AcerPower 8600

User’s Guide

AcerPower 8600 User's Guide
Part No.: 49.30C01.001
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Record the model number, serial number, purchase date, and place of purchase information in the space provided below. The serial number and model number are recorded on the label affixed to your computer. All correspondense concerning your unit should include the serial number, model number, and purchase information.

AcerPower 8600 User's Guide

Model Number :_____

Serial Number :_____

Purchase Date : _____

Place of Purchase : _____

Notices

FCC Notice

This device has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be determined by turning the device off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ❑ Reorient or relocate the receiving antenna
- ❑ Increase the separation between the device and receiver
- ❑ Connect the device into an outlet on a circuit different from that to which the receiver is connected
- ❑ Consult the dealer or an experienced radio/television technician for help

Notice: Shield Cables

All connections to other computing devices must be made using shielded cables to maintain compliance with FCC regulations.

Notice: Peripheral Devices

Only peripherals (input/output devices, terminals, printers, etc.) certified to comply with the Class B limits may be attached to this equipment. Operation with non certified peripherals is likely to result in interference to radio and TV reception.

Caution

Changes or modifications not expressly approved by the manufacturer could void the user's authority, which is granted by the Federal Communications Commission, to operate this computer.

Use Conditions

This part complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Notice: Canadian Users

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Remarque à l'intention des utilisateurs canadiens

Cet appareil numérique de la classe B respected toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Important Safety Instructions

Read these instructions carefully. Save these instructions for future reference.

1. Follow all warnings and instructions marked on the product.
2. Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
3. Do not use this product near water.
4. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
5. Slots and openings in the cabinet and the back or bottom are provided for ventilation; to ensure reliable operation of the product and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register, or in a built-in installation unless proper ventilation is provided.
6. This product should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
7. Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
8. If an extension cord is used with this product, make sure that the total ampere rating of the equipment plugged into the extension cord does not exceed the extension cord ampere rating. Also, make sure that the total rating of all products plugged into the wall outlet does not exceed the fuse rating.

9. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

10. Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage points or other risks. Refer all servicing to qualified service personnel.

11. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- **a.** When the power cord or plug is damaged or frayed
- **b.** If liquid has been spilled into the product
- **c.** If the product has been exposed to rain or water
- **d.** If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal condition.
- **e.** If the product has been dropped or the cabinet has been damaged
- **f.** If the product exhibits a distinct change in performance, indicating a need for service.

12. Replace the battery with the same type as the product's battery we recommend. Use of another battery may present a risk of fire or explosion. Refer battery replacement to a qualified serviceman.

13. Warning! Batteries may explode if not handled properly. Do not disassemble or dispose of them in fire. Keep them away from children and dispose of used batteries promptly.

14. Use only the proper type of power supply cord set (provided in your accessories box) for this unit. It should be a detachable type: UL listed/ CSA certified, type SPT-2, rated 7A 125V minimum, VDE approved or its equivalent. Maximum length is 15 feet (4.6 meters).

Year 2000 Compliance Statement

The AcerPower 8600 carries the "Hardware NSTL Tested Year 2000 Compliant" logo, which certifies that this model has been tested by NSTL using the YMark2000 test, and has been found to meet NSTL's standards for Year 2000 hardware compliance.

For more details, check the Acer Year 2000 Resource Center at http://www.acer.com.tw/service/y2k/

Laser Compliance Statement

The CD-ROM drive in this computer is a laser product. The CD-ROM drive's classification label (shown below) is located on the drive.

CLASS 1 LASER PRODUCT
CAUTION: INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.

APPAREIL A LASER DE CLASSE 1 PRODUIT
LASERATTENTION: RADIATION DU FAISCEAU LASER INVISIBLE EN CAS D'OUVERTURE. EVITTER TOUTE EXPOSITION AUX RAYONS.

LUOKAN 1 LASERLAITE LASER KLASSE 1
VORSICHT: UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET NICHT DEM STRAHLL AUSSETZEN

PRODUCTO LÁSER DE LA CLASE I
ADVERTENCIA: RADIACIÓN LÁSER INVISIBLE AL SER ABIERTO. EVITE EXPONERSE A LOS RAYOS.

ADVARSEL: LASERSTRÅLING VEDÅBNING SE IKKE IND I STRÅLEN.

VARO! LAVATTAESSA OLET ALTTINA LASERSÅTEILYLLE.
VARNING: LASERSTRÅLNING NÅR DENNA DEL ÅR ÖPPNAD ÅLÅ TUIJOTA SÅTEESEENSTIRRA EJ IN I STRÅLEN

VARNING: LASERSTRÅLNING NAR DENNA DEL ÅR ÖPPNADSTIRRA EJ IN I STRÅLEN

ADVARSEL: LASERSTRÅLING NAR DEKSEL ÅPNESSTIRR IKKE INN I STRÅLEN

Lithium Battery Statement

CAUTION
Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

ADVARSEL!
Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering. Udskiftning må kun ske med batteri af samme fabrikat og type. Léver 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
Explosionsfara vid felaktigt batteribyte. Anvãnd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren. Kassera anvãnt batteri enligt fabrikantens instruktion.

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

VORSICHT!
Explosionsgefahr bei unsachgemäßen Austausch der Batterie Ersatz nur durch denselben oder einem vom Hersteller empfohlenem ähnlichen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

Table of Contents

Getting Started

Chapter 1

This chapter gives you a general introduction of the system unit and tells you how to select a site and set up the system. It also includes a simple troubleshooting section to allow you to check your system before you ask for technical support.

Overview

The AcerPower 8600 is an all-in-one, high-performance system that supports the Intel Pentium III CPU. It utilizes the PCI (Peripheral Component Interface) and the AGP (Accelerated Graphics Port) bus designs. Both designs improve system performance, enabling the system to support various multimedia functions and applications.

Aside from the standard I/O (Input/Output) interfaces such as two serial ports, one parallel port, and PS/2 keyboard and mouse ports, the system also comes with two USB (Universal Serial Bus) ports, one mono Microphone-in port, one stereo Line-in port, one Line-out port, and one Game/MIDI (Musical Instrument Digital Interface) port. These additional ports are included to enable the system to accommodate additional peripherals.

The system may also come with an onboard AGP video controller, an interface for LCD, a TV out port, an onboard audio controller, an external fax/modem card and/or a network card. These additional features offer special functions that will enable you to take full advantage of the system. Special features such as hardware monitoring, USB, power management, video and audio functions are discussed in this manual.

Furthermore, this system is fully compatible with MS-DOS v6.X, OS/2, SCO UNIX, Windows 95/98 and Windows NT operating systems.

Preinstallation

The preinstallation process involves the following activities:

- ❑ Selecting a site
- ❑ Unpacking components

Selecting a Site

Consider the following when selecting a site for your computer:

- ❑ Determine the best site for your system. Cable paths should not run near equipment that might cause electromagnetic or radio frequency interference such as radio transmitters, televisions, copy machines, or heating and air-conditioning equipment.
- ❑ Route cables away from personnel and equipment traffic.
- ❑ Avoid dusty areas and extremes of temperature and humidity.

Unpacking Components

Unpack the contents of each box carefully. Save all packing materials in case you need to move or ship the system in the future.

Check that all items are present and in good condition. Contact your dealer immediately if anything is missing or damaged.

Features

The basic configuration consists of a system unit, a keyboard, a CD-ROM drive, a diskette drive, a fixed disk drive and a mouse.

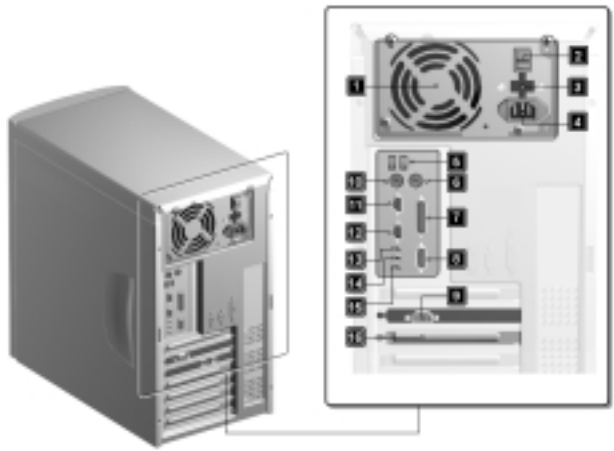
Front Panel

The figure below shows the system unit front panel.

No.	Component
1	Floppy disk drive
2	Floppy disk drive eject button
3	CD-ROM drive
4	Drive bay cover for additional 5.25-inch storage Device
5	Power button

Rear Panel

The figure below shows the system unit rear panel.

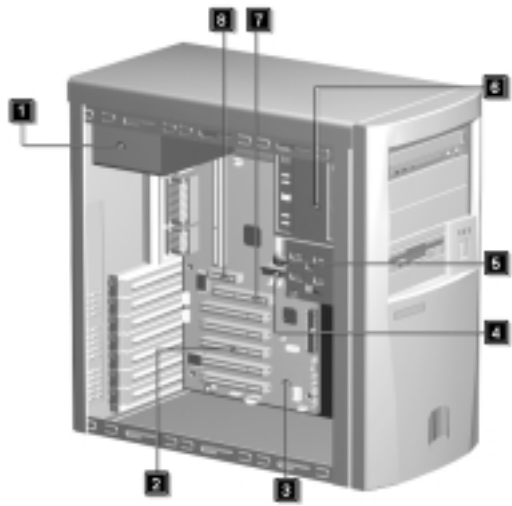


No.	Component
1	Fan
2	System main power switch
3	Voltage selector
4	System power socket
5	USB ports
6	PS/2 mouse port
7	Parallel port
8	Game/MIDI port

No.	Component
9	VGA/Monitor port
10	PS/2 keyboard port
11	Serial port 1
12	Serial port 2
13	Speaker-out/Line-out port
14	Line-in port
15	Microphone-in port
16	Add-on card brackets

Internal Components

The figure below shows the system unit internal components.



No.	Component
1	Power supply
2	PCI socket
3	System Board
4	Hard disk drive
5	Floppy disk drive
6	Metal bracket for additional hard disk drives
7	AGP slot
8	AMR slot

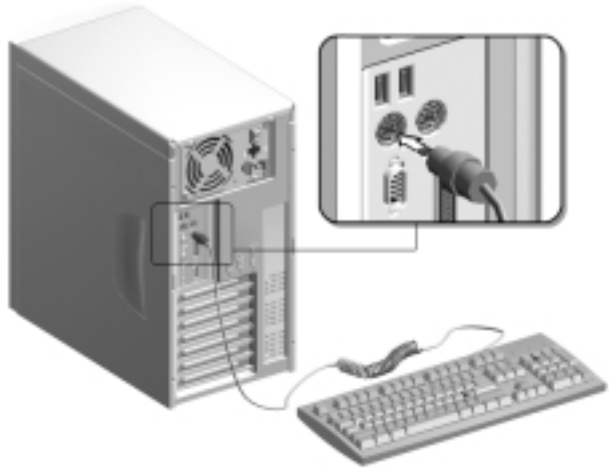
Connecting System Components

Caution: *Do not turn on the system main power switch on the rear panel of the system or plug the system in until you finish connecting all system components.*

The following sections show how to connect each component to the system:

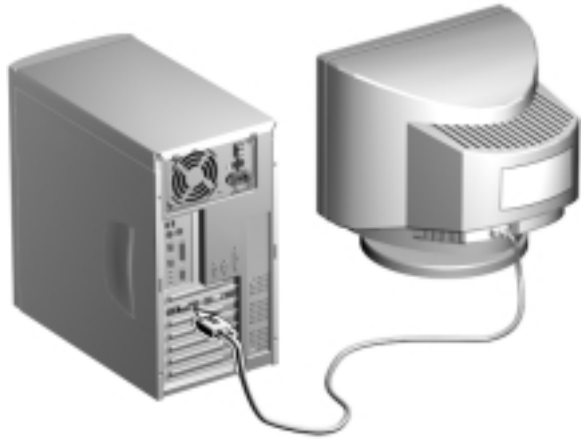
Connecting the Keyboard

Plug the keyboard cable into the keyboard socket on the rear panel.



Connecting the Monitor

Plug the monitor signal cable into the VGA connector on the rear panel.

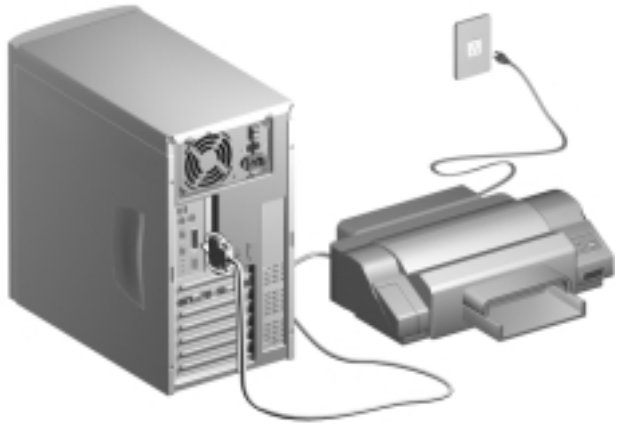


Connecting the Mouse

Plug the mouse cable into the mouse connector on the rear panel.

Connecting the Printer (optional)

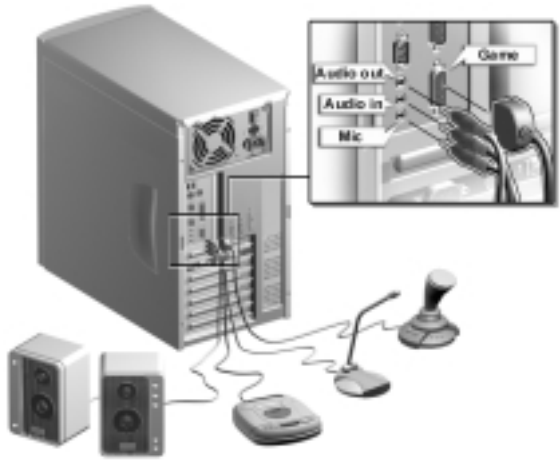
Check your printer before you connect it to your system. If you have a parallel printer, connect it to the parallel port on the rear panel.



If you have a serial printer or other serial peripheral, connect it to the serial port (COM2). See “Rear Panel” on page 6 for the location of the serial ports.

Connecting Multimedia Components

Your system also supports optional multimedia features. Connect the multimedia components as shown below:



Connecting to the Network (optional)

Your system may come with a LAN (Local Area Network) card for network connection. To connect your system to the network, plug the network cable into the card's network port.

Connecting USB Devices (optional)

The USB ports on the rear panel enable the system to support additional serial devices without using up your system resources.

To connect a USB device, simply plug the device cable into a USB port on the rear panel.

Note: *Most USB devices have a built-in USB port which allows you to daisy-chain other devices.*

Turning On Your Computer

After you have connected all peripherals and cables, follow these steps to turn on your computer:

1. Turn on all peripherals connected to the system such as the monitor, printer, fax, speakers, etc.
2. Locate the system main power switch on the back of the system and turn it on.

3. Press the power button located on the front of the system unit..

When the system finishes booting, the computer is now ready for use.

Turning Off Your Computer

1. Turn off all peripherals connected to the system such as the monitor, printer, fax, speakers, etc.
2. Press the power button located on the front of the system unit for at least four seconds. Quickly pressing the button puts the system in Suspend mode only.

Note: *You do not need to turn off the system main power switch on the rear panel every time you turn off your computer.*

Turn off the system main power switch only:
- if you will not use your system for a long period of time.
- if you need to open your system for any purpose, such as troubleshooting or upgrading.

If the system main power switch is not available, you must unplug the system.

Troubleshooting

If you encounter a hardware problem, we recommend you to review the following suggestions before calling for service:

General failure

- ❑ Are all cables securely plugged?
- ❑ Are all system components and peripherals turned on?
- ❑ Is the system main power switch on?
- ❑ Is the power outlet burned out? You may check this by plugging in and turning on some other piece of equipment.
- ❑ Are any cables damaged? Are they properly routed and coiled? Entwined cables may cause signal interference.

Front panel light doesn't work

- ❑ After turning off the computer, check inside the system unit and make sure that the front panel LED connector for the LED that is not working is correctly plugged. Refer to "Jumpers and Connectors" on page 31 to identify the proper LED connector.

"Garbage" or nothing appears on the screen

- ❑ Is the monitor turned on? Is the screen brightness adjusted properly?

Warning! *Never open the monitor case. The CRT monitor retains very high voltage levels even after the power is turned off. Refer all monitor service to qualified service technicians.*

Keyboard is dead

- ❑ Is the keyboard cable plugged in? Turn off the system and plug in the keyboard.

Caution: *Do not plug or unplug the keyboard while the power is on.*

Printer doesn't work

- ❑ Is the printer power turned off?

- ❑ Is the printer cable connected to the correct port (serial or parallel)?
- ❑ Are your application and the printer configured for the same operating values? Be sure there is no conflict with any port on the add-on card. For details, check the documentation that came with your printer.
- ❑ Is the printer out of paper or jammed? Check the printer's status indicator lights.
- ❑ Are the printer cables tangled? To prevent signal interference, neatly fold or coil excess cable length.

Add-on card fails intermittently

- ❑ Do two add-on cards have conflicting addresses? "PnP/PCI Options" on page 72 shows where you can see the addresses in the Setup Utility's Advanced Options. See "Entering Setup" on page 42 for instructions on entering the Advanced Level of the BIOS Utility.

If you receive an error message

- ❑ Read the corrective actions listed in "Error Messages" on page 20.

Error Messages

In the event that you receive an error message, do not continue using the computer. Note the message and take corrective action immediately. This section describes the different types of error messages and suggests corrective measures.

There are two general types of error messages:

- Software
- System

Software Error Messages

Software error messages are returned by your operating system or application. These messages typically appear after you boot the operating system or when you run your applications. If you receive this type of message, consult your application or operating system manual for help.

System Error Messages

A system error message indicates a problem with the computer itself. These messages normally appear during the power-on self-test, before the operating system prompt appears.

The table below lists the system error messages.

Error Message	Corrective Action
CMOS Battery Bad	Contact your dealer or an authorized service center.
CMOS Checksum Error	Contact your dealer or an authorized service center.
CPU Clock Mismatch	When the user changes the CPU frequency, this message will be shown once. Then the BIOS will adjust the CPU clock automatically.

Error Message	Corrective Action
Equipment Configuration Error	Run Setup and reconfigure the system.
Expansion ROM Allocation Fail	Contact your dealer or an authorized service center.
Floppy Disk Controller Error	Check the floppy drive cable and its connections. If the cable is good and properly connected, the floppy disk controller may be the problem. Change the floppy disk controller or disable the onboard controller by installing another add-on card with a controller.
Floppy Drive A Error Floppy Drive B Error	If there is a floppy disk in the drive, remove it. If there is no floppy disk in the drive, turn off the system and check the cable connections. If the connections are okay and the error message continues to show, replace the floppy drive.
Floppy Drive(s) Write Protected	Enter BIOS Setup and restore the setting to “Normal”.
Hard Disk Drive(s) Write Protected	Enter BIOS Setup and restore the setting to “Normal”..
IDE Drive 0 Error IDE Drive 1 Error IDE Drive 2 Error IDE Drive 3 Error	Check the HDD cable connections and IDE settings in CMOS Setup. Replace the disk drive or the HDD (hard disk drive) controller.
Insert system diskette and press <Enter> key to reboot	Insert a bootable disk in the diskette drive or remove this disk if a hard disk drive is installed.
I/O Parity Error	Contact your dealer or an authorized service center.

Error Message	Corrective Action
I/O Resource Conflict(s)	Try to reset resource assignments by going to Setup and under Advanced Options, go to PnP/PCI Options and set the Reset Resource Assignments to “Yes”.
IRQ Setting Error	Contact your dealer or an authorized service center.
Memory Error at MMMM:SSSS:OOOOh (R:xxxxh, W:xxxxh	Replace the RIMMs.
Memory Resource Conflict(s)	Try to reset resource assignments by going to Setup and under Advanced Options, go to PnP/PCI Options and set the Reset Resource Assignments to “Yes”.
Onboard Parallel Port Conflict	Change the onboard parallel port address in CMOS Setup or set the parallel port address of the add-on card to others.
Onboard Serial Port 1 Conflict(s) Onboard Serial Port 2 Conflict(s)	Change the onboard serial port address in Setup or change the add-on card serial port address.
Onboard XXX... Conflicts	Try to reassign or disable onboard device resources.
Press Ctrl_Alt_Esc key to enter Setup or F1 key to continue...	Press F1 to reconfigure the system.
Press ESC to turn off NMI, or any key to reboot	Press the “Esc” key to reject NMI error or press any other key to reboot the system.
PS/2 Keyboard Error or Keyboard Not Connected	Reconnect or replace the keyboard.

Error Message	Corrective Action
PS/2 Keyboard Interface Error	Contact your dealer or an authorized service center.
PS/2 Pointing Device Error	Reconnect or replace the pointing device.
PS/2 Pointing Device Interface Error	Contact your dealer or an authorized service center.
PS/2 Keyboard Locked	Unlock the keyboard.
RAM Parity Error	Replace the RIMM chips or disable parity check in Setup if the model supprots it.
Real-time Clock error	Contact your dealer or an authorized service center.
System Management Memory Bad	Replace the RIMM chips.

Correcting Error Conditions

As a general rule, the "Press F1 to continue" error message is caused by a configuration problem which can be easily corrected. An equipment malfunction is more likely to cause a fatal error, i.e., an error that causes complete system failure.

Here are some corrective measures for error conditions:

1. Run Setup. You must know the correct configuration values for your system before you enter Setup, which is why you should write these values down when the system is correctly configured. An incorrect Setup configuration is a major cause of power-on error messages, especially for a new system.

2. Remove the system cover according to the directions in the system housing installation guide. Check that the system board and any expansion boards are set correctly.

3. Check that all connectors and boards are secure. Consult the system housing installation guide for assistance.

If you have purchased a new hard disk drive and your computer cannot detect it or access it after installing it, it may be because your disk is not physically formatted. Physically format the disk using the FDISK and FORMAT commands.

Caution: *These commands are performed in DOS environment. We recommend that you familiarize yourself with the DOS commands first before you format your hard disk.*

If you follow the corrective steps above and still receive an error message, the cause may be an equipment malfunction.

If you are sure that your configuration values are correct and your battery is in good condition, the problem may lie in a damaged or defective chip. Contact an authorized service center for assistance.

Note: *If you do not know how to contact an authorized service center, call your distributor.*

System Board Information

Chapter 2

This system board is uniquely-designed to support not only the common features found in today's high-performance system boards, but the multimedia functions as well.

This chapter gives a detailed discussion of the board's components and features.

Features

This high-performance system board comes with the following components and features:

Components

- Intel Pentium III processor with 512-KB second-level cache running at 450, 500, 533, 600 and 667 MHz and up
- Two Rambus in-line memory modules (RIMM) sockets that accept 64-, 128-, 256- and 512-MB 184-pin RIMM (RIMM) modules, allowing memory upgrade of up to 1 GB
- On-board Peripheral Component Interface (PCI) master enhanced local bus IDE (Embedded in Intel ICH chipset)
- On-board Audio with AC' 97 2.1 compliant
- Two PCI enhanced IDE interfaces that support up to four IDE devices
- External ports
  - PS/2 keyboard and mouse ports
  - Two buffered high-speed serial ports
  - One parallel port that supports Standard Parallel Port (SPP)/Extended Capabilities Port (ECP)/Enhanced Parallel Port (EPP) modes
  - Two Universal Serial Bus (USB) ports
- Five PCI slots
- One AGP (Accelerated Graphic Port) slot
- One AMR (Audio/Modem Riser) slot (currently not available)

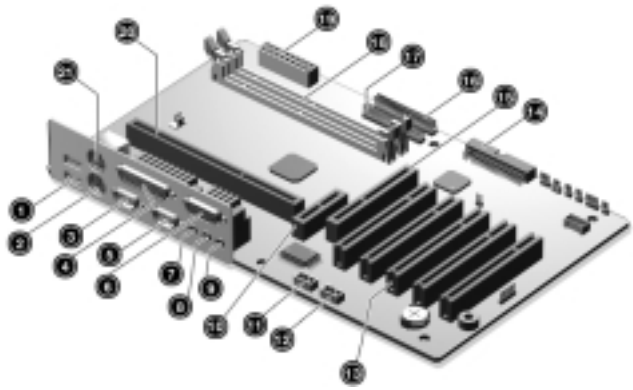
Features

- Plug-and-Play
- Desktop Management Interface (DMI) support
- Advanced Configuration and Power Interface (ACPI)-compliant BIOS
- Software Shutdown support for Windows 95/98

- ❑ Power Management
- ❑ USB support
- ❑ Hardware Monitoring

Board Layout

Your system board should look just like the following figure:



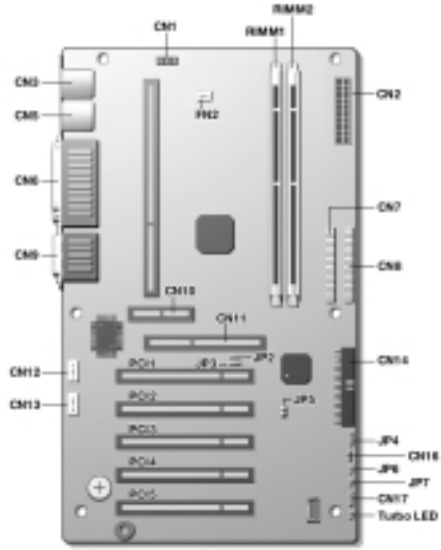
The following table lists the components that you will find on the system board:

No.	Component
1	USB ports
2	PS/2 keyboard port
3	Serial port 1
4	Parallel port
5	Serial port 2
6	Game/Midi port
7	Speaker-out/Line-out port
8	Line-in port

No.	Component
9	Microphone-in port
10	AMR socket
11	Voice modem connector
12	CD-in connector
13	PCI slots
14	Floppy disk drive connector
15	AGP socket
16	IDE 1 connector
17	IDE 2 connector
18	RIMM sockets
19	ATX power supply connector
20	CPU socket
21	PS/2 mouse port

Jumpers and Connectors

Refer to the following figure for the location of the jumpers and connectors on the system board:



The following table lists the onboard jumpers, their respective functions and possible settings:

Jumper	Function and Settings
JP2	Password Check 1-2 Check password 2-3 Bypass password (default)
JP3	Boot Block 1-2 Write disable (default) 2-3 Write enable
JP5	Intruder alert connector

The following table lists the onboard connectors and their respective functions:

Connector	Function
CN1	USB upgrade connector
CN2	ATX power connector
CN3	USB
CN5	Lower: Keyboard, Upper: Mouse
CN6	Lower left: Serial 1; Lower right: Serial 2; Upper: Parallel/Printer
CN7	IDE 2
CN8	IDE 1
CN9	Upper: game/MIDI; Lower right: line-out; Lower center: line-in; Lower left: microphone-in
CN10	Audio/Modem riser
CN11	AGP connector
CN12	Fax-voice modem
CN13	CD-in connector
CN14	Floppy disk connector
CN16	LAN PME
CN17	Hard disk LED connector
CN19	AOL connector
RIMM 1, 2	Memory module sockets
PCI 1, 2, 3, 4, 5	PCI expansion slots
FN2	3-pin CPU fan

Connector	Function
JP4	Power LED
JP5	Housing Intrusion conn.
JP6	Reset key
JP7	Power switch

Floppy Disk/Hard Disk Support

The board comes with an enhanced PCI IDE controller that supports PIO mode 4 and Ultra DMA (Direct Memory Access) mode data transfers. Two PCI IDE interfaces are mounted on the board to enable the system to support a maximum of four IDE hard disks, or any other IDE devices. See “Jumpers and Connectors” on page 31 for the location of the IDE interfaces.

Connect the cables according to the IDE hard disk configuration listed in the table below. Follow the instructions in the housing installation manual on how to install a hard disk in the system.

IDE Connector	Master	Slave
IDE 1 (CN8)	Hard disk 0	Hard disk 1
IDE 2 (CN7)	Hard disk 2/IDE CD-ROM	Hard disk 3

Video Function

The system board comes with a 3-D super AGP socket. The AGP bus architecture is considered to be the best solution for 3-D applications because its greater bandwidth is capable of speeding up the VGA bus to better meet the requirements of 3-D applications.

Audio Function

For its audio solution, the board comes with an ICH audio controller and the following ports (CN10):

- Mono microphone port
- Stereo line-in port
- Stereo line-out port
- Game/MIDI port

These connectors enable the system to accommodate external audio devices. For instructions on how to connect the external audio devices, see “Connecting Multimedia Components” on page 12.

USB Support

USB is a new serial bus design that is capable of cascading low and medium-speed peripherals (less than 12 Mbps) such as a keyboard, mouse, joystick, scanner, printer and modem/ISDN. With USB, complex cable connections at the back panel of your PC can be eliminated.

The board comes with two USB ports (CN3). See “Jumpers and Connectors” on page 31 for the location of the ports.

Hardware Monitoring Function

The Hardware Monitoring function allows you to check the system resources, either locally or in a computer network, by using software such as ASM Pro Suite. This is a desktop management program that offers SMART (System Monitoring Analysis and Reporting Technology) for checking local or network connected systems. In addition, it also enables the PC hardware and applications to be OS (operating system) independent.

To enable the Hardware Monitoring function, you need to install ASM Pro Suite. Contact your dealer for information on the availability of the software. Refer to the software documentation for more details on the Hardware Monitoring function.

BIOS Information

Chapter 3

This chapter contains detailed discussion about the BIOS utility. You will need this information for reconfiguring your system or for resetting your system back to its original settings in case you have reconfigured it improperly.

The BIOS Utility is a hardware configuration program built into your system's Basic Input/Output System (BIOS).

Since most systems are already properly configured and optimized, there is no need to run this utility. However, if you encounter configuration problems and get the "Run Setup" message, you will need to run this utility.

Before you run Setup, make sure that you have saved all open files. The system reboots immediately after you exit Setup.

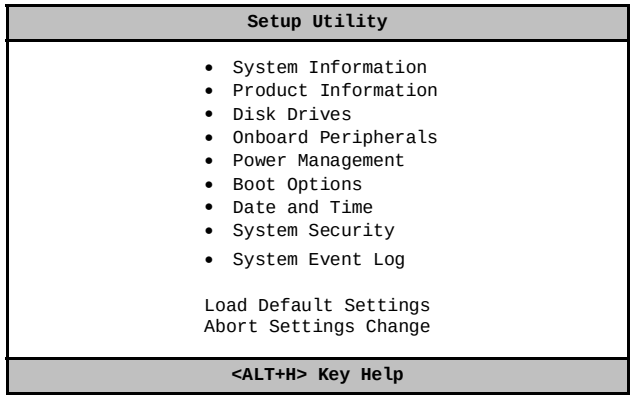
Note: *If you repeatedly receive Run Setup messages, the battery may be bad. In this case, the system cannot retain configuration values in CMOS. Ask a qualified technician for assistance.*

Entering Setup

To enter Setup, press the key combination **Ctrl-Alt-Esc** upon boot up.

Important! *You must press Ctrl-Alt-Esc simultaneously while the system is booting. This key combination does not work during any other time.*

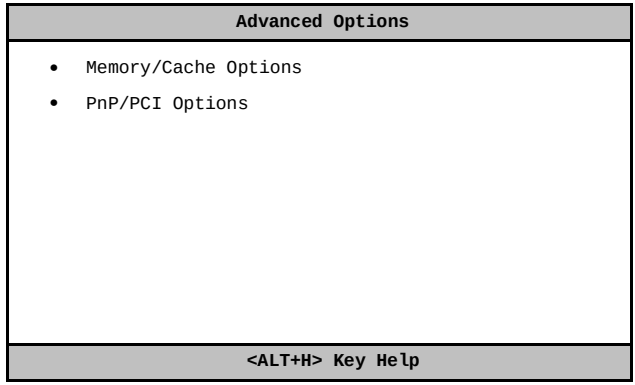
The “Setup Utility” main menu then appearsThe system supports two



BIOS Utility levels: Basic and Advanced. The above screen is the BIOS Utility Basic Level screen. It allows you to view and change only the basic configuration of your system.

If you are an advanced user, you may want to check the detailed configuration of your system. Detailed system configurations are contained in the Advanced Level. To view the Advanced Level, press the **F8** key.

The following screen shows the “Setup Utility Advanced Options” main menu**Note:** The F8 key works only when you are in the main



menu. This means that you can activate the Advanced Level only when you are in the main menu.

The command line at the bottom of the menu tells you how to move within a screen and from one screen to another.

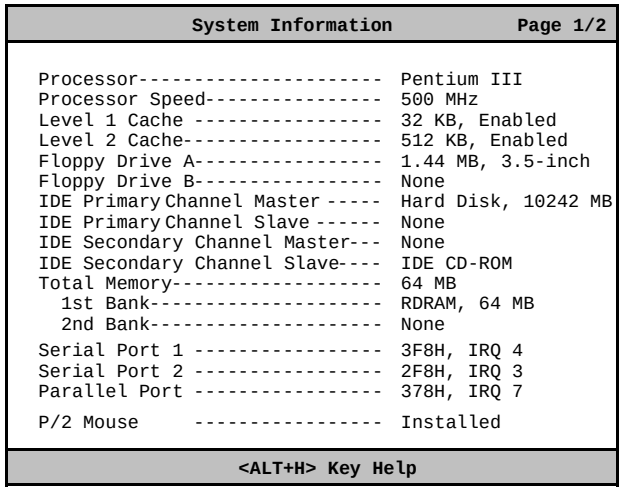
- ❑ To select an option, move the highlight bar by pressing ↓ or ↑ then press **Enter**.
- ❑ Press **PgDn** to move to the next page or **PgUp** to return to the previous page.
- ❑ To change a parameter setting, press ← or → until the desired setting is found.
- ❑ Press **Esc** to return to the main menu. If you are already in the main menu, press **Esc** again to exit Setup.

The parameters on the screens show default values. These values may not be the same as those in your system.

The grayed items on the screens have fixed settings and are not user-configurable.

System Information

The following screen appears if you select “System Information” from the main menu.



The following table describes each System Information parameter:

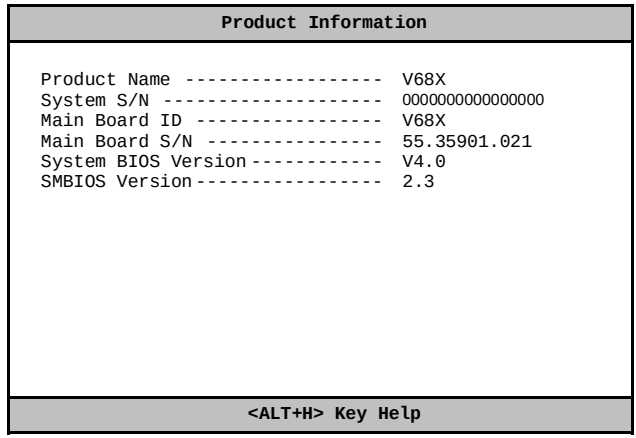
Parameter	Description	Format
Processor	Specifies the type of processor currently installed in your system.	
Processor Speed	Specifies the speed of the processor currently installed in your system.	Speed in MHz
Level 1 Cache	Specifies the first-level or the internal memory (i.e., the memory integrated into the CPU) size, and whether it is enabled or disabled.	Cache size in KB
Level 2 Cache	Specifies the second-level cache memory size currently supported by the system.	Cache size in KB

Parameter	Description	Format
Floppy Drive A	Shows the floppy drive A type.	Capacity, dimension
Floppy Drive B	Shows the floppy drive B type.	Capacity, dimension
IDE Primary Channel Master	Specifies the current configuration of the IDE device connected to the master port of the primary IDE channel.	Drive type, capacity
IDE Primary Channel Slave	Specifies the current configuration of the IDE device connected to the slave port of the primary IDE channel.	Drive type, capacity
IDE Secondary Channel Master	Specifies the current configuration of the IDE device connected to the master port of the secondary IDE channel.	Drive type, capacity
IDE Secondary Channel Slave	Specifies the current configuration of the IDE device connected to the slave port of the secondary IDE channel.	Drive type, capacity
Total Memory	Specifies the total amount of onboard memory. The memory size is automatically detected by BIOS during the POST. If you install additional memory, the system automatically adjusts this parameter to display the new memory size.	Memory size in MB

Parameter	Description	Format
1st Bank	Indicates the type of DRAM installed in the RIMM 1 socket. The None setting indicates that there is no DRAM installed.	RIMM type, capacity in MB
2nd Bank	Indicates the type of DRAM installed in the RIMM 2 socket. The None setting indicates that there is no DRAM installed.	RIMM type, capacity in MB
Serial Port 1	Shows the serial port 1 address and IRQ settings.	Address, IRQ
Serial Port 2	Shows the serial port 2 address and IRQ settings.	Address, IRQ
Parallel Port	Shows the parallel port address and IRQ settings.	Address, IRQ
PS/2 Mouse	Indicates if there is a mouse connected to your system. This is automatically detected by BIOS.	Displays Installed if there is a mouse detected; otherwise, it displays None.

Product Information

The screen below appears if you select “Product Information” from themain menu:



The Product Information menu contains general data about the system, such as the product name, serial number, BIOS version, etc. This information is necessary for troubleshooting (may be required when asking for technical support).

The following table describes the parameters found in this menu:

Parameter	Description
Product Name	Displays the model name of your system
System S/N	Displays your system’s serial number
Main Board ID	Displays the system board’s identification number
Main Board S/N	Displays your system board’s serial number
System BIOS Version	Specifies the version of your BIOS utility

Parameter	Description
SMBIOS Version	The System Management Interface (SM) BIOS allows you to check your system hardware components without actually opening your system. Hardware checking is done via software during start up. This parameter specifies the version of the SM BIOS utility installed in your system.

Disk Drives

Select “Disk Drives” from the main menu to configure the drives installed in your system.

The following screen shows the “Disk Drives” menu:The following

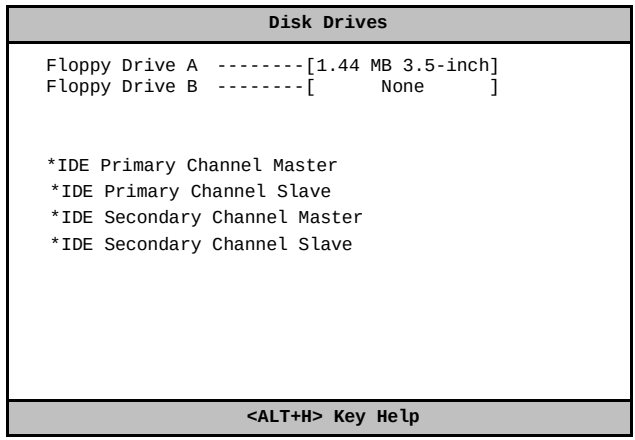
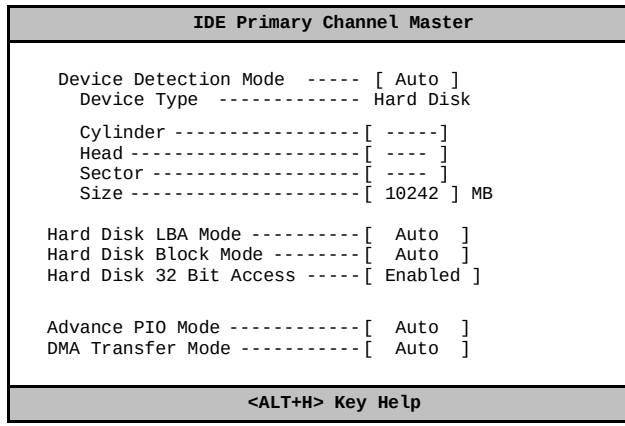


table describes the parameters found in this menu. Settings in **boldface** are the default and suggested settings.

Parameter	Description	Options
Floppy Drive A / B	Allows you to configure your floppy drive(s).	None 360 KB, 5.25-inch 1.2 MB, 5.25-inch 720 KB, 3.5-inch **1.44 MB, 3.5-inch** 2.88 MB, 3.5-inch
IDE Primary Channel Master	Allows you to configure the hard disk drive connected to the master port of IDE channel 1.	

Parameter	Description	Options
IDE Primary Channel Slave	Lets you configure the hard disk drive connected to the slave port of IDE channel 1.	
IDE Secondary Channel Master	Allows you to configure the hard disk drive connected to the master port of IDE channel 2.	
IDE Secondary Channel Slave	Lets you configure the hard disk drive connected to the slave port of IDE channel 2.	

The following screen appears if you press the **F8** key.



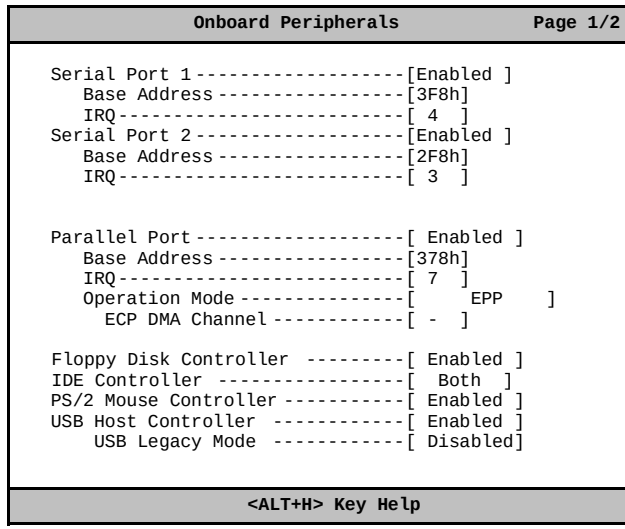
The following table describes the parameters found in these submenus. Settings in **boldface** are the default and suggested settings.

Parameter	Description	Options
Device Detection Mode	Lets you specify the type of hard disk installed in your system. If you want BIOS to automatically configure your hard disk, select Auto. If you know your hard disk type, you can enter the setting manually. Setting this parameter also sets the Cylinder, Head, Sector, and Size parameters.	**Auto,** None, or User. The User setting allows you to enter your settings manually if you know your hard disk type. The Auto setting also sets the Cylinder, Head, Sector, and Size parameters.
Device Type	Display the type of device installed.	
Cylinder	Specifies your hard disk's number of cylinders, and is automatically set depending on your Type parameter setting.	
Head	Specifies your hard disk's number of heads, and is automatically set depending on your Type parameter setting.	
Sector	Specifies your hard disk's number of sectors, and is automatically set depending on your Type parameter setting.	
Size	Specifies the size of your hard disk, in MB, and is automatically set depending on your type parameter setting.	
Hard Disk LBA Mode	Set to "Auto" under DOS and Windows. Set to "Disabled" under Novell Netware and Unix.	**Auto** or Disabled

Parameter	Description	Options
Hard Disk Block Mode	This function enhances disk performance depending on the hard disk in use. If you set this parameter to Auto, the BIOS utility automatically detects if the installed hard disk drive supports the Block Mode function. If supported, it allows data transfer in blocks (multiple sectors) at a rate of 256 bytes per cycle.	**Auto** or Disabled
Hard Disk 32 Bit Access	Enabling this parameter improves system performance by allowing the use of the 32-bit hard disk access. This enhanced IDE feature works only under DOS, Windows 3.x, Windows 95/98, Windows NT, and Novell NetWare.	**Enabled** or Disabled
Advanced PIO Mode	When set to Auto, the BIOS utility automatically detects if the installed hard disk supports the function. If supported, it allows for faster data recovery and read/write timing that reduces hard disk activity time. This results in better hard disk performance.	**Auto**, Mode 0, 1, 2, 3, or 4
DMA Transfer Mode	The Ultra DMA and Multi-DMA modes enhance hard disk performance by increasing the transfer rate. However, besides enabling these features in the BIOS Setup, both the Ultra DMA and Multi-DMA modes require the DMA driver to be loaded.	**Auto**, Multiword Mode 0, 1, 2, Ultra Mode 0, 1, 2, 3, 4 or Disabled

Onboard Peripherals

The “Onboard Peripherals” menu allows you to configure the onboard devices. Selecting this option from the main menu displays the following screen:The following table describes the parameters



found in this menu. Settings in **boldface** are the default and suggested settings.

Parameter	Description	Options
Serial Port 1	Let you enable or disable the serial port 1.	**Enabled** or Disabled
Base Address	Lets you set a logical base address for each serial port. This parameter is configurable only if the Serial Port parameter is enabled.	**3F8h**, 3E8h, 2E8h

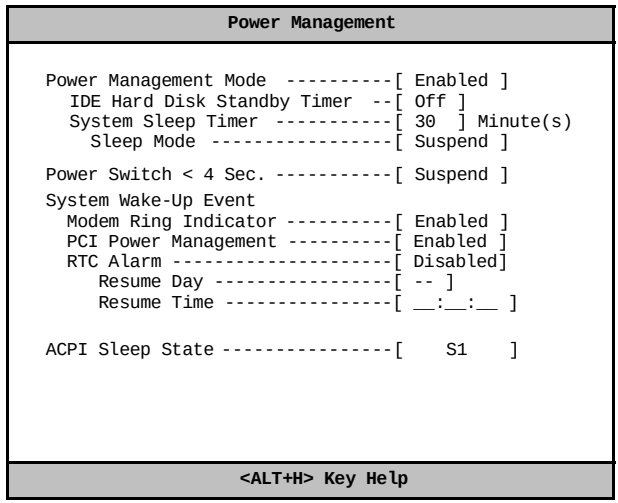
Parameter	Description	Options
IRQ	Lets you assign an interrupt for each serial port. This parameter is configurable only if the Serial Port parameter is enabled.	**4** or 11
Serial Port 2	Let you enable or disable the serial port 2.	**Enabled** or Disabled
Base Address	Lets you set a logical base address for each serial port. This parameter is configurable only if the Serial Port parameter is enabled.	**2F8h,** 3E8h, 2E8h
IRQ	Lets you assign an interrupt for each serial port. This parameter is configurable only if the Serial Port parameter is enabled.	**3** or 10
Parallel Port	Lets you enable or disable the parallel port.	**Enabled** or Disabled
Base Address	Lets you set a logical base address for the parallel port. This parameter is configurable only if the Parallel Port parameter is enabled.	**378h**, 278h
IRQ	Lets you assign an interrupt for the parallel port. This parameter is configurable only if the Parallel Port parameter is enabled.	5 or **7**

Parameter	Description	Options
Operation Mode	Lets you set your parallel port's operation mode. This parameter is configurable only if the Parallel Port parameter is enabled.	Standard Parallel Port (SPP), Bidirectional, **Enhanced Parallel Port (EPP)**, Extended Capabilities Port (ECP)
ECP DMA Channel	Allows you to assign a DMA channel for the ECP parallel port function. This parameter is configurable only if you select the Extended Capabilities Port (ECP) as the operation mode.	**1** or 3
Floppy Disk Controller	Lets you enable or disable the onboard floppy disk controller.	**Enabled** or Disabled
IDE Controller	Lets you enable or disable the onboard primary, secondary or both IDE interfaces.	Primary, **Both**, or Disabled
PS/2 Mouse Controller	Lets you enable or disable the onboard PS/2 mouse controller.	**Enabled** or Disabled
USB Host Controller	Lets you enable or disable the onboard USB host controller.	**Enabled** or Disabled
USB Legacy Mode	Lets you activate or deactivate the USB keyboard connected to your system. When activated, the USB keyboard functions in a DOS environment.	Enabled or **Disabled**

Power Management

The “Power Management” menu lets you configure the system power-management feature. It works only under APM mode.

The following screen shows the “Power Management” parameters and their default settings:The following table describes the parameters



found in this menu. Settings in **boldface** are the default and suggested settings.

Parameter	Description	Options
Power Management Mode	Allows you to reduce the system’s power consumption. When enabled, the IDE hard disk and system timers become configurable.	**Enabled** or Disabled
IDE Hard Disk Standby Timer	Allows the hard disk to enter Standby mode after inactivity of 1 to 15 minutes, depending on your setting.	1 to 15 minutes, or **Off**

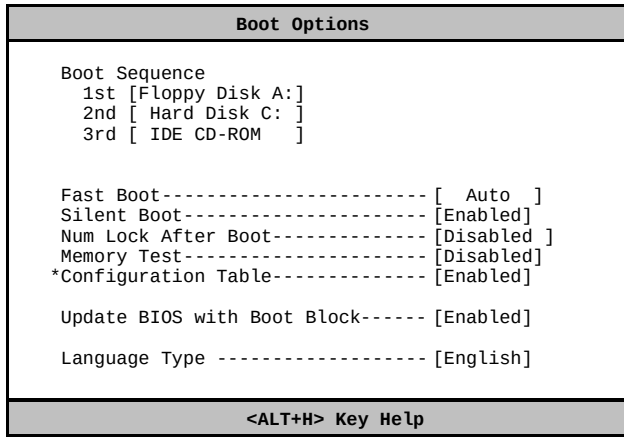
Parameter	Description	Options
System Sleep Timer	Automatically puts the system to power-saving mode after a specified period of inactivity. Any keyboard or mouse action, or any activity detected from the IRQ channels resumes system operation.	2, 5, 10, 15, 20, **30**, 40, 50...120 minutes, or Off
Sleep Mode	Lets you specify the power-saving mode that the system will enter after a specified period of inactivity. This parameter is configurable only if the System Sleep Timer is enabled.	Standby or **Suspend**
Power Switch < 4 sec.	Lets you specify whether to automatically turn off the machine or put the system to Suspend mode when the power switch is pressed for less than 4 seconds.	**Power Off** or Suspend
System Wake-up Event	Lets you specify the activity that will resume the system to normal operation.	
Modem Ring Indicator	Wakes the system from Sleep mode once any fax/modem activity is detected.	Enabled or **Disabled**
PCI Power Management	Allow the system to be awaken by PME function.	**Enabled** or Disabled
RTC Alarm	Set system wake up time.	Enabled or **Disabled**
Resume Day	If the RTC alarm is enabled, set date for the system to wake up.	Day 1-31

Parameter	Description	Options
Resume Time	If the RTC alarm is enabled, set time for the system to wake up.	00:00:00-23:59:59
ACPI Sleep State	If the ACPI sleep state is set to S1, all the components are working normally, only the CPU is in sleep state. When it is set to S3, only the system memory is working, the rest of the components are in sleep state.	**S1** or S3

Boot Options

This option allows you to specify your preferred settings for bootup.

The following screen appears if you select “Boot Options” from the main menu:



***Note**: The Configuration Table will only appear after pressing F8*

The following table describes the parameters found in this menu. Settings in **boldface** are the default and suggested settings.

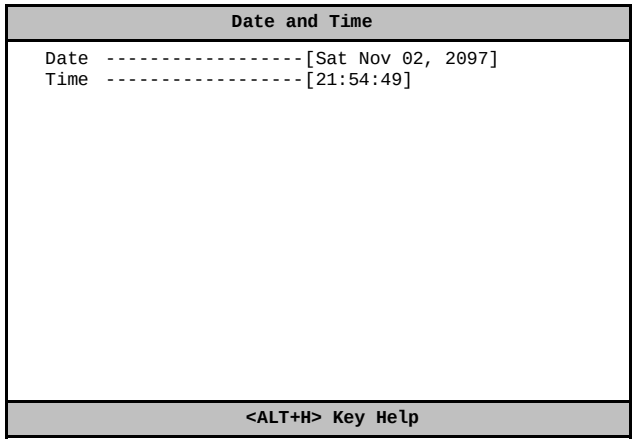
Parameter	Description	Options
Boot Sequence	Allows you to specify the boot search sequence.	**Floppy Disk**, Hard Disk, IDE CD-ROM, LANDesk (R) Service Agent

Parameter	Description	Options
Fast Boot	Allows you to define your system's booting process, whether to skip some POST routines or proceed with the normal booting process.	**Auto** or Disabled
Silent Boot	When enabled, BIOS is in graphical mode and displays only an identification logo during POST and while booting. Then, the screen displays the operating system prompt (as in DOS) or logo (as in Windows). If any error occurs while booting, the system automatically switches to the text mode. You may also switch to the text mode while booting by pressing **F9** after you hear a beep that indicates the activation of the keyboard.	**Enabled** or Disabled
Num Lock After Boot	Allows you to activate or deactivate the Num Lock function upon booting.	Enabled or **Disabled**
Memory Test	Lets you specify whether you want BIOS to perform or bypass the RAM test during POST.	Enabled or **Disabled**
Configuration Table	Display preboot system configuration table	**Enabled** or Disabled

Parameter	Description	Options
Update BIOS with Boot Block	Set this parameter to Enabled if you want to replace the existing BIOS in the Flash ROM. Then insert the floppy disk containing the new BIOS in the floppy drive. When you reset the system, it will automatically read the BIOS file contained in the floppy disk (i.e., the first file in the disk) and replace your current BIOS in the Flash ROM. If the update is successful, the system will automatically set this parameter to Disabled and shut down the system.	**Enabled** or Disabled
Language Type	Select a language type as a based language for showing messages.	**English** or Japanese

Date and Time

The following screen appears if you select the “Date and Time” option from the main menu:



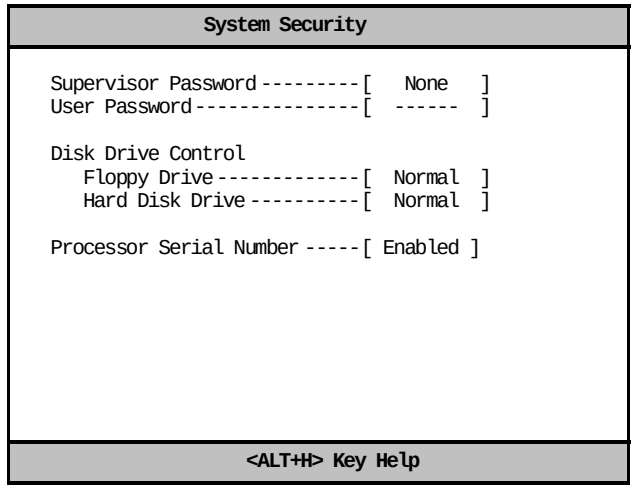
The following table describes the parameters found in this menu:

Parameter	Description	Options
Date	Lets you set the date following the weekday-month-day-year format.	Weekday: Sun, Mon, Tue, Wed, Thu, Fri, Sat Month: Jan, Feb...Dec Day: 1 to 31 Year: 1980 to 2079
Time	Lets you set the time following the hour-minute-second format.	Hour: 0 to 23 Minute: 0 to 59 Second: 0 to 59

System Security

The Setup program has a number of security features to prevent unauthorized access to the system and its data.

The following screen appears if you select “System Security” from the main menu:



The following table describes the parameters found in this menu. Settings in **boldface** are the default and suggested settings.

Parameter	Description	Options
Supervisor Password	Prevents unauthorized access to the BIOS utility.	**None** or Present. The Present setting allows you to set a Setup password. For instructions on how to set a Setup password, refer to “Setting a Password” on page 65.

Parameter	Description	Options
User Password	Secures your system against unauthorized use. Once you set this password, you have to type it whenever you boot the system.	**None** or Present. The Present settings allows you to set a Power-on password. For instructions on how to set a Power-on password, refer to “Setting a Password” on page 65.
Disk Drive Control	Allows you to protect your system’s floppy drive and hard disk data from being modified (possible under DOS mode only).	
Floppy Drive	Protects your floppy drive data from being modified.	**Normal**, Write Protect All Sectors, Write Protect Boot Sectors
Hard Disk Drive	Protects your hard disk data from being modified.	**Normal**, Write Protect All Sectors, Write Protect Boot Sectors
Processor Serial Number	Enable or disable the processor serial number (only if system have PIII CPU).	**Enabled** or Disabled

Setting a Password

1. Make sure that **JP2** is set to **2-3** (bypass password).

You cannot enter the BIOS utility if a Setup password does not exist and JP2 is set to 1-2 (password check enabled). By default, JP2 is set to 2-3 (bypass password).

2. Enter the BIOS utility and select "System Security".
3. Highlight the "Supervisor Password" parameter and press enter. The following screen appears:

```
                Supervisor Password

  Enter your Password Twice, Password
  maybe up to 7 characters long.

  Enter Password---------------- [        ]
  Enter Password Again---------- [        ]

  Set or Change Password
```

***Note**: You can enable the "User Password" only if the "Supervisor Password" is set.*

4. Type a password. The password may consist of up to seven characters. Then press **Enter**.

***Note:** Be very careful when typing your password because the characters do not appear on the screen.*

5. Retype the password then press **Enter**.
6. After setting the password, highlight the "Set or Change Password" option.
7. Press **Esc** to return to the System Security screen.
8. Press **Esc** to return to the main menu.
9. Press **Esc** to exit the BIOS utility. A dialog box appears asking if you want to save the CMOS data.

10. Select “Yes” to save the changes and reboot the system.
11. After rebooting, turn off the system then open the housing.

If you have set a Supervisor password, the next time you want to enter the BIOS utility, you must key-in your Supervisor password.

If you have set a User password, you must enter that password every time you boot your system.

Changing or Removing the Password

Should you want **to change one of your passwords**, do the following:

1. Enter the BIOS utility and select “System Security”.
2. Highlight the “Supervisor Password” parameter (for Supervisor password) or the “User Password” parameter (for User password if the Supervisor password is set). The Password menu appears.
3. From the Password menu, highlight the “Set or Change Password” option.
4. Enter a new password.
5. Press **Esc** to return to the System Security screen.
6. Press **Esc** to return to the main menu.
7. Press **Esc** to exit the BIOS utility. A dialog box appears asking if you want to save the CMOS data.
8. Select “Yes” to save the changes.

To remove the password, simply select the “Supervisor Password” parameter (for Supervisor password) or the “User Password” parameter (for User password if the Supervisor password is set) from the System Security menu and set it to “None”.

Bypassing the Password

If you forget your password, you can bypass the password security feature by hardware. Follow these steps to bypass the password:

1. Turn off and unplug the system.

2. Open the system housing and set **JP2** to **2-3** to bypass the password function.
3. Turn on the system and enter the BIOS utility. This time, the system does not require you to type in a password.

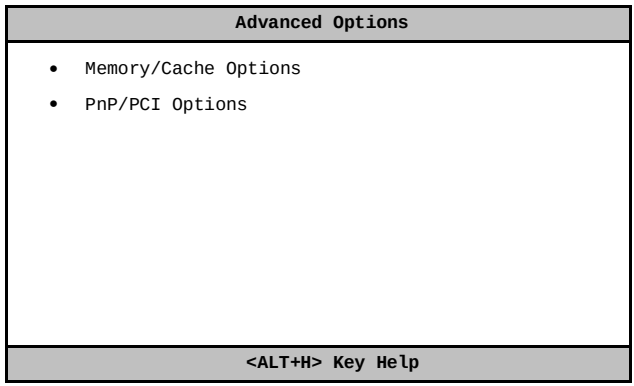
You can either change the existing password or remove it by selecting None. Refer to “Changing or Removing the Password” on page 66 for the procedure.

Advanced Options

Note: *The Advanced Options selection is available only in the Advanced Level.*

The “Advanced Options” menu allows you to configure the system memory and PCI device settings.

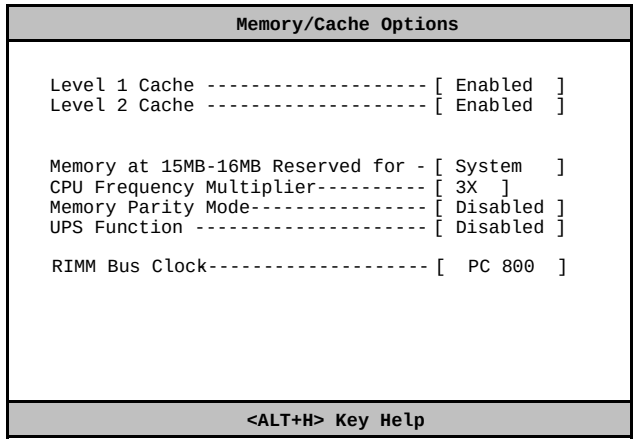
The following screen shows the Advanced Options parameters:



Caution: *Do not change any settings in the Advanced Options menu if you are not a qualified technician to avoid damaging the system.*

Memory/Cache Options

Selecting “Memory/Cache Options” from the Advanced Options menu displays the following screen:



This menu lets you configure the system memory.

The following table describes the parameters found in this submenu. Settings in **boldface** are the default and suggested settings.

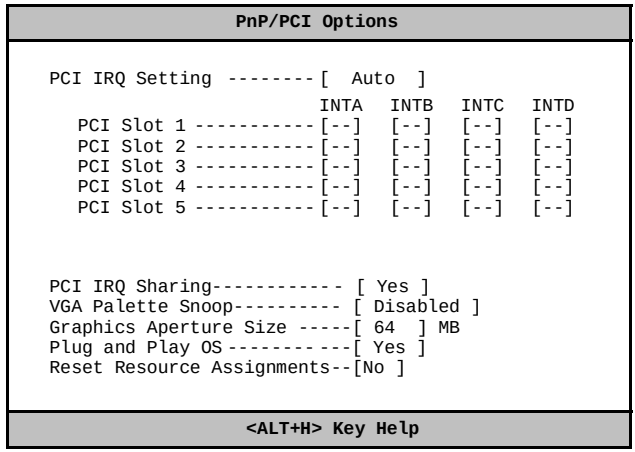
Parameter	Description	Options
Level 1 Cache (CPU Cache)	Lets you enable or disable the primary cache memory, i.e., the CPU memory.	**Enabled** or Disabled
Level 2 Cache	Lets you enable or disable the secondary cache memory.	**Enabled** or Disabled

Parameter	Description	Options
Memory at 15MB-16MB Reserved for	To prevent memory address conflicts between the system and expansion boards, reserve this memory range for the use of either the system or an expansion board. Some VGA cards have required settings for this feature. Check your VGA card manual before setting this parameter.	**System** or Add-on card
CPU Frequency Multiplier	If your processor is Pentium III, the system automatically set the CPU Frequency Multiplier. If your processor is Pentium II, then you have to the CPU Frequency Multiplier based on the processor speed. Ex. For PII 400 Mhz, the CPU Frequency Multiplier is set to 4X, for PII 450 Mhz is 4.5X.	**3X**, 3.5X, 4X, 4,5X, 5X, 5.5X, 6X, 6,5X
Memory Parity Mode	This parameter allows you to enable or disable the ECC (Error Checking and Correction) feature. The ECC feature enables BIOS to detect and correct data errors. Disable this parameter if you want to disregard the function.	Enabled or **Disabled**
UPS function	Enable you to restore your system back to the state before a power failure occur.	Enabled or **Disabled**

Parameter	Description	Options
RIMM Bus Clock	(PC 700, PC 800) 133 CPU Frequency (PC 600, PC 800) 100 CPU Frequency	

PnP/PCI Options

The "PnP/PCI Options" allows you to specify the settings for your PCI devices. Selecting this option displays the following screen:



The following table describes the parameters found in this submenu. Settings in **boldface** are the default and suggested settings.

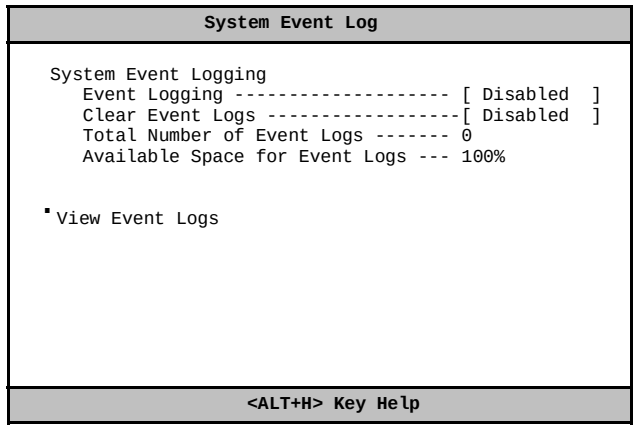
Parameter	Description	Options
PCI IRQ Setting	Allows you to automatically or manually configure the Plug-and-Play (PnP) devices installed in your system. Refer to your device manual for technical information about the PCI card.	**Auto** or Manual
PCI Slot 1/2/3/ 4/5	Allow you to manually assign an interrupt for each PCI device installed in your system. When the PCI IRQ Setting is set to Auto, BIOS automatically assigns the available IRQs to the PCI devices.	

Parameter	Description	Options
PCI IRQ Sharing	Allows you to assign the same IRQ to two different devices.	**Yes** or No
VGA Palette Snoop	Enables the palette snooping feature if you installed more than one VGA card in the system, allowing the control palette register (CPR) to manage and update the VGA RAM DAC (Digital Analog Converter, a color data storage) of each VGA card installed in the system. The snooping process lets the CPR send a signal to all the VGA cards so that they can update their individual RAM DACs. The signal goes through the cards continuously until all RAM DAC data has been updated. This allows the display of multiple images on the screen. Some VGA cards have required settings for this feature. Check your VGA card manual before setting this parameter.	Enabled or **Disabled**
Graphics Aperture Size	This parameter determines the effective size of the graphics aperture. Graphics aperture is the address range that the AGP video and the CPU use to manage graphical objects.	The lowest setting is 8 MB and the highest is 256 MB.
Plug and Play OS	Set it to Yes if the computer is running on Win95/98 or Win NT 5.0. For any other OS, set to No.	**Yes** or No

Parameter	Description	Options
Reset Resource Assignments	When enabled, avoids IRQ conflicts when installing non-PnP and PnP PCI cards. This clears all resource assignments and allows BIOS to reassign resources to all installed PnP devices the next time the system boots.	Yes or **No** After clearing the resource data, it is recommended that you reset the parameter to its default, i.e., No.

System Event Log

The “System Event Log” enables you to record and monitor events that occur in your system like excessive system temperature, fan stops, and others. This feature allows you to specify the appropriate settings for your system’s event handling. Selecting this option from the Main Menu displays the following screen:



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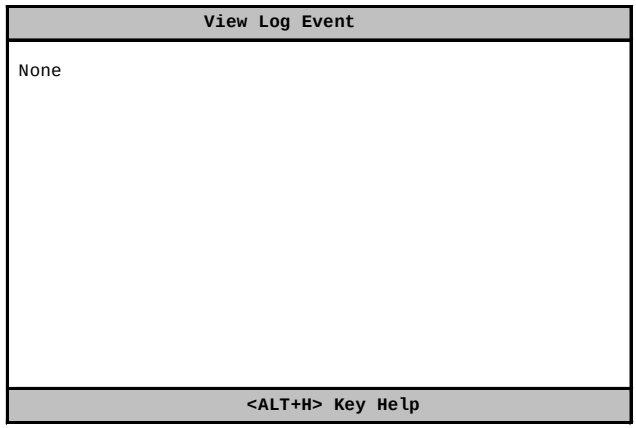
Parameter	Description	Options
System Event Logging	Allows you to record monitored events that occurs during the operation of your system.	
Total Number of Event Logs	The number of events currently logged in the event log area.	
Available Space for Event Logs	The percentage of space that is available for logging system events.	

Parameter	Description	Options
Event Logging	This parameter allows you to enable or disable the event logging function of your system.	**Enabled** or Disabled
Clear Event Logs	Allow you to clear the event logs.	Enabled or **Disabled**

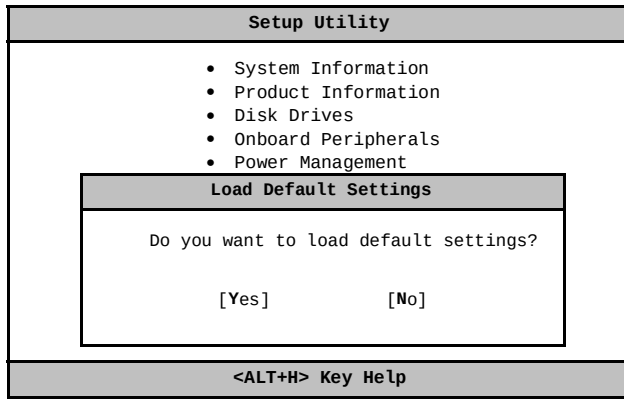
View Event Log

The “View Event Log” allows you to open the system event log file for viewing.



Load Default Settings

You need to reload the BIOS default settings every time you make changes to your system hardware configuration (such as memory size, CPU type, hard disk type, etc.); otherwise, BIOS will keep the previous CMOS settings. Selecting this option displays the following dialog box:

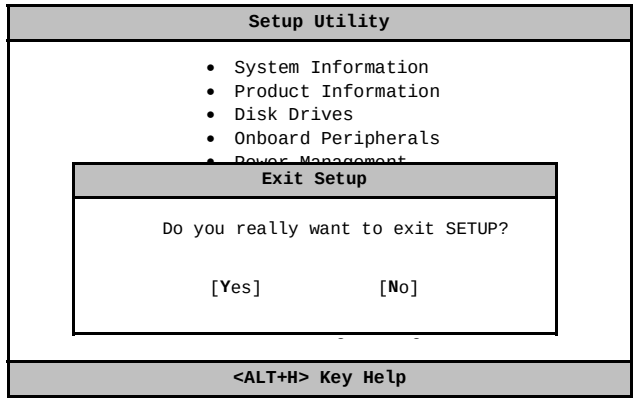


Choosing “Yes” enables BIOS to automatically detect the hardware changes that you have made in your system. This option also allows you to restore the default settings.

Choosing “No” returns you to the main menu without loading the default settings.

Abort Settings Change

Selecting the “Abort Settings Change” option from the main menu displays the following dialog box:

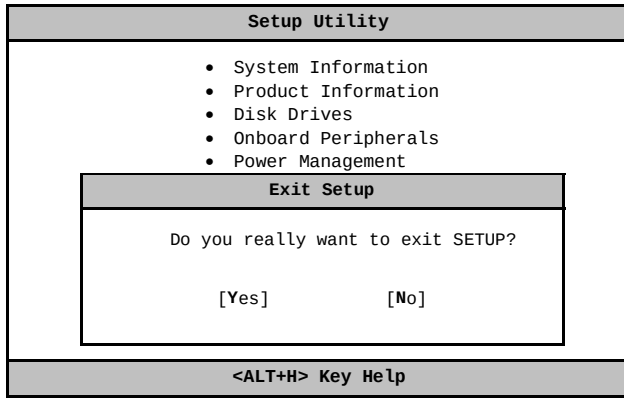


Choosing “Yes” discards all the changes that you have made and reverts the parameters to their previously saved settings.

Choosing “No” returns you to the main menu. BIOS retains all changes that you have made.

Exiting Setup

To exit the BIOS utility, simply press **Esc**. The following dialog box appears:



Select “Yes” to exit Setup. Select “No” to return to the main menu. If you have made changes in the parameter settings, you will be asked if you want to keep the changes made to the BIOS. Select “Yes” to save your changes before you exit Setup. Select “No” to discard all changes and exit Setup.

Upgrading the System

Chapter 4

This chapter tells you how to remove and replace the system housing, and to install optional components to upgrade the system. It gives brief and clear instructions accompanied by mechanical illustrations showing how to perform each described procedure.

Installation Precautions

Before you install any system component, we recommend that you read the following sections. These sections contain important ESD precautions, pre- and post-installation instructions.

ESD Precautions

Electrostatic discharge (ESD) can damage your processor, disk drives, expansion boards, and other components. Always observe the following precautions before you install a system component.

1. Do not remove a component from its protective packaging until you are ready to install it.
2. Wear a wrist grounding strap and attach it to a metal part of the system unit before handling components. If a wrist strap is not available, maintain contact with the system unit throughout any procedure requiring ESD protection.

Preinstallation Instructions

Always observe the following before you install a system component:

1. Turn off the system power and all the peripherals connected to the unit before opening it.
2. Open the system according to the instructions on page 85.
3. Follow the ESD precautions on page 83 before handling a system component.
4. Remove any expansion boards or peripherals that block access to the RIMM sockets or CPU connector.
5. See the following sections for specific instructions on the component you wish to install.

Warning! *Not turning off the system properly before you start installing the components may damage your system.*

Do not attempt the procedures described in the following sections unless you are a qualified service technician.

Post-installation Instructions

Observe the following after installing a system component:

1. See to it that the components are installed according to the step-by-step instructions in their respective sections.
2. Make sure you have set all the required jumpers. See “Jumpers and Connectors” on page 31 for the correct jumper settings.
3. Replace any expansion boards or peripherals that you removed earlier.
4. Replace the system cover.
5. Connect the necessary cables and turn on the system.

Opening the System

Caution: Before you proceed, make sure that you have turned off the system and all peripherals connected to it. Read the preinstallation instructions on page 83.

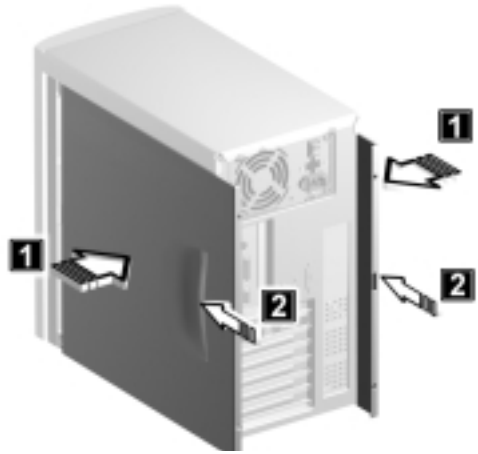
This section tells you how to open the housing cover when you need to install additional components inside the system unit.

Removing the Housing Cover

1. Turn off the system power and unplug all cables.
2. Place the system unit on a flat, steady surface.
3. Turn the screws counterclockwise to remove the cover. Set the screws aside. You will need them when replacing the housing cover.
4. Hold the sides of the cover with both hands and slide it back about an inch and tilt it out to remove the cover..

Replacing the Housing Cover

1. Hold the cover as shown and slide it back into place..



2. Replace the screws and turn it clockwise to secure the cover.

Installing Additional Memory

The system memory is upgradeable to a maximum of 1 GB via two 184-pin RIMM sockets on the system board. These RIMM sockets accept PC-600, 700 and 800 compliant RIMMs with 64-, 128-, 256- and 512-MB capacities. See “Board Layout” on page 29 for the location of the RIMM sockets. For instructions on how to install RIMMs, refer to “Installing a RIMM” on page 89.

The following table lists the possible memory configurations:

RIMM 1	RIMM 2	Total Memory
64 MB	C-RIMM	64 MB
128 MB	C-RIMM	128 MB
256 MB	C-RIMM	256 MB
512 MB	C-RIMM	512 MB
C-RIMM	64 MB	64 MB
C-RIMM	128 MB	128 MB
C-RIMM	256 MB	256 MB
C-RIMM	512 MB	512 MB
64 MB	64 MB	128 MB
64 MB	128 MB	192 MB
64 MB	256 MB	320 MB
64 MB	512 MB	576 MB
128 MB	64 MB	192 MB
128 MB	128 MB	256 MB
128 MB	256 MB	384 MB
128 MB	512 MB	640 MB

RIMM 1	RIMM 2	Total Memory
256 MB	64 MB	320 MB
256 MB	128 MB	384 MB
256 MB	256 MB	512 MB
256 MB	512 MB	768 MB
512 MB	512 MB	1024 MB or 1 GB

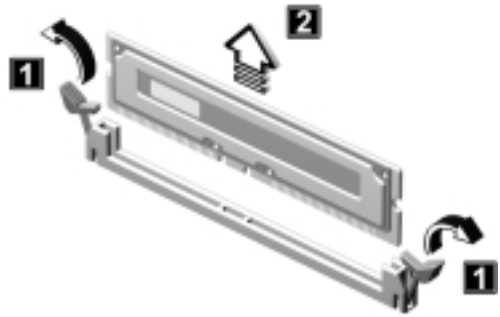
Installing a RIMM

1. Open the clips on the socket.
2. Align the RIMM with the socket.
3. Press the RIMM into the socket until the clips lock into the RIMM.

Note: *The RIMM socket is slotted to ensure proper installation. If you insert a RIMM but it does not fit easily into the socket, you may have inserted it incorrectly. Turn the RIMM around and try to insert it again.*

Removing a RIMM

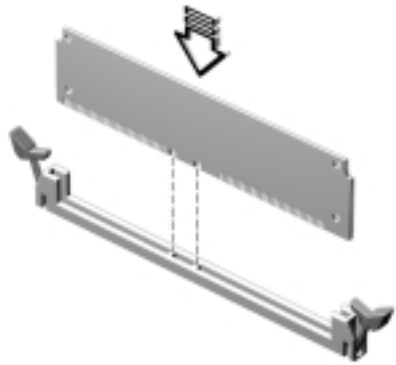
1. Press the holding clips on both sides of the socket outward to release the RIMM.
2. Gently pull the RIMM out of the socket.



Installing a C-RIMM

Note: The C-RIMM module is needed for the RIMM module to function properly, because the RIMM module only work in series.

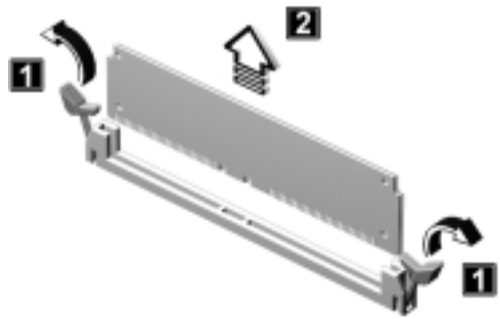
1. Open the clips on the socket.
2. Align the C-RIMM with the socket.
3. Press the C-RIMM into the socket until the clips lock into the C-RIMM.



Note: *The C-RIMM socket is slotted to ensure proper installation. If you insert a C-RIMM but it does not fit easily into the socket, you may have inserted it incorrectly. Turn the C-RIMM around and try to insert it again.*

Removing a C-RIMM

1. Press the holding clips on both sides of the socket outward to release the C-RIMM.
2. Gently pull the C-RIMM out of the socket.



Reconfiguring the System

The system automatically detects the amount of memory installed. Run Setup to view the new value for total system memory and make a note of it.

Upgrading the CPU

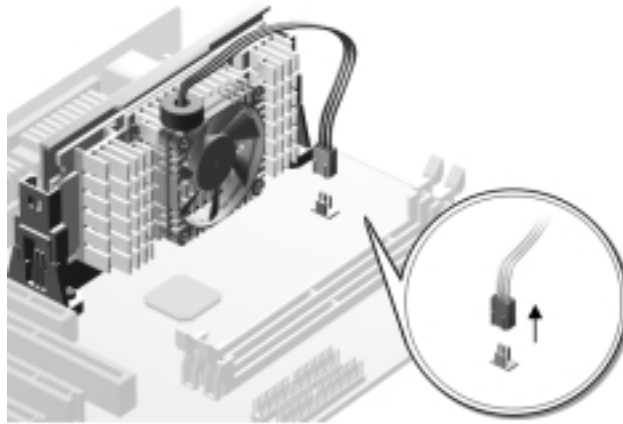
Removing the CPU

Note: *Observe the ESD precautions on page 83 when installing or removing a system component.*

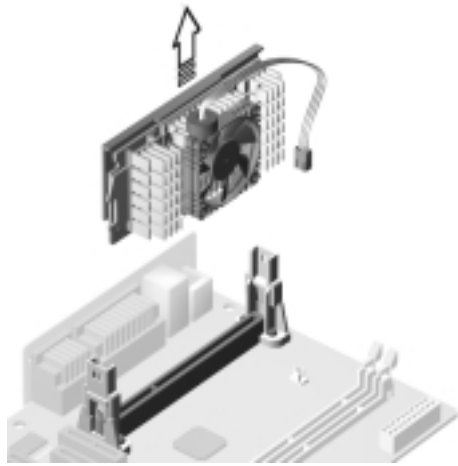
Before you can replace or upgrade your processor, you need to remove the previously installed processor on the system board.

Follow these steps to remove the CPU:

1. On the system board, locate the CPU mounted on the socket.
2. Detach the fan/heatsink cable connector.



3. Gently pull the CPU straight up from its socket.



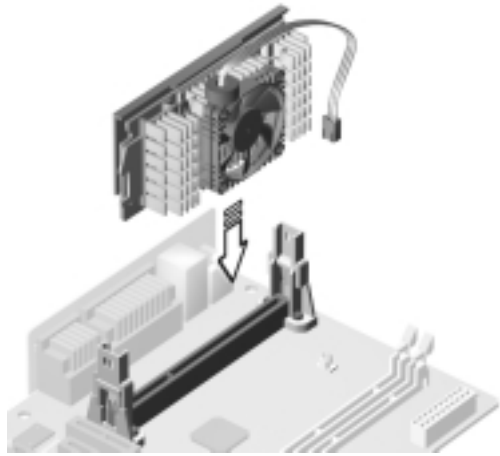
Installing the Upgrade CPU

Note: *Observe the ESD precautions on page 83 when installing or removing a system component.*

Before you proceed, make sure that there is no CPU installed in the CPU socket.

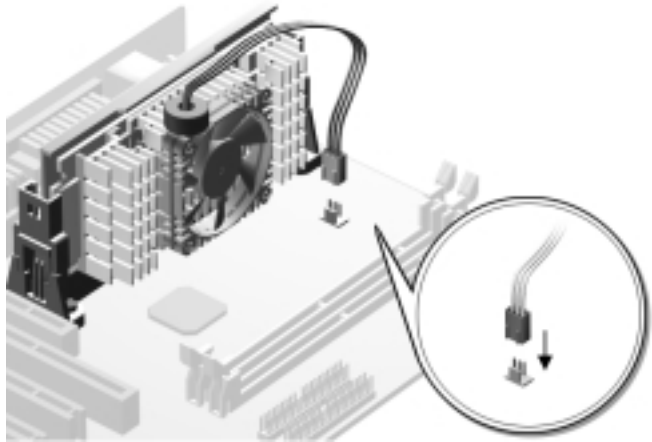
Follow these steps to install the upgrade CPU:

1. Insert the CPU as shown in the figure below.



2. Plug the fan/heatsink cable to the fan connector marked FN1 (for 2-pin connector) or FN2 (for 3-pin connector). See

“Jumpers and Connectors” on page 31 for the location of the connectors on the system board.

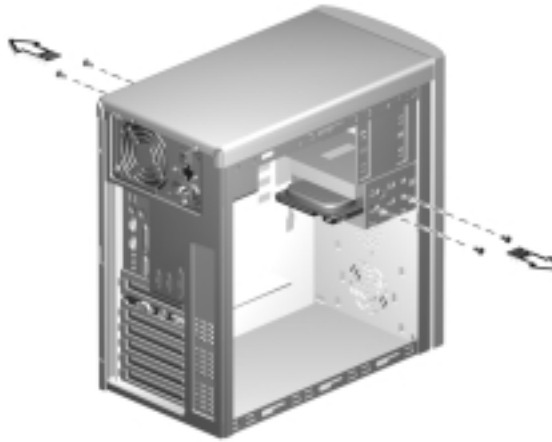


Warning! *The heatsink becomes very hot when the system is on. Never touch the heatsink with any metal or with your hands.*

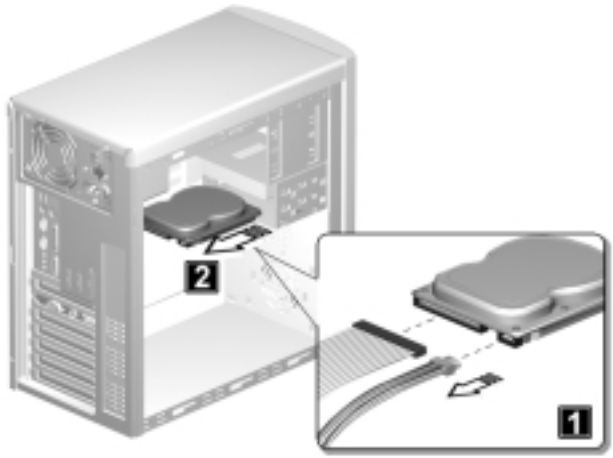
Replacing the Hard Disk

Follow these steps to replace the hard disk drive:

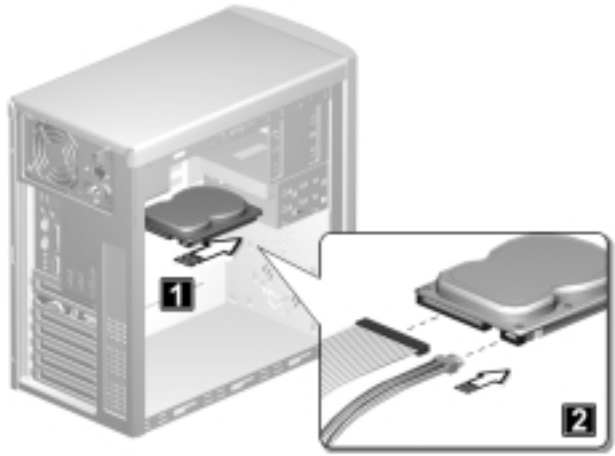
1. Remove the cover as shown on page 85.
2. Remove the four screws that hold the hard disk to the metal bracket frame.



3. Pull out the hard disk drive and remove the power cable and disk drive cable as shown below..



4. Install a new 3.5-inch hard disk drive and connect the disk drive cable and power cable



5. Secure the hard disk with the fours screws that you have removed previously..

6. Reinstall the housing cover as shown on page 86.

Make sure that the other ends of the diskette drive cables are securely connected to their corresponding connectors on the system board.

Installing and Removing a PCI Card

Installing a PCI Card

1. Locate an empty PCI slot on the system board.
2. Remove the bracket on the housing opposite the selected empty PCI slot.

3. Remove the PCI card from its protective packaging.
4. Align then insert the PCI card into the slot. Make sure that the card is properly seated.

5. Secure the card to the housing with a screw.
6. Reinstall the housing cover (see page 86).

When you turn on the system, BIOS automatically detects and assigns resources to the PCI devices.

Removing a PCI Card

To remove a PCI card, simply reverse the instructions listed under the "Installing a PCI Card" section.

Installing and Removing a AGP Card

Installing a AGP Card

1. Locate an empty AGP slot on the system board.
2. Remove the bracket on the housing opposite the selected empty AGP slot.

3. Remove the AGP card from its protective packaging.
4. Align then insert the AGP card into the slot. Make sure that the card is properly seated.

5. Secure the card to the housing with a screw.
6. Reinstall the housing cover (see page 86).

When you turn on the system, BIOS automatically detects and assigns resources to the AGP devices.

Removing a AGP Card

To remove a AGP card, simply reverse the instructions listed under the "Installing a AGP Card" section.

Index