AcerPower User's Guide

Minitower (M11E/IDCATX-2) System Manual

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IMPORTANT SAFETY INSTRUCTIONS

- 1. Read these instructions carefully. Save them for future reference.
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- 4. Do not use this product near water.
- 5. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
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- 7. 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.
- 8. This product is equipped with a 3-wire grounding-type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace the outlet. Do not defeat the purpose of the grounding-type plug.
- 9. Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
- 10. 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 15 amperes.
- 11. 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.
- 12. 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.
- 13. 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

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- 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
- 14. Replace battery with the same type as the product's battery as installed. Use of another battery may present a risk of fire or explosion. Refer battery replacement to a qualified service technician.
- 15. Warning! Battery may explode if not handled properly. Do not recharge, disassemble or dispose of in fire. Keep away from children and dispose of used battery promptly.
- 16. Use only the proper type of power supply cord set (provided in your keyboard/manual accessories box) for this unit. It should be a detachable type: UL listed/CSA certified, type SVT/SJT, rated 6A 125V minimum, VDE approved or its equivalent. Maximum length is 15 feet (4.6 meters).

FCC Class B Radio Frequency Interference Statement

Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment 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 equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

Notice 1:

The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Notice 2:

Shielded interface cables, if any, must be used in order to comply with the emission limits.

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Chapter 1 Introduction

Acer is on the leading edge of microcomputer systems development for both corporate and home computing needs, as the OEM of choice for many of the world's leading computer companies. Acer is committed to meeting the world's demand for state-of-the-art computers — at the best prices.

The AcerPower[™] family of personal computers provides the sheer power and speed to run demanding business, graphics and multimedia applications, and the reliability that makes your life easier. Each system is engineered with an eye to the next generation of more demanding applications, making the AcerPower a sound investment now and for the future.

About This Manual

This manual is divided into four chapters and an Appendix.

Chapter 1 System Board

Describes the system board and all its major components. It contains information about the system board layout, jumper and connector locations and functions, jumper settings, and memory configuration. It also describes how to install or remove a Pentium® II processor. At the end of the chapter, you will find an explanation of error messages and corresponding corrective measures.

Chapter 2 BIOS Utility

Describes the features and options of the system BIOS and tells how to configure the system by setting the BIOS parameters.

Chapter 3 System Housing

Describes the system housing and tells how to install basic system components into the housing. It gives brief instructions accompanied by illustrations showing how to perform the described procedure.

Chapter 4 Acer Manageability Software

Discusses the desktop manageability software bundled with your system: The Acer Resource CD, Acer CPR, the Acer Software Installer, McAfee® VirusScan® and Intel LANDesk® Client Manager.

The Acer Resource CD contains the bundled software that came with your system, along with the Acer CPR utility and the Acer Software Installer. Use Acer CPR to restore your computer to its original factory settings. Use the Acer Software Installer to install the bundled software that resides on the Acer Resource CD.

McAfee VirusScan's main features are described, as well as how to update VirusScan data files. Information about installing VirusScan is also included.

The Intel LANDesk® Client Manager section describes how to install/remove and use LANDesk® Client Manager.

Appendix A CD-ROM Drive

This appendix shows how to use your CD-ROM drive. Also included are illustrations of the front and rear panels, describing each feature.

Conventions

The following conventions are used in this manual:

a, e, s, etc.	Represents the actual keys that you have to press on the keyboard.
	NOTE Gives bits and pieces of additional information related to the current topic.
	WARNING Alerts you to any damage that might result from doing or not doing specific actions.
(İ)	CAUTION Suggests precautionary measures to avoid potential hardware or software problems.
	IMPORTANT Reminds you to take specific action relevant to the accomplishment of the procedure at hand.
	TIP Tells how to accomplish a procedure with minimum steps through little shortcuts.

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Chapter 1 System Board

1.1 Features

This high-performance system board supports the Intel Pentium II CPU running at 233 up to 450 MHz. Integrated with the Intel 440BX system controller, which consists of the PCI controller and the PCI/ISA IDE accelerator (PIIX4), the system combines the new generation of Pentium II power with unmatched graphics performance.

The system controller host bus interface supports a Pentium II processor with 66 or 100 MHz external front side bus frequency. It also provides support for ECC synchronous DRAM (SDRAM) 168 pin DIMMs.

The PIIX4 is a multifunction PCI device controller implementing system functions including PCI IDE and universal serial bus (USB) host/hub. It also supports Ultra DMA/33 synchronous DMA-compatible devices.

The system board utilizes both the ISA and the PCI local bus architecture. Two ISA, five PCI bus slots (including one PCI/ISA shared slot), and one AGP slot reside on the system board.

Three memory banks composed of 168-pin dual inline memory module (DIMM) sockets support a maximum system memory of 384 MB using 128-MB DIMMs.

The system board also supports the USB (Universal Serial Bus) interface, and other standard features such as two UART NS16C550 serial ports, one enhanced parallel port with an Enhanced Parallel Port (EPP)/Extended Capabilities Port (ECP) feature, a diskette drive interface, and two embedded hard disk interfaces.

1.2 Major Components

The system board has the following major components:

- A single edge contact (SEC) CPU connector that supports Pentium II processors running from 233 up to 450 MHz
- Three DIMM sockets that accept 16-, 32-, 64-, and 128-MB SDRAM DIMMs
- Two ISA, five PCI slots
- 256-KB Flash ROM for system BIOS
- Enhanced IDE hard disk and diskette drive interface
- System controller chipset
- External ports:
 - Two USB connectors
 - One SPP/ECP/EPP high speed parallel port
 - PS/2 keyboard and mouse ports
 - Two high speed serial ports



1.2.1 System Board Layout

- 1 PS/2 keyboard port
- 2 PS/2 mouse port
- 3 USB connectors
- 4 Serial port 2
- 5 Parallel port
- 6 Serial port 1
- 7 BIOS
- 8 ISA slots
- 9 PCI slots
- 10 AGP slot

- Battery
 Intel 82371EB
- 13 Primary IDE connector
- 14 Secondary IDE connector
- 15 FDD connector
- 16 Intel 440BX
- 17 DIMM sockets
- 18 Voltage regulators
- 19 CPU slot
- 20 Power connector

Figure 1-1 System Board Layout

1.3 Jumpers and Connectors

1.3.1 Jumper and Connector Locations

Figure 1-2 shows the jumper and connector locations on the system board.



Figure 1-2 Jumper and Connector Locations



In this figure, the blackened pin of a jumper or connector represents pin 1.

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1.3.2 Jumper Settings

Table 1-1 Jumper Settings

Jumper	Setting	Function
Password Security		
JP3	1-2	Check password
	2-3*	Bypass password
BIOS		
JP4	1-2*	Acer
	2-3	Reserved

1.3.3 Connector Functions

Table 1-2 lists the different connectors on the system board and their respective functions.

Table 1-2 Connector Functio

Connector	Function
CN1	SPS S/W Control
CN2	CPU thermal sensor connector
CN3	CPU fan connector
CN5	Power connector
CN6	Floppy disk connector
CN7	USB connectors
CN8	COM2 (lower left), COM1 (lower right), and Parallel port (above)

connector	Function
CN9	Upper: PS/2 mouse connector Lower: PS/2 keyboard connector
CN10	Enhanced IDE 2 connector
CN11	Enhanced IDE 1 connector
CN12	Hard disk LED connector
CN13	SCSI disk LED connector (for Combo Card)
CN15	Wake-on LAN connector
CN16	Power switch
CN19	Housing fan connector
CN20	Audio line-in connector
CN21	Modem Ring-in connector
CN22	Turbo LED connector
JP1	Power LED connector
JP2	System reset connector
JP5	Housing intrusion switch connector

 Table 1-2
 Connector Functions (continued)

1.4 Front Panel Connectors

The following figure shows the pin orientation of the front-panel connectors.



Figure 1-3 Front-Panel Connectors

1.5 Installing Components

The following sections describe how to install components into the system board, including how to install a Pentium II processor, and how to upgrade system memory.

Before beginning the installation, please take a moment to read the sections below. They contain important ESD precautions and pre- and post-installation instructions.

1.5.1 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 chassis throughout any procedure requiring ESD protection.

1.5.2 Pre-installation 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. Unplug the power cord from the unit.
- 2. Open the system according to the instructions in Chapter 3, System Housing.
- 3. Follow the ESD precautions in section 1.5.1 before handling a system component.
- 4. Remove any expansion boards or peripherals that block access to components you are installing.
- 5. See the following sections for specific instructions on the component you wish to install.

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

1.5.3 Post-installation Instructions

Observe the following procedures after installing a system component:

- 1. Check that the components are installed according to the instructions in their respective sections.
- 2. Make sure you have set all the required jumpers. See section 1.3 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.

1.6 Removing a Pentium II Processor



Observe the ESD precautions (section 1.5.1) when installing or removing a system component.

Follow these steps to remove the Pentium II CPU module from the slot.

- 1. Remove the fan connections. See Table 1-2.
- 2. Unlock the latches that secure the processor module.



Figure 1-4 Unlocking the Module Latches

2. Firmly hold the processor module and pull it out of the socket.



Figure 1-5 Removing the Pentium II Processor

1.7 Installing a Pentium II Processor



Observe the ESD precautions (section 1.5.1) when installing or removing a system component.

Follow these steps to install a Pentium II processor.

- 1. Remove the Pentium II processor from its protective packaging. Make sure that the latches on the sides of the module are not pressed.
- 2. With the processor card edge pointing downward, align the processor to the posts of the retention mechanism. The processor will only fit one way. Be sure to orient the processor **properly**.



The system settings are configured at the factory for the correct CPU frequency/Memory DIMM combination. If you upgrade the CPU frequency to 350, 400, or 450 MHz, the memory controller requires PC-100 DRAM DIMMs. Your system will not work properly if you use standard DIMMs with the higher speed CPUs. All of the installed DIMMs must have the same capabilities.



After upgrading the CPU you must run Setup (see section 2.1) and change the 'CPU multiple' parameter to the correct multiplier for your new CPU (see section 2.10.3).

- 3. Lower the processor into to the CPU connector on the system board until the card edge touches the connector.
- 4. Press down on the processor until the card edge completely fits into the connector and the latches on the sides lock the processor into place.
- 5. Plug the fan cable into the fan connector on the system board.



Figure 1-6 Installing a Pentium II Processor

1.8 Memory Upgrade

The three 168-pin sockets onboard support synchronous DRAM DIMMs. You may install 16, 32, 64, or 128-MB DIMMs for a maximum of 384-MB system memory. Each of the sockets represents one independent bank. This allows you to install DIMMs with different capacities in each bank.

1.8.1 Memory Configurations

Table 1-3 lists some system memory configurations. You can combine DIMMs with various capacities to form other combinations.

Bank 0	Bank 1	Bank 2	Total
			Memory
16 MB			16 MB
16 MB	16 MB		32 MB
16 MB	16 MB	16 MB	48 MB
32 MB			32 MB
32 MB	32 MB		64 MB
32 MB	32 MB	32 MB	96 MB
64 MB			64 MB
64 MB	64 MB		128 MB
64 MB	64 MB	64 MB	192 MB
128 MB			128 MB
128 MB	128 MB		256 MB
128 MB	128 MB	128 MB	384 MB

Table 1-3 Memory Configurations

1.8.2 Installing a DIMM

Follow these steps to install a DIMM:

- 1. Align pin 1 of the DIMM with pin 1 of the socket. Pin 1 is labeled 1 on both the DIMM and the socket.
- 2. Gently push the DIMM until the holding clips lock the DIMM into a vertical position.



Figure 1-7 Installing a DIMM



Be careful when inserting DIMMs. Forcing a DIMM in or out of a socket can damage the socket or the DIMM (or both).

1.8.3 Removing a DIMM

To remove a DIMM:

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



Figure 1-8 Removing a DIMM

1.8.4 Reconfiguring the System

Reconfigure the system after installing or removing DIMMs.

Follow these steps to reconfigure the system:

- 1. Reboot the system.
- 2. Press CTRL + ALT + ESC during the power-on self-test (POST) routine to run Setup. During POST, a memory error message may appear, indicating that the total memory does not match the value stored in CMOS.
- 3. Press ESC twice to exit Setup (see section 2.1) and reboot the system. The system boots with the new memory configuration.

1.9 Error Messages

Do not continue using the computer if you receive an error message of any type. Note the message and take corrective action. This section explains the different types of error messages and corresponding corrective measures.

There are two general types of error messages:

- Software
- System

1.9.1 Software Error Messages

Software error messages are returned by your operating system or application. These messages typically occur 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.

1.9.2 System Error Messages

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

Table 1-4 lists the system error messages.

Message	Action
CMOS Battery Error	Replace the CMOS battery.
CMOS Checksum Error	Run Setup (see section 2.1).
CPU BIOS Update Code Mismatch	Contact your dealer.
Diskette Drive Controller Error or Not Installed	Check and connect the control cable to the diskette controller.
Diskette Drive Error	Check the CMOS settings in Setup and the diskette drive cable connections.
Diskette Drive A Type Mismatch	Run Setup (see section 2.1) and select the proper drive type.
Diskette Drive B Type Mismatch	Run Setup (see section 2.1) and select the proper drive type.
Equipment Configuration Error	Modify DRAM configuration to agree with one of the options in Table 1-4.
Hard Disk Controller Error	Run Setup (see section 2.1).
Hard Disk 0 Error	Check all cable connections. Replace hard disk.
Hard Disk 1 Error	Check all cable connections. Replace hard disk.
Hard Disk 0 Extended Type Error	Run Setup (see section 2.1).
Hard Disk 1 Extended Type Error	Run Setup (see section 2.1).
I/O Parity Error	Contact your dealer.
Keyboard Error or No Keyboard Connected	Check and connect the keyboard to the system unit.
Keyboard Interface Error	Replace the keyboard or contact your dealer.

Message	Action
Memory Error at: MMMM:SSSS:OOO (W:XXXX, R:YYYY) where:	Check DIMMs on the system board. Contact your dealer.
M: MB, S: Segment, O: Offset, X/Y: write/read pattern	
Memory Size Mismatch CPU Clock Mismatch	Check the memory size and CPU clock speed installed in the system. If you are sure that the values are correct, ignore the message. If the message reappears, ask for technical assistance.
Onboard Serial Port 1 Conflict	Run Setup (see section 2.1) and disable the port.
Onboard Serial Port 2 Conflict	Run Setup (see section 2.1) and disable the port.
Onboard Parallel Port Conflict	Run Setup (see section 2.1) and disable the port.
Pointing Device Error	Check and connect pointing device.
Pointing Device Interface Error	Replace the pointing device or contact your dealer.
Press F1 key to continue or Ctrl-Alt-Esc for Setup	Press $F1$ or CTRL + ALT + ESC to enter Setup.
Real Time Clock Error	Run Setup (see section 2.1) and set the time and date.
Press Esc to turn off NMI, any key to reboot	Press ESC to disregard the NMI error.
	Press any other key to reboot.
Real-time Clock Error	Run Setup (see section 2.1).
1.9.3 Correcting Error Conditions

As a general rule, if an error message says "Press F1 to continue," it 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 (See section 2.1). You must know the correct configuration values for your system before you enter Setup, which is why you should write them down when the system is correctly configured. An incorrect configuration is a major cause of power-on error messages, especially for a new system.
- 2. Remove the system unit cover (See Chapter 3, System Housing). Check that the jumpers on the system board and any expansion boards are set correctly (see section 1.3 for system board jumper information).
- 3. Check that all connectors and boards are securely plugged in.

If you go through 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.

In either case, contact an authorized service center for assistance.

Chapter 2 BIOS Utility

Most systems are already configured by the manufacturer or the dealer. There is no need to run Setup when starting the computer unless you get a Run Setup message.

The Setup program loads configuration values into the battery-backed nonvolatile memory called CMOS RAM. This memory area is not part of the system RAM.



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.

2.1 Entering Setup

To enter Setup, press the key combination **CTRL**+**ALT**+**ESC**.



You must press CTRL + ALT + ESC while the system is booting. This key combination does not work any other time.

The Setup Utility Main Menu appears:

Setup Utility



* This option appears when you press the [F8] key.



The asterisk (*) mark indicates that the parameter appears only when you are in the Advanced Level.

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.

Use the **1** and **1** arrow keys to move around the Setup Utility screen.

Use the and arrow keys to change the values.

Use **FGDN** to move to the next page or **FGUP** to return to the previous page if the setup screen has more than one page available.

Press ESC to return to the Main menu.

The system supports two BIOS Utility levels: Basic and Advanced. 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 $\boxed{F8}$.

2.2 System Information

The following screen appears if you select System Information from the Main menu:

 System Information

 Processor
 Pentium II

 Processor Speed
 300 MHz

 Internal Cache Size
 32 KB, Enabled

 External Cache Size
 512 KB, Enabled

 Floppy Drive A
 1.44 MB, 3.5-inch

 Floppy Drive B
 None

 IDE Primary Channel Master
 Hard Disk, xxx MB

 IDE Secondary Channel Slave
 None

 IDE Secondary Channel Slave
 IDE CD-ROM

 Total Memory
 xxx MB

 1st Bank
 SDRAM, xxx MB

 2nd Bank
 None

The System Information menu shows the current basic configuration of your system.

The following screen shows page 2 of the System Information menu.

The following sections explain the parameters.

2.2.1 Processor

The Processor parameter specifies the type of processor currently installed in your system. The system supports Intel Pentium II processors.

2.2.2 Processor Speed

The Processor Speed parameter specifies the speed of the processor currently installed in your system. The system can support Pentium II processors running at 233, 266, 300, 333, 350, 400, and 450 MHz.

2.2.3 Internal Cache Size

This parameter specifies the first-level or the internal cache memory size (i.e., the memory integrated into the CPU)), and whether it is enabled or disabled.

2.2.4 External Cache

This parameter specifies the second-level cache memory size currently supported by the system. Cache size is 512 KB. For information on how to configure the system memory, see section 2.10.1

2.2.5 Floppy Drive A

This parameter specifies the system's current diskette drive A settings. For information on how to configure the floppy drives, see section 2.4.1.

2.2.6 Floppy Drive B

This parameter specifies the system's current diskette drive B settings. For information on how to configure the floppy drives, see section 2.4.1.

2.2.7 IDE Primary Channel Master

This parameter specifies the current configuration of the IDE device connected to the master port of the primary IDE channel. For information on how to configure the IDE drives, see section 2.4.2.

2.2.8 IDE Primary Channel Slave

This parameter specifies the current configuration of the IDE device connected to the slave port of the primary IDE channel. For information on how to configure the IDE drives, see section 2.4.2.

2.2.9 IDE Secondary Channel Master

This parameter specifies the current configuration of the IDE device connected to the master port of the secondary IDE channel. For information on how to configure the IDE drives, see section 2.4.2.

2.2.10 IDE Secondary Channel Slave

This parameter specifies the current configuration of the IDE device connected to the slave port of the secondary IDE channel. For information on how to configure the IDE drives, see section 2.4.2.

2.2.11 Total Memory

This parameter 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.

1st Bank/2nd Bank/3rd Bank

The 1st Bank, 2nd Bank, and 3rd Bank parameters indicate the type and size of DRAM installed in DIMM sockets 1, 2, and 3 respectively. The **None** setting indicates that there is no DRAM installed. For the location of the DIMM sockets, refer to Figure 1-1.

2.2.12 Serial Port 1

This parameter shows the serial port 1 address and IRQ setting.

2.2.13 Serial Port 2

This parameter shows the serial port 2 address and IRQ setting.

2.2.14 Parallel Port

This parameter shows the parallel port address and IRQ setting.

2.2.15 PS/2 Mouse

The BIOS utility automatically detects if there is a pointing device connected to your system. If there is, this parameter displays the **Installed** setting. Otherwise, this is set to **None.**

2.3 Product Information

The Product Information contains the 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 figure shows how the Product Information screen appears:

Product Information

Product NamexxxxxxxxxSystem S/NxxxxxxxxxMain Board IDM11EMain Board S/NxxxxxxxxxSystem BIOS Versionv3.1DMI BIOS Version2.00.1

2.3.1 Product Name

This parameter specifies the official name of the system.

2.3.2 System S/N

This parameter specifies the system's serial number.

2.3.3 Main Board ID

This parameter specifies the system board's identification number.

2.3.4 Main Board S/N

This parameter specifies the system board's serial number.

2.3.5 System BIOS Version

This parameter specifies the version of the BIOS utility.

2.3.6 DMI BIOS Version

This parameter specifies the DMI (Desktop Management Interface) BIOS version. DMI enables software to collect information about a computer environment.

2.4 Disk Drives

Select Disk Drives to input configuration values for disk drives.

The following screen shows the Disk Drives menu screen:

2.4.1 Floppy Drives

To enter the configuration value for the first floppy drive (drive A), highlight the Floppy Drive A parameter. Press \bigoplus or \bigoplus key to view the options and select the appropriate value.

Possible settings for the Floppy Drive parameters are:

- [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]

Follow the same procedure to configure floppy drive B. Choose **None** if you do not have a second floppy drive.

2.4.2 LS-120 Drive Compatible As

This parameter allows you not only to enable the LS-120 device installed in your system, but also to specify the function of the device. The setting affects how BIOS will detect the device. The default setting is **Normal**.

Possible settings are:

- Normal In this setting, BIOS does not support the LS-120 drive. The drive needs the LS-120 device driver to operate.
- Drive A BIOS recognizes the LS-120 drive as drive A. If a standard diskette drive A exists, BIOS automatically identifies it as drive B. If a standard diskette drive B exists, it automatically becomes inaccessible. If two LS-120 drives exist, BIOS recognizes them as drive A and drive B, respectively.
- **Drive B** BIOS recognizes the LS-120 drive as drive B. If a standard diskette drive B exists, it becomes inaccessible.
- **Hard Disk** BIOS recognizes the LS-120 drive as a hard disk. In this setting, format the LS-120 drive as any other hard disk and assign it a drive letter C, D, E, and so on. See the documentation that came with the LS-120 drive for more information.

2.4.3 IDE Drives

To configure the IDE drives connected to your system, select the parameter that represents the channel and port where the desired hard disk to configure is connected. The options are:

IDE Primary Channel Master

This parameter lets you configure the hard disk drive connected to the master port of IDE channel 1.

IDE Primary Channel Slave

This parameter lets you configure the hard disk drive connected to the slave port of IDE channel 1.

IDE Secondary Channel Master

This parameter lets you configure the hard disk drive connected to the master port of IDE channel 2.

IDE Secondary Channel Slave

This parameter lets you configure the hard disk drive connected to the slave port of IDE channel 2.

The following screen appears if you select any of the IDE Drive parameters:

IDE Primary/Secondary Channel Master/Slave Page 1/1 Type [Auto] Cylinder [XXXX] Head [XXXX] Sector [XXXX] Size [XXXX] MB Hard Disk Size > 504MB [Auto] *Hard Disk Block Mode [Auto] *Advanced PIO Mode [Auto] *Hard Disk 32-Bit Access [Enabled] *DMA Transfer Mode [Auto] *CD-ROM Drive DMA Mode [Disabled] $\uparrow \downarrow$ = Move Highlight Bar, \rightarrow \leftarrow = Change Setting, F1 = Help



The above parameters marked with (*) will only appear if you access the advanced configuration level in the Main Menu. Please refer to section 2.1 for more information.

Туре

This parameter 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. The default setting is Auto.

Cylinder

This parameter specifies the number of cylinders of your hard disk, and is automatically set depending on your Type parameter setting.

Head

This parameter specifies the number of heads of your hard disk, and is automatically set depending on your Type parameter setting.

Sector

This parameter specifies the number of sectors of your hard disk, and is automatically set depending on your Type parameter setting.

Size

This parameter specifies the size of your hard disk, in MB. This is automatically set depending on your Type parameter setting.

Enhanced IDE Features

Hard Disk Size > 504 MB

When set to **Auto**, the BIOS utility automatically detects if the installed hard disk supports the function. If supported, it allows you to use a hard disk with a capacity of more than 504 MB. This is made possible through the Logical Block Address (LBA) mode translation. However, this enhanced IDE feature works only under DOS and Windows 3.x, 9x environments. The default setting is **Auto**.

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 block (multiple sectors) at a rate of 256 bytes per cycle. To disregard the feature, change the setting to **Disabled.** The default setting is **Auto**.

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. To disregard the feature, change the setting to **Disabled**. The default setting is **Auto**.

Hard Disk 32-Bit Access

Enabling this parameter improves system performance by allowing the use of 32-bit hard disk access. This enhanced IDE feature works only under DOS, Windows 3.x, Windows 98, and Novell NetWare. If your software or hard disk does not support this function, set this parameter to **Disabled**. The default setting is **Enabled**.

DMA Transfer Mode

The Ultra DMA and Multi-DMA modes enhance hard disk performance by increasing the transfer rate. However, in addition to enabling these features in the BIOS Setup, both the Ultra DMA and Multi-DMA modes require the DMA driver to be loaded. By setting this parameter to **Auto**, BIOS automatically sets the appropriate DMA mode for your hard disk. The default setting is **Auto**.

CD-ROM Drive DMA Mode

Set this parameter to **Enabled** to enable the DMA mode for the CD-ROM drive. This improves system performance since it allows direct memory access to the CD-ROM. To deactivate the function, set the parameter to **Disabled**. The default setting is **Disabled**.

2.5 Onboard Peripherals

The Onboard Peripheral Configuration allows you to configure the onboard communication ports and the onboard devices. Selecting this option displays the following screen:

 Onboard Peripherals

 Serial Port 1
 [Enabled]

 Base Address
 [3F8h]

 IRQ
 [4]

 Serial Port 2
 [Enabled]

 Base Address
 [2F8h]

 IRQ
 [3]

 Parallel Port
 [Enabled]

 Base Address
 [378h]

 IRQ
 [7]

 Operation Mode
 [EPP]

 ECP DMA Channel
 [-]

 •Onboard Device Settings

2.5.1 Serial Ports 1 and 2

These parameters allow you to enable or disable serial ports 1 and 2.

Base Address

This function lets you set a logical base address for serial ports 1 and 2. The options are:

• 3F8h • 2F8h • 3E8h • 2E8h

IRQ

This function lets you assign an interrupt for serial ports 1 and 2. The options for serial ports 1 are IRQ 4 and 11. The options for serial port 2 are IRQ 3 and 10.



The Base Address and IRQ parameters for each port are configurable only if the port is enabled.

2.5.2 Parallel Port

This parameter allows you to enable or disable the parallel port.

Base Address

This function lets you set a logical base address for the parallel port. The options are:

• 3BCh • 378h • 278h

IRQ

This function lets you assign an interrupt for the parallel port. The options are IRQ **5** and **7**.



The Base Address and IRQ parameters are configurable only if Parallel Port is enabled.

If you install an add-on card that has a parallel port whose address conflicts with the onboard parallel port, a warning appears on the screen.

Check the parallel port address of the add-on card and change the address to one that does not conflict.

Operation Mode

This item allows you to set the operation mode of the parallel port. Table 2-1 lists the different operation modes.

Table 2-1	Parallel Port	Operation	Mode Settings
-----------	---------------	-----------	---------------

Setting Function

Table 2-1	Parallel Port	Operation	Mode	Settings
-----------	---------------	-----------	------	----------

Setting	Function
Standard Parallel Port (SPP)	Allows normal speed one-way operation
Standard and Bi- directional	Allows normal speed operation in a two-way mode
Enhanced Parallel Port (EPP)	Allows bi-directional parallel port operation at maximum speed
Extended Capabilities Port (ECP)	Allows parallel port to operate in bi- directional mode and at a speed higher than the maximum data transfer rate

ECP DMA Channel

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

2.5.3 Onboard Device Settings

The Onboard Device Settings menu allows you to configure the onboard communication ports and the onboard devices. Selecting this option from the Onboard Peripherals menu displays the following screen:

Onboard Device Settings

Floppy Disk Controller

This parameter lets you enable or disable the onboard floppy disk controller. The default setting is **Enabled**.

IDE Controller

Set this parameter to **Primary** to enable only the primary IDE controller; **Both** to enable both primary and secondary IDE controllers; or **Disabled** to disable all IDE controllers. The default setting is **Both**.

PS/2 Mouse Controller

This parameter enables or disables the onboard PS/2 mouse controller. The default setting is **Enabled**.

USB Host Controller

This parameter lets you enable or disable the USB controller on board. When enabled, it activates the USB function of the system. When disabled, it deactivates the function. The default setting is **Enabled**.

USB Legacy Mode

This function, when enabled, lets you use a USB keyboard in DOS. Set this to **Disabled** to deactivate the USB keyboard function in DOS. The default setting is **Disabled**.

SMBus Interrupt (IRQ9)

The System Management Bus (SMBus) is used to control and get information from devices on a motherboard. The system management software uses SMBus hardware and software interfaces to access the information about the devices attached to the SMBus. The default setting is **Disabled**.

2.6 Power Management

The Power Management menu allows you to configure the system power-management feature.

The following screen shows the Power Management parameters and their default settings:

Power Management
Power Management Mode[Enabled]
IDE Hard Disk Standby Timer[OFF]
System Sleep Timer[OFF]
Sleep Mode[OFF]
Power Switch < 4 sec.[Power Off]
System Wake-up Event
Modem Ring Indicator[Disabled]

2.6.1 Power Management Mode

This parameter allows you to reduce power consumption. When this parameter is set to **Enabled**, you can configure the IDE hard disk and system timers. Setting it to **Disabled** deactivates the power-management feature and its timers. The default setting is **Enabled**.

IDE Hard Disk Standby Timer

This parameter allows the hard disk to enter standby mode after inactivity of 1 to 15 minutes, depending on your setting. When you access the hard disk again, allow 3 to 5 seconds (depending on the hard disk) for the disk to return to normal speed. Set this parameter to **OFF** if your hard disk does not support this function. The default setting is **OFF**.

System Sleep Timer

This parameter sets the system to the lowest 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. The default setting is **OFF**.

Sleep Mode

This parameter lets you specify the power-saving mode that the system will enter after a specified period of inactivity. The options are **Standby** and **Suspend** modes.

This parameter becomes configurable only if the System Sleep Timer is enabled. Any keyboard or mouse action, or any enabled monitored activities occurring through the IRQ channels resume system operation.

2.6.2 Power Switch < 4 sec.

When set to **Power Off**, the system automatically turns off when the power switch is pressed for less than 4 seconds. When set to **Suspend**, the system enters the suspend mode when pressed for less than 4 seconds. The default setting is **Power Off**.

2.6.3 System Wake-up Event

The system wake-up event allows the system to resume operation when the modem ring indicator is enabled.

Modem Ring Indicator

When **Enabled** any fax/modem activity wakes up the system from suspend mode. The default setting is **Disabled**.

2.7 Boot Options

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

The following screen appears if you select Boot Options from the Basic Configuration menu:

Boot Options	
Boot Sequence 1 st [Floppy Disk] 2 nd [Hard Disk] 3 rd [IDE CD-ROM]	
First Hard Disk Drive Fast Boot Silent Boot Num Lock After Boot Memory Test *Configuration Table	<pre>[IDE][Disabled][Enabled][Enabled][Enabled][Enabled]</pre>



The above parameter marked with '*' will only appear if you access the Advanced Configuration level in the Main Menu. Please refer to section 2.1 for more information.

2.7.1 Boot Sequence

This parameter allows you to specify the boot search sequence during POST.

- 1st. The system checks this drive first.
- 2nd. The system then checks this drive if it can not boot from the 1st specified drive.
- 3rd. If the 1st and 2nd searches fail then it boots from this drive.

BIOS will display an error message if the drive(s) specified is not bootable.

2.7.2 First Hard Disk Drive

This parameter specifies whether the BIOS utility will boot from an EIDE hard disk drive or a SCSI hard disk drive. The system will automatically boot from an EIDE hard disk if your system does not have a SCSI hard disk drive. The default setting is **IDE**.

2.7.3 Fast Boot

This parameter allows the system to boot faster by skipping some POST routines. The default setting is **Disabled**.

2.7.4 Silent Boot

This parameter enables or disables the Silent Boot function. When set to **Enabled**, BIOS is in graphical mode and displays only an identification logo during POST and while booting. After booting the screen displays the operating system prompt (such as DOS) or logo (such as Windows 98). If any error occurs while booting, the system automatically switches to the text mode.

Even if your setting is **Enabled**, you may also switch to the text mode while booting by pressing $\boxed{F3}$ when you see the "Ctrl-Alt-Esc key to enter setup" message on the screen.

When set to **Disabled**, BIOS is in the conventional text mode where you see the system initialization details on the screen.

The default setting is **Disabled**.

2.7.5 Num Lock After Boot

This parameter allows you to activate the Num Lock function upon booting. The default setting is **Enabled**.

2.7.6 Memory Test

When set to **Enabled**, this parameter allows the system to perform a RAM test during the POST routine. When set to **Disabled**, the system detects only the memory size and bypasses the test routine. The default setting is **Disabled**.

2.7.7 Configuration Table

This parameter allows you to enable or disable the appearance of the configuration table after POST but before booting. The configuration table gives a summary of the hardware devices and settings that BIOS detected during POST. The default setting is **Enabled**.

2.8 Date and Time

The real-time clock keeps the system date and time. After setting the date and time, you do not need to enter them every time you turn on the system. As long as the internal battery remains good (approximately seven years) and connected, the clock continues to keep the date and time accurately even when the power is off.

Boot Options
Date[DDD, MMM xx, xxxx]
Time[HH:MM:SS]

2.8.1 Date

Highlight the items on the Date parameter and press \implies or \checkmark to set the date following the weekday-month-day-year format.

Valid values for weekday, month, day, and year are:

- Weekday Sun, Mon, Tue, Wed, Thu, Fri, Sat
- Month **1** to **12**
- Day 1 to 31
- Year **1980** to **2099**

2.8.2 Time

Highlight the items on the Time parameter and press \implies or \checkmark to set the time following the hour-minute-second format.

Valid values for hour, minute, and second are:

- Hour **00** to **23**
- Minute **00** to **59**
- Second **00** to **59**

2.9 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:

2.9.1 Setup Password

The Setup Password prevents unauthorized access to the BIOS utility.

To set or change a Password:

 Make sure that JP3 is set to 2-3 (bypass password). See Figure 1-2 for the location of JP3.



You cannot enter the BIOS utility if a Setup password does not exist and JP3 is set to 1-2 (password check enabled).

By default, JP3 is set to 2-3 (Bypass password).

3. Type a password in the Enter Password field. The password may consist of up to seven characters.



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

- 4. Press ENTER. Retype your password in the Enter Password again field to verify your first entry.
- 5. Highlight Set or Change Password and press ENTER
- 6. Press ESC to return to the System Security menu and then press ESC again to exit Setup. The Exit Setup screen appears:



7. Press **Yes** to save your settings and exit Setup Utility. Your password will be saved to CMOS.

For the password to take effect you must set jumper JP3 to 1-2 (Check password):

- 1. Turn off and unplug the computer.
- 2. Open the computer housing and set JP3 to 2-3 (Bypass password) to bypass the password function. See figure 1-2 for the location of JP3.
- 3. Close your computer's housing and reboot your system.

The next time you want to enter the BIOS utility, you must key in your Setup password.

To remove your Setup Password:

- 2. Press ESC to return to the System Security menu and then press ESC again to exit Setup. The Exit Setup screen appears:



3. Press **Yes** to save your settings and exit Setup Utility. Your previous password will be removed from CMOS.



Remember to set JP3 to 2-3 (Bypass password) because you won't be able to access Setup Utility if a password does not exist and JP3 is set to 1-2 (Check password). To set JP3 to 2-3 (Bypass password):

- 1. Turn off and unplug the computer.
- 2. Open the computer housing and set JP3 to 2-3 (Bypass password) to bypass the password function. See figure 1-2 for the location of JP3.
- 3. Close your computer's housing and reboot your system.

To bypass Setup Password:

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

- 1. Turn off and unplug the computer.
- 2. Open the computer housing and set JP3 to 2-3 (Bypass password) to bypass the password function. See figure 1-2 for the location of JP3.
- 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 Setup password or remove it by selecting None. Refer to the previous section for the procedure.

2.9.2 Power-on Password

The Power-on Password secures your system against unauthorized use. Once you set this password, you have to type it whenever you boot the system. To set this password, enter Setup Utility, select System Security, then highlight the Power-on Password parameter. Follow the same procedure as in setting the Setup password.



Make sure to set JP3 to 1-2 to enable the Power-on password.

Power-on Password

```
Enter your new Power-on Password twice. Power-on
Password may be up to 7 characters long.
Enter Password ..... [ ]
Enter Password again ..... [ ]
Set or Change Password
```

Operation Mode

This function lets you enable or disable the password prompt display. When set to **Normal**, the password prompt appears before system boot. When set to **Keyboard Lock**, the password prompt does not appear; however, your system will not respond to any keyboard or mouse input until you enter the correct password.

2.9.3Disk Drive Control

The disk drive control features allow you to control the floppy drive or the hard disk drive boot function to prevent loading operating systems or other programs from a certain drive while the other drives are operational (under DOS mode only).

Table 2-2 lists the drive control settings and their corresponding functions.

Floppy Drive	
Setting	Description
Normal (default)	Floppy drive functions normally
Write Protect All Sectors	Disables the write function on all sectors
Write Protect Boot Sector	Disables the write function only on the boot sector
Hard Disk Drive	
Huru Disk Drive	
Setting	Description
Setting Normal (default)	Description Hard disk drive functions normally
Setting Normal (default) Write Protect All Sectors	Description Hard disk drive functions normally Disables the write function on all sectors

Table 2-2 Drive Control Settings

2.10 Advanced Options



Advanced Option configuration is available only in the Advanced Level.

The Advanced Options configuration menu allows you to configure the system memory, PCI device settings, and CPU frequency. Press F8 to access the Advanced Options parameters.



To avoid damaging the system, do not change any settings in the Advanced Configuration unless you are a qualified technician.

The following screen shows the Advanced Options parameters.

Advanced Options

- Memory/Cache Options
- PnP/PCI Options
- CPU Frequency
2.10.1 Memory/Cache Options

The Memory/Cache Options allows you to configure the advanced system memory functions.

Memory/Cache Options

Internal Cache (CPU Cache)

This parameter enables or disables the first-level or internal memory, that is, the memory integrated into the CPU. The default setting is **Enabled**.

External Cache

This parameter enables or disables the external cache memory. The external cache is incorporated in the CPU module. The default setting is **Enabled**.

Cache Scheme

This parameter shows the cache scheme status only as **Write-back** mode. **Write-back** updates the cache but not the memory when there is a write instruction. It updates the memory only when there is an inconsistency between the cache and the memory

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. The default setting is **System**.

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. The default setting is **Disabled**.

2.10.2 PnP/PCI Options

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

PnP/PCI Options PCI IRQ Setting [Auto 1 INTA INTB INTC INTD PCI Slot 1[--] [--] [--] [--] PCI Slot 2[--] [--1 [--] [--] PCI Slot 3[--] [--] [--] [--] PCI Slot 4[--] [--] [--] [--] PCI Slot 5[--] [--] [--] [--] AGP[--] PCI IRQ Sharing [Yes] VGA Palette Snoop [Disabled] Graphics Aperture Size [64] MB Plug and Play OS [Yes] Reset Resource Assignments .. [No]

PCI IRQ Setting

Select **Auto** to let BIOS automatically configure the plug-and-play (PnP) devices installed on your system. Otherwise, select **Manual**. The default setting is **Auto**.



Refer to your PCI user's manual for any special requirements.

The onboard USB device will report or share the IRQ resource with PCI Slot 4.

PCI Slots

When you set the PCI IRQ Setting parameter to **Auto**, these parameters specify the autoassigned interrupt for each of the PCI devices. If you set the PCI IRQ Setting parameter to **Manual**, you need to specify the interrupt that you want to assign for each PCI device installed in your system.

AGP

This item shows the assigned interrupt for the onboard accelerated graphics port (AGP) controller.

PCI IRQ Sharing

Setting this parameter to **Yes** allows you to assign the same IRQ to two different devices. To disable the feature, select **No**. The default setting is **Yes**.



If there are no IRQs available to assign for the remaining device function, we recommend that you enable this parameter.

VGA Palette Snoop

This parameter permits you to use the palette snooping feature if you installed more than one VGA card in the system. The default setting is **Disabled**.

The VGA palette snoop function allows 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.

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. The default setting is **64 MB**.

Plug and Play OS

When this parameter is set to **Yes**, BIOS initializes only PnP boot devices such as SCSI cards. When set to **No**, BIOS initializes all PnP boot and non-boot devices such as sound cards. The default setting is **Yes**.

Reset Resource Assignments

Set this parameter to **Yes** to avoid IRQ conflict when installing non-PnP or PnP ISA cards. This clears all resource assignments and allows BIOS to reassign resources to all installed PnP devices the next time the system boots. After clearing the resource data, the parameter resets to **No**. The default setting is **No**.

2.10.3 CPU Frequency

This parameter displays your CPU's speed and bus frequency. It also allows you to specify the CPU frequency multiplier. Selecting this option displays the following screen:

```
CPU Frequency
Bus Frequency ..... [xx] MHz
CPU Multiple ..... [x]
Processor Speed ..... xxx MHz
```

Bus Frequency

The bus frequency refers to the speed by which data is transferred between internal computer components and the CPU or the main memory of the CPU. A fast bus allows data to be transferred faster, which allows applications to run faster.

CPU Multiple

This parameter sets the Core/bus ratio of your system. The clock speed of the bus does not necessarily equal the CPU's (core). This multiplier equals the CPU core frequency divided by the bus frequency.

Processor Speed

The processor speed is the speed at which a microprocessor executes instructions. Clock speeds are expressed in megahertz (MHz), with 1 MHz being equal to 1 million cycles per second. The faster the clock, the more instructions the CPU can execute per second.

2.11 Load Default Settings

Use this option to load the default settings for the optimized system configuration. When you load the default settings, some of the parameters are grayed-out with their fixed settings. These grayed parameters are not user-configurable.

The following dialog box appears when you select Load Default Settings from the main menu:



Select Yes to load the default settings.

Select No to ignore the message and return to the BIOS utility.

Abort Settings Change

The following dialog box appears when you select Abort Settings Change from the main menu:



Select Yes to abort changes.

Select No to ignore the message and return to the BIOS utility.

2.12 Exit Setup

Examine the system configuration values. When you are satisfied that all the values are correct, write them down. Store the recorded values in a safe place. In the future, if the battery loses power or the CMOS chip is damaged, you will know what values to enter when you rerun Setup.

Press ESC to leave Setup Utility. The following dialog box appears:

Exit Setup				
Do yo	u really wa	ant to exit Setup	?	
	[Yes]	[NO]		

Use the arrow keys to select your response. Press ENTER.

If you made any changes to the Setup Utility, the dialog box below is displayed.

Exit Setup	
Settings have been changed. Do you want to save CMOS settings?	
[Yes] [No]	

Use the arrow keys to select your response. Select **Yes** to save the changes in CMOS. Select **No** to retain the old configuration values. Press **ENTER** to exit.

Chapter 3 System Housing

This chapter tells you how to install the basic system components into the system housing. It gives brief instructions accompanied by mechanical illustrations showing how to perform each described procedure.

The illustrations in this chapter, except the front panel figure, do not show any installed components such as disk drives or expansion boards. This chapter describes the installation of these components.

The system that you receive may have some of these basic components already installed. In this case, you just have to add other items that you wish to install following the procedures in this chapter.



Turn off system power and unplug the power cord and all peripherals before opening the system or connecting or removing any peripheral device. Always turn on any external peripheral device before you turn on the system.



To avoid damaging the system, do not open the housing for service or upgrades, unless you are a qualified technician.

Before attempting the procedures described in this chapter, read the ESD precautions and pre- and post-installation instructions in section 1.5.

3.1 Front Panel



Figure 3-1 Front Panel



3.2 Rear Panel

- 1 Safety latch
- 2 Monitor power socket
- 3 Voltage selector

- 7 USB port 2
- 8 Universal Serial Bus (USB) port 1
- 9 COM2 port

- 4 Power socket
 5 Mouse connector
 10 Parallel port
 11 COM1 port
- 6 Keyboard connector

Figure 3-2 Rear Panel

3.3 Internal Components



- 1 Power supply
- 2 Expansion board brackets
- 3 Drive bays for 5.25-inch diskette drive or CD-ROM drive
- 4 Hard disk drive bay
- 5 Extra hard disk frame

Figure 3-3 Internal Components

3.4 Positioning the Housing



Arrange the legs so that the housing is secure in the standing position.



The housing has vents on both sides, with the left vent being the more important of the two. When standing the system with the vents facing a wall, leave a 2-inch space from the wall to allow air circulation. See Figure A.

To stand the housing with the vents facing out, place the system close to the wall and position the legs as in Figure B.

3.5 Component Installation



Make sure to turn off the power and unplug the power cord before installing or removing a system component.

3.5.1 Opening the Housing

Front Panel



- 1. Release the rear security latch to unlock the system housing.
- 2. Insert your hand in the opening under the front panel. Reach for the panel handle and press it to release the cover from the housing frame.
- 3. Pull the cover to detach completely from the frame.

3.5.2 Removing the Power Supply

Before you can install components into the housing, you must first remove the power supply. Follow these steps to remove the power supply:



1. Arrange the legs as shown in the figure and put the housing in a flat position.



2. Locate the power supply. Remove any attached power cables, remembering where they were located (refer to Figure 1-1). Remove the screw from the top rear of the chassis, then press the tab located on top of the housing frame just above the power supply.



3. Gently pull the power supply outward to detach it from the frame.

3.5.3 Installing a System Board

ESD Precautions

Always observe the following electrostatic discharge (ESD) precautions before installing a system component:

- 1. Do not remove a component from its anti-static packaging until you are ready to install it.
- 2. Wear a wrist grounding strap before handling electronic components. Wrist grounding straps are available at most electronic component stores.

3.5.4 Installation Procedures

The housing accepts ATX form-factor system boards. Follow these steps to install a system board:



Before you proceed, make sure that you have removed the power supply and that the housing is lying flat.



- 1. Align the board with the pegs on the housing frame.
- 2. Gently press the board until it is properly seated.
- 3. Secure the board with the required screws.

3.5.5 Reattaching the Power Supply



Before you reattach the power supply, make sure that you have installed the system board.



1. Connect the power supply cables into the onboard power connector.



The connectors are keyed; improper installation will damage the main board.



- 2. Reinstall the power supply into the housing frame. To reinstall, simply insert the frame tabs into the appropriate holes on the rear panel.
- **3**. Gently push the power supply towards the housing until the tab located on top of the power supply frame click into place. Then secure it with the screw. This secures the power supply into the housing frame.



4. Arrange the legs as shown above and return the housing into standing position.

3.5.6 Installing Expansion Boards



Observe the ESD Precautions before installing a system component.



- 1. Study the expansion board installation guide and configure any jumpers as directed.
- 2. Remove a bracket from any empty expansion slot. Save the screw to secure the new board. Keep the bracket for future use.



- 3. Gently insert the board into the expansion slot. Make sure that the board is properly inserted.
- 4. Secure the board with the screw.



Do not neglect this step. The board may use the screw for grounding.

3.5.7 Installing Drives



Observe the ESD Precautions before installing a system component.

Installing a 3.5-inch Diskette Drive

The system housing comes with a 3.5-inch diskette drive installed in the upper 3.5-inch diskette drive bay. However, you can install an additional 3.5-inch drive in the Hard disk drive\external device bay.

To install a 3.5-inch diskette drive in the external device bay:



1. Attach the 3.5-inch diskette drive to the 3.5-inch diskette drive frame with the necessary screws as shown below.



To install a 3.5-inch diskette drive in the hard disk drive/external device bay:



1. Detach the 3.5-inch diskette drive frames from the housing.



2. Detach the upper drive frame from the lower drive frame.



3. Attach the lower drive frame to the 3.5-inch diskette drive with the necessary screws.



4. Reattach the lower drive frame to the upper drive with 3.5-inch diskette drive.



5. Reinstall the drive frames with drive(s) to the housing.



6. Attach the power supply and drive cables. Make sure that the hard disk drive cable is connected to the IDE1 connector on the board.

Installing a CD-ROM Drive



- 1. Push in the middle upper drive bay cover on the front panel and fold it inside the frame.
- 2. Simply insert a CD-ROM drive into the drive bay. Secure the drive with the required screws.



3. Attach the power supply and the drive cables to the CD-ROM drive. Make sure that the other end of the CD-ROM drive cable is connected to the secondary IDE connector on the system board.

Installing a Hard Disk



1. Detach the 3.5-inch diskette drive frames from the housing.



2. Detach the upper drive frame from the lower drive frame.



3. Attach the lower drive frame to a hard disk with the necessary screws.



4. Reattach the lower drive frame to the upper drive with hard disk drive.



5. Reinstall the drive frames with drive(s) to the housing.



6. Attach the power supply and drive cables. Make sure that the hard disk drive cable is connected to the primary IDE connector on the system board if it is the primary system drive.

3.5.8 Installing Extra Hard Disks

The housing accommodates two extra hard disks. Follow these steps to install the extra hard disks.



1. Your housing comes with an extra hard disk frame. Attach the hard disks to the extra hard disk frame with the necessary screws.



Before you proceed with the installation of extra hard disks, make sure that you have installed the system board and the necessary expansion board(s).



- 2. Locate the slots on the rear and bottom side of the housing.
- 3. Insert the frame tabs into these slots, with the hard disk facing the system board inside the housing.
- 4. Secure the hard disk frame with a screw.

3.5.9 Reinstalling the Cover



After you install the necessary system components into the housing, you must reinstall the cover.

To install the cover:

- 1. Align the rear-end corners of the cover with the front corners of the housing frame.
- 2. Push the cover back until it clicks into place.
- 3. Pull the safety latch to the lock position to fully secure the housing.



Always first turn on any peripherals before you turn on the system.
Chapter 4 Acer Manageability Software

Your AcerPower system is bundled with Acer desktop manageability software. It is designed to make an AcerPower system more manageable based on support for the following industry standards and specifications:

- Desktop Management Interface (DMI) 2.0
- S.M.A.R.T. compliant

Acer desktop manageability software is provided through the Acer software preload which comes pre-installed on your system, and the Acer Resource CD.

The following manageability features and utilities are explained in more detail in the remaining sections of this chapter.

- Acer Resource CD
- Acer Software Installer
- Acer Software Library
- Acer Online Documentation
- Acer CPR
- System diagnostics
- McAfee[®] VirusScan[®]
- Intel LANDesk[®] Client Manager

4.1 The Acer Resource CD

The Acer Resource CD contains a collection of powerful utility programs and information, to effectively manage your AcerPower system. The Acer Resource CD provides the following useful features and services:



Figure 4-1 Acer Resource CD

- Acer Software Installer. This program allows you to install only the application software you wish to use, avoiding unwanted applications and eliminating unnecessary hard disk space usage.
- Acer Software Library. This is a reference library containing a reference copy of the qualified drivers and applications for your AcerPower system.
- Acer Online Documentation. This includes a collection of User's Guide and Release Notes in .PDF format, which can be accessed using Adobe Acrobat Reader.
- Acer CPR. This is a powerful hard disk recovery program for disaster recovery. It allows you to reinstall your hard disk drive, with the Acer preload including operating system, drivers, to its factory condition.
- **System Diagnostics.** This program allows you to verify components and system integrity.

To use your *Acer Resource CD*, insert it into the CD-ROM drive. The Windows auto-run mechanism automatically launches Microsoft Internet Explorer, and brings up the Acer Resource CD interface (in HTML-based format).

4.2 Acer Software Installer

Acer Software Installer allows you to do a customized installation of only the applications software that you wish to use, and to eliminate unnecessary hard disk space usage.

The Acer Software Installer also provides a single and easy launching point for you to selectively install some or all of the bundled software; you do not need to know any of the path names or other details. Launch the Acer Software Installer and click on the software title on the **Acer Software Installer** screen. The Acer Software Installer will prepare and install the software of your choice for you.



Figure 4-2 Acer Software Installer

Use the Acer Software Installer

To activate the Acer Software Installer, please do the following:

- 1. From the Acer Resource CD interface, click on the Acer Software Installer button.
- 2. When Microsoft Internet Explorer **File Download** screen is displayed to prompt "what would you like to do", select **Open it**, and then click the **OK** button.
- 3. When Microsoft Internet Explorer **Security Warning** screen is displayed to prompt "do you wish to continue", click the **Yes** button. The **Acer Software Installer** menu appears.
- 4. Click the software title you wish to install.
- 5. Follow the on-screen prompts to complete the installation.

Installable Applications Software

The following application software (bundled with your AcerPower system) is installable from the Acer Software Installer:

- Acer Settings (Acer wallpaper and screen saver)
- Adobe Acrobat Reader
- Intel LANDesk Client Manager
- McAfee VirusScan



Some of the bundled applications have dedicated versions for different Operating Systems. Make sure the matching application is being installed for the correct Operating System version.

4.3 Acer Software Library

Acer Software Library contains a reference copy of the qualified drivers for your AcerPower system. The proper drivers for your AcerPower system have been preinstalled in the Acer preload on your hard disk drive.



The drivers and applications in the Acer Software Library are for your reference only, or for reinstallation.

The Acer Software Library includes:

- Video drivers
- Audio drivers
- Modem drivers
- Network drivers
- Intel LDCM, Administrator Version
- Acer motherboard specific drivers
- Monitor

To access the Acer Software Library components, click the Acer Software Library button from the Acer Resource CD interface, and then search for the drivers or applications you are looking for.

4.4 Acer Online Documentation

The Acer Online Documentation includes the *User's Guide*, and other helpful information in .PDF format. It allows you to quickly access important information about your system, components, and applications without searching for their manual.

The Acer Online Documentation includes:

- McAfee VirusScan User's Guide.
- Intel LANDesk Client Manager User's Guide.

To access the Acer Online Documentation, click on the Acer Online Documentation button from the Acer Resource CD interface, then click on the document you are looking for.



The Adobe Acrobat Reader must be installed first from the Acer Software Installer, before viewing the .PDF documents.

4.5 Acer CPR

Acer CPR is primarily a powerful preload recovery program for disaster recovery. It allows you to reconfigure your hard disk drive, and to reinstall the Acer preload that includes operating system, and drivers.

In case of emergency such as a hard disk drive failure, you may find that the only way to recover is to rebuild the hard disk drive to its original factory state. Acer CPR gives you a simple way to completely reinstall the Acer pre-load that originally came preinstalled on your hard disk drive. In such an emergency, use Acer CPR to rebuild your hard disk drive.



A hard disk drive rebuild will FDISK and FORMAT your hard disk drive. Files which have not been backed up will be lost when rebuilding your hard disk drive. Acer shall not be liable for any loss of data or any other incidental, special or consequential damages. Acer's responsibility for Acer CPR utility is limited to the terms of the Limited Product Warranty with your system.

The Acer CPR utility has been programmed to operate only with specific Acer systems. IT WILL NOT WORK WITH ANY OTHER COMPUTER SYSTEM.

Please be aware that all software on the Acer Resource CD is subject to the terms of the software license agreements that come packaged with your Acer system. Your use of the Acer Resource CD means that you agree to all of those software license agreement terms. Also, you will be prompted to type-in your Microsoft Certificate of Authenticity (COA) product ID number. Look for your COA number on the cover of your Windows manual.

To rebuild your hard drive, do the following:

- 1. Power up your Acer system.
- 2. When prompted (after memory testing completes), press CTRL + ALT + ESC to enter CMOS setup.
- 3. Insert the Acer Resource CD in your CD-ROM drive.
- 4. At the CMOS Setup screen select **Basic Configuration**, then press **ENTER**.
- 5. Select the **Boot Options** section, and change the **Boot Sequence** to the following order:
 - 1st [CD-ROM]
 - 2nd [Floppy Disk]
 - 3rd [Hard Disk]
- 6. Press **ESC** twice. When prompted, 'Do you want to save CMOS data?', select [**Yes**], then press **ENTER**. The system will reboot from the CD-ROM.
- 7. After booting from the CD-ROM, you will see the Acer CPR options displayed. Select **Rebuild Drive** and follow the onscreen instructions.
- 8. When prompted, use the DS number (DS.xxxxx.xxx) found on a label located on the lower right side of your system chassis, to select the correct software installations.
- 9. After you complete rebuilding your hard disk drive, remove your Acer Resource CD and repeat steps 2, 4, 5, and 6 to enter CMOS setup. Set the **Boot Sequence** back to its original configuration:
 - 1st [Floppy Disk]
 2nd [Hard Disk]
 3rd [CD-ROM]
- 10. After the hard disk rebuilding process completes, remove your Acer Resource CD.
- 11. Look for your Microsoft Certificate of Authenticity (COA) ID number on the cover of your Windows manual. Enter this number when requested.

4.6 System Diagnostics

The System Diagnostics program allows you to test individual components and verify system integrity. It is also a valuable tool for quickly identifying problems and solutions. This reduces support costs by minimizing time spent on troubleshooting the system components.

To invoke the system diagnostics program:

- Follow the Acer CPR procedure to start Acer CPR.
- From the Acer CPR screen, click on the **Diagnostics** button. The diagnostics software will start to automatically test the system components.

4.7 McAfee[®] VirusScan[®]

McAfee VirusScan is an advanced desktop anti-virus solution. Once installed, VirusScan protects your system from virus activity. If a virus is detected, VirusScan can attempt to remove it from the infected file, move the file to a quarantine location, or delete the infected file. VirusScan helps protect one of your most important assets — the information on your computer.

VirusScan should also be considered as an important element of a comprehensive, overall manageability solution program to reduce the Total Cost of Ownership. The program should include a variety of safety measures such as regular backups, meaningful password protection, training, and awareness.

McAfee VirusScan performs the following:

- Scans all subsystem areas including floppies, boot sectors, file allocation and partition tables, folders, files, and compressed files to provide extensive security.
- Accurately cleans most virus infections from files, master boot sectors, partition tables, and memory.
- On-access scanning technology captures viruses on disk access, file copying, file creation, file renaming, program execution, system startup, and system shut down.
- On-demand scanning provides for user-initiated detection of known boot, file, multipartite, stealth, encrypted, and polymorphic viruses located within files, drives, and diskettes.

4.7.1 Installing VirusScan

To install the McAfee VirusScan utility:

- 1. Invoke the **Acer Software Installer** from the Acer Resource CD (refer to previous section for instructions).
- 2. Click McAfee VirusScan.
- 3. Follow the on-screen prompts to complete the installation.

4.7.2 Updating VirusScan Data Files

New viruses (and variants of old ones) are constantly appearing and circulating within the computer community. McAfee updates the VirusScan programs regularly — usually monthly, but more often if many new viruses appear. Each new version detects and removes as many as 100 to 200 new viruses, and may add new features to the VirusScan product. To find out what's new in your release, read the WHATSNEW.TXT text file shipped with this product.

VirusScan's new SecureCast component gives you several options for keeping your installation up-to-date, with varying levels of user interaction. One option, which uses BackWeb's Internet "push" technology, automatically updates your installation on a regular basis. If you choose this option, you will install BackWeb's client software, which will perform invisible downloads of updates whenever you are connected to the Internet. If you are not connected long enough for a full download at one time, the software will automatically piece out the work and notify you when a complete update package has arrived.

You can also wait until VirusScan warns you it is time to update, and use the convenient one-button electronic update option available at that time. Or you can choose to update your files manually at any time by following the procedure below. Information on SecureCast is available from the McAfee Web Site at:

http:// www.nai.com/default_mcafee.asp

Download New Versions Manually

To update your data files manually, take the following steps:

- 1. Download the data file (for example, DAT-3103.ZIP) from one of McAfee's electronic services. On most services, it is located in the anti-virus section. Please note that your ability to access these updates is legally restricted by the maintenance terms outlined in the README.1ST file accompanying the software and detailed in the software license agreement.
- 2. Copy the file to a new directory.
- 3. The file is in a compressed format. Decompress the file using any PKUNZIPcompatible decompressing software. If you don't have the decompressing software, you can download PKUNZIP (shareware) from McAfee electronic sites. (All authentic files from McAfee will be tagged with -AV by PKZIP. Look for this tag when unzipping files to ensure their authenticity.)
- 4. Locate the directories on your hard drive where your VirusScan software is currently loaded. The default directory locations are shown below.

Windows 9Xx:\Program Files\McAfee\VirusScan Windows NT x:\Win32App\VirusScan NT

where x is your CD-ROM drive letter

5. Copy the new NAMES.DAT, CLEAN.DAT, and SCAN.DAT files to the appropriate directory, overwriting the old data files. There might be VirusScan files in more than one directory. If so, place the updated files in each appropriate directory.



Occasionally, the product's scan engine is also upgraded and you will require a new version of VirusScan in order to use the newest data files. By subscribing to a maintenance plan and upgrading your VirusScan software regularly, you are ensured complete virus protection for at least one year after your VirusScan purchase. Contact McAfee for details.

6. Before performing any scans, shut down your computer, wait a few seconds, and turn it on again. This will avoid the possibility of VirusScan reporting a "failed integrity check."

4.8 Intel LANDesk[®] Client Manager

As computer systems are becoming more complex, the system manageability is becoming one of the important requirements for desktop, server, and notebook computers, especially in networked environments. The Desktop Management Interface (DMI) standard, created by the Desktop Management Task Force (DMTF), provides an industry standard based solution, enabling any DMI-compliant management software to manage any DMI-enabled computer systems.

AcerPower desktop computers have been made DMI 2.0 compliant, by providing DMI 2.0 Service Provider, and DMI-compliant component instrumentation. The manageable system information within the AcerPower system can be accessed through any DMI-compliant management software.

Your AcerPower desktop computer has also been bundled with Intel LANDesk Client Manager, which is a DMI-compliant management software.

The LANDesk Client Manager, Client Version, can be used by the AcerPower users, to do the following tasks:

- Review system inventory.
- View DMI-compliant component information.
- Receive notifications of system events.
- Troubleshoot some of the computer problems.

The LANDesk Client Manager, Administrator Version, can be used by a system administrator to manage client workstations remotely. Besides to remotely perform those system management tasks listed above, the system administrator can also:

- Back up and restore the system configuration files.
- Make remote troubleshooting easier.
- Transfer files to and from client workstations.
- Remotely reboot client workstations.
- Remotely power up client systems.

For more information about MIF files, instrumentation, and DMI standards, please visit the following site on the World Wide Web: http://www.dmtf.org.

4.8.1 Setting Up LANDesk Client Manager

Installing LANDesk Client Manager, Client Version

To install LANDesk Client Manager, Client Version, do the following:

- Invoke the Acer Software Installer from Acer Resource CD (refer to previous section for instructions).
- Click Intel LANDesk Client Manager.
- Follow the instructions to complete the installation.



To reinstall LDCM, or to install a newer version of LDCM, you must remove the existing copy of LDCM first.

Removing LANDesk Client Manager

To remove the LANDesk Client Manager, on your Windows desktop:

- Click Start | Settings | Control Panel.
- Double-click Add/Remove Programs.
- Double-click LANDesk Client Manager.
- Follow the instructions to completely remove LDCM.

4.8.2 Using LANDesk Client Manager

To invoke LANDesk Client Manager: click **Start** | **Programs** | **Intel LANDesk Management** | **Client Manager.** The Client Manager user interface has three main parts:

- The PC health indicator, which consists of the PC Health meter, PC health description, and suggestions for improving unhealthy workstations.
- The inventory, which consists of numerous categories of information. This information help you troubleshoot system problems, audit system components (hardware and software), and even change, back up, and recover system configurations.
- The DMI explorer which enables you to view and modify DMI-compliant component information.



4.8.3 LANDesk Client Manager, Administrator Version

A copy of the LANDesk Client Manager, Administrator Version, is bundled on your Acer Resource CD. It is recommended that you install this software only if it is to be used by a system administrator as the management station.

Installing LANDesk Client Manager, Administrator Version

You must have LANDesk Client Manager, Client Version, installed on your system before installing the Administrator Version.

To install LDCM, Administrator Version, on your AcerPower Windows desktop:

- Insert the Acer Resource CD into your CD-ROM drive.
- Click Start | Run.
- Type d:/Softlib/LDCM.adm/setup.
- Click OK.
- Follow the instructions to complete the installation of LDCM, Administrator version.

Appendix A: CD-ROM Drive

A.1 Introduction

Your system includes a CD-ROM drive in a 5.25-inch half-height form factor. This drive is ideal for multimedia applications that incorporate graphics, animation, full-motion video, electronic publishing, and information distribution.

This CD-ROM drive is designed to be compatible with an industry standard – the Enhanced IDE/ATAPI interface. The Enhanced IDE/ATAPI interface allows the CD-ROM drive to share the same data bus and interface card with a hard disk drive.



With the **Boot from CD-ROM** option enabled in your system BIOS, there is a possibility that your system will encounter problems at bootup if you are using a non-bootable CD. If this occurs, remove the CD and reboot the system.

This CD-ROM drive has the following key features:

- Enhanced IDE/ATAPI interface
- Power/motorized tray-loading and disc ejection
- Emergency eject function for manual disc ejection
- Power-saving feature
- Compatible with the following disc formats Audio-CD, Video-CD, CD-ROM/XA, CD-I/FMV, Karaoke-CD, and Photo-CD (both single and multi-session), CD Plus
- Front-panel audio play/skip track control

A.2 Precautions

The laser beam in this CD-ROM drive can be harmful to the eyes. The wavelength of the laser diode is 780nm typical and the optical power of $0.2 \sim 0.3$ mw continuous wave. Do not attempt to service this drive by yourself (e.g., opening or removing the drive casing). All service operations should be performed by an authorized service technician, dealer or distributor.

A.2.1 During Operation

- Do not move the drive while it is operating.
- Do not open the disc tray except when inserting or removing a disc.
- Do not place any item on top of the disc tray. Never attempt to push down on an opened disc tray.
- Do not operate the drive right after a sudden increase in temperature.
- Most errors are usually caused by the following factors:
 - scratch or defect on the surface of a disc
 - random electrical noise
 - dust or fingerprints on the surface of a disc

A.2.2 When Handling a Disc

- Always handle a disc by its edges. Do not touch the surface of the disc (especially the underside).
- Never write on a disc or place a label on the surface of the disc.
- Never bend a disc.
- Do not store a disc in places with high temperature and humidity. Do not place the disc under direct sunlight.
- Always store a disc in its case to prevent dust contamination, scratches, bending, and other damage.
- To remove dust or fingerprints, use a clean, soft and dry cloth. Never use fluids like benzene or anti-static fluids. Using fluids of these types may damage the disc.

A.3 CD-ROM Drive Description

A.3.1 Front View



Figure A-1 Front Panel



Your CD-ROM front panel may be slightly different from the one shown above.

- 1. Disc tray opens and closes for disc loading and removal
- 2. Headphone jack is used for attaching headphones or self-amplified speakers
- 3. **Busy indicator** lights up while data is being read from the disc; flashes during seek operation
- 4. Headphone volume control adjusts headphone sound level
- 5. **Emergency eject hole**. Insert a rod to eject the tray manually
- 6. Audio play/Skip track control button plays and skips one information track of an audio CD
- 7. **Open/Close** button opens or closes the disc tray

A.3.2 Rear View



Figure A-2 Rear Panel



Your CD-ROM rear panel may be slightly different from the one shown above.

- 1. **Power supply connector** connects the CD-ROM drive to the computer's power supply
- 2. Interface connector connects the CD-ROM drive to the 40-pin interface cable
- 3. **Device configuration jumper**. The CD-ROM drive is configured as a master drive, so a jumper is installed on "MA". To change the setting to slave, remove this jumper.
- 4. **Digital Audio Output** offers high quality Audio, through a digital signal from a D/A converter

A.4 Operating the CD-ROM Drive

A.4.1 Starting the Drive

- 1. Press the **Eject** button. The tray is ejected from the drive.
- 2. Place the disc in the tray with the disc label side facing up.
- 3. Press the **Eject** button or press the tray panel lightly to close the tray.



The drive must be in a horizontal position during operation. Do not operate this drive in a vertical position.

4. Press the **Audio Play/Skip track control** button to play or skip one track of Audio CD without executing application software.

- Do not force the tray to open manually.
- When not using the drive, keep the tray closed to prevent dust and dirt contamination.
- Do not press down hard on the tray when loading a disc, as it could damage the tray and may cause the drive to malfunction.
- Do not insert any foreign objects into the disc tray.

A.4.2 Emergency Eject

If for any reason the tray does not eject automatically, insert and press an eject-bar inside the emergency eject hole to manually eject the tray. A large straightened paper clip can be used as an eject-bar.



Be sure to turn off the power before a manual disc eject operation.

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