

answers²

Operating manual

SCENIC P / SCENICO P

English



FUJITSU COMPUTERS
SIEMENS

Are there ...

... any technical problems or other questions which you would like to be clarified?

Please contact:

- your sales partner
- your sales outlet

Further information can be found in the "Safety", "Ergonomics" and "Warranty" manuals.

The latest information on our products, tips, updates, etc., can be found on the internet under:

<http://www.fujitsu-siemens.com>

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SCENIC P / SCENICO P

Operating manual

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Your SCENIC P / SCENICO P...

... is available with various configuration levels with different hardware and software. Please observe the notes on your operating system.

You can incorporate operable drives (for example DVD drive) as well as other boards.

Depending on the configuration selected, the operating system is preinstalled on your hard disk (e.g. Windows XP).

Your PC has a number of security features to ensure that no unauthorised persons can access your data, for example, you can activate a screen saver with password protection. In addition, you can also mechanically lock your PC. The security functions in the *BIOS Setup* also allow you to protect your data by means of passwords.

DeskUpdate allows you under some operating systems to easily and quickly install the latest drivers and operating system extensions with a few mouse clicks. *DeskUpdate* is contained on the "Drivers & Utilities" CD.

Further information on this PC is provided:

- in the "Getting Started" manual
- in the "Safety" manual
- in the "Ergonomics" manual
- in the "Warranty" manual
- in the operating manual for the monitor
- in the technical manual for the mainboard
- in the "BIOS Setup" manual
- in your operating system documentation
- in the information files (e.g. *.TXT, *.DOC, *.CHM, *.HLP, *.PDF, *.HTML)



You will find an electronic version of some of the listed manuals on the "User Documentation" or "Drivers & Utilities" CD.

You can access and view the required information using the *Acrobat Reader* program, which is also on the CD. If necessary, you can also make a print version of the manual.

Notational conventions

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



indicates information which is important for your health or for preventing physical damage.



indicates important information which is required to use the system properly.

► Text which follows this symbol describes activities that must be performed in the order shown.

`Text in this typeface` indicates screen outputs.

This font indicates commands or menu items.

"Quotation marks" indicate names of chapters or terms.

Important notes

In this chapter you will find information regarding safety which is essential to take note of when working with your PC.

Safety notes



Pay attention to the information provided in the "Safety" manual and in the following security notes.

During installation and before operating the device, please observe the instructions on environmental conditions in the "Technical data" chapter as well as the instructions in the "Preparing for use" chapter.

You may only operate the device, if the rated voltage for the device is set to the local mains voltage. Check the rated voltage set for this device (see the "Preparing for use" chapter).

The main switch and the ON/OFF switch do not disconnect the PC from the mains voltage. To completely disconnect the mains voltage, remove the power plug from the grounded mains outlet.

Replace the lithium battery on the mainboard in accordance with the instructions in the "Extensions to the mainboard" - "Replacing lithium battery" chapter.

Caution, components in the system can get very hot.

Energy saving, disposal and recycling

Further information can be found on the "User Documentation" or "Drivers & Utilities" CD provided with your computer.

CE marking



CE marking for devices without wireless LAN

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



CE marking for devices with wireless LAN

This equipment complies with the requirements of Directive 1999/5/EC of the European Parliament and Commission from 9 March, 1999 governing Radio and Telecommunications Equipment and mutual recognition of conformity.

This device is approved for use in Belgium, Denmark, Germany, Finland, Greece, Great Britain, Ireland, Italy, Luxembourg, the Netherlands, Austria, Portugal, Sweden, Switzerland, Spain, Iceland, Liechtenstein and Norway. Contact the corresponding government office of the respective country for current information on possible operating restrictions. If your country is not included in the list, then please contact the corresponding supervisory authority as to whether the use of this product is permitted in your country.

FCC Class B Compliance Statement

The following statement applies to the products covered in this manual, unless otherwise specified herein. The statement for other products will appear in the accompanying documentation.

NOTE:

This equipment has been tested and found to comply with the limits for a "Class B" digital device, pursuant to Part 15 of the FCC rules and meets all requirements of the Canadian Interference-Causing Equipment Standard ICES-003 for digital apparatus. 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.

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

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

Transporting the PC



Transport all parts separately in their original packaging or in a packaging which protects them from knocks and jolts, to the new site. Do not unpack them until all transportation manoeuvres are completed.

Never drop the monitor (risk of implosion)!

Cleaning the PC



Turn off all power and equipment switches and remove the power plug from the mains supply.

Do not clean any interior parts yourself. Leave this job to a certified service technician.

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

Ensure that no liquid enters the system.

Wipe the casing with a dry cloth. If particularly dirty, use a cloth that has been moistened in mild domestic detergent and then carefully wrung out. Use disinfectant wipes to clean the keyboard and the mouse.

Preparing for use



Please take note of the safety information in the "Important notes" chapter.

Unpacking and checking the delivery

It is recommended not to throw away the original packaging material! It may be required for reshipment at some later date.

- ▶ Unpack all the individual parts.
- ▶ Check the delivery for damage incurred during transportation.
- ▶ Check whether the delivery agrees with the details in the delivery note.

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

Steps for initial setup

Only a few steps are necessary to put your new PC into operation for the first time:

- Select location for PC and set up PC
- Connect the monitor, mouse and keyboard
- Check the voltage at the mains outlet and connect the PC to an electrical outlet
- Switching on the PC

You will learn more about the individual steps in the following sections.



External devices

If you have received other devices in addition to your PC (e.g. a printer or a modem), do not connect these until after the initial installation. The following sections contain a description of how to connect these external devices: "Connecting external devices to the serial port" and "Connecting external devices to the parallel port".

Drives and boards

If you have received drives or boards with your PC, please do not install them until after first-time setup. How to install drives and boards is described in the "System expansions" chapter.

Setting up the PC



When installing your PC, give consideration to the recommendations and safety notes in the "Safety" manual.

Set up the PC only in its correct orientation. The points to observe are illustrated on the following pages.

We recommend that you place your device on a surface with good anti-slip qualities. In view of the multitude of different finishes and varnishes used on furniture, it is possible that the rubber feet will mark the surface they stand on.

Do not expose the PC to extreme environmental conditions (see "Technical data" chapter). Protect the PC from dust, humidity and heat.

When installing the PC, provide sufficient clearance around the PC, as indicated in the "Technical data" chapter to ensure adequate ventilation. In order to avoid overheating, do not cover the ventilation area of the monitor or the PC.

Do not place several PCs one above the other.

Depending on the location of your device, bothersome vibrations and noises may occur. To prevent this, a distance of at least 3 mm should be maintained from other devices on casing sides without ventilation surfaces. In addition, we recommend placing the device on support feet, as these buffer vibrations.

Connect the monitor, mouse and keyboard

The ports for the monitor, mouse, and keyboard are on the rear and front of the PC.



PS/2 keyboard port / purple



PS/2 mouse port / green




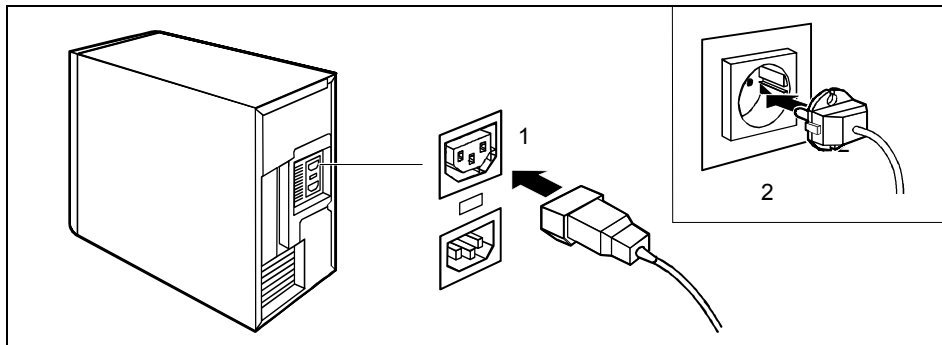
Monitor port / blue



USB port / black

Connecting the monitor

- ▶ Follow the instructions contained in the monitor manual to prepare the monitor for operation (e.g. connecting cables).
- ▶ Plug the data cable into the monitor port  of the PC.



- ▶ Depending on your device configuration level, plug the monitor power cable into either the PC (1) or the grounded mains outlet (2).




The monitor power cable may only be connected to the PC monitor socket if the monitor current consumption is smaller than 1,5 A with 230 V or 3 A with 115 V. The values for the monitor current consumption can be found in the technical data on the monitor or in the operating manual for the monitor.


Connecting the mouse

Depending on the equipment level selected, your PC will be supplied with a PS/2 mouse or a USB mouse.


Connecting a PS/2 mouse

- ▶ Connect the PS/2 mouse to the PS/2 mouse port  of the PC.

Connecting USB mouse

- ▶ Connect the USB mouse to the USB port  of the PC.




If you do not attach a mouse at the PS/2 mouse port , you can disable the mouse controller in the *BIOS Setup* in order to free the IRQ12 for a different application.

Connecting a keyboard

Depending on the equipment level selected, your PC will be supplied with a standard keyboard or a USB keyboard.


Connecting standard keyboard

Use the supplied keyboard cable only.

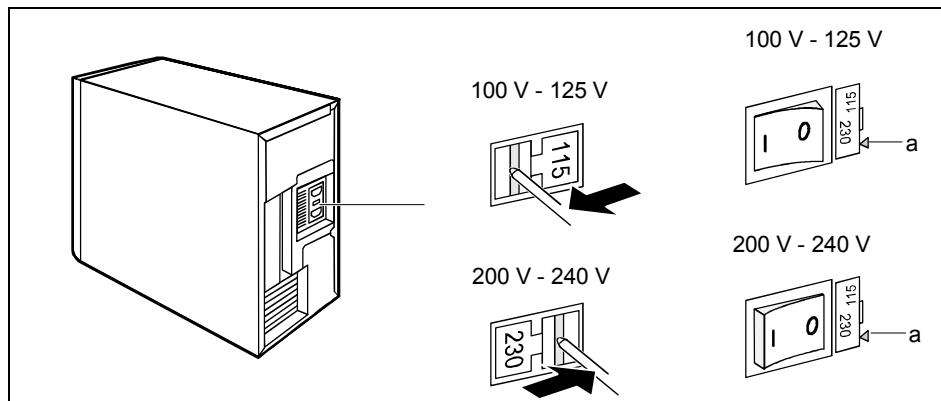
- ▶ Plug the other end of the keyboard cable (square plug) into the socket on the underside of the keyboard.
- ▶ Plug the round plug of the keyboard cable into the keyboard port  of the PC.

Connecting USB keyboard

Use the supplied keyboard cable only.

- ▶ Plug the other end of the keyboard cable (square plug) into the socket on the underside of the keyboard.
- ▶ Insert the rectangular USB plug of the keyboard cable into the USB port  of the PC.

Connecting the PC to the mains voltage



a = Notch for inserting the screwdriver

- Check the voltage setting.



Devices with main power switch:

Some units with a main power switch have a wide-range power supply, depending on the configuration level. This means that manual voltage setting is not necessary for these devices. Therefore there is no switch available for the voltage setting.

The following refers to the other devices:

The value indicated with an arrow must be compatible with the local rated voltage:

115 = 100 V to 127 V

230 = 200 V bis 240 V

If the voltage setting is incorrect, then lift out the manual voltage adjuster with a screwdriver (1), turn it to the required setting and reinsert it.

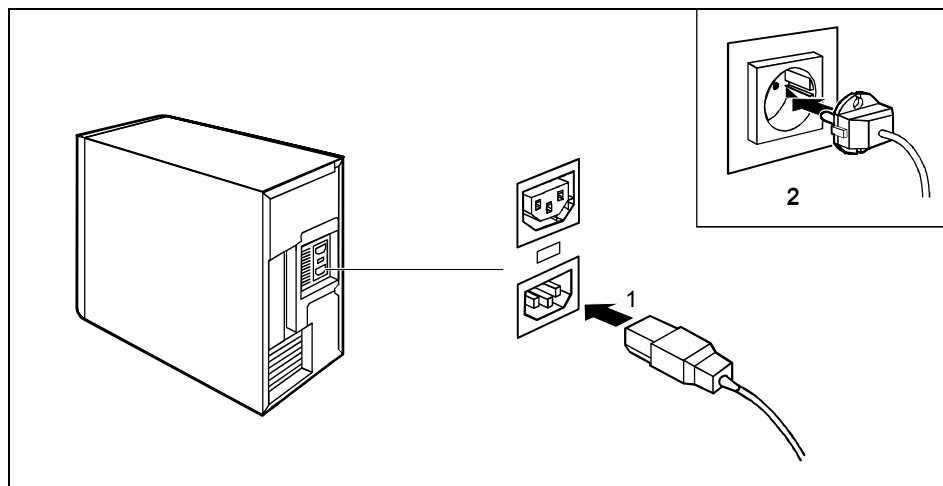
Devices without main power switch:

The visible value must agree with the local mains voltage:

115 = 100 V to 127 V

230 = 200 V bis 240 V

If an incorrect mains voltage is set, push the slide switch all the way into the other possible position with a pointed object.



- Connect the power cable first to the PC (1) and then to the grounded mains outlet (2).

Initial switch-on: Software will be installed

If the PC is connected to a network, the network protocol is required as well as the user and server details. Contact your network administrator if you have any questions about these settings.

When you switch on your PC for the first time, the supplied software is installed and configured. You should plan some time for this, as this process must not be interrupted.



Once the installation has been started the PC must not be switched off!

During installation the PC may only be rebooted when you are requested to do so!

Otherwise the installation will not be performed correctly. If a fault occurs during the installation, the contents of the hard disk must be completely restored.

You may need the licence number for Windows during the installation. This number is located on a sticker on your PC.

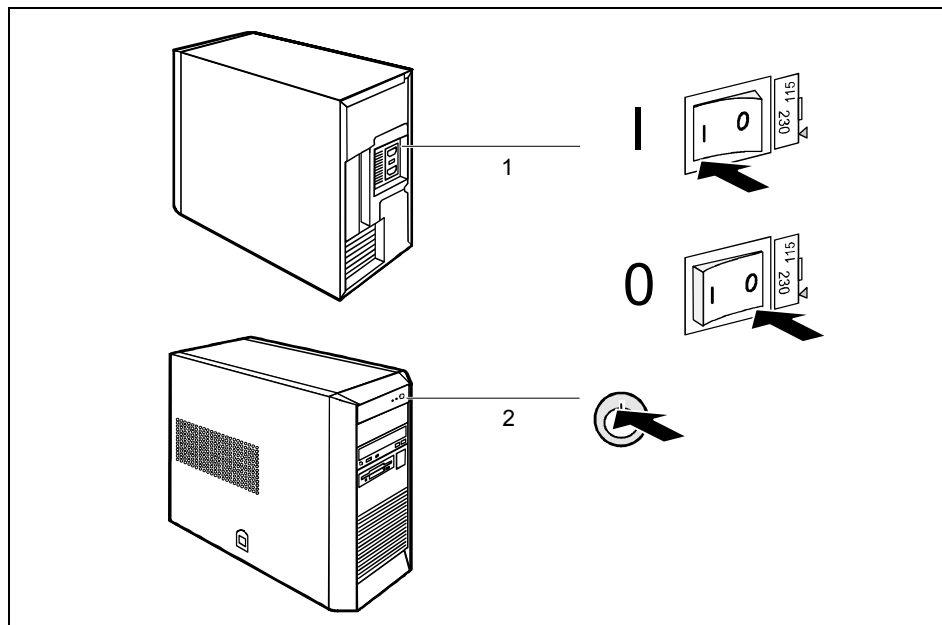
Switching on monitor and PC

- ▶ Switch the monitor on (see the operating manual for the monitor).
- ▶ Switch the PC on. To do this, follow the instructions below.



Depending on the version, your PC is equipped with a main power switch on the back of the casing in addition to the power button on the front. This differentiates between the ways to switch on both PC versions.

Switching on PC with devices with main power switch



1 = Main power switch

2 = ON/OFF switch

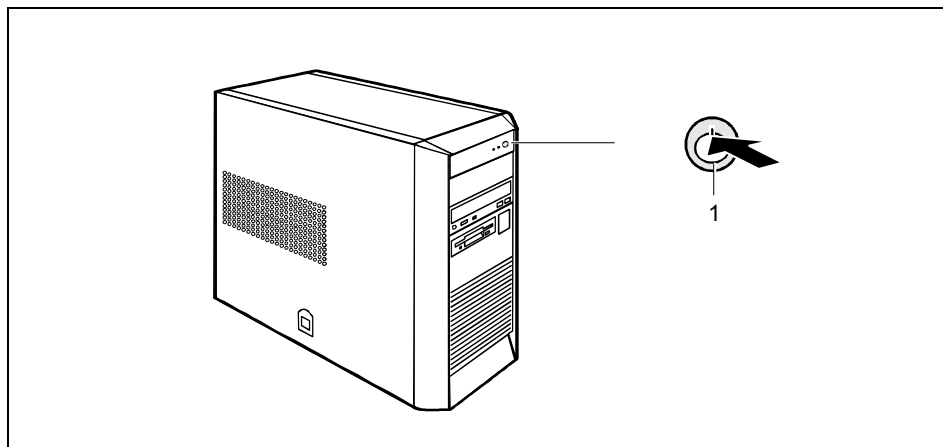
0 = PC is switched off

I = PC is ready-to-operate

- ▶ Switch the PC on with the main power switch on the back panel.
- ▶ Press the ON/OFF switch on the front of the casing.

The power-on indicator lights green and the PC is started.

Switching on PC with devices without main power switch



1 = ON/OFF switch

- Press the ON/OFF switch on the front of the PC.

The power-on indicator lights green and the PC is started.

Installing the software

- During installation, follow the instructions on screen.

Consult the operating system manual if there is anything unclear about the requested input data.



You will find further information about the system, drivers, utilities, updates, manuals etc. on the "Drivers & Utilities" CD supplied.

Connecting external devices



Do not connect or disconnect cables during a thunderstorm.

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

Connect and disconnect the cables in the order described below.

With the exception of USB devices, always remove all power plugs before connecting external devices!

Read the documentation on the external device before connecting it.

Connecting cables

- Turn off all power and equipment switches.
- Remove all power plugs from the mains outlets.
- Plug all cables into the PC and peripherals. Under all circumstances, please observe the safety notes provided in the "Important notes" chapter.
- Plug all data communication cables into the utility sockets.
- Plug all power cables into the grounded mains outlets.

Disconnecting cables

- Turn off all power and equipment switches.
- Remove all power plugs from the mains outlets.
- Unplug all data communication cables from the utility sockets.
- Unplug all cables from the PC and peripherals.



USB devices are hot-pluggable. This means you can connect and disconnect devices while your operating system is running.

Additional information can be found in the documentation for the USB devices.

Ports

The ports for external devices are on the rear and on the front of the PC. The ports available on your PC depend on the configuration level you have selected. The standard ports are marked with the symbols shown below (or similar). Exact details of the position of the ports are supplied in the technical manuals for the boards.



Keyboard port / purple



PS/2 mouse port / green



Serial interface 1 / turquoise



Serial interface 2 / turquoise



Monitor port / blue



Parallel interface / Printer / burgundy



Headphones port / orange / light green



Microphone jack (mono) / pink



Audio output (Line out) / light green



Audio input (Line in) / light blue



Game port / gold



SCSI connection



USB - Universal Serial Bus / black




LAN port



Some of the devices that you connect require special drivers (see the operating system and device documentation).

Connecting external devices to the serial port

External devices can be connected to the serial port (e.g. a modem).

- ▶ Connect the data cable to the external device.
- ▶ Connect the data cable to the serial port .

For an exact description of how to connect external devices to the serial port, please refer to the device documentation.



Settings of the serial port


If you need to change the settings of the serial port (e.g. address, interrupt), you can do so in the *BIOS Setup*. The settings for the port are described in the technical manual for the mainboard or in the "BIOS Setup" manual.

Device drivers

The devices connected to the serial port require drivers. Your operating system already includes many drivers. Nevertheless, if the driver you need is not on the hard disk, please install it from the data carrier supplied with the device or with the application programme.

Connecting external devices to the parallel port

External devices can be connected to the parallel port (e.g. a printer).

- ▶ Connect the data cable to the external device.
- ▶ Connect the data cable to the parallel port .

For an exact description of how to connect external devices to the parallel port, please see the device documentation.



Settings of the parallel port

If you need to change the settings of the parallel port (e.g. address, interrupt), you can do so in the *BIOS Setup*. The settings for the port are described in the technical manual for the mainboard or in the "BIOS Setup" manual.

Device drivers

The devices connected to the parallel port require drivers. Your operating system already includes many drivers. Nevertheless, if the driver you need is not on the hard disk, please install it from the data carrier supplied with the device or with the application programme.


Connecting external devices to the USB ports

You can connect a wide range of external devices to the USB port (e.g. printer, scanner, modem or keyboard).



USB devices are hot-pluggable. This means you can connect and disconnect devices while your operating system is running.

Additional information can be found in the documentation for the USB devices.

- ▶ Connect the data cable to the external device.
- ▶ Connect the data cable to the USB port .



Device drivers

The devices you connect to the USB ports usually require no driver of their own, as the required software is already included in the operating system. However, if the USB device requires its own software, please install it from the data carrier provided with the USB device.

Operation

Switching on the PC

- ▶ If necessary, switch the monitor on (see the operating manual for the monitor).
- ▶ Switch the PC on with the main power switch on the rear of the PC (if present).
- ▶ Press the ON/OFF switch on the front of the PC.

The power-on indicator lights green and the PC is started.

Switching off the PC

- ▶ Shut down the operating system properly. For Windows: select *Shut Down* from the *Start* menu.
- ▶ If the operating system does not automatically switch the PC off, turn the PC to ready-to-operate when requested to do so by pressing the ON/OFF switch.

If the PC is ready-to-operate, the PC consumes very little power.

- ▶ Switch the PC off at the main switch (if present). The PC no longer uses any power.



The main power switch and the power button do not disconnect the PC from the mains voltage. To completely disconnect the mains voltage, remove the power plug from the socket.

- ▶ If necessary, switch the monitor off (see the operating manual for the monitor).

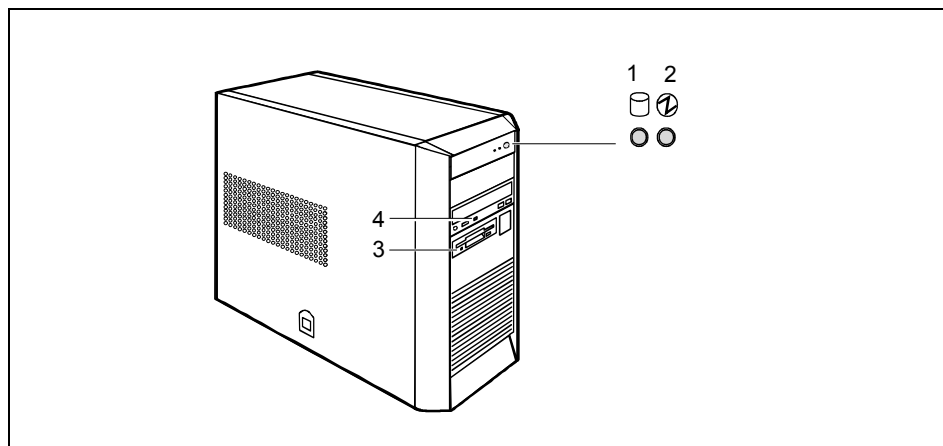
Placing a PC (with soft power off function) in a ready-to-operate state by means of software

With the soft power off function the PC automatically switches off (standby) or switches into the energy-saving mode after the operating system is shut down. Requirements: Your system must support switching off with software and this functionality must be enabled in *BIOS Setup*. The soft power off software may also need to be installed on Windows NT systems.

You can also switch your PC into the standby mode via the *DeskView* software with the *DeskOff* programme.

Indicators on the PC

The indicators are on the front of the casing. Which indicators are available on your PC depends on the configuration level you have selected.



1 = Hard disk indicator

2 = Power-on indicator

3 = Floppy disk indicator

4 = CD-ROM indicator

1 - Hard disk indicator

The indicator lights up when the hard disk drive of the PC is accessed.

2 - Power-on indicator

- The indicator lights green:
The PC is on.
- The indicator lights orange:
The PC is in energy-saving mode. After being switched on with the power button, the PC switches on or returns to the state it was in before the energy-saving mode.



In an energy-saving mode the PC must not be switched off with the main power switch (if present) or disconnected from the mains, as this may result in data loss.

- The indicator does not light up:
The PC is switched off (power switch at 0 or disconnected from the power supply) or ready-to-operate. If the PC is ready-to-operate, the PC can be enabled with the ON/OFF switch.

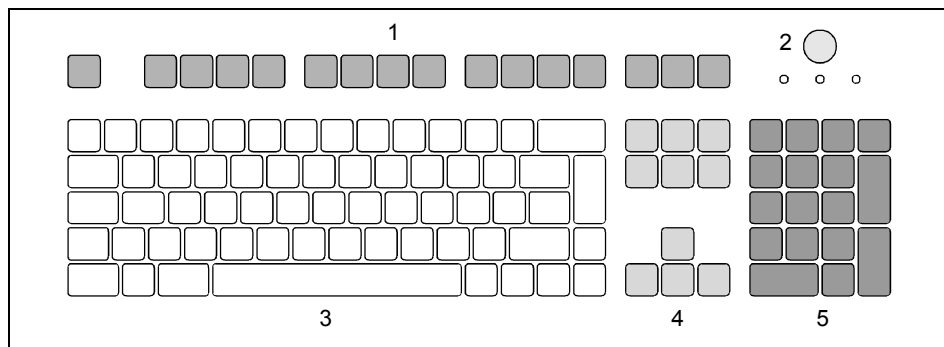
3 - Floppy disk indicator

The indicator lights up when the floppy disk drive of the PC is accessed. You may only remove the floppy disk when the indicator is unlit.

4 - CD-ROM indicator

The indicator lights up when the CD-ROM drive is accessed. You may only remove the CD when the indicator is dark.

Keyboard



1 = Function keys

2 = Power button (optional)

3 = alphanumeric keypad

4 = Cursor control keys

5 = numeric keypad (calculator keypad)



The illustrated keyboard is an example and may differ from the model you use.

Important keys and key combinations

The following description of keys and key combinations refers to Windows. Details of other keys and key combinations can be found in the documentation of the relevant application programme.

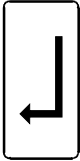


ON/OFF switch (optional)

Depending on the setting in the *BIOS Setup*, the system can be switched on, off, or on and off with this button. Some operating systems allow you to configure additional functions of the ON/OFF switch in the Control Panel.



On some keyboards the ON/OFF switch can only be used with ACPI. Otherwise the key is inoperative. The mainboard must support this function.



Enter key

confirms the marked selection. The enter key is also referred to as the "Return" key.



Start key

calls up the Windows *Start* menu.



Menu key

invokes the menu for the marked item (Windows).



Shift key

enables upper-case letters and the upper key symbols to be used.



Alt Gr (e.g. German keyboard)

produces a character shown on the right-hand side of a key (e.g. the character @ on the key **Q**).

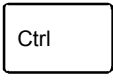


Num Lock key

by pressing the Num Lock key you switch between the Numeric keypad cursor control functions and digit or comma functions.

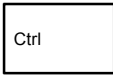
When the Num Lock indicator is lit the digit and comma keys are active.

When the Num Lock indicator is not lit the cursor control functions are active in the Numeric keypad.



Ctrl key

starts key combination actions. The **Ctrl** key is also called "Control" or "Control key".



+



+



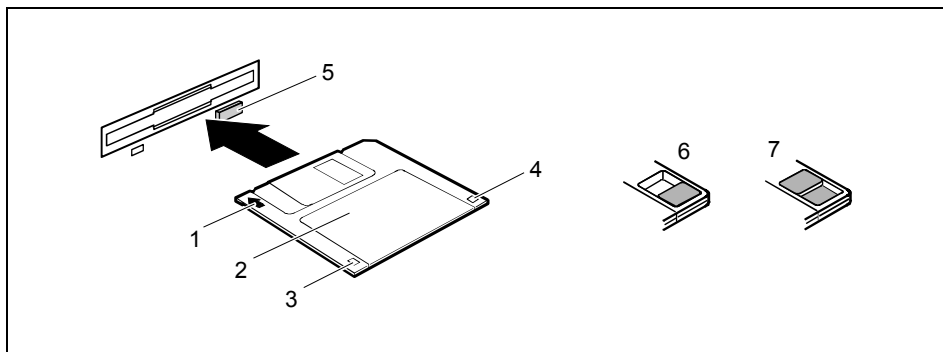
Warm boot

restarts the PC. Press simultaneously the keys **Ctrl**, **Alt** + **Del**. Under some operating systems the Task Manager appears first.

Working with floppy disks



Follow the instructions supplied by the vendor of the floppy disks. Never clean the floppy disk drives with cleaning disks. Any attempt would destroy the read/write head in the disk drive within 20 seconds.



- 1 = Insertion direction
- 2 = Label area
- 3 = Write protection switch for a 720 KB or a 1.44 MB floppy disk
- 4 = Identification of a 1.44 MB floppy disk or write protect switch on a 120 MB floppy disk
- 5 = Eject button for inserted floppy disks
- 6 = Disk is write-protected
- 7 = Disk is not write-protected

To insert a diskette

- Push the floppy disk into the drive in the insertion direction (1) until it engages. The label should be facing upward.

To remove a diskette

- Push the eject button (5).

Protect the floppy disk against being overwritten or erased

- Slide the write-protect slider into position (6). The hole is now visible.

Deactivate write protection

- Slide the write-protect slider into position (7). The hole is now covered.

Settings in BIOS Setup

The *BIOS Setup* menu allows you to set your hardware configuration and system functions. When the PC is delivered, the default entries are valid (see "BIOS Setup" manual and if necessary technical manual for the mainboard). You may customise these settings to your requirements in the *BIOS Setup*.

Property and data protection

Software functions and mechanical locking offer a broad range of functions for protecting your PC and your personal data from unauthorised access. You can also combine these functions.

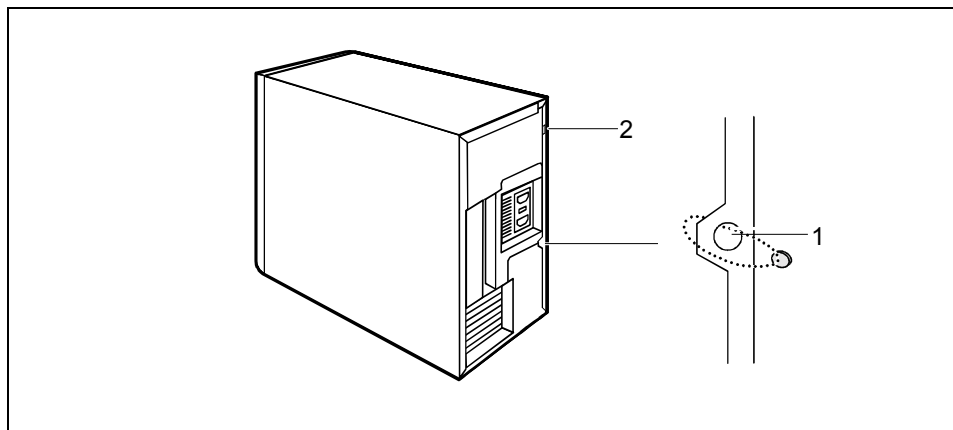
Anti-theft protection

There are two ways to protect your PC from theft:

- with a chain and the eyelet (1)
- with the Kensington Lock device (2) and with a Kensington MicroSaver

To prevent unauthorised persons from opening the casing, the casing can be sealed. To do this, use the eye on the top cover (1) and the eye on the back of the casing (2).

You can also attach a padlock to the eye (1) to prevent unauthorised opening of the casing.



Kensington Lock

BIOS setup security functions

The *Security* menu in *BIOS Setup* offers you various options for protecting your personal data against unauthorised access, e.g.:

- Preventing unauthorised *BIOS Setup* entry
- Preventing unauthorised system access
- Preventing unauthorised access to the settings of boards with their own BIOS
- Preventing system booting from the diskette drive
- Activating virus warnings
- Preventing unauthorised writing of diskettes
- Protecting BIOS from being overwritten
- Protecting the PC from being switched on by an external device

You can also combine these functions.

You will find a detailed description of the *Security* menus and how to assign passwords in the technical manual for the mainboard or in the "BIOS Setup" manual.

Access authorisation via SmartCard

In systems equipped with a SmartCard reader, access can be restricted to those users who have a corresponding SmartCard.

Access protection with SystemLock

With SystemLock you can protect your system from unauthorised booting. Then a system can only be booted when the user inserts a valid SmartCard in the SmartCard reader and enters his/her personal code number (PIN). To use SystemLock you require the following components:

- External SmartCard reader
- SystemLock installed (see "BIOS Setup" manual)
- SmartCard

SystemLock controls access to your PC. When a SmartCard is initialised, permissions are assigned for system access (system, setup, system+setup, admin). You can configure several SmartCards for one system and initialise them with different permissions. In addition you can protect access to your hard disk.

In this way users can be divided into user groups. Users of a user group use SmartCards with the same permissions.

More information on SystemLock



If you also want to use other security software in addition to SystemLock (e.g. SMARTY), please read the documentation on your security software beforehand.

SystemLock permissions

You can initialise a SmartCard with one of the following permissions:

System	The system starts following entry of the user PIN. You can change the user PIN.
Setup	You can open and change the <i>BIOS Setup</i> and change the user PIN.
System+Setup	The system starts following entry of the user PIN. You can open and change the <i>BIOS Setup</i> and change the user PIN.
Admin	The system starts following entry of the user PIN. You can change the user PIN an the administrator PIN, unlock locked SmartCards, open and change the <i>BIOS Setup</i> and generate additional SmartCards for this system.

For instructions on how to install and operate SystemLock, and how to initialise SmartCards, see the "BIOS Setup" manual.

Operating the SmartCard reader

- Connect the external SmartCard reader to your system as described in the instructions for the SmartCard reader.

Operating the external SmartCard reader:

- After the PC is switched on, you will be prompted to insert your SmartCard.

Troubleshooting and tips



Take note of the safety notes in the "Safety" manual and in the "Preparing for use" chapter, when you connect or disconnect cables.

If a fault occurs, try to correct it as described in the following places:

- in this chapter
- in the documentation of the connected devices
- in the help systems of the software used
- in the documentation of your operating system

If you fail to correct the problem, proceed as follows:

- ▶ Switch the PC off.
- ▶ Make a note of the steps and the circumstances that led to the fault.
- ▶ Make a note of any error messages displayed.
- ▶ Note the ID number of your device.
This number can be found on the type rating plate on the back of the casing.
- ▶ Contact your sales outlet or our customer service centre.

Installing new software

When installing programmes or drivers, important files may be overwritten and modified. To be able to access the original data in the event of any problems following installation, you should backup your hard disk prior to installation.

Power-on indicator remains unlit after you have switched on your device

This may be due to the following:

The mains voltage supply is faulty

- ▶ Check whether the power cable is properly plugged into the PC and grounded mains outlet.
- ▶ Switch the PC on.

Internal power supply overloaded

- ▶ Remove the PC's power cable from the grounded mains outlet.
- ▶ Wait for a moment.
- ▶ Plug the power cable into the grounded mains outlet again.
- ▶ Switch the PC on.

The screen stays blank

If your screen remains blank this may be due to the following:

Monitor is switched off

- ▶ Switch your monitor on.

Power saving has been activated (screen is blank)

- ▶ Press any key on the keyboard.

or

- ▶ Deactivate the screen saver. Enter the appropriate password.

Brightness control is set to dark

- ▶ Adjust the brightness control. For detailed information, please refer to the operating manual supplied with your monitor.

Power cable not connected

- ▶ Switch off the monitor and the PC.
- ▶ Check that the monitor power cable is properly connected to the monitor and, depending on your device configuration level, to the device itself or to a grounded mains outlet.
- ▶ Check that the PC power cable is properly plugged into the PC and grounded mains outlet.
- ▶ Switch on the monitor and the PC.

Monitor cable not connected

- ▶ Switch off the monitor and the PC.
- ▶ Check that the monitor cable is properly connected to the PC and monitor.
- ▶ Switch on the monitor and the PC.

Wrong monitor has been set under Windows 2000

- ▶ Restart the PC.
- ▶ If the message *Starting Windows* appears, press function key **F8**

The *Windows 2000 Advanced Options Menu* appears.

- ▶ Select *Safe Mode* or *Safe Mode with Network*.
- ▶ Set the correct values for the attached monitor as described in the operating manual of the monitor by selecting *Start - Settings - Control Panel - Display - Settings*.

Wrong monitor has been set under Window XP

- ▶ Restart the PC.
- ▶ Press **F8** while the system is booting.

Either the *Windows Advanced Start Options* menu or the menu for selecting the operating system appears.


- ▶ If the menu for selecting the operating system appears, press **F8**.
- ▶ Select *Safe Mode* or *Safe Mode with Network*.
- ▶ Set the correct values for the attached monitor as described in the operating manual of the monitor by selecting *Start - Settings - Control Panel - Display* and then the *Appearance, Themes, Settings* tabs.

The wrong RAM modules have been inserted

See the technical manual for the mainboard for information on which memory modules can be used.

No mouse pointer displayed on the screen

- ▶ Shut down the operating system properly.
- ▶ Switch the PC off.
- ▶ Check that the mouse cable is properly connected to the system unit.
If you use an adapter or extension lead with the mouse cable, check the connections.
- ▶ Make sure that only one mouse is connected.
- ▶ Switch the PC on.

The mouse controller must be enabled if you use a PS/2 mouse on the PS/2 mouse port .

- ▶ Check in the *BIOS Setup* that the mouse controller is *Enabled*.
- ▶ Check that the mouse driver is properly installed and is present when the application programme is started. Detailed information can be found in the user guide for the mouse and application programme.

The floppy disk cannot be read or written

- ▶ Check that the write protection of the floppy disk or the floppy disk drive is activated (refer to the "BIOS Setup" manual and if necessary to the technical manual for the mainboard).
- ▶ Check the entry for *Diskette A:* in the *Main* menu of the *BIOS Setup*.
- ▶ Check that the floppy disk drive controller is enabled (refer to the "BIOS Setup" manual and if necessary to the technical manual for the mainboard).
- ▶ Check that the cables of the floppy disk drive are properly connected (refer to "Replacing the floppy disk drive" chapter).

Time and/or date is not correct

You can set the time and date in the *BIOS Setup* or in the operating system.

- ▶ Set the time and date.



If the time and date are repeatedly wrong when you switch on your PC, the on-board battery is flat. Change the lithium battery as described in the "Extensions to the mainboard" - "Replacing lithium battery" chapter.

Error messages on the screen

Error messages and their explanation are contained:

- in the technical manual for the mainboard
- in the "BIOS Setup" manual
- in the documentation for the programmes used.

Restoring the hard disk contents

Should you need to restore your hard disk, the instructions are provided on the case of the "Recovery CD" (delivered with your system).

Tips

The PC cannot be switched off with the ON/OFF switch

Cause: The PC was not switched on with the ON/OFF switch.

- ▶ Press the ON/OFF switch again.

Cause: System crash

- ▶ Press and hold the ON/OFF switch for at least four seconds until the PC switches off.

Out of system resources

If you have too many applications running at once, you may experience problems due to a lack of system resources. In this case you should:

- ▶ close unnecessary applications

or

- ▶ run the applications in a different order.

Other manuals

Additional manuals are provided as PDF files on the "User Documentation" or "Drivers & Utilities" CD.

System expansions



As the PC has to be shut down in order to install/deinstall system hardware components, it is a good idea to print out the relevant sections of this chapter.

It may be necessary to update the BIOS when carrying out a system expansion or hardware upgrade. Additional information is contained in the "BIOS Setup" manual or possibly in the technical manual for the mainboard.

When installing components that become very hot, make sure that the maximum permissible temperatures of the individual components are not exceeded.

The PC must be switched off when installing/removing the system expansions and may not be in the energy-saving mode.

This chapter describes all the activities required to modify your PC hardware (e.g. installing boards or drives).

Read the supplied documentation before installing new drives and/or boards.

Refer to the technical manual for the mainboard before making any extensions to the mainboard.

Information about boards

Take care with the locking mechanisms (catches and centring pins) when you are replacing boards or components on boards.

To prevent damage to the board or the components and conductors on it, please take care when you insert or remove boards. Make sure expansion boards are inserted straightly.

Never use sharp objects (screwdrivers) for leverage.



Boards with electrostatic sensitive devices (ESD) are identifiable by the label shown.

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

- You must always discharge static build up (e.g. by touching a grounded object) before working.
- The equipment and tools you use must be free of static charges.
- Remove the power plug from the mains supply before inserting or removing boards containing ESDs.
- Always hold boards with ESDs by their edges.
- Never touch pins or conductors on boards fitted with ESDs.

Opening the casing

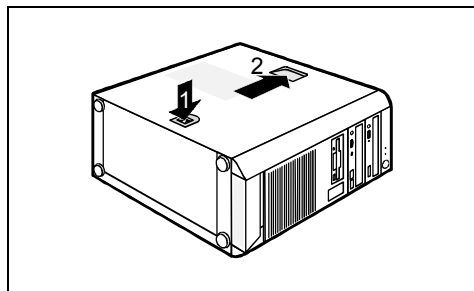
- ▶ Switch the PC off. The PC must not be in the energy-saving mode!



Please take note of the safety information in the "Important notes" chapter.

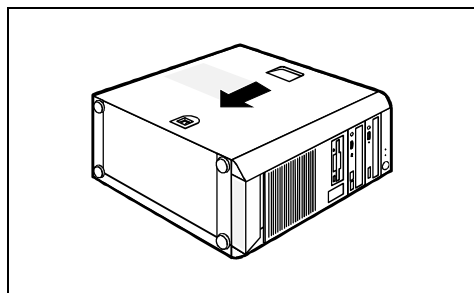
Pull the power plug out of the mains outlet!

- ▶ If the cables connected to the PC are in the way, disconnect them from the PC.
- ▶ Place the PC on its right side.



- ▶ Press on the clip (1).
- ▶ Push the top cover in the direction of the arrow (2).

Closing the casing



- ▶ Push the top cover down in the direction of the arrow (1) until it engages.

- ▶ Return the PC to its original position.
- ▶ If you have disconnected cables, reconnect them to the connectors on the rear panel.

Installing and removing a board



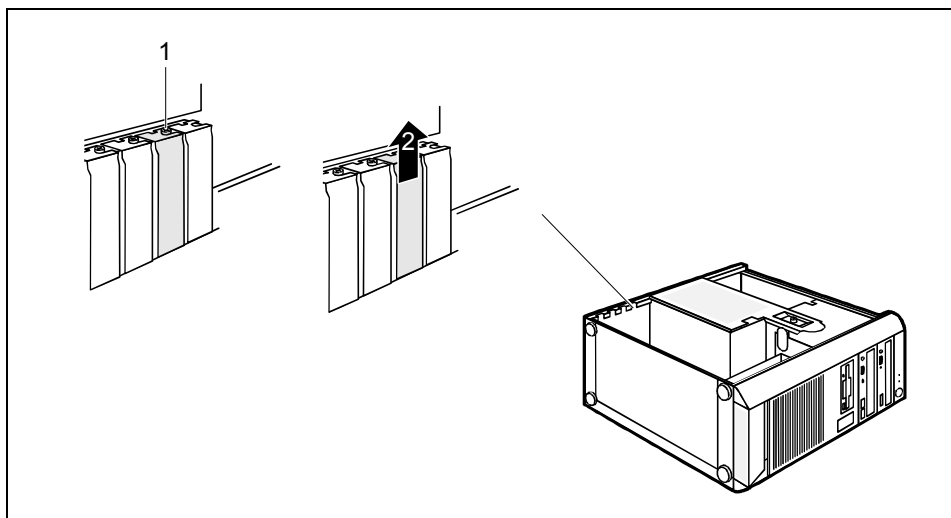
Please take note of the section "Information about boards".

In the upper three slots you can install boards with a length of up to 230 mm, and in the lower slot boards with a length of up to 315 mm.

The number, position and arrangement of the board slots on the mainboard can be found in the technical manual for the mainboard. Boards may already be installed when the device is shipped.

Installing a board

- Open the casing (see "Opening the casing").



- Remove the screw (1).
- Remove the rear slot cover plate from the slot (2).

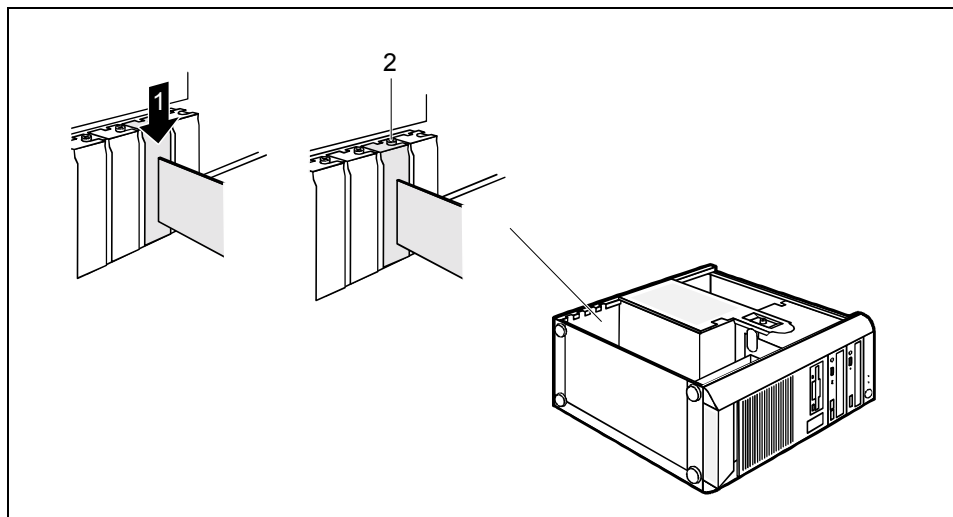


Do not dispose of the cover plate. For cooling, protection against fire and in order to comply with EMC regulations, you must refit the cover plate if you remove the board.

The top and the lowest slot are suitable for low-profile cards with an adapter.

- Take the new board out of its packaging.

- Make the required settings for the board.



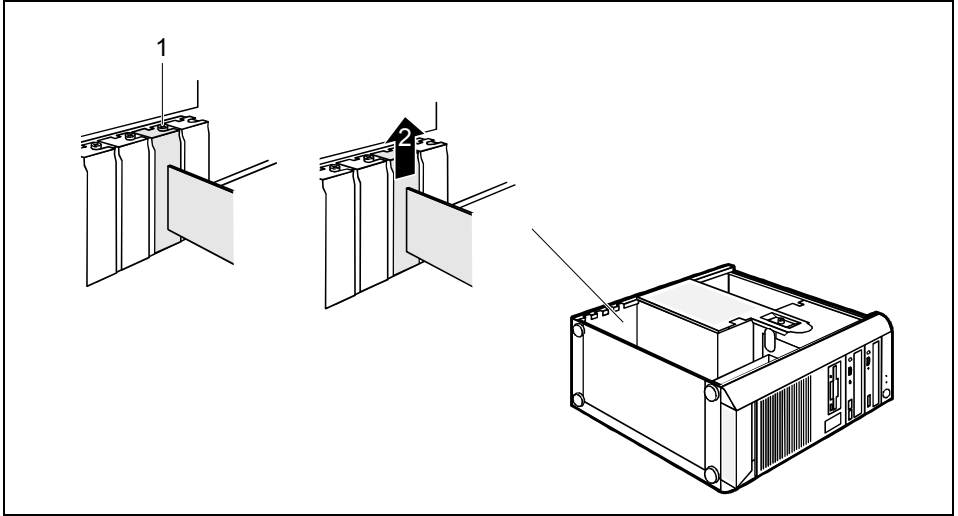
- Push the board up to its slot (1). Ensure that the end of a long board without angle bracket fits into the corresponding guide of the casing.
- Press the board into the slot so that it engages.
- Fasten the board into place with the screw (2).
- If necessary, connect the cables.
- Close the casing (see "Closing the casing").



If you have installed or removed a PCI board, please check the relevant PCI slot settings in the *BIOS Setup*. If necessary, change the settings. Further information is provided in the PCI board documentation.

Removing a board

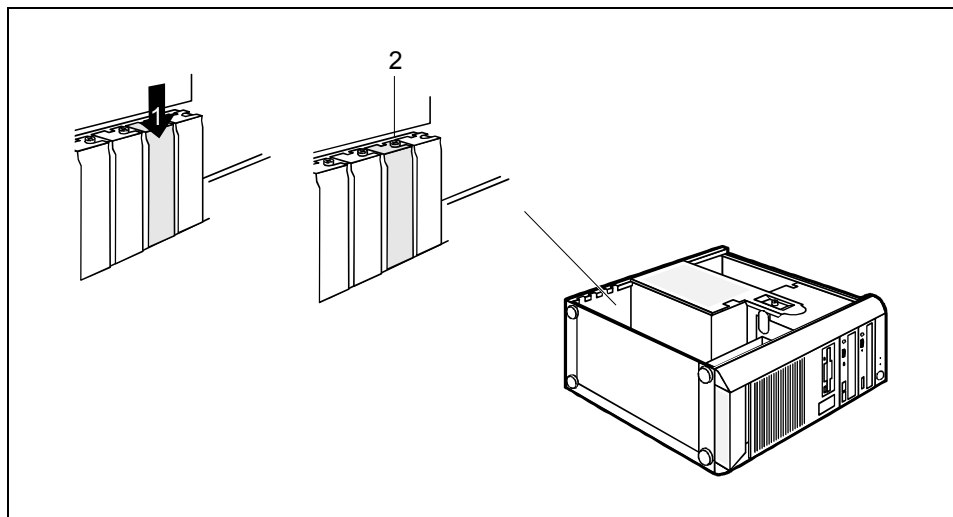
- ▶ Open the casing (see "Opening the casing").
- ▶ Disconnect the cables connected to the board.



- ▶ Remove the screw (1).
- ▶ Remove the board from the casing (2).
- ▶ Place the board into appropriate packaging.



To ensure proper cooling, fire protection and observation of the relevant EMC (electromagnetic compatibility) regulations, you must mount a rear slot cover plate.



- ▶ Push the rear slot cover plate into the slot (1).
- ▶ Fasten the rear slot cover plate with the screw (2).
- ▶ Close the casing (see "Closing the casing").

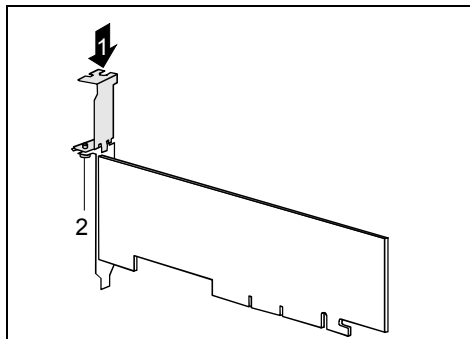


If you have installed or removed a PCI board, please check the relevant PCI slot settings in the *BIOS Setup*. If necessary, change the settings. Further information is provided in the PCI board documentation.

Low-Profile boards

For units with a particularly low overall height, there are so-called low-profile boards with a slot cover with a lower overall height to match the low-profile units. To also install these low-profile boards in normal board slots, you must mount a corresponding slot adapter beforehand

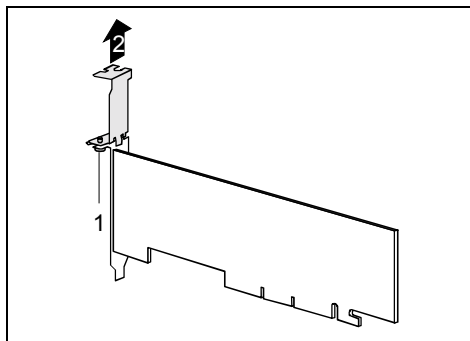
Mounting slot adapter



- Fit the slot adapter on the slot cover of the low-profile board (1) and screw it on (2).

Now you can install the low-profile board in a suitable slot like a normal board (see the chapter "Installing board").

Removing slot adapter



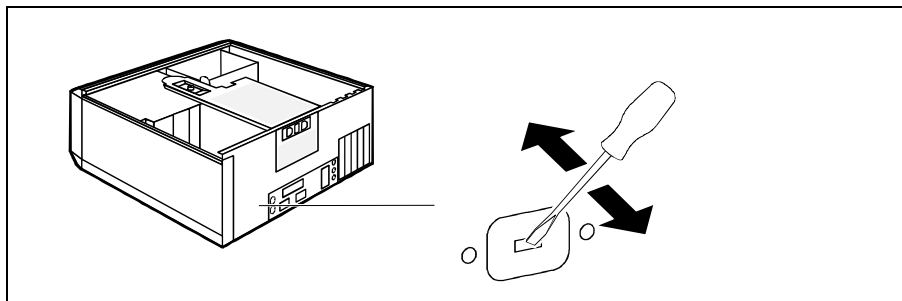
- Unscrew the screw (1) and remove the slot adapter (2).

Installing an additional serial port

The condition is that the mainboard has a free internal serial port.

There are two ways of installing an additional serial port:

1. An additional serial interface can be installed in an angled installation bracket like a board.
 - ▶ Install the angled installation bracket with the serial port like a board (see "Installing a board").
 - ▶ Connect the cable of the additional serial port to the connector on the mainboard.
2. An installation opening for the serial port is provided on the rear panel of the casing. As a result, no board slot is occupied when a second serial port is installed.



- ▶ Insert a screwdriver into the opening and break out the pre-stamped installation opening by moving it backwards and forwards.
- ▶ Detach the pins of the serial port from the angled installation bracket.
- ▶ Secure the serial port to the rear panel of the device with the pins.
- ▶ Connect the cable of the additional serial port to the connector on the mainboard.

Installing and removing drives

The PC casing can accommodate a total of five drives:

- three accessible drives
(two 5 1/4 inch drives and one 3 1/2 inch drive)
- two non-accessible drives
(both 3 1/2 inch drives with half installation height)

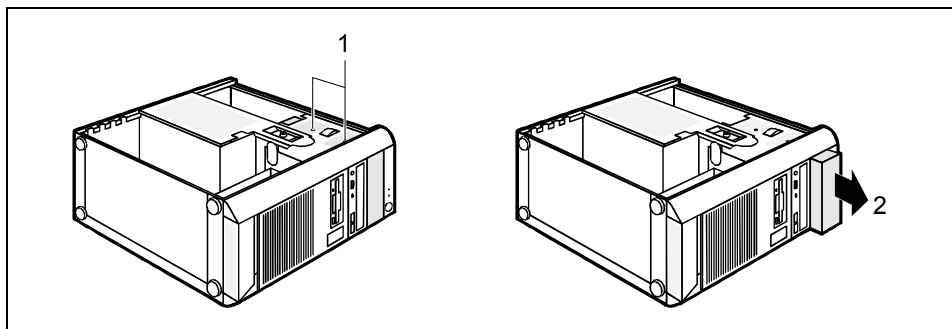
"Accessible drives" are e.g. DVD or CD ROM drives, into which a data carrier can be inserted from outside. Non-accessible drives are e.g. hard disk drives.

IDE drives

Four IDE drives are supported as standard equipment. Ideally, hard disks are connected to IDE interface 1 and other drives (e.g. CD ROM drive) to IDE interface 2 (see also the technical manual for the mainboard).

Installing an accessible drive

- Open the casing (see "Opening the casing").



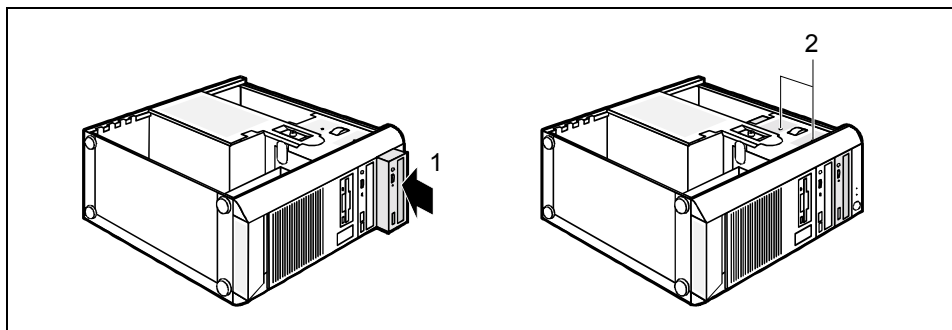
- Remove the screws (1) and take the blind insert out of the casing (2).



Do not dispose of the blind insert. For cooling, protection against fire and in order to comply with EMC regulations, you must refit the blind insert if you remove the drive later.

- Take the new drive out of its packaging.

- ▶ Adjust the required settings on the drive (if necessary, on already-installed drives as well).



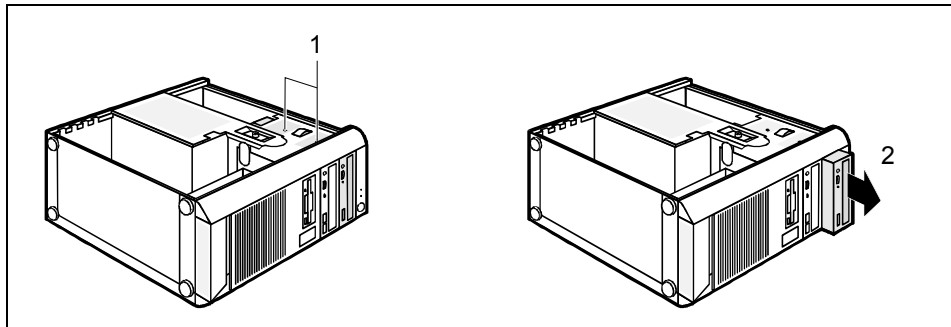
- ▶ Slide the drive into its bay (1).
- ▶ Fasten the drive into place with the screws (2).
- ▶ Plug the data and the power supply connectors into the drive. Make sure the polarity is correct.
- ▶ Close the casing (see "Closing the casing").



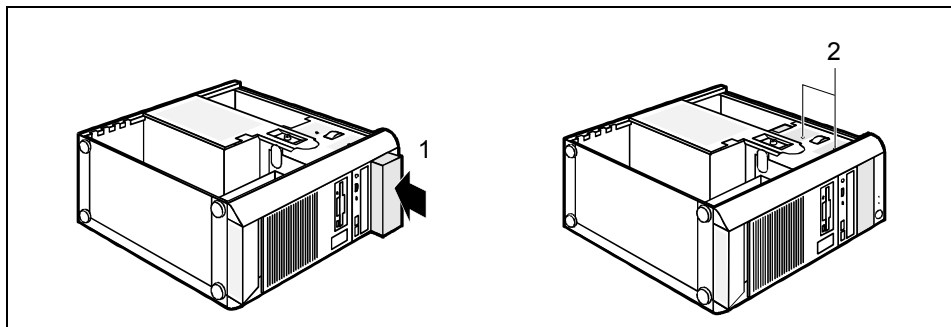
It may be necessary to modify the entry for the drive in the *BIOS Setup*.

Removing an accessible drive

- Open the casing (see "Opening the casing").



- Remove the screws (2), and take the drive out of the PC casing (3).
- Pull the data and the power supply connectors from the drive.



- Push the blind insert into the casing (1).
- Secure the blind insert with the screws (2).



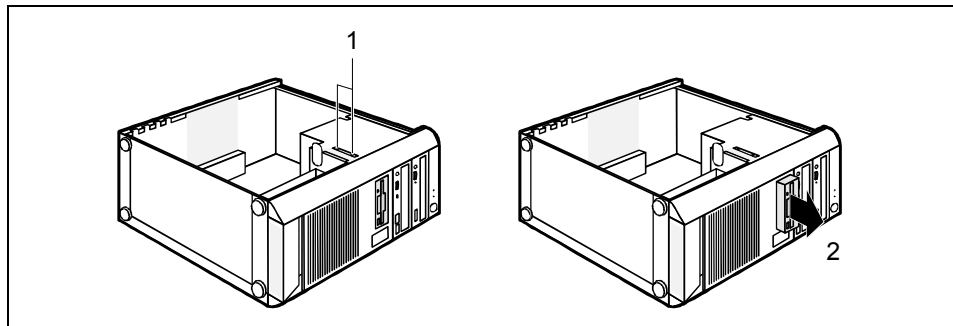
It may be necessary to modify the entry for the drive in the *BIOS Setup*.

Replacing the floppy disk drive

- Open the casing (see "Opening the casing").



Before you can replace the floppy disk drive, you must remove the power supply unit, see the chapter "Removing the power supply".



- Remove the data and power supply connectors from the floppy disk drive.
- Remove the screws (1) on the left side of the floppy disk drive.
- Slide the floppy disk drive out of the casing in the direction of the arrow (2).
- Take the new floppy disk drive out of its packaging.
- Slide the new floppy disk drive into the case opposite the direction of the arrow (2).
- Fasten the floppy disk drive with the screws (1).
- Fit the data and power supply connectors to the floppy disk drive. Make sure the polarity is correct.
- Close the casing (see "Closing the casing").

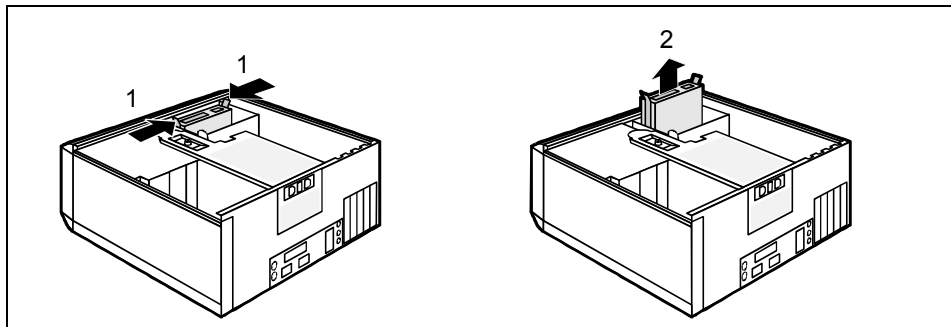


It may be necessary to modify the entry for the drive in the *BIOS Setup*.

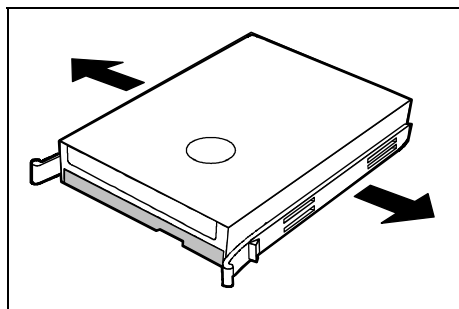
Installing/removing hard disk drive with EasyChange rail

- Open the casing (see "Opening the casing").

Removing a hard disk drive



- Press the EasyChange rails mounted on the hard disk drive together somewhat (1) and pull the hard disk drive out of the case in the direction of the arrow (2).
- Disconnect all cables connected to the drive (data cable, power supply cable).



- Pull the EasyChange rails off the hard disk drive.

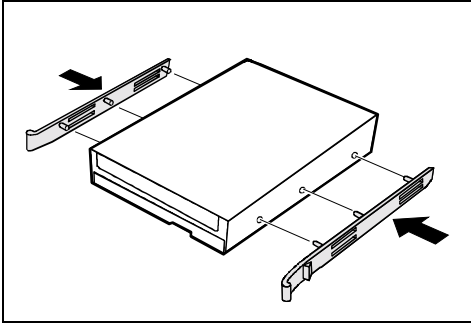


It may be necessary to modify the entry for the drive in the *BIOS Setup*.

- Connect the cables to the hard disk drive.
- Close the casing (see "Closing the casing").

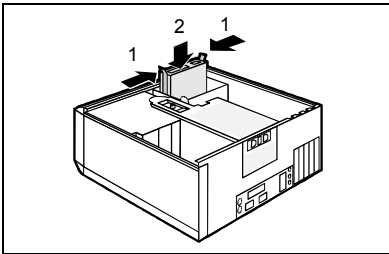
Installing a hard disk drive

- ▶ Take the new hard disk drive out of its packaging.
- ▶ Make the required settings (e.g. master/slave, cable select) on the drives.



- ▶ Secure the EasyChange rails on the side of the hard disk by inserting the upper pins of the EasyChange rail in the corresponding holes of the hard disk.

- ▶ Connect the cables to the hard disk drive.



- ▶ Press the EasyChange rails mounted on the hard disk drive together somewhat (1) and slide the hard disk drive into the case in the direction of the arrow (2).

- ▶ Close the casing (see "Closing the casing").



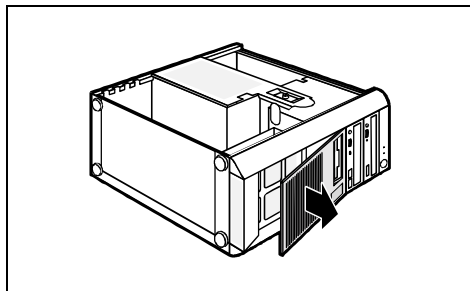
It may be necessary to modify the entry for the drive in the *BIOS Setup*.
EasyChange rails for a second hard disk drive are mounted on the drive cage.

Installing front USB or USB audio ports

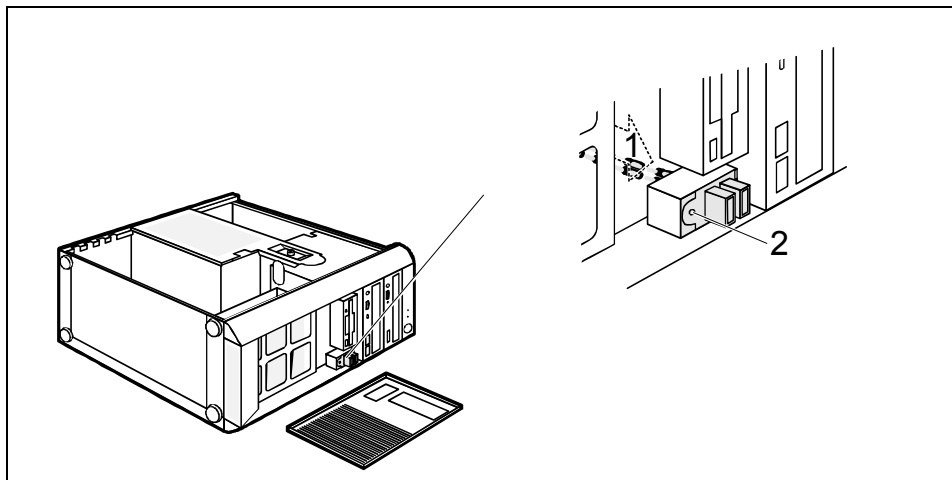
You can install the following variants in the recess next to the floppy disk drive:

- two USB ports
- or a USB port combined with two audio ports
- or two USB interfaces combined with two audio ports

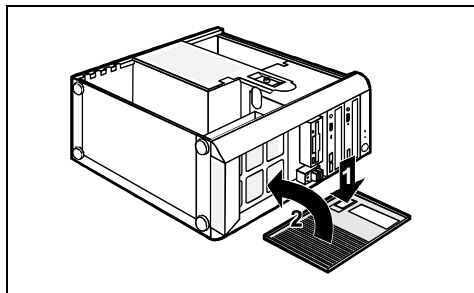
Each of the audio ports have the connections Headphone OUT and Microphone IN.



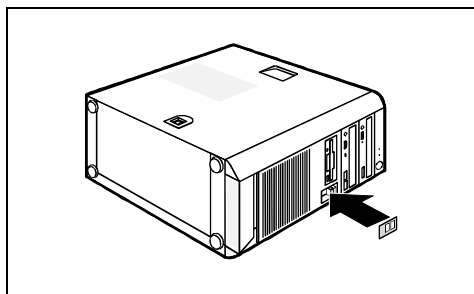
- Remove the cover.



- Push the USB or USB audio port into the installation opening (1) and secure the USB or USB audio interface with the screw (2).
- Connect the USB cable and, if necessary, the audio cable to the corresponding connector on the mainboard (see also the technical manual for the mainboard).

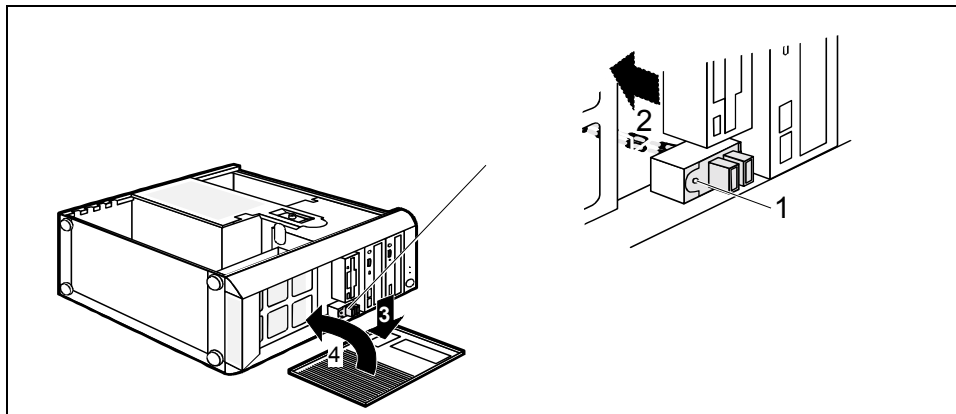


- ▶ Remove the blind cover of the installation opening by pressing against it from the inside (1).
- ▶ Place the cover on the casing again (2).



- ▶ Remount the port cover, if present.

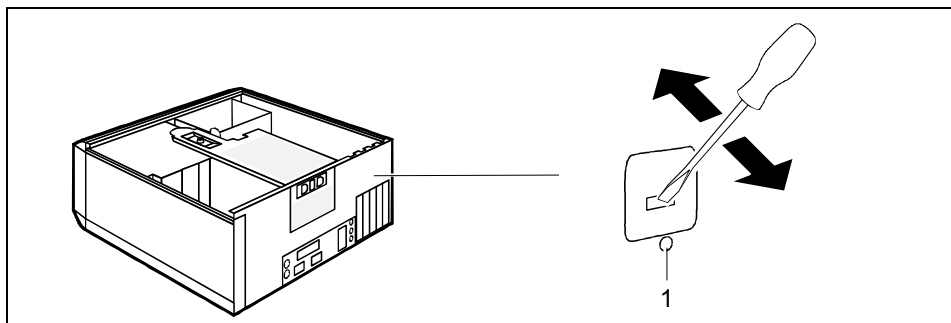
Installing USB or USB audio ports



- ▶ Disconnect the USB cable and, if necessary, the audio cable from the mainboard.
- ▶ Remove the port cover, if present.
- ▶ Remove the screw (1) and pull the USB interface or the USB audio interface upwards out of the location (2).
- ▶ Remount the blind cover of the bay (3) from the front.
- ▶ Re-attach the cover (4).

Installing USB port on back

An installation opening for the USB port is provided on the rear panel of the casing. As a result, no board slot is occupied when a second serial port is installed.

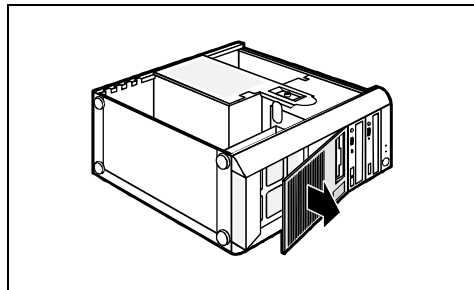


- ▶ Insert a screwdriver into the opening and break out the pre-stamped installation opening by moving it backwards and forwards.
- ▶ Slide the USB port into the installation opening and secure it with the screw (1).
- ▶ Connect the USB cable to the mainboard.

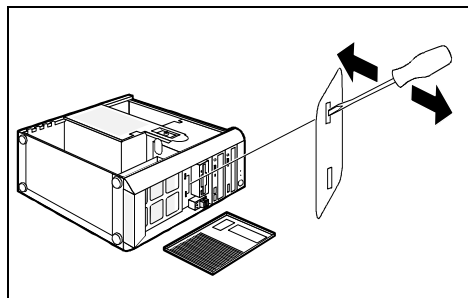
Installing WLAN module

There is an installation opening on the front of the casing which you can use to install a WLAN module. As a result, no board slot is occupied when a second serial port is installed.

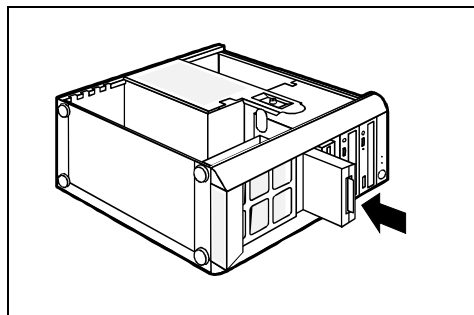
- Open the casing (see "Opening the casing").



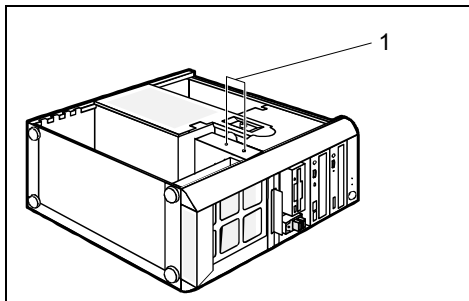
- Remove the cover.



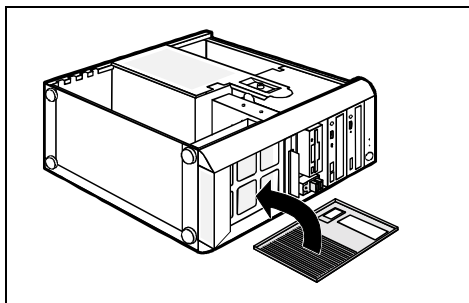
- Insert a screwdriver into the opening and break out the pre-stamped installation opening by moving it backwards and forwards.



- Slide the WLAN module into the open installation opening.



- Secure the WLAN module with the two screws (1) provided.

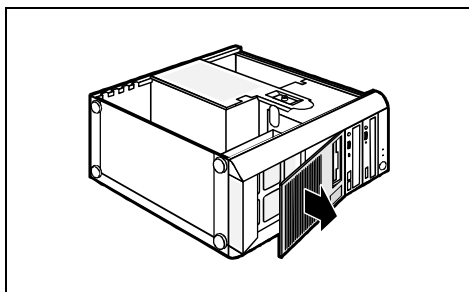


- Place the cover on the casing again.

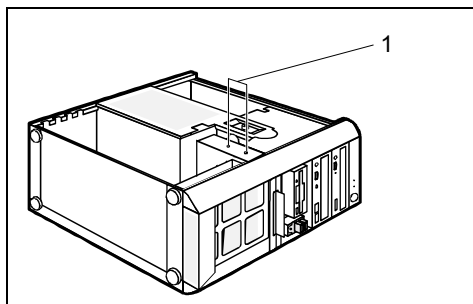
- Connect the USB cable of the WLAN module onto the corresponding connector on the mainboard (also see "Technical Manual" for the mainboard).
- Close the casing (see "Closing the casing").

Removing WLAN module

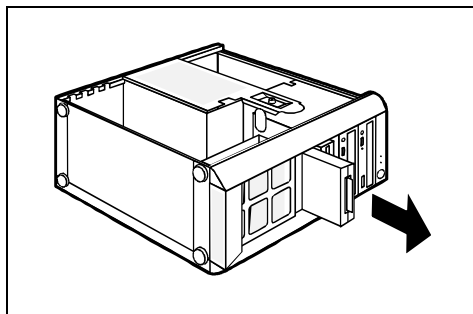
- Open the casing (see "Opening the casing").
- Disconnect the USB cable of the WLAN module from the connector on the mainboard.



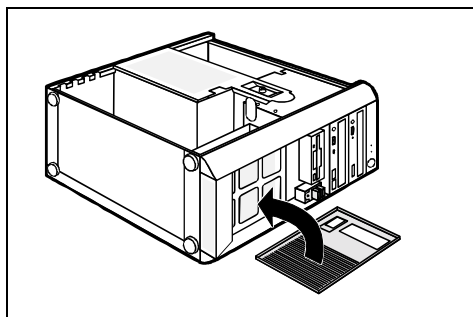
- Remove the cover.



- Remove the two screws (1).



- Pull the WLAN module out of the installation opening.



- Place the cover on the casing again.

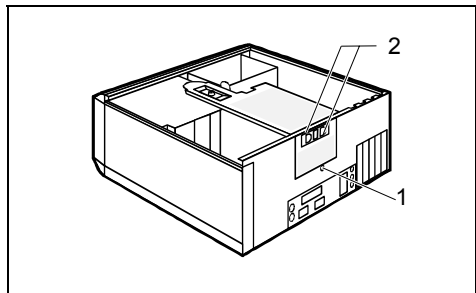
- Close the casing (see "Closing the casing").

Extensions to the mainboard

Details on whether you can upgrade the main memory or the processor are provided in the technical manual for the mainboard. Below the necessary steps are described to enable you to work on the system board.

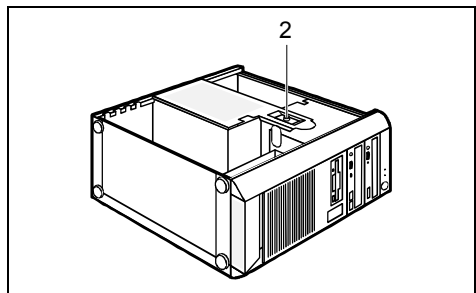
- Open the casing (see "Opening the casing").

Removing the power supply

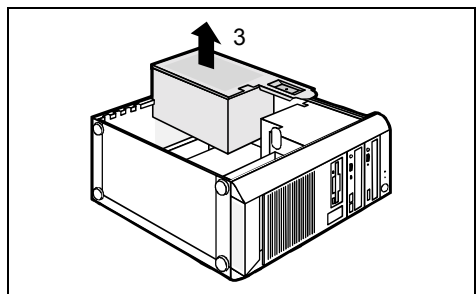


- Remove the knurled screws (1) on the rear of the casing.
- Disconnect the power cables - if connected - from the power supply (2).

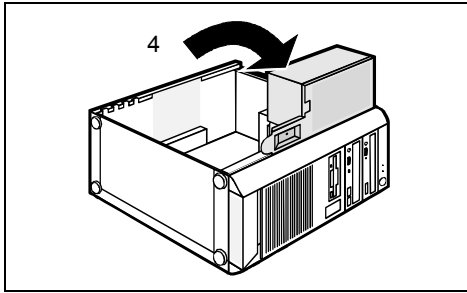
The power connections are mechanically locked when the power supply is removed.



- Loosen the knurled screws (2) on the side of the power supply.



- Carefully pull the power supply out of the casing (3).



- Tilt and turn the power supply unit so that it engages in the mounting on the front casing (4).



The removed power supply may not be connected to the power system (danger of electrical shock)!

The power connections are mechanically locked when the power supply is removed.

Upgrading main memory

- Upgrade the memory as described in the technical manual for the mainboard.
- Close the casing (see "Closing the casing").

Replacing the processor

- Replace the processor as it is described in the technical manual for the mainboard.
- Close the casing (see "Closing the casing").

Replacing lithium battery

In order to permanently save the system information, a lithium battery is installed to provide the CMOS-memory with a current. A corresponding error message notifies the user when the charge is too low or the battery is empty. The lithium battery must then be replaced.



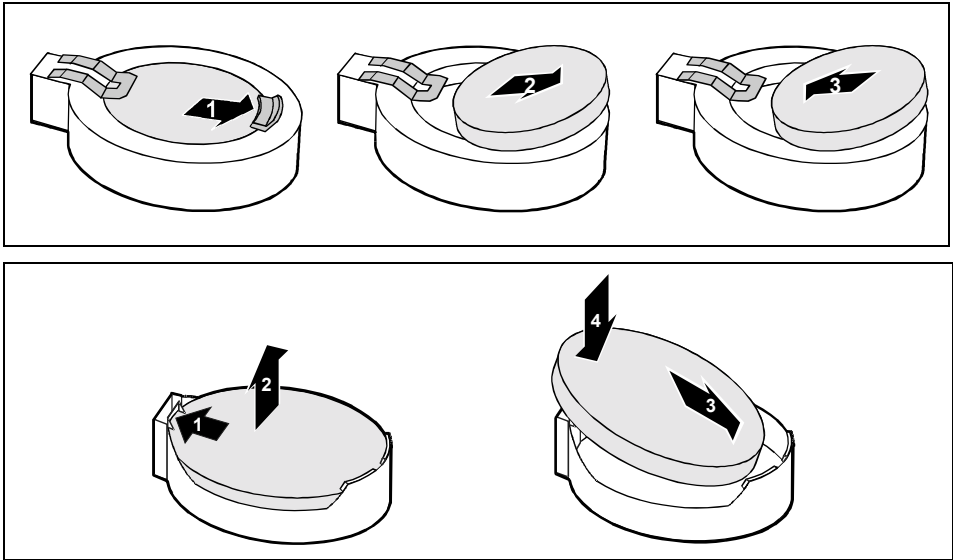
Incorrect replacement of the lithium battery may lead to a risk of explosion!

The lithium battery may be replaced only with an identical battery or with a type recommended by the manufacturer.

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

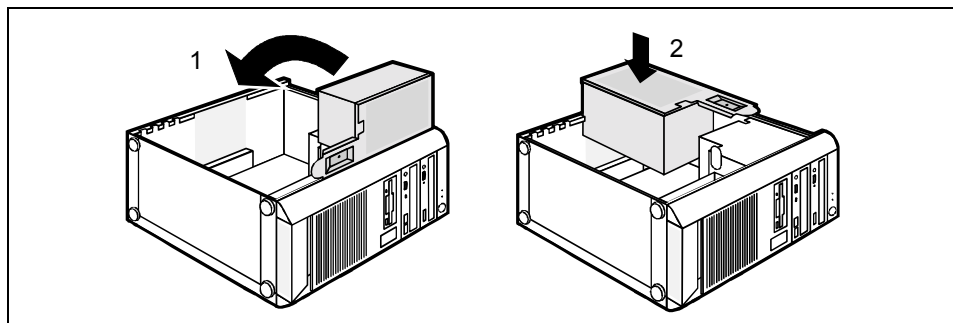
Make sure that you insert the battery the right way round. The plus pole must be on the top!

The lithium battery holder exists in different designs that function in the same way.

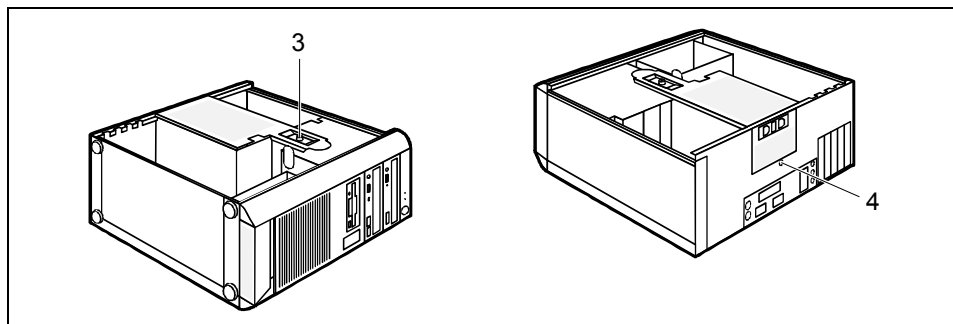


- ▶ Press the locking lug in the direction of the arrow; the battery jumps somewhat out of the holder (1).
- ▶ Remove the battery (2).
- ▶ Push the new lithium battery of the identical type into the holder (3) and press it downward until it engages (4).
- ▶ Close the casing (see "Closing the casing").

Installing the power supply



- ▶ Tilt and turn the power supply unit (1) so that you can place the power supply in the casing. Watch the guide rails when doing so.
- ▶ Firmly press the power supply in the direction of the arrow (2) to deactivate locking of the power connections.



- ▶ Fasten the knurled screws (3) on the side of the power supply.
- ▶ Then fasten the knurled screws (4) on the rear of the chasing.

Technical data

Electrical data

Regulations complied with: IEC 60950-1 / EN 60950-1 / VDE 0805 / UL 60950
CSA 22.2 No.60950

Protection class: I
Rated voltage range: (selectable) 100 V -127 V / 200 V - 240 V
Frequency: 50 Hz - 60 Hz

Max. rated current
• Casing with monitor socket 100 V -127 V / 6.0 A
200 V -240 V / 3.0 A
• Monitor socket (output) 100 V -127 V / 3.0 A
200 V -240 V / 1.5 A

Dimensions

Width/depth/height: 202 mm/376 mm/372 mm

Weight

with the basic configuration ca. 11 kg in basic configuration

Environmental conditions

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

Temperature:
• Operating (3K2) 15 °C 35 °C
• Transport (2K2) -25 °C 60 °C

Condensation in operating must be avoided.

Clearance required to ensure adequate ventilation:

• top min. 200 mm
• left min. 200 mm
• front min. 200 mm
• rear min. 200 mm

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