



System board D969

Technical Manual

Is there ...

... any technical problem or other question you need clarified?

Please contact:

- one of our IT Service Shops
- your sales partner
- your sales office

The addresses of your service partners are contained in the guarantee booklet or in the service address booklet.

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

<http://www.siemens.com/pc>

... anything you want to tell us about this manual?

Please send us your comments quoting the order number of the manual.

Siemens AG
User Documentation Department,
ICP CS BS2 OS ID4
Otto-Hahn-Ring 6
D-81730 München

Your training needs?

The Siemens Training Centers offer you a wide range of training courses in information technology and on IT products and other subjects - onsite near to your workplace or offsite at one of our training centers.

Let us know your training requirements or request information from us - the fastest way is via fax under: +49 89 636-42945

Or write to:

Siemens AG
Training Center, Beratungsservice
D-81730 München

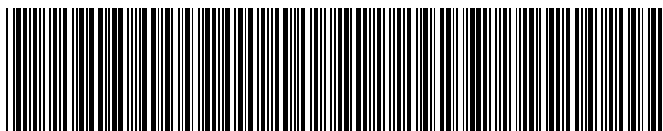
System board D969



Dieses Handbuch wurde auf Recycling-Papier gedruckt.
This manual has been printed on recycled paper.
Ce manuel est imprimé sur du papier recyclé.
Este manual ha sido impreso sobre papel reciclado.
Questo manuale è stato stampato su carta da riciclaggio.
Denna handbok är tryckt på recyclingpapper.
Dit handboek werd op recycling-papier gedrukt.

Herausgegeben von/Published by
Siemens AG
D-81730 München

Bestell-Nr./Order No.: **A26361-D969-Z120-8-7619**
Printed in the Federal Republic of Germany
AG 1198 11/98



A26361-D969-Z120-1-7619

System board D969

Technical Manual

Introduction

Important notes

Settings in BIOS Setup

Settings with switch block

Add-on modules

Error messages

Index

November 1998 edition

Creative is a registered trademark, Sound Blaster 16 and VIBRA 16C are trademarks of Creative Technology Ltd.

Intel and Pentium are registered trademarks and OverDrive is a trademark of Intel Corporation, USA.

AMD-K5 is a trademark of Advanced Micro Devices, Inc.

Microsoft, MS, MS-DOS and Windows are registered trademarks of Microsoft Corporation.

PS/2 and OS/2 Warp are registered trademarks of International Business Machines, Inc.

All other trademarks referenced are trademarks or registered trademarks of their respective owners, whose protected rights are acknowledged.

Copyright © Siemens AG 1998

All rights, including rights of translation, reproduction by printing, copying or similar methods, even of parts are reserved.

Offenders will be liable for damages.

All rights, including rights created by patent grant or registration of a utility model or design, are reserved.

Delivery subject to availability. Right of technical modification reserved.

Contents

Introduction	1
Notational conventions	1
Features	2
Interfaces and connectors	4
Possible screen resolution.....	5
Resource table	7
 Important notes	 9
 Settings in BIOS Setup	 11
Main menu - Making system settings	11
System Time / System Date	12
Diskette A / Diskette B	12
Hard Disk 1 to Hard Disk 4 - Hard disk drive	13
Boot Options	16
Video Display	18
Base Memory	18
Extended Memory	18
Advanced menu - Making advanced system settings.....	19
Cache Memory	20
Shadow Memory	22
Peripheral Configuration - Ports and Controllers.....	23
PCI Configuration	27
Advanced System Configuration	29
Plug & Play O/S.....	31
Reset Configuration Data	31
Large Disk Access Mode - Hard disk access	31
Menu Security - Setting up the security features	32
Setup Password / System Password.....	32
Set Setup Password.....	33
Setup Password Lock.....	33
Set System Password	33
System Password Mode.....	34
System Load	34
Setup Prompt - Setup message	34
Virus Warning.....	35
Diskette Write	35
Flash Write	35
Power On/Off.....	36
Power menu - Setting energy saving functions	39

Contents

APM - Enabling the APM Interface	39
Power Management Mode - Extent of energy saving functions.....	40
Standby Timeout	40
Suspend Timeout - Suspend mode	40
Hard Disk Timeout.....	41
Standby CPU Speed.....	41
Save To Disk	41
Wakeup Event - Defining system activities	43
BIOSFaX menu - modem - quick start functions	44
Receive Mode.....	44
Ring Count.....	44
Fax Tone Count.....	45
Fax Modem Port - Serial port.....	45
Exit menu.....	46
Save Changes & Exit - Saving and Exiting.....	46
Discard Changes & Exit.....	46
Get Default Values	46
Load Previous Values.....	46
Save Changes	46
Settings with switch block S180.....	47
Clock speed - switch 1, 2, 3 and 4	48
Recovering System BIOS - switch 5	48
Write protection for System BIOS - switch 7	49
Write protection for floppy disk drive - switch 8.....	49
Add-on modules	51
Upgrading main memory.....	52
Replacing the processor	54
Upgrading the Second-level cache	55
Upgrading the video memory	56
Connecting an audio board.....	57
Replacing the lithium battery	58
Error messages.....	59
Messages d'erreur	61
Mensajes de error	63
Messaggi di errore	65
Felmeddelanden	67
Foutmeldingen	69
Index	71

Introduction

This description applies for the system board D969 with PCI bus (Peripheral Component Interconnect).



This system board is available in different configuration levels. Depending on the hardware configuration of your device, it may be that you cannot find several options in your version of the system board, even though they are described.

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.



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 enter a blank space at this point.



This symbol means that you must press the Enter key.

Texts in this typeface are screen outputs from the PC.

Texts in this bold typeface are the entries you make via the keyboard.

Texts in italics indicate commands or menu item.

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

Features

- ATX system board
- 64-bit processor Intel Pentium with 16 Kbytes internal cache (first-level cache, 8 Kbytes data cache, 8 Kbytes code cache) or OverDrive processor for Pentium
or
- AMD-K5
- Memory configuration on the system board: 8 to 128 Mbyte (FPM or EDO)
- Error recognition and correction via ECC / Parity
- Second-level cache on the system board: 0, 256 or 512 Kbytes (PBSRAM)
- 256 Kbytes Flash BIOS
- 3 PCI, 2 ISA slots and 1 ISA/PCI slot (shared)
- PCI bus
- IDE hard disk controller connected to PCI bus for up to four IDE drives (e.g. IDE hard disk drives, ATAPI CD ROM drive)
- Real-time clock/calendar with integrated battery backup
- Floppy disk controller (up to 2.88 Mbytes format)
- Parallel interface (ECP- and EPP-compatible)
- 2 Serial interfaces
- PS/2 mouse port
- PS/2 keyboard port
- Security functions

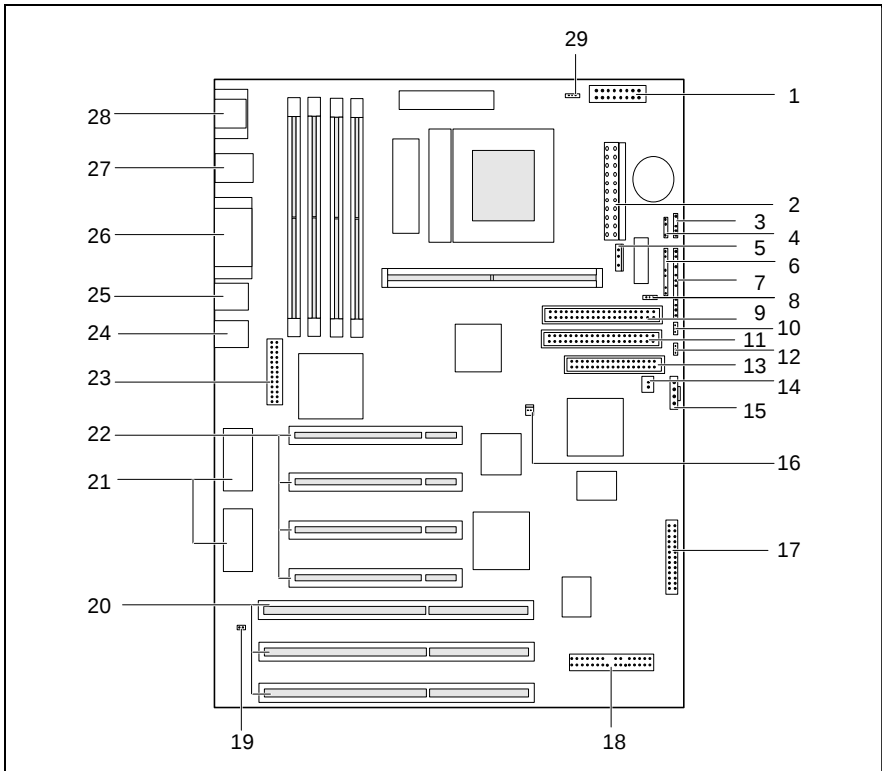
Optional Component

- Video connector
- Screen controller connected to PCI bus, graphics processor Cirrus Logic CL-GD5446 with Windows accelerator and 1 Mbyte or 2 Mbytes DRAM video memory
- Audio controller on ISA-BUS (Creative VIBRA 16C; 16 bit; compatible with Sound Blaster 16, MPU401, Multimedia PC and Multimedia PC II; Stereo-FM synthesizer YAMAHA OPL3)
- USB (Universal Serial Bus)
- Energy saving functions
- Connector for feature connector, loudspeaker
- Connector for remote-on (fax/modem board), chipcard reader and infrared interface
- Connector for CD-line in, wavetable module, Game/Midi, voice modem, AUX-in
- Microphone connector (via supplementary board)
- Audio port (line in) (via supplementary board)
- Headphone connector (via supplementary board)



The microphone connector, audio port and headphone connector are connected via a common plug (Game/Midi / Audio) on the system board.

Interfaces and connectors



- | | |
|------------------------------------|-----------------------------------|
| 1 = Chipcard reader | 15 = CD Line in |
| 2 = Power supply | 16 = Power on switch |
| 3 = infrared interface | 17 = Wavetable board |
| 4 = External loudspeaker | 18 = Game/Midi / Audio |
| 5 = Soft-off power supply | 19 = I ² C connector |
| 6 = LED indicators in front panel | 20 = ISA slots 1-3 |
| 7 = LED indicators in front panel | 21 = Socket for video memory |
| 8 = SCSI-LEDs | 22 = PCI slots 1-4 |
| 9 = IDE drives 3 and 4 (secondary) | 23 = Feature board |
| 10 = Voice modem | 24 = Video connector |
| 11 = IDE drives 1 and 2 (primary) | 25 = USB |
| 12 = AUX IN | 26 = Parallel port |
| 13 = Floppy disk drive | 27 = PS/2 mouse and keyboard port |
| 14 = Remote on via fax/modem | 28 = Serial interface 1 / 2 |
| | 29 = Fan |

The connectors marked do not have to be present on the system board.

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.

You can set the screen resolution under Windows 95 by selecting *Control Panel - Display - Settings*.

You can set the screen resolution under MS-DOS using the *SET-VGA* program.

Screen resolution	Refresh rate (Hz)	Horizontal-rate (kHz) **	Max. number of colors
640x350	70	31,5	16
640x350	84	38	16
640x480	60	31,5	16777216
640x480	75	37,5	16777216
640x480	85	43,4	16777216
640x480	100	50,6	16777216
720x400	70	31,5	16
720x400	84	38	16
800x600	60	38	65536
800x600	60	38	16777216
800x600	72	48	65536
800x600	72	48	16777216
800x600	75	47	65536
800x600	75	47	16777216
800x600	85	53,7	65536
800x600	85	53,7	16777216
800x600	100	63	65536
800x600	100	63	16777216
1024x768	87 interlaced	36	256
1024x768	87 interlaced	36	65536
1024x768	60	48,4	256
1024x768	60	48,4	65536
1024x768	75	60	256
1024x768	75	60	65536
1024x768	85	68,7	256 *
1024x768	100	81	256 *
1280x1024	87 interlaced	49	16
1280x1024	87 interlaced	49	256
1280x1024	60	63,7	256 *
1280x1024	75	80,4	256 *

* no 16 color mode

** The horizontal rate values may have a tolerance range of ± 0.3 kHz.

The values marked are only available with a 2-Mbytes video memory.

Resource table

	assigned IRQ	possible IRQ	Possible Address	Possible DMA
Keyboard	IRQ1			
Serial port COM2 / IrDA	IRQ3		02F8, 03F8 02E8, 03E8	
Serial interface COM1 / Chip card reader	IRQ4		03F8, 02F8 03E8, 02E8	
Floppy disk drive controller	IRQ6			DMA2
Parallel interface LPT1	IRQ7	IRQ5, IRQ7	0278, 0378	DMA1, DMA3
RTC	IRQ8			
Audio controller		IRQ5, IRQ7, IRQ9, IRQ10		DMA1, DMA3, DMA5, DMA7
Joystick:			0200-0207	
Base address:			0220-022F 0240-024F 0260-026F 0280-028F	
MPU 401:			0300-0301 0330-0331	
Adlib:			0338-038B	
USB controller	IRQ11			
Mouse controller	IRQ12			
Numeric processor	IRQ13			
IDE controller 1	IRQ14			
IDE controller 2	IRQ15			

"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



Please note that a resource cannot be used by two applications at the same time.

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.

Incorrect replacement of the lithium battery may lead to a risk of explosion. It is therefore essential to observe the instructions in the chapter "Add-on modules" - "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.

ADVARSEL



Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering. Udskiftning må kun ske med batteri af samme fabrikat og type. Lever det brugte batteri tilbage til leverandøren.

ADVARSEL



Eksplosjonsfare ved feilaktig skifte av batteri. Benytt samme batteritype eller en tilsvarende type anbefalt av apparatfabrikanten. Brukte batterier kasseres i henhold til fabrikantens instruksjoner.

VARNING



Eksplosionsfara vid felaktigt batteribyte. Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkarenfabrikanten. Kassera använt batteri enligt fabrikantens instruktion.

VAROITUS



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

Important notes



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.

Connecting 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.

Settings in BIOS Setup

The *BIOS Setup* menu allows you to set your hardware configuration and system functions. In addition, the *BIOS Setup* displays technical information on the PC's configuration.

When it is supplied, the PC is set to factory default settings which you can alter in the *BIOS Setup* menus. 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*.

The Operating Manual describes how to call the *BIOS Setup* and change menu entries.

You can select the following settings in the *BIOS Setup*:

Main - system functions

Advanced - advanced system configuration

Security - security features

Power - power-management features

BIOSFaX - quick start functions

Exit - save and quit



The various menus are described below with all setting options. Since the setting options depend on your PC's hardware configuration, some of them may not be offered in the *BIOS setup*.

Main menu - Making system settings

In the *Main* menu you can set up the following:

- Time (in the field marked *System Time*)
- Date (in the field marked *System Date*)
- Floppy disk drive (in the field marked *Diskette A* or *Diskette B*)
- Hard disk drive (in the submenus of *Hard Disk*)
- System boot (in the submenus of *Boot Options*)
- Display device (in the field marked *Video Display*)

Phoenix BIOS Setup					
Main	Advanced	Security	Power	BIOSFaX	Exit
System Time: [07:42:19] System Date: [08/11/1995] Diskette A: [1.4M] Diskette B: [None] ▶ Hard Disk 1: 1 Gbyte ▶ Hard Disk 2: None ▶ Hard Disk 3: None ▶ Hard Disk 4: None ▶ Boot Options Video Display: [EGA/VGA] Base Memory: 640K Extended Memory: 7M				Item Specific Help	
F1 Help ESC Exit	↑↓ Select Item ←→ Select Menu	-/+ Enter	Change Values Execute Command	F9 Setup Defaults F7 Previous Values	

Example for *Main* menu

System Time / System Date

The *System Time* field and the *System Date* field show the time and date respectively according to the PC. The time is shown in the format hh:mm:ss (hours:minutes:seconds) and the date is shown in the format mm/dd/yyyy (month/day/year).



If the settings in the *System Time* and *System Date* fields are frequently wrong when you power up the computer, the lithium battery is dead. Change the battery as described in "[Add-on modules](#)" - "[Replacing the lithium battery](#)".

Diskette A / Diskette B

These two fields are used to specify the type of floppy disk drive installed.

360K, 720K, 1.2M, 1.4M, 2.8M

The entry depends on the floppy disk drive installed.
(Default entry Diskette A : 1.4M).

None

A floppy disk drive is not installed.
(Default entry for Diskette B: 1.2M).

Hard Disk 1 to Hard Disk 4 - Hard disk drive

call the submenu to make corresponding settings of the IDE hard disk drive.

i

You should change the default settings only if you are connecting an additional IDE drive to one of the two IDE connectors.

The maximum transfer speed is supported independently on all four IDE drives. Consequently a fast and a slow hard disk drive can be attached at an IDE connector without affecting the maximum transfer speed of the fast drive.

The following description of the setting options for *Hard Disk 1* also applies to *Hard Disk 2*, *Hard Disk 3* and *Hard Disk 4*. The default settings depend on the installed drive.

Phoenix BIOS Setup Main			
Hard Disk 1:	1 Gbyte	Item Specific Help	
Autotype Hard Disk:	[Press Enter]		
Type:	[User]		
Cylinders:	[1654]		
Heads:	[16]		
Sectors/Track:	[63]		
Write Precomp:	[None]		
Transfer Mode:	[Standard]		
LBA Translation:	[Enabled]		
PIO Mode:	[Fast PIO 3]		
32 Bit I/O:	[Enabled]		
F1 Help	↑↓ Select Item	-/+ Change Values	F9 Setup Defaults
ESC Exit	←→ Select Menu	Enter Execute Command	F7 Previous Values

Example for the submenu *Hard Disk 1*

Autotype Hard Disk



Only if you have installed a new unrecorded IDE hard disk drive, you should mark the *Autotype Hard Disk* field.

If you have set the hard disk parameters with *Autotype Hard Disk*, you can only reduce the values.

If you have installed a new unrecorded IDE hard disk drive, you should mark the *Autotype Hard Disk* field and press Enter. This has the effect of setting the optimum values for the IDE hard disk drive. You can change these values if you set the *Type* field to *User*.

Type - Hard Disk Type

This field is used to specify the type of hard disk drive.

- None

You cannot change the hard disk parameters (*Cylinders, Heads, Sector/Track* and *Write Precomp*). An IDE drive has not been installed.
- 1 to 39

The hard disk parameters (*Cylinders, Heads, etc.*) are preset.
- Auto

If the hard disk supports this mode, the setup menu reads the hard disk parameters from the disk itself. You do not need to select the parameters yourself.
- User

You can enter the hard disk parameters (*Cylinders, Heads etc.*) yourself.
If you have set the hard disk parameters with *Autotype Hard Disk*, you can only reduce the values.

Examples of user-defined entries (IDE drives):

Hard disk parameter	hard disk capacity		
	850 Mbyte	1,2 Gbyte	1,6 Gbyte
Cylinders	1654	2484	3148
Heads	16	16	16
Sectors	63	63	63
Write Precomp	None	None	None

Cylinders, Heads, Sectors/Track, Write Precomp - hard disk parameter

These hard disk parameters are set in accordance with the IDE hard disk drive. If you want to change the hard disk parameters manually, set the *Type* field to *User*.

Transfer Mode

This field specifies the transfer mode for the IDE hard disk drive.

Standard One block is transferred for each interrupt (default entry).

2 Sectors, 4 Sectors, 6 Sectors, 8 Sectors, 16 Sectors

The set number of blocks (sectors) is transferred for each interrupt.

LBA Translation - Addressing

This field enables and disables the LBA (Logical Block Addressing) mode. LBA mode allows you to install and use IDE hard disks with a capacity of more than 528 Mbytes. If a hard disk supports LBA mode, you can use the full capacity of the IDE hard disk.

The default entry depends on the installed IDE hard disk drive. Change the default entries only if you are installing another hard disk drive.



You may only use IDE drives in the LBA mode selected when they were set up. In other words, if you set up a hard disk with LBA mode disabled, you may only operate the hard disk with LBA mode disabled.

Enabled If the hard disk supports LBA and it has a capacity of more than 528 Mbytes, the BIOS translates the hard disk parameters, allowing the disk's full capacity to be used. This allows the disk's full capacity to be used.
If the hard disk does not support LBA, its parameters are not translated.

Disabled The BIOS uses the hard disk parameters and supports a maximum capacity of 528 Mbytes.

PIO Mode - Transfer rate

The PIO (Programmed Input Output) Mode defines the transfer rate of the IDE hard disk drive.

- Standard* 0.8 Mbyte/s to 2 Mbytes/s (default entry)
- Fast PIO 1* 2 Mbytes/s to 4 Mbytes/s
- Fast PIO 2* 4 Mbytes/s to 5 Mbytes/s
- Fast PIO 3* 5 Mbytes/s to 10 Mbytes/s
- Fast PIO 4* more than 10 Mbyte/s

32 Bit I/O - Bus width for data transfer

This field specifies the width of data transmission between the processor and the IDE controller.

- Enabled* The data transfer is 32 bits in width at the PCI bus. This enhances performance (default entry).
- Disabled* The data transfer is 16 bits in width.

Boot Options

calls the submenu in which you can select the settings for system startup of the PC.

Phoenix BIOS Setup	
Main	
Boot Options	Item Specific Help
POST Error Halt: [Halt On All Errors] Quick Boot: [Disabled] Quiet Boot: [Disabled] Boot Sequence: 1. Diskette 2. Hard Disk 3. CD ROM	
F1 Help ESC Exit	↑↓ Select Item ←→ Select Menu -/+ Change Values Enter Execute Command F9 Setup Defaults F7 Previous Values

Example for submenu *Boot Options*

POST Error Halt - Aborting system startup

defines whether the system startup is to be aborted and the system halted when an error is detected.

Halt On All Errors

If the self-test detects an error, system startup is aborted after the self-test, and the system is halted (default entry).

No Halt On Any Errors

The system startup is not aborted. The error is ignored as far as possible. The error is ignored as far as possible.

Quick Boot

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

Enabled When the PC is switched on, the quick self-test is carried out, in which the floppy disk drives are not checked.

Disabled When the PC is switched on, the complete PC configuration is tested (default entry).

Quiet Boot

Instead of a start information a logo is displayed on the screen.

Enabled The logo is displayed on the screen. A switch to the start information is made if you press the **Esc** key or if errors occur.

Disabled The start information is displayed on the screen (default entry).

Boot Sequence

defines the sequence in which the system BIOS searches the drives for system files to start the operating system. If you wish to change this sequence, place the cursor on the entry for the drive which you wish to move forward ( key) or back ( key).

Default entry:

1. *1. Diskette*
2. *Hard Disk*
3. *CD ROM*

Video Display

This field is used to specify the type of monitor connected.

EGA/VGA, Color 80, Monochrome

Default entry: *EGA/VGA*

Base Memory

This field indicates the size of the available base memory below 1 Mbyte.

Extended Memory

indicates the size of the memory above 1 Mbyte.

Advanced menu - Making advanced system settings



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

You can make the following system settings in the *Advanced* menu:

- Internal cache and second-level cache (in the *Cache Memory* submenu)
- Copy BIOS sections to the RAM (in the *Shadow Memory* submenu)
- Interfaces and controllers (in the *Peripheral Configuration* submenu)
- PCI functionality (in the *PCI Configuration* submenu)
- System settings (in the *Advanced System Configuration* submenu)
- Plug&Play functionality (in the *Plug and Play O/S* field)
- Configuration data (in the *Reset Configuration Data* field)
- Hard disk access (in the *Large Disk Access Mode* field)

Phoenix BIOS Setup					
Main	Advanced	Security	Power	BIOSFaX	Exit
Warning! Setting items on this menu to incorrect values may cause your system to malfunction. ► Cache Memory ► Shadow Memory ► Peripheral Configuration ► PCI Configuration ► Advanced System Configuration Plug & Play O/S: [Yes] Reset Configuration Data: [No] Large Disk Access Mode: [DOS]				Item Specific Help	
F1 Help	↑↓ Select Item	-/+ Change Values	F9 Setup Defaults		F7 Previous Values
ESC Exit	↔ Select Menu	Enter Execute Command			

Example for the *Advanced* menu

Cache Memory

calls the submenu in which you can make the settings for the internal cache (in the processor) and the second-level cache (on the system board).

Phoenix BIOS Setup Advanced					
Cache Memory			Item Specific Help		
Cache: [Intern And Extern] Cache Mode: Write Back Cache System BIOS Area: [Enabled] Cache Video BIOS Area: [Enabled] Cache Memory Regions: C800 - CBFF: [Disabled] CC00 - CFFF: [Disabled] D000 - D3FF: [Disabled] D400 - D7FF: [Disabled] D800 - DBFF: [Disabled] DC00 - DFFF: [Disabled]					
F1 Help ESC Exit	↑↓ Select Item ←→ Select Menu	-/+ Change Values Enter Execute Command	F9 Setup Defaults F7 Previous Values		

Example for submenu *Cache Memory*

Cache - cache utilization

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

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

Intern Only Only the internal cache is used.

Intern And Extern
Internal (first-level cache) and external cache (second-level cache) are enabled. If there is no external Cache, only the internal cache is used.

Disabled
Internal (first-level cache) and external cache (second-level cache) are disabled. All cache-related settings are then without effect.

Cache Mode - Transfer Mode

Requirement: The *Cache* field must be set to *Intern Only* or *Intern And Extern*.

Cache Mode sets the mode in which the CPU uses the cache. The field is set to *Write Back* and can not be changed

In write-back mode the CPU writes information to the cache. The information is only written to the main memory if necessary. Main memory and cache contents are not identical.

Cache System BIOS Area / Cache Video BIOS Area

The *Cache* field must be set to *Intern only* or *Intern and Extern*.

Cache System BIOS Area and *Cache Video BIOS Area* lets you specify the BIOS that should be mapped to the cache. Mapping the BIOS to the cache increases system performance.

Enabled The specified BIOS is mapped to the cache (default entry).

Disabled The specified BIOS is not mapped to the cache.

Cache Memory Regions

The *Cache* field must be set to *Intern only* or *Intern and Extern*.

Cache Memory Regions lets you specify the BIOS ROM areas that should be mapped to the cache. Mapping the BIOS ROM areas to the cache increases system performance.

Enabled The relevant ROM area is mapped to the cache.

Disabled The relevant ROM area is not mapped to the cache (default entry).



If your ISA board uses a dual ported RAM in the associated ROM area, set the entry to *Disabled*.

Shadow Memory

calls the submenu in which you can specify which parts of the ROM (Read Only Memory) are to be copied to the faster RAM (Random Access Memory) at system startup.

Phoenix BIOS Setup Advanced	
Shadow Memory	Item Specific Help
System Shadow: Enabled Video Shadow: [Enabled] Shadow Memory Regions: C800 - CBFF: [Disabled] CC00 - CFFF: [Disabled] D000 - D3FF: [Disabled] D400 - D7FF: [Disabled] D800 - DBFF: [Disabled] DC00 - DFFF: [Disabled]	
F1 Help ESC Exit	↑↓ Select Item ←→ Select Menu -/+ Change Values Enter Execute Command F9 Setup Defaults F7 Previous Values

Example for submenu *Shadow Memory*

System Shadow

This field is always *Enabled*, because the System BIOS is automatically copied to the faster RAM.

Video Shadow

This field allows you to copy the video BIOS to fast RAM. Copying the video BIOS to fast RAM increases system performance.

- Enabled

The video BIOS is copied to fast RAM (default entry).
- Disabled

The video BIOS is not copied to fast RAM. This setting is not effective with an external screen controller connected to the PCI bus.

Shadow Memory Regions - ROM areas

Shadow Memory Regions allows you to copy ROM areas to fast RAM. Copying ROM areas to fast RAM increases system performance.

- Enabled* The ROM area is copied to fast RAM.
- Disabled* The ROM area is not copied to fast RAM (default entry).

 If your ISA board uses a dual ported RAM in the associated ROM area, set the entry to *Disabled*.

Peripheral Configuration - Ports and Controllers

calls the submenu in which you can set the ports and controllers.

Phoenix BIOS Setup Advanced		
Peripheral Configuration		Item Specific Help
Serial 1: [Auto] Serial 2: [Auto] Serial 2 Mode: [Standard] Parallel: [Auto] Parallel Mode: [Printer] Diskette Controller: [Enabled] Hard Disk Controller: [Primary And Secondary] Mouse Controller: [Enabled] Audio Controller: [Enabled] USB Controller: [Disabled]		
F1 Help	↑↓ Select Item	-/+ Change Values
ESC Exit	↔ Select Menu	Enter Execute Command
		F9 Setup Defaults
		F7 Previous Values

Example for submenu *Peripheral Configuration*

Serial 1 / Serial 2 - Serial ports

This field selects the address and the interrupt used to access the relevant serial port.

3F8h, IRQ4, 2F8h, IRQ3, 3E8h, IRQ4, 2E8h, IRQ3,

The serial port is set to the shown address and interrupt.

Auto

The serial interface is automatically set to the next available combination (address, interrupt) (Default entry).

Disabled

The serial port is disabled.

Serial 2 Mode - Serial interfaces

This field defines whether the second serial port is used as the standard port or as the infrared interface.

If you wish to use infrared data transfer, an infrared port with the associated hardware must be incorporated in the device.

Standard

The port operates as a serial port (default entry).

IRDA

(Infra-Red Data Association) The serial port permits infrared data transfer up to 115 kbit/s. External serial port 2 does not function.

Parallel - parallel port

This field selects the address and the interrupt used to access the parallel port.

378h, IRQ7, 278h, IRQ5, 3BCh, IRQ7

The parallel port is set to the shown address and interrupt.

Auto

The parallel interface is automatically set to the next available combination (address, interrupt) (Default entry).

Disabled

The parallel port is disabled.

Parallel Mode - Parallel data transfer

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. In addition, the field *Parallel* must be set to *378h* or *278h*.

<i>Printer</i>	The port functions as an output port only (default entry).
<i>Bidirection</i>	Data can be transferred in both directions across the port.
<i>EPP</i>	Fast transfer mode (up to 2 Mbytes/s), can output and receive data. The mode requires a peripheral device which supports the EPP (Enhanced Parallel Port) transfer mode.
<i>ECP</i>	Fast transfer mode (up to 2.4 Mbytes/s), can output and receive data. The mode requires a peripheral device which supports the ECP (Enhanced Capability Port) transfer mode. The DMA channel required is determined by the system in accordance with Plug & Play.

Diskette Controller

This field is used to enable and disable the built-in floppy disk controller on the system board.

<i>Enabled</i>	The floppy disk controller is enabled - IRQ 6 is used. (default entry).
<i>Disabled</i>	The floppy disk controller is disabled - IRQ 6 is free.

Hard Disk Controller

This field allows you to enable and disable the built-in IDE hard disk controller. The associated interrupts (IRQ 14 for the first connector, IRQ 15 for the second connector) will only be available if no IDE hard disk drive is physically connected.

Primary The first IDE hard disk controller is enabled (default entry). Two IDE drives can be attached to the first (primary) connector. IRQ14 is occupied.

Primary And Secondary
Primary and secondary IDE drive controllers are activated (default entry). Up to four IDE drives can be connected. Low-speed drives are preferred for the second (secondary) connector (e.g. CD-ROM). IRQ14 and IRQ15 are occupied.

Disabled Both IDE hard disk controllers are disabled.

Mouse Controller

This field is used to enable and disable the built-in mouse controller on the system board.

Enabled The mouse controller is enabled (default entry)- IRQ 12 is used. .

Disabled The mouse controller is disabled - IRQ 12 is free.

Audio Controller

This field sets the base address for the audio controller on the system board or disables the audio controller.

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

Disabled The audio controller is disabled.

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 (default entry).

PCI Configuration

calls the submenu in which you can make the settings for the PCI slots.

Phoenix BIOS Setup Advanced					
PCI Configuration			Item Specific Help		
PCI Interrupt Mapping INTA#: [Auto] PCI Interrupt Mapping INTB#: [Auto] PCI Interrupt Mapping INTC#: [Auto] PCI Interrupt Mapping INTD#: [Auto] VGA Interrupt: [Disabled] PCI Device, Slot #1 Default Latency Timer: [Yes] Latency Timer: [0040] PCI Device, Slot #2 Default Latency Timer: [Yes] Latency Timer: [0040] PCI Device, Slot #3 Default Latency Timer: [Yes] Latency Timer: [0040]					
F1 Help	↑↓ Select Item	-/+ Change Values	F9 Setup Defaults		
ESC Exit	←→ Select Menu	Enter Execute Command	F7 Previous Values		

Example for submenu *PCI Configuration*

PCI Interrupt Mapping INTx# - Assignment of the PCI interrupts

defines which PCI interrupt is switched to which ISA interrupt. For the change to take effect, you must switch your device off and then on again after the *Setup BIOS* has terminated.

A multifunctional PCI board can use all PCI interrupts, if need be.

If you use a setting other than *Auto*, the Plug&Play functionality of the system BIOS for PCI boards is deactivated.

The PCI interrupts INTA#, INTB# and INTC# are assigned as follows:

PCI slot 1 = INTA#, PCI slot 2 = INTB#,

PCI slot 3 = INTC#, PCI slot 4 = INTD#

Auto The PCI interrupts are assigned automatically in accordance with the Plug&Play guidelines (default entry).

Disabled No PCI interrupt is used for the PCI board in the assigned PCI slot.

IRQ03, IRQ04, IRQ05, IRQ06, IRQ07, IRQ09, IRQ10, IRQ11, IRQ12, IRQ14, IRQ15

The PCI interrupt is switched to the selected ISA interrupt. You may not select an ISA interrupt that is used by a component on the system board (e.g. controller) or an ISA board.

VGA Interrupt - Assigning PCI-VGA interrupt

assigns PCI interrupt to the screen controller on the built-in PCI board. If you have not defined any other interrupt with *PCI Interrupt Mapping*, IRQ9 is assigned.

Enabled The interrupt is assigned to the screen controller on the built-in PCI board (default entry).

Disabled The interrupt can be used for other add-on boards.

PCI Device, Slot #n: Default Latency Timer

specifies the lowest number of clock cycles in which a PCI master board can be active at the PCI bus; *n* stands for the number of the PCI slot. For the change to take effect, you must switch your device off and then on again after the *BIOS Setup* has terminated.

- Yes

The value predefined by the PCI board is accepted. The entry in the corresponding field for PCI Device, Slot #n: *Latency Timer* is ignored
- No

The value predefined by the PCI board is ignored. The value set in the relevant field of *PCI Device, Slot #n: Latency Timer* determines the number of clock cycles.

PCI Device, Slot #n: Latency Timer

Requirement: The relevant field of *PCI Device, Slot #n: Default Latency Timer* must be set to *No*.

The field defines the lowest number of clock cycles in which a burst can be transferred on the PCI bus. *n* stands for the number of the PCI slot.

0000h to 0280h Number of clock cycles (default entry = 0040h).

Advanced System Configuration

calls the submenu in which you can make additional settings.

Phoenix BIOS Setup Advanced					
Advanced System Configuration			Item Specific Help		
ISA Memory Gap: [Disabled] Parity Mode: [Disabled] System Performance: [Fast] Feature Connector: [Disabled]					
F1 Help ESC Exit	↑ Select Item ↔ Select Menu	-/+ Change Values Enter Execute Command	F9 Setup Defaults F7 Previous Values		

Example for submenu *Advanced System Configuration*

ISA Memory Gap

inserts a contiguous ISA memory area of 1 Mbyte into the main memory area of 15 to 16 Mbytes.

Enabled The ISA memory area is inserted.

Disabled The ISA memory area is not inserted (default).

Parity Mode - DRAM Parity Check

Determines whether a parity check is carried out in the case of DRAM modules. If the system BIOS detects that at least one DRAM module does not have a parity bit, the parity check is generally disabled.

Disabled No parity check is performed.

Parity The parity check is set in parity mode. A bit corruption is recognized and an error message is issued (default entry).

ECC A bit corruption is corrected (no error message). An error message is issued for two or more bit corruptions.

System Performance - System Speed

Determines whether system timing is with default parameters or parameters which allow a better performance.

Standard System is set to standard.

Fast Setting performance of system (default entry).

Feature Connector - Enabling of Feature Connectors

This field is used to enable and disable the feature connector on the system board.

Enabled The feature connector is enabled.

Disabled The feature connector is disabled (default entry).

Plug & Play O/S

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

- | | |
|------------|--|
| <i>Yes</i> | The operating system takes over some of the Plug&Play functions. You should select this setting only if the operating system supports Plug&Play. |
| <i>No</i> | The BIOS takes over the complete Plug&Play functionality (default setting). |

Reset Configuration Data

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

- | | |
|------------|--|
| <i>Yes</i> | When the PC is started the old 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. |
| <i>No</i> | The Plug&Play functionality ascertains the current configuration data and uses it to initialize the installed modules and drives. There is no update when the system is started (default entry). |

Large Disk Access Mode - Hard disk access

specifies the type of hard disk access for large hard disks (more than 1024 cylinders, 16 heads). The default setting depends on the operating system used.

- | | |
|--------------|--|
| <i>DOS</i> | the operating system uses MS-DOS-compatible hard disk accesses. |
| <i>Other</i> | If the operating system uses hard disk accesses which are not MS-DOS-compatible (e.g. Novell, SCO Unix). |

Menu Security - Setting up the security features

- You can set up the following security features in the *Security* menu:
- Protecting BIOS Setup (in the field marked *Set Setup Password*)
 - Protecting BIOS of add-on modules (in the field marked *Setup Password Lock*)
 - Protecting system boots (in the field marked *Set System Password*)
 - Locking input devices (in the field marked *System Password Mode*)
 - Prevention of system boots from floppy disk (in the field marked *System Load*)
 - Displaying Setup message (in the *Setup Prompt* field)
 - Virus Warning (in the field marked *Virus Warning*)
 - Prevention of write operations to floppy disk (in the field marked *Diskette Write*)
 - Write protection of System BIOS (in the field marked *Flash Write*)
 - On/Off functionality (in the submenu *Power On/Off*)

Phoenix BIOS Setup		Security		Power	BIOSFaX	Exit
Main	Advanced					
Setup Password		Not Installed		Item Specific Help		
System Password		Not Installed				
Set Setup Password:		[Press Enter]				
Setup Password Lock:		[Standard]				
Set System Password:		[Press Enter]				
System Password Mode:		[System]				
System Load:		[Standard]				
Setup Prompt:		[Enabled]				
Virus Warning:		[Disabled]				
Diskette Write:		[Enabled]				
Flash Write:		[Enabled]				
► Power On/Off						
F1 Help	↕ Select Item	-/+ Change Values	F9 Setup Defaults			
ESC Exit	↔ Select Menu	Enter Execute Command	F7 Previous Values			

Example for *Security* menu

Setup Password / System Password

These fields indicate whether the appropriate password is installed or not.

Set Setup Password

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

Mark the field and press the Return key. You can then enter and confirm the setup password (see also the PC Operating Manual).

Setup Password Lock

specifies the effect of the Setup Password. The setting in this field takes effect as soon as a Setup Password has been installed.

<i>Standard</i>	The setup password prevents unauthorized callup of the <i>BIOS setup</i> (Default entry).
<i>Extended</i>	The Setup Password prevents unauthorized calls of the <i>BIOS Setup</i> and locks the keyboard when the PC is initialized. This prevents unauthorized access to settings for installed boards with a BIOS of their own.

Set System Password

Requirement: The setup password is installed.

This field enables you to install the system password. The system password prevents unauthorized access to your system.

Mark the field and press the Return key. You can then enter and confirm the system password (see also the PC Operating Manual).

System Password Mode

specifies the effect of the system password. The setting in this field becomes effective as soon as a system password is installed.

<i>System</i>	When the PC is started, the system password enables the operating system to be booted.
<i>Keyboard</i>	When the PC is started, the operating system is booted and the keyboard and mouse are locked. The system password unlocks the keyboard and mouse.

System Load

This field specifies the drive from which the operating system can be loaded.

<i>Standard</i>	The operating system can be loaded from floppy disk or hard disk (default entry).
<i>Diskette Lock</i>	The operating system can only be loaded from hard disk.

Setup Prompt - Setup message

specifies whether the setup message Press F2 to enter SETUP is displayed when the system is rebooted.

<i>Enabled</i>	The setup message Press F2 to enter SETUP is displayed when the system is started (default entry).
<i>Disabled</i>	The setup message is not displayed.

Virus Warning

This field checks the boot sectors of the hard disk drive to see if any changes have been made since the previous system startup. If they have been changed and the reason for this is unknown, a program for finding computer viruses should be loaded.

- | | |
|-----------------|--|
| <i>Enabled</i> | If the boot sector has been changed since the previous system startup (e.g. new operating system or virus attack), a warning is displayed. The warning stays on the screen until you acknowledge the changes with Confirm or deactivate the function (Disabled). |
| <i>Confirm</i> | This entry confirms a required change in a boot sector (e.g. new operating system). |
| <i>Disabled</i> | The boot sectors are not checked (default entry). |

Diskette Write

This field is used to enable and disable floppy disk write-protection.

- | | |
|-----------------|---|
| <i>Enabled</i> | Floppy disks can be read, written or deleted, the write protection in <i>BIOS setup</i> must be disabled (switch 8 <i>off</i> , default entry). |
| <i>Disabled</i> | The diskettes can only be read. |

Flash Write

This field can assign write protection to the System BIOS.

- | | |
|-----------------|--|
| <i>Enabled</i> | The System BIOS can be written or deleted. BIOS update from floppy disk is possible (default entry). |
| <i>Disabled</i> | The System BIOS can neither be written to nor deleted. BIOS update from floppy disk is not possible |

Power On/Off

calls the submenu in which you can specify how the system can be powered on and off. These settings cause the to be switched on and off in the same way as using the on/off button on the system unit. The on/off button is always operable and cannot be disabled.

Phoenix BIOS Setup	
Security	
Power On/Off	Item Specific Help
Power Off Source Software: [Enabled] Keyboard: [Enabled] Power On Source Remote: [Enabled] Keyboard: [Enabled] Timer: [Enabled] Chipcard: [Enabled]	
F1 Help ESC Exit	↑↓ Select Item ←→ Select Menu -/+ Change Values Enter Select ► Sub-Menu F9 Setup Defaults F7 Previous Values

Example for submenu *Power On/Off*



If you have assigned a system password in *System Mode*, the boot procedure is suspended during remote power on of the system (using *Remote Power On* or *Timer On*) as the system waits for entry of the system password. For this reason you should not assign a system password in *System Mode* if you want to use remote power-on.

Power Off Source: Software

specifies whether the system can be switched off with a program (*DeskOff*, *SWOFF*) or an operating system (*Windows 95*, *Windows NT* with *Siemens HAL*).

- Enabled

The system can be switched off with the *SWOFF* program (default entry).
- Disabled

The system cannot be switched off with a program.

Power Off Source: Keyboard

specifies whether the system can be switched off using a special on/off button on the keyboard.

Enabled The system can be switched off using a special on/off button on the keyboard.

Disabled The system cannot be switched off using a special on/off button on the keyboard (default).

Power On Source: Remote

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

Enabled The system can be switched on from an incoming message (default entry).

Disabled The system cannot be switched on from an incoming message.

Power-on Source: Keyboard

specifies whether the system can be switched on using a special on/off button on the keyboard.

Enabled The system can be switched on using a special on/off button on the keyboard (default entry).

Disabled The system cannot be switched on using a special on/off button on the keyboard.

Power-on Source: Timer

specifies whether the system can be timed to switch on at a particular time or after a particular period of time.

The switch-on time cannot be specified in BIOS Setup. You require a suitable program for setting this switch-on time.

Enabled The system can be switched on at set times.

Disabled The system cannot be switched on under timer control (default entry).



Rebooting after a critical system error (*ASR&R Boot Delay* field in the *Server* menu) is not affected by this setting.

Chipcard

specifies whether the system can be switched on via the chipcard reader.

Enabled The system can be switched on via the chipcard reader (default).
(Default entry.)

Disabled The system cannot be switched on via the chipcard reader.

Power menu - Setting energy saving functions

Programs for power management (e.g. *POWER.EXE*) can change the settings for the energy saving functions.

You can set the following functions in the *Power* menu:

- Enabling of APM interface (in the *Advanced Power Management* field)
- Extent of energy saving functions (in the *Power Management Mode* field)
- Standby mode (in the *Standby Timeout* field)
- Suspend mode (in the *Suspend Timeout* field)
- Hard disk energy saving functions (in the *Hard Disk Timeout* field)
- Processor speed in standby mode (in the *Standby CPU Speed* field)
- Save system status (in the *Save To Disk* field)
- Defining system activities (in the *Wakeup Event* field)

Phoenix BIOS Setup					
Main	Advanced	Security	Power	BIOSFaX	Exit
APM [Enabled] Power Management Mode: [Customize] Standby Timeout: [15 min] Suspend Timeout: [10 min] Hard Disk Timeout: [10 min] Standby CPU Speed: [Medium] Save To Disk: [Disabled] ► Wakeup Event				Item Specific Help	
F1 Help ESC Exit	↑ Select Item ↔ Select Menu	-/+ Change Values Enter Execute Command	F9 Setup Defaults F7 Previous Values		

Example for menu *Power*

APM - Enabling the APM Interface

Determines whether an operation system can change the power management settings in the system BIOS.

- Enabled

The operating system has access to the power management settings and can change these if necessary (default entry).
- Disabled

Changes can not be made to power management setting by an operating system.

Power Management Mode - Extent of energy saving functions

This field defines the extent of the energy saving functions.

Customize The functions set in the fields *Standby Timeout*, *Hard Disk Timeout* and *Standby CPU Speed* are effective in power management. (Default entry).

Maximum, Medium or Minimum Power Savings
These entries call predefined settings, thus determining the extent of energy saving.

Disabled None of the energy saving functions is effective.

Standby Timeout

Requirement: The *Power Management Mode* must be set to *Customize*.

This field defines the amount of time without system activity the PC is to wait before switching to standby mode. In standby mode, the screen is dark and the processor clock is set in accordance with the entry in the *Standby CPU Speed* field. The next wakeup event terminates standby mode again

2 min, 5 min, 10 min, 15 min, 30 min
Default entry = *15 min*.

Disabled The PC does not switch to standby mode.

Suspend Timeout - Suspend mode

Requirement: The *Power Management Mode* must be set to *Customize*.

This field defines the amount of time without system activity the system is to wait before switching to standby mode. In standby mode, the screen is dark and the processor is switched off. The next wakeup event terminates suspend mode again.

In a network environment *Suspend Timeout* must be disabled, otherwise data transfer will be aborted.

2 min, 15 min, 30 min, 1 Std, 2 Std, 3 Std, 4 Std
Default entry = *15 min*.

Disabled The PC does not switch to suspend mode

Hard Disk Timeout

Requirement: The *Power Management Mode* must be set to *Customize*.

This field defines the amount of time without system activity before the motor of the hard disk drive is switched off. As soon as there is a hard disk access, the motor is switched back on.

2 min, 5 min, 10 min, 15 min

Default entry = *10 min*.

Disabled The PC does not switch off the hard disk drive.

Standby CPU Speed

Requirement: The *Power Management Mode* must be set to *Customize*.

This field specifies the processor's clock speed in standby mode. The entries *High*, *Medium* and *Low* cause programs to run more slowly.

In a network environment the processor's clock speed must be set to *Max*, otherwise data transfer will take place at reduced speed.

<i>Max</i>	Maximum clock speed
<i>High</i>	1/4 of maximum clock speed
<i>Medium</i>	1/8 of maximum clock speed (default entry)
<i>Low</i>	1/16 of maximum clock speed

Save To Disk

Requirement: The *Power Management Mode* must be set to *Customize*. There must be sufficient storage space on the hard disk.

This field specifies whether the current system status (active programs, files, memory contents) is saved to file *SAVETO.DSK* when the system switches to suspend mode. This system status is restored when you restart the system; in other words, you can carry on working in the same application.

<i>Enabled</i>	The contents of the main memory, working memory, video memory and cache are saved to the hard disk.
<i>Disabled</i>	The memory contents are not saved (default entry).

The *Enabled* setting only works with:

- Controllers integrated on the system board (e. g. graphics and audio controllers)
- Add-on boards indicated in the price list.

Other add-on boards are not supported at present.



Do not set the entry in the *Save to Disk* field to *Enabled*, if you are using boards other than those listed above. This applies, for example, to add-on boards such as SCSI controllers and graphics controllers.

These restrictions also apply if you activate the *Quickstart* function (Save to disk) under Windows using *DeskEnergy*.

Before starting the *Save to Disk* function, you should first close all documents located on network drives.

Wakeup Event - Defining system activities

This field calls the submenu in which you can set the interrupts which are to be evaluated as system activities. When one of these interrupts occurs, the active energy saving mode is terminated, for example.

In a network environment the *Wakeup Event* for the network controller interrupt must be disabled, otherwise the system will not switch to *Standby Mode*.

Phoenix BIOS Setup Power		
Wakeup Event	Item Specific Help	
IRQ 1: Enabled IRQ 3: [Disabled] IRQ 4: [Disabled] IRQ 5: [Disabled] IRQ 6: [Enabled] IRQ 7: [Disabled] IRQ 8: [Disabled] IRQ 9: [Disabled] IRQ 10: [Disabled] IRQ 11: [Disabled] IRQ 12: [Enabled] IRQ 13: Disabled IRQ 14: [Enabled] IRQ 15: [Enabled]		
F1 Help ESC Exit	↑↓ Select Item ←→ Select Menu	-/+ Change Values Enter Select ► Sub-Menu F9 Setup Defaults F7 Previous Values

Example for *Wakeup Event* submenu

- Enabled

The associated interrupt is evaluated as a system activity.
- Disabled

The associated interrupt has no effect on the active energy saving mode.

BIOSFaX menu - modem - quick start functions

With the *BIOSFaX* menu you can select whether your system can be switched on via modem and whether an abbreviated system startup is executed. During this system startup any incoming call or fax is stored.

Phoenix BIOS Setup		Main Advanced Security Power BIOSFaX Exit	
Receive Mode:		[Disabled]	Item Specific Help
Ring Count:		[Auto]	
Fax Tone Count:		[Auto]	
Fax Modem Port:		COM3	
F1 Help ESC Exit	↑↓ Select Item ←→ Select Menu	-/+ Change Values Enter Select ► Sub-Menu	F9 Setup Defaults F7 Previous Values

Example for *BIOSFaX* menu

Receive Mode

Requirement: Remote on functionality (*Remote on*) must be enabled.

This field determines the mode in which the modem is operated. Depending on the setting, any incoming message will be recorded.

Voice and Fax Any incoming call or fax will be recorded.

Voice Only an incoming call will be recorded.

Fax Only an incoming fax will be recorded.

Disabled Modem functionality is not available when the system is switched off (default entry).

Ring Count

Defines how often a ring tone should sound before the modem answers. Possible settings: 2, 3, 4, 5, 6, 7 or *Auto* (default entry).

Fax Tone Count

Defines how often a fax tone should sound before the modem answers. Possible settings: 1, 2, 3, 4, 5, 6, 7 or *Auto* (default entry).

Fax Modem Port - Serial port

Shows which serial interface is used for the modem. This setting is assigned by the system and cannot be changed.

Possible displays: *COM1*, *COM2*, *COM3* or *COM4*.

Exit menu

In the *Exit* menu, you can save your settings and exit *BIOS Setup*.

Phoenix BIOS Setup					
Main	Advanced	Security	Power	BIOSFaX	Exit
Save Changes & Exit Discard Changes & Exit Get Default Values Load Previous Values Save Changes				Item Specific Help	
F1 Help ESC Exit	↑↓ Select Item ←→ Select Menu	-/+ Change Values Enter Execute Command	F9 Setup Defaults F7 Previous Values		

Example for menu *Exit*

Save Changes & Exit - Saving and Exiting

saves the settings you have made and exits BIOS Setup.

Discard Changes & Exit

exits *BIOS Setup* without saving the new settings.

Get Default Values

reverts all settings to the default values.

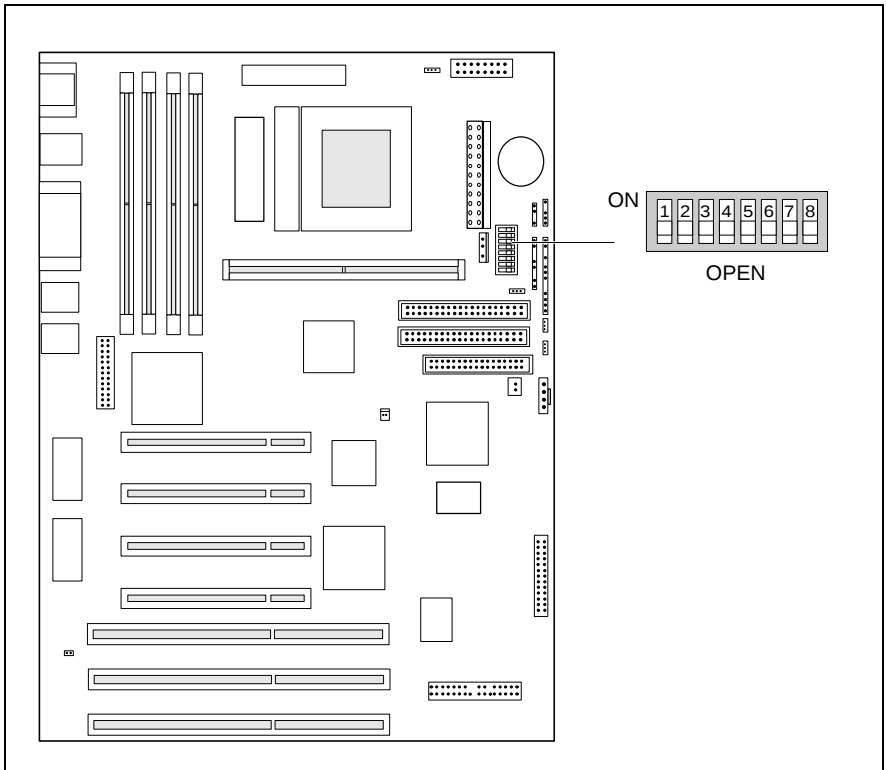
Load Previous Values

sets the values which were in effect when BIOS Setup was called.

Save Changes

saves the settings you have made.

Settings with switch block S180



Switch 1, 2, 3 and 4 = clock speed
Switch 5 = recovering system BIOS
Switch 6 = must be set to *off*

Switch 7 =
system BIOS
Switch 8 =
disk drive

write protection for
write protection for floppy

Clock speed - switch 1, 2, 3 and 4



The switches may only be set as specified in the table below for the particular processor used.

processor	switch 1	switch 2	switch 3	switch 4
75 MHz	on	on	off	off
90 MHz	on	off	off	off
100 MHz	off	on	off	off
120 MHz	on	off	on	off
133 MHz	off	on	on	off
150 MHz	on	off	on	on
166 MHz	off	on	on	on
200 MHz	off	on	off	on
233 MHz	off	on	off	off

Recovering System BIOS - switch 5

Switch 5 enables recovery of the old system BIOS after an attempt to update has failed. Write protection for the System BIOS must be disabled in the BIOS setup and before the System BIOS can be recovered (switch 7 = *off*). To restore the old BIOS you need a Flash BIOS Diskette (call customer service).

- on* The System BIOS executes from floppy drive A: and restores the System BIOS on the system board.
- off* The System BIOS is started from the system board (default setting).

Write protection for System BIOS - switch 7

Switch 7 enables and disables system BIOS updating. Before an update of the system BIOS can be carried out, write protection for the system BIOS must also be disabled in the *BIOS Setup* (in the *Security menu*, the *Flash Write* field must be set to *Enabled*). If you wish to update your system BIOS, please consult our customer service.

on System BIOS is write protected.

off System BIOS can be overwritten (default setting).



If you change the configuration of your system (for example by installing new add-on boards), you must set switch 7 to *off*. Only then you can change the configuration data in the system BIOS.

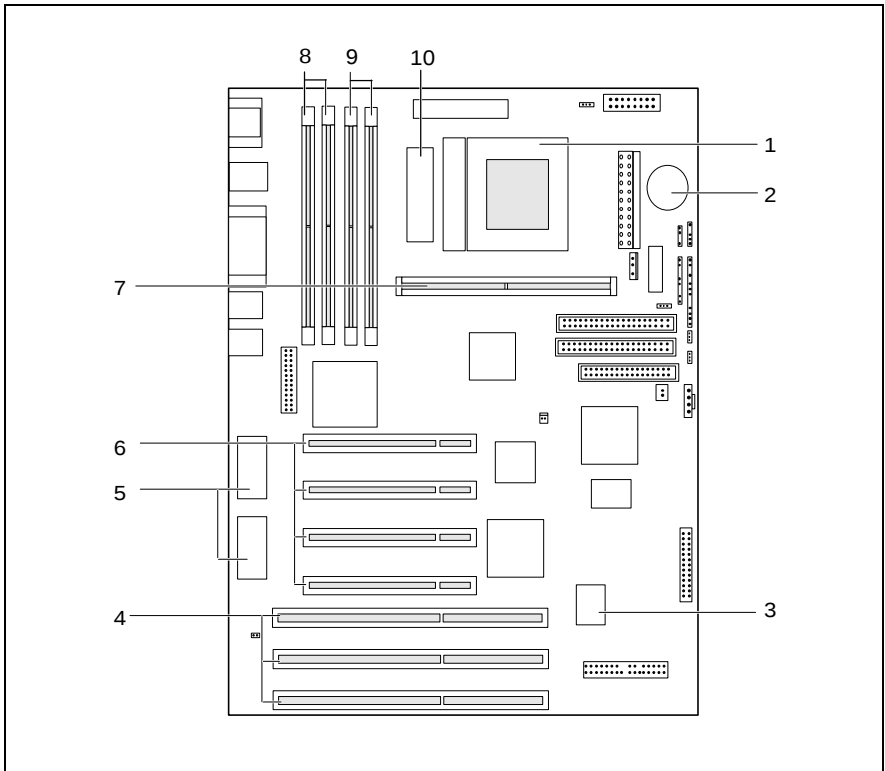
Write protection for floppy disk drive - switch 8

Switch 8 is used to define whether floppy disks can be written or deleted in the floppy disk drive. To write and delete floppy disks, the write protection in *BIOS setup* must be disabled (in menu *Security*, the field *Diskette Write* must be set to *Enabled*).

on The floppy disk drive is write-protected.

off Read, write and delete floppy disks is possible (default setting).

Add-on modules



1 = Processor with heat sink

2 = Lithium battery

3 = Flash BIOS

4 = ISA slots (from below: 1, 2, 3)

5 = Socket for video memory

6 = PCI slots (from below: 1, 2, 3, 4)

7 = Location for second-level Cache

8 = Locations bank 1 for main memory

9 = Locations bank 2 for main memory

10 = Heat sink



The heat sink 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!

Upgrading main memory

Four locations (bank 1 and bank 2) are available on the system board for installing memory modules. The board supports a maximum of 128 Mbytes.

You may use memory modules of 4, 8, 16 or 32 Mbytes with or without parity check.



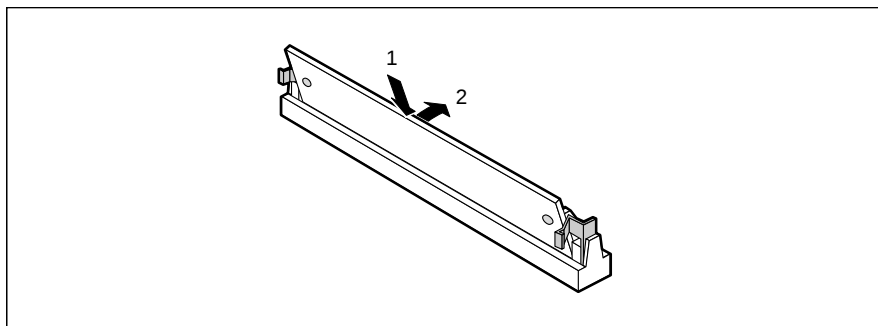
You may only use fast memory modules (access time = 70ns or less) or EDO memory modules (access time = 60ns or less)

In other words, you fit the first pair to bank 1, and the second pair in bank 2. Pairs of memory modules must have the same capacity and the same access time.

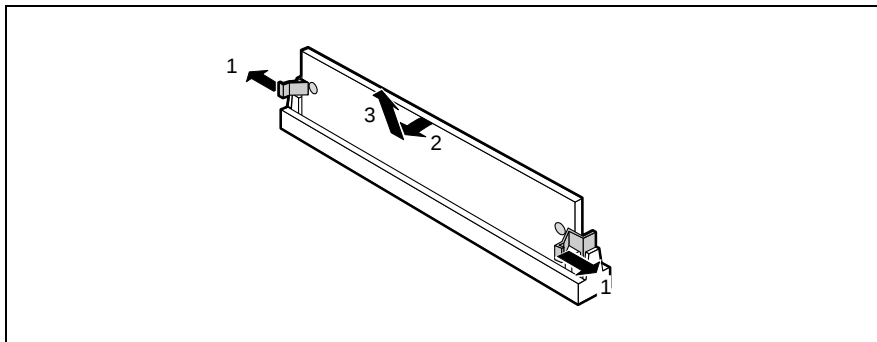


The ECC error identification is only possible for modules with parity checks

Installing memory modules

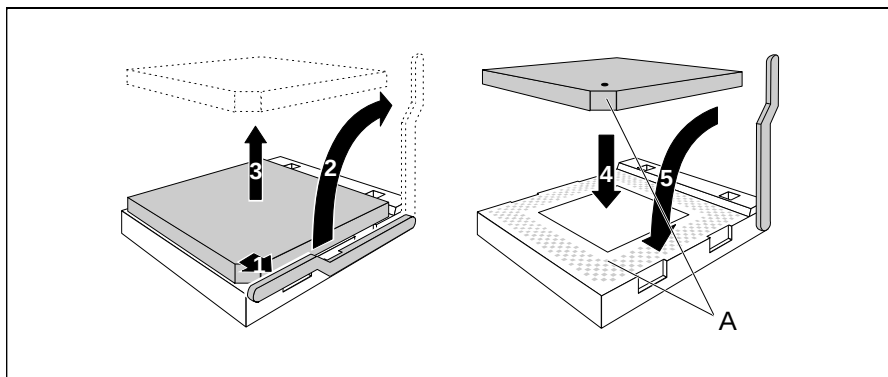


- ▶ Insert the memory module at an angle into the appropriate location (1). Ensure that the key notch and the two holes are correctly aligned with the retaining pins.
- ▶ Tilt the memory module upwards until it snaps into place vertically (2).

Removing a memory module

- Carefully push the retaining clips at each end of the module outwards (1).
- Tilt the memory module to the side (2) and withdraw it at an angle from the location (3).

Replacing the processor



- ▶ 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.

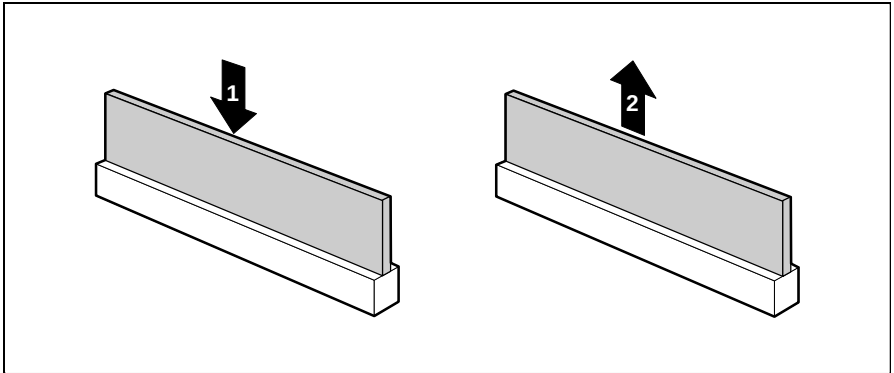
- ▶ Push the lever back down so that it snaps into place.
- ▶ Set the switches 1, 2, 3 and 4 depending on the processor which is installed.

Upgrading the Second-level cache

The system board has a socket for second-level cache. You can install a Pipelined-Burst second-level cache module with 128 Kbytes, 256 Kbytes or 512 Kbytes.



To avoid damage to the system board only cache modules released by Siemens should be used.



1 = Installing second-level cache

2 = Removing second-level cache

- ▶ If a second-level cache is already installed, pull it out of the mounting location in the direction of the arrow (2).
- ▶ Insert the new second-level cache module into the mounting location, making sure it snaps into place (1).



To be able to use the second-level cache, you must set the Cache field in the *Advanced / Cache Memory* menu of the *BIOS Setup* to *Intern and Extern*. You can enhance the performance by setting the *Cache System BIOS Area* and *Cache Video BIOS Area* fields in the same menu to *Enabled* and copying ROM sections with *Cache memory regions* to the cache.

Removing second-level cache modules

- ▶ Pull the second-level cache module out of the mounting location in the direction of the arrow.

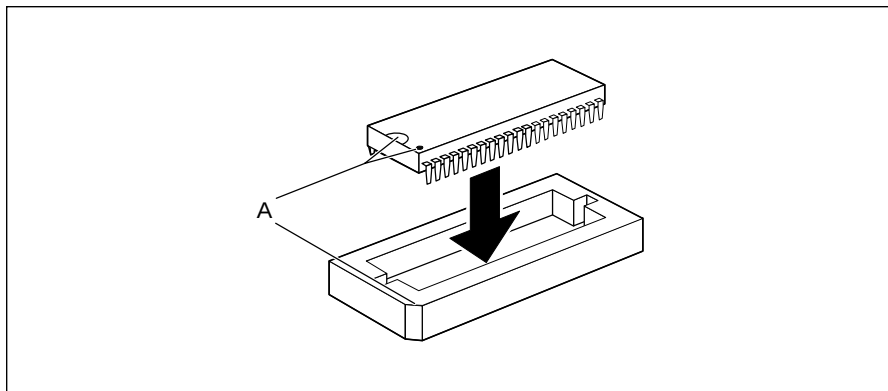
Upgrading the video memory

If your system board is supplied with a video memory configuration of 1 Mbyte, you may enlarge the video memory up to 2 Mbytes.



Information on which DRAM components (DRAM 256K*16 16ns) you can use is available from your sales office or the customer service.

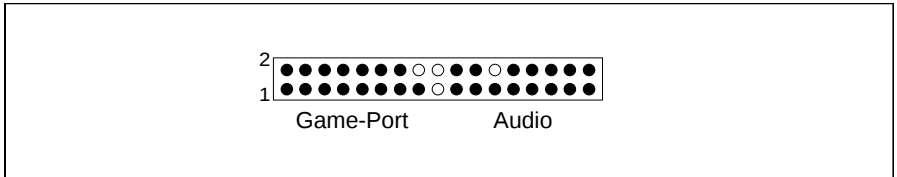
Note the location of the DRAM chip when you plug in DRAM chip!



- Insert the DRAM component in such a way in the socket for video memory that the mark on the upper side of the DRAM component (A) matches the position of the mark on the socket.

Connecting an audio board

If an audio board is installed at the front of your system or you install one at the front, you must attach the connecting line to the Game/Midi / Audio port on the system board. The Game/Midi / Audio port is a combined plug.



- Plug the connecting line onto the side marked with *Audio*.

If an audio board is installed at the back of your system or you install one at the back, you must attach the connecting line to the Game/Midi / Audio port on the system board. The plug on the connecting line is exactly the same width as the Game/Midi / Audio port.

- Plug the connecting line into the Game/Midi / Audio port.

Replacing the lithium battery

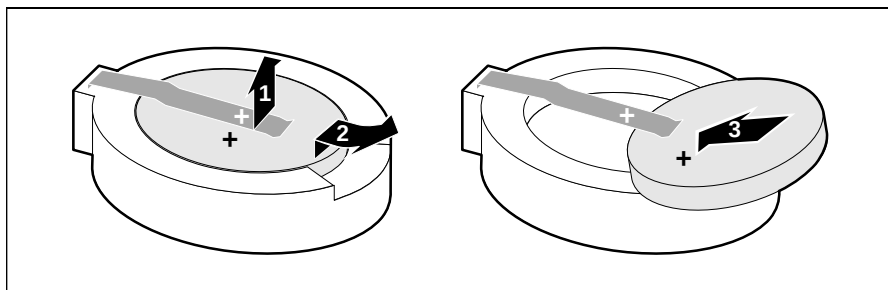


Incorrect replacement of the lithium battery may lead to a risk of explosion.

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 be on the top!



- ▶ Lift the contact (1) a few millimeters and remove the battery from its socket (2).
- ▶ Insert a new lithium battery of the same type in the socket (3).

Error messages

This chapter contains error messages generated by the system board.

Diskette drive A error

Diskette drive B error

Check the entry for the diskette drive in the *Main* menu of the *BIOS Setup*.

Check the connections to the diskette drive.

Extended RAM Failed at offset: nnnn

Failing Bits: nnnn

System RAM Failed at offset: nnnn

Switch the PC off and on again. If the message is still displayed, please contact your sales office or customer service.

Fixed Disk 0 Failure

Fixed Disk 1 Failure

Fixed Disk Controller Failure

Check the entries for the hard disk drive in the *Main* menu of the *BIOS Setup*.

Check the hard disk drive's connections and jumpers.

Incorrect Drive A - run Setup

Incorrect Drive B - run Setup

Correct the entry for the diskette drive in the *Main* menu of the *BIOS Setup*.

Invalid NVRAM media type

Switch the PC off and on again. If the message is still displayed, please contact your sales office or customer service.

Invalid System configuration Data

In the *Advanced* menu of the *BIOS-Setup* set the entry for *Reset Configuration Data* to *Yes*.

Keyboard controller error

Connect another keyboard. If the message is still displayed, please contact your sales office or customer service.

Keyboard error

Check that the keyboard is connected properly.

Keyboard error nn

Release the key on the keyboard (*nn* is the hexadecimal code for the key).

Error messages

Monitor type does not match CMOS - RUN SETUP

Correct the entry for the monitor type in the *Main* menu of the *BIOS Setup*.

Operating system not found

Check the entries for the hard disk drive and the floppy disk drive in the *Main* menu of the *BIOS Setup*.

Parity Check 1

Parity Check 2

Switch the PC off and on again. If the message is still displayed, please contact your sales office or customer service.

Previous boot incomplete - Default configuration used

By pressing function key **[F2]** you can check and correct the settings in *BIOS Setup*. By pressing function key **[F1]** the PC starts with incomplete system configuration. If the message is still displayed, please contact your sales office or customer service.

Real time clock failure

Call the *BIOS Setup* and enter the correct time in the *Main* menu. If the message is still displayed, please contact your sales office or customer service.

System battery is dead - Replace and run SETUP

Replace the lithium battery on the system module and redo the settings in the *BIOS Setup*.

System Cache Error - Cache disabled

Switch the PC off and on again. If the message is still displayed, please contact your sales office or customer service.

System CMOS checksum bad - run SETUP

Call the *BIOS Setup* and correct the previously made entries or set the default entries.

System timer error

Switch the PC off and on again. If the message is still displayed, please contact your sales office or customer service.

Messages d'erreur

Ce chapitre vous donne les messages d'erreur générés par le BIOS du système.

Diskette drive A error

Diskette drive B error

Vérifiez dans le menu Main du BIOS setup l'entrée correspondant au lecteur de disquettes. Vérifiez les connecteurs du lecteur de disquettes.

Extended RAM Failed at offset: nnnn

Failing Bits: nnnn

System RAM Failed at offset: nnnn

Redémarrez votre PC. Si le message réapparaît, adressez-vous à votre revendeur ou à notre S.A.V.

Fixed Disk 0 Failure

Fixed Disk 1 Failure

Fixed Disk Controller Failure

Vérifiez dans le menu Main du BIOS setup l'entrée correspondant au lecteur de disque dur. Vérifiez les connecteurs et les cavaliers du lecteur de disque dur.

Incorrect Drive A - run Setup

Incorrect Drive B - run Setup

Entrez dans le menu Main du BIOS setup et paramétrez correctement l'entrée correspondant au lecteur de disquettes.

Invalid NVRAM media type

Redémarrez votre PC. Si le message réapparaît, adressez-vous à votre revendeur ou à notre S.A.V.

Invalid System configuration Data

In the *Advanced* menu of the *BIOS-Setup* set the entry for *Reset Configuration Data* to *Yes*.

Keyboard controller error

Connectez un autre clavier. Si le message réapparaît, adressez-vous à votre revendeur ou à notre S.A.V.

Keyboard error

Assurez-vous que le clavier est correctement connecté.

Keyboard error nn

Libérez la touche du clavier (nn est le code hexadécimal de cette touche).

Monitor type does not match CMOS - RUN SETUP

Entrez dans le menu Main du BIOS setup et paramétrez correctement l'entrée correspondant au type d'écran.

Operating system not found

Vérifiez dans le menu Main du BIOS setup les entrées correspondant au lecteur de disque dur et au lecteur de disquettes.

Parity Check 1

Parity Check 2

Redémarrez votre PC. Si le message réapparaît, adressez-vous à votre revendeur ou à notre S.A.V.

Previous boot incomplete - Default configuration used

Appuyez la touche de fonction **[F2]** pour vérifier et corriger les valeurs dans BIOS Setup. Si vous appuyez la touche de fonction **[F1]** le PC démarre en configuration incomplète. Si le message réapparaît, adressez-vous à votre revendeur ou à notre S.A.V.

Real time clock failure

Appelez le BIOS setup et entrez l'heure exacte dans le menu Main. Si le message réapparaît, adressez-vous à votre revendeur ou à notre S.A.V.

System battery is dead - Replace and run SETUP

Remplacez la batterie au lithium sur la carte système et procédez à de nouveaux réglages dans le BIOS setup.

System Cache Error - Cache disabled

Redémarrez votre PC. Si le message réapparaît, adressez-vous à votre revendeur ou à notre S.A.V.

System CMOS checksum bad - run SETUP

Appelez le BIOS setup et corrigez les réglages effectués en dernier lieu ou activez les réglages standard.

System timer error

Redémarrez votre PC. Si le message réapparaît, adressez-vous à votre revendeur ou à notre S.A.V.

Mensajes de error

Aquí se describen los mensajes de error que son generados por el BIOS-Setup.

Diskette drive A error

Diskette drive B error

Compruebe en el menú principal del *BIOS-Setup* el registro para la unidad de disquete. Compruebe las conexiones de dicha unidad..

Extended RAM Failed at offset: nnnn

Failing Bits: nnnn

System RAM Failed at offset: nnnn

Arranque de nuevo el PC. Si sigue visualizándose este mensaje, diríjase a su distribuidor o a nuestro servicio de postventa.

Fixed Disk 0 Failure

Fixed Disk 1 Failure

Fixed Disk Controller Failure

Compruebe en el menú principal del *BIOS-Setup* los registros para la unidad de disco duro. Compruebe las conexiones y puentes enchufables de la unidad de disco duro.

Incorrect Drive A - run Setup

Incorrect Drive B - run Setup

Defina correctamente el registro de la unidad de disquete en el menú principal del *BIOS-Setup*.

Invalid NVRAM media type

Arranque de nuevo el PC. Si sigue visualizándose este mensaje, diríjase a su distribuidor o a nuestro servicio de postventa.

Invalid System configuration Data

Pour l'entrée *Reset Configuration Data* du menu *Advanced* du *BIOS setup*, activez le paramètre *Yes*.

Keyboard controller error

Conecte otro teclado. Si sigue visualizándose este mensaje, diríjase a su distribuidor o a nuestro servicio de postventa.

Keyboard error

Compruebe si el teclado está conectado correctamente.

Mensajes de error

Keyboard error nn

Desbloquee la tecla del teclado (*nn* es el código hexadecimal para la tecla).

Monitor type does not match CMOS - RUN SETUP

Defina correctamente en el menú principal del *BIOS-Setup* el registro para el tipo de pantalla..

Operating system not found

Compruebe en el menú principal del *BIOS-Setup* los registros de la unidad de disco duro y de la unidad de disquete.

Parity Check 1

Parity Check 2

Arranque de nuevo el PC. Si sigue visualizándose este mensaje, diríjase a su distribuidor o a nuestro servicio de postventa.

Previous boot incomplete - Default configuration used

Pulsando la tecla **[F2]** puede verificar y corregir los registros del *BIOS-Setup*. Pulsando la tecla **[F1]**, el sistema arranca con la configuración incompleta. Si sigue visualizándose este mensaje, diríjase a su distribuidor o a nuestro servicio de postventa.

Real time clock failure

Active el *BIOS-Setup* y registre la hora correcta en el menú principal (*Main*). Si sigue visualizándose este mensaje, diríjase a su distribuidor o a nuestro servicio de postventa..

System battery is dead - Replace and run SETUP

Sustituya la pila de litio en el módulo de sistema y repita las operaciones de ajuste en el *BIOS-Setup*..

System Cache Error - Cache disabled

Arranque de nuevo el PC. Si sigue visualizándose este mensaje, diríjase a su distribuidor o a nuestro servicio de postventa.

System CMOS checksum bad - run SETUP

Active el *BIOS-Setup* y corrija los últimos registros hechos o ajuste los registros estándar.

System timer error

Arranque de nuevo el PC. Si sigue visualizándose este mensaje, diríjase a su distribuidor o a nuestro servicio de postventa.

Messaggi di errore

I messaggi di errore emessi dal system BIOS sono descritti qui in seguito.

Diskette drive A error

Diskette drive B error

Controllate il valore indicato per il drive per dischetti nel *BIOS-Setup* del menu principale (*Main*). Controllate i collegamenti del drive per dischetti.

Extended RAM Failed at offset: nnnn

Failing Bits: nnnn

System RAM Failed at offset: nnnn

Riavviate nuovamente il PC. Se il messaggio ricompare rivolgetevi al Vostro rivenditore o al nostro servizio di assistenza tecnica..

Fixed Disk 0 Failure

Fixed Disk 1 Failure

Fixed Disk Controller Failure

Controllate nel *BIOS-Setup* del menu principale i valori indicati per il drive del disco rigido. Controllate i collegamenti ed i ponticelli del drive del disco rigido.

Incorrect Drive A - run Setup

Incorrect Drive B - run Setup

Impostate nel *BIOS-Setup* del menu principale (*Main*) il valore corretto per il drive per dischetti.

Invalid NVRAM media type

Riavviate nuovamente il PC. Se il messaggio ricompare rivolgetevi al Vostro rivenditore o al nostro servizio di assistenza tecnica.

Invalid System configuration Data

En el menú *Advanced* del *BIOS-Setup* ajuste el valor *Yes* para *Reset Configuration Data*.

Keyboard controller error

Collegate un'altra tastiera. Se il messaggio ricompare rivolgetevi al Vostro rivenditore o al nostro servizio di assistenza tecnica.

Keyboard error

Controllate che la tastiera sia collegata correttamente.

Messaggi di errore

Keyboard error nn

Liberate il tasto dalla tastiera (*nn* indica il codice esadecimale del tasto).

Monitor type does not match CMOS - RUN SETUP

Impostate nel *BIOS-Setup* del menu principale (*Main*) il valore corretto per il tipo di monitor.

Operating system not found

Controllate nel *BIOS-Setup* del menu principale i valori indicati per il drive per il disco rigido e per il drive per dischetti.

Parity Check 1

Parity Check 2

Riavviate nuovamente il PC. Se il messaggio ricompare rivolgetevi al Vostro rivenditore o al nostro servizio di assistenza tecnica.

Previous boot incomplete - Default configuration used

Premendo il tasto funzione **[F2]** potete verificare e correggere le impostazioni nel *BIOS-Setup*. Premendo il tasto funzione **[F1]**, il PC viene avviato con la configurazione di sistema completa. Se il messaggio ricompare rivolgetevi al Vostro rivenditore o al nostro servizio di assistenza tecnica.

Real time clock failure

Richiamate il *BIOS-Setup* ed inserite nel menu principale (*Main*) l'ora esatta. Se il messaggio ricompare rivolgetevi al Vostro rivenditore o al nostro servizio di assistenza tecnica.

System battery is dead - Replace and run SETUP

Sostituite la batteria al litio dell'unità di sistema ed inserite nuovamente i valori di impostazione nel *BIOS-Setup*.

System Cache Error - Cache disabled

Riavviate nuovamente il PC. Se il messaggio ricompare rivolgetevi al Vostro rivenditore o al nostro servizio di assistenza tecnica..

System CMOS checksum bad - run SETUP

Richiamate il *BIOS-Setup* e correggete gli ultimi valori impostati oppure indicati i valori standard.

System timer error

Riavviate nuovamente il PC. Se il messaggio ricompare rivolgetevi al Vostro rivenditore o al nostro servizio di assistenza tecnica.

Felmeddelanden

Nedan beskrivs de felmeddelanden som system-BIOS matar ut på systemkomponenten.

Diskette drive A error

Diskette drive B error

Kontrollera inställningen för diskettenheten i menyn *Main* i *BIOS-Setup*-menyn. Kontrollera diskettenhetens anslutningar.

Extended RAM Failed at offset: nnnn

Failing Bits: nnnn

System RAM Failed at offset: nnnn

Starta upp PCn på nytt. Om meddelandet fortfarande visas bör du kontakta din återförsäljare eller vår kundservice.

Fixed Disk 0 Failure

Fixed Disk 1 Failure

Fixed Disk Controller Failure

Kontrollera inställningarna för hårddisken i menyn *Main* i *BIOS-Setup*-menyn. Kontrollera hårddiskens anslutningar och insticksbryggorna.

Incorrect Drive A - run Setup

Incorrect Drive B - run Setup

Korrigera inställningen för diskettenheten i menyn *Main* i *BIOS-Setup*-menyn.

Invalid NVRAM media type

Starta upp PCn på nytt. Om meddelandet fortfarande visas bör du kontakta din återförsäljare eller vår kundservice.

Invalid System configuration Data

Ställ in värdet *Yes* för *Reset Configuration Data* i menyn *Advanced* i *BIOS-Setup*-menyn.

Keyboard controller error

Anslut ett annat tangentbord. Om meddelandet fortfarande visas bör du kontakta din återförsäljare eller vår kundservice.

Keyboard error

Kontrollera att tangentbordet är korrekt anslutet.

Keyboard error nn

Frigör den angivna tangenten (*nn* är tangentens hexadecimalkod).

Monitor type does not match CMOS - RUN SETUP

Korrigera inställningarna för bildskärmtypen i menyn *Main* i *BIOS-Setup* menyn.

Operating system not found

Kontrollera inställningarna för hårddisken och diskettenheten i menyn *Main* i *BIOS-Setup*-menyn.

Parity Check 1

Parity Check 2

Starta upp PCn på nytt. Om meddelandet fortfarande visas bör du kontakta din återförsäljare eller vår kundservice.

Previous boot incomplete - Default configuration used

Om du trycker på funktionstangenten **F2**, kan du kontrollera och korrigera inställningarna i *BIOS-Setup*. Om du trycker på funktionstangenten **F1** startas PCn med den ofullständiga systemkonfigurationen. Om meddelandet fortfarande visas bör du kontakta din återförsäljare eller vår kundservice.

Real time clock failure

Ropa upp *BIOS-Setup*-menyn och ställ in korrekt klockslag i menyn *Main*. Om meddelandet fortfarande visas bör du kontakta din återförsäljare eller vår kundservice.

System battery is dead - Replace and run SETUP

Byt ut litiumbatteriet på systemkomponenten och genomför inställningarna i *BIOS-Setup*-menyn på nytt.

System Cache Error - Cache disabled

Starta upp PCn på nytt. Om meddelandet fortfarande visas bör du kontakta din återförsäljare eller vår kundservice.

System CMOS checksum bad - run SETUP

Ropa upp *BIOS-Setup*-menyn. Korrigera de senast gjorda inställningarna eller ställ in standardvärdena igen.

System timer error

Starta upp PCn på nytt. Om meddelandet fortfarande visas bör du kontakta din återförsäljare eller vår kundservice.

Foutmeldingen

Vervolgens worden de foutmeldingen beschreven die het BIOS-systeem op de systeembouwgroep geeft.

Diskette drive A error

Diskette drive B error

Controleer in de setup van het *BIOS*, in het menu *Main*, de instelling van het diskettestation. Controleer de aansluitingen van het diskettestation.

Extended RAM Failed at offset: nnnn

Failing Bits: nnnn

System RAM Failed at offset: nnnn

Start de PC opnieuw. Als de melding opnieuw verschijnt, neem dan a.u.b. contact op met uw dealer of met onze klantendienst.

Fixed Disk 0 Failure

Fixed Disk 1 Failure

Fixed Disk Controller Failure

Controleer in de setup van het *BIOS*, in het menu *Main*, de instellingen van de harde schijf. Controleer de aansluitingen en de jumpers van de harde schijf.

Incorrect Drive A - run Setup

Incorrect Drive B - run Setup

Stel in de setup van het *BIOS*, in het menu *Main*, het diskettestation op de juiste wijze in.

Invalid NVRAM media type

Start de PC opnieuw. Als de melding opnieuw verschijnt, neem dan a.u.b. contact op met uw dealer of met onze klantendienst.

Invalid System configuration Data

Zet in de *BIOS-Setup* in het menu *Advanced* de instelling voor *Reset Configuration Data* op *Yes*.

Keyboard controller error

Sluit een ander toetsenbord aan. Als de melding opnieuw verschijnt, neem dan contact op met uw dealer of met onze klantendienst.

Keyboard error

Controleer of het toetsenbord goed is aangesloten.

Keyboard error nn

Laat de toets van het toetsenbord los (*nn* is de hexadecimale code voor de toets).

Monitor type does not match CMOS - RUN SETUP

Stel in de setup van het *BIOS*, in het menu *Main*, het monitortype op de juiste wijze in.

Operating system not found

Controleer in de setup van het *BIOS*, in het menu *Main*, de instellingen van de harde schijf en het diskteststation..

Parity Check 1

Parity Check 2

Start de PC opnieuw. Als de melding opnieuw verschijnt, neem dan a.u.b. contact op met uw dealer of met onze klantendienst.

Previous boot incomplete - Default configuration used

Als u op de functietoets **[F2]** drukt, kunt u in de setup van het *BIOS* de instelling uittesten en verbeteren. Als u op de functietoets **[F1]** drukt, start de PC met de onvolledige systeemconfiguratie. Als de melding opnieuw verschijnt, neem dan a.u.b. contact op met uw dealer of met onze klantendienst.

Real time clock failure

Roep de setup van het *BIOS* op en stel in het menu *Main* de juiste tijd in. Als de melding opnieuw verschijnt, neem dan a.u.b. contact op met uw dealer of met onze klantendienst.

System battery is dead - Replace and run SETUP

Vervang de lithiumbatterij op het motherboard en stel de *BIOS* opnieuw in.

System Cache Error - Cache disabled

Start de PC opnieuw. Als de melding opnieuw verschijnt, neem dan a.u.b. contact op met uw dealer of met onze klantendienst.

System CMOS checksum bad - run SETUP

Roep de setup van het *BIOS* op en corrigeer wat u voor het laatst heeft ingesteld of stel de defaultwaarden in.

System timer error

Start de PC opnieuw. Als de melding opnieuw verschijnt, neem dan a.u.b. contact op met uw dealer of met onze klantendienst.

Index

3

32 Bit I/O [16](#)

5

528 Mbyte, Festplattenkapazität [15](#)

A

Abspeichern, siehe Speichern

Adresse [7](#)

 Serielle Schnittstelle [24](#)

Adressierung, Festplatte [15](#)

Advanced BIOS-Setup [19](#)

Advanced Power Management, siehe APM-Schnittstelle

Advanced System Configuration [29](#)

Akkumulator [58](#)

Aktuellen Systemzustand, speichern [41](#)

Anschließen, Audiobaugruppe [57](#)

Anschluß [4](#)

 Game/Midi / Audio [57](#)

Anzahl

 Faxton [45](#)

 Klingeln [44](#)

APM-Schnittstelle [39](#)

Arbeitsspeicher [52](#)

 Größe [18](#)

ASR&R Boot Delay [38](#)

Audio Controller [3](#), [26](#)

Audiobaugruppe, anschließen [57](#)

Audioeingang [3](#)

Ausbauen

 Second-Level-Cache [55](#)

 Speichermodul [53](#)

Ausschalten

 Audio-Controller [26](#)

 Feature Connector [30](#)

 Maus-Controller [26](#)

 Plug&Play [31](#)

 USB-Controller [26](#)

Auswirkung

Setup-Paßwort [33](#)
System-Paßwort [34](#)
Autotype Hard Disk [14](#)
AUX-in, Steckverbinder [3](#)

B

Base Memory [18](#)
Batterie
 Austausch [58](#)
 Entsorgung [58](#)
Baugruppe [4](#)
 Sicherheitshinweise [10](#)
Beenden, BIOS-Setup [46](#)
Belegung
 DMA [7](#)
 Interrupt [7](#)
Betriebssystem
 ausschalten [36](#)
 starten [34](#)
Bidirection [25](#)
Bildschirmauflösungen [5](#)
Bildschirmtyp [18](#)
Bildwiederholpeicher, hochrüsten [56](#)
BIOSFaX [44](#)
BIOS-Setup
 beenden [46](#)
 Einstellungen [11](#)
 Energiesparfunktionen [39](#)
 erweiterte Systemeinstellungen [19](#)
 Menü Advanced [19](#)
 Menü BIOSFaX [44](#)
 Menü Exit [46](#)
 Menü Main [11](#)
 Menü Power [39](#)
 Menü Security [32](#)
 Sicherheitsfunktionen [32](#)
 Systemkonfiguration [11](#)
BIOS-Update [48, 49](#)
 Diskette [35](#)
Boot Options [16](#)
Boot Sequence [18](#)
Boot-Logo [17](#)
Boot-Optionen [16](#)

Bootreihenfolge 18
Bootsektor, Veränderungen 35
Busbreite einstellen 16

C

Cache

- BIOS 21
- Cache-Funktion 21
- Cache-Nutzung 20
- einstellen 55
- ROM-Bereiche 21
- Schreibzugriff 21
- Second-Level-Cache hochrüsten 55

Cache Memory 20

Cache Memory Regions 21

Cache Mode 21

Cache System BIOS Area 21

Cache Video BIOS Area 21

CD-Line in, Steckverbinder 3

Chipcard 38

Chipkartenleser 38

Computerviren 35

Controller

- Audio 26
- Diskettenlaufwerk 25
- Laufwerk 25
- Maus 26
- USB 26

Cylinders, Festplattenparameter 15

D

Darstellungsmittel 1

Daten, Technische 2

Datenübertragung

- Modus einstellen 25
- Parallele 25

Datum einstellen 12

Default Latency Timer 29

DeskOff 36

Discard Changes & Exit 46

Diskette A / B 12

Diskette Controller 25

Diskette Lock 34

Diskette Write 35, 49
Diskettenlaufwerk
 Schreibschutz 35, 49
 Typ 12
Diskettenlaufwerks-Controller 25
 einstellen 25
DMA 7
DRAM-Baustein 56
DRAM-Modul 56
DRAM-Paritätsprüfung 30

E

ECC 30, 52
Echtzeituhr-Baustein 58
ECP 25
EGB 10
Ein-/Ausschalten
 System 36
 Ursachen 36
Ein-/Ausschalt-Funktionalität 36
Ein-/Aus-Taster 36
Einbauen
 Second-Level-Cache 55
 Speichermodul 52
Einschalten
 Audio-Controller 26
 Chipkartenleser 38
 Feature Connector 30
 Maus-Controller 26
 Plug&Play 31
 USB-Controller 26
Einschaltzeit 38
Einstellungen
 BIOS-Setup 11
 Power-Management 39
 speichern 46
Energie, sparen 40
Energiesparfunktionen
 BIOS-Setup 39
 einstellen 39
 Festplattenlaufwerk 41
 Umfang 40
Energiesparmodus 43

Enhanced Capability Port, siehe ECP

Enhanced Parallel Port, siehe EPP

EPP 25

Erhöhen, Performance 16

Erreur, messages 61

Error Correction Code, siehe ECC

Error messages 59

Error, mensajes 63

Errore, messaggi 65

Erweiterte Systemeinstellungen 19

Erweiterungsspeicher, Größe 18

Exit, BIOS-Setup 46

Extended Memory 18

Externer Cache

 einstellen 20

 Second-Level-Cache 20

F

F1 11

F2 34

Fax Modem Port 45

Fax Tone Count 45

Feature Connector 30

Fehlererkennung 52

Felmeddelanden 67

Fernein-Funktionalität 37

Ferneinschalten 37

Festplatte

 Adressierung 15

 Festplattenkapazität 15

 Parameter 14

 Übertragungsgeschwindigkeit 16

 Übertragungsmodus 15

Festplattenkapazität 15

Festplattenlaufwerk 13

 Controller 25

 Energiesparfunktionen 41

 Festplattenparameter 14

Festplattenparameter

 Cylinders 15

 Heads 15

 Sectors/Track 15

 Write Precomp 15

Festplattentyp [14](#)
Festplattenzugriff [31](#)
First-Level-Cache
 einstellen [20](#)
 interner Cache [20](#)
Flash Write [35](#)
Flash-BIOS, Schreibschutz [35](#)
Flash-BIOS-Diskette [48](#)
Foutmeldungen [69](#)
Freischalten, Feature Connector [30](#)
Funktionalität, ein-/ausschalten [36](#)
Funktionstaste
 F1 [11](#)
 F2 [34](#)

G

Game/Midi / Audio [3, 57](#)
Game/Midi, Steckverbinder [3](#)
Get Default Values [46](#)
Grafik-Controller [3](#)
 Bildschirmauflösungen [5](#)

H

HAL [36](#)
Hard Disk [13](#)
Hard Disk Controller [25](#)
Hard Disk Timeout [41](#)
Hardware Abstraction Layer, siehe HAL
Hauptspeicher [52](#)
 hochrüsten [52](#)
 vergrößern [52](#)
Heads, Festplattenparameter [15](#)
Hilfetext aufrufen [11](#)
Hochlaufroutine [16, 17, 18](#)
Hochrüsten
 Hauptspeicher [52](#)
 Second-Level-Cache [55](#)

I

IDE-Festplatte, siehe Festplatte
IDE-Festplattenlaufwerk, siehe Festplattenlaufwerk
Infrarotschnittstelle [24](#)
Initialisieren, Konfigurationsdaten [31](#)

Installation

Setup-Paßwort 33

System-Paßwort 33

Interner Cache

einstellen 20

First-Level-Cache 20

Schreibzugriff 21

Interrupt 7

Serielle Schnittstelle 24

zuordnen 28

Interrupt-Tabelle 7**ISA Memory Gap 30****ISA-Speicherbereich 30****K****Keyboard**

System ausschalten 37

System einschalten 37

System-Paßwort 34

Konfiguration, BIOS-Setup 11**Konfigurationsdaten, initialisieren 31****Kopfhöreranschluß 3****Kurzer Selbsttest 17****L****Lage, Schalterblock 47****Large Disk Access Mode 31****Latency Timer 29****Laufwerks-Controller 25**

ausschalten 25

einstellen 23

LBA Translation 15**Leistungsmerkmale 2****Lithium-Batterie 58****Load Previous Values 46****Logical Block Addressing, siehe LBA****M****Main, Menü 11****Mensajes de error 63****Menü**

Advanced 19

BIOSFaX 44

- BIOS-Setup [11](#)
- Exit [46](#)
- Main [11](#)
- Power [39](#)
- Security [32](#)
- Menü Security, Flash Write [49](#)
- Messages [59](#)
- Messages d'erreur [61](#)
- Messaggi di errore [65](#)
- Mikrofonanschluß [3](#)
- Modem Modus [44](#)
- Modem, einstellen [44](#)
- Mouse Controller [26](#)

P

- Parallel
 - Datenübertragung [25](#)
 - Schnittstelle [24, 25](#)
- Parallel Mode [25](#)
- Parameter, Festplatte [14](#)
- Paritätsprüfung [30, 52](#)
- Parity Mode [30](#)
- Paßwort
 - Setup-Paßwort [33](#)
 - System-Paßwort [33, 34](#)
- Paßwortanzeige [32](#)
- PCI [1](#)
- PCI Configuration [27](#)
- PCI Device, Slot #n [29](#)
- PCI Interrupt Mapping INTx# [28](#)
- PCI-Einstellungen [27](#)
- PCI-Funktionalität [27](#)
- PCI-Interrupt, zuordnen [28](#)
- PCI-Steckplatz
 - Default Latency Timer [29](#)
 - einstellen [29](#)
 - Latency Timer [29](#)
- PCI-VGA-Interrupt, zuordnen [28](#)
- Performance, erhöhen [16, 20, 21, 22, 23, 30, 55](#)
- Peripheral Component Interconnect, siehe PCI
- Peripheral Configuration [23](#)
- Peripherie [23](#)
- PIO Mode [16](#)

- Plug & Play O/S [31](#)
- Plug&Play, Funktionalität [31](#)
- POST Error Halt [17](#)
- Power Management Mode [40](#)
- Power Off Source
 - Keyboard [37](#)
 - Software [36](#)
- Power On Source
 - Keyboard [37](#)
 - Remote [37](#)
 - Timer [38](#)
- Power On/Off [36](#)
- Power, BIOS-Setup [39](#)
- Power-Management, Einstellungen [39](#)
- Press F2 to enter SETUP [34](#)
- Primärer Steckverbinder, Laufwerks-Controller [25](#)
- Printer [25](#)
- Programm, System ausschalten [36](#)
- Programmed Input Output Mode, siehe PIO
- Prozessor
 - austauschen [54](#)
 - interner Cache [20](#)
 - Taktfrequenz [48](#)
- Prozessortakt, Standby-Funktion [41](#)

Q

- Quick boot [17](#)
- Quiet boot [17](#)

R

- RAM [22](#)
- Random Access Memory, siehe RAM
- Read Only Memory, siehe ROM
- Receive Mode [44](#)
 - Modem Modus [44](#)
- Recycling, Batterie [58](#)
- Reihenfolge, Systemstart [18](#)
- Remote Power On [37](#)
- Reset Configuration Data [31](#)
- Ressourcen-Tabelle [7](#)
- Ring Count [44](#)
- ROM [22](#)
- ROM-Bereiche [23](#)

kopieren 22

S

S180, Schalterblock 47

Save Changes 46

Save Changes & Exit 46

Save To Disk 41

SAVETO.DSK 41

Schalter 1, 2, 3 und 4

Taktfrequenz 54

Schalter 1, 2, 3 und 4, Taktfrequenz 48

Schalter 5, System-BIOS wiederherstellen 48

Schalter 7, Schreibschutz System-BIOS 48, 49

Schalter 8, Schreibschutz Diskettenlaufwerk 49

Schalterblock, Lage 47

Schnittstelle 4

einstellen 23, 24, 25

parallel 24

seriell 24, 45

Schreibschutz

Diskettenlaufwerk 35, 49

System-BIOS 35, 49

Second-Level-Cache

ausbauen 55

einstellen 20

externer Cache 20

hochrüsten 55

Schreibzugriff 21

Sectors/Track, Festplattenparameter 15

Security, BIOS-Setup 32

Sekundärer Steckverbinder, Laufwerks-Controller 25

Selbsttest 16, 17

Serial 1

Adresse 24

ausschalten 24

Interrupt 24

Serial 2

Adresse 24

ausschalten 24

Interrupt 24

Serial 2 Mode 24

Serielle Schnittstelle 45

einstellen 24

- Set Setup Password [33](#)
- Set System Password [33](#), [36](#), [37](#), [38](#)
- Setup Password [32](#)
- Setup Password Lock [33](#)
- Setup Prompt [34](#)
- Setup, siehe BIOS-Setup
- Setup-Aufforderung [34](#)
- Setup-Paßwort
 - Auswirkung [33](#)
 - Installation [33](#)
- Shadow Memory [22](#)
- Shadow Memory Regions [23](#)
- Sicherheitsfunktionen, BIOS-Setup [32](#)
- Sicherheitshinweise, Baugruppe [10](#)
- Software, System ausschalten [36](#)
- Speicher
 - Arbeitsspeicher [18](#)
 - Bildwiederholtspeicher [56](#)
 - Cache [20](#)
 - Erweiterungsspeicher [18](#)
 - Hauptspeicher [18](#), [52](#)
 - Second-Level-Cache [55](#)
- Speicherausbau, Hauptspeicher [52](#)
- Speicherbereich, ISA-Baugruppe [30](#)
- Speicherkapazität, Festplatte [15](#)
- Speichermodul [52](#)
 - ausbauen [53](#)
 - einbauen [52](#)
- Speichern
 - Aktuellen Systemzustand [41](#)
 - Einstellungen [46](#)
- Standby CPU Speed [41](#)
- Standby Timeout [40](#)
- Standby-Funktion, Taktfrequenz [41](#)
- Standby-Modus [40](#)
- Startreihenfolge [18](#)
- Steckplätze [4](#)
- Steckverbinder [4](#)
 - AUX-in [3](#)
 - CD-Line in [3](#)
 - Game/Midi [3](#)
 - Voice-Modem [3](#)
- Suspend Timeout [40](#)

Index

- Suspend-Modus 40
- SWOFF 36
- System
 - anhalten 17
 - Ein-/Ausschalten 36
- System ausschalten
 - Keyboard 37
 - Software 36
- System Date 12
- System einschalten
 - Fernein 37
 - Keyboard 37
 - Tastatur 37
 - Zeitgesteuert 38
- System Load 34
- System Password 32
- System Password Mode 34, 36, 37, 38
- System Performance 30
- System Shadow 22
- System Time 12
- Systemaktivitäten, festlegen 43
- Systembaugruppe, siehe Baugruppe
- System-BIOS
 - Schreibschutz 35, 49
 - wiederherstellen 48
- Systemeinstellungen
 - Erweitert 19
 - vornehmen 11
 - zusätzliche 29
- Systemgeschwindigkeit 30
- Systemkonfiguration, BIOS-Setup 11
- System-Paßwort
 - Auswirkung 34
 - Installation 33
- Systemstart 16, 17, 18
- System-Timing 30
- Systemzustand 41

T

- Taktfrequenz
 - Schalter 48
 - Standby-Funktion 41
- Taktzyklus, PCI-Steckplatz 29

Tastatur

System ausschalten 37

System einschalten 37

Technische

Daten 2

Informationen 11

Testroutine 16, 17

Transfer Mode 15

Type, Festplattentyp 14

Ü

Übertragungsgeschwindigkeit, Festplatte 16

Übertragungsmodus 21

Festplatte 15

parallele Schnittstelle 25

U

Uhrzeit einstellen 12

Umfang, Energiesparfunktionen 40

Unterstützte Bildschirmauflösungen 5

Update

BIOS 48

fehlerhaft 48

USB Controller 26

V

Veränderungen, Bootsektor 35

Verfügbarer

Arbeitsspeicher 18

Erweiterungsspeicher 18

Verkürzter Selbsttest 17

VGA Interrupt 28

Video Display 18

Video Shadow 22

Video-BIOS 22

Virus Warning 35

Viruswarnung 35

Voice-Modem, Steckverbinder 3

W

Wakeup Event 43

Wavetable-Baugruppe 3

Wiederherstellen, System-BIOS 48

Index

Write Back [21](#)
Write Precomp, Festplattenparameter [15](#)
Write Through [21](#)

Z

Zeit einstellen [12](#)
Zeitgesteuert, einschalten [38](#)
Zuordnen
 PCI-Interrupt [28](#)
 PCI-VGA-Interrupt [28](#)
Zusätzlich, Systemeinstellungen [29](#)