

Maintaining and Troubleshooting Your E-1000 Series System



Gateway™



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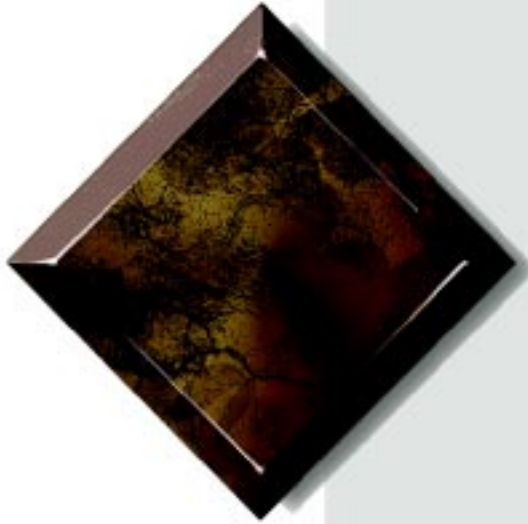
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Preface

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Conventions Used in This Guide

Throughout this guide, you will see the following conventions:

Convention	Description
ENTER	Keyboard key names are printed in small capitals.
CTRL+ALT+DEL	A plus sign indicates that the keys must be pressed simultaneously.
Setup	Commands to be entered, options to select, and messages that appear on your monitor are printed in bold.
<i>User's Guide</i>	Names of publications and files are printed in italic.
 <i>Important!</i>	An important informs you of special circumstances.
 <i>Caution!</i>	A caution warns you of possible damage to equipment or loss of data.
 <i>Warning!</i>	A warning indicates the possibility of personal injury.

Safety Instructions

Observe the following safety instructions when using your system:

- Follow all instructions marked on the system and in the documentation.
- When the system is turned off, a small amount of electrical current still runs through the system. Always unplug the system from the electrical outlet before cleaning the system or opening the cover.
- Do not use this product near water or a heat source, such as a radiator or heat register.
- Do not spill anything on or into the system. The best way to avoid spills is to avoid eating and drinking near your system.
- Make sure you set up the system on a stable work surface.
- Openings in the system cabinet are provided for ventilation. Do not block or cover these openings. Make sure you provide adequate space (at least 12 inches) around the system for ventilation when you set up your work area. Never insert objects of any kind into the system ventilation slots.
- Use the voltage setting for your area. The voltage selector switch is set at the factory to the correct voltage.
- This system is equipped with a 3-wire grounding plug (a plug with a grounding pin). This plug will only fit into a grounded power outlet. This is a safety feature. Do not defeat the purpose of the grounding pin. If you are unable to insert the plug into the outlet, contact your electrician to replace the outlet.
- Do not walk on the power cord or allow anything to rest on it.
- If you use an extension cord with this system, make sure the total ampere ratings on the products plugged into the extension cord do not exceed the extension cord ampere rating. Also, the total ampere requirements for all products plugged into the wall outlet must not exceed 15 amperes.

 **Warning!**

Do not attempt to service the system yourself except as explained elsewhere in the system documentation. Adjust only those controls covered in the instructions.

Opening or removing covers marked “Do Not Remove” may expose you to dangerous electrical voltages or other risks.

- There is a danger of explosion if the CMOS (complementary metal-oxide semiconductor) battery is replaced incorrectly. Replace the battery with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.
- Unplug the system from the wall outlet and refer servicing to qualified personnel if:
 - The power cord or plug is damaged.
 - Liquid has been spilled into the system.
 - The system does not operate properly when the operating instructions are followed.
 - The system was dropped or the cabinet is damaged.
 - The system's performance changes.

Additional Information Sources

Along with this manual and your *E-1000 Series User's Guide*, you can find additional information by using the following sources.

The Gateway Support Center

Log on to the Gateway Support Center at www.gateway.com/support to access information about your system or other Gateway products. Some types of information you can access are:

- Hardware driver (including BIOS) and software application updates
- An expanded Glossary
- Technical tips
- Service Agreement information
- Technical documents and component information
- Frequently Asked Questions (FAQ)
- Online access to Tech Support

The System Restoration CD

The System Restoration CD included with your system contains online documentation for Gateway components (such as hard drives, modems, CD-ROM drives, and system boards).

If your system includes a component that requires setup or requires additional information to use or to set up software—and a printed document is not included in your accessory kit—that information should be on the CD in either HTML or Acrobat PDF format.

Instructions for using the System Restoration CD are included in the CD package.





System Access

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Static Electricity Precautions

Static electricity can permanently damage electronic components in your computer. When opening your computer case, always perform the following procedure:

Caution!

Prevent electrostatic damage to your system by following static electricity precautions every time you open your computer case.

1. **Wear a grounding wrist strap** (available at most electronics stores).
2. Turn off the system power.
3. Touch the back of the power supply fan, located on the back of the case, to discharge any static electricity.
4. Unplug all power cords from AC outlets.
5. Remove the computer case cover.

Follow these precautions to avoid electrostatic damage to your system components:

- Avoid static-causing surfaces such as plastic and styrofoam in your work area.
- Remove the parts from their antistatic bags only when you are ready to use them. Do not lay parts on the outside of antistatic bags since only the inside of the bag provides antistatic protection.
- Always hold cards by their edges and their metal mounting bracket. Avoid touching components on the cards and the edge connectors that connect to expansion slots.
- Never slide cards or other parts over any surface.

Opening the Case

To perform work in the internal components of your computer you must open the case, which has two removable parts:

- A chassis cover, that surrounds the sides and top of the system
- A front faceplate (bezel) that covers the front of the system

Because the components inside your computer are extremely sensitive to static electricity, be sure to follow the precautions for avoiding static electricity damage at the beginning of this chapter.

The system case was designed with side latches for easy opening and removal of the cover. Only one thumbscrew needs to be removed, and no tools are necessary.

To remove the chassis cover

1. Turn off the computer and disconnect all power cords.
2. Remove the thumbscrew or lock on the back of the case.
3. Locate the latches at the rear sides of the case, and spread both latches out simultaneously until they clear the chassis.

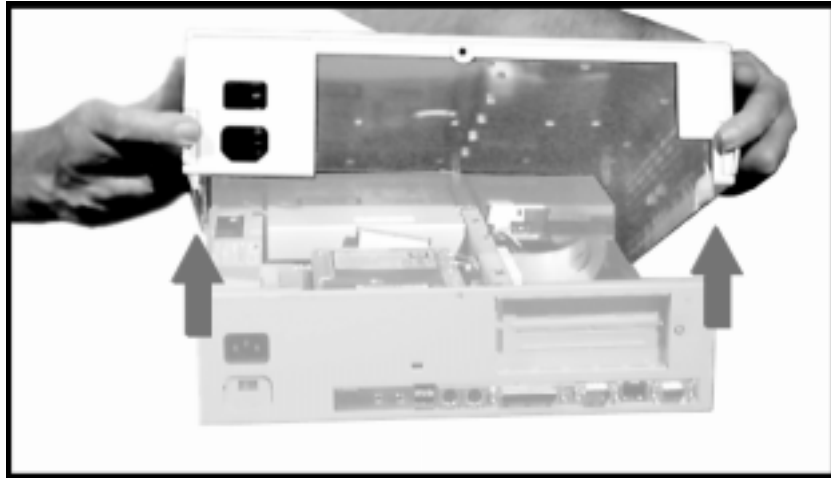


Caution!

Power down the system and disconnect all power cords before proceeding. Installing any component while the power is ON may cause permanent damage to the system.

The chassis cover has a backplate through which the power cord fits: you cannot remove the chassis cover without first disconnecting the power cord from the back of the computer.

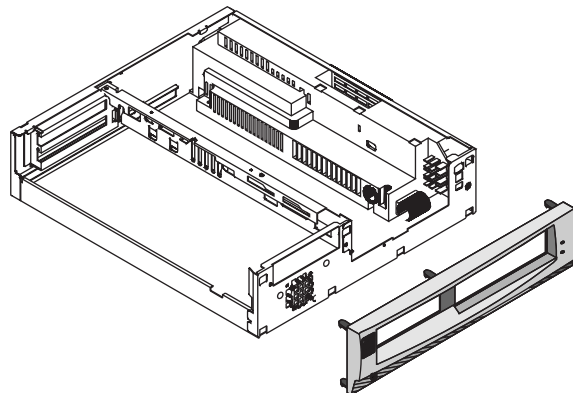
4. Lift up the rear of the cover.



5. Slide the cover toward the rear of the computer so that the lip on the cover is free of the front bezel, and then remove the cover.

To remove the front bezel

1. On the inside of the chassis, press down on the upper three bezel tabs to release the bezel and then pull the bezel away from the chassis.



Closing the Case

Letting the computer sit uncovered allows it to collect dust and dirt that could eventually cause damage to the system.

To replace the front bezel

1. Insert the bottom bezel tabs into the corresponding openings on the chassis front.
2. Press the top of the bezel into the chassis until the upper tabs snap into place.

To replace the chassis cover

1. Lower the cover onto the computer with the front engaging the faceplate assembly and the rear in a raised position.
2. Move the cover toward the front of the computer so that the cover tabs slide under the front bezel.
3. Lower the rear of the cover onto the computer chassis.



4. Spread the latches on the sides of the cover so that they clear the chassis, and continue lowering the cover until it is fully closed.



5. Reinstall the thumbscrew or lock that was removed to open the case.

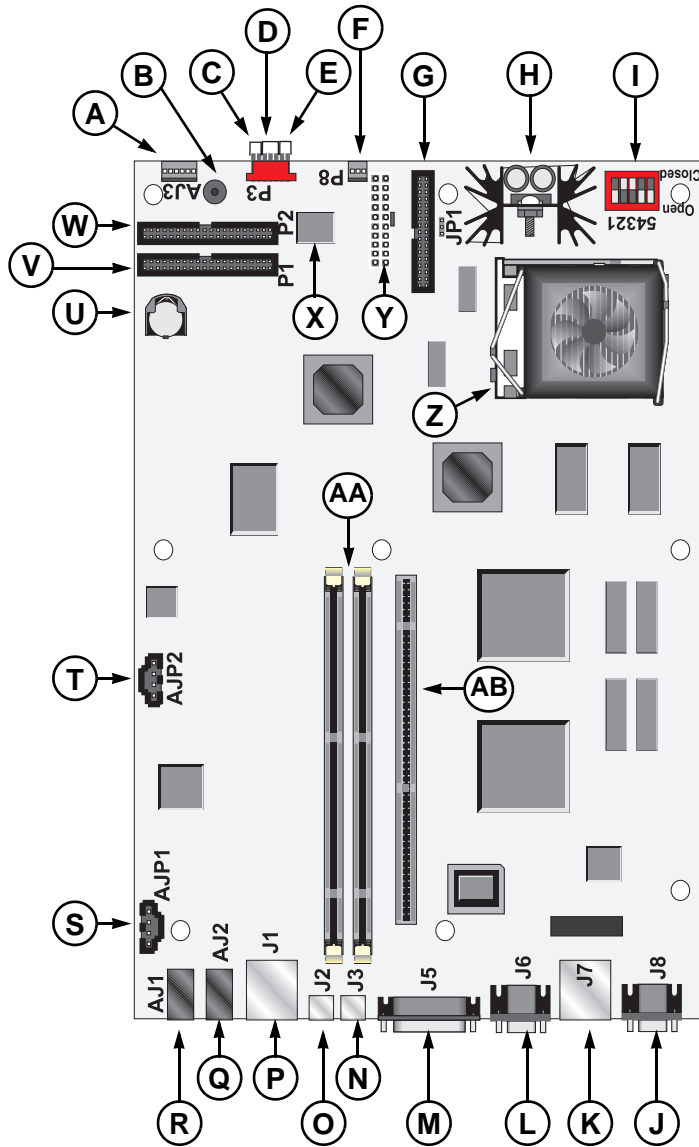


Components

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System Board Components

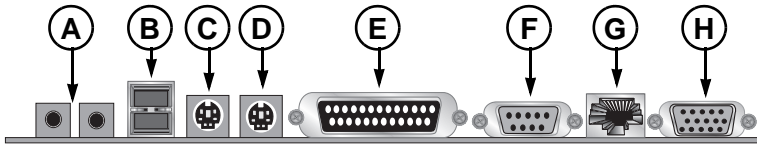


The following components are included on the system board:

- A** Audio connector
- B** Speaker
- C** To power switch
- D** To power LED
- E** To hard drive LED
- F** CPU fan connector
- G** Floppy drive connector
- H** Voltage regulator module
- I** CPU selector switch
- J** Video port
- K** RJ45 network connector
- L** Serial port
- M** Parallel (printer) port
- N** Keyboard port
- O** Mouse port
- P** USB ports
- Q** Audio out
- R** Audio in
- S** CD audio-in connector
- T** Speaker phone connector
- U** 3-V lithium battery CR2032
- V** Primary IDE connector
- W** Secondary IDE connector

- X** BIOS chip
- Y** Power connector
- Z** CPU socket (Socket 7)
- AA** DIMM (system RAM) sockets
- AB** Extender (riser) card socket

I/O Connectors



The following I/O connectors are included with the system:

- A** Audio connectors (audio in–left, audio out–right)
- B** USB ports (2)
- C** PS/2 mouse
- D** PS/2 keyboard
- E** Parallel (printer) port
- F** Serial port
- G** RJ45 network connector
- H** VGA video connector

Replacing the Processor

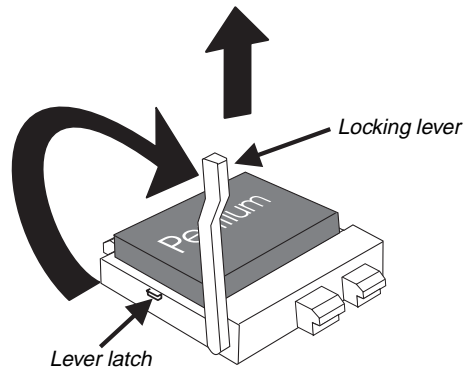
The system is compatible with Intel Pentium® processors. It is also compatible with MMX-ready processors.

It is critical that a heatsink with an integrated fan (fansink) be installed so that it makes direct contact with the top of the the processor. The fansink supplied with the Pentium processor on the system provides all necessary cooling for the processor.

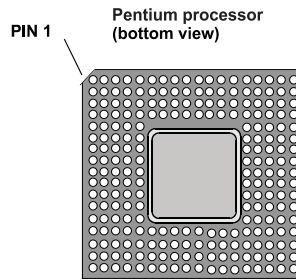
When replacing a CPU, order a Pentium processor upgrade kit. The kit includes the Pentium processor, a fansink, a hookup cable assembly for the fansink, and a disposable electrostatic discharge (ESD) wriststrap.

To replace the processor

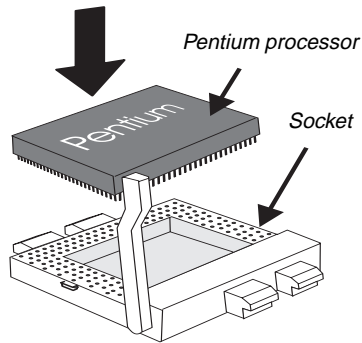
1. Turn off the system and unplug the power supply cord.
2. Open the case, observing the “Static Electricity Precautions” on page 2.
3. Disengage and lift the locking lever, and then lift the old processor straight up and out of the socket.



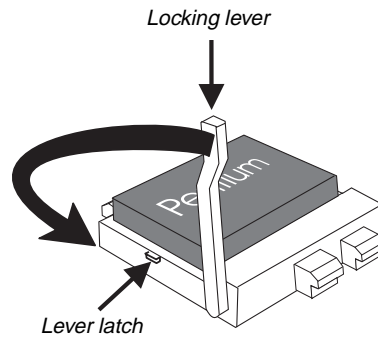
4. Hold the new CPU over the empty CPU socket and verify that pin 1 on both the CPU and the socket are aligned.



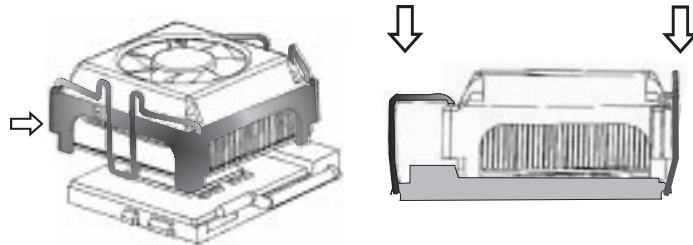
5. Gently place the new CPU into the socket..



6. Secure the CPU by lowering the locking lever until the lever latches into place. The CPU will slip into place without pressure when aligned correctly.



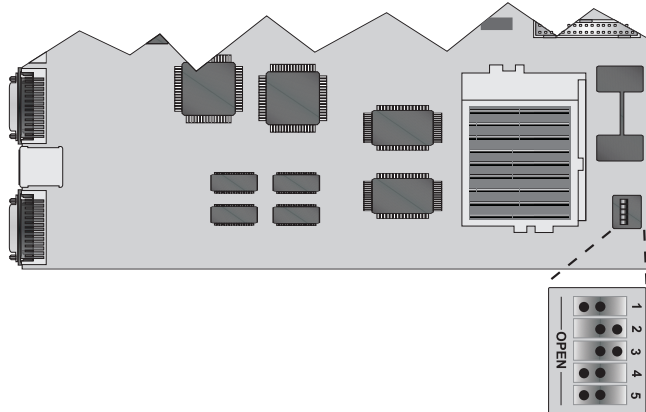
7. Set the fansink flat on the processor. The four corner posts should wrap around the four corners of the processor base so that the fansink cannot move from side to side.
8. Press the metal retaining clips down until they hook into place. Make sure that the fansink is level and that all four corners extend below the black plastic edge of the processor base. It is very important that the fansink makes direct contact with the processor or else it will not cool correctly, resulting in processor failure.



9. Connect the fansink power cable to P8 (fan connector) on the system board.
10. Set the configuration switches to match your processor speed. (See “Configuration Switches” on page 15.)
11. Close the system as described in chapter 1.
12. Reconnect the power cord and turn on the system.

Configuration Switches

The system board has one bank of configuration switches to set CPU/bus speed settings and to enable or disable the onboard system BIOS. This switch bank (illustrated below) contains five switches.



CPU/bus speed settings

Switches 1, 2, 3, and 4 of the configuration switch bank let you set the processor and host bus speed. Refer to the table below for configuration.

CPU Speed	Host-Bus Freq.	Bus Clock Multiplier	Switch 1	Switch 2	Switch 3	Switch 4
133MHz	66MHz	2.0	open	closed	open	open
150Mhz	60MHz	2.5	closed	closed	closed	open
166MHz	66MHz	2.5	open	closed	closed	open
200MHz	66MHz	3.0	open	open	closed	open
233MHz	66MHz	3.5	open	open	open	open

Enable/disable onboard BIOS

Switch 5 of the configuration switch bank lets you enable or disable the onboard system BIOS. Refer to the table below for configuration.

Onboard BIOS	Switch 5
Enabled	open
Disabled	closed

Installing Memory

Your computer's system board supports 3.3-V unbuffered Synchronous Dynamic Random Access Memory (SDRAM) in Dual In-line Memory Modules (DIMMs). It also supports 3.3-V unbuffered EDO (Extended Data Out) DIMMs.

DIMMs represent an advancement in capability because they provide a 64-bit data path that allows for faster data transfer across the system board. The previous type of memory, Single In-line Memory Modules (SIMMs), provides only a 32-bit data path.

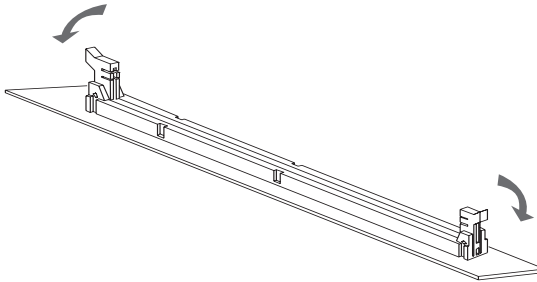
You can fill Bank 0, Bank 1, or both banks with DIMMs. No jumper settings are required for the memory size or type because this information is automatically detected by the BIOS.

This system board requires 4-clock DIMMs with a clock latency of 2 (CL2). Most pre-1997 DIMMs are 2-clock DIMMs. Make sure to buy CL2 4-clock DIMMs should you wish to add more RAM to your computer.

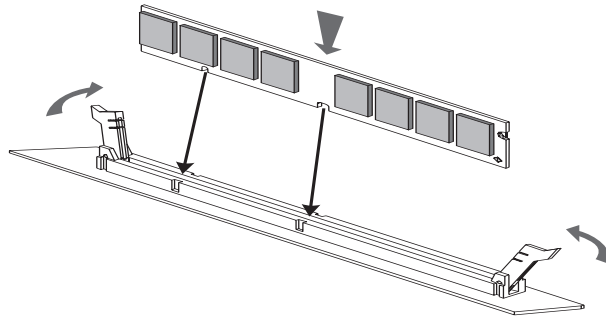
Refer to the DIMM configuration chart later in this section for valid memory configurations. You may select any combination that provides the total RAM required by your system and applications.

To install DIMMs

1. Turn off the system and unplug the power supply cord.
2. Open the case, observing the "Static Electricity Precautions" on page 2.
3. Pull open the socket clamps on each side of the DIMM socket.



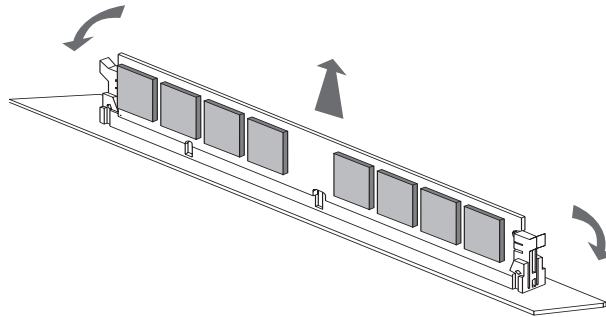
4. Insert the DIMM perpendicular to the socket and align the two notches in the DIMM with the two notches in the DIMM socket.



5. Gently press the DIMM into the socket until it doesn't move any farther. (Inserting the DIMM automatically locks each of the socket clamps on each end of the DIMM.)

To remove DIMMs

1. Gently push out first one and then the other plastic socket clamp on each end of the DIMM. The DIMM should pop up slightly from the socket.



2. Carefully lift the DIMM out of the socket.
3. Place the DIMM in a static-free container.

Caution!

Never try to remove a DIMM without releasing the clamps. You may break the socket, causing serious damage.

DIMM configurations

DIMM Bank 0	DIMM Bank 1	Total Memory
1M x 64 (8 MB) or empty	empty	8 MB
1M x 64 (8 MB)	1M x 64 (8 MB)	16 MB
1M x 64 (8 MB)	2M x 64 (16 MB)	24 MB
1M x 64 (8 MB)	4M x 64 (32 MB)	40 MB
1M x 64 (8 MB)	8M x 64 (64 MB)	72 MB
1M x 64 (8 MB)	16M x 64 (128 MB)	136 MB
2M x 64 (16 MB)	empty	16 MB
2M x 64 (16 MB)	1M x 64 (8 MB)	24 MB
2M x 64 (16 MB)	2M x 64 (16 MB)	32 MB
2M x 64 (16 MB)	4M x 64 (32 MB)	48 MB
2M x 64 (16 MB)	8M x 64 (64 MB)	80 MB
2M x 64 (16 MB)	16 x 64 (128 MB)	144 MB
4M x 64 (32 MB)	empty	32 MB
4M x 64 (32 MB)	1M x 64 (8 MB)	40 MB
4M x 64 (32 MB)	2M x 64 (16 MB)	48 MB
4M x 64 (32 MB)	4M x 64 (32 MB)	64 MB
4M x 64 (32 MB)	8M x 64 (64 MB)	96 MB
4M x 64 (32 MB)	16M x 64 (128 MB)	160 MB
8M x 64 (64 MB)	empty	64 MB
8M x 64 (64 MB)	1M x 64 (8 MB)	72 MB
8M x 64 (64 MB)	2M x 64 (16 MB)	80 MB
8M x 64 (64 MB)	4M x 64 (32 MB)	96 MB
8M x 64 (64 MB)	8M x 64 (64 MB)	128 MB
8M x 64 (64 MB)	16M x 64 (128 MB)	192 MB
16M x 64 (128 MB)	empty	128 MB
16M x 64 (128 MB)	1M x 64 (8 MB)	136 MB
16M x 64 (128 MB)	2M x 64 (16 MB)	144 MB
16M x 64 (128 MB)	4M x 64 (32 MB)	160 MB
16M x 64 (128 MB)	8M x 64 (64 MB)	192 MB
16M x 64 (128 MB)	16M x 64 (128 MB)	256 MB

Storage Bays

To add or change drives (diskette drives, CD-ROM drives, etc.) on the system, the chassis cover and front bezel must be removed. Refer to Chapter 1, System Access, for instructions on opening and closing the case.

Replacing the 3.5-inch diskette drive

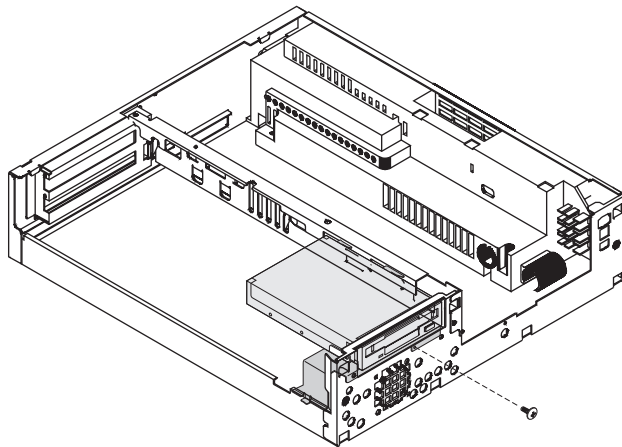
The 3.5-inch diskette drive is secured to a metal mounting bracket, which enables the drive to be quickly installed and removed from the system chassis.

Note:

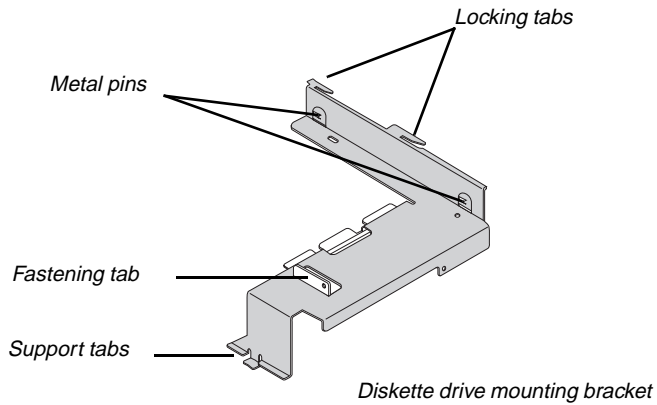
The E-1000N system does not have a diskette drive installed.

To replace the 3.5-inch diskette drive

1. Turn off the system and unplug the power supply cord.
2. Open the case, observing the “Static Electricity Precautions” on page 2.
3. Locate the diskette drive installed in the mounting bracket unit.
4. Remove the power and data cables from the back of the drive.
5. Remove the front screw that secures the drive bay to the chassis.



6. Move the unit back towards the rear of the chassis until the locking tabs and support tabs on either side clear the chassis slots.



7. Remove the screw from the fastening tab, and lift the drive out of the bracket.
8. Place the new drive in the mounting bracket, aligning the drive screw holes with the metal pins on the inside and with the fastening tab on the outside.
9. Replace the screw you removed from the fastening tab.
10. Position the mounting bracket in the system chassis.
11. Secure the drive bay to the chassis with the screw removed in step 4.
12. Plug in the power and data cables.
13. Replace the bezel and chassis cover, plug in the power and other connectors, and turn on the system.

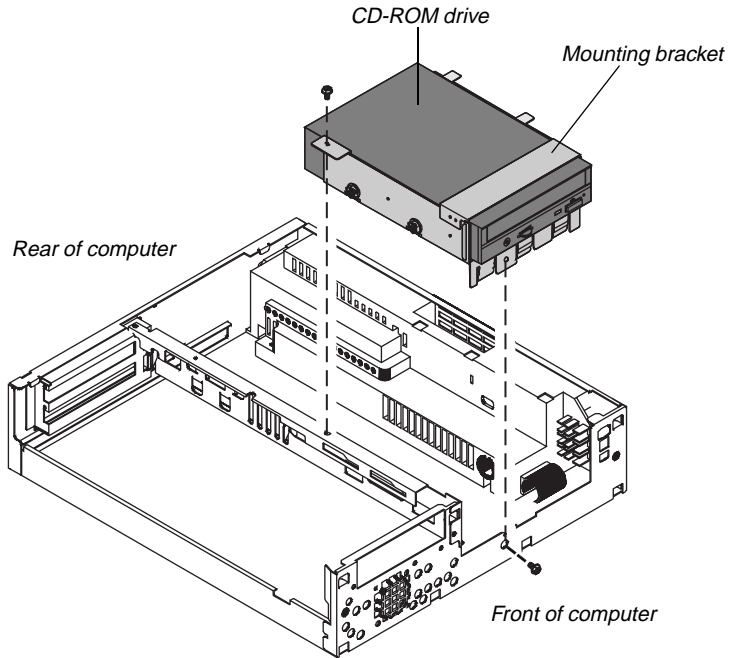
Installing a drive in the 5.25-inch drive bay

The 5.25-inch drive bay may be used to install a disk drive, CD-ROM drive, or other 5.25-inch device.

To install a drive in the 5.25-inch drive bay

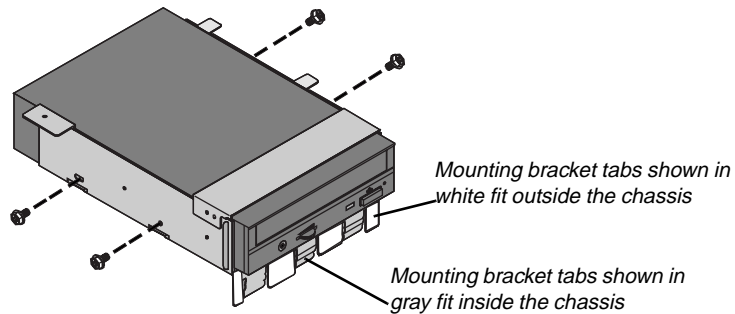
1. Turn off the system and unplug the power supply cord.
2. Remove the chassis cover and the front bezel, observing the “Static Electricity Precautions” on page 2.
3. Locate the 5.25-inch drive mounting bracket unit containing the CD-ROM.
4. Remove the data and power cables from the back of the drive, and unplug the CD audio cable from the CD audio-in connector on the system board (see “System Board Components” on page 8 for the location of the connector).

5. Remove the two screws (one near the center of the chassis and one on the front of the chassis) that secure the mounting bracket.



6. Remove the four screws (two on each side of the mounting bracket) that secure the drive in the bracket, and remove the drive.
7. Place the new drive into the mounting bracket, and replace the four side screws.

8. Replace the mounting bracket in the chassis so that four lower tabs are on the outside of the chassis and the remaining tabs are on the inside. Secure with the two screws you removed in step 5.



9. Plug the power and data cables into the back of the drive (see drive documentation for proper jumper settings and connector orientation).

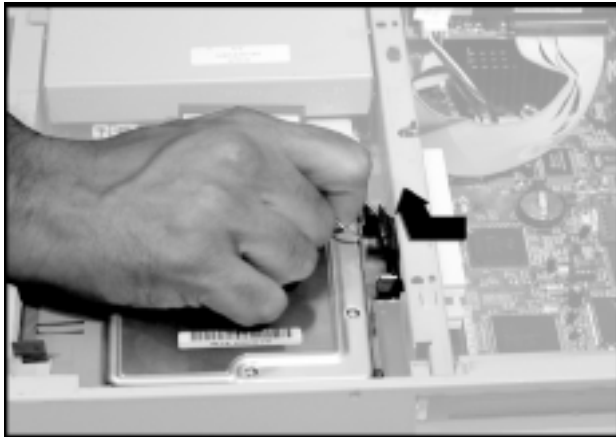
If installing a CD-ROM drive, connect the audio cable to the CD audio-in connector on the system board (callout “S” in the system board diagram on page page 8).
10. Replace the bezel and the chassis cover, plug in power cords and attach peripherals, and turn on the system.
11. Run configuration software if required.

Replacing the hard drive

To make hard drive replacement easier, your system uses a quick-release mounting bracket. Extra brackets may be ordered from the factory, and they can be mounted to replacement drives to make drive swapping quick and without using tools..

To replace the hard drive

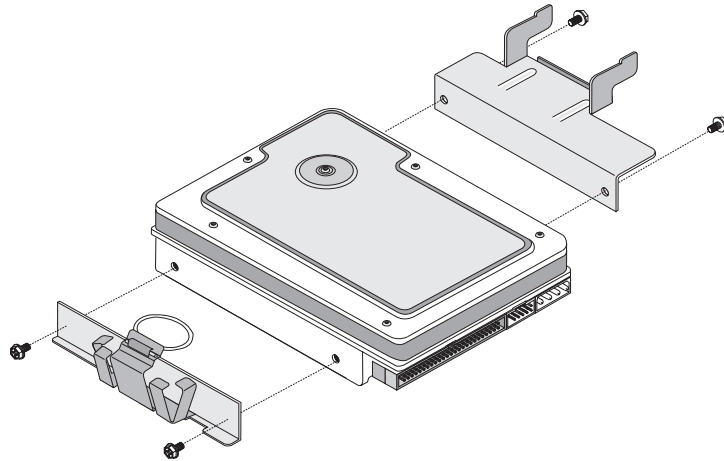
1. Turn off the system and unplug the power supply cord.
2. Remove the chassis cover, observing the “Static Electricity Precautions” on page 2.
3. Disconnect the hard drive data and power cables, noting their location. (You will reconnect these cables when you install the new hard drive.)
4. Firmly pull on the ring on the mounting bracket so that the spring latch releases the side of the mounting bracket from the chassis.



5. Tilt the hard drive up, slide the fingers on the bracket opposite the pull ring, pull away from the retainers on the chassis, and lift the drive out of the case.



6. Remove two screws on each side of the the mounting brackets, and remove the drive.

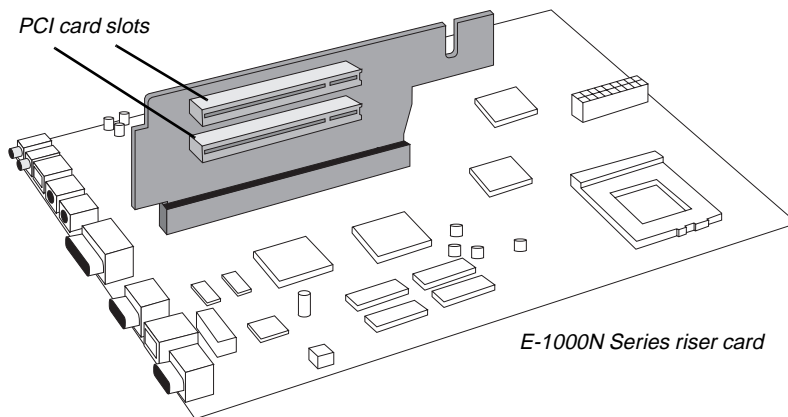
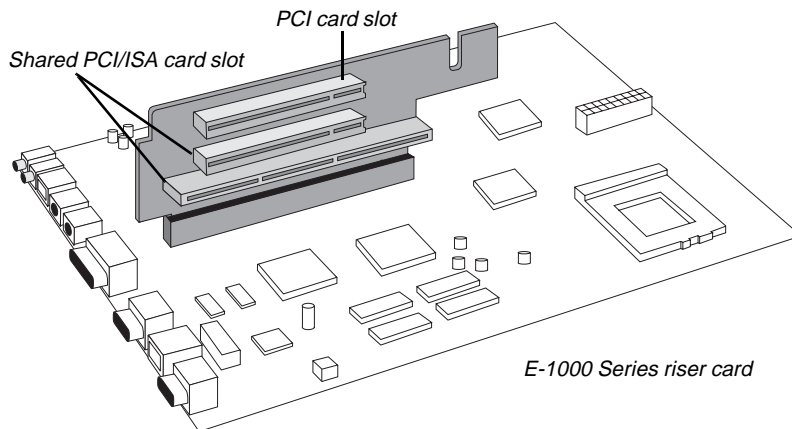


7. Attach the mounting brackets to the new drive, using the screws you removed in step 6.
8. Replace the drive into the chassis, making sure the spring latch clicks fully into position , and then attach the data and power cables.

Adding an Expansion Card

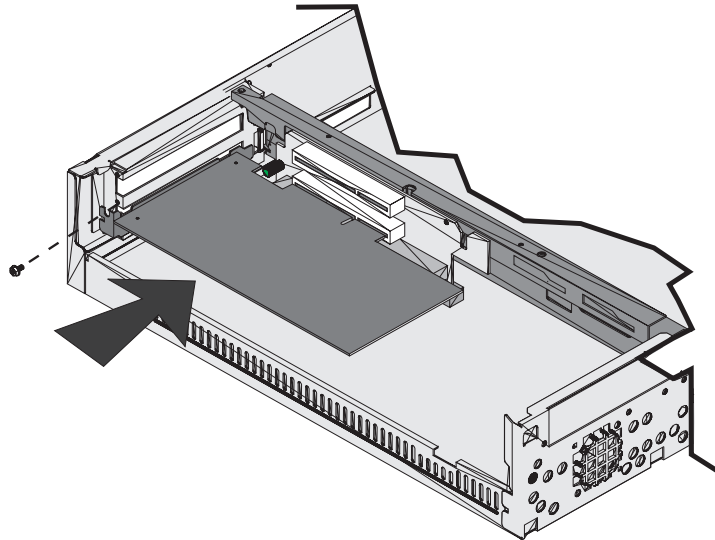
Your system is capable of accepting two expansion cards to enable features not integrated into the system board. These features might include an internal fax/modem, a SCSI controller card, or a video capture board. Expansion cards are installed in a riser or extender card on the system board (shown below without the case, for clarity).

- The E-1000 Series riser card can accommodate either two PCI cards (one in the upper slot and one in the lower, shared slot) or one PCI card and one ISA card (PCI card in the upper slot and ISA card in the lower, shared slot)
- The E-100N Series riser card can accommodate two PCI cards.



To add an expansion card

1. Set any jumpers and switches on the card, if required in the card's instructions.
2. Turn off the system and unplug the power supply cord.
3. Remove the chassis cover, observing the "Static Electricity Precautions" on page 2.
4. Locate an available PCI or ISA/PCI (shared) slot.
5. Remove and retain the screw securing the expansion port cover to the rear panel. Keep the port cover for reinstallation in case you ever need to remove the card.
6. Firmly insert the edge of the expansion card into the slot.



7. After seating the card firmly, secure it to the chassis by installing the screw you removed in step 5 through the mounting bracket at the end of the card.
8. Attach cables according to the card's instructions.
9. Replace the case cover and turn on the system.

It may be necessary to reconfigure your system after installing some expansion cards. You may also need to install software that came with the card. Check the card documentation for additional information.

Configuring the Network Card

The system board is equipped with an onboard AMD Am79C971 10/100 LAN controller. This controller features 32-bit direct bus mastering on the PCI bus and is 10Base-T and 100Base-TX compatible using a single RJ45 connector.

The LAN system configuration is totally software-configurable. To configure your system for use on a network, refer to your operating system manual and online help.

To install the LAN interface driver

1. Start the computer.
2. Put the System Restoration CD into the CD-ROM drive. The AutoPlay feature automatically opens the CD browser. If AutoPlay is disabled, run Clickthis.exe on the System Restoration CD.
3. In the CD browser, click to select your operating system, and then click **Network Card** in the Driver Installation section.
4. Carefully follow the on-screen instructions to complete the installation for the AMD Network Driver.

Networking and Windows NT

The following sections provide information about networking and Windows NT.

Verifying Network Card Properties

If you cannot browse or connect to the network in Windows NT 4.0, follow the steps below to verify the correct adapter properties.

1. Start the computer.
2. Select **Start, Settings, Control Panel**.
3. Select the **Network** icon, and then the **Adapters** tab. Make sure that the AMD Network Adapter is highlighted: if not, select it from the list of adapters.
4. Click the **Properties** button, and verify that the 10Base-T port checkbox is unchecked.
5. Select **OK** or **Continue** until prompted to restart or shutdown the computer.
6. When the system completes the shutdown procedure, press the power button to turn the system off.
7. Disconnect the power cord, wait for approximately two minutes, and reconnect the power cord.
8. Turn the system on and boot Windows NT 4.0, then test the network functionality.

For detailed information about setting up a network and configuring network protocols and services, see your operating system manual and online help.

Installing Windows NT Network Drivers

Systems that ship with the Windows NT operating system but without CD-ROM or diskette drives have Windows NT installation files stored in C:\i386 directory on the hard disk. This allows you to load network drivers locally if necessary.

LM78 Hardware Management

LM78 is an integrated data acquisition system that lets you monitor the status of your system hardware. Monitored information includes internal temperature, fan speed, voltage, and chassis intrusion (to alert you in case of

tampering). The features of the hardware management system can be accessed through LANDesk® Client Manager, which provides a quick system health indicator.

Installing and Restoring LANDesk

Intel's LANDesk® Client Manager is the desktop management interface (DMI) solution that is already loaded on your system. LANDesk Client Manager lets you monitor your system for critical situations that may need your attention. It also lets your system administrator remotely inventory and manage systems on your network.

1. In the C:\DMI folder, double-click the **Setup** icon to launch the InstallShield® wizard.
2. Follow the instructions that appear on your screen. If you are prompted for a password during the installation process, enter **LOWTCO**.

LANDesk Client Manager comes with complete electronic documentation and online help. Refer to these documents and the program's Help for any LANDesk concerns.

If you ever need to restore LANDesk from the System Restoration CD that came with your system, enter **LOWTCO** if prompted for a password.

Caution!

There is a danger of explosion if the battery is incorrectly replaced. Replace the battery only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

Replacing the Battery

The battery provides power for the system real-time clock and CMOS RAM, which holds the system configuration information.

To replace the battery

1. Restart the computer and start the setup program by pressing **F1** when you are prompted to do so.
2. Write down the CMOS values from the setup screens so you can reenter them after you replace the battery. (For more information about the setup program, see Chapter 3, BIOS Setup.)
3. Turn off the system and unplug the power supply cord.
4. Open the case, observing the “Static Electricity Precautions” on page 2.
5. Locate the battery on the system board. (See “System Board Components” on page 8.) The battery is circular and has the positive pole mark (+) on the top.
6. Gently pull the battery from its socket, and press the new battery in the socket with the positive pole up. Be sure you have pressed the battery down far enough for it to contact the base of the socket.
7. Replace the cover.
8. Restart the system, enter the setup program, and verify that the system configuration is correct using the data you recorded in step 1.

If the CMOS data is not correct, change the information in the setup screens as necessary.

Troubleshooting the battery installation

If you have problems after installing the new battery, try each of the items listed below, replacing the cover and restarting the computer after each try.

- Turn off the system and ensure that all exterior cables are attached to the correct connectors and secured.
- Check to be sure that all power switches are on. If the system is plugged into a power strip or surge protector, be sure it is turned on also.
- Enter the BIOS Setup program and compare the settings on the screen with your notes or the system's hardware manuals. Correct any discrepancies.
- Turn off the system, remove the cover, and check that all cables inside the case are attached securely. Also, make sure that the colored cable edges are aligned correctly and that the connectors didn't miss any pins. Disconnect and reconnect the cables, and then replace the cover carefully so as not to disturb any cables.
- Turn off the system, remove the cover and, if you have the proper test equipment, verify that the new battery has power. (It is possible, although highly unlikely, that your new battery is defective.)

When everything works properly, replace the cover.



BIOS Setup

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Using the BIOS Setup Utility

The computer's BIOS has a built-in program that lets you set many basic system characteristics. These settings are stored battery-backed RAM and saved even when the power is off. This chapter contains information about this setup utility and is intended to serve as a guide so that you can make changes to your system's BIOS when necessary.

To enter the setup utility, restart the system and then press F1 when prompted on screen during the startup process. Upon entering setup, the Main Setup screen opens.

BIOS Setup Utility			
Main	Advanced	Security	Exit
	System Date	Sun April 5, 1998	F1 Help
	System Time	17:31:03	ESC Back
			Enter Select
	Floppy Options	Press Enter	↑ Previous Item
	Primary IDE Master	Press Enter	↓ Next Item
	Primary IDE Slave	Press Enter	←→ Select Menu
	Secondary IDE Master	Press Enter	F5 Setup Defaults
	Secondary IDE Slave	Press Enter	F6 Previous Values
	Language	English	F10 Save & Exit
	Boot Options	Press Enter	
	Video Mode	EGA / VGA	
	Mouse	Installed	
	Base Memory	OKB	
	Extended Memory	OMB	
	BIOS Version		

As you select items on the main menu and in submenus, you will see specific information related to the current selection in the Item Specific Help box on the right side of the screens. Refer to the Help box for information about the menu options.

The command bar at the bottom of the screen shows the keystrokes necessary to access help, navigate through the menus, and perform other functions.

- F1 opens the Help screen, providing general help for using the BIOS Setup utility.

- The **up arrow** (↑) and **down arrow** (↓) keys select items in the menu.
- The **left arrow** (←) and **right arrow** (→) keys move you between the menus listed on the top menu bar.
- ENTER either moves you to a submenu screen when a selected item is preceded by > or activates a selected field.
- The **plus sign** (+) and **minus sign** (-) change values in fields or move an item up or down in a list.
- ESC closes the screen you are in and returns you to the previous screen.
- F9 opens a screen that lets you return all values to their default settings.
- F10 opens a screen that lets you save all parameters and then exit the BIOS Setup utility.

The main screen has the following menu selections at the top of the screen:

- **Main** gives you access to basic information and settings related to your system hardware and configuration.
- **Advanced** gives you access to information and settings for system resources, hardware, and system configuration.
- **Security** gives you access to settings related to system access passwords.
- **Power** gives you access to information and settings related to power-saving functions available with your system.
- **Boot** gives you access to settings that determine how your computer starts up.
- **Exit** gives you access to options for exiting the BIOS Setup utility.

Refer to the Item-Specific Help box for information about specific menu options.

Updating the BIOS

If you need a new version of BIOS, you can download the BIOS update from the Tech Support area of the Gateway web site www.gateway.com/support and install the new version from a diskette.

To update the BIOS

1. Enter BIOS Setup by pressing F1 when prompted during startup.
2. Write down the BIOS version that displays.
3. Write down the settings for each of options on the menus and submenus. (At the end of the BIOS update process, you will use the list to reset the BIOS back to your default values.)
4. Exit the BIOS Setup program.
5. Connect to the Gateway Internet site <http://www.gateway.com/support> and download the correct BIOS file.
6. Uncompress the contents of the BIOS file you downloaded, and copy the contents onto a bootable diskette. Be sure to read the readme.txt file for any updated instructions.
7. Place the bootable diskette containing the BIOS files into drive A, and restart the system with the diskette in the drive. The BIOS Setup program starts.
8. Press ENTER to go to the Main menu.
9. Select **Update Flash Memory From a File** and press ENTER.
10. Select **Update System BIOS** and press ENTER.
11. Press TAB to select the file name and press ENTER.
The system warns you that BIOS is about to be changed.
12. Press ENTER.
13. Once the BIOS files have been loaded, remove the diskette from drive A and press ENTER at the prompt to restart the system.

14. As the system starts up, verify that the correct BIOS version is reported.
15. Enter BIOS Setup by pressing F1 when prompted during startup. Once in BIOS Setup, press F5 (to reset the BIOS to original default values) and then reenter the values you wrote down at the beginning of this process.

If you do not set the CMOS values back to original default values using the F5 key before entering your particular setup values, the system may function erratically.





Troubleshooting

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Introduction

If your system does not operate correctly, re-read the instructions for the procedure(s) you have performed. If an error occurs within an application, consult the documentation supplied with the software.

This section identifies solutions to common problems. If the suggestions in this section are not helpful, try calling Technical Support.

Troubleshooting Checklist

Before turning on the system, make sure that:

- The power cord is connected to the CPU system drawer and an AC outlet.
- The AC outlet is supplying power.
- If a power strip is used, it is switched on, and the circuit breaker is set.
- The voltage selection switch on the system's power supply reflects the proper voltage.

Verifying your configuration

If your system is not operating correctly, the BIOS may contain an invalid configuration parameter. Enter the BIOS program and check your configuration settings.

Troubleshooting guidelines

As you troubleshoot your system, keep the following guidelines in mind:

- Never remove the system's cover while the system is turned on.
- Do not attempt to open the monitor; it is extremely dangerous. Even if the monitor's power is disconnected, stored energy within the monitor's components can offer a painful or harmful experience.
- If a peripheral such as the keyboard, mouse, drive, or printer does not appear to work, ensure that all connections are secure.
- If an error message displays on the screen, write it down, word for word. You may be asked about it when calling Technical Support.
- Only qualified personnel should open the system for maintenance.
- If you feel you are qualified to maintain the system yourself, make certain you are properly grounded before opening the system chassis. See "Static Electricity Precautions" on page 2 for more information on preventing electrostatic damage to the system.

CD-ROM Problems

 An audio CD produces no sound.

Probable Cause	Solution
The CD is loaded incorrectly.	Make certain the label is facing upward, and then try again.
The speakers are not connected.	Check the speaker cables. Make certain they are connected properly and securely.
The speaker volume is turned down.	Check the volume control.
The speakers may be muted via the Multimedia volume control.	From the Accessories menu (Start Programs Accessories), click Multimedia , and then click Volume Control . Make certain the volume is turned up.
The sound card may not be installed correctly.	Open the system, and then reseat the sound card. Make certain the cables are connected properly.
The speakers may be faulty.	Connect a set of headphones to the speaker jack to test the output. If they work, replace the speakers.

 **Note:**


Some systems do not have sound cards because sound capabilities are built into the system board.

 The CD-ROM drive is not recognized by the system.

Probable Cause	Solution
The CD is not intended for PC use.	Make certain the CD is PC-compatible.
The CD is loaded incorrectly.	Make certain the label is facing upward, and then try again.
The CD is scratched or dirty.	Try cleaning the CD with a lint-free cloth. Check the CD for scratches.
The CD-ROM drive needs to be added as new hardware.	From the Control Panel window (Start Settings Control Panel), double-click Add New Hardware . Follow the directions for adding the drive. If you are not experienced with this procedure, call Technical Support.

Probable Cause	Solution
The secondary IDE device may be disabled.	Restart your computer, and then press F1 to enter the setup program. From the Peripheral Configuration Advanced menu, set the Secondary IDE Interface to Auto and make certain the Secondary IDE Status is Enabled .
The CD cables are not installed correctly.	Open the system and check all cables between the CD controller and the CD-ROM drive.

Hard Disk Problems

 The SCSI drive is not recognized by the system.

Probable Cause	Solution
The primary IDE device may be disabled.	Restart your computer, and then press F1 to enter the setup program. From the Peripheral Configuration Advanced menu, set the Primary IDE Interface and Primary IDE Status to Enabled .
The SCSI bus is not properly terminated.	Make certain the last device on the SCSI chain is properly terminated.
The drive is configured with a conflicting SCSI address.	Change the device's SCSI address to one that is not currently being used by the system.
The cables are not connected correctly.	Open the system and check the cable connections.


 The IDE drive is not recognized by the system.

Probable Cause	Solution
The primary IDE device may be configured incorrectly.	Restart your computer, and then press F1 to enter the setup program. From the Main menu, set the Primary IDE Master to Auto Configured .
The drive may not be configured properly.	Consult the hard disk user's guide for instructions on how to configure the drive.
The drive cables are not connected properly.	Open the system and check all cables connected to the controller card.
The drive controller is not seated properly.	Open the system and reseat the drive controller.

Memory/Processor Problems

 Memory errors were detected during system start up.

Probable Cause	Solution
Memory was added or removed, and the new configuration was not saved in BIOS Setup.	Enter BIOS Setup and save the new memory configuration.
The memory was installed incorrectly.	Check the memory for proper seating and orientation.
A memory chip is faulty.	Replace the card on which the faulty chip resides. Third-party diagnostic programs can help determine which chip or memory segment is failing.

 A new processor is not recognized by the system.

Probable Cause	Solution
The processor was installed incorrectly or in the wrong socket.	Check the installation. The processor should be recognized automatically if it was installed correctly.
The processor speed was not selected on the system board.	If your system board enables you to select the processor speed, make sure you have selected the speed properly.
A pin was bent on the processor during installation.	Remove the processor and inspect it for damage. If a pin is bent, very carefully try to straighten it.

Modem Problems

 The modem is not recognized by the system.

Probable Cause	Solution
The modem has not been added as new hardware.	Add the modem as new hardware.
The modem is not connected to a live phone jack.	Make certain the line connected to the modem is live and plugged into the appropriate port on the modem (line port).
The modem is not configured with a valid interrupt or address.	Check the system settings for possible conflicts. If one exists, correct the problem by selecting an available interrupt and address.
The phone jack is shared by another modem or telephone.	If the modem shares the jack with another device, make certain the other device does not have the port open (for instance, someone is on the phone, or another modem is in use).

Peripheral/Adapter Problems

❖ A SCSI device is not recognized by the system.

Probable Cause	Solution
The device needs to be added as new hardware.	From the Control Panel window (Start Settings Control Panel), double-click Add New Hardware . Follow the directions for adding the device. If you are not experienced with this procedure, call Technical Support.
The SCSI ID may be invalid.	Assign an available SCSI ID to the device.
The SCSI chain is not terminated.	Make certain the last device on the SCSI chain is terminated.
The device cables are not installed correctly.	Open the system and check all cables between the controller and the device.

❖ The diskette drive is not recognized by the system.

Probable Cause	Solution
The diskette drive may be configured incorrectly.	Restart your computer, and then press F1 to enter the setup program. From the Main Floppy Options menu, ensure that the diskette drive parameters are set correctly.
The drive cables are not connected properly.	Open the system and check all cables connected to the controller card.
The drive controller is not seated properly.	Open the system and reseat the drive controller.


❖ The diskette drive will not read, write, or format.

Probable Cause	Solution
The diskette is not IBM formatted.	Make certain the diskette you are trying to format is IBM-compatible. If it is, try reformatting it.

Probable Cause	Solution
The diskette is corrupted.	Run ScanDisk on the diskette. If errors are detected and corrected, try accessing the diskette again.
The disk is write protected.	Make certain the write-protection window on the upper-right corner of the diskette is closed (unprotected).


 The diskette drive LED illuminates continuously.

Probable Cause	Solution
The diskette is corrupted.	Remove the diskette from the drive. If the light remains on, try restarting the system.
The cable to the drive is not connected properly.	Open the system and check the cable between the diskette drive and its controller. Make certain the pins are not bent or misaligned.

 An adapter card is not recognized by the system.

Probable Cause	Solution
The interrupt and/or I/O address is set incorrectly.	Check the address configuration of the adapter card and ensure that it does not conflict with another card in the system.
The card has not been configured through the software (e.g., EISA configuration utility).	Configure the card with the appropriate software.
The card was not installed correctly.	Reseat the card and make certain that its jumpers are configured appropriately.

Printer Problems

 The printer will not turn on.

Probable Cause	Solution
The printer is not plugged in.	Check the power cable. Make certain it is plugged into a live power source.
The printer is not turned on.	Make certain the printer's power switch is depressed or set to the On position. If power is applied to the printer, the green power LED should be illuminated.
The printer is defective.	Try another printer if one is available.


 The printer is turned on but will not print.

Probable Cause	Solution
The printer is not connected to the system.	Check the data cable between the printer and the system. Make certain it is connected to the proper port. Check the connector and cable for bent or broken pins.
The printer is not designated as the default printer.	If the printer to which you are trying to print is not the default printer, make certain you have selected it through the application's printer setup function.
The printer has not been added to the system.	From the Printers window (Start Settings Printers), double-click Add Printer . Follow the directions for adding the new printer.

 The printer prints garbled text.

Probable Cause	Solution
The wrong driver is being used for the selected printer.	From the Printers window (Start Settings Printers), select the printer. From the File menu, click Properties . Make certain the printer is using the right printer driver. If not, install the correct one.


System Problems

 The system will not start up.

Probable Cause	Solution
The system is not connected to an AC outlet.	Check the power cable(s) and make certain it is connected to an AC power source.
Voltage selection switch not set correctly.	Make certain the voltage selection switch reflects the correct power source.
One power supply is not supplying power to the load share module.	Verify both power cords are plugged into working AC outlets. Verify both power cords are fully plugged into their AC-IN connectors on rear of computer. Verify both power supplies are set to the correct voltage range (115-V AC or 230-V AC). Verify both power supplies are turned on. Replace defective power supply.

 The keyboard doesn't work.

Probable Cause	Solution
A key was depressed while the system was starting up.	Clear the sticking key, then turn off the system, wait for a few seconds, and then turn the system back on.
The keyboard is not plugged in or connected properly.	Check the cable. Make certain it is plugged in correctly.
Something spilled into the keyboard.	Turn off the system. Turn the keyboard upside down to let it dry before turning the system back on.
The keyboard is defective.	Try a keyboard you know is working.

 The mouse doesn't work.

Probable Cause	Solution
The mouse is not plugged in or connected properly.	Check the cable. Make certain it is plugged in correctly.
The mouse driver did not load when the system booted.	Load the appropriate mouse driver manually or contact Technical Support.
The mouse is defective.	Try a mouse you know is working.

Video Problems

 The system is running but there is no display.

Probable Cause	Solution
The monitor is not turned on.	Make certain the monitor is plugged in and turned on. If power is applied to the monitor, the green power LED should illuminate.
The monitor's data cable is not connected.	Make certain the monitor's data cable is connected to the video controller on the back of the system.
The connector or cable is damaged.	Check the connector and cable for bent or damaged pins.
The monitor is defective.	Connect a working monitor to the computer.
The monitor's brightness and contrast controls are turned down.	Adjust the brightness and contrast knobs to the center position.
The video card is not seated correctly.	Open the system and reseat the video card.
The video card is not compatible with the system.	PCI video cards must be compatible with the system.

 **Note:**

Your system board may have a built-in video adapter, so there may not be a video adapter to remove and replace.

 The text on the display is dim or difficult to read.

Probable Cause	Solution
The monitor's brightness and contrast controls are turned down.	Adjust the brightness and contrast knobs until the text becomes clear.
Sunlight is glaring off the display.	Position the monitor away from the sun or window.
The CRT may be old.	Replace the monitor.

 The color monitor displays everything in black and white.

Probable Cause	Solution
The system was turned on before the monitor.	Make certain the monitor is turned on, and then restart the system.
The display type is set incorrectly.	From the Control Panel window (Start Settings Control Panel), double-click Display , set the display to the appropriate monitor type, and then reboot the system.

 The displayed characters are garbled.

Probable Cause	Solution
The video cable is damaged.	Check the cable and connectors for bent pins or broken wires.
The video card has failed.	Try another video card.
The display setup is incorrect.	From the Control Panel window (Start Settings Control Panel), double-click Display and check the settings. The correct video type should be selected, along with a supported resolution. Check your monitor and video controller documentation for details.

 The video is distorted.

Probable Cause	Solution
The monitor's controls are not properly adjusted.	Adjust the monitor controls until the text becomes clear. (See your monitor documentation for more information.)
The connector or cable is damaged.	Check the connector and cable for bent or damaged pins.
The surge protector or UPS is damaged.	Disconnect the monitor power cable and connect it directly to the power source.

Probable Cause	Solution
The monitor is too close to a source of electrical interference.	Move the monitor away from sources of electrical interference, such as televisions, unshielded speakers, microwaves, fluorescent lights, and metal beams or shelves.
The monitor needs to be degaussed.	Turn off the computer and monitor and leave them off for at least a half hour, and then restart the system.

Error Messages

This section lists common error messages that may be displayed on your monitor. These messages often indicate procedural errors such as an incorrect keystroke or a write-protected diskette. Some messages, however, may indicate a problem that requires you to consult the troubleshooting section of this manual.

Error Message	Solutions
Access denied.	<ul style="list-style-type: none">• Try saving to a new file or diskette.• Move the write-protection tab over the hole on the back of the diskette.
Bad command or file name.	<ul style="list-style-type: none">• Make certain you entered the right command.• Verify the specified drive and try it again.• If you are trying to exit MS-DOS to return to Windows, type exit and press ENTER.
Base memory [xxx] expansion.	This is an informational message only. No action is required.
Checking RAM on disk controller.	Your BIOS configuration is incorrect. Enter BIOS Setup and verify the parameter values.
CD-ROM is not recognized.	See "The CD-ROM drive is not recognized by the system." on page 44.
Data error.	Run ScanDisk on the reported disk.
Decreasing available memory.	Your BIOS configuration is incorrect. Enter BIOS Setup and verify the parameter values.
Diskette drive is not recognized.	See "The diskette drive is not recognized by the system." on page 49.
Diskette drive 0 seek to track 0 failed.	<ul style="list-style-type: none">• Enter BIOS Setup and verify the diskette drive parameters.• Check the diskette drive cables. Make certain Pin 1 on the cable aligns with Pin 1 on the connector.

Error Message	Solutions
Diskette drive reset failed.	<ul style="list-style-type: none"> • Enter BIOS Setup and verify the diskette drive parameters. • Check the diskette drive cables. Make certain Pin 1 on the cable aligns with Pin 1 on the connector.
Diskette read failed - strike F1 to retry boot.	<ul style="list-style-type: none"> • Make certain the boot disk contains the Command.com file. • Use the configuration utility (if applicable) to verify your drive or controller configuration. • Press F1 to try the boot again.
Gate A20 failure.	<p>You may have an XT keyboard connected to an AT system or vice versa. Make certain the keyboard is configured to work with the appropriate system. Some keyboards have a switch to select either AT or XT.</p>
Hard disk controller failure.	<ul style="list-style-type: none"> • Make certain the hard disk cable is properly connected. • Open the BIOS Setup program and verify that the correct drive type is selected.
Hard disk controller failure - press F1 to try re-boot.	<ul style="list-style-type: none"> • The drive controller may be defective. Press F1 to retry the boot. • Try running Fdisk and DOS Format. For more information, refer to your DOS documentation.
Insert bootable media device.	<ul style="list-style-type: none"> • See "The IDE drive is not recognized by the system." on page 46. • See "The SCSI drive is not recognized by the system." on page 46. • Backup your files as soon as possible.
Insufficient disk space.	<ul style="list-style-type: none"> • Check the free space on the disk volume. If the volume is full or almost full, remove unnecessary files.
Invalid configuration information...	<ul style="list-style-type: none"> • Enter BIOS Setup and verify the parameter values.

Error Message	Solutions
Invalid password.	<ul style="list-style-type: none"> • Enter your password again, making certain to enter it correctly. • If you do not know the password, you may need to reinstall the software you are trying to access. • Startup passwords are stored in BIOS. If this password has been set and is unknown, you may be able to reset the password via system board jumper settings. See “Enable/disable onboard BIOS” on page 16 for more information.
Keyboard clock line failure.	<ul style="list-style-type: none"> • Try a working keyboard. • Make certain the keyboard is compatible with the system. You may have to change the switch setting to AT. • Replace the keyboard chip.
Keyboard controller failure.	<ul style="list-style-type: none"> • Try a working keyboard. • Make certain the keyboard is compatible with the system. You may have to change the switch setting to AT. • Replace the keyboard chip.
Keyboard controller failure.	<ul style="list-style-type: none"> • Try a working keyboard. • Make certain the keyboard is compatible with the system. You may have to change the switch setting to AT. • Replace the keyboard chip.
Keyboard not detected.	<ul style="list-style-type: none"> • See “The keyboard doesn’t work.” on page 52. • Turn off the system and check the keyboard cable.
Keyboard stuck key failure.	<ul style="list-style-type: none"> • Remove any objects that may be resting on the keyboard, and then restart the system. • Check for sticky keys. Clean the keyboard if necessary.

Error Message	Solutions
Memory errors were detected while the system powered up.	See "Memory errors were detected during system start up." on page 47.
Memory size error.	Enter BIOS Setup and save the memory configuration.
Non-system disk or disk error.	<ul style="list-style-type: none"> • Eject the diskette and press ENTER. • If the diskette is bootable, check it for errors.
Not enough memory.	Close all programs that are not currently in use.
Print queue is full.	<ul style="list-style-type: none"> • Wait until the current print job has completed before sending another print job. • If you receive this error often, you need to add memory to the printer.
Printer is out of paper.	<ul style="list-style-type: none"> • Add paper to the printer. • Make certain the printer is online.
Required parameter missing.	<ul style="list-style-type: none"> • Make certain you entered the right command. • If you are trying to exit MS-DOS to return to Windows, type exit and press ENTER.
Syntax error.	<ul style="list-style-type: none"> • Make certain you entered the right command. • If you are trying to exit MS-DOS to return to Windows, type exit and press ENTER.
Time and date not set.	Enter BIOS Setup to set the system's date and time.
Write protect error.	Move the write-protection tab over the hole on the back of the diskette.



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Specifications

The following specifications are for the standard configuration; your system may contain optional equipment. All specifications are subject to change without notice or obligation.

Summary	Supports Pentium® microprocessors operating at 166 MHz to 233 MHz. Features LPX form factor, Socket 7 Pentium OverDrive® processor socket, and switchless onboard regulator for Intel Pentium and MMX-ready processors
Main Memory	Two 168-pin SDRAM/EDO DIMM sockets, support for up to 256 MB of SDRAM or Extended Data Out (EDO) memory
Second Level Cache Memory	256K Pipeline Burst SRAM soldered to the system board
Chipset and PCI/IDE Interface	Intel 82430TX PCIset ®, integrated PCI bus mastering controller, PIIX4 ®, Two UltraDMA-33 Bus Master IDE® interfaces, real-time clock ®, support for two Universal Serial Bus (USB)® interfaces, support for up to four IDE devices
Mgt. Extension Hardware	LM78 voltage, temperature, fan, and chassis monitor, LM75 Processor Temperature monitor (optional)
I/O Features	SMC FDC37C67X ACPI compliant Super I/O controller, PC97 compliant, PnP-compatible register set, Auto Power Management, shadowed write-only registers for ACPI compliance, 2.88-MB super floppy controller, keyboard and mouse controller, serial port, multi-mode™ parallel port
Expansion Slots	E-1000: 1 ISA and 1 PCI, or 2 PCI E-1000N: 2 PCI
Audio Subsystem	Crystal 4236B codec audio component
Graphics Subsystem	Integrated S3 Trio64V+/V2 graphics controller, VESA feature connector (optional)

LAN System	AMD Am79C971 10/100 LAN controller, ICS1890 Single Chip Physical Layer Interface, Magic Packet support, two levels of power management (Sleep and Snooze), onboard boot ROM
Other Features	Plug-and-Play-compatible, support for Advanced Power Management, ACPI and PC97 compliant
Case	Low Profile Desktop - LPX Form factor
Dimensions	3.5"H x 13.8"W x 15.7"D
Bays	1 - External 5.25" and 1 - External (Std.) 3.5" 1 - Internal Half Height

Regulatory Compliance Statements

American Users



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 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 or television reception. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio and 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:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected

Consult the dealer or an experienced radio/TV technician for help.

Accessories: This equipment has been tested and found to comply with the limits of a Class B digital device. The accessories associated with this equipment are as follows:

- Shielded video cable
- Shielded power cord.

These accessories are required to be used in order to ensure compliance with FCC rules.

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de Classe B prescrites dans le règlement sur le brouillage radioélectrique édicté par Industrie Canada.

Caution!

The Federal Communications Commission warns the users that changes or modifications to the unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Canadian Users:



Attention!

Couper le courant avant l'entretien.

This Information Technology Equipment has been tested and found to comply with the following European directives:

[i]EMC Directive 89/336/EEC amending directive 92/31/EEC & 93/68/EEC as per

-EN 50081-1:1992 according to

EN 55022:1995 Class B

EN 61000-3-2:1995 or EN 60555-2:1986

EN 61000-3-3: 1995

-EN50082-1:1992 according to

EN 61000-4-2:1995 or IEC 801-2:1984

ENV 50140:1994 or IEC 801-3:1984

EN 61000-4-4:1988 or IEC 801-4:1998

[ii]Low Voltage Directive (Safety) 73/23/EEC as per EN 60950: 1992

This equipment is in the Class 2 category (Information Technology Equipment to be used in a residential area or an adjacent area thereto) and conforms to the standards set by the Voluntary Control Council for Interference by Information Technology Equipment aimed at preventing radio interference in such residential area.

When used near a radio or TV receiver, it may become the cause of radio interference. Read instructions for correct handling.

この装置は、第二種情報処理装置（住宅地域又はその隣接した地域において使用されるべき情報処理装置）で住宅地域での電波障害防止を目的とした情報処理装置等電波障害自主規制協議会(VCCI)基準に適合しております。

しかし、本装置をラジオ、テレビジョン受信機に近接してご使用になると、受信障害の原因となることがあります。

取扱説明書に従って正しい取り扱いをして下さい。

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to the Australian/New Zealand standard AS/NZS 3548 set out by the Spectrum Management Agency.

European Users:



Japanese Users:



Australian and New Zealand Users:





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