







# E-4200 User's Guide

Part #8503808

MAN SYS US E-4200 USR GDE R0

10/98

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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.
User's Guide	Names of publications and files are printed in italic.
★ Important!	An important note informs you of special circumstances.
Caution!	A caution warns you of possible damage to equipment or loss of data.
₩arning!	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 computer is turned off, a small amount of electrical current still runs through the computer. Always unplug the computer from the electrical outlet before cleaning the system or opening the computer cover. (Follow the cleaning instructions in your user's guide.)
- 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 computer 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 computer ventilation slots.
- Use the voltage setting for your area. The voltage selector switch is set at the factory to the correct voltage.
- As a safety feature, this system is equipped with a 3-wire power cord to ensure that the product is properly grounded when in use. The plug will only fit into a grounding-type outlet. If you are unable to insert the plug into an outlet, contact an electrician to install the appropriate 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.

Refer all servicing of those compartments to qualified service personnel.

- 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 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 can be used to:

- Restore your Windows 95 or Windows 98 operating system
- Install hardware drivers for Windows 95, Windows 98, and Windows NT
- Reinstall selected software applications, such as LANDesk Client Manager or McAfee Virus Scan
- View or install component online documentation

Instructions for each operating system are provided with the System Restoration CD.

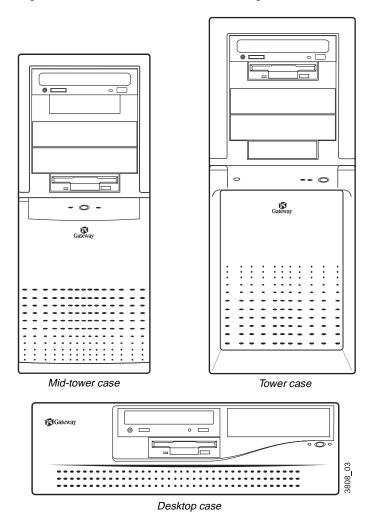


# **Getting Started**

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# Identifying your computer case

Your computer case comes in three models: desktop, mid-tower and tower.



# Setting up your system

Follow the instructions on the poster that came with your system for assembling your system. Before you assemble your system, prepare a safe working environment for it.

- Provide a clean, flat, and stable surface for your system. Allow at least 12 inches at the rear of the computer for cabling and air circulation.
- Obtain a grounded (three-prong) AC surge-protected power strip.
   A surge-protected power strip helps protect against AC line spikes.
- Protect your system from extreme temperature and humidity. Do not expose your system to direct sunlight, heater ducts, or other heat-generating objects.
- Keep your computer away from equipment that generates magnetic fields, such as unshielded stereo speakers. Even a telephone placed too close to the computer may cause interference.
- Plug the computer into a wall outlet or power strip that is easily
  accessible. When you turn off the computer with the power button,
  some electricity still flows through the computer. To remove all
  power from the computer, you need to unplug it.



Keep the product carton and packing material, in case you need to send the system out for repair. If you return your system to the factory in different packaging, your warranty may be void.



#### Caution!

Make sure your computer and peripherals are turned off and unplugged from the power outlet when you connect peripherals to the computer.

# Starting your system

Before you start your system for the first time:

- Check that the voltage selector switch on the back of the computer is still set to the correct voltage for your area. This switch is set at the factory to the correct voltage (see "Rear panel features" on page 16 for voltage selector switch location).
- Make sure all cables are firmly connected to the proper cable ports on the rear panel of the computer.
- Make sure the computer and monitor are plugged into an AC outlet or power strip.

#### To start the system

- 1. If you have connected the system components to a power strip, make sure all the system components are turned off, and then turn on the power strip.
- 2. Press the power button on the monitor to turn on the monitor.
- **3.** Press the power button on the computer to turn on the computer. The power light-emitting diode (LED) on the front panel is lit when the computer's power is on.
- **4.** Turn on any other components connected to the computer, such as speakers, a printer, or a scanner.
- **5.** If nothing happens when you turn on the system:
  - Recheck the power cables to see that they are securely plugged in and that your power strip (if you are using one) is plugged in and turned on.
  - Make sure the monitor is connected to the computer, plugged into the power strip or AC outlet, and turned on. You may also need to adjust the brightness and contrast controls on the monitor.

Wait until the startup procedure is finished before loading a diskette in the diskette drive, or the computer may search the diskette for startup information.

For more troubleshooting information, see the "Troubleshooting" chapter in Maintaining and Troubleshooting Your E-4200 System.

#### Understanding the Power-On Self-Test

When you turn on your computer, the power-on self-test (POST) routine checks the system memory and components. To see this information on the screen, press TAB during POST. Press Esc to bypass the remaining memory count.

The system displays an error message if POST finds any problems. Write down the error message that appears. See the "Troubleshooting" chapter of Maintaining and Troubleshooting Your E-4200 System for a description of error messages.

## Completing the operating system setup

The first time you start your computer, the operating system takes a few minutes to set up.

Refer to your software documentation for specific instructions on what to do after the computer starts.

#### To complete the operating system setup

- 1. After the computer starts, start-up wizard opens. Click Next to continue.
- **2.** Type the requested information in the appropriate text boxes. When you have finished entering the information, click Next.
- 3. At the screen prompting you to enter your product number, refer to the Certificate of Authenticity located on the front cover of your Windows manual.

- **4.** Continue following the instructions and selecting options in the start-up wizard dialog boxes, clicking **Next** to move through the dialog boxes until the wizard tells you to restart your computer.
  - Most of the dialog boxes that open in the start-up wizard have a button that takes you back to previous dialog boxes in case you need to change or correct the information you typed.
- **5.** Restart your system. The setup is complete.

# Using power management

The Windows 95 and Windows 98 operating systems (together with a supporting system board and BIOS capabilities) provide many power saving options. You can set when you want to have the hard drive spin down, if the monitor should go into a lowered power state, and other options.

Consult your Windows Help or operating system documentation for more information about using power management.

#### Using Suspend Mode

Suspend, available in Windows 95, is a power management feature that lets you leave your computer on in a power-saving mode. When your computer is in Suspend, it appears to be off. However, it continues to receive incoming faxes and perform automatic tasks you have scheduled. When you exit Suspend, the computer returns to the state it was in without going through the normal startup routine.

#### To put your system into Suspend

- **1.** Save and close any open files to prevent data loss in the event of a power failure.
- 2. Click Start, and then click Suspend on the Start menu.
- **3.** The power LED turns amber and the monitor becomes dark, indicating that the computer has entered Suspend mode.

#### To take your system out of Suspend

- 1. Press any key on the keyboard or move the mouse.
- 2. The power LED turns green, and your computer returns to the state it was in before it entered Suspend. However, if your system is part of a Novell network, putting your computer in Suspend disconnects you from your network connection. To reestablish your network connection:
  - A. Click Start and then click Shut Down.
  - B. From the Shutdown Windows options, select Close all programs and log on as a different user. Selecting that option bypasses the restart process and displays your network logon dialog box.
  - **C.** Enter your password and click **OK**. Your logon script runs and your network connections are reestablished.



If your system is part of a Microsoft network, putting your computer in sleep mode does not disconnect you from your network connection.



#### ╆ Important!

If you have a Novell network and you put your system in Suspend mode, it will disconnect from the network.

#### ⚠ Warning!

When you turn the computer off by pressing the power button, some electric current still flows through the computer. Before opening the computer case or connecting or removing any peripherals, turn off the computer and then unplug the power cord from the electrical outlet.

# **Turning off your system**

Every time you turn off your system, shut down the operating system first. You may lose data if you do not follow the proper procedure.

#### To turn off your system in Windows 95

- 1. On the Taskbar, click Start.
- 2. Click Shut Down.
- 3. Select Shut down the computer?
- **4.** Click **Yes**. The computer turns off.
- **5.** Turn off the monitor and peripherals.

#### To turn off your system in Windows NT and Windows 98

- 1. On the Taskbar, click Start.
- 2. Click Shut Down (Windows 98) or Shut down the computer? (Windows NT).
- 3. Select Shut Down.
- **4.** Click **OK**. The computer turns off. If you see a message saying **It is now safe to turn off your computer** (Windows NT only), press your computer's power button to turn off the computer.
- **5.** Turn off the monitor and peripherals.

# Resetting your computer

If your computer does not respond to keyboard or mouse input, you may have to close a program or programs that may not be responding. If closing nonresponsive programs does not restore your computer to normal operation, you may have to reset the system.

#### ★ Important!

The reset option is available on the Tower computer only.

#### To reset your system in Windows 95 or Windows 98

- **1.** Press CTRL+ALT+DEL. A window opens that enables you to close a program that is not responding.
- **2.** Highlight a program that displays a not-responding message and click **End Task**. Follow any additional screen prompts to close the program.
- **3.** If the computer does not respond, press and hold the power button for 5 seconds.
- **4.** The power indicator light turns off, indicating that the computer is turned off.
- **5.** Press and release the power button again to turn on the system.
- **6.** After displaying some of the startup screens, a message appears asking if you would like to run ScanDisk.
- **7.** Press any key to run ScanDisk. Follow the on-screen instructions. When the checks are finished, Windows will start.

#### To reset your system in Windows NT

- **1.** Press CTRL+ALT+DEL. A window opens that enables you to close a program that is not responding.
- 2. Click Task Manager, select the program that is not responding, and click End Task.
- **3.** If the computer does not respond, press and hold the power button for 5 seconds.

- **4.** The power indicator light turns off, indicating that the computer is turned off.
- **5.** Press and release the power button again to turn on the system.
- **6.** As a part of the regular startup process, a program to check the disk status will automatically run. When the checks are finished, Windows will start.



# System Features

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# Standard features

The following features are standard in the E-4200 system:

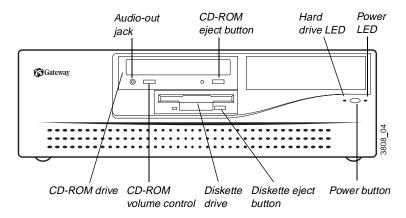
- Intel<sup>®</sup> Pentium<sup>®</sup> II processor
- Three DIMM sockets that support up to 384 megabytes (MB) of Synchronous Dynamic Random Access Memory (SDRAM)
- 512K of L2 cache
- LM81 management
- Intel 440 BX chipset
- Three PCI slots, one shared PCI/ISA slot, and one ISA slot
- 1.44-MB 3.5-inch diskette drive
- PIIX4E controller
- Keyboard port, mouse port, two serial ports, parallel port, and two USB ports
- Phoenix BIOS
- 200-watt power supply
- 10/100 Mbit per second Ethernet network support
- AGP video with Synchronous Graphic Random Access Memory (SGRAM)

# Front panel features

The following front panel features are included with your desktop, mid-tower, and tower computers.

#### Desktop front panel

The desktop front panel includes the following features:



**Audio-out jack:** Connects headphones or powered speakers that enable you to listen to an audio CD (directly from the CD-ROM drive).

**CD-ROM eject button:** Ejects a CD from the CD-ROM drive.

**Hard drive LED:** Lights when the hard drive is active.

**Power LED:** Lights when the computer is turned on. The green light indicates your computer is using full power. The amber light indicates your computer is in low power mode.

**Power button:** Turns the computer on and off.

**Diskette eject button:** Ejects diskettes from the diskette drive.

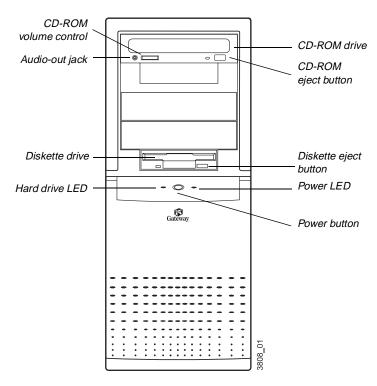
**Diskette drive:** Writes to and reads from 3.5-inch, 1.44 MB diskettes.

**CD-ROM volume control:** Controls the volume of an audio CD.

**CD-ROM drive:** Plays data or audio CDs.

#### Mid-tower front panel

The mid-tower case front panel includes the following features:



**CD-ROM drive:** Plays data or audio CDs.

**CD-ROM eject button:** Ejects a CD from the CD-ROM drive.

**Diskette eject button:** Ejects diskettes from the diskette drive.

**Power LED:** Lights when the computer is turned on. The green light indicates your computer is using full power. The amber light indicates your computer is in low power mode.

Power button: Turns the computer on and off.

**Hard drive LED:** Lights when the hard drive is active.

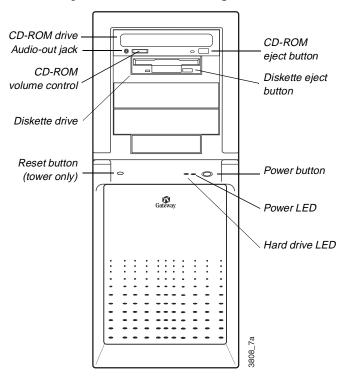
**Diskette drive:** Writes to and reads from 3.5-inch, 1.44 MB diskettes.

Audio-out jack: Connects headphones or powered speakers that enable you to listen to an audio CD (directly from the CD-ROM drive).

**CD-ROM volume control:** Controls the volume of an audio CD.

## Tower front panel

The tower case front panel includes the following features:



**CD-ROM eject button:** Ejects a CD from the CD-ROM drive.

**Diskette eject button:** Ejects diskettes from the diskette drive.

Power button: Turns the computer on and off.

**Power LED:** Lights when the computer is turned on. The green light indicates your computer is using full power. The amber light indicates your computer is in low power mode.

**Hard drive LED:** Lights when the hard drive is active.

**Reset button:** Restarts the system.

**Diskette drive:** Writes to and reads from 3.5-inch, 1.44 MB diskettes.

**CD-ROM volume control:** Controls the volume of an audio CD.

**Audio-out jack:** Connects headphones or powered speakers that enable you to listen to an audio CD (directly from the CD-ROM drive).

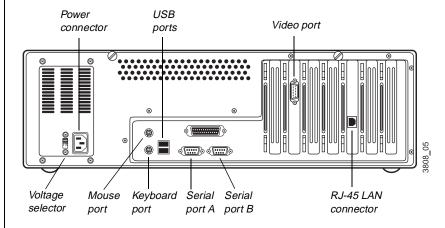
**CD-ROM drive:** Plays data or audio CDs.

# Rear panel features

The following rear panel features are included with your desktop, mid-tower, and tower computers.

#### Desktop rear panel

The desktop case rear panel includes the following I/O ports, connectors, and switches:



**Power Connector:** Connects the computer power cord. The other end of the power cord plugs into an AC outlet or power strip.

**USB ports:** Connect external Plug-and-Play devices that are automatically configured when they are plugged into the computer through one of these ports. Some USB devices are keyboards, pointing devices, and monitors.

Video port: Connects the monitor's interface cable.

**RJ-45 LAN connector:** Connects a cable that connects the computer to a network.

**Serial ports:** Connect serial devices, such as musical instrument digital interface (MIDI) devices.

**Keyboard port:** Connects a Personal System/2 (PS/2) compatible keyboard.

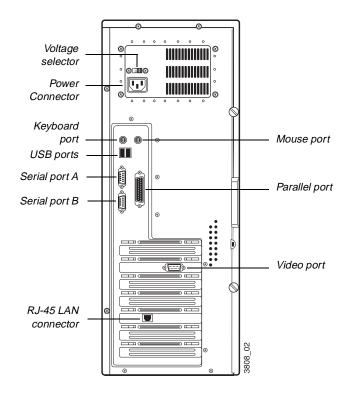
**Mouse port:** Connects a PS/2-compatible mouse.

**Parallel port:** Connects a printer or other parallel device.

Voltage selector: Sets the voltage for your area, either 115 V or 230 V.

#### Mid-tower rear panel

The mid-tower case rear panel includes the following I/O ports, connectors, and switches:



Mouse port: Connects a PS/2-compatible mouse.

**Parallel port:** Connects a printer or other parallel device.

Video port: Connects the monitor's interface cable.

**RJ-45 LAN connector:** Connects a cable that connects the computer to a network.

**Serial ports:** Connect serial devices, such as musical instrument digital interface (MIDI) devices.

**USB ports:** Connect external Plug-and-Play devices that are automatically configured when they are plugged into the computer through one of these ports. Some USB devices are keyboards, pointing devices, and monitors.

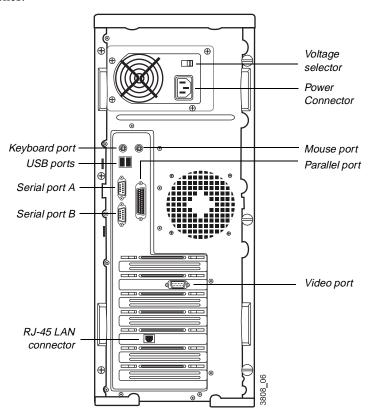
Keyboard port: Connects a Personal System/2 (PS/2) compatible keyboard.

Power Connector: Connects the computer power cord. The other end of the power cord plugs into an AC outlet or power strip.

Voltage selector: Sets the voltage for your area, either 115 V or 230 V.

#### Tower rear panel

The tower case rear panel includes the following I/O ports, connectors, and switches:



**Voltage selector:** Sets the voltage for your area, either 115 V or 230 V.

**Power Connector:** Connects the computer power cord. The other end of the power cord plugs into an AC outlet or power strip.

**Mouse port:** Connects a PS/2-compatible mouse.

**Parallel port:** Connects a printer or other parallel device.

**Video port:** Connects the monitor's interface cable.

**RJ-45 LAN connector:** Connects a cable that connects the computer to a network.

**Serial ports:** Connect serial devices, such as musical instrument digital interface (MIDI) devices.

**USB ports:** Connect external Plug-and-Play devices that are automatically configured when they are plugged into the computer through one of these ports. Some USB devices are keyboards, pointing devices, and monitors.

**Keyboard port:** Connects a Personal System/2 (PS/2) compatible keyboard.



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# Maintaining your system

Your system and its components need regular maintenance. Some programs that help maintain the integrity of the hard disks in your system come as part of your operating system. The following sections contain information about maintaining your system.

#### Maintaining the hard disk

Hard disks need regular maintenance because running the system software divides files, creates spaces between data, and otherwise decreases hard disk performance. Windows 95 and Windows 98 provide maintenance tools that help prevent possible hard disk problems. The two most important tools for hard disk maintenance are the programs ScanDisk and Disk Defragmenter. Windows NT has a similar maintenance tool called Check Disk. To use these programs, consult your Windows Help or the operating system documentation.

#### Hard disk partition information

The hard drive shipped with your Windows 95 or Windows 98 system is partitioned using file allocation table (FAT) 32.

The first 2 gigabytes (GB) of the hard drive shipped with your Windows NT system are partitioned as FAT16. The rest of the space on the drive is partitioned as NT file system (NTFS). Any other hard drives shipped from the factory with your system are partitioned as NTFS.

FAT16, FAT32, and NTFS are different methods the operating system uses to locate files on a hard drive. NTFS supports large drive sizes, but NTFS partitions cannot be viewed with Microsoft® disk operating system (MS-DOS®) diagnostic utilities, like fdisk. See your Windows NT manual for more information on NTFS.

#### Installing LANDesk Client Manager

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.

#### To install LANDesk Client Manager

- 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 Help for any LANDesk concerns.

# Cleaning your system

Your system needs to be cleaned occasionally. The following sections contain information about caring for the parts of your system.

## Cleaning the mouse

If the mouse pointer on the screen moves erratically when you move the mouse, dirt is probably on the rollers inside the mouse.

#### To clean the mouse

- 1. Turn off the computer.
- 2. Turn your mouse upside down and remove the mouse ball cover.

- **3.** Cup your hand under the mouse and turn your mouse right-side up. The mouse ball should drop into your hand. If it does not, gently shake the mouse until the ball drops out of the socket.
- **4.** Once the mouse ball is free, use adhesive tape to pick up any dust or lint on its surface and wipe away dirt or lint inside the ball socket. You can also blow into the socket to remove dirt and lint.
  - If foreign matter is trapped inside the socket or on the rollers, use a cotton swab dipped in isopropyl alcohol to loosen it. Let surfaces dry completely after cleaning.
- **5.** Return the mouse ball to the socket and replace the cover.

# Cleaning the keyboard

You should clean the keyboard occasionally to remove dust and lint particles trapped under the keys. The easiest way to do this is to blow trapped dirt from under the keys using an aerosol can of air with a narrow, straw-like extension.

If you spill liquid on the keyboard, turn off the computer and disconnect the keyboard. Turn the keyboard upside down to let the liquid drain out overnight before trying to use it again. If it fails to work after draining, contact Technical Support.

## Cleaning the monitor screen

Use a soft cloth and window cleaner to clean the monitor screen. Squirt a little cleaner on the cloth (never directly on the screen), and wipe the screen with the cloth.

## Cleaning the computer and monitor cases

Always turn off the computer and other peripherals before cleaning any components.

Use a damp lint-free cloth to clean the computer case, monitor case, keyboard, speakers, and other parts of your system. Avoid abrasive or solvent cleaners because they can damage the finish on your components.

#### Protecting against viruses

A virus is a program written with malicious intent for the purpose of creating havoc in a computer system. It attaches itself to executable files or boot sectors, so it can replicate and spread. Some viruses may only cause your system to beep or display messages or images on the screen. Other viruses are highly destructive and corrupt or erase the contents of your files or diskettes. To be safe, never assume any virus is harmless.

Viruses spread through direct contact with executable programs or boot sectors. Diskettes used in a contaminated system get a virus and transfer the virus when used in another system. A virus can also spread through programs downloaded from bulletin boards or the Internet.

#### To protect your system against viruses

- Obtain an antivirus program and scan your system regularly.
- Make backup copies of all files and write-protect the diskettes.
- Obtain all software from reputable sources and always scan new software for any viruses before installing files.

If you suspect your system has been infected, find and remove the viruses immediately using an antivirus program. Next, turn your system off and leave it off for at least 15 seconds before turning it back on. This is the only way to ensure the virus does not remain in your system RAM.



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# **Acronyms and abbreviations**

ASIC - Application specific integrated circuit

**BIOS** - Basic input/output system

**CMOS** - Complementary metal-oxide semiconductor

**DIMM** - Dual inline memory module

**DMI** - Desktop management interface

**DRAM -** Dynamic random access memory

**ECC** - Error correcting code

**FAT** - File allocation table

**GB** - Gigabyte

**IDE** - Integrated drive electronics

IRQ - Interrupt request line

**ISA** - Industry standard architecture

LAN - Local area network

**LED** - Light-emitting diode

MB - Megabyte

Mbps - Megabits per second

MIDI - Musical instrument digital interface

MHz - Megahertz

MS-DOS - Microsoft disk operating system

**NTFS** - NT file system

**POST** - Power-on self-test

**PS/2** - Personal System/2

**RAM -** Random-access memory

**ROM -** Read-only memory

**SCSI** - Small computer system interface

**SDRAM -** Synchronous dynamic random access memory

TCP/IP - Transmission control protocol/Internet protocol

V - Volt

## **Terms and definitions**

This list of terms should help you get acquainted with terms used in your computer's documentation and in your system software.

**Applications** - Software installed on your system. Sometimes called *programs*.

**BIOS** - Basic input/output system. The BIOS is software that is independent of any operating system. It enables the computer to communicate with the monitor, keyboard, and other peripheral devices without using programs on the hard disk.

The BIOS on your computer is flash BIOS, which means that is has been recorded on a memory chip that can be updated if needed.

**Boot -** To load the first software program (usually the operating system) that starts your computer. To perform a cold (or hard) boot, you turn the computer on when it is off. To perform a warm (or soft) boot, you reset the computer when it is already turned on.

**Boot disk** - A disk containing operating system programs required to start your computer. A boot disk can be a diskette, hard drive, or CD.

**Byte** - The basic unit of measure for computer memory. A character, such as a letter of the alphabet, uses one byte of memory. Each byte is made up of eight bits. Computer memory is often measured in kilobytes (1,024 bytes) or megabytes (1,048,576 bytes).

**Cache memory** - Cache is very fast memory that can be located in the processor. Cache reduces the average time required for the processor to get the data it needs from the main memory by storing recently accessed data in the cache.

**CMOS** memory - Complementary metal oxide semiconductor memory. CMOS memory is memory that is retained even when the computer is turned off. The Setup program settings and other parameters are maintained in CMOS memory.

**Default** - The option that the software or system uses when you have not made a choice yourself.

**Disc** - A compact disc (CD).

**Disk** - The device used by the computer to store and retrieve information. Disk can refer to a diskette or a hard disk.

**Diskette** - A removable disk, also called a floppy.

**Hard drive** - The drive installed inside your computer that stores all your system and data files. Depending on its configuration, the computer may have more than one hard drive. Each drive is assigned its own drive letter. If you have only one drive, its drive letter is C, and it is often called "the C drive."

I/O - Input/output. Refers to devices, such as printers, whose purpose is to enter data into a computer or extract data from a computer. An I/O device is accessed through an I/O address: a location in memory reserved for the device to exchange information between itself and the rest of the computer.

**IRQ** - Interrupt request line. The IRQ is a hardware line that a device uses to signal the processor when the device needs the processor's services. The number of IRQs is limited by industry standards.

**Operating system -** A program that supervises the computer's operation, including handling I/O, networking and connectivity, and device drivers.

**Path** - A sequence of information that directs the system to the file it needs. For example, **c:\windows\bubbles.bmp** is the path to a graphics file on your system. The **c:** tells the system it is on the C hard drive, the **\windows** tells the system it is in the windows folder, and **bubbles.bmp** is the file.

**Pixel -** A pixel is an individual dot in a graphic displayed on your computer. Pixels are so close together that they look as though they are connected.

**POST -** Power-on self-test. POST tests your computer's components whenever you turn on the computer.

**Programs -** Software installed on your system. Programs are sometimes called *applications*.

**RAM** - Random access memory. RAM is the computer's system memory. You can write to and read from RAM. Information stored in RAM is temporary and is erased when the computer is turned off.

**Refresh rate** - The refresh rate is the rate at which the image on the monitor screen is rewritten to the screen. A fast refresh rate helps keep the image from flickering.

**Resolution** - The resolution is the sharpness or clarity of the image on the monitor screen. Resolution is measured by the number of pixels the screen can display. For example, a resolution of 800x600 means that the screen can display 800 pixels in a row and can display 600 rows. The more pixels displayed, the higher the resolution and the clearer the images.

**ROM** - Read-only memory. Permanent computer memory dedicated to a particular function. For example, the instructions for starting the computer when you first turn on power are contained in ROM. You cannot write to ROM.

#### American Users:



### 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:



# Regulatory compliance statements

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.

### 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.

#### 雷波隨害について

この装置は、情報処理装置等電波障害自主規制協議会(VCCI)の基準に基づく第二種情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置をラジオやテレビジョン受信器に近接してご使用になると、受信障害を引き起こすことがあります。

取扱説明書に従って正しい取り扱いをしてください。

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.

#### Caution!

Disconnect power before servicing.

European Users:



### Japanese Users:



Australian and New Zealand Users:



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