Introduction

This manual describes the features of the system board as well as the setting options and the extensions that you can make to the system board.

You can find more detailed information in the Operating Manual of the device or in the manual "Terminal Setup".

Further information to drivers is provided in the readme files on hard disk or on the supplied drivers diskettes or on the "Drivers & Utility" CD.

Notational conventions

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

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

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

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

↵ This symbol means that you must press the Enter key.

`Texts in this typeface` are screen outputs.

Texts in italics indicate commands or menu items.

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

Important notes

Store this manual close to the device. If you pass on the device to third parties, you should also pass on this manual.

Be sure to read this page carefully and note the information before you open the device.

You cannot access the components of the system board without first opening the device. How to dismantle and reassemble the device is described in the Operating Manual accompanying the device.

Please note the information provided in the chapter "Safety" in the Operating Manual of the device.

Before disconnecting cables from the system board remember how the connectors are plugged in. Some connectors may not be coded.

Incorrect replacement of the lithium battery may lead to a risk of explosion. It is therefore essential to observe the instructions in the section „Replacing the lithium battery". The lithium battery must be replaced with an identical battery or a battery type recommended by the manufacturer (CR2032).

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

The shipped version of this board complies with the requirements of the EEC directive 89/336/EEC "Electromagnetic compatibility".

Compliance was tested in a typical PC configuration.

When installing the board, refer to the specific installation information in the Operating Manual or Technical Manual of the receiving device.

Data cables for peripherals must be adequately insulated to avoid interference.

Components can become very hot during operation. Make sure you do not touch components when making extensions to the system board. There is a danger of burns!

The warranty expires if the device is damaged during the installation or replacement of system expansions. Information on which system expansions you can use is available from your sales office or the customer service.

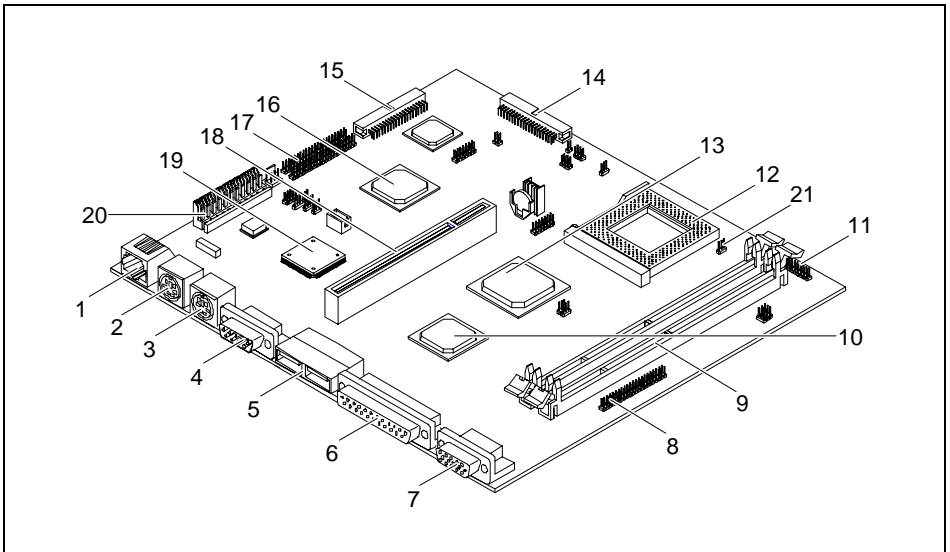Boards with electrostatic sensitive devices (ESD) may be identified by labels.
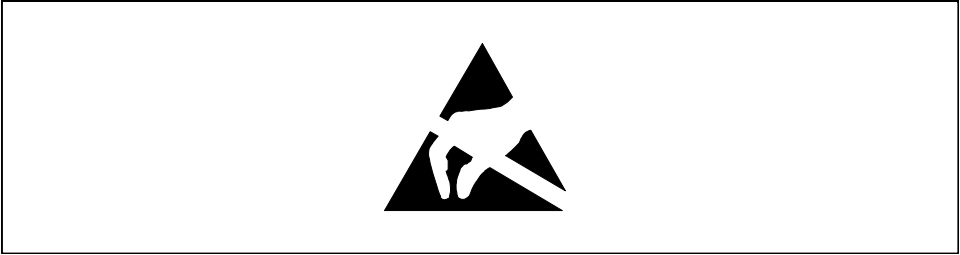
When you handle boards fitted with ESDs, you must observe the following points under all circumstances:

● You must always discharge yourself (e.g. by touching a grounded object) before working.

● The equipment and tools you use must be free of static charges.

● 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.

Features

- System board in LPX format
- Processor IDT C6 with 66 MHz system clock
  or
- Processor AMD K6-2 with 100 MHz system clock
- Support of the latest MMX technology
- ZIF socket (Zero-Insertion Force) for an easy replacement of the processor
- 2 DIMM slots for 16 to 256 Mbyte main memory (SDRAM memory modules)
- 1 external parallel port
- 1 external serial port
- 1 internal serial port
- 2 external PS/2 interfaces for keyboard and mouse
- 2 external USB ports (USB = Universal Serial Bus)
- LAN controller
- ATI AGP screen controller
- AMC connector
- AGP/PCI/Cache/Memory Controller
- 2 IDE connectors
- Connector for one floppy disk drive
- Security functions
- Energy saving functions
- Flash BIOS

Interfaces and connectors

1 = LAN port
2 = Keyboard port
3 = PS/2 mouse port
4 = Serial port 1
5 = 2 USB ports
6 = Parallel interface
7 = Video connector
8 = AMC connector
9 = 2 DIMM sockets
10 = ATI AGP controller
11 = Serial port 2
12 = Processor socket (type 7)

13 = AGP/PCI/Cache/Memory Controller
14 = Connector for one floppy disk drive
15 = Audio connector
16 = PCI-ISA Bridge, System I/O Controller
17 = 2 IDE connectors
18 = Connector for PCI slot board
19 = LAN controller
20 = Connector for power supply
21 = fan connector

The marked connectors are optional and may not be present on the system board.

Internal ports and jumpers
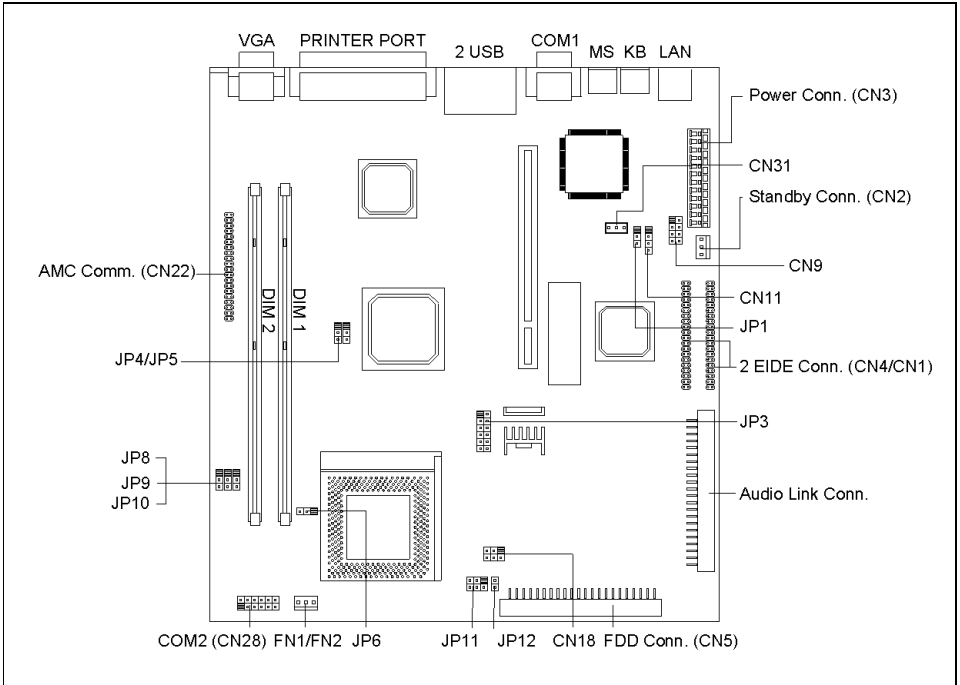
	The blackened pin of a jumper or a connector represents pin 1
i	

JP1 - Ring-in Signal

jumper	Setting	Function
JP1	connected to 1 - 2 connected to 2 - 3*	**Ring-in Signal** Ring-in Active Low Ring-in Active High

* = Default setting

JP3 - Selecting the processor core voltage Vcore

Vcore	Jumper JP3		Vcore	Jumper JP3
3.3V	connected to 1 - 2		2.8V	connected to 7 - 8
3.2V	connected to 3 - 4		2.2V	connected to 9 - 10
2.9V	connected to 5 - 6		1.8V	connected to 11 - 12

JP6 - Selecting the processor voltage

K6 processor type	Jumper JP6	PLL- Processor voltage
K6-2 300	connected to 1 - 2	3.6V
Other K6	connected to 2 - 3	3.3V

JP4, JP5 - Selecting the clock speed

System clock	Jumper JP5	Jumper JP4
100 MHz	connected to 1 - 2	connected to 1 - 2
83 MHz	connected to 1 - 2	connected to 2 - 3
66 MHz	connected to 2 - 3	connected to 2 - 3

JP8, JP9, JP10 - Selecting the clock ratio

Clock ratio	Jumper JP8	Jumper JP9	Jumper JP10
2,5	connected to 2 - 3	connected to 2 - 3	connected to 1 - 2
3,0	connected to 1 - 2	connected to 2 - 3	connected to 1 - 2
3,5	connected to 1 - 2	connected to 1 - 2	connected to 1 - 2
4,0	connected to 2 - 3	connected to 1 - 2	connected to 2 - 3
4,5	connected to 2 - 3	connected to 2 - 3	connected to 2 - 3

JP11 - LED jumper

JP11	MSG LED | Gnd | HD LED: Mail indicator/Hard disk indicator Gnd | PWR OFF LED| PWR ON LED: On/Off indicator

JP12 - Switch jumper

JP12	ON/OFF switch

FN1/FN2 - Processor fan

CN1 to CN31 - Internal ports and connectors

Internal port	Function
CN1	Primary IDE connector
CN2	Standby connector
CN3	Power supply
CN4	Secondary IDE connector
CN5	Floppy disk drive
CN6	Serial port 1
CN7	USB port 1
CN8	LAN port
CN9	LAN indicator
CN11	Modem Ring-In connector: 1(PWR2)3(Ring-in)4(GND)

Internal port	Function
CN13	Mouse port
CN15	Keyboard port
CN18	USB port 2
CN19	On/Off switch: 1 (-) 2 (+) 3 (-)
CN20	Parallel interface
CN21	Video connector
CN22	AMC
CN28	Serial port 2
CN31	WOL connector

Possible screen resolution

Depending on the operating system used the screen resolutions in the following table refer to the screen controller on the system board. If you are using an external screen controller, you will find details of supported screen resolutions in the Operating Manual or Technical Manual supplied with the controller.

To select the appropriate setting for your monitor, please use the ATI drivers supplied.

In Windows 9x you can select your monitor type and the resolution in the "Control Panel" under „Display Properties".

Screen resolution	Refresh rate (Hz)	Vertical frequency range (kHz)	Horizontal frequency range (kHz)	Max. number of colors
640 x 480	120	60 - 120	32 - 64	256
640 x 480	120	60 - 120	32 - 64	65 K
640 x 480	120	60 - 120	32 - 64	16.7 M
800 x 600	120	56 - 120	35 - 77	256
800 x 600	120	56 - 120	35 - 77	65 K
800 x 600	120	56 - 120	35 - 77	16.7 M
1024 x 768	120	60 - 120	48 - 97	256
1024 x 768	120	60 - 120	48 - 97	65 K
1024 x 768	-	-	-	16.7 M
1152 x 864	100	60 - 100	55 - 90	256
1152 x 864	100	60 - 100	55 - 90	65 K
1152 x 864	-	-	-	16.7 M
1280 x 1024	85	60 - 85	64 - 92	256
1280 x 1024	-	-	-	65 K
1280 x 1024	-	-	-	16.7 M
1600 x 1024	-	-	-	256
1600 x 1024	-	-	-	65 K
1600 x 1024	-	-	-	16.7 M
1600 x 1200	76	60 - 76	75 - 95	256
1600 x 1200	-	-	-	65 K
1600 x 1200	-	-	-	16.7 M

\-   not available

Resource table

	assigned IRQ	possible IRQ	Possible Address (hex)	Possible DMA
Keyboard	1			
Serial interface COM1		4, 11	02E8, 02F8	
Serial port COM 2		3, 4	03E8, 03F8	
Floppy disk drive controller	6			2
Parallel interface LPT1		5, 7	0378H, 0278H, 03BC	1,3
RTC	8			
USB controller	9			
Mouse controller	12			
Numeric processor	13			
IDE controller 1	14		01F0H-01F7H	
IDE controller 2	15		0170H-0177H	

"assigned IRQ" = interrupts assigned as shipped
"Possible IRQ" = these interrupts can be used for your particular application
"Possible address" = this address can be used for your particular application
"Possible DMA" = these DMAs can be used for your particular application

Upgrading main memory

The system board is equipped with two 168 pin sockets with which the main memory can be upgraded to a maximum of 256 Mbyte.

These slots are suitable for 16, 32, 64 and 128 Mbyte SDRAM memory modules of the DIMM format.

Memory modules with different memory capacities can be combined.
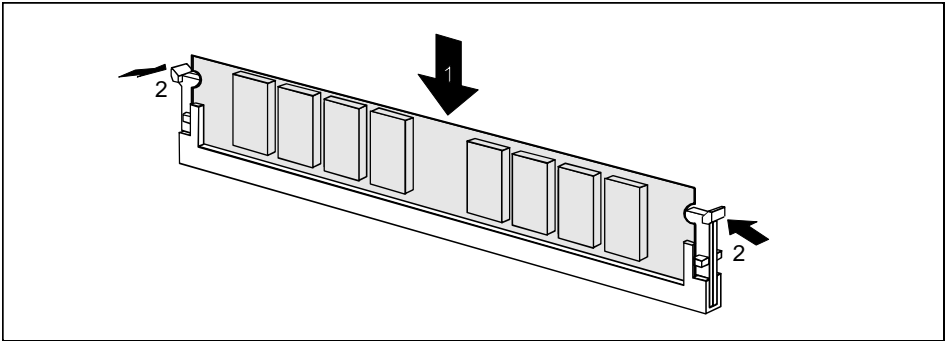
DIMM = Dual Inline Memory Module
SDRAM = Synchronous Dynamic Random Access Memory

Depending on the processor type SDRAM memory modules must be designed for a clock frequency of 66 MHz or 100 MHz or higher (meets PC100 specification).

Installing memory modules

► Flip the holders on each side of the relevant location outwards.

► Insert the memory module into the location.

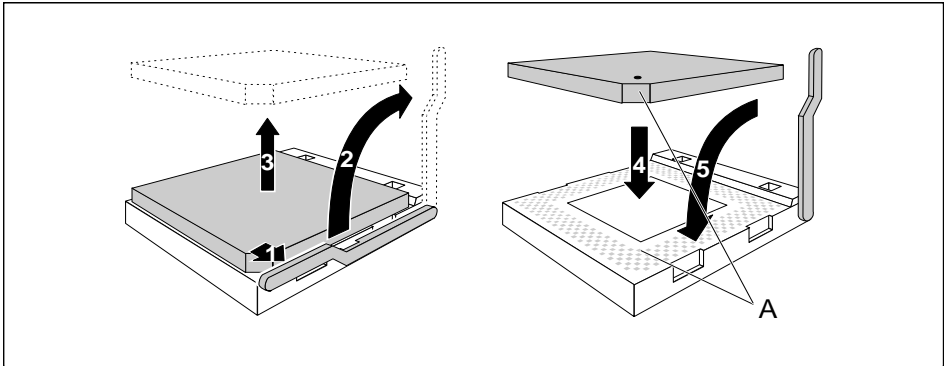► At the same time flip the lateral holders upwards until the memory module snaps in place.

Removing a memory module
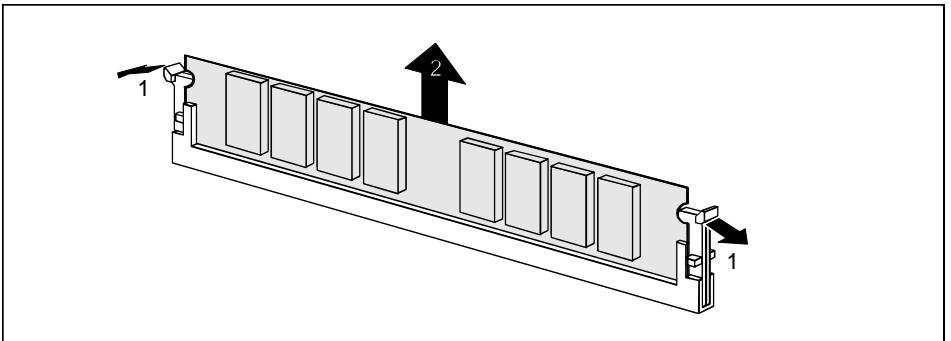
► Flip the holders to the right and left of the location outwards.

► Pull the memory module out of its location.

Replacing the processor

► Remove the fan connector.

► Push the lever in the direction of the arrow (1) and lift it as far as it will go (2).

► Remove the old processor from the socket (3).

► Insert the new processor in the socket so that the mark on the upper side of the processor matches the mark (A) on the socket (4).

> ⚠ The mark on the processor may be covered by a heat sink. In this case let yourself be guided by the marking in the rows of pins on the underside of the processor.

► Push the lever back down so that it snaps into place.

► Connect the fan connector.

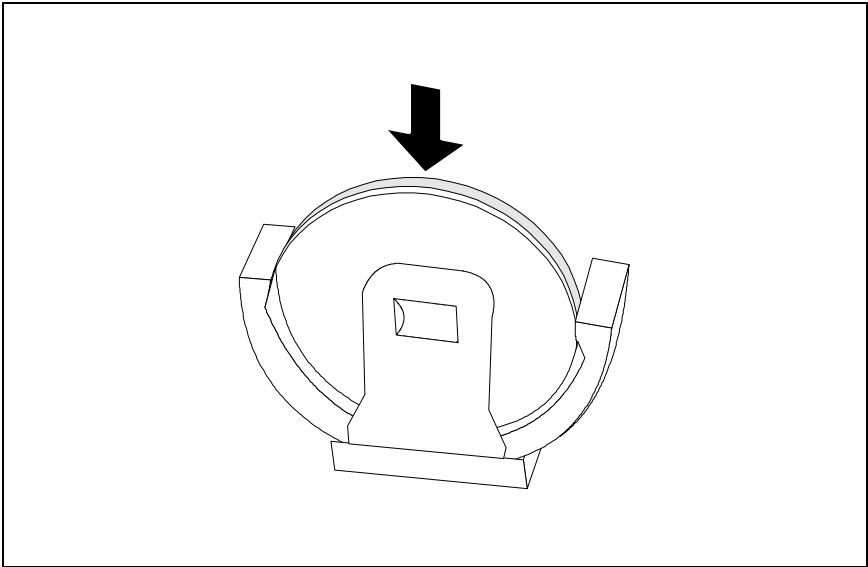# Replacing the lithium battery

⚠ Once you have installed the system board, you should remove the battery protection (i.e. the thin plastic plate between battery and contact spring).

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

The lithium battery must be replaced with an identical battery or a battery type recommended by the manufacturer (CR2032).

Do not throw lithium batteries into the trashcan. It 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 point to the contact !

► Insert a new lithium battery of the same type in the socket.

Error messages

```
Memory Error at MMMM:SSSS:OOOOh
(R:xxxxh, W:xxxxh)
```

► Replace the DRAM chips or the DIMMs.

```
System Management Memory  Bad
```

► Replace the DRAM chips or the DIMMs.

```
PS/2 Keyboard Interface Error
```

► Check the keyboard interface circuit or change the keyboard.

`PS/2 Keyboard Error or Keyboard Not Connected`

► Reconnect or replace the keyboard.

`PS/2 Keyboard Locked`

► Disable the keyboard lock.

`PS/2 Pointing Device Error`

► Reconnect or replace the pointing device.

`PS/2 Pointing Device Interface Error`

► Check the pointing device interface circuit.

```
IDE Primary Channel Master Drive Error
IDE Primary Channel Slave Drive Error
IDE Secondary Channel Master Drive Error
IDE Secondary Channel Slave Drive Error
```

► Replace the drive or the hard disk controller.
Check the HDD cable connections and BIOS Setup configuration.

`Hard Disk Drive(s) Write Protected`

► Call *BIOS Setup* and set the setting to *Normal*.

```
Floppy Drive A Error
Floppy Drive B Error
```

► Replace the floppy disk drive.

`Floppy Disk Controller Error`

► Check the floppy drive cable and its connections.
Change the floppy disk controller or disable the onboard controller by installing another add-on board with a controller.

`Floppy Drive(s) Write Protected`

► Call *BIOS Setup* and set the setting to *Normal*.

`CPU Clock Mismatch`

The user has changed the CPU frequency. This message will only be shown once Then the BIOS will adjust the CPU clock automatically.

`Real Time Clock Error`

► Check the real time clock circuit or replace the real time clock.

`CMOS Battery Bad`

► Replace the battery.

`CMOS Checksum Error`

► Run BIOS Setup to reconfigure the system.

```
Onboard Serial Port 1 Conflict(s)
Onboard Serial Port 2 Conflict(s)
```

► Change the onboard serial port address in Setup or change the add-on board serial port address.

`Onboard Parallel Port Conflict(s)`

► Change onboard parallel port address or set the parallel port address of add-on board to others.

```
On Board xxx ... Conflict(s)
```

► Try to reassign or disable on-board device resources.

```
PnP ISA Card(s) Disabled
```

► Try to reset resource assignments.

```
I/O Resource Conflict(s)
```

► Try to reset resource assignments.

```
Memory Resource Conflict(s)
```

► Try to reset resource assignments.

```
IRQ Setting Error
```

► Run BIOS Setup to reconfigure the system.

```
Expansion ROM Allocation Fail
```

► Change the I/O expansion ROM address.

NMI error messages and warning messages

```
RAM Parity Error
```

► Replace the DRAM chips or SIMMs, or disable parity check in Setup if the model supports it.

```
I/O Parity Error
```

► Check all I/O related circuits (i.e. system I/O controller, memory controller, interrupt controller, DMA controller, etc.)

```
Press Ctrl_Alt_Esc key to enter SETUP or F1 key to Continue...
```

► Press Ctrl + Alt + Esc to reconfigure the system.

```
Press ESC to turn off NMI, or any key to reboot
```

► Press Esc to reject NMI error or press any other key to reboot the system.

► Try to reset resource assignments.

```
Insert system diskette and press <Enter> key to reboot
```

► Insert a bootable disk in the diskette drive or remove this disk if a hard disk drive is installed.

```
Equipment Configuration Error
```

► Call BIOS Setup and reconfigure the system.

BIOS Setup

In *BIOS Setup* you can set the system functions and the hardware configuration of the device.

When it is supplied, the device is set to factory default settings. You can change these settings in *BIOS Setup*. Any changes you make take effect as soon as you save the settings and quit the *BIOS Setup*.

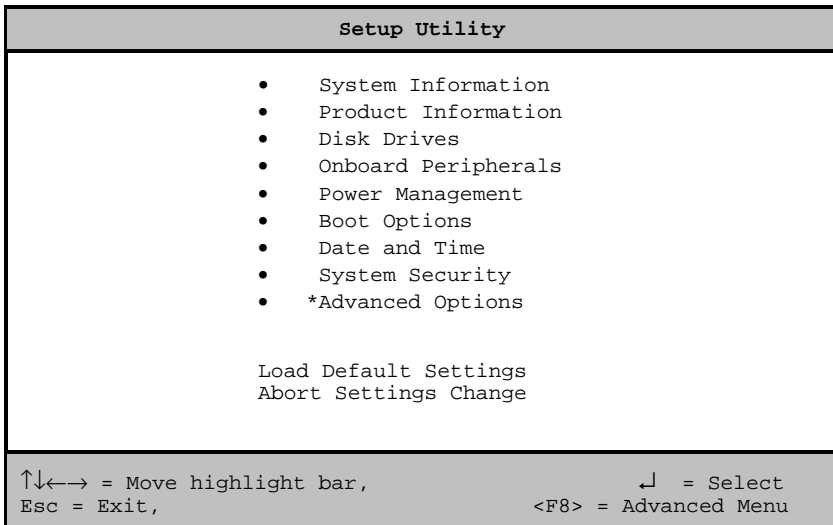| i	If you repeatedly receive *Run Setup* messages, the battery may be bad. In this case, please contact your sales office or our Customer Service to change the battery.
	Some menu items may not be present on your system.

Calling BIOS Setup

► To call *BIOS Setup* press Ctrl + Alt + Esc during system startup.

i	The following figures are examples and may be different on your system.

```
                         Setup Utility

               •     System Information
               •     Product Information
               •     Disk Drives
               •     Onboard Peripherals
               •     Power Management
               •     Boot Options
               •     Date and Time
               •     System Security
               •    *Advanced Options


               Load Default Settings
               Abort Settings Change


↑↓←→ = Move highlight bar,                    ↵  = Select
Esc = Exit,                           <F8> = Advanced Menu
```

Example for the *Setup Utility* main menu

BIOS Setup supports two user levels: Basic and Advanced. Basic Level allows you to view and change only the basic configuration of your system.

> **i**
> As an advanced user you can call the Advanced level by pressing $\boxed{\text{F8}}$ in the main menu. Additional parameters appear. These parameters are marked with asterisk (*) in this manual.

The command line at the bottom of the menus tells you how to use *BIOS Setup*.

► To select an option: move the highlight bar by pressing $\boxed{\uparrow}$ or $\boxed{\downarrow}$. Then press Enter.

► Press $\boxed{\text{PgDn}}$ to move to the next page or $\boxed{\text{PgUp}}$ to return to the previous page.

► To change a parameter setting: press the $\boxed{\leftarrow}$ or $\boxed{\rightarrow}$ key until the desired setting is found.

► Press $\boxed{\text{Esc}}$ to return to the main menu.

► To exit *BIOS Setup* press $\boxed{\text{Esc}}$ in the main menu.

System Information

```
 System Information                              Page 1/2

   Processor.......................... IDT-C6
   Processor Speed.................... 200 MHz
   Internal Cache Size............... 64 KB, Enabled
   External Cache Size............... 512 KB, Enabled
   Floppy Drive A.................... 1.44 MB, 3.5-inch
   Floppy Drive B.................... None
  +IDE Primary Channel Master ........ Hard Disk, 3400 MB
  +IDE Primary Channel Slave ......... None
  +IDE Secondary Channel Master....... None
   IDE Secondary Channel Slave....... IDE CD-ROM
   Total Memory...................... 32 MB
     1st Bank........................ SDRAM, 32 MB
    +2nd Bank........................ None


   PgDn/PgUp = Move Screen, Esc = Back to Main Menu
```

Example for *System* Information menu

> **i**
> All parameters marked with a plus (+) sign will appear only if there is a device connected or installed.

The *System Information* menu displays the standard system functions of the device.

```
 System Information                                    Page 2/2

   Serial Port 1 ..................... 3F8h, IRQ 4
   Serial Port 2 ..................... Disabled

   Parallel Port ..................... 378h, IRQ 7
   PS/2 Mouse ........................ Installed




  PgDn/PgUp = Move Screen, Esc = Back to Main Menu
```

Example for the 2. page *System Information* menu

Product Information

```
      Product Information                            Page 1/1

   Product Name ............ SCOVERY
   System S/N .............. Serial#
   Main Board ID............ 98134-1
   Main Board S/N........... 0000000000000000
   System Board Version..... V3.2
   DMI BIOS Version......... 2.00.1


  <Esc> = Back to Main Menu
```

Example for the *Product Information* menu

The *Product Information* displays information on the product designation of the device, the serial numbers of device and system board as well as the system BIOS and DMI BIOS versions.

Disk Drives

```
   Disk Drives                                 Page 1/1

  Floppy Drive A .......... [1.44-MB    3.5-inch]
  Floppy Drive B ......... [   None    ]

  LS-120 drive as ......... [ Normal ]

 •   IDE Primary Channel Master

 •   IDE Primary Channel Slave

 •   IDE Secondary Channel Master

 •   IDE Secondary Channel Slave




  ↑↓ = Move Highlight Bar          F1 = Help
  Esc = Exit                       → ← = Change Setting,
```

Example for the *Disk Drives* menu

Floppy Drives

Select the correct value for the first floppy disk drive (*Drive A*). Press the ⬅ or ➡ key to view the options and select the appropriate value.

LS-120 drive

Installs and configures a 120 Mbyte floppy disk drive. You can determine how the 120 Mbyte floppy disk drive will be detected.

Possible entries are:

Normal   *BIOS* does not support the LS-120 drive. The drive needs the LS-120 device driver to operate.

Drive A   *BIOS* recognizes the LS-120 drive as drive A. If a standard diskette drive A exists, *BIOS* automatically identifies LS-120 drive as drive B. If drive A and B already exist, the LS-120 drive will not be recognized.

Drive B   *BIOS* recognizes the LS-120 drive as drive B. If a standard diskette drive B exists, the LS-120 drive will not be recognized.

Hard Disk   *BIOS* recognizes the LS-120 drive as a hard disk. Treat the LS-120 drive like any other hard disk. See the documentation that came with the LS-120 drive for more information.

IDE Drives

Configures the IDE drives.

```
   IDE Primary/Secondary
    Channel Master/Slave                           Page 1/1


   Type......................... [ Auto ]
     Cylinder.................... [ XXXX ]
     Head....................... [ XXXX ]
     Sector..................... [ XXXX ]
     Size....................... [ XXXX ] MB

 Hard Disk Size > 504MB......... [ Auto ]
*Hard Disk Block Mode.......... [ Auto ]
*Advanced PIO Mode............. [ Auto ]
*Hard Disk 32 Bit Access....... [Enabled]
*DMA Transfer Mode............. [ Auto ]

 ↑↓ = Move Highlight Bar         F1 = Help
 Esc = Exit                      → ← = Change Setting,
```

Example for *IDE Primary/Secondary* menu

Type

This field is used to specify the type of hard disk drive. *Auto* configures the hard disk automatically. You do not need to select the parameters yourself. If you know your hard disk type, you can enter the setting manually with the *Cylinder, Head, Sector* and *Size* parameters.

Cylinders	Number of cylinders
Head	Number of heads
Sectors	Number of sectors
Size	Size of the hard disk in Mbyte

Hard Disk Size > 504 MB

Auto automatically detects the installed hard disk and supports the function if possible.

Hard Disk Block Mode

This function enhances disk performance depending on the hard disk in use. *Auto* automatically detects the installed hard disk and supports the function if possible. If supported data can be transferred in blocks. *Disabled* does not support this function.

Advanced PIO Mode (Programmed Input Output Mode)

This function defines the transfer rate of the IDE hard disk drive. *Auto* automatically detects if this function is supported.

Hard Disk 32-bit Access

This function allows the 32-bit hard disk access.

DMA Transfer Mode

This field specifies the transfer mode for the IDE hard disk drive. *Auto* automatically detects if this function is supported.

Onboard Peripherals

```
 Onboard Peripherals                            Page 1/1

   Onboard Communication Ports
   Serial Port 1 ..................... [Enabled]
      Base Address ................... [3F8h]
      IRQ ........................... [ 4 ]
   Serial Port 2 ..................... [Disabled]
      Base Address ................... [----]
      IRQ ........................... [---]

   Parallel Port ..................... [Enabled ]
      Base Address ................... [378h]
      IRQ ........................... [ 7 ]
      Operation Mode ................. [Standard]
        ECP DMA Channel .............. [ - ]


   •   Onboard Device Settings


   ↑↓ = Move Highlight Bar           F1 = Help
   Esc = Exit                        → ← = Change Setting,
```

Example for the *Onboard Peripherals* menu

Parallel Port Operation Mode Settings

This field is used to specify whether the parallel port is to be used as a bi-directional input/output port or just as an output port. *ECP* and *EPP* transfer modes allow faster transfer rates of 2 and 2.4 Mbytes/s. These modes will only work with peripheral devices which support them.

Setting	Function
Standard and Bi-directional	Data can be transferred in both directions across the port.
Enhanced Parallel Port (EPP)	Fast transfer mode (up to 2 Mbytes/s), can output and receive data. The mode requires a peripheral device which supports the EPP transfer mode.
Extended Capabilities Port (ECP)	Fast transfer mode (up to 2.4 Mbytes/s), can output and receive data. The mode requires a peripheral device which supports the ECP transfer mode.

ECP DMA Channel

This item becomes active only if you select *Extended Capabilities Port (ECP)* as the operation mode. It allows you to assign *DMA channel 1* or *DMA channel 3* for the ECP parallel port function (as required in Windows 98).

Onboard Device Settings

The parameters are shown in Advanced level only.

```
   Onboard Device Settings                         Page 1/1


   Floppy Disk Controller ..............[Enabled ]
   IDE Controller ......................[Both ]
   PS/2 Mouse Controller ...............[Enabled ]
   USB Host Controller .................[Enabled ]
     USB Legacy Mode ...................[Disabled]




   ↑↓ = Move Highlight Bar              F1 = Help
   Esc = Exit                          → ← = Change Setting,
```

Example for the *Onboard Devices Configuration* submenu

USB Controller

switches the USB controller (Universal Serial Bus) of the system board on or off.

Enabled   The system BIOS determines which system resources (interrupts, addresses) are occupied.

Disabled   The USB controller is disabled.

USB Legacy Mode

specifies whether the USB keyboard emulation is still active after starting the operating system (in a DOS environment). The *USB Host Controller* must be enabled.

Enabled   The function is enabled.

Disabled   The function is disabled.

Power Management

Programs for power management can change the settings for the energy saving functions.

```
   Power Management    Page 1/1


   Power Management Mode  ............. [Enabled ]
     IDE Hard Disk Standby Timer  ..... [Off] Minute(s)
     System Sleep Timer  ............. [30] Minute(s)
       Sleep Mode  ................... [Suspend ]

   Power Switch < 4 Sec. .............. [Power Off ]

   System Wake-Up Event

     Modem Ring Indicator ............. [Disabled ]
     Magic Packet ..                    [Enabled ]



   ↑↓ = Move Highlight Bar          F1 = Help
   Esc = Exit                       → ← = Change Setting,
```

Example for menu *Power Management*

Power Management Mode

This field defines the extent of the energy saving functions. When *Enabled* is set, the functions set in the fields *IDE Hard Disk Standby Timer* and *System Sleep Timer* are effective. When *Disabled* is set, the energy saving functions are disabled.

Power Switch < 4 sec

Power Off switches the system off, when the On/Off switch is pressed.
Suspend switches the system in Suspend mode, when the On/Off switch is pressed.

System Wake-Up Event

specifies the event which wakes up the system.

Modem Ring Indicator

specifies whether the system can be switched on by an incoming message (e.g. via modem, fax or telephone). The signal can be supplied externally via serial port 1 or internally via the modem on connector.

When *Enabled* is set the system can be switched on by means of an incoming message.
When *Disabled* is set the system cannot be switched on by means of an incoming message.

Magic Packet

determines whether the system can be switched on by means of an LAN controller (onboard or additional board).

When *Enabled* is set the system can be switched on by means of an LAN controller.
When *Disabled* is set the system cannot be switched on by means of an LAN controller.

Boot Options

Specifies the settings for the system startup.

```
    Boot Options   Page 1/1


    Boot Sequence
      1st [Floppy Disk]
      2nd [Hard Disk]
      3rd [IDE CD-ROM]

  First Hard Disk Drive ..................[IDE]
  Primary Display Adapter ................[Auto ]

  Fast Boot ..............................[Auto ]
  Num Lock After Boot ....................[Enabled ]
  Memory Test ............................[Disabled]
  *Configuration Table ...................[Enabled ]
  *Boot from LANDesk Service Agent .......[Disabled]

  ↑↓ = Move Highlight Bar          F1 = Help
  Esc = Exit                       → ← = Change Setting,
```

Example for the *Boot Options* submenu

Boot Sequence

defines the sequence in which the system BIOS searches the drives for system files to start the operating system. You can change the sequence with the ← and → key.

First Hard Disk Drive

Specifies whether the system is booted from an IDE or an SCSI hard disk drive.

Primary Display Adapter

Primary Display Adapter enables or disables the on-board VGA controller on the system board. If a screen controller board is installed the on-board controller must be disabled.

Fast Boot

Fast Boot can reduce the extent of the self-test and thus accelerate the system startup.

When *Auto* is set, the fast self test is performed. When *Disabled* is set, the complete device configuration is tested, when the device is switched on.

Num Lock After Boot

Num Lock After Boot activates the Num Lock function after system startup.

Memory Test

When *Enabled* is set, the memory test is performed during the self test. When *Disabled* is set, the memory test is skipped.

Configuration Table

The parameter is shown in Advanced level only.

This parameter allows you to enable or disable the display of the configuration table after the self test but before booting. The configuration table gives a summary of the hardware devices and settings that BIOS detected.

Boot from LANDesk Service Agent / Boot over BOOTP

enables the operating system to be loaded from a server. This function is used particularly when neither floppy disk nor hard disk drives are installed, or they have been switched off. Here there are two different boot protocols: *BootP* and *LSA*.

Boot from LANDesk Service Agent

When *Enabled* is set, the *LSA* LAN-BIOS is activated and enables the operating system to be loaded from a server via a local network connection with *LSA*.

When *Disabled* is set the LAN boot is not possible. The LAN-BIOS is not activated.

Boot over BOOTP

When *Enabled* is set, the *BootP* LAN-BIOS is activated and enables the operating system to be loaded from a server via a local network connection with *BootP*.

When *Disabled* is set the LAN boot is not possible. The LAN-BIOS is not activated.

Date and Time

indicates the date / the time of the device. The date is entered in the weekday-month-day-year format. The time is entered in the hour-minute-second format. If you want to change the current date set / the current time set, enter the new date in the *System Date* field / the new time in the *System Time* field. Use the ⬅ and ➡ keys.

System Security

The *System Security* menu offers you various options for protecting your system and personal data from unauthorized access. By combining these options, you can achieve optimum protection for your system.

Setup Password

This field enables you to install the Setup password. The Setup password prevents unauthorized callup of the *BIOS Setup*.

Setting the Setup password

To set or change the setup/system password, proceed as follows:

► Call *BIOS Setup* and select the *System Security* menu.

► In the *System Security* menu mark the *Setup Password* field and press the ← or → key.

The *Setup Password* screen is displayed.

```
 Setup Password        Page 1/1


  Enter your new Password twice.
  Password may be up to 7 characters long.


  Enter Password ................. [XXXXXXX]
  Enter Password again ........... [XXXXXXX]


  Set or Change Password




 ↑↓ = Move Highlight Bar          F1 = Help
 Esc = Exit
```

► Enter the password in the *Enter Password* field and press the Enter key.

> **i** The password can be at most seven characters long. All alphanumerical characters can be used; no differentiation is made between upper-case and lower-case.
>
> Passwords are not displayed as they are entered.

► Re-enter the password in the *Enter Password again* field and press the Enter key.

► Confirm the *Set or Change Password* line with the Enter key to save the password.

► Press Esc to enter the *System Security* menu.

The *Setup Password* entry is set to *Present*.

► Press Esc to return to the main menu.

► Press Esc to exit *BIOS Setup*.

► Select *Yes* to save the changes.

The next time you want to call *BIOS Setup*, you must enter your Setup password.

Power-on Password

With the system password you can prevent booting of the operating system. The system can be accessed only by those who know the system password.

You can set the system password in the *Power-on Password* field. Follow the same procedure as in setting the Setup password.

Disk Drive Control

Disk Drive Control is used to enable and disable drive write-protection.

The table shows the possible settings and their meaning:

Floppy disk drive

Settings	Meaning
Normal	Floppy disks may be read, written to or deleted.
Write Protect All Sectors	Diskettes can only be read.
Write Protect Boot Sector	The boot sector of floppy disks is read-only. The remaining data on the floppy disk may be read, written or deleted.

Hard disk drive

Settings	Meaning
Normal	Hard disks may be read, written to or deleted.
Write Protect All Sectors	Hard disks are read-only.
Write Protect Boot Sector	The boot sector of the hard disk is read-only. The remaining data on the hard disk may be read, written to or deleted.

Advanced Options

This menu and the associated submenus are shown in Advanced level only.

⚠ Change the default settings only for special applications. Incorrect settings can cause malfunctions.

Memory / Cache Options

calls the submenu in which you can make the settings for main memory and cache.

```
 *Memory / Cache Options                        Page 1/1

  *Internal Cache (CPU Cache) ............[Enabled]

  *External Cache .......................[Disabled]
     *Cache Scheme .......................Write Back

  *Memory at 15MB - 16MB Reserved for ....[System]


 ↑↓ = Move Highlight Bar              F1 = Help
 Esc = Exit                           → ← = Change Setting,
```

Example for the *Memory / Cache Options* menu

Internal Cache (CPU Cache)

This field switches the internal cache on and off. The cache is a buffer to which parts of the main memory and BIOS can be temporarily copied. The system performance is higher when the cache is switched on.

You must disable the cache, if the access time is too short for older applications.

Select *Enabled*, if you want to switch on the internal cache.

External Cache

This field switches the external cache on and off.

Select *Enabled*, if you want to switch on the external cache.

Cache Scheme [Write Back]

The contents of the memory are mapped in the cache and written in the main memory only as required. Main memory and cache contents are not identical.

Memory at 15MB-16MB Reserved for

Select *Add-on Card*, if the memory region between 15 and 16 Mbyte shall be reserved for a board. Otherwise select *System*.

PnP / PCI Options

calls the submenu in which you can make the settings for Plug&Play and the PCI bus.

```
  *PnP / PCI Options                                Page 1/1

  *PCI IRQ Setting ..................... [Auto]

                                        INTA INTB INTC INTD
    *PCI Slot 1 ....................... [--] [--] [--] [10]
    *PCI Slot 2 ....................... [--] [--] [10] [--]


  *PCI IRQ Sharing ..................... [Yes]
  *VGA Palette Snoop ................... [Disabled]
  *Plug and Play OS .................... [Yes]
  *Reset Resource Assignments .......... [No]


  ↑↓ = Move Highlight Bar           F1 = Help
  Esc = Exit                        → ← = Change Setting,
```

Example for the *PnP / PCI Options* submenu

PCI IRQ Setting

defines the setting of the PCI interrupts.

Select *Auto*, if you use PCI boards supporting Plug&Play. Otherwise select *Manual*.

PCI Slot 1 / 2

If *PCI IRQ Setting* is set to *Manual*, you can set the PCI interrupts in this field.

Multifunctional PCI boards or boards with an integrated PCI-to-PCI bridge can use several PCI interrupts (INTA#, INTB#, INTC#, INTD#). Monofunctional PCI boards (default) only use one PCI interrupt (INTA#) per PCI slot.

The PCI interrupts INTA#, INTB#, INTC# and INTD# are available for every PCI slot.

PCI IRQ Sharing

The same interrupt can be assigned simultaneously to several PCI boards.

Select *Yes*, if you want to assign one interrupt to several boards. Otherwise select *No*.

VGA Palette Snoop

Select *Enabled* to activate the Palette Snoop function in VGA boards installed in the device.

Plug & Play OS

defines the Plug&Play functionality. Plug&Play means that inserted modules are automatically recognized and installed if they support Plug&Play.

Yes   The operating system takes over some of the Plug&Play functions. You should select this setting only if the operating system supports Plug&Play.

No   The BIOS takes over the complete Plug&Play functionality.

Reset Resource Assignments

This field specifies whether the configuration data is reset and reinitialized when the system is started.

Yes   After the system is started, the configuration data is reset, and the entry in this field is set to *No*. The new configuration data is determined by means of the Plug&Play functionality. The mounted modules and drives are then initialized with this data. Non-Plug&Play components must be entered manually.(e. g. Windows 95, ICU).

No   After the system is started, the Plug&Play functionality ascertains the current configuration data and uses this data to initialize the installed boards and drives. The configuration data of non-Plug&Play components are not reset.

Load Default Settings

You need to reload the BIOS default settings every time you make changes to your system hardware configuration (such as memory size, CPU type, hard disk type, etc.); otherwise, BIOS will keep the previous settings.

After selecting *Load Default Settings* the following dialog box appears:

```
        Do you want to load default settings?

              Yes                  No
```

Selecting *Yes* enables BIOS to detect the new default values. Selecting *No* returns you to the main menu without loading the default settings.

Abort Settings Change

After selecting *Abort Settings Change* the following dialog box appears:

```
        Do you want to abort settings change?

               Yes                    No
```
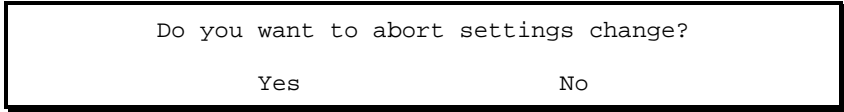
Select *Yes* to discard all changes. Selecting *No* returns you to the main menu without discarding the changes.

Exiting Setup

To exit *BIOS Setup* press the **Esc** key in the main menu. Confirm the following dialog box.

Index

Contents

A26361-K522-Z120-2-7419
Systemboard D1152
Technical Manual
April 1999 edition