system functions.

When it is supplied, the subnotebook is set to factory default settings which you can alter in the *Setup* program's various submenus. Any changes you make take effect as soon as you quit the *Setup* program or switch on the subnotebook.

The *Setup* program contains the following submenus:

– *System Setup*: for setting the system time and date and configuring the ports and the pointing device

– *Video Setup*: for setting up the display

– *Security Setup*: for setting up the security features

– *Power Management*: for setting up the power-management features

Starting the Setup program

- Reboot the subnotebook (switching on/off or warm boot).
- When the message `Press Fn + Esc for Setup` appears, press the key combination **Fn** + **Esc**.

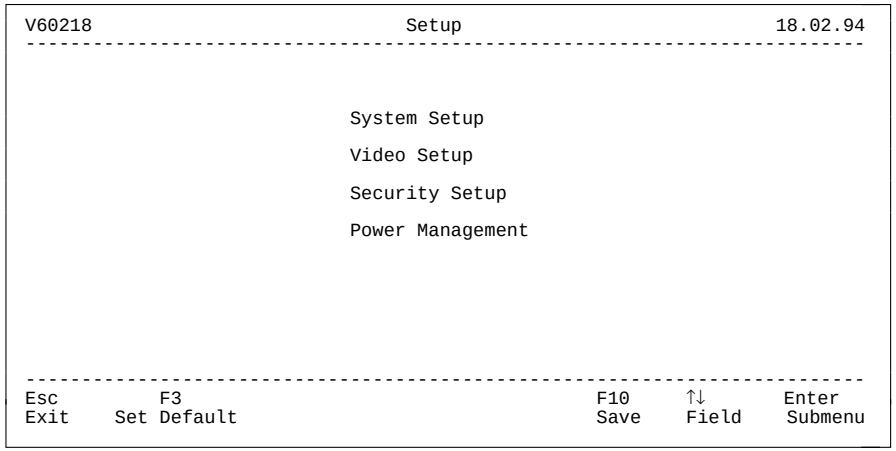
i

If a setup password has been defined:
- Enter the setup password and press the Enter key.

If you have forgotten the setup password:
- Insert the disk *System Utilities* in the subnotebook's floppy disk drive.
- Press the key combination **Fn** + **F6**.

If you have forgotten the Setup password and it is not stored on the System Utilities disk or the System Utilities disk is no longer available, please contact our customer service.

The *Setup* program's main menu is displayed.



The *Setup* program's main menu

Using the Setup program

- Use the cursor key ↑ or ↓ to select the submenu you wish to access to make changes.
- Press the Enter key. The submenu opens.
- Use the cursor key ↑ or ↓ to select the item you wish to change.
- Press the cursor key ← or → until the setting you require appears.
  The items *User Password* and *Setup Password* require that you enter normal text.
- Repeat the last two steps described for all the items you wish to change.
- Make a note of the changes you have made (here in this manual, for example).
- Press the function key **F10**.
  The changes you have made are saved temporarily. The main menu appears again.
- Change any other settings you wish in the other submenus.
- Press the function key **F10**.
  The changes you have made are stored and *Setup* ends. The subnotebook reboots.

i If you press the **Esc** key instead of the function key **F10** , your changes are not saved. If you press the function key **F3** , all the entries are reset to their defaults.

Changing the system settings - System Setup

In the *System Setup* submenu you can set up the following:
– Time (in the field marked *Time*)
– Date (in the field marked *Date*)
– Operating system boot device (in the field marked *Boot Device*)
– Power-on self-test (in the field marked *Quick Boot*)
– Cache memory (in the field marked *Cache Memory*)
– Pointing devices (in the field marked *Pointing Device*)
– Keyboard variant (in the field marked *Keyboard Simulation*)
– Parallel port (in the field marked *LPT Port*)

```
V60218                          System Setup                          18.02.94
-------------------------------------------------------------------------------

Time (H:M:S):              HH:MM:SS
Date (D/M/Y):              DD/MM/YY

External Floppy Drive:     3.5" 1.44MB    Cyl   Hd   Sec   Size
Hard Disk:                 AUTO           840   16   38    249
Boot Device:               Hard Disk
Quick Boot:                Enable

Base Memory:               640KB
Extended Memory:           3072 KB
Cache Memory:              Enable
Shadow BIOS:               Enable

Pointing Device:           Auto Detection
Keyboard Simulation:       102-key
Parallel Port:             Bidirectional


-------------------------------------------------------------------------------
  Esc           F3                                    F10      ↑↓       ←/→
Main Menu    Set Default                             Save     Field    Value
```

The *System Setup* submenu

Time
Date

indicate the time and date according to the subnotebook's built-in clock.
If you change these settings, enter the time in the format *HH:MM:SS* (hours:minutes:seconds) and enter the date in the format *DD.MM.YYYY* (day/month/year).

External Floppy Drive

shows the type of external disk drive connected. "None" is displayed if no external drive has been connected.

Hard Disk

shows the parameters of the built-in hard disk drive.

Boot Device

defines the device from which the operating system is booted.

Floppy Drive BIOS boots the operating system from an external disk drive. If no system disk has been inserted or no other external disk drive has been connected, the operating system is booted from the C: drive.

Hard Disk The BIOS always boots the operating system from the C: drive (default).

Quick Boot

is used to specify the type of power-on self-test carried out by the subnotebook.

Enable A short, limited-scope test (default).

Disable A longer, full test.

Base Memory

shows the amount of base memory available below 1 Mbyte.

Extended Memory

shows the amount of available memory above 1 Mbyte.

Cache Memory

is used to enable and disable the cache memory. If the access time is too fast for certain application programs, you should disable the cache memory.

Enable Part of main memory is mapped to high-speed cache memory. This increases the execution speed of programs and data access (default).

Disable The cache memory is not used.

Shadow BIOS

shows always *Enable*. The system BIOS is copied to faster RAM when the subnotebook is switched on.

Pointing Device

is used to specify the type of pointing device used.

Serial Type The pointing device on the serial port is enabled. The trackball and pointing device on the PS/2 port are disabled. The necessary driver must be loaded for the serial pointing device.

PS/2 Type The pointing device on the PS/2 connection is enabled. The trackball and the pointing device on the serial port are disabled.

Track Ball The trackball of the subnotebook is enabled. All pointing devices connected are disabled.

Auto Detection The trackball of the subnotebook or the pointing device on the PS/2 port is enabled. The trackball is disabled as soon as a pointing device is connected to the PS/2 port (default).

Keyboard Simulation

defines the keyboard variant simulated by the subnotebook keyboard.

101-key The keyboard variant with 101 keys is simulated.

102-key The keyboard variant with 102 keys is simulated (default).

Parallel Port

defines whether the parallel port is used as an input/output device or just as an output device. The EPP and ECP transmission modes can also be enabled. The data transmission rates can be increased to 2 and 2.4 MB/s with these modes. The peripheral equipment and associated drivers which support these modes are required.

Unidirectional Data can only be transmitted.

Bidirectional Data can be received and transmitted (default).

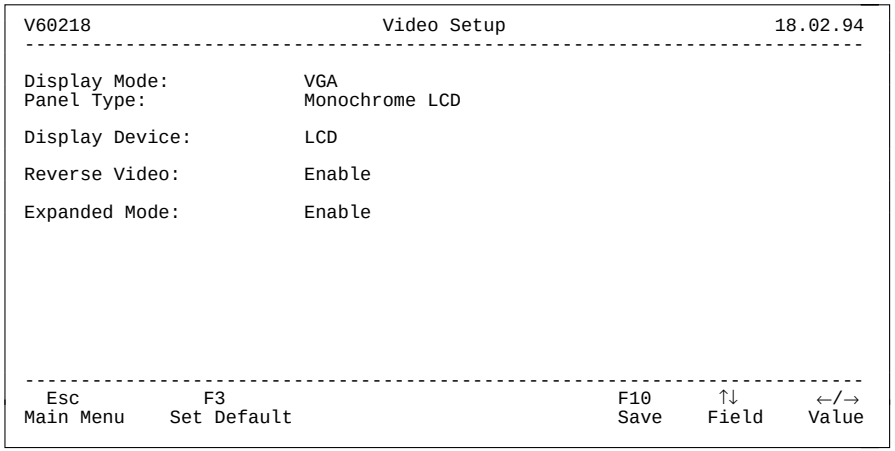
EPP 1.7 EPP1.7 standard transmission mode (enhanced parallel port).

EPP 1.9 EPP1.9 standard transmission mode (enhanced parallel port).

Extended (ECP) extended capability port transmission mode.

Display settings - Video Setup

You can select the following settings in the *Video Setup* submenu:
– the display device (in the field marked *Display Device*)
– the display attributes (in the field marked *Reverse Video*)
– the on-screen image size (in the field marked *Expanded Mode*)



The *Video Setup* submenu

Display Mode

always displays VGA

Panel Type

shows the subnotebook's built-in display type.

Monochrome LCD monochrome display

Color DSTN LCD DSTN (Double Super Twisted Nematic) color

Display Device

is used to specify the display device.

LCD Just the subnotebook's internal display is used (default).

CRT Just the external display is used.

LCD&CRT The subnotebook's internal display and the external display are used.

Reverse Video

is only displayed if your subnotebook is fitted with a monochrome display.
You specify whether, and how, reverse video is to be used.

Disable Light characters on a dark background.

Enable Produces dark characters on a light background (default).

Expanded Mode

controls the on-screen image size in video modes that drive less than 480 lines.

Disable 400 lines are centered vertically on the display.

Enable The video output is expanded vertically to fill the full available screen area (default).

Setting up the security features - Security Setup

You can set up the following security features in the *Security Setup* submenu:
– Prevention of write operations to floppy disk (in the field marked *Diskette Write*)
– Control of system start-up (in the field marked *System Lock*)
– Locking of input devices (in the field marked *Keyboard Lock*)
– Control of access to the *Setup* program (in the field marked *Setup Password*)

```
V60218                        Security Setup                        18.02.94
--------------------------------------------------------------------------------

Diskette Write:          Enable

User Password:           Not Set
System Lock:             Disable
Keyboard Lock:           Disable
Setup Password:          Not Set









--------------------------------------------------------------------------------
  Esc           F3                                    F10      ↑↓       ←/→
Main Menu    Set Default                             Save     Field    Value
```

The *Security Setup* submenu

Diskette Write

you specify whether the subnotebook's floppy disk drive can write to, or delete, floppy disks.

Enable Floppy disks can be read, written and deleted (default).

Disable Floppy disks can only be read.

User Password

You can specify a user password in this field. `********` is displayed in the field if a user password has been specified. Depending on the *System Lock* and *Keyboard Lock* settings, the user password allows the system to boot, or unlocks the input devices.

If you do not specify a different password in *Setup Password*, the user password will also permit access to the *Setup* program.

Default: Not Set (User password disabled)

To specify or alter the user password:

- Set the User Password field to Enable (if a user password has not yet been specified) or highlight the User Password field (if a user password has already been specified).
  The following message is displayed:
  `Type your password, then press the Enter key`
- Enter the user password and press the Enter key.
  The user password can consist of a maximum of eight letters or numbers.
  The following message is displayed:
  `Re-enter your password for verification`
- Enter the user password a second time to confirm it and press the Enter key.
  The following message is displayed:
  `New password is now installed, press any key to continue`
- Press any key to continue.

Pressing function key **F3** deletes all passwords.

System Lock

you select whether the system start-up is to be restricted by means of the user password.

Enable You can only select this option if you have specified a user password.
Whenever the subnotebook is switched on or warm-booted, the keyboard lock is released, or the subnotebook comes out of suspend mode you have to enter the user password before the system will boot.

Disable The system will boot without the entry of a password (default).

Keyboard Lock

to specify whether the input devices should be locked. If the input devices are locked, you can unlock them by entering the user password.

Enable You can only select this option if you have specified a user password.
Using the key combination **Fn**+**Scroll** you can lock the input devices and switch off the display.

1 Minute to *5 Minutes*
You can only select this option if you have specified a user password.
If the subnotebook receives no input within the period of time specified, the input devices are locked and the display is switched off.
You can also lock the input devices and switch off the screen by pressing the key combination Fn + Scroll .

Disable The input devices cannot be locked (default).

Setup Password

to enable and disable password-protection for the *Setup* program. The setup password can consist of a maximum of eight letters.

Not Set You can only select this option if *System Lock* and *Keyboard Lock* are set to *Disable*.
You will then be able to start *Setup* without having to enter a password (default).

User Password The user password must be entered in order to start the Setup program. The User Password prompt is displayed automatically if the System Lock or Keyboard Lock fields are set to Enable.

******** A setup password has been specified.

To specify or alter the setup password (user password must be specified):

- Set the Setup Password field to User Password (if a setup password has not yet been specified) or highlight the Setup Password field (if a setup password has already been specified).
  The following message is displayed:
  `Type your password, then press the Enter key`

i If *User Password* is specified and if you leave the field with the cursor control keys ↑ or ↓ , the user password and the setup password are identical.

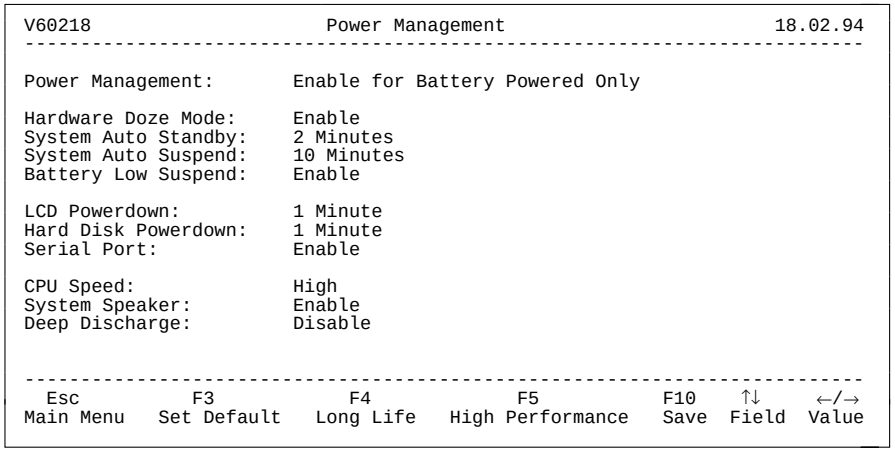
- Enter the new setup password and press the Enter key.
  The following message is displayed:
  `Re-enter your password for verification`

- Enter the new setup password a second time to confirm it and press the Enter key.
  The following message is displayed:
  `New password is now installed, press any key to continue`
- Press any key to continue.
- Select *Setup Password*.
- Insert the disk *System Utilities* in the floppy disk drive.
- Press the Enter key.
  The setup password is saved in encrypted form on the system utility disk.
- Note the passwords down and keep your note and the disk *System Utilities* in a safe place.

Pressing function key F3 deletes all passwords.

Setting up the power management features - Power Management Setup

You can do the following in the *Power Management* submenu:
– Enable/disable the power management features (in the field marked *Power Management*)
– Enable/disable Doze mode (in the field marked *Doze Mode*)
– Enable/disable Standby mode (in the field marked *System Auto Standby*)
– Enable/disable Suspend mode (in the field marked *System Auto Suspend*)
– Enable/disable Suspend mode if battery is empty (in the field marked *Battery Low Suspend*)
– Enable/disable automatic display power-down (in the field marked *LCD Power Down*)
– Enable/disable the hard disk's power saving features (in the field marked *Hard Disk Power Down*)
– Set the CPU speed (in the field marked *CPU Speed*)
– Enable/disable the system speaker (in the field marked *System Speaker*)
– Deep-discharge the battery (in the field marked *Deep Discharge*)



The *Power Management* submenu

Long Life mode

You can select the Long Life mode by pressing function key F4 . The Long Life mode uses all the available power management features to conserve power. The subnotebook uses little power and operates slightly slower than usual.

To re-enable the default power management features, press function key F3 .

High Performance mode

You can select High Performance mode by pressing function key F5 . In this mode the subnotebook operates at maximum speed and uses the most power.

To re-enable the default power management features, press function key F3 .

Power Management

to specify when the power management features are to be used.

Always Enable The power management features are permanently enabled.

Enable for Battery Powered only
The power management features are only used if the subnotebook is running on its built-in battery (default).

Disable The power management features of the program *Setup* are not used.

Hardware Doze Mode

Enable If the system registers no activity for a specific period of time, the CPU speed is reduced to save power. Any resumption of activity causes the CPU speed to return to normal (default).

Disable The Doze mode is disabled.

System Auto Standby

you specify how long the subnotebook waits during a period without system activity before switching to Standby mode.

10 Minutes to *1 Minute*
If the subnotebook registers no system activity for the period specified in this field, it switches to Standby mode. Any resumption of activity re-activates the subnotebook.
(Default: *2 Minutes*)

Disable The feature is disabled.

System Auto Suspend

you specify how long the subnotebook waits during a period without system activity before switching from Standby mode to Suspend mode. This feature will only work if a time is defined in *System Auto Standby*.

15 Minutes to *1 Minute*
: If the subnotebook registers no system activity for the period specified in this field, it switches from Standby mode to Suspend mode. (Default: *10 Minutes*)

Disable
: The feature is disabled.

Battery Low Suspend

defines whether or not the subnotebook switches to Suspend mode when the battery charge level drops below 10%.

Disable
: The feature is disabled.

Enable
: If the system registers no activity for 30 seconds after the battery charge level drops below 10%, the subnotebook switches to Suspend mode (default).

LCD Powerdown

you specify the time after which the subnotebook powers down its display if it is receiving no input. Any input it receives causes it to switch the display on again.

5 Minutes to *1 Minute*
: If the subnotebook registers no input for the period defined in this field, it switches off its display. (Default: *1 Minute*)

Disable
: The feature is disabled.

Hard Disk Powerdown

you specify the time after which the subnotebook powers down its hard disk if it is not being accessed. The next attempt to access the hard disk powers it up again.

10 Minutes to *1 Minute*
: If the hard disk is not accessed for the period defined, it is powered down (Default: *1 Minute*).

Disable
: The feature is disabled.

Serial Port

you enable or disable serial port.

Enable
: The serial port is enabled (default).

Disable
: The serial port is disabled.

CPU Speed

you select the CPU speed.

High
: The CPU operates at maximum speed (default).

Low
: The CPU operates at reduced speed.

System Speaker

you enable or disable the subnotebook's system speaker.

Enable
: The system speaker is enabled (default).

Disable
: The system speaker is disabled.

Deep Discharge

you can specify that the built-in battery is to be fully discharged (see chapter "Operation - The battery - Deep-discharging/recharging the battery".

Enable
: The battery will be discharged, provided the subnotebook is left switched on.

Disable
: The feature is disabled (default).

System expansion

Only use system expansions that meet the requirements and guidelines concerning safety, RFI, EMC and telecommunications terminal equipment (see the section "Important notes").

Adding/removing memory

The subnotebook is fitted with a standard 4 Mbytes of main memory (RAM). This can be increased to either 8 Mbytes, 12 Mbytes or 20 Mbytes with a memory upgrade module.

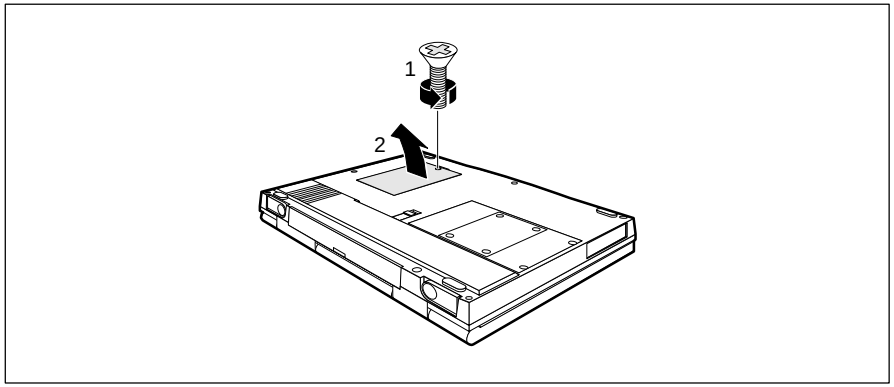
Only use memory modules designed specifically for this subnotebook.

Never use force when installing or removing a memory module.

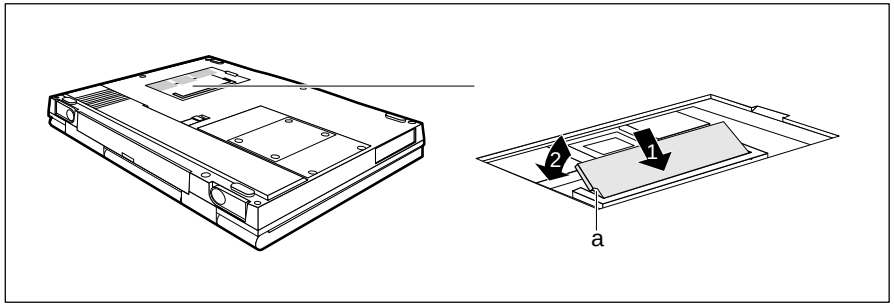
Make sure that foreign objects do not fall into the memory module slot.

Installation

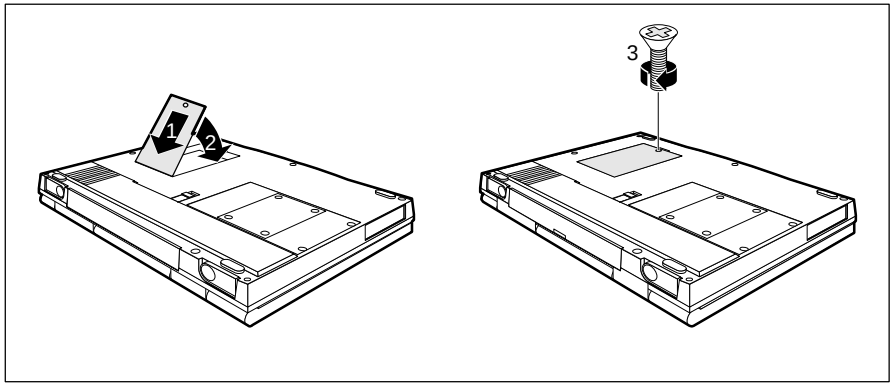
- Switch off the subnotebook.
- Close the cover of the subnotebook so that it locks into place.
- Disconnect any cables attached to the subnotebook.
- Place the subnotebook bottom-up on a flat surface.



- Remove the screw (1).
- Open the cover of the subnotebook (2).



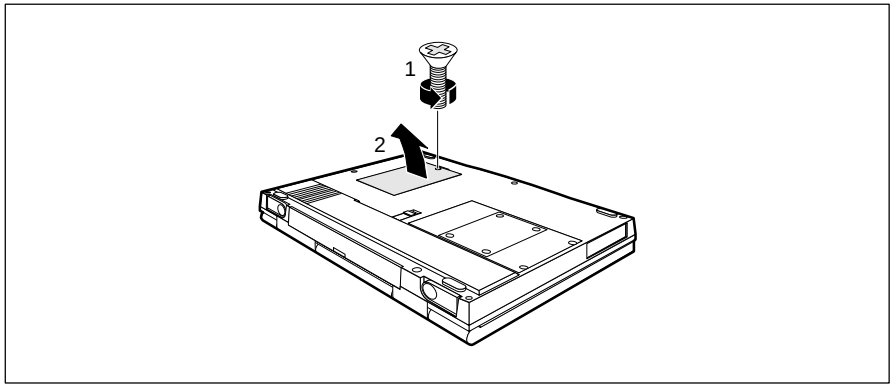
- Insert the memory module, contacts first, into the slot (1). The opening (a) on the memory module must be facing towards the rear panel of the subnotebook.
- Gently push the memory module downwards until it locks into place (2).



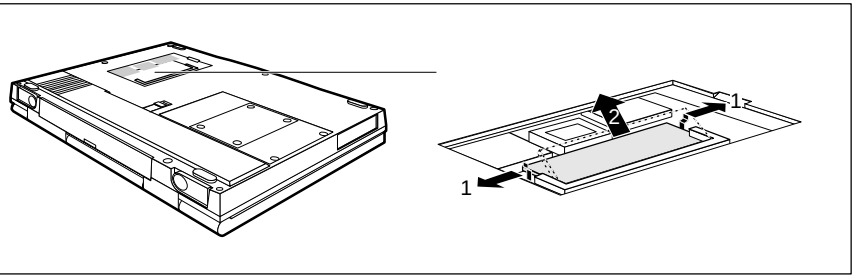
- Replace the cover (1) and secure it to the underside of the subnotebook (2).
- Secure the cover with the screw (3).
- Turn the subnotebook over and place it on a flat surface with the underside facing downwards.
- Reconnect the cables you previously disconnected.

Removal

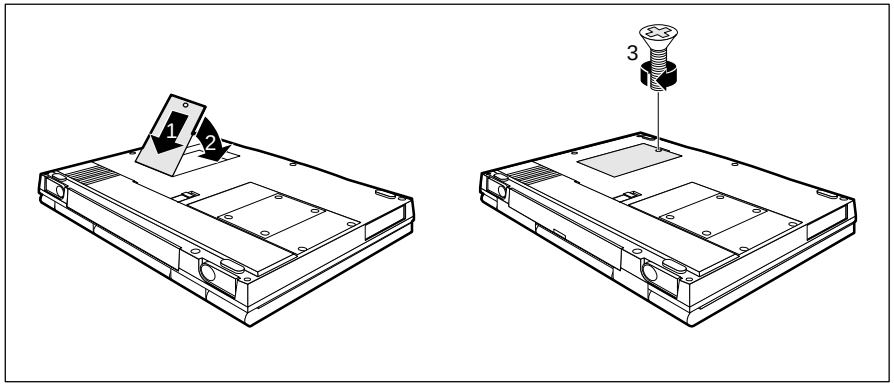
- Switch off the subnotebook.
- Close the cover of the subnotebook so that it locks into place.
- Disconnect any cables attached to the subnotebook.
- Place the subnotebook bottom-up on a flat surface.



- Remove the screw (1).
- Remove the cover (2).



- Gently open both retaining clips outwards (1).
  Push the memory card upwards.
- Pull the memory module out of the subnotebook (2).



- Replace the cover (1) secure it to the underside of the subnotebook (2).
- Secure the cover with the screw (3).
- Turn the subnotebook over and place it on a flat surface with the underside facing downwards.
- Reconnect the cables you previously disconnected.

Installing and removing PCMCIA cards

You can install either two 3.3mm (type I) or 5mm (type II) PCMCIA cards, or one 10.5mm (type III) PCMCIA card in the subnotebook.

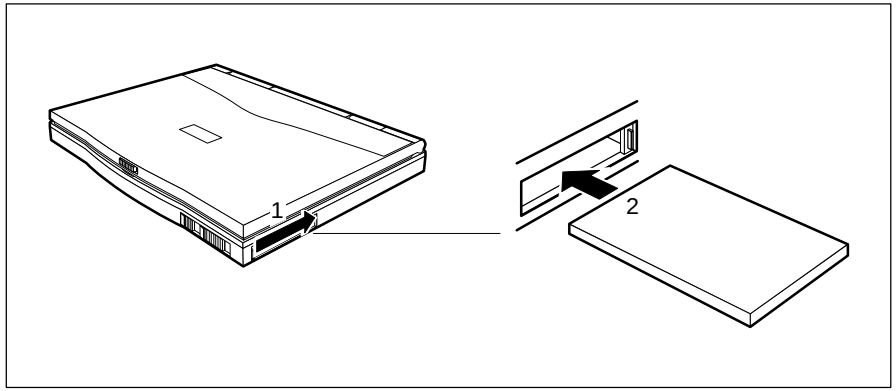
The PCMCIA card must not consume more than 1 A (at +5V) or 60mA (at +12V).

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

Never use force when inserting or removing a PCMCIA card.

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

Installation



- Slide the cover in the direction of the arrow as far as it will go (1).
- Insert the PCMCIA card, contacts first, into the slot guides (2). The labeled side of the upgrade must be facing upwards.
- Gently push the PCMCIA card into the slot until you feel it click into place. The corresponding release tab on the front of the subnotebook is released to the right.

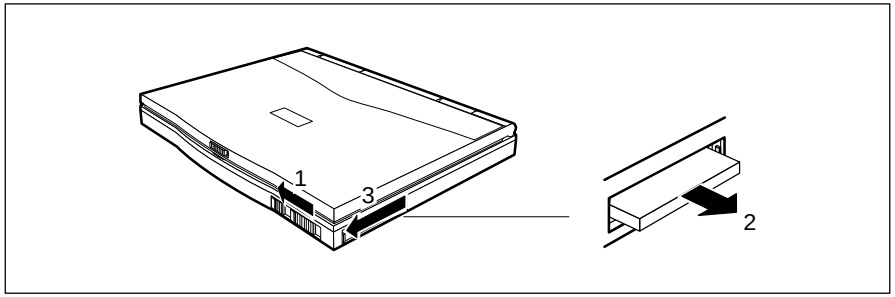
The upper slot for PCMCIA cards has the address "slot 0", the lower slot the address "slot 1".

Drivers for the PCMCIA cards are stored on the PCMCIA utility disk supplied. Refer to the information files on the PCMCIA utility disk or the documentation on the PCMCIA card for instructions on how to install the necessary drivers.

An external disk drive must be connected in order to install the drivers from floppy disk (see "Connecting external devices").

If you are using PCMCIA cards that do not connect to external devices, close the PCMCIA slot cover.

Removal



- Slide the appropriate release tab to the left (1).
  The PCMCIA cards in the upper and lower slots are released with the left and right release tabs respectively.
- Pull the PCMCIA card out of the subnotebook (2).
- Push the cover in the direction of the arrow (3) to close it.

Connecting external devices

Disconnect all the devices from their respective power sources when you connect or disconnect a device.

Consult the documentation supplied with an external device before attempting to connect it.

Do not connect or disconnect cables during a storm.

When disconnecting cables, always hold them by the connector; do not pull on the cable itself.

When connecting or disconnecting cables, carry out the following steps in the sequence indicated:

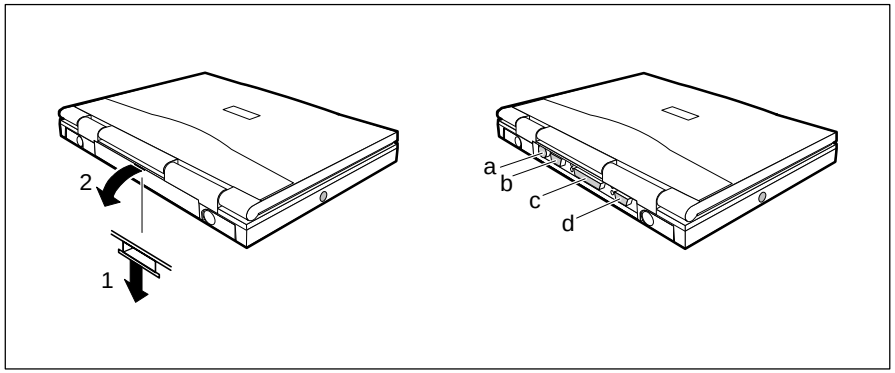
Connecting cables

– Switch off all the relevant devices.
– Disconnect the AC power cords of all the relevant devices from the grounded wall outlets.
– Connect all the cables to the subnotebook and the external devices. Pay attention to the safety information provided in the section "Important notes".
– Connect all the data cables to the relevant data and telecommunications network connectors.
– Reconnect the AC power cords to the grounded wall outlets.

Disconnecting cables

– Switch off all the relevant devices.
– Disconnect the AC power cords of all the relevant devices from the grounded wall outlets.
– Disconnect all the data cables from the various data and telecommunications network connectors.
– Disconnect all the cables connecting the subnotebook and the external devices.

Port covers and connectors



a = Connector for external input device (e.g. keyboard, PS/2 mouse)
b = Serial port connector
c = Parallel port connector
d = Display connector

If you wish to connect an external display, a serial or parallel device, a mouse or keyboard, you must first open the port cover:

- Press the opening at the base of the port cover (1).
- Fold down the port cover (2).

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

Connecting a mouse

The trackball and the trackball buttons are disabled when you connect a mouse.

- Connect the mouse to the appropriate port (PS/2 or serial).
- Switch on the subnotebook.
- Set the Pointing Device field in System Setup to PS/2 Type, Auto Detection (PS/2 mouse) or Serial Type (serial mouse), depending on the type of mouse.
- Install the necessary device driver (see the manual supplied with the mouse).

Connecting an external keyboard

Connecting an external keyboard disables the keyboard built into the subnotebook.

- Connect the external keyboard to the external keyboard connector. 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.
- Switch on the subnotebook.

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

If the external keyboard does not feature an **Fn** key, you can simultaneously press the **Alt** and **Shift** keys instead.
If, for example, you wish to enter the **Fn**+**F1** key combination, press the **Shift**+**Alt**+**F1** key combination on the external keyboard.

Connecting serial or parallel devices

The serial port is set to COM1, the parallel port to LPT1 and bidirectional mode. You can select the transmission mode of the parallel port in System Setup (see chapter "System configuration - system settings).

- Connect the device's data cable to the appropriate port connector.
- Install the necessary drivers (see documentation on device connected).

Connecting an external display

You can connect a VGA, SVGA (Super VGA) or multisync monitor. The subnotebook's built-in display controller supports resolutions up to 1024 x 768 with 16 colors and 800 x 600 with 256 colors. If you wish to use a resolution greater than 640 x 480, you must load the relevant display drivers (see the manuals supplied with your display).

- Connect the display's video signal cable to the subnotebook's display connector.
- Connect the power cable of the external display to a grounded wall outlet.
- Switch on the external display.
- Switch on the subnotebook.
- Configure the display output in *Video Setup* or by pressing the key combination Fn + F12.
- Select the resolution for the external display.

If an external monitor is connected and distortion occurs in the lower screen area of the subnotebook or of the external monitor, adjust the settings so that only the external monitor is used for the display (in the *Video Setup*, set the *Display Device* field to *CRT* using the key combination Fn + F12).

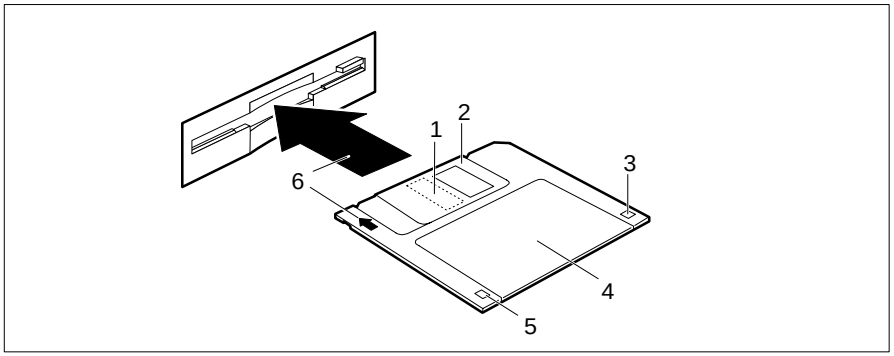
Connecting an external disk drive

- Connect the disk drive's data cable to the parallel port of the subnotebook.
- Switch the subnotebook on. The disk drive is installed.
- Ensure that *Parallel Port* in *System Setup* is not set to *Unidirectional*.

Working with floppy disks

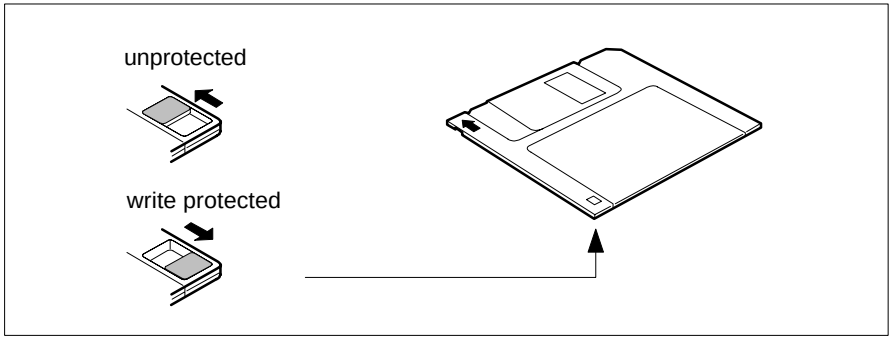
Follow the instructions supplied by the vendor of the floppy disks.

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



1 = Slot for read/write head
2 = Sliding metal cover
3 = Hole for recognition of 3 1/2" HD disks
4 = Label area(s)
5 = Write protection indicator
6 = Insertion direction

Protecting floppy disks against inadvertent overwriting



Replacing the hard disk drive

Only use hard disk drives which were designed for this subnotebook.

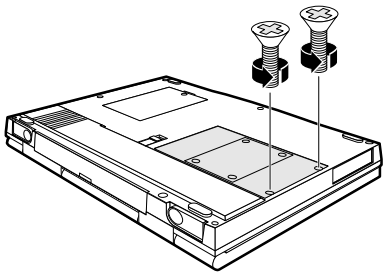
Do not use any force in installing or removing the hard disk drive.

Ensure that no foreign objects enter the compartment containing the hard disk drive.

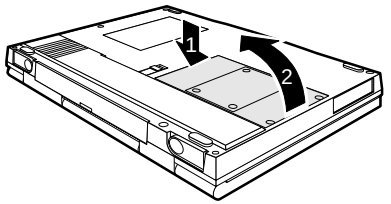
- Switch off the subnotebook.

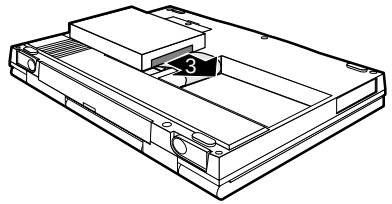
Pull the power plug of the power supply unit out of grounded wall outlet.

- Close the cover of the subnotebook so that it locks into place.
- Disconnect any cables attached to the subnotebook.
- Place the subnotebook bottom-up on a flat surface.

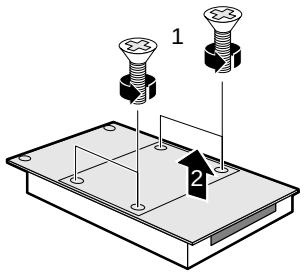


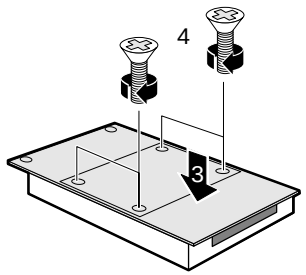
- Remove both screws.



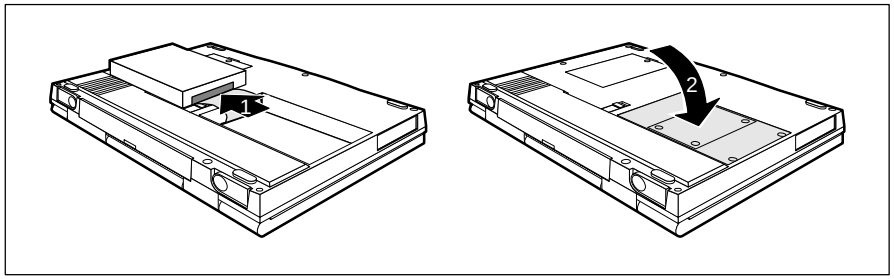


- Press the cover at position (1) and lift the hard disk drive - together with the cover - out of the subnotebook (2).
- Disconnect the data cable connector (3).

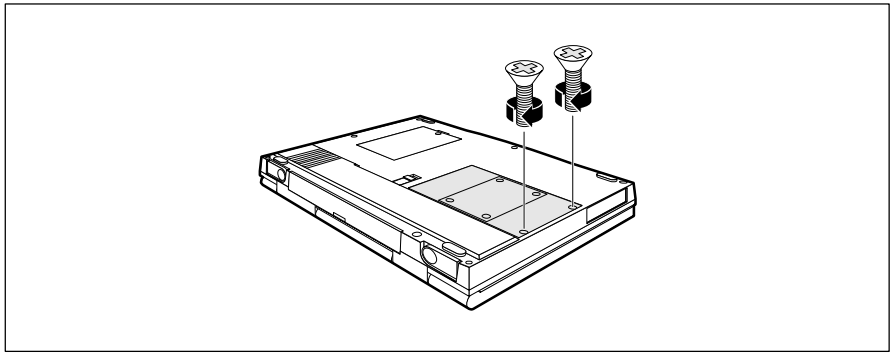




- Remove the four screws (1).
- Remove the cover from the disk drive (2).
- Place the cover on the new disk drive (3).
- Secure the cover with the four screws (4).



- Connect the data cable to the hard disk drive (1).
- Place the hard disk drive in its compartment (2).



- Tighten both screws.

Changing the keycaps

If the keycaps on the keyboard do not match the country settings (selected when the operating system is installed), you can fit the appropriate keycaps.

Information on which keycaps to change is provided with the replacement keycaps and shows how the keyboard layout should appear once you have switched the caps.

- Lift off a keycap you wish to replace (e.g., with a screwdriver).
  Be careful not to damage the neighboring keys.
- In the case of the wide keys, hook the wire clip into the slot in the key switch unit and the slot on the underside of the keycap.
- Press the new keycap onto the key switch unit so that it clicks into place.

Troubleshooting

Pay attention to the safety instructions provided in the "Important notes" and "Installation" sections when connecting and disconnecting cables.

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

- Switch off the subnotebook.
- 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 subnotebook's display remains blank

If the display remains blank, it can have the following causes:

The battery is not installed correctly

- Switch off the subnotebook.
- Check to ensure that the battery is installed correctly in its compartment.
- Switch on the subnotebook.

The battery is dead

- Recharge the battery or install a fully charged battery.

The power supply unit is not connected properly.

- Switch off the subnotebook.
- Check that the power supply unit is connected to the subnotebook properly.
- Check that the AC power cord is connected properly to the power supply unit and the grounded wall outlet.
  The LED on the power supply unit should light up.
- Switch on the subnotebook.

The display is switched off

- Press a key or enter the user password.

The display's contrast or brightness has been turned down

- Increase the contrast by pressing Fn + ← or increase the brightness with Fn + ↑).

The subnotebook has been configured to drive an external display

- Press the key combination Fn + F12 or change the *Display Device* in *Video Setup* setting to *LCD* or *LCD&CRT*.

The subnotebook's display is difficult to read

If the display is difficult to read:

Reflexes

- Turn the subnotebook or alter tilt of the display.

The contrast is too low or too high

- Increase the contrast with Fn + ← or reduce it with Fn + →.

The brightness is too low or too high

- Increase the brightness with Fn + ↑ or reduce it with Fn + ↓.

The external display remains blank

If the display remains blank, it can have the following causes:

The display is switched off

- Switch it on

The display has been blanked

- Press a key to reactivate it.

The brightness control is turned down

- Adjust the brightness control to increase the brightness. For further details, consult the manual supplied with the display.

The subnotebook has been configured to drive the internal display

- Press the key combination Fn + F12 or set *Display Device* in *Video Setup* to *CRT* or *LCD&CRT*.

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

- Switch off the external display and the subnotebook.
- Check that the external display's power cable is connected correctly to a grounded wall outlet.
- Check that the signal cable is connected correctly to the subnotebook and to the display itself (if it is not permanently mounted).
- Switch on the external display and the subnotebook.

The external display is blank or the image is unstable

The wrong display resolution has been set for the external display or the application.

- Exit the application in Microsoft Windows by pressing Alt + F4 ↵. If the error persists when you exit the program, switch off the external display and then switch it on again after a pause of at least three seconds.
- Use *Windows Setup* to select the correct display resolution for the application.

The subnotebook seems to have locked up (crashed)

If the subnotebook seems to have locked up or crashed, it can have the following causes:

The subnotebook is in Standby or Suspend mode

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

The application has locked up

- Close the application or restart the subnotebook by power-cycling it or with a warm boot.

The battery is dead.

- Recharge the battery or install a fully charged battery.

The trackball does not respond

If the trackball does not work, it can have the following causes:

External pointing device connected

- Check whether an external pointing device has been connected.
- Check the Pointing Device field in System Setup (see chapter "System configuration - system settings").

Incorrect settings in System Setup

- Ensure that *Pointing Device* in *System Setup* is set to *Trackball*.

No mouse driver installed

- Ensure that the correct mouse driver has installed correctly before starting the application.

The trackball or its mechanism is soiled

- Switch off the subnotebook.
- Clean the trackball and its mechanism.
- Switch on the subnotebook.

The mouse does not respond

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

Incorrect settings in Setup

- Check the *Pointing Device* setting in *System Setup*.
  If a PS/2 mouse is connected to the subnotebook, the field should be set to *PS/2 Type* or *Auto Detection*.
  If a serial mouse is connected, it should be set to *Serial Type*.
- Check the *Serial Port* setting in *Power Management Setup*. The field must be set to *Enable*.

No mouse driver installed

- Ensure that the correct mouse driver has installed correctly before starting the application. For information on the mouse driver, consult the manuals supplied with the mouse or your application.

The mouse is not properly connected

- Switch off the subnotebook.
- Check to ensure that the mouse cable is connected to the subnotebook properly.
  If you are using an adapter or extension cable, check the connections here, too.
- Switch on the subnotebook.

The subnotebook will not write to floppy disk

- Check whether that floppy disk is OK and is not write-protected.
- Ensure that *Diskette Write* in *Security Setup* is not set to *Enable*.
- Switch the subnotebook off and check whether the data cable of the disk drive is properly connected to the parallel port of the subnotebook.

The battery drains quickly or becomes hot

- Deep-discharge and recharge the battery.

If this does not correct the problem, the battery should be replaced. When disposing of the old battery, pay attention to the safety instructions in the section "Important notes".

The PC's date or time is incorrect

- Change the time and/or date in *System Setup*.

i If the date and time are repeatedly incorrect when you switch on the subnotebook, the backup battery that supplies the internal clock is dead. Connect the subnotebook via its power supply unit to a grounded wall outlet or install a fresh battery. The backup battery will charge fully in roughly two days.

The printer does not print

- Makes sure that the printer is switched on and on-line (see the manuals supplied with the printer).
- Check that the printer cable connecting the subnotebook and the printer is connected properly.
- Make sure that the port you are using to address the printer has been configured correctly in your application, in Microsoft Windows and in MS-DOS.
- Check that the correct printer driver is installed.
- If you have connected a printer via a serial port, check that the Serial Port field has been set to Enable in Power Management Setup.

The LED indicator on the subnotebook is flashing at close intervals

The battery is drained if the LED indicator flashes at close intervals.

- Recharge the battery.

Acoustic warnings

Three beeps

The battery is almost drained.

- Recharge the battery.

A single continuous beep

The subnotebook cannot switch to Standby or Suspend mode because the hard disk or floppy disk is being accessed, or because there is insufficient space on the hard disk.

- Wait until the read/write operations to the hard disk or floppy disk have finished or clear some space on the hard disk.

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

On-screen error messages

This section describes the error messages displayed by the subnotebook. Error messages displayed by the operating system or programs are described in the relevant manuals.

The battery is empty

- Recharge the battery.

The battery is defective

- Deep-discharge and recharge the battery.

If this does not correct the problem, the battery should be replaced. When disposing of the old battery, pay attention to the safety instructions in the section "Important notes".

The battery is dead or no battery is installed

- Ensure that the battery has been installed correctly.
- Deep-discharge and recharge the battery.

If this does not correct the problem, the battery should be replaced. When disposing of the old battery, pay attention to the safety instructions in the section "Important notes".

`BL`

The battery is empty.

- Recharge the battery.

`CA`
`CU`

The battery is dead or no battery is installed.

- Ensure that the battery has been installed correctly.
- Deep-discharge and recharge the battery.

If this does not correct the problem, the battery should be replaced. When disposing of the old battery, pay attention to the safety instructions in the section "Important notes".

`Incorrect diskette, insert the utility diskette.`

The password cannot be saved to the disk you have inserted.

- Insert the disk *System Utilities*.
- Press the Enter key.

`Invalid password, Ctrl, Alt or Shift keys are not available`

You have entered an invalid character in the password.

- Re-enter the password.
  Use only letters and digits.

`Invalid password, only alphanumeric keys are available`

You have entered an invalid character in the password.

- Re-enter the password.
  Use only letters and digits.

`System configuration has been changed,`
`System will not Resume from Disk`

System configuration has been changed or the battery is drained in Suspend mode.

- Press the key R.
  Subnotebook reboots - data which has not been saved is deleted.

`Verification of your password was incorrect!`

You have entered the wrong password in confirmation.

- Press any key.
- Re-enter the password.

System specifications

Subnotebook

Processor:	SL enhanced processor, i486 SX, 33 MHz or SL enhanced processor, i486 DX2, 50 MHz
Cache:	8 KB, integrated in processor
Memory (RAM):	4 Mbytes, upgradable to 8, 12 or 20 Mbytes
System ROM (flash EPROM):	128 Kbytes for system and video BIOS
Disk drive:	2 1/2-inch hard disk drive 12,5 mm high
Display:	Backlit liquid-crystal transmissive display
– Resolution:	640x480, or 25 80-character lines
– Monochrome, 64 gray scales:	24 cm diagonal (9.5 inches)
– Color (DSTN), 256 colors:	24 cm diagonal (9.5 inches)
Display controller:	VESA local-bus Windows accelerator
– Video memory:	512 Kbyte
– Resolutions:	up to 1024 x 768 with 16 colors
(on external display)	up to 800 x 600 with 256 colors
Input devices	
– Keyboard:	84 keys
– Trackball:	19 mm diameter with two trackball keys
Ports	
– PS/2 Input device:	6-pin mini DIN female connector
– Serial ports:	9-pin male connector, 16550-compatible
– External display connector:	15-pin female connector
– Parallel port:	25-pin female connector, bi-directional ECP-/EPP-capable

Slots	
– PCMCIA:	2 x type I/type II or 1 x type III
– Memory:	4 Mbytes, 8 Mbytes or 16 Mbytes
Power consumption:	30.4 W max. (subnotebook on with battery charging)
Temperature	
– Operation:	5 ˚C .... 35 ˚C
– Transportation:	-20 ˚C .... 60 ˚C
Dimensions (W x D x H)	
– with monochrome display:	269 mm, 199 mm, 36 mm
– with color display:	269 mm, 199 mm, 39.5 mm
Weight without battery	
– with monochrome display:	1.9 kg
– with color display:	2 kg

Power supply unit

Primary	
– Rated voltage:	100 V to 240 V
– Rated frequency:	47 Hz to 63 Hz
– Max. rated current:	1 A
Secondary	
– Rated voltage:	19 V
– Max. rated current:	1.6 A
Dimensions (W x D x H):	120 mm, 60 mm, 36 mm
Weight without AC cord:	260 g (2.55 N)

Battery

Rated voltage:	12 V
Rated capacity:	1.8 Ah
Dimensions (W x D x H):	264 mm, 41 mm, 21.5 mm
Weight:	440 g

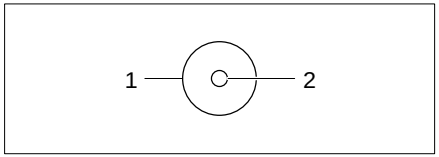
I/O addresses, interrupts and DMA channels

Function	I/O address	Interrupt	DMA
DMA controller #1, 8237	000H – 01FH		
Interrupt controller #1, 8259	020H – 030H		
Timer, 8254	040H – 050H	IRQ0	DRQ0
Keyboard and mouse controller	060H – 06FH	IRQ1, IRQ12	
Real-time clock/NMI controller	070H – 07FH	IRQ8	
DMA register	080H – 09FH		
Fast A20 gate and CPU reset	092H		
Interrupt controller #2, 8259	0A0H – 0BFH		
DMA controller #2, 8237	0C0H – 0DFH		
Clear FPU	0F0H		
Reset FPU	0F1H		
ACC2066 register	0F2H – 0F3H		
FPU	0F8H, 0FCH, 0FEH		
Hard disk controller	1F0H – 1F8H	IRQ14	
Parallel port LPT2	278H – 27FH	IRQ5	
Serial port COM2	2F8H – 2FFH	IRQ3	
Parallel port LPT1	378H – 37FH	IRQ7	
Display controller	3B0H – 3DFH		
PCMCIA controller	3E0H – 3E3H		
Floppy disk controller	3F0H – 3F7H	IRQ6	DRQ2
Serial port COM1	3F8H – 3FFH	IRQ4	

Pin assignment

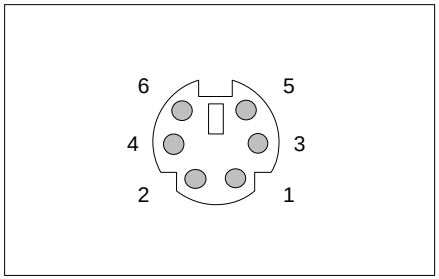
The pin assignments of external ports are described on the following pages.

DC input connector



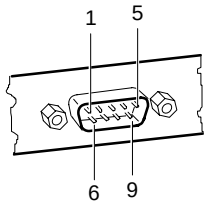
No.	Description
1	0 V
2	+19 V

Port for external keyboard and PS/2 mouse



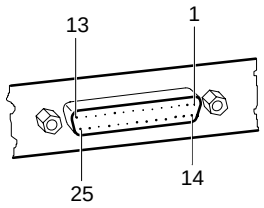
Pin	Signal/Description
1	DATA
2	NC
3	0 V
4	+5 V
5	CLOCK
6	NC

Serial port



Pin	Signal	Description
1	DCD	Data Carrier Detect
2	RxD	Receive Data
3	TxD	Transmit Data
4	DTR	Data Terminal Ready
5	GND	Signal Ground
6	DSR	Data Set Ready
7	RTS	Request to Send
8	CTS	Clear to Send
9	RING	Ring Indicator

Parallel port



There are three transmission mode options with the parallel port: SPP, EPP and ECP mode. SPP mode (standard parallel port) has been used to date as the standard mode for controlling a printer. EPP (enhanced parallel port) and ECP (extended capabilities port, compatible with IEEE 1284) modes enable data to be transmitted at 2 and 2.4 MB/s. Peripheral equipment which supports these new modes is necessary. The applications of the new transmission modes include port conversions between parallel and SCSI or parallel and IDE. The pin assignment differs in all three modes.

Pin assignment in SPP mode

Pin	Signal name	Description
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 FEED	Automatic new line
15	ERROR	Device error
16	INIT	Reset/initialize
17	SELECT IN	Printerselection
18-25	GROUND	Ground

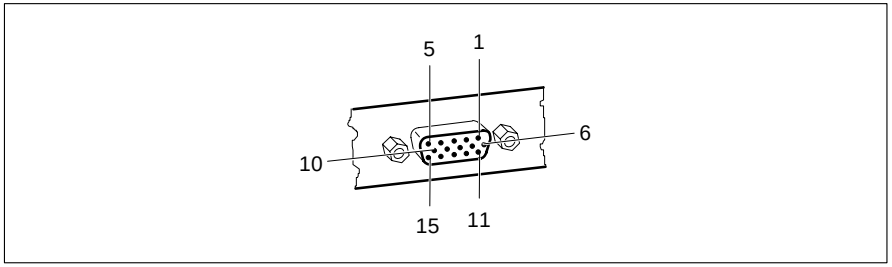
Pin assignment in EPP mode

Pin	Signal name	Direction of signal
1	Write	Output
2-9	Data Lines 0-7	Input/Output
10	Intr	Input
11	Wait	Input
12	not assigned	---
13	not assigned	Input
14	DStrb	Output
15	not assigned	---
16	not assigned	---
17	AStrb	Output
18-25	Ground	

Pin assignment in ECP mode

Pin	Signal name	Direction of signal
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	

Port for external display

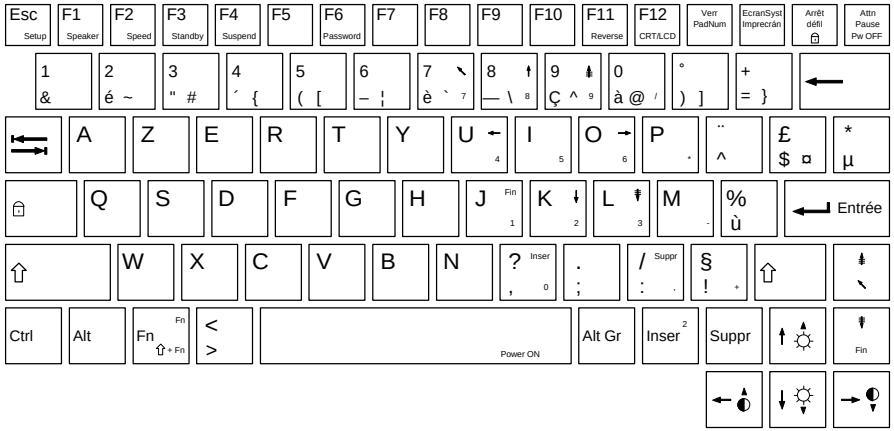


Pin	Signal/Description
1	Red
2	Green
3	Blue
4	reserved
5	GND
6	GND
7	GND
8	GND

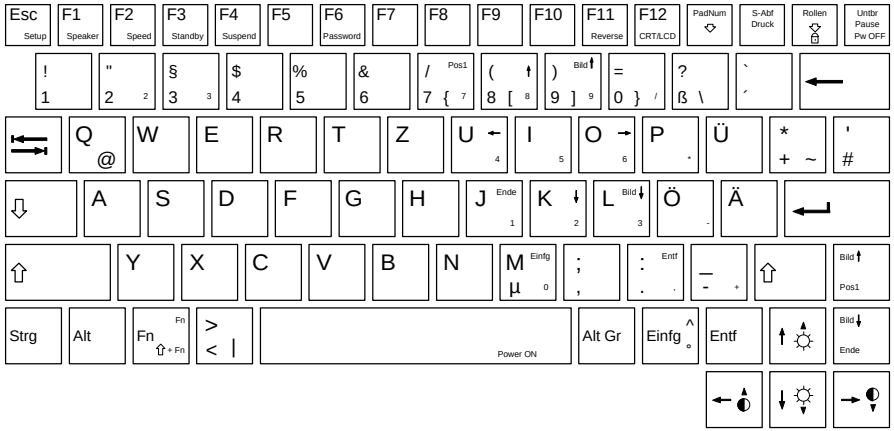
Pin	Signal/Description
9	NC
10	GND
11	reserved
12	reserved
13	HSYNC
14	VSYNC
15	reserved

Keyboard layouts

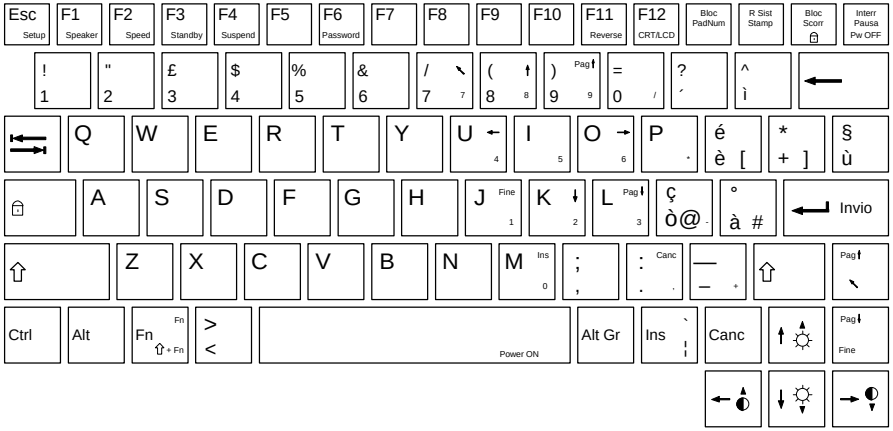
French



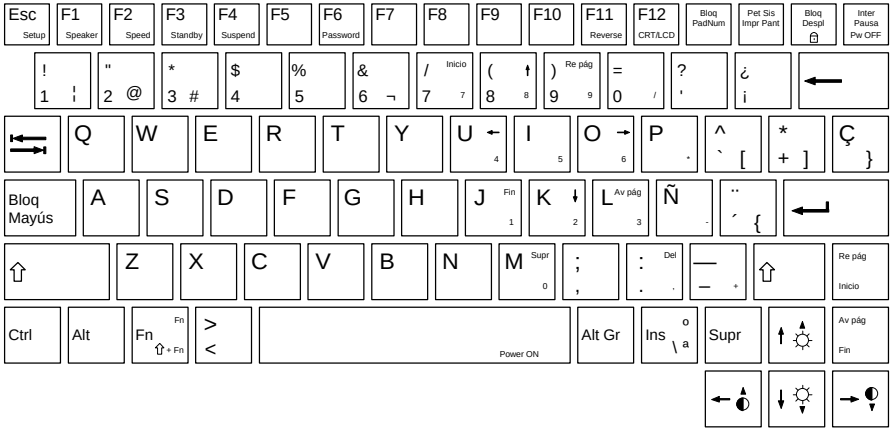
German



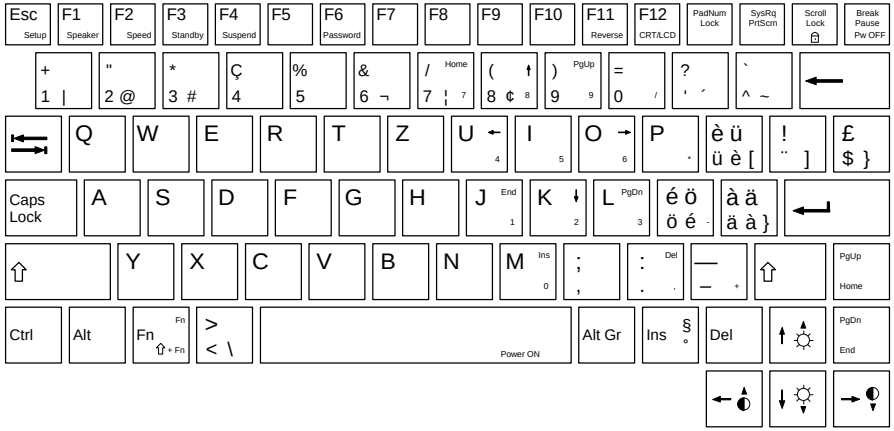
Italian



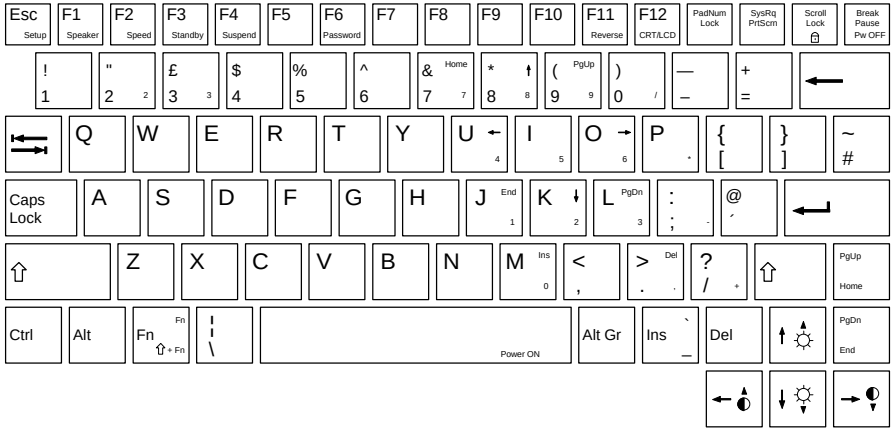
Spanish



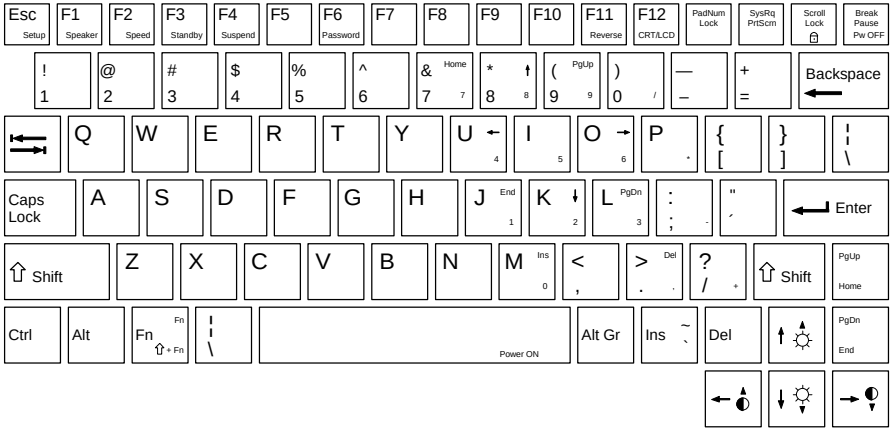
Swiss



UK English



US English



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