

BEETLE /M



Modular POS System

User Guide

Edition June 2005

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Manufacturer's Certification



The device complies with the requirements of the EEC directive 89/336/EEC with regard to "Electromagnetic compatibility" and 73/23/EEC "Low Voltage Directive".

Therefore, you will find the CE mark on the device or packaging.

Tested Safety



The POS system has been provided with the symbol for "Tested Safety".



In addition, the BEETLE has received the UL symbol and cUL symbol.

FCC-Class A Declaration

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Le présent appareil numérique ne génère pas de bruits radioélectriques dépassant les limites applicable aux appareils numériques de la "Class A" prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

Note on the laser

If your device is equipped with a CD ROM drive, the following condition applies:

The CD ROM drive contains a light-emitting diode (LED), classified according to IEC 825-1:1993:LASER CLASS 1; it must not be opened.

Important notes

The modular POS system BEETLE /M conforms to the current safety standards for data processing equipment.

- If this device is taken from a cold environment into the operating room, moisture condensation may form. The device must be absolutely dry before being put into service; an acclimatization period of at least two hours must therefore be observed,
- This device is equipped with a safety-tested power cable and may be connected only to a prescribed grounded-contact power socket.
- When setting up the device, ensure that the power socket on the device and the grounded-contact power socket are easily accessible.
- To disconnect the device from the supply voltage completely, switch off the device und disconnect the power plug.
- Ensure that no foreign objects (e.g. office clips) find their way into the device, as this may lead to electric shocks or short-circuits.
- In order to ensure that the device is well ventilated and to prevent overheating, do not obstruct the ventilation slots on your device.
- Never plug in or unplug data communication lines during thunderstorms.
- Protect devices from vibrations, dust, moisture and heat.
- Always dispose of used parts in an environmentally safe manner.
- The lithium battery must be replaced by the end user only by identical batteries or types recommended by Wincor Nixdorf International GmbH.

- The lithium battery must be disposed of in accordance with local regulations for special waste.
- In emergencies (e.g. damaged housing or damaged power cable, penetration by liquids or foreign bodies), the device must be switched off immediately, the power plug disconnected and the Customer Service of Wincor Nixdorf International GmbH or your dealer must be notified.
- Your BEETLE POS system is the result of modern technical innovation. So please see for according structural and technical surroundings to guarantee a faultless and efficient work of your BEETLE. Therefore, you should connect your BEETLE or other IT-devices only to power supply systems with separately guided protective earth conductor (PE). This kind of electricity system is known as TN-S network. Do not use PEN conductors!
Please also observe the recommendations of the norm DIN VDE 0100, Part 540, Appendix C2 as well as EN50174-2, §5.4.3.
Thus you can help to avoid possible malfunctions.
- The device may only be repaired by authorized qualified personnel. Unauthorized opening of the device and inexpertly carried-out repairs may not only seriously jeopardize the safety of the user, but also cancel all warranty and liability agreements.



Warning

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Introduction

The BEETLE /M is the compact, powerful and economical basis for your POS system.

The BEETLE /M conforms to the PC/AT industry standard. Powerful processors ensure a quick processing of all operations.

You can connect a variety of different peripheral devices to your BEETLE /M and even the choice of the software is not limited to a certain product.

Optional the BEETLE /M can be equipped with a floppy disk drive, a CD ROM drive or a memory card adapter.

This provides you with a considerable degree of flexibility when arranging the configuration of your POS system.

The BEETLE can also be connected to a network once an appropriate network card has been installed.

In the event of a mains voltage failure, the version with battery and corresponding software enable you to save the data by means of a controlled program shutdown.

Whatever configuration you need: Wincor Nixdorf International GmbH offers the right solution. So, whenever you want to expand your BEETLE /M, please contact your Wincor Nixdorf International GmbH branch office or your dealer.

About this manual

This manual describes the modular POS system BEETLE /M with a Celeron/Pentium III processor from Intel.

This documentation is intended to help you work with the POS system and to serve as a reference work. The detailed table of contents help you find the desired information quickly and easily.

The first section describes

- everything you need to do before switching on the POS system and how to connect peripherals to the BEETLE /M.

The second section contains

- a brief overview of the components of your BEETLE POS system. Here, you will also find a detailed description of recurring actions, for example, how to use the disks.

The Appendix

- contains the most important technical data and a glossary.



Notes in the manual are marked by this symbol.



This symbol is used for warnings.

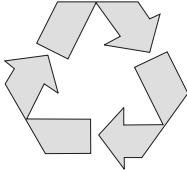
The type and scope of application programs depend on the customer's own selection; therefore, software will not be discussed further in this manual.

You will find a description of the BIOS Setup and the Central Processing Unit in a separate manual ("POS Motherboard with Intel Celeron CPU"), which also is part of the scope of supply.

Care of the BEETLE /M

Clean your BEETLE/M at regular intervals with a suitable plastic-surface cleaner which can be ordered from Wincor Nixdorf International GmbH. Make sure that the power plug is disconnected and that no liquid finds its way into the device.

Recycling the BEETLE /M



Environmental protection does not begin when it comes time to dispose of the BEETLE; it begins with the manufacturer. This product was designed according to our internal norm "Environmental conscious product design and development"

The modular BEETLE /M POS System is manufactured without the use of CFCs und CCHs and is produced mainly from reusable components and materials.

The processed plastics can, for the most part, be recycled. Even the precious metals can be recovered, thus saving energy und costly raw materials.

Please do not stick labels onto plastic case parts. This would help us to re-use components and material.

You can protect our environment by only switching on your equipment when it is actually needed. If possible, even avoid the stand-by-mode as this wastes energy, too. Also switch your equipment off when you take a longer break or finish your work.

At this time, there are still some parts that are not reusable. Wincor Nixdorf International GmbH guarantees the environmentally safe disposal of these parts in a Recycling Center, which is certified pursuant to ISO 9001 and ISO 14001.

So don't simply throw your BEETLE POS system on the scrap heap when it has served its time, but take advantage of the environmentally smart, up-to-date recycling methods!

Please contact your competent branch or the Recycling Center Paderborn (for European countries) for information on how to return and re-use devices and disposable materials under the following mail address:

Email: info@wincor-nixdorf.com

We look forward to your mail.

Warranty

Wincor Nixdorf guarantees generally a warranty engagement for 12 months beginning with the date of delivery. This warranty engagement covers all those damages which occur despite a normal use of the product.

Damages because of

- improper or insufficient maintenance,
- improper use of the product or unauthorized modifications of the product,
- inadequate location or surroundings

will not be covered by the warranty.

For further information of the stipulation look at your contract.

All parts of the product which are subject to wear and tear are not included in the warranty engagement.

Please order spare parts at the Wincor Nixdorf customer service.

Spare Parts

All spare parts that can be ordered with their Order-Numbers are registered on a label inside the cover of the BEETLE /M. Please order spare parts at the Wincor Nixdorf customer service.

BEETLE /M - the individual POS System

Overview

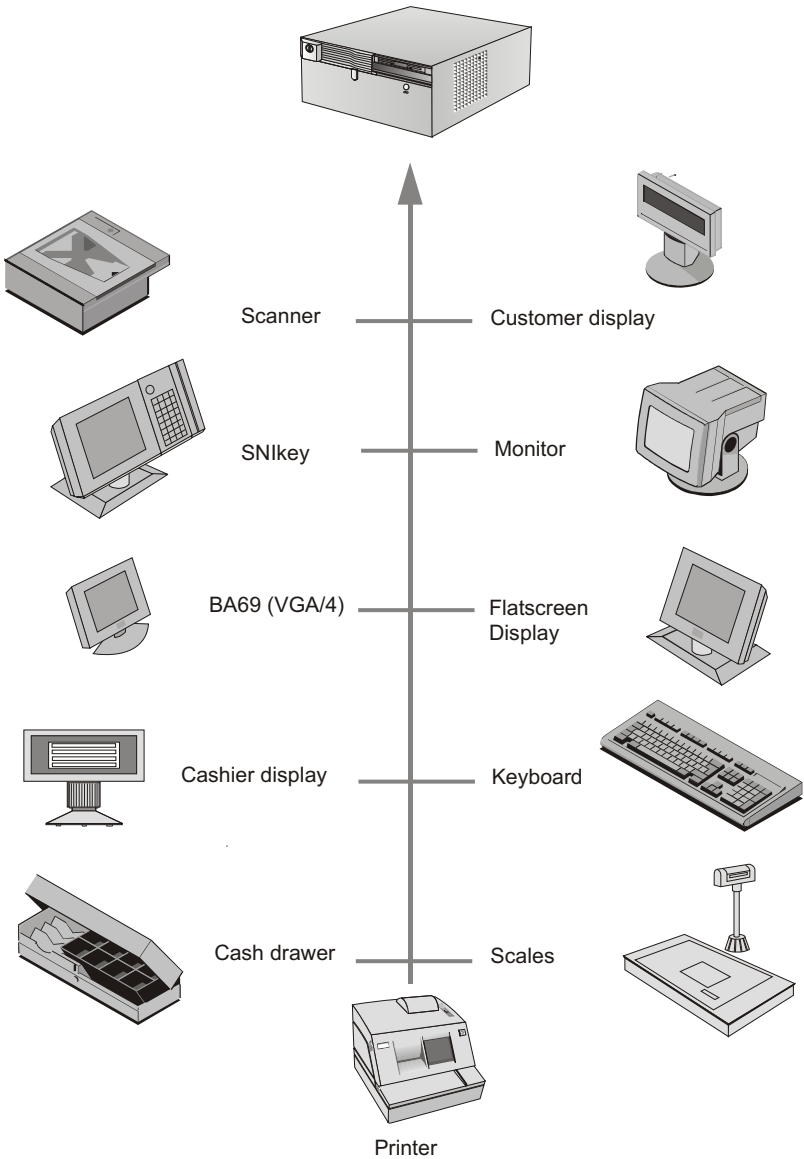
You can connect a variety of peripherals to your modular POS system BEETLE /M and thus implement a wide range of expansion stages. You can

- connect a two or four-line alphanumeric customer display and a four line cashier display. Alternatively you can connect Flat screens, such as BA69 (VGA/4), BA70 (b/w) or BA71, BA72 and BA73 (color),
- use various types of scanners such as distance, touch or stationary scanners,
- use scales and scanner scales (please take into account the official certification regulations),
- connect various printers,
- use POS keyboards with or without a swipecard reader,
- use different types of cash drawers,
- connect a monitor,
- install the POS workplace SNIkey,
- integrate the BEETLE /M in a network after installing a LAN board and
- upgrade the BEETLE /M, since it can accommodate one PCI- and alternatively another PCI card or a ISA card.

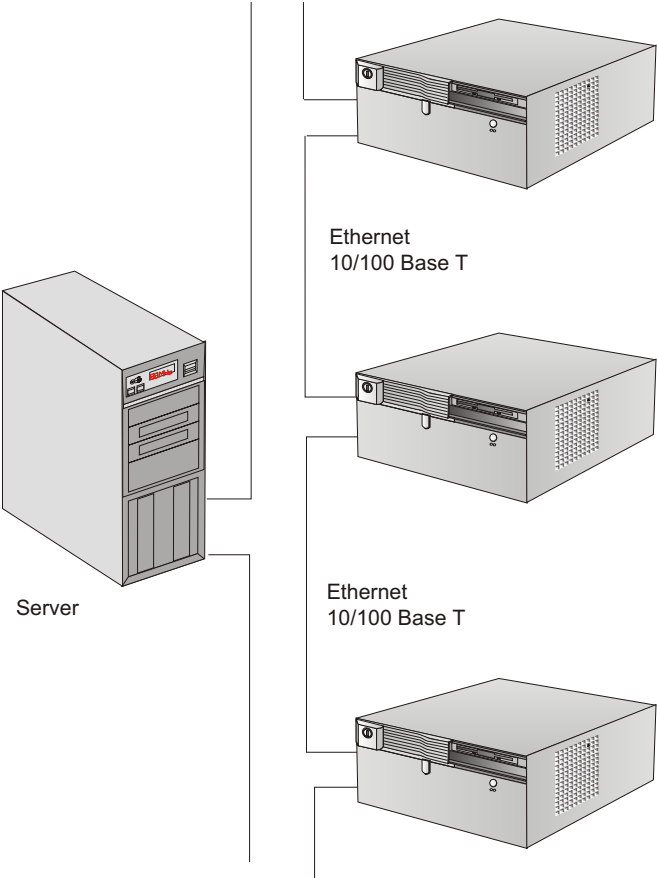
This means that the BEETLE /M can meet your requirements at all times, without having to exchange the complete system for a new one, thus saving you time and money.

The illustration below show you how your modular POS system can grow - from a scanner to integration in a network.

BEETLE /M Peripherals



BEETLE /M in a network



Before switching on the System

Unpacking and checking the System

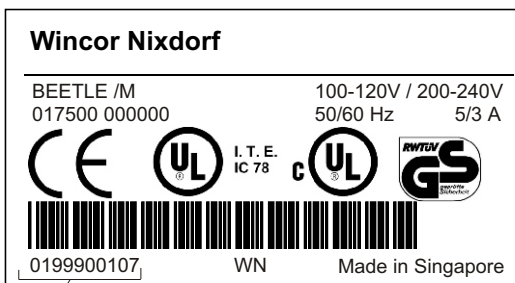
Unpack the components and verify that the scope of delivery is identical to the information on the delivery ticket.

The cardboard box contains the basic unit and a country-specific package. In addition, the basic unit may be equipped with the components network card, diskette drive, hard disk, DVD drive, CD-ROM drive and VGA-card, LCD adapter, AT-COM board, PCMCIA adapter or a combination of these components.

Should you notice any

- transport damages or
- discrepancies between package contents and delivery ticket or
- functional defects,

please inform your contracting parties or the branch office of Wincor Nixdorf immediately. Please indicate the number of your delivery ticket and delivery ticket position and serial number of the respective device. The serial number can be found on the label illustrated below which is located at the rear of the housing; it may be necessary to remove the cable cover and storage battery.



The serial number is located on the label below the bar code.



It is absolutely necessary to check the function of the original equipment before you perform any changes (e.g. by installing an expansion card). Only then is it possible to accept a functional defect as a claim.

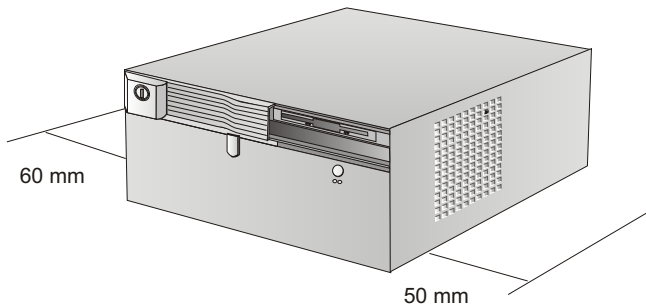


We recommend saving the original packaging for transport at a later time (protection from impact and shock).

Setting up the device

Set up the BEETLE /M POS system where it will not be exposed to extreme environmental conditions. Protect the device from vibrations, dust, moisture, heat and strong magnetic fields.

The lateral ventilation slots of the BEETLE /M must remain unobstructed to ensure sufficient ventilation of the equipment. If the equipment is to be fitted, you must ensure that the specified minimum distances are maintained and constant ventilation is provided. The immediate ambient temperature of the system must not exceed 40° C/104 °F. These requirements are met, for example, if the equipment is not built into an enclosed piece of furniture.

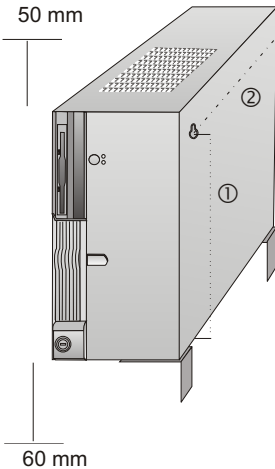


The fitting depth may be equal to the overall depth of the equipment including the cable cover, that is, 350 mm.

Vertical installation of the equipment

A bore hole is located at the underside which allows the BEETLE /M to be suspended by means of a screw. In addition, you must affix two angular brackets at the corresponding wall on that will evenly support the BEETLE /M. The minimum top and bottom distances listed in the figure must be maintained; otherwise, a sufficient ventilation of the equipment is not guaranteed.

BEFORE SWITCHING ON THE SYSTEM



The distance between the screw hole and the supporting side of the BEETLE /M measures 227 mm (1).

The distance from the screw hole to the rear wall of the BEETLE /M measures at least 230 mm (2).

The screw must not be stronger than 4.5 mm.

- A surface made of nonflammable material (e.g. concrete or metal) must be located underneath the vertically mounted BEETLE /M.
- Install the equipment so that the side with the fan points upward. This is the side with the lower number of ventilation slots.
- Ensure that the angular brackets do not cover the ventilation slots of the BEETLE /M.
- CD or DVD drive may be operated in horizontal position only. If necessary, the BEETLE /M must be de-installed and temporarily set up horizontally to use the CD-ROM/DVD drive (e.g. for loading programs).
- The following minimum clearances must also in vertical mounting be provided in free convection to ensure sufficient ventilation:

horizontal placement: left side: 60 mm, right side: 50 mm

vertical placement: upwards: 50 mm, downwards: 60 mm

Cabling of the BEETLE /M

Follow the steps below in the order given when installing devices:

- Make sure that the power switch on the front of the housing is set to OFF, i.e. that it visibly protrudes. You may have to open the slide in order to do this.
- If present, the cable cover must be removed.

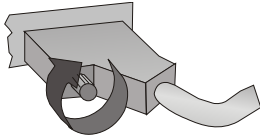
BEFORE SWITCHING ON THE SYSTEM

- Plug one end of the power cable into the power cord receptacle on the BEETLE /M.
- Plug the other end of the power cable into a grounded-contact power socket.
- Plug in and secure the data cable.

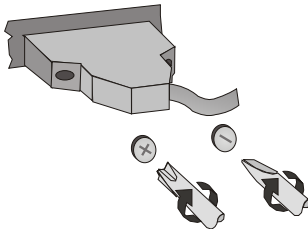


Always make sure that the system is switched off when you do cabling works.

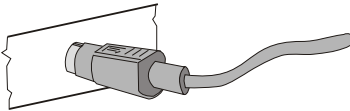
Securing the data cable



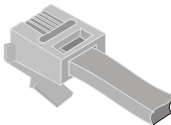
Secure interface connectors with knurled screws manually.



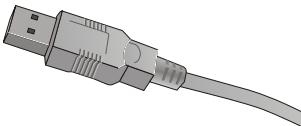
The interface connectors screws made of metal can be secured with a screwdriver. Screws made of plastic must be secured manually only.



Mini-DIN plugs lock in when you insert them. Check the lock by slightly pulling the cable. Maybe you will have to lock the plug by slightly pushing the cable.

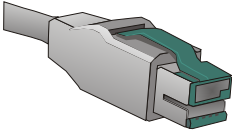


RJ12 plugs lock in when you insert them.

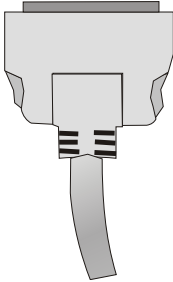


Non-powered USB connectors are not locked upon insertion and can be unplugged by slightly pulling on them.

BEFORE SWITCHING ON THE SYSTEM



Powered USB connectors are locked upon insertion.



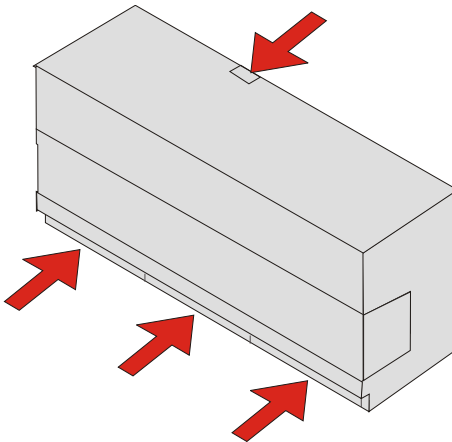
TFT connectors are locked upon insertion.

Replace the cable cover after the cables have been mounted (see next page).

Mounting the cable cover

The scope of supply of your BEETLE /M includes a cable cover. Before mounting the device, you should first remove the cable openings where necessary. This depends on the cables which you wish to lay.

Tools are not required as the plastic parts can be removed by hand.

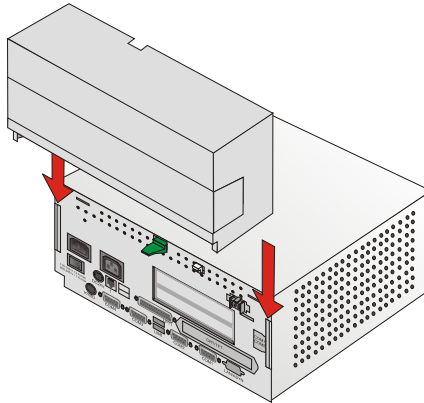


BEFORE SWITCHING ON THE SYSTEM

In order to mount the cable cover, insert it in the guides marked with arrows in the figure below.



In doing so, ensure that the cable cover does not fit a skew.



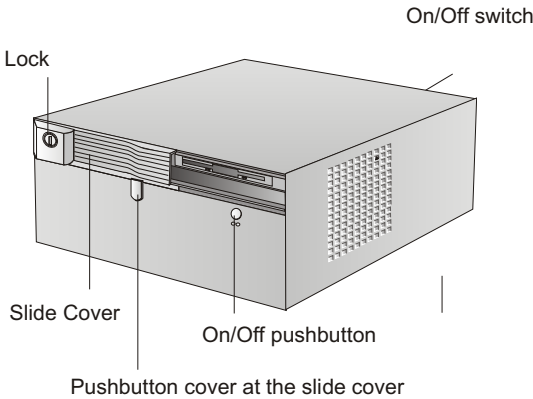
Connecting to the mains power supply

All devices belonging to the modular BEETLE /M POS system that have a separate power cable must be connected to the same electric circuit.

- Ensure that the power switch on the POS terminal housing is switched off.
- Make sure that all data cables on the system unit and peripherals are connected correctly.
- Plug all power cables belonging to the BEETLE and the peripherals into the grounded-contact power sockets.

You can now switch on the BEETLE /M by means of the switch on the rear of the housing. Push the ON button at the front of the box (approx. 4 seconds). You may have to unlock the slide and move it to the left.

BEFORE SWITCHING ON THE SYSTEM



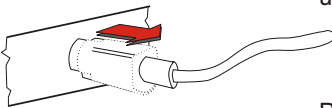
The power pack can be connected to all standard power supply networks. The unit adjusts automatically to the respective voltage. A fan provides the required ventilation. The maximum output of the power pack is 150 W.

Disconnecting cables

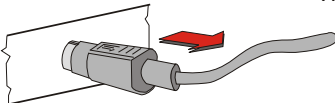
Never unplug a cable by pulling on the cable itself; always take hold of the actual plug. Follow the procedure below when disconnecting cables:

- Turn off all power and equipment switches.
- Remove the cable cover.
- Unplug all data communication cables from the sockets of the data networks.
- Unplug all power plugs from the grounded-contact power sockets.
- Unplug all cables from the devices.

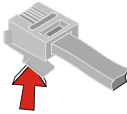
With MINI-DIN plugs, the plug remains inserted until released.



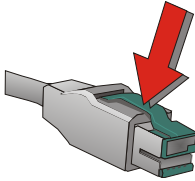
Pull the plastic covering from the connecting socket with your thumb. The lock is released. The metal of the plug is visible.



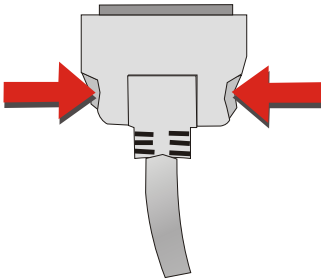
BEFORE SWITCHING ON THE SYSTEM



RJ12 plugs lock in when you insert them. To release them push the latch under the plug to the top.



The powered USB connector is disengaged by pressing the metal spring that is marked by an arrow.



On TFT (LCD) connectors, press the interlocks on the left and right side.

Basic settings

Ex works, the BEETLE /M is configured to your order. Your configuration must be subsequently adapted to support supplementary devices such as scanners. For more information, contact the Wincor Nixdorf International GmbH branch office responsible for your area.

Adjusting the loudspeaker

You can set the volume as desired by means of a menu in the BIOS Setup (see manual "POS Motherboard with Intel Celeron Processor").

Light emitting diode (LED)

The right LED (yellow) below the ON/OFF switch lights up while the hard disk is being accessed. The left LED (green) lights when the BEETLE/ M is switched on.

Connecting peripherals

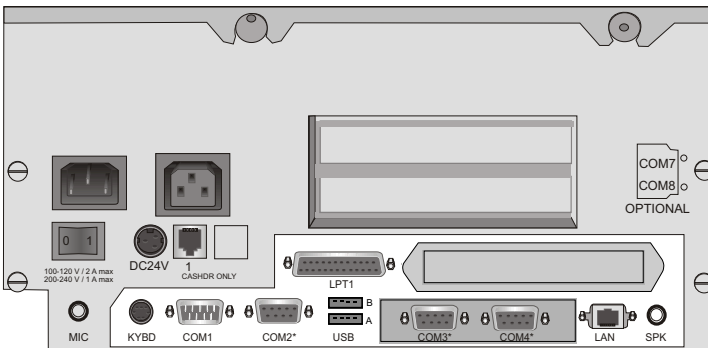
The peripherals mentioned here are available as options and are not part of the basic configuration. A separate manual is provided for each of the connectable components. For more detailed information, please consult the relevant documentation.

The figure shows the back panel of the BEETLE/ M (D2 CPU) with the locations of the connecting sockets and connecting plugs. If you wish to connect a monitor, however, you must also have a video board. Another LAN Controller can be plugged alternatively.

The interfaces COM7 and COM8 are optional.
A PoweredUSB (B+C+D) can be installed alternatively too the COM3*/4* card.
CRT and TFT interfaces are used alternatively.



Connecting peripherals with the system switched on is not allowed, except USB.



Rear panel of the BEETLE/ M

Keyboard (KYBD)

The BEETLE /M has a 6-pin mini-DIN jack for connecting a keyboard. Make sure that the connector is plugged firmly into the socket to prevent malfunctioning. Power is supplied to the keyboard via this socket. If you wish to connect a standard PC keyboard with DIN connector, you must use a special adapter cable, obtainable from the Wincor Nixdorf International GmbH branch office responsible for your area.

CONNECTING PERIPHERALS



In addition to the keyboard it is possible to connect a PS/2 mouse via y-adapter.



When removing cables with locks, please grip the cable at the connector housing.

Cash drawer

The BEETLE /M has one RJ12 socket for connecting a cash drawer. Make sure that the connector is plugged firmly into the socket to prevent malfunctioning. RJ12 plugs lock in when you insert them. Power is supplied to the cash drawer via this socket, P24V +5% / -10%.



Connecting daisy chained cash drawers and 12V OEM-drawers is prohibited!



Connect cash drawers only (no telephon).

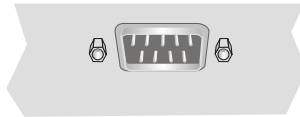
Scanners and scales (COM1 - COM4*)

Depending on the systems configuration, scanners without an independent power supply are connected to the COM2*, COM3* or COM4* (*energised) serial interface (standard setting COM3). Connect scales with their own power supply to the COM1 interface. COM1 is designed as a 9-pin D-sub plug, whereas COM2* - COM4* are 9-pin D-sub jacks.

Make sure that the scanner connector is plugged securely into the socket to prevent possible malfunctioning.



If scales which are not supplied by Wincor Nixdorf International GmbH are connected to the BEETLE /M, you must obtain a Wincor Nixdorf licence for the driver software.



If COM2 is equipped with a connector, the interface does not carry a current.

The COM1 or COM2 interface is without effect if a TFT adapter with touchscreen function is installed (adjustment is necessary in the BIOS setup).

Customer display (COM2* or COM4*)

With the BEETLE /M, and depending on how the system is configured, the customer display is connected to either the COM2* or COM4* serial interface. The interface connection is a 9-pin D-sub jack. Make sure that the connector for the customer display is screwed firmly to the socket to prevent possible malfunctioning. Power is supplied via this jack.



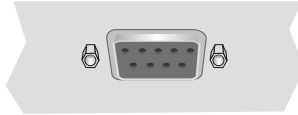
If COM2 is equipped with a connector, this interface does not carry a current.

Cashier display (COM3*)

Connect the cashier display to the serial interface COM3*. This port is a 9-pin D-sub jack.

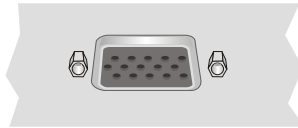


Make sure that the connector for the cashier display is screwed firmly to the socket to prevent possible malfunctioning. Power is supplied via this jack.



Monitor

If a CRT adapter is installed, you can connect a monitor to the BEETLE /M via the 15-pin D-sub jack on the CRT adapter. Power is supplied to the monitor via the AC-outlet on the BEETLE /M, located on the back of the housing.



A LCD screen can be connected alternatively if a TFT adapter is installed.

SNIkey / Screen display

If a TFT adapter is installed you can connect a Panellink TFT to the BEETLE / M without using a slot. Connect the 40-pin data cable of the SNIkey to the system. The signals for the touchscreen function and the power supply are also effected via this cable. To implement the touchscreen functionality for the COM2 interface you have to change some settings in the BIOS Setup.



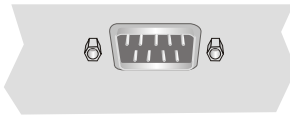
If the SNIkey is equipped with a keyboard cable connect this with the KYBD terminal. You can only connect one keyboard cable to the BEETLE /M at one time - either that of the SNIkey or that of the free standing keyboard (e.g. PC keyboard, TA57, TA61)

To find out how to connect a second keyboard, refer to the user guide of the SNIkey.

Connecting standard PC peripherals (COM1)

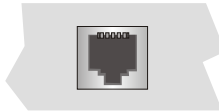
You can connect supplementary standard peripherals to the BEETLE /M via the COM1 serial interface.

Make sure that all supplementary devices have been tested for RFI suppression pursuant to the legal requirements of your country.



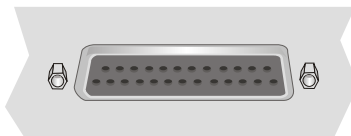
Network

If a network board is installed, the system can be connected to a network (LAN) from the POS terminal back panel. If a LAN board is not installed, this location on the back panel is closed by a dummy cover (see also Configuration variants).



Modular printers

The standard parallel interface LPT1 is intended for connecting a printer.



CONNECTING PERIPHERALS

Appropriate POS printers can also be connected via the low-voltage jack 24V, max. 3A via non-UPS or 2A via UPS. A connecting cable with a HOSIDEN plug is required for this.



Connect only cable to the 24V connector which are marked with DP-1 or DP-2.



Do not connect the HOSIDEN plug when the system is turned on, this can lead to an automatic reboot of the system.

USB (Universal Serial Bus)

The USB interface contains 2 downstream ports providing the data rates of 12 MHz for high speed USB peripherals and 1.5 MHz for low speed USB peripherals.

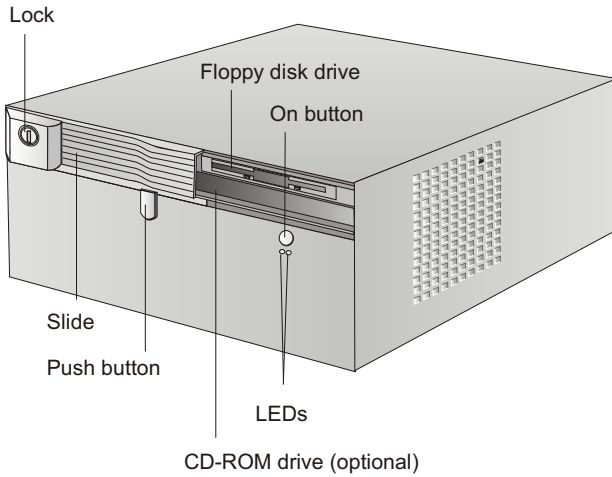


Only connect devices equipped with a shielded cable to the USB-interface.

BEETLE /M - the Components

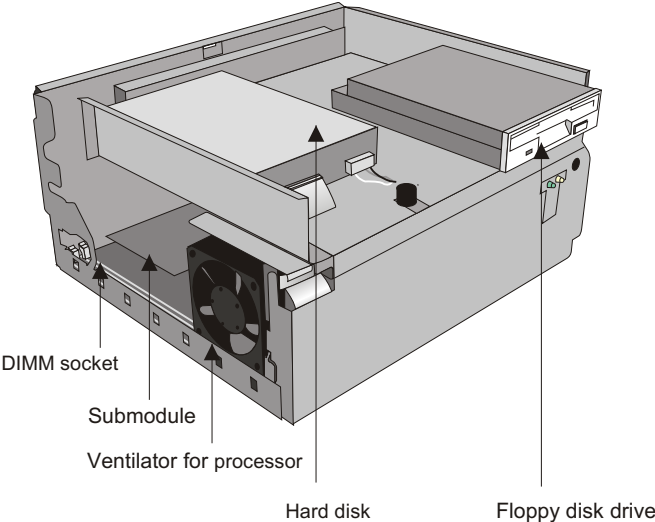
Overview

The following figure shows the outside of the BEETLE /M.



OVERVIEW

The figure below shows the inside of the BEETLE /M.



Floppy disk drive

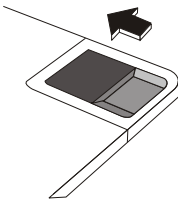
General

The BEETLE /M is equipped with a floppy disk drive for 3.5" disks. The LED at the drive lights up whenever the system accesses the drive.

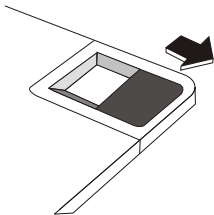
The disks can be used for a variety of applications, such as:

- Loading programs
- Saving data (e.g. daily sales figures)
- Access control (electronic key)

The disk can be *write protected* to protect your data from accidentally being overwritten. The slide is located at the bottom left of the diskette.

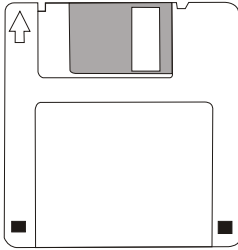


Writing to the disk is possible.



Writing to the disk is not possible.

Inserting a disk



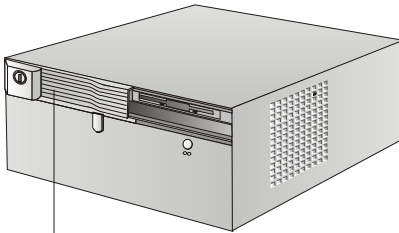
Hold the disk so that the arrow symbol is at the top and points away from you. Now insert the disk in the drive slot provided. The disk has been correctly inserted if the gray ejection button has popped out.

Removing a disk

Press the gray ejection button next to the drive slot. You can now remove the disk.



Never remove the disk while the drive is being accessed, i.e. when the LED indicator for the drive is illuminated. Otherwise, you could damage the drive and the disk.



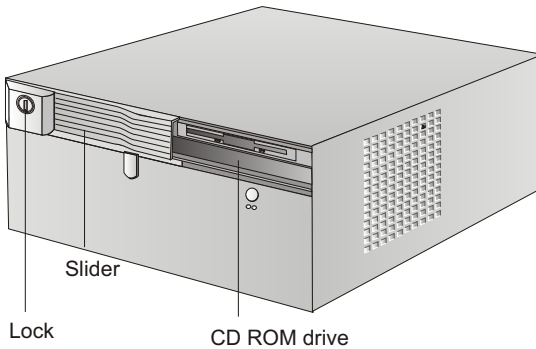
Slide cover

The lockable slider can be used to prevent unauthorized access to the disk drive.

CD ROM drive (optional)

The BEETLE /M can be equipped with a CD ROM drive. The lockable slider prevents unauthorized access to the disk drive.

Open the drive by pressing the ejection button in the middle of the loading box. You lock it by sliding in the loading box.



Power pack

The power pack can be connected to all conventional power supply networks. It automatically adjusts itself to the particular voltage and is fan-cooled. The power output of the power pack is maximum 150 W (UPS) and 212 W (Non-UPS).



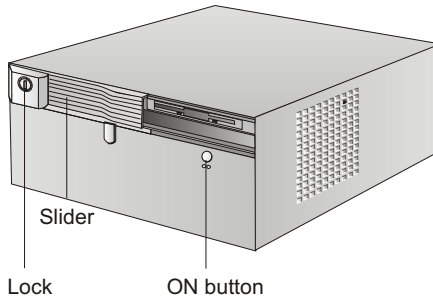
The power pack must be removed or replaced by authorized qualified personnel only.

The power cord receptacle, the power output socket for the monitor and the ON/OFF switch are located on the back of the BEETLE /M.

At the front side you will find the ON button which will turn on the powerpack (and the system) if the ON/OFF switch at the rear side is in the position ON. Pushing the ON button again (approx. 4 seconds) will turn the powerpack off.

BATTERY (OPTIONAL)

The ON button can be protected from access using the lockable slide.



Battery (optional)

The battery bridges any power failures and allows a controlled shutdown of the POS program by the appropriate software (see “Security in the event of power failure”).



Battery charging time is approx. 8 hours after initial startup. The battery is charged only while the system is switched on.

The table below provides an overview of how long the BEETLE /M is supplied with battery power in the event of a power failure (with the battery fully charged).

Duration of power supply	Power output	Operation
0, 5 minutes	Full load (max. 90 W)	with supply of external peripherals and 24V printer running
1, 5 minutes	Medium load (approx. 70 W)	with supply of external peripherals
10 minutes	Low load (30 W)	e. g. device switched on



Peripherals connected to the power output socket of the POS terminal are not powered during a power failure.

Changing the battery

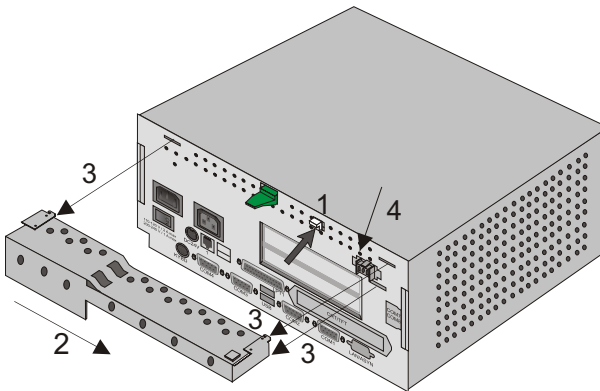
All batteries have a limited service life. In order to prevent any loss of data, we recommend that you change the battery at least every five years.



Make sure that the device is switched off and the power plug is disconnected.

Remove the cable cover at the backside of the housing by pulling the cable cover upwards out of the guide. Then press the white button (1). While holding down the button, push the battery plate to the right side (2) and pull it backwards (3).

Then loosen the connector (4).



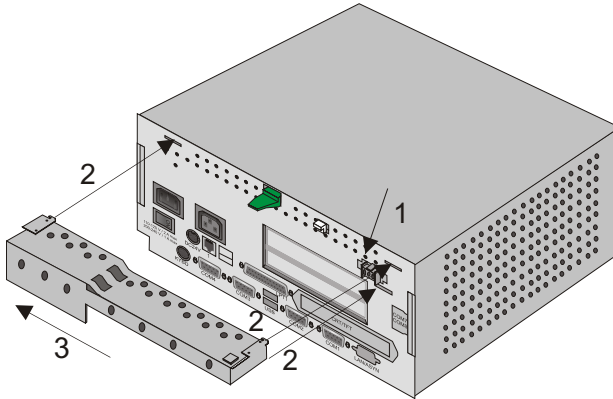
Use only batteries approved by Wincor Nixdorf International GmbH. Always dispose of batteries in an environmentally safe manner.

Change the battery.

BATTERY (OPTIONAL)

Connect the plug to the jack (1) and reinstall the battery plate with the new battery at the backside of the BEETLE /M.

Insert the battery plate into the slots (2) and move it to the left (3) until the lock snaps in.



Security against power failure

If the battery is used, the BEETLE /M system has another important feature.

When the power fails, the system remains fully functional for a short period of time. The power needed for further operation is supplied by the battery.

This means that a system power failure is bridged for a short time.

Because operation is maintained with the aid of the battery, the application program can be terminated correctly.

The power failure is reported to the application program by the Retail Device Interface (see chapter Software). The application program then terminates the program correctly by, for example, closing open files and writing important information to the non-volatile memory.

The termination of these actions is reported by the Retail Device Interface. This causes the system to be disconnected, which also prevents the battery from being discharged unnecessarily.



Peripherals connected to the power output jack of the POS system are not powered during a power failure.

Configuration variants

Submodules for the CPU

Various controllers and adapters can be plugged in the CPU. An onboard PCI slot makes possible that a WN controller don't clog further AT slot. The following is a brief description of the available options:

LAN-Adapter 10/100 MBit / LAN Controller 10/100 MBit

Ex works the BEETLE /M is equipped with the LAN Adapter 10/100 MBit for the incorporation in an Ethernet Network. *Alternatively* a LAN Controller 10/100 MBit can be plugged. See the manual "POS Motherboard" for the settings in the BIOS Setup.

A wireless LAN or a LAN submodule don't need any AT slot.

CRT- or TFT-adapter

Both adapters must be installed alternatively. You can connect either a CRT monitor or a TFT-LCD module with optional touch screen functionality.

When installing a TFT adapter with touchscreen functionality the cable for the internal loudspeaker must be removed in order to activate the loudspeaker in the screen display.

The touch functionality must be activated via system configuration.



The COM2 interface will be covered and is no longer valid for external use.

A 2nd CRT/TFT controller is offered as a submodule and don't need any AT slot.

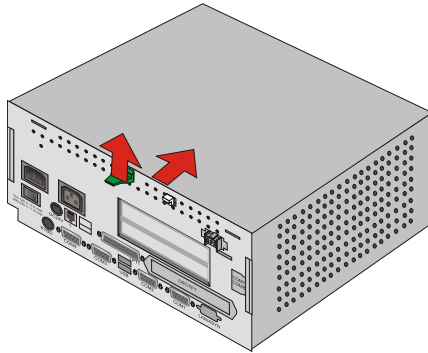
Installing the submodules and adapters

First ensure that the device is switched off and that the power connector is disconnected.

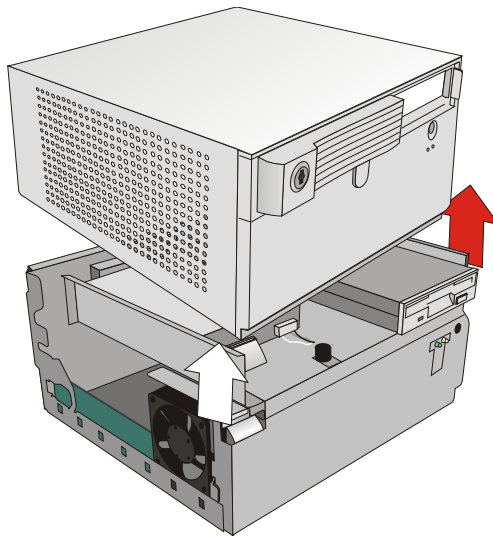
Remove the battery plate.

INSTALLING THE SUBMODULES AND ADAPTERS

Lift up the latch (see arrows) and push the housing with the latch forward.

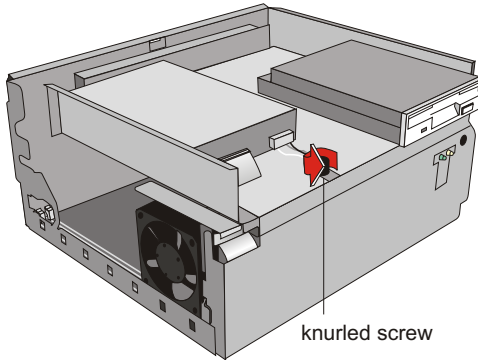


Then you can lift off the housing.

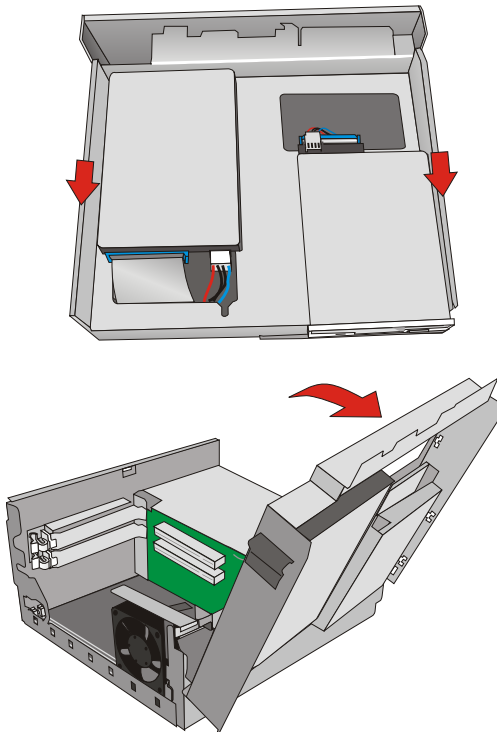


INSTALLING THE SUBMODULES AND ADAPTERS

Lift up the carrier of the hard disk and the floppy disk drive by loosening the knurled screw (see drawing) manually or with a screwdriver.

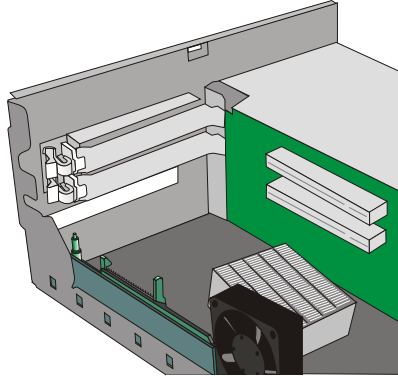


Then pull the carrier forward to the stop and lift it up to the front side.

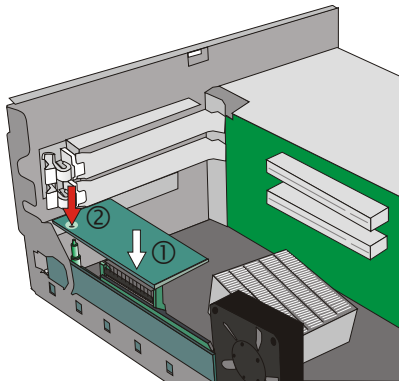


INSTALLING THE SUBMODULES AND ADAPTERS

Remove the respective metal cover at the backside of your BEETLE /M.



Then bring the socket through the recess of the housing. When attaching the submodule to the motherboard, bend the green clamp with care to the front. Make sure that the connector is plugged correctly (1) and that the pin goes through the opening (2).



Attach the socket using the screws that you removed before.

Carefully swing the drive carrier back and push it back towards the rear wall of the housing until it engages.

It is absolutely necessary to ensure that cables are not pinched. Otherwise, this could prevent the drive carrier from being closed correctly.

Finally, attach the housing cover and push it to the rear until the green lug engages. Attach the cable cover.

AT plug-in cards

Most of all standard ISA and PCI cards can be used in the BEETLE /M.

BEETLE Inhouse Controller

The BEETLE Inhouse Controller (BIC) is a ISA card for BEETLE POS systems. The board ensures that BEETLE systems can be integrated in existing installations in inhouse networks.

The card is installed in a free AT slot in the POS housing.

If you would like to receive further details on this expansion card, please contact your dealer or your local WN branch.

PCMCIA controller

Using an appropriate PCMCIA controller, you can use various storage media, such as FLASH memory card and I/O cards, memory cards of Type 1 EXT, Type II EXT and Type III, and ATA removable disks.

If you want to know more about PCMCIA controllers, please contact your dealer or your Wincor Nixdorf International GmbH branch.

SNIkey controller

The SNIkey is a comfortable input/output device for BEETLE POS systems.

Once you have installed a SNIkey controller, you can connect a SNIkey to the BEETLE /M.

If you want to know more about the SNIkey, please contact your dealer or your WN branch.

Installing an expansion card

First ensure that the device is switched off and that the power connector is disconnected.

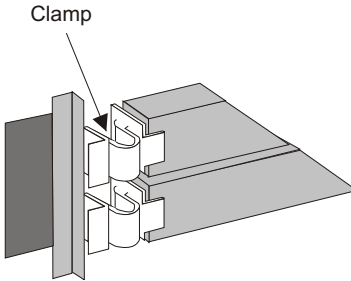
Please proceed as described in the section "changing the battery".

After having pulled forward the carrier of the hard disk and floppy disk there is an easy access to the AT slots. Now remove the metal cover at the housing by squeezing out one of the clamps (see picture).

AT PLUG-IN CARDS



You always should use the upper slot first.
This slot is - depending on the configuration - reserved for a PCI-Card.



First check whether the jumpers (if present) of the card are set correctly to avoid internal system conflicts. The correct setting for the jumpers can be found in the documentation for the plug-in card. Then slide the expansion card into the slot provided. Ensure that the card establishes contact with the terminal strip.

Secure the card by tightening it with the clamp that you have removed before (The pin of the clamp has to be put into the boring of the card).

Following this, mount the POS housing again. The mains connector can now be reconnected and the device switched on.



Expansion cards with electrostatically sensitive devices (ESD) can be marked with this sticker.

When you handle boards fitted with ESDs (electronical components), you must observe the following aspects under all circumstances:

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

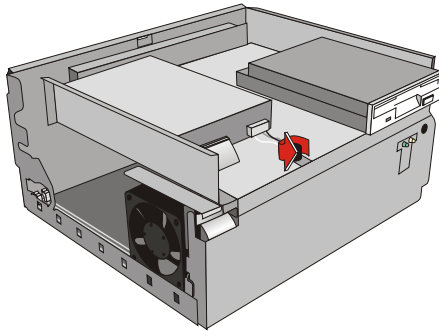
Replacing the 3.5" hard disk



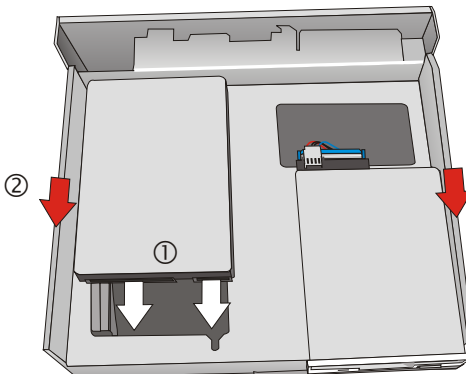
Hard disks are very sensitive components. Even a slight impact or drop can damage them. Hard disks should, therefore, be handled with extreme care. Specifically, this means that the drive carrier on which the hard disk is mounted must carefully be swung open and closed.

To replace the hard disk, first remove the cable cover and the housing cover.

Loosen the knurled screw, with which the drive carrier is attached to the housing, with a screwdriver or by hand by turning it counterclockwise (direction of the arrow).



Then disconnect all cables leading to the hard disk (1). To do so, do not grasp the cables, but the connector housings. Pull the drive carrier towards the front of the housing (2).

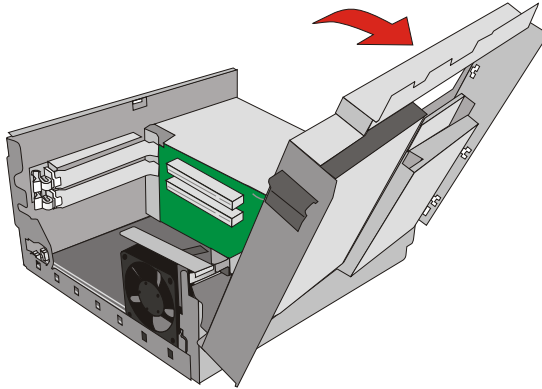


REPLACING THE 3.5" HARD DISK

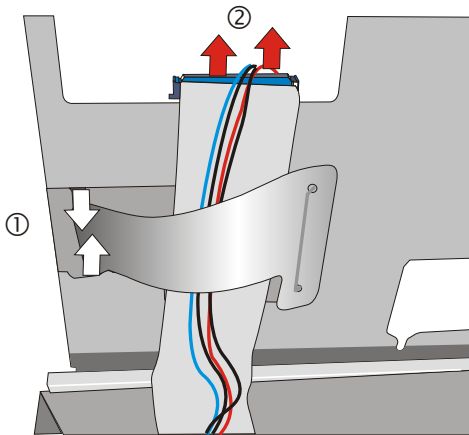
Swing the carrier upward and remove it.



Do not use force to swing the carrier open if resistance is noticeable, since this may bend the holding latches.



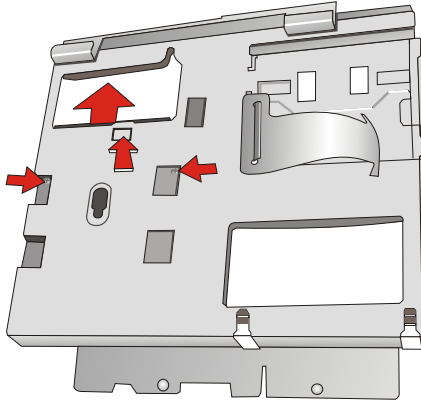
Loosen the plastic scrap (1) on the backside of the floppy drive carrier. Disconnect all cables (2). To do so, do not grasp the cables, but the connector housings.



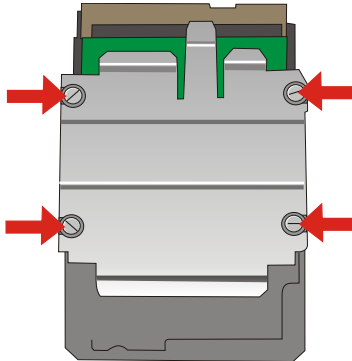
Carefully place the carrier on the top surface.

REPLACING THE 3.5" HARD DISK

The hard disk is attached to the drive carrier with two screws. Remove these screws (1). Then press the clamp (2) and push the hard disk out of the bracket in the direction of the arrow (3) as shown in the illustration below.



Next, loosen the screws marked with four horizontal arrows.



Ensure that the settings of the new hard disk are correct. It may also be necessary to change settings in the BIOS (see the manual for the motherboard).

Now remove the screws marked in the illustration and detach the carrier. Attach the carrier on the new hard disk.

CHANGING THE 2.5" HARD DISK



Ensure that you handle the hard disk with extreme caution during the installation.

Place the new hard disk on the guide rail, push it backward until it engages, and tighten the screws.

Insert the drive carrier and connect both cables to the floppy disk and ensure the cables with the plastic strap. Carefully swing the drive carrier back and push it back towards the rear wall of the housing until it engages. Connect both cables to the hard disk.



It is absolutely necessary to ensure that cables are not pinched. Otherwise, this could prevent the drive carrier from being closed correctly.

Finally, attach the housing cover and push it to the rear until the green lug engages. Attach the cable cover.

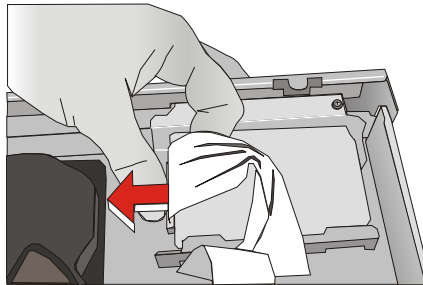
Changing the 2.5" hard disk

The 2.5" hard disk used in the BEETLE /M always is the second hard disk!



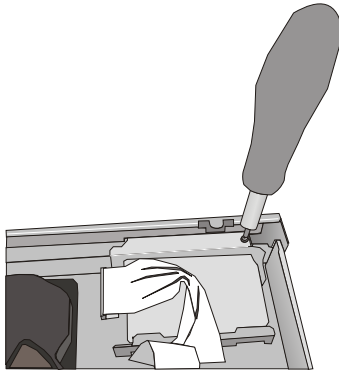
Always mind, that hard disks use to be very sensitive components. Even a slight shock or drop can lead to damages which might come into effect only after some time of operation. So, hard disks always should be handled with utmost care!

Switch off the system with the power switch and disconnect the power cable. Then remove the cable cover and the housing cover. Unplug the plug from the 2.5" hard disk.

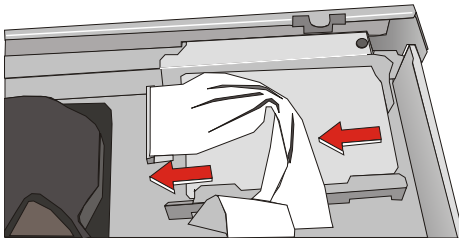


Loosen the screw that fixes the hard disk carrier to the drivers carrier.

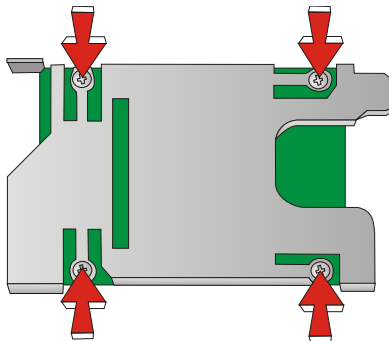
CHANGING THE 2.5" HARD DISK



Pull the hard disk carrier towards the 3.5" hard disk (see arrow), angle it a little and lift it upwards off the guide.



Tilt the removed carrier towards the CD ROM drive. Loosen and remove the four screws that fix the hard disk to the carrier.



CHANGING THE 2.5" HARD DISK

The 2.5" hard disk has to be jumpered as "SLAVE".



Handle the hard disk with great care during installation.

Replace the old hard disk with the new one and bolt it together with the hard disk carrier. Mount the hard disk carrier in logical reverse order as described above.

Thread the cable wrap through both of the metal openings. Plug the cable on the hard disk and enclose it with the cable wrap.

Attach the housing cover and push it backwards until the green lug engages. Finally, mount the cable cover.

Starting up the system

The configuration label shows you the equipment included in your modular BEETLE /M system.

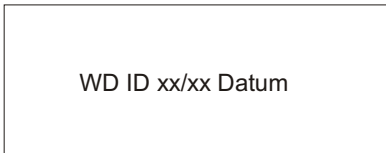
The label is located at the underside of the BEETLE /M. The data specified there are required for entering the setup parameters (see section Setup in the manual "BEETLE POS Motherboard").

Start and runup behaviour

After installing the BEETLE /M, switch on the POS system using the ON/OFF button on the front panel and the power switch on the power supply.

The system first performs an automatic self-test to test its basic functions.

For example, you may see the following message (irrespective of processor type) on the four-line cashier display or on the monitor:



WD ID xx/xx Datum

xx/xx is the place holder of the BIOS version number

The system then determines the medium from which the operating system and POS application are to be booted. Each medium is assigned a logical drive according to the configuration of your BEETLE /M.

The following media can be assigned a drive:

- Floppy Disk
- Network
- Hard disk
- Memory card
- CD-ROM

The logical drives are designated A:, B:, C: and D:.

START AND RUNUP BEHAVIOUR

If the system is to be booted from disk, this medium must always be assigned drive A:. The network is always assigned to the C: drive during the runup procedure. The hard disk can be assigned to the C: or D: drive. The system can only be started from the hard disk if the disk has been configured as the C: drive.

Corresponding to the Setup configuration the modular BEETLE /M POS system can be booted from the following drives:

- Floppy disk in drive A:
- Hard disk in drive C:
- CDROM in EL TORITO format
- Network adapter with BOOTPROM

Please mind that the storage medium must be system-boot-capable.

The following priorities apply:

Floppy disk (A:)	High priority
Network (C:)	Medium priority
Hard disk (C:)	Low priority

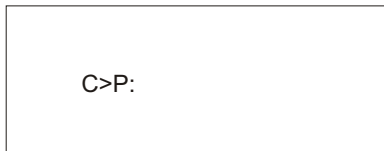
As standard the POS system always attempts to boot from a disk first if it is inserted in the respective drive.



If the POS system does not find a disk resp. a CD-ROM in drive A:, it automatically continues the loading process from drive C:.

If drive A: contains a disk on which no operating system is stored, the POS system cannot be booted. In this case, either replace the disk with one that is system-boot-capable or remove the disk altogether.

The operating system responds with additional messages on the cashier display or monitor, as shown in the illustration below.



If the operating system has started up without error, the POS application software is automatically booted if necessary.

TECHNICAL DATA FOR THE BEETLE /M

A message is displayed as soon as the BEETLE /M is ready for operation. For more detailed information, see the description of your application program.

Appendix

Technical data for the BEETLE /M

Footprint	
Width	280 mm
Depth (including cable cover)	350 mm
Height	137 mm
Weight	approx. 7 kg
Climatic category	
Operating	IEC 721-3-3 class 3K3 5°- 40°C
Transport	IEC 721-3-2 class 2K2 -25° until +60°C
Storage	IEC 721-3-1 class 1K2 +5° until +40°C
Input voltage	100-120 V 200- 240 V
Power consumption	3A / 5A
Frequency of system voltage	50/60 Hz
Noise Development	Acc. to GPSGV 60 dB(A) or less
Power subdistributor	100 - 120 V /2 A max 200 - 240 V /1 A max

Glossary

Bit

A bit is a binary digit (0 or 1). It is the smallest unit used in data processing.

Controller

Serves to control data input and output in a data processing system or between a computer and the connected peripherals.

CPU

Abbreviation of central processing unit. It includes the main components of a data processing system. The CPU monitors all operations and provides data and programs. It comprises the control unit for input and output, the computer and the main memory, divided into ROM and immediate access storage.

Interface

Designates the transition point between different hardware units and software units or between hardware and software units of computers or their peripherals.

JEIDA

Abbreviation of Japan Electronic Industry Development Association. Industry standard for memory cards.

Operating system

Refers to all programs that are a component of a computer and are required for operating the system and executing application programs.

PCMCIA

Abbreviation for Personal Computer Memory Card International Association. Industry standard for memory cards.

Plug and PLayer (PnP)

PnP means the automatic recognition of hardware components by the system. Thus the installation, integration and configuration of new components is made substantially easier.

Peripherals

Devices serving as an input/output device or storage for a computer. This includes, for example, document readers, keyboards, printers and disk storage.

GLOSSARY

Server

This is a computer connected to a local network and whose services are available to all of the network subscribers, e.g. a print server for printing the data from all of the network subscribers on the printer connected to the server.

VGA

Stands for Video Graphics Array and is the interface for connecting colour monitors.

Abbreviations

AT	Advanced Technology
ATA	AT-Attachment
BIOS	Basic Input Output System
COM	Communication Port
CPU	Central Processing Unit
CRT	Cathode Ray Tube
cUL	canada Underwriters Laboratories
DIMM	Dual Inline Memory Module
ECP	Extended Capability Port
EPP	Enhanced Parallel Port
EPROM	Erasable Programmable Read Only Memory
FD	Floppy Disk
GS	Geprüfte Sicherheit (Tested Safety)
HDD	Hard Disk Drive
IDE	Integrated Drive Electronic
ISA	Industrial Standard Architecture
ISO	International Standardization Organization
JEIDA	Japan Electronic Industry Development Association
LAN	Local Area Network
LBA	Logical Block Addressing
LED	Light Emitting Diode
LPT	Line Printer
PCI	Peripheral Component Interconnect
PCMCIA	Personal Computer Memory Card International Association
PnP	Plug and Play
RAM	Random Access Memory
RDI	Retail Device Interface
ROM	Read Only Memory
SCSI	Small Computer Systems Interface
SIMM	Single-In-Line-Memory-Modul
SRAM	Static Random Access Memory
SVGA	Super Video Graphics Array
TFT	Thin Film Transistor
UL	Underwriters Laboratories
UPS	Unbreakable Power Supply
XMS	Extended Memory Specification