

scenic.

Scenic PC  
System board  
D912



pentium<sup>®</sup>  
PROCESSOR

Technical Manual



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# Scenic PC System board D912

## Technical Manual

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July 1996 edition

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# Introduction

This description applies for the system board D912 with PCI bus (Peripheral Component Interconnect).

## Notational conventions

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



This indicates instructions which it is essential to observe. Failure to do so may endanger your health, the operational integrity and electrical safety of your PC, or the security of your 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 items.

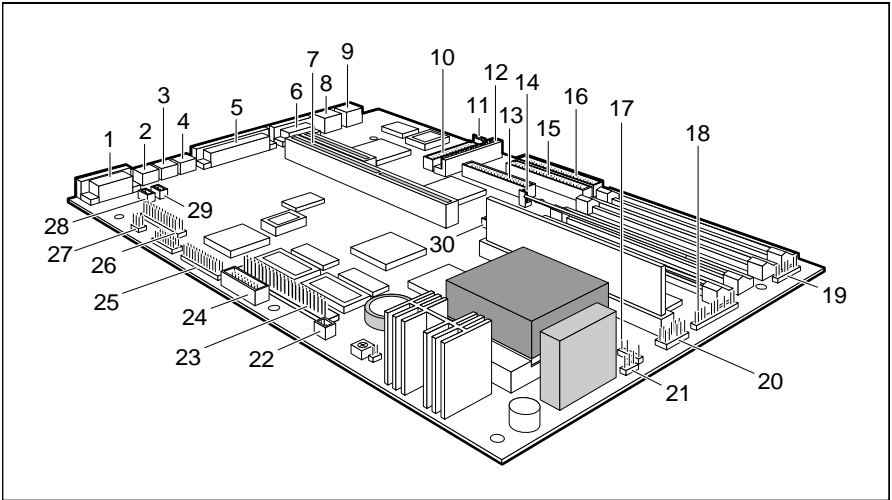
"Quotation marks" indicate highlighted text and names of chapters."

## Features

- 64-bit microprocessor Pentium with 16 Kbytes internal cache (first-Level Cache, 8 Kbytes data cache, 8 Kbytes address cache) or OverDrive processor for Pentium
- Memory configuration on system board: 8 Mbytes to 128 Mbytes
- Second-level cache on the system board: 0, 256 or 512 Kbytes
- 256 Kbytes Flash BIOS
- PCI bus
- Monitor controller connected to PCI bus; graphics processor TSENG ET4000/W32P with Windows accelerator and 1 Mbyte or 2 Mbytes DRAM video memory
- IDE hard disk controller connected to PCI bus for up to four IDE drives (e.g. IDE hard disk drives, ATAPI CD ROM drive))
- Audio controller connected to ISA bus (Creative VIBRA 16S; 16 bit; compatible to Sound Blaster 16, MPU401, Multimedia PC and Multimedia PC II; Stereo FM Synthesizer YAMAHA OLP3)
- Real-time clock/calendar with integrated battery backup
- Floppy disk controller (up to 2.88 Mbytes format)
- Bus interface for platter
- Connector for remote-on (fax/modem board), Imageport, voice modem, Audio output, CD Line in, wavetable board, VESA VGA Path-Through, Game/Midi connection, infrared connection
- Monitor interface
- Microphone interface
- Audio input (Line in) and Audio output (Line out)
- Parallel interface (ECP- and EPP-compatible)
- Serial interface
- PS/2 mouse interface
- PS/2 keyboard interface
- Piezo loudspeaker

- Energy saving functions
- Security functions

## Interfaces and connectors



- |   |   |
|---|---|
| 1 = Monitor interface   | 17 = Connector for external loudspeaker |
| 2 = Microphone interface  | 18 = Connector for LED indicators       |
| 3 = Audio input (Line in)   | 19 = Connector for LED indicators       |
| 4 = Audio output (Line out)                                       | 20 = Connector for LED indicators       |
| 5 = Parallel interface  | 21 = Connector for processor fan        |
| 6 = Serial interface  | 22 = Connector for remote-on            |
| 7 = Bus interface   | 23 = Connector for Imageport            |
| 8 = PS/2 mouse interface  | 24 = Connector for Game/Midi connection |
| 9 = PS/2 keyboard interface                                       | 25 = Connector for VESA-VGA             |
| 10 = Connector for infrared connection                            | Pass-Through                            |
| 11 = Connector for soft-off power supply                          | 26 = Connector for wavetable board      |
| 12 = Connector for power supply                                   | 27 = Connector for voice modem          |
| 13 = Connector for floppy disk drive                              | 28 = Connector for audio input          |
| 14 = Connector for main switch                                    | 29 = Connector for CD Line in           |
| 15 = Connector 1 for IDE drives 1 and 2<br>(e.g. hard disk drive) | 30 = Connector for CD input             |
| 16 = Connector 2 for IDE drives 3 and 4                           |   |

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

## Possible screen resolution

The screen resolutions in the following table refer to the monitor controller on the system board. You can set the screen resolution under Windows 95 using the *Refrate* program.

If your PC was shipped with a graphics board, no monitor controller is installed on the system board. The screen resolutions supported are then given in the documentation accompanying the graphics board.

To set the screen resolution under MS-Windows click the start button, point to *Settings* and then click *Control Panel - Display properties* (refer to MS-Windows documentation).

Screen resolution	Refresh rate (Hz)	Horizontal-rate (kHz)	Max. number of colors
640x350	70	31,3	16
640x350	84	38	16
640x480	60	31,3	16777216
640x480	75	38	16777216
640x480	90	48	65536
720x400	70	31,5	16
720x400	84	38	16
800x600	56	35	16777216
800x600	56	35	65536
800x600	60	38	16777216
800x600	60	38	65536
800x600	75	47	65536
800x600	90	60	256
1024x768	87 interlaced	36	65536
1024x768	87 interlaced	36	256
1024x768	60	49	65536
1024x768	60	49	256
1024x768	70	57	256
1024x768	75	60	256
1280x1024	87 interlaced	49	256
1280x1024	87 interlaced	49	16
1280x1024	60	64	256
1280x1024	75	80	256

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

## Interrupt table

	Address	Assigned IRQ	Possible IRQ
Keyboard		IRQ1	
COM2 dispatcher	02F8	IRQ3	
Serial interface COM1	03F8	IRQ4	
Fax/modem	03E8	IRQ5	IRQ3, IRQ4, IRQ7
Floppy disk drive controller		IRQ6	
Parallel interface LPT1		IRQ7	
RTC		IRQ8	
Framegrabber or Wavetable		IRQ9  IRQ9	IRQ10, IRQ11, IRQ12, IRQ13, IRQ14, IRQ15 IRQ3, IRQ4, IRQ5, IRQ7, IRQ10
Audio controller  Joystick: base address:  MPU 401: synthesizer:	0200-0207 0220-022F 0230-0233 0330-0331 0338-038B	IRQ10	IRQ5, IRQ7, IRQ9
MPEG1		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

**i**

Please note that an interrupt cannot be used by two applications at the same time.



---

## Important Notes



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

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

Incorrect replacement of the lithium battery may lead to a risk of explosion. It is therefore essential to observe the instructions in the section „[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. Your vendor or dealer or their authorized representatives will take used batteries back free of charge so that they can be recycled or disposed of in the proper manner.

Connecting cable for peripherals must be adequately insulated to avoid interference.

### 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.

### WARNING



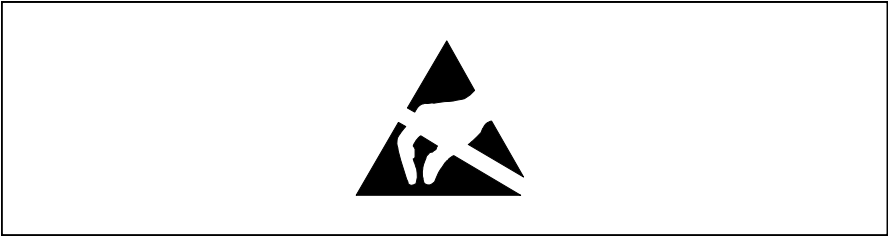
Eksplosionsfara vid felaktigt batteribyte. Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkarenfabrikanten. Kassera använt batteri enligt fabrikantens instruktion.

### VAROITUS



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

Modules with electrostatic sensitive devices (ESD) may be identified by labels.



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

- When you handle modules fitted with ESDs, 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 modules containing ESDs.
- Always hold modules with ESDs by their edges.
- Never touch pins or conductors on modules fitted with ESDs.

## **Program with time loops**

Problems can occur with programs in which time loops have been implemented through software loops. This applies in particular to older programs which were written for 8 MHz processors.

---

# 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. 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* - modem settings

*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.

## System settings - Main menu

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 Copyright 1985-94 Phoenix Technologies Ltd.	
<b>Main</b>	Advanced Security Power Exit
System Time: [07:42:19] System Date: [08/11/1995]	Item Specific Help
Diskette A: [1.4M] Diskette B: [None]	
▶ Hard Disk 1: 850 Mbyte ▶ Hard Disk 2: None ▶ Hard Disk 3: None ▶ Hard Disk 4: None	
▶ Boot Options	
Video Display: [EGA/VGA]	
Base Memory: 640K Extended Memory: 7M	
F1 Help ESC Exit	↑↓ Select Item ←→ Select Menu
-/+ Enter	Change Values Execute Command
F9 F7	Setup Defaults Previous Values

Example for *Main* menu

## System Time / System

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:).

## Hard Disk 1 to Hard Disk 4

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



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 rate of two IDE drives connected to the same connector is determined by the slower of the two. Fast hard disks should therefore be connected to the first IDE connector and identified as *Hard Disk 1* or *Hard Disk 2*; slower hard disks or other IDE drives (e.g. CD ROM drives) should be connected to the second IDE connector and identified as *Hard Disk 3* or *Hard Disk 4*.

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 Copyright 1985-94 Phoenix Technologies Ltd.		
<b>Main</b>		
Hard Disk 1:	850 Mbyte	Item Specific Help
Autotype Hard Disk:	[Press Enter]	
Type:	[User]	
Cylinders:	[ 1647]	
Heads:	[ 16]	
Sectors/Track:	[ 63]	
Write Precomp:	[None]	
Transfer Mode:	[Standard]	
LBA Translation:	[Disabled]	
PIO Mode:	[Standard]	
32 Bit I/O:	[Enabled]	
F1 Help	↑ Select Item	-/+ Change Values
ESC Exit	←→ Select Menu	Enter Execute Command
		F9 Setup Defaults
		F7 Previous Values

Example for the submenu *Hard Disk 1*



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 installed.

*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 and sets them automatically. 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 Gbyte	1,2 Gbyte	1,6 Gbyte
Cylinders	1647	2097	2484	3148
Heads	16	16	16	16
Sectors	63	63	63	63
Write Precomp	None	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 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.

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

### 32 Bit I/O - - Bus width for data transfer

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 (default entry).. This enhances performance.
- 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 Copyright 1985-94 Phoenix Technologies Ltd.					
<b>Main</b>					
Boot Options			Item Specific Help		
POST Error Halt:    [Halt On All Errors] Quick Boot:        [Disabled]					
F1 Help	↑↓	Select Item	-/+	Change Values	F9 Setup Defaults
ESC Exit	←→	Select Menu	Enter	Execute Command	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.



**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).

**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**

This field indicates the size of the memory above 1 Mbyte.



## 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 Copyright 1985-94 Phoenix Technologies Ltd. <b>Advanced</b>	
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    ↓ Select Item    -/+ Change Values    F9 Setup Defaults ESC Exit   ←→ Select Menu   Enter Execute Command   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
- you are installing *OS/2 Warp*.

*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 (Default entry).

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

**Cache Mode**

Condition: 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 and the information is only written to main memory if necessary. Memory and cache contents are not identical.

**Cache System BIOS Area / Cache Video BIOS Area**

Condition: 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**

Condition: 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).

## Shadow Memory - ROM areas in the RAM

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 Copyright 1985-94 Phoenix Technologies Ltd.					
<b>Advanced</b>					
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    ↑ Select Item    -/+ Change Values    F9 Setup Defaults ESC Exit   ←→ Select Menu   Enter Execute Command   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 unless an external monitor controller is used.

### 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).

## Peripheral Configuration - Interfaces and controllers

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

Phoenix BIOS Setup Copyright 1985-94 Phoenix Technologies Ltd.	
<b>Advanced</b>	
Peripheral Configuration	Item Specific Help
Serial 1:                    [Auto] Serial 2:                    [Auto] Parallel:                    [Auto] Parallel Mode:            [Printer]  Diskette Controller:      [Enabled] Hard Disk Controller:    [Primary And Secondary]  Mouse Controller:        [Enabled]  Audio Controller:        [220h] Gameport:                 [Enabled]	
F1 Help      ↑↓ Select Item    -/+ Change Values      F9 Setup Defaults ESC Exit    ←→ Select Menu   Enter Execute Command   F7 Previous Values	

Example for submenu *Peripheral Configuration*

### Serial 1 / Serial 2

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

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

The serial interface 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 interface is disabled. The corresponding interrupt and address are free.

**Parallel**

This field selects the address and the interrupt used to access the parallel interface.  
*378h, IRQ7, 278h, IRQ5, 3BCh, IRQ7*

- Auto* The parallel interface is set to the shown address and interrupt.
- Disabled* The parallel interface is automatically set to the next available combination (address, interrupt) (Default entry).
- Disabled* The parallel interface is disabled.

**Parallel Mode**

This field is used to specify whether the parallel interface 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. The field Parallel must be set to *378h* or *278h*.

- Printer* The port functions as an output port only (default entry).
- Bidirection* Data can be transferred in both directions across the port.
- EPP* Fast transfer mode (up to 2 Mbytes/s), can output and receive data. Requires a peripheral device which supports the EPP (Enhanced Parallel Port) transfer mode..
- ECP* Fast transfer mode (up to 2.4 Mbytes/s), can output and receive data. Requires a peripheral device which supports the ECP (Enhanced Capability Port) transfer mode.

**Diskette Controller**

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

- Enabled* The floppy disk controller is enabled - IRQ 6 is used. (default entry).
- Disabled* 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 hard disk is physically connected.

*Primary*           The first IDE hard disk controller is enabled (default entry). Two IDE drives (preferably high-speed hard disks) 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*           The IDE hard disk controller is 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 - IRQ 12 is used. (default entry).

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

**Audio Controller**

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

*220h, 240h, 260h, 280h*

The audio controller is set to the corresponding base address. (default entry base: address 220h). Which system resources (interrupts, addresses) are used is defined by the audio driver software.

*Disabled*           The audio controller is disabled.



**Gameport - Connector for Game/Midi connection**

Condition: The Audio Controller field is set to 220h, 240h, 260h or 280h.

This field is used to enable and disable the Game/Midi port on the system board.

*Enabled*            The game port is enabled (default entry).

*Disabled*          The game port is disabled.

**PCI Configuration**

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

Phoenix BIOS Setup Copyright 1985-94 Phoenix Technologies Ltd. <b>Advanced</b>	
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 a change to take effect, you must switch your PC off and then on again when the *Setup-BIOS* has terminated.

With multifunctional PCI boards, all PCI interrupts can be used. The controllers on the system board do not need any PCI interrupts.

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#

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

*Enabled* IRQ9 is assigned to the monitor controller on the built-in PCI module.

*Disabled* IRQ9 can be used for other add-on modules (default entry).

**PCI Device, Slot #n: Default Latency Timer**

specifies the lowest number of clock cycles in which a PCI master module 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 PC off and then on again after the *Setup-BIOS* has terminated.

*Yes* The value predefined by the PCI module is accepted. The entry in the corresponding field for *PCI Device, Slot #n: Latency Timer* is ignored. (Default entry)

*No* The value predefined by the PCI module is ignored. The value set in the corresponding field for *PCI Device, Slot #n: Latency Timer* determines the number of clock cycles.

**PCI Device, Slot #n: Latency Timer**

Condition: the corresponding field for *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 - Additional system settings**

calls the submenu in which you can make additional system settings.

Phoenix BIOS Setup Copyright 1985-95 Phoenix Technologies Ltd. <b>Advanced</b>		
Advanced System Configuration	Item Specific Help	
Video Subsystem: [Auto]		
F1 Help	↑ Select Item	-/+ Change Values
ESC Exit	← Select Menu	F9 Setup Defaults
	Enter Select	▶ Sub-Menu
		F7 Previous Values

Example for the submenu *Advanced System Configuration*

### Video Subsystem - Monitor controller

defines settings for the monitor controller. If you are using your own monitor controller and are encountering problems, this setting may be the cause.

*Auto* default entry

*3C3h, 46E8h* further possible settings



Have settings changed only by a service technician or have the service technician instruct you in how to make changes.

### Plug & Play O/S - Plug&Play functionality

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

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

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

### Reset Configuration Data

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

*Yes* 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. Components which are not Plug&Play must be entered manually.

*No* When the PC is started, the Plug&Play functionality ascertains the current configuration data and uses it to initialize the installed modules and drives. The configuration data of non-Plug&Play components is not reset (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.

- DOS*                   the operating system uses MS-DOS-compatible hard disk accesses.
- Other*                 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*)
- 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*)
- Switching off by software (in the field marked *Soft Power Off*)
- Remote Power On (in the field marked *Remote Power On*)

Phoenix BIOS Setup Copyright 1985-94 Phoenix Technologies Ltd.					
Main	Advanced	<b>Security</b>	Power	Exit	
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]			
Soft Power Off:		[Enabled]			
Remote Power On:		[Enabled]			
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

This field indicates 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 call 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.

*Standard* Setup Password prevents unauthorized calls of the BIOS Setup. (Default entry).

*Extended* The Setup Password prevents unauthorized calls of the BIOS Setup 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

Condition: the setup password must be 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.

*System* When the PC is started, the system password enables the operating system to be booted. (Default).

*Keyboard* 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.

*Standard*      The operating system can be loaded from floppy disk or hard disk (default entry).

*Diskette Lock*      The operating system can only be loaded from hard disk.

## Setup Prompt

This field specifies whether the message `Press F2 to enter SETUP` is displayed when the PC is rebooted.

*Enabled*      The message `Press F2 to enter SETUP` is displayed when the system is started (default entry).

*Disabled*      The 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.

*Enabled*      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*).

*Confirm*      This entry confirms a required change in a boot sector (e.g. new operating system).

*Disabled*      The boot sectors are not checked (default entry).



## Diskette Write - Write protection for floppy disk drive

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

- Enabled* Floppy disks can be read, written or deleted, provided jumper FDP is not inserted (default entry).
- Disabled* Floppy disks can only be read.

## Flash Write - Write protection for System BIOS

This field can assign write protection to the System BIOS.

- Enabled* The System BIOS can be written to or deleted, provided jumper FLP is not inserted (default entry). BIOS update from floppy disk is possible.
- Disabled* The System BIOS can neither be written to nor deleted. BIOS update from floppy disk is not possible

## Soft Power Off

This field specifies whether the PC can be switched off with a program (e.g. SWOFF).

- Enabled* The PC can be switched off with a program (default entry).
- Disabled* The PC cannot be switched off with a program.

## Remote Power On

specifies whether the PC can be switched on from an external device (e.g. fax).

- Enabled* The PC can be switched on from an external device (default entry).
- Disabled* The PC cannot be switched on from an external device.

## 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:

- Extent of energy saving functions (in the *Power Management Mode* field)
- Standby mode (in the *Standby Timeout* field)
- Hard disk energy saving functions (in the *Hard Disk Timeout* field)
- Processor speed in standby mode (in the *Standby CPU Speed* field)
- Defining system activities (in the *Wakeup Event* field)

Phoenix BIOS Setup Copyright 1985-94 Phoenix Technologies Ltd.			
Main	Advanced	Security	<b>Power</b> Exit
Power Management Mode:	[Customize]	Item Specific Help	
Standby Timeout:	[15 min]		
Hard Disk Timeout:	[10 min]		
Standby CPU Speed:	[Medium]		
▶ Wakeup Event			
F1 Help	↑↓ Select Item	-/+ Change Values	F9 Setup Defaults
ESC Exit	←→ Select Menu	Enter Execute Command	F7 Previous Values

Example for menu *Power*

### 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

Condition: 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.

## Hard Disk Timeout - Hard disk energy saving functions

Condition: 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 - Processor clock

Condition: 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.

*Max* Maximum clock speed

*High* 1/4 of maximum clock speed

*Medium* 1/8 of maximum clock speed (default entry )

*Low* 1/16 of maximum clock speed

## 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.

- 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 setting

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 <b>BIOSFaX</b> Exit
Receive Mode:	[Disabled]	Item Specific Help
Ring Count:	[Auto]	
Fax Tone Count:	[Auto]	
Serial Port:	COM3	
F1 Help	↑↓ Select Item	-/+ Change Values
ESC Exit	←→ Select Menu	Enter Select ▶ Sub-Menu
		F9 Setup Defaults
		F7 Previous Values

Example for menu *BIOSFaX*

### 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

This field is used to define 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**

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

## **Serial Port**

This field 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 - Exiting BIOS Setup

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

Phoenix BIOS Setup Copyright 1985-94 Phoenix Technologies Ltd.					
Main	Advanced	Security	Power	<b>Exit</b>	
Save Changes & Exit Discard Changes & Exit Get Default Values Load Previous Values Save Changes				Item Specific Help <hr/>	
F1 Help	↓ Select Item	-/+ Change Values	F9 Setup Defaults		
ESC Exit	←→ Select Menu	Enter Execute Command	F7 Previous Values		

Example for menu *Exit*

### Save Changes & Exit

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.

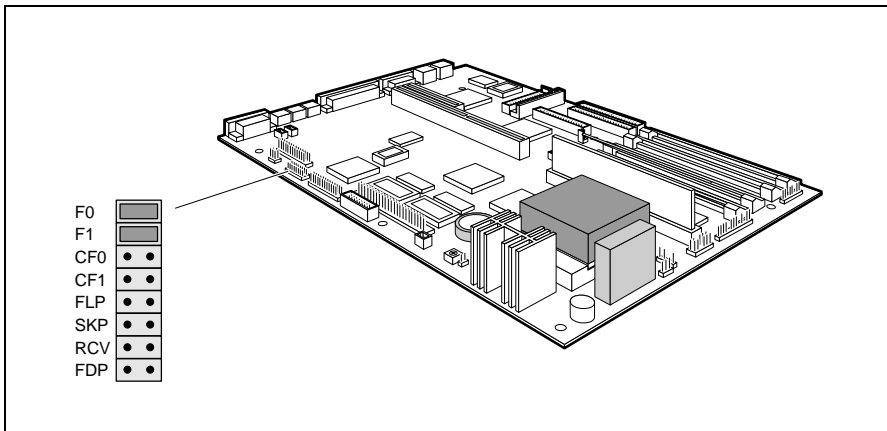
### Save Changes

saves the settings you have made.





# Jumper settings



F0, F1, CF0, CF1 = clock speed  
 FLP = System BIOS write-protection  
 SKP = for future use (do not change)

RCV = System BIOS recovery  
 FDP = Floppy disk write-protection

## Clock speed - jumper F0, F1, CF0 and CF1

The setting depends on the processor.



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

Processor Pentium	jumper F0	jumper F1	jumper CF0	jumper CF1
75 MHz	inserted	inserted	not inserted	not inserted
90 MHz	inserted	not inserted	not inserted	not inserted
100 MHz	not inserted	inserted	not inserted	not inserted
120 MHz	inserted	not inserted	inserted	not inserted
133 MHz	not inserted	inserted	inserted	not inserted
150 MHz	inserted	not inserted	inserted	inserted
166 MHz	not inserted	inserted	inserted	inserted
200 MHz	not inserted	inserted	not inserted	inserted

### Write protection for System BIOS - jumper FLP

Jumper FLP 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.

*inserted*            System BIOS is write protected.  
*not inserted*       System BIOS can be overwritten (default setting).

### Recovering System BIOS - jumper RCV

The jumper RCV 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 (the FLP jumper must not be inserted and the *Flash Write* field must be set to *Enabled* in the *Security* menu). To restore the old BIOS you need a Flash BIOS disk (call customer service).

*inserted*            The System BIOS executes from floppy drive A: and restores the System BIOS on the system board.  
*not inserted*       The System BIOS is started from the system module (default setting).

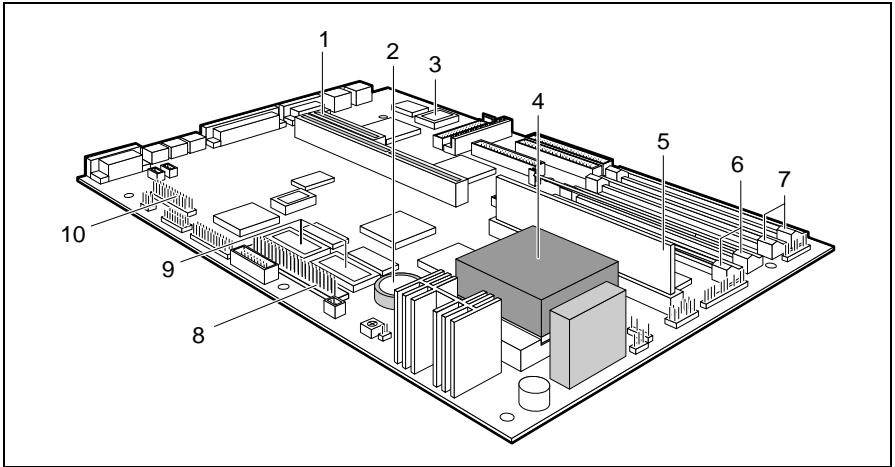
### Write protection for floppy disk drive - jumper FDP

The jumper FDP 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*).

*inserted*            The floppy disk drive is write protected.  
*not inserted*       Read, write and delete floppy disks is possible (default setting).

---

# Add-on modules



- |                                     |                                      |
|-------------------------------------|--------------------------------------|
| 1 = Slot for fax/modem (optional)   | 6 = Locations bank 0 for main memory |
| 2 = Lithium battery                 | 7 = Locations bank 1 for main memory |
| 3 = Flash BIOS                      | 8 = Slot for framegrabber board      |
| 4 = Processor with heat sink        | 9 = Socket for video memory          |
| 5 = Location for second-level Cache | 10 = Slot for wavetable board        |



If no wavetable board is connected on the system board, you cannot plug in a framegrabber board.

## Upgrading main memory

Four locations (bank 0 and bank 1) are available on the system board for installing memory modules. The board supports a maximum of 128 Mbytes.

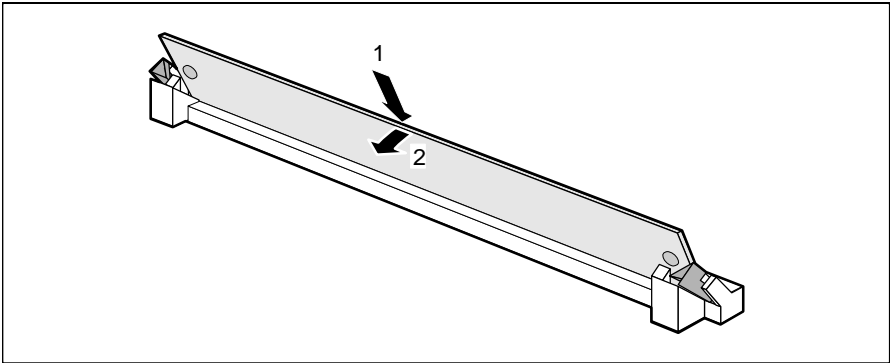
You may use memory modules of 4, 8, 16 or 32 Mbytes with or without parity check. No parity check is performed.



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

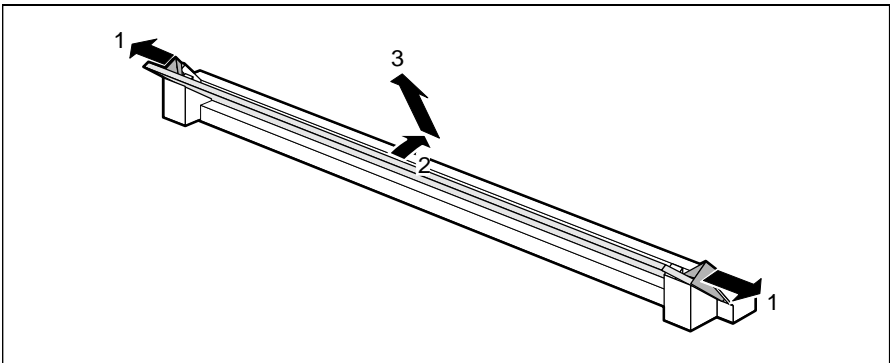
You must always add memory modules in pairs. In other words, you fit the first pair to bank 0, and the second pair in bank 1. Pairs of memory modules must have the same capacity and the same access time.

## Installing memory modules



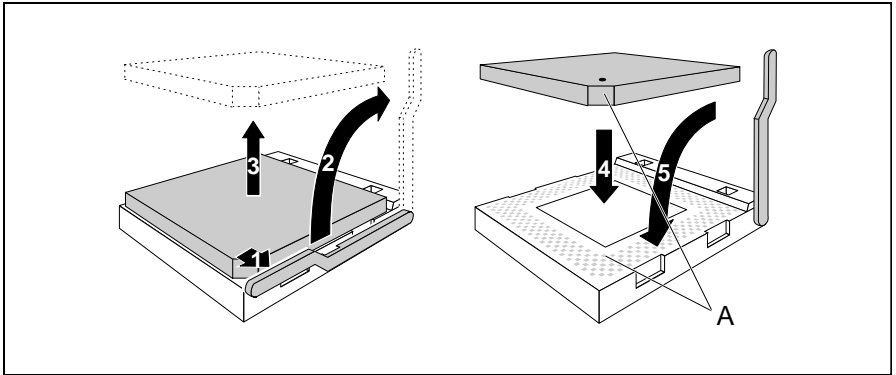
- ▶ Insert the memory module at an angle into the appropriate location (1). Ensure that the key notch and the two holes are correctly aligned with the retaining pins.
- ▶ Tilt the module down until it snaps into place (2).

## Removing a memory module



- ▶ Carefully push the retaining clips at each end of the module outwards (1).
- ▶ Tilt the memory module forwards (2), and pull it upwards and at an angle out of the mounting 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).

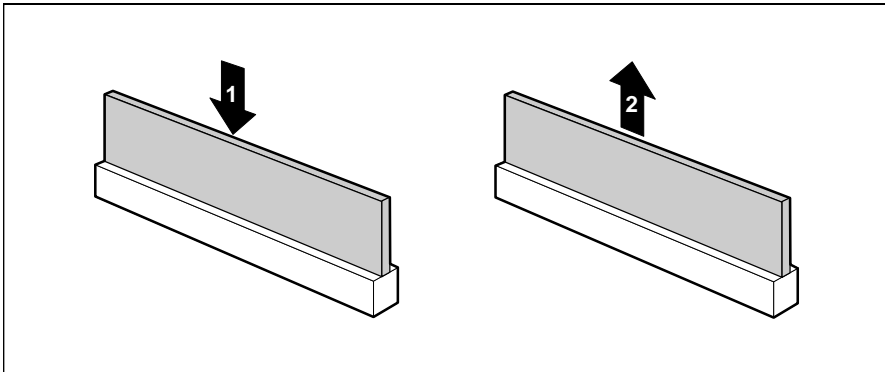


The mark on the processor may be covered by a heat sink. In this case let yourself be guided by the marking in the rows of pins on the underside of the processor.

- ▶ Push the lever back down so that it snaps into place.
- ▶ Set the jumpers F0, F1, CF0 and CF1 depending on the processor which is installed (see [Clock speed - jumper F0, F1, CF0 and CF1](#)).

## Upgrading the Second-level cache

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



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).

**i**

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.

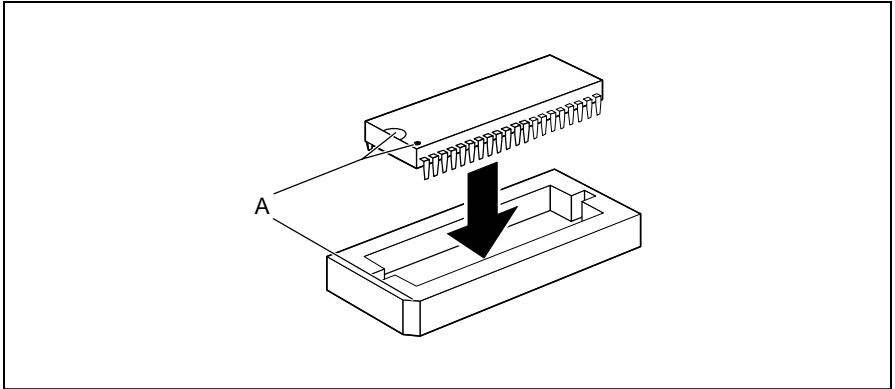
## Upgrading the video memory

If a 1-Mbyte video memory is present on the system board, you can upgrade it to 2 Mbytes.



Information on which DRAM components (DRAM 256K\*16 60ns) 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 that the mark on the upper side of the DRAM component (A) matches the position of the mark on the socket.

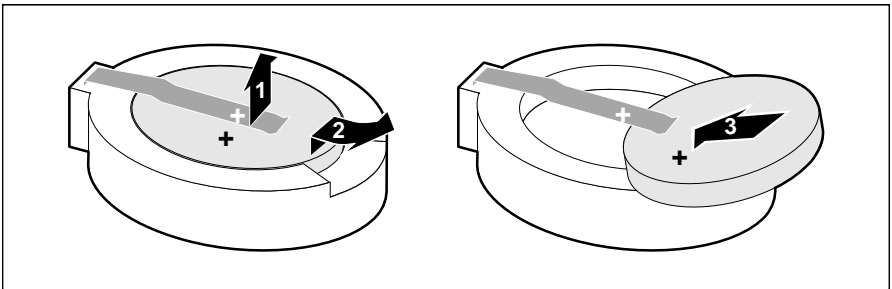
## Replacing the lithium battery



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. our vendor or dealer or their authorized representatives will take used batteries back free of charge so that they can be recycled or disposed of in the proper manner. 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

System RAM Failed at offset: nnnn

Failing Bits: 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 - run configuration utility

Press <F1> to resume, <F2> to Setup

If your PC was switched off during system startup, this error message may be displayed.

Call the *BIOS Setup* and change to the *Advanced* screen page. On this page select the menu item *Reset Configuration* and change the setting to *Yes*. Save the change and quit the *BIOS Setup*. Reboot your PC.

## Error messages

---

### 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).

### 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

System RAM Failed at offset: nnnn

Failing Bits: 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 - run configuration utility

Press <F1> to resume, <F2> to Setup

Ce message d'erreur peut apparaître si l'ordinateur a été mis hors tension pendant la phase de démarrage.

Appelez le setup du BIOS et passez à la page d'écran *Advanced*. Choisissez-y l'option de menu *Reset Configuration* et modifiez le réglage sur *Yes*.

Sauvegardez le changement et quittez le setup du BIOS. Redémarrez l'ordinateur.

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

System RAM Failed at offset: nnnn

Failing Bits: 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 - run configuration utility

Press <F1> to resume, <F2> to Setup

Este mensaje puede producirse si el ordenador es desconectado durante el arranque del sistema.

Active el setup de BIOS y pase a la página de pantalla *Advanced*. En ésta, seleccione la opción de menú *Reset Configuration* y ajuste el valor *Yes*.

Memorice la modificación y salga del setup de BIOS. Arranque de nuevo el ordenador.

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.

### 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

System RAM Failed at offset: nnnn

Failing Bits: 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 - run configuration utility

Press <F1> to resume, <F2> to Setup

Questo messaggio può comparire se il computer è stato spento durante l'avvio del sistema.

Richiamate il Setup BIOS e passate alla pagina video *Advanced*. Qui selezionate il punto di menu *Reset Configuration* e modificate l'impostazione su *Yes*. Memorizzate la modifica ed uscite dal Setup BIOS. Avviate nuovamente il computer.

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.



### 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

Riavviate nuovamente il PC. 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

System RAM Failed at offset: nnnn

Failing Bits: 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

Korriger 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 - run configuration utility

Press <F1> to resume, <F2> to Setup

Om PCn stängdes av under systemstarten, kan detta felmeddelande uppträda.

Ropa upp *BIOS-Setup*-menyn och växla till bildskärmsidan *Advanced*. Välj där ut meny punkten *Reset Configuration* och ändra inställningen till *Yes*. Lagra ändringen och lämna *BIOS-Setup*-menyn. Starta PCn på nytt.

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

Starta upp PCn på nytt. 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 disktestation. Controleer de aansluitingen van het disktestation.

Extended RAM Failed at offset: nnnn

System RAM Failed at offset: nnnn

Failing Bits: 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 disktestation 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 - run configuration utility

Press <F1> to resume, <F2> to Setup

Als de computer tijdens het opstarten van het systeem werd uitgeschakeld, kan deze foutmelding zich voordoen.

Roep de BIOS-Setup op en ga naar de pagina *Advanced*. Kies daar het menupunt *Reset Configuration* en wijzig de instelling in *Yes*. Sla de wijziging op en verlaat de BIOS-Setup. Start de computer opnieuw.

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

Start de PC opnieuw. 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 setup van het *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.



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