Dell™ Inspiron™ 3800

REFERENCE AND TROUBLESHOOTING GUIDE

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Safety Instructions

Use the following safety guidelines to help protect your computer from potential damage and to help ensure your own personal safety.

When Using Your Computer

As you use your computer, observe the following safety guidelines.

CAUTION: Do not allow your portable computer to operate with the base resting directly on exposed skin. With extended operation, heat can potentially build up in the base. Allowing sustained contact with the skin could cause discomfort or, eventually, a burn.

- Do not attempt to service the computer yourself. Always follow installation instructions closely.

- Do not carry a battery pack in your pocket, purse, or other container where metal objects (such as car keys) could short-circuit the battery terminals. The resulting excessive current flow can cause extremely high temperatures and may result in damage from burns.

- Be sure that nothing rests on your AC adapter's power cable and that the cable is not located where it can be tripped over or stepped on.

- Place the AC adapter in a ventilated area, such as a desk top or on the floor, when you use it to run the computer or to charge the battery. Do not cover the AC adapter with papers or other items that will reduce cooling; also, do not use the AC adapter inside a carrying case.

- Do not use your computer in a wet environment, for example, near a bathtub, sink, or swimming pool or in a wet basement.

- Do not push objects into air vents or openings of your computer. Doing so can cause fire or electric shock by shorting out interior components.

- Use only the AC adapter and batteries that are approved for use with this computer as indicated in this document. Use of another type of battery pack or AC adapter may risk fire or explosion.

- Before you connect the computer to a power source, ensure that the voltage rating of the AC adapter matches that of the available power source:

  — 115 volts (V)/60 hertz (Hz) in most of North and South America and some Far Eastern countries such as South Korea and Taiwan

  — 100 V/50 Hz in eastern Japan and 100 V/60 Hz in western Japan

  — 230 V/50 Hz in most of Europe, the Middle East, and the Far East

- To help prevent electric shock, plug the AC adapter and peripheral power cables into properly grounded power sources. These cables are equipped with 3-prong plugs to help ensure proper grounding. Do not use adapter plugs or remove the grounding prong from a cable. If you must use an extension cable, use a 3-wire cable with properly grounded plugs.

- If you use an extension cable with your AC adapter, ensure that the total ampere rating of the products plugged in to the extension cable does not exceed the ampere rating of the extension cable.

- To remove power from the computer, turn it off, remove the battery pack, and disconnect the AC adapter from the electrical outlet.

- If your computer includes an integrated or optional (PC Card) modem, disconnect the modem cable during an electrical storm to avoid the remote risk of electric shock from lightning via the telephone line.

- To help avoid the potential hazard of electric shock, do not connect or disconnect any cables or perform maintenance or reconfiguration of this product during an electrical storm.

- PC Cards may become very warm during normal operation. Use care when removing PC Cards after their continuous operation.

- Do not dispose of battery packs in a fire. They may explode. Check with local authorities for disposal instructions.

- When traveling, do not check the computer as baggage. You can put your computer through an X-ray security machine, but *never* put your computer through a metal detector. If you have the computer checked by hand, be sure to have a charged battery available in case you are asked to turn on the computer.

- When traveling with the hard-disk drive removed from the computer, wrap the drive in a nonconducting material, such as cloth or paper. If you have the drive checked by hand, be ready to install the drive in the computer. You can put the hard-disk drive through an X-ray security machine, but *never* put the drive through a metal detector.

- When traveling, do not place the computer in overhead storage compartments where it could slide around. Do not drop your computer or subject it to other mechanical shocks.

- Protect your computer, battery, and hard-disk drive from environmental hazards such as dirt, dust, food, liquids, temperature extremes, and overexposure to sunlight.

- When you move your computer between environments with very different temperature and/or humidity ranges, condensation may form on or within the computer. To avoid damaging the computer, allow sufficient time for the moisture to evaporate before using the computer.

  NOTICE: When taking the computer from low-temperature conditions into a warmer environment or from high-temperature conditions into a cooler environment, allow the computer to acclimate to room temperature before turning on power.

- When you disconnect a cable, pull on its connector or on its strain-relief loop, not on the cable itself. As you pull out the connector, keep it evenly aligned to avoid bending any connector pins. Also, before you connect a cable make sure both connectors are correctly oriented and aligned.

- Handle components with care. Hold a component such as a memory module by its edges, not its pins.

- When removing a memory module from the system board or disconnecting a peripheral device from the computer, wait 5 seconds after turning off the computer before removing the memory module or disconnecting the device to help avoid possible damage to the system board.

- Before you clean your computer, turn it off, unplug it from its power source, and remove the battery pack(s).

- Clean your computer with a soft cloth dampened with water rather than with liquid or aerosol cleaners.

- Clean the display with a soft, clean cloth and commercial window cleaner that does not contain wax or abrasives. Apply the cleaner to the cloth; then stroke the cloth across the display in one direction, moving from the top of the display to the bottom. If the display contains grease or some other contaminant, use isopropyl alcohol instead of commercial window cleaner.

- If your computer gets wet or is damaged, follow the procedures described in Chapter 3, "Troubleshooting." If, after following these procedures, you confirm that your computer is not operating properly, contact Dell Computer Corporation. (See Chapter 5, "Getting Help," for the appropriate telephone number.)
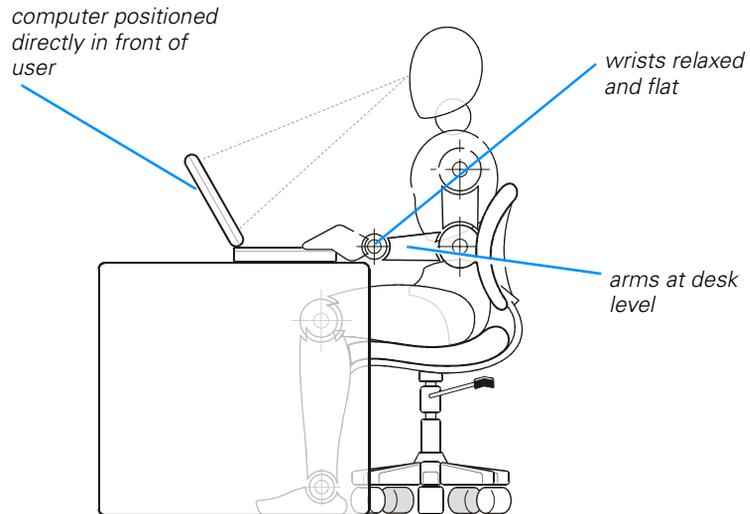
Ergonomic Computing Habits

CAUTION: Improper or prolonged keyboard use may result in injury.

CAUTION: Viewing the display or external monitor screen for extended periods of time may result in eye strain.

computer positioned
directly in front of
user

wrists relaxed
and flat

arms at desk
level

For comfort and efficiency, observe the following ergonomic guidelines when setting up and using your computer:

• When setting up the computer for work, place it on a level surface.

• Position your computer directly in front of you as you work.

• Adjust the tilt of the computer's display, its contrast and/or brightness settings, and the lighting around you (such as overhead lights, desk lamps, and the curtains or blinds on nearby windows) to minimize reflections and glare on the display.

• When using an external monitor with your computer, set the monitor at a comfortable viewing distance (usually 510 to 610 millimeters [20 to 24 inches] from your eyes). Make sure the monitor screen is at eye level or slightly lower when you are sitting in front of the monitor.

• Use a chair that provides good lower-back support.

• Keep your forearms horizontal with your wrists in a neutral, comfortable position while using the keyboard, trackball, touch pad, or external mouse.

• Always use the palmrest with the keyboard, touch pad, or trackball. Leave space to rest your hands when using an external mouse.

• Let your upper arms hang naturally at your sides.

• Sit erect with your feet resting on the floor and your thighs level.

• When sitting, make sure the weight of your legs is on your feet and not on the front of your chair seat. Adjust your chair's height or use a footrest, if necessary, to maintain proper posture.

• Vary your work activities. Try to organize your work so that you do not have to type for extended periods of time. When you stop typing, try to do things that use both hands.

When Removing or Installing Memory Modules

Before removing or installing memory modules, perform the following steps in the sequence indicated.

NOTICE: The only time you should ever access the inside of your computer is when you are installing memory modules.

NOTICE: Wait 5 seconds after turning off the computer before disconnecting a peripheral device or removing a memory module to help prevent possible damage to the system board.

1. Turn off your computer and any attached peripherals.

2. Disconnect your computer and peripherals from the electrical outlets to reduce the potential for personal injury or shock. Also, disconnect any telephone or telecommunication lines from the computer.

3. Remove the main battery from the battery bay and, if necessary, the second battery from the media bay.

4. Ground yourself by touching the unpainted metal surface of the I/O panel on the back of the computer.

   While you work, periodically touch the I/O panel to dissipate any static electricity that might harm internal components.

Protecting Against Electrostatic Discharge

Static electricity can harm electronic components inside your computer. To prevent static damage, discharge static electricity from your body before you touch any of your computer's electronic components, such as a memory module. You can do so by touching an unpainted metal surface on the computer's I/O panel.

As you continue to work inside the computer, periodically touch an I/O connector to remove any static charge your body may have accumulated.

You can also take the following steps to prevent damage from electrostatic discharge (ESD):

- When unpacking a static-sensitive component from its shipping carton, do not remove the component from the antistatic packing material until you are ready to install the component. Just before unwrapping the antistatic packaging, be sure to discharge static electricity from your body.

- When transporting a sensitive component, first place it in an antistatic container or packaging.

- Handle all sensitive components in a static-safe area. If possible, use antistatic floor pads and workbench pads.

The following notice may appear throughout this document to remind you of these precautions:

NOTICE: See "Protecting Against Electrostatic Discharge" in the safety instructions at the front of this guide.

Preface

About This Guide

This guide is intended for anyone who uses a Dell portable computer. It can be used by both first-time and experienced computer users who want to learn about the features of the computer. This guide also provides basic troubleshooting procedures and instructions for using the Dell Diagnostics to test your computer and its components.

Summaries of the chapters and appendixes of this guide follow:

- Chapter 1, "Introduction," provides an overview of the computer features and a list of available upgrades.

- Chapter 2, "Options and Upgrades," describes the installation procedures for the options and upgrades available from Dell for your computer.

- Read Chapter 3, "Troubleshooting," for some initial checks and procedures that you can use to solve basic computer problems and for some general guidelines on analyzing software problems.

- Chapter 4, "System Software Solutions," provides detailed instructions for reinstalling system drivers and software.

- Chapter 5, "Getting Help," describes the help tools that Dell provides to assist you if you have a problem with the computer. It also explains how and when to call Dell for technical assistance.

- Appendix A, "Technical Specifications," is intended primarily as reference material if you are interested in learning more about the details of your computer.

- Read Appendix B, "Using the System Setup Program," to learn how to access the System Setup program, which allows you to change system settings, such as your computer's power conservation features.

- Appendix C, "System Messages," defines system messages and error codes.

- Appendix D, "Regulatory Notices," is for users who are interested in which regulatory agencies have tested and approved your computer.

- Appendix E, "Limited Warranty and Return Policy," describes the warranty for your Dell computer and the "Total Satisfaction" Return Policy.

Limited Warranty and Return Policy Information

Dell Computer Corporation ("Dell") manufactures its hardware products from parts and components that are new or equivalent to new in accordance with industry-standard practices.

For information about the Dell limited warranty and return policy, see Appendix E, "Limited Warranty and Return Policy."

Other Documents You May Need

Besides this *Reference and Troubleshooting Guide*, you may also receive one or more of the following documents with your computer.

*NOTE: Documentation updates are sometimes included with your computer to describe changes to your computer or software. Always read these updates **before** consulting any other documentation because the updates contain the latest information.*

- The *Dell-Installed Microsoft Windows 98 Setup Guide*, which describes how to set up the Microsoft Windows 98 operating system on your Dell computer.

- Microsoft Windows system documentation is included if you ordered your operating system from Dell. This documentation describes how to configure and use your operating system software.

- Documentation is included with any options you purchase separately from your computer. This documentation includes information that you need to configure and install these options in your Dell computer.

- "Readme" files may be installed on your hard-disk drive to provide last-minute updates about technical changes to your computer or advanced technical reference material intended for experienced users or technicians.

Notes, Notices, and Cautions

Throughout this guide, blocks of text may be accompanied by an icon and printed in bold type or in italic type. These blocks are notes, notices, and cautions, and they are used as follows:

NOTE: A NOTE indicates important information that helps you make better use of your computer system.

NOTICE: A NOTICE indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

CAUTION: A CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

Typographical Conventions

The following list defines (where appropriate) and illustrates typographical conventions used as visual cues for specific elements of text throughout this document:

- *Interface components* are window titles, button and icon names, menu names and selections, and other options that appear on the monitor screen or display. They are presented in bold.

  Example: Click **OK**.

- *Keycaps*, the labeling that appears on the keys on a keyboard, are enclosed in angle brackets.

  Example: <Enter>

- *Key combinations* are series of keys to be pressed simultaneously (unless otherwise indicated) to perform a single function.

  Example: <Ctrl><Alt><Enter>

- *Commands* presented in lowercase bold are for reference purposes only and are not intended to be typed at that particular point in the discussion.

  Example: "Use the **setup** command to . . . ."

  In contrast, commands presented in the Courier New font are intended to be typed as part of an instruction.

  Example: "Type format to format the diskette in drive A."

- *Filenames* and *directory names* are presented in lowercase bold.

  Examples: **autoexec.bat** and **c:\windows**

- *Syntax lines* consist of a command and all its possible parameters. Commands are displayed in lowercase bold; variable parameters (those for which you substitute a value) are displayed in lowercase italics; constant parameters are displayed in lowercase bold. The brackets indicate items that are optional.

  Example: **del** [*drive***:**] [[*path*]*filename*] [**/p**]

- *Command lines* consist of a command and may include one or more of the command's possible parameters. Command lines are presented in the Courier New font.

  Example: del c:\myfile.doc

- *Screen text* is text that appears on the screen of your display or external monitor. It can be a system message, for example, or it can be text that you are instructed to type as part of a command (referred to as a *command line).* Screen text is presented in the Courier New font.

  Example: The following message appears on your screen:

  No boot device available

- *Variables* are symbols for which you substitute a value. They are presented in italics.

  Example: module *n* (where *n* represents the memory module number)

Contents

CHAPTER 1
Introduction

This chapter provides information about the major hardware and software features of your Inspiron™ portable computer.

Hardware Features

Your computer includes the following hardware features:

- An Intel® mobile microprocessor incorporating the latest processor technology.

- An internal Level 1 (L1) cache consisting of 64 kilobytes (KB) of high-speed memory that resides in the processor core. The microprocessor has either a 128-KB or 256-KB (integrated) Level 2 (L2) cache, or a 512-KB pipelined-burst static random-access memory (SRAM) (external) L2 cache.

- A minimum of 32 megabytes (MB) of synchronous dynamic random access memory (SDRAM) system memory, with support for a maximum of 512 MB.

- A media bay in which you can install a variety of modules, including a diskette drive, CD-ROM drive, CD-RW drive, DVD-ROM drive (on computers running Microsoft® Windows® 98 Second Edition or Windows 2000), Zip drive, LS-120 drive, second battery, or second hard-disk drive.

  NOTES: Your computer was shipped with a diskette drive in the media bay. For information on removing the diskette drive and installing a different device in the bay, see "Using the Media Bay" in Chapter 2.

  Because the Microsoft Windows NT® operating system does not support DVD technology, the DVD-ROM drive is available only on computers that use the Windows 98 Second Edition or Windows 2000 operating system.

- A 64-bit hardware-accelerated ATI Mobility-M video controller with 8 MB of video memory, accelerated graphics port (AGP) 2X, 3D assist, motion compensation, extended desktop, OpenGL support, and a flicker-free TV-out S-video connector.

- An active-matrix extended graphics array (XGA) or super extended graphics array (SXGA) thin-film transistor (TFT) color display.

- ESS Maestro-3I audio controller with hardware wavetable support and 3D surround sound.

- Integrated stereo speakers and microphone.

- Connectors for connecting external speakers, headphones, or an external microphone to the computer.

- A TV-out S-video connector and composite TV-out adapter cable that allows you to connect a television to your computer. You can obtain the latest video drivers on Dell's World Wide Web site at **http://www.dell.com/filelib**.

- Ultra direct memory access (DMA)/33 data transfer protocol for Advanced Technology Attachment (ATA)/integrated drive electronics (IDE) hard-disk drive interface. Ultra DMA/33 allows data transfer rates of up to 33 MB/sec.

- An integrated keyboard that includes two special keys that support the Windows operating systems.

- A Personal System/2 (PS/2)-compatible touch pad that provides full mouse functionality. A set of left and right buttons, located below the touch pad, operate like the left and right buttons on a mouse. You can also perform many pointing functions by tapping the touch pad, which is positioned for both left- and right-handed users. Click-and-drag buttonless functions are also supported.

  An optional Dell™ DualPoint™ integrated pointing device is available, which provides a track stick in addition to the PS/2-compatible touch pad. The DualPoint option also includes a second set of left and right buttons, located above the touch pad. The track stick controls the cursor on the display screen and is positioned in the keyboard to allow you to move the cursor while keeping your fingers in a typing position. You can also perform many pointing functions by tapping the track stick. Click-and-drag buttonless functions are also supported.

- Universal serial bus (USB) capability, which simplifies connecting peripheral devices such as mice, printers, and computer speakers. The USB connector on your computer's back panel provides a single connection point for multiple USB-compliant devices such as keyboards, mice, printers, and computer speakers. Also, you can connect and disconnect USB-compliant devices while the computer is running.

NOTES: Windows NT does not support USB functions.

If you attach a USB device that was not included in your original system configuration, you may need to install a specific driver for that device to obtain its full functionality. Contact the manufacturer of the USB device for more information.

- A lithium-ion or nickel-metal hydride battery in the battery bay, with support for a second battery in the media bay. The Dell ExpressCharge™ technology charges a single lithium-ion battery in approximately 1 hour (when the computer is off or in save-to-disk suspend mode).

NOTICE: Do not puncture or incinerate the battery. When your battery no longer holds a charge, call your local waste disposal agency or environmental agency for advice on disposing of the computer's lithium-ion battery. The lithium-ion technology used in the battery is significantly less hazardous to the environment than the lithium metal technology used in some other batteries (such as watch batteries).

- An Infrared Data Association (IrDA) 1.1-compliant infrared port that permits you to transfer files without connecting cables.

NOTE: Windows NT does not support IrDA.

- A PC Card slot with connectors for two 3.3- or 5-volt (V) cards. Both PC Card connectors support CardBus technology. In addition, the lower PC Card connector (slot 0) supports the use of a zoomed video (ZV) port card.

NOTES: The PC Card controller supports the CardBus standard for 32-bit data transfer on the PC Card.

Windows NT does not support zoomed video.

- One high-performance serial port connector.

- One parallel port connector that can be set to AT, PS/2, or Extended Capabilities Port (ECP) mode.

- One PS/2 keyboard/mouse port connector.

- An integrated 56-kilobits per second (Kbps) v.90 modem with support for telephone hardware worldwide.

- One docking connector for the optional advanced port replicator.

- Two security cable connectors to which you can attach a commercially available security cable to prevent unauthorized removal of the computer.

- Two power conservation modes—*standby mode* and *save-to-disk suspend mode*—that help you conserve battery power. If the batteries run out of power, save-to-disk suspend mode prevents data loss by copying all system data to the hard-disk drive and turning off the computer.

- An automatic thermal management system that uses a variable-speed fan and microprocessor speed changes to keep the computer running at the optimum temperature.

CAUTION: Do not allow your portable computer to operate with the base resting directly on exposed skin. With extended operation, heat can potentially build up in the base. Allowing sustained contact with the skin could cause discomfort or, eventually, a burn.
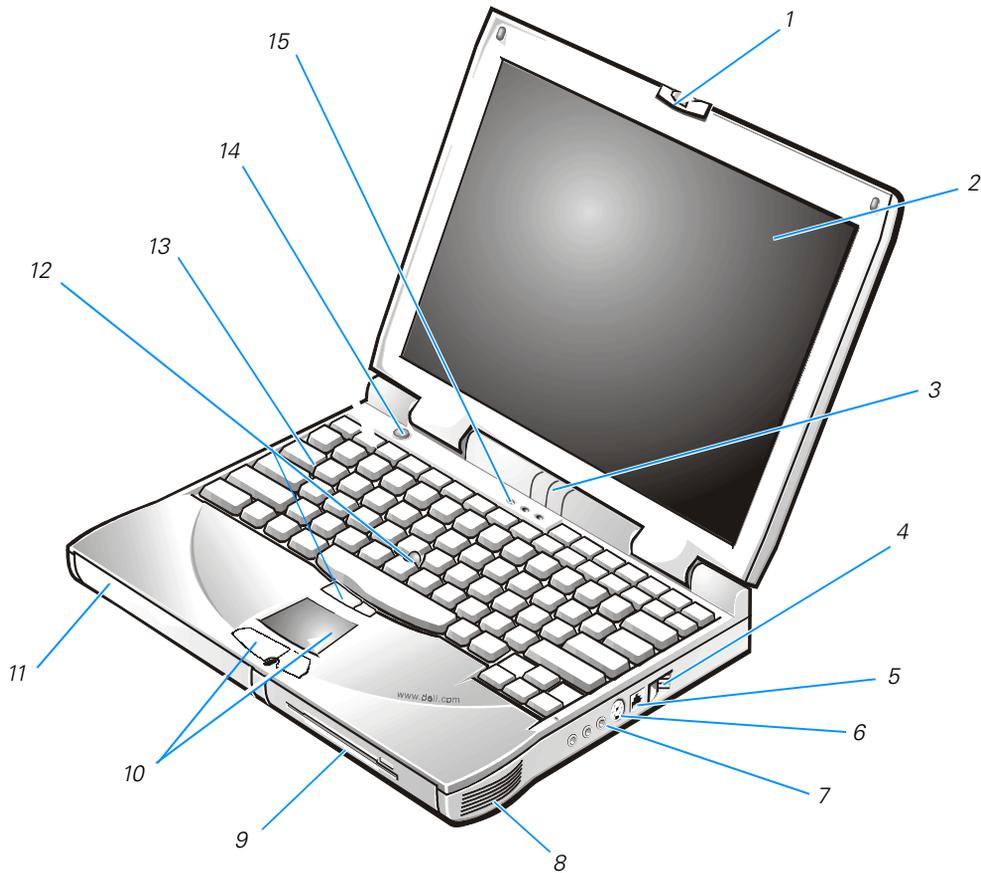
Figure 1-1. Front View of the Computer

1	Display latch	**9**	Media bay
2	Display	**10**	Touch pad and buttons
3	Device access/status indicators	**11**	Battery bay
4	Air intake	**12**	Track stick and buttons (DualPoint option)
5	Modem connector	**13**	Keyboard
6	TV-out S-video connector	**14**	Power button
7	Audio connectors (3)	**15**	Keyboard status indicators (3)
8	Speaker		
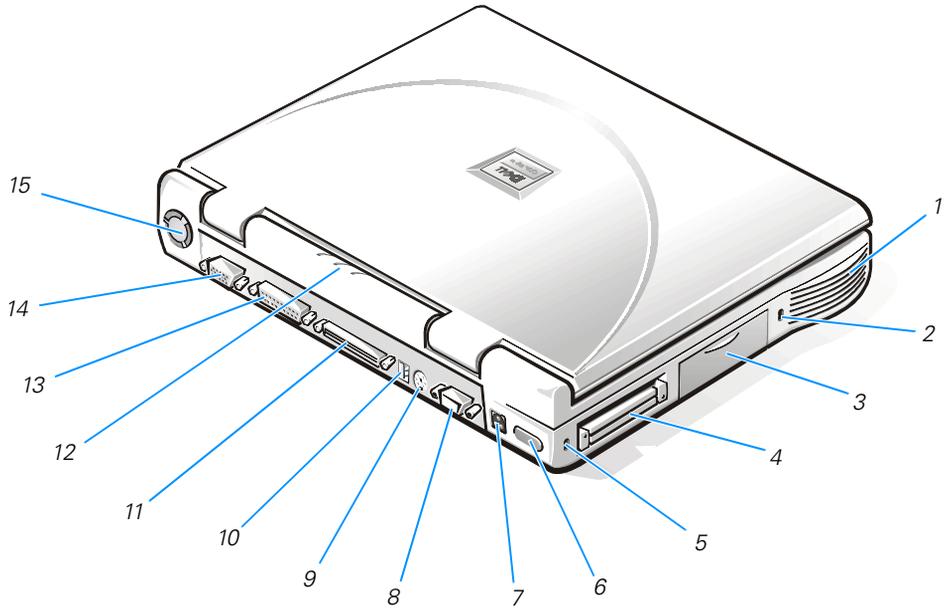
Figure 1-2. Back View of the Computer

1	Speaker	**9**	PS/2 connector
2	Security cable slot	**10**	USB connector
3	Hard-disk drive	**11**	Docking connector
4	PC Card slot	**12**	Device access/status indicators
5	Security cable slot	**13**	Parallel port connector
6	Infrared port	**14**	Video connector
7	AC adapter connector	**15**	Fan exhaust
8	Serial port connector		

Software Features

Your computer includes the following software features:

- Microsoft Windows 98 Second Edition, Windows 2000, or Windows NT operating system installed on your hard-disk drive.

- Virus-scanning software.

- A standard set of video drivers to support video resolutions greater than 640 x 480 pixels.

- Audio utilities for computers with integrated audio capabilities.

- Internal modem software capable of communicating up to a speed of 56K.

- DualPoint integrated pointing device software (for use with the optional Dell integrated pointing device), which allows you to set the default for the type of cursor pointing device that you want to use, as well as sensitivity, motion, and drag-and-drop features of both the touch pad and track stick.

- Optional software DVD decoder driver on computers that use the Windows 98 Second Edition or Windows 2000 operating system.

  NOTE: Windows NT does not support the DVD decoder driver.

- Two power conservation modes—*standby mode* and *save-to-disk suspend mode*—that help you conserve battery power. If the batteries run out of power, save-to-disk suspend mode prevents data loss by copying all system data to the hard-disk drive and turning off the computer.

- The System Setup program for quickly viewing and changing system configuration information. For information on using the System Setup program, refer to Appendix B, "Using the System Setup Program."

- Software support for the optional advanced port replicator.

- Dell Diagnostics for evaluating the computer's components and devices. For information on using the diagnostics, refer to "Running the Dell Diagnostics" in Chapter 3.

ENERGY STAR® Compliance

Certain configurations of Dell computer systems comply with the requirements set forth by the Environmental Protection Agency (EPA) for energy-efficient computers. If the front panel of your computer bears the ENERGY STAR® Emblem (see Figure 1-3), your original configuration complies with these requirements and all ENERGY STAR® power management features of the computer are enabled.

NOTES: As an ENERGY STAR® Partner, Dell Computer Corporation has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

*Any Dell computer bearing the ENERGY STAR® Emblem is certified to comply with EPA ENERGY STAR® requirements **as configured when shipped by Dell**. Any changes you make to this configuration (such as installing additional expansion cards or drives) may increase the system's power consumption beyond the limits set by the EPA's ENERGY STAR® Computers program.*

Figure 1-3. ENERGY STAR Emblem

The EPA's ENERGY STAR® Computers program is a joint effort between the EPA and computer manufacturers to reduce air pollution by promoting energy-efficient computer products. The EPA estimates that use of ENERGY STAR® computer products can save computer users up to two billion dollars annually in electricity costs. In turn, this reduction in electricity usage can reduce emissions of carbon dioxide, which is the gas primarily responsible for the greenhouse effect, and of sulfur dioxide and nitrogen oxides, which are the two primary causes of acid rain.

Computer users can also help to reduce electricity usage and its side effects by turning off their computer systems when they are not in use for extended periods of time—particularly at night and on weekends.

Getting Help

If at any time you do not understand a procedure described in this guide or if your computer does not perform as expected, Dell provides a number of tools to help you. For more information, see Chapter 5, "Getting Help."

C H A P T E R 2
Options and Upgrades

This chapter describes the installation procedures for the options and upgrades available from Dell for your computer.

Available Options and Upgrades

- Advanced port replicator (APR)
- Additional batteries
- External keyboards and a numeric keypad
- External monitors
- External pointing devices
- External speakers, headphones, and microphones
- Printers
- Hard-disk drives
- Second hard-disk drive for the media bay
- DVD-ROM drives
- SuperDisk LS-120 drives
- AC adapter
- PC Cards
- 32-, 64-, 128-, 192-, and 256-MB memory modules
- Carrying case

To order any of these options or upgrades, call Dell. For instructions, see Chapter 5, "Getting Help," or the "Contacting Dell" section of the system *Help*.

Using the AC Adapter

The AC adapter converts AC power to the DC power required by the computer. The AC adapter kit includes two cables: the AC adapter cable and an AC power cable (see Figure 2-1).

You can connect the AC adapter with your computer either turned on or off.

The AC adapter works with electrical outlets worldwide. However, power connectors vary among countries. Before you use AC power in a foreign country, you may need to obtain a new power cable designed for use in that country.

NOTE: If you are running your computer on AC power with a battery installed, the AC adapter charges the battery (if needed) and then maintains the battery's charge.

NOTICE: The AC adapter should be in a ventilated area, such as on a desktop or on the floor, when used to power the computer or charge the battery. Do not use the AC adapter in a poorly ventilated environment, such as inside a carrying case.
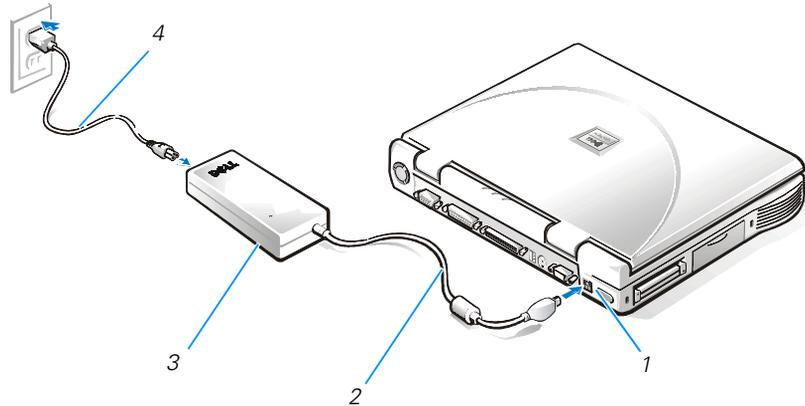
Figure 2-1. Using the AC Adapter

1	AC adapter connector	**3**	AC adapter
2	AC adapter cable	**4**	AC power cable

To connect the AC adapter, perform the following steps:

1. Connect the AC adapter power cable to the AC adapter (see Figure 2-1).

2. Plug the AC adapter power cable into an electrical outlet.

3. Plug the AC adapter cable into the AC adapter connector on the computer.

Using the Media Bay

You can use the media bay to install one of the following devices:

- Diskette drive
- CD-ROM drive
- DVD-ROM drive

NOTE: Because the Microsoft Windows NT operating system does not support DVD technology, the DVD-ROM drive is available only on computers that use the Microsoft Windows 98 Second Edition or Windows 2000 operating system. If you choose to install Windows NT on a computer that originally came with a DVD-ROM drive, the DVD-ROM drive will function as a CD-ROM drive.

- SuperDisk LS-120 drive
- Zip drive
- Second battery
- Second hard-disk drive

When you receive your computer, a diskette drive is installed in the media bay.

NOTICE: Do not change devices while the computer is connected to a port replicator. The docking connector can be irreparably damaged.

Changing a Device in the Media Bay

If your computer is running Windows 98 with Softex BayManager or Windows NT with Softex Docking Services, see the next section, "Changing a Device in the Media Bay With Softex Docking Services or BayManager Software."

To change a device in the media bay, perform the following steps:

1. Verify that the **Diskette Reconfig** option in the System Setup program is set to **Any Time**.

2. Save and close any open files, exit any open application programs, and shut down the computer.

3. If the computer is docked, undock it. For instructions, see your *Advanced Port Replicator User's Guide*.

   NOTICE: When the CD-ROM, DVD-ROM, SuperDisk LS-120, and diskette drives are not inside the computer, they are fragile and must be handled carefully to avoid damage. Do not press down on the drives or place heavy objects on top of them. Place the drives in a travel case to keep them free of dust and liquids. Store the drives in a safe place.

4. If the media bay contains a device, remove the device as follows (see Figure 2-2):

   a. Close the computer display and turn the computer over.

   b. Slide the media bay latch toward the unlock icon.

   c. Hold the media bay latch in this position with one hand while pulling the device out of the bay with your other hand.

   d. Release the media bay latch after the device is removed.
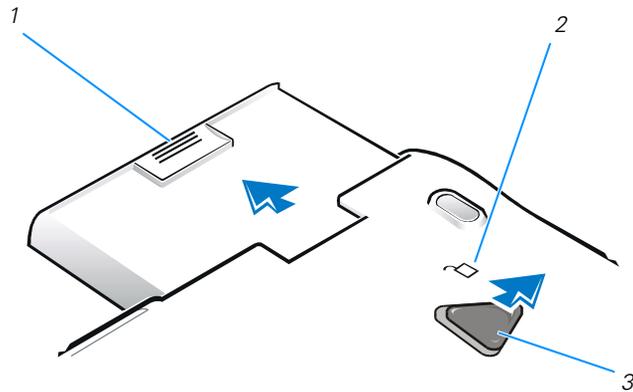
Figure 2-2. Removing a Device From the Media Bay

1	Device in media bay
2	Unlock icon
3	Media bay latch

5. Slide the new device firmly into the media bay.

   You should hear a click when the device is fully seated.

6. Press the power button to resume normal operation.

Changing a Device in the Media Bay With Softex Docking Services or BayManager Software

Softex Docking Services for Windows NT and Softex BayManager for Windows 98 allow you to hot-swap a device to and from the media bay while the computer is on. You do not have to shut down or restart the computer for the device to be recognized. You may hot-swap diskette drives, hard-disk drives, SuperDisk LS-120 drives, CD-ROM drives, DVD-ROM drives, and Zip drives.

If you are removing a device from the media bay and installing a battery, refer to "Installing a Second Battery," found later in this chapter.

To remove and replace devices with Softex Docking Services or Softex BayManager, perform the following steps:

1. Verify that the **Diskette Reconfig** option in the System Setup program is set to **Any Time**.

2. Save and close any open files, and exit any open application programs.

3. If the computer is docked, undock it. For instructions, see your *Advanced Port Replicator User's Guide*.

   NOTICE: When the CD-ROM, DVD-ROM, SuperDisk LS-120, and diskette drives are not inside the computer, they are fragile and must be handled carefully to avoid damage. Do not press down on the drives or place heavy objects on top of them. Place the drives in a travel case to keep them free of dust and liquids. Store the drives in a safe place.

4. Double-click the **Docking Services** or **BayManager** icon in the Windows system tray on the taskbar.

   The **Softex BayManager** window appears for Windows 98. The **Docking Services** window appears for Windows NT.

5. Click the **Remove/Swap** button.

6. If the media bay contains a device, remove the device as follows (see Figure 2-2):

   a. Verify that the **Display Close** option in the System Setup program is set to **Active**.

   b. Close the computer display and turn the computer over.

   c. Slide the media bay latch toward the unlock icon.

   d. Hold the media bay latch in this position with one hand while pulling the device out of the bay with your other hand.

   e. Release the media bay latch after the device is removed.

   f. Turn the computer over and open the computer display.

   g. If you want the computer to activate save-to-disk suspend mode when you close the display while the computer is turned on, set the **Display Close** option in the System Setup program to **Suspend**.

   *NOTE: Softex Docking Services and Softex BayManager do not report a second battery installed in the media bay on the **Storage Devices** tab.*

7. Slide the new device firmly into the media bay.

   You should hear a click when the device is fully seated.

8. Click **OK**, and then click **OK** again to close the Softex window.

Using the Diskette Drive as an External Device

If the external media bay in your computer is already occupied by another device, you can use the diskette drive as an external device.

NOTICE: Use the diskette drive cable with the diskette drive only.

Use the diskette drive cable to connect the diskette drive to the parallel connector on the back of the computer (see Figure 2-3).
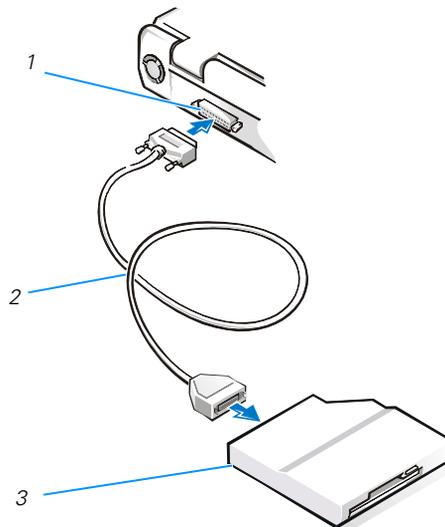
Figure 2-3. Connecting the Diskette Drive as an External Device

1	Parallel port connector on back of computer
2	Diskette drive cable
3	Diskette drive

Installing a Battery

Your computer comes with a lithium-ion or nickel-metal hydride (NiMH) battery installed in the battery bay. The battery provides power to your computer when AC power is not available.

NOTICE: These batteries are designed to work with Dell Inspiron 3800 computers only. To avoid damaging the batteries or the computer, do not use the batteries with other computers, and do not use a battery from another computer.

NOTE: You can also install a second battery in the media bay. If the computer already contains a battery in the battery bay and you are installing a second battery, see "Installing a Second Battery," found later in this chapter.

To install a battery in the battery bay, perform the following steps:

1. Save and close any open files, exit any open application programs, and shut down the computer.

2. If the computer is docked, undock it. For instructions, see your *Advanced Port Replicator User's Guide*.

NOTICE: To avoid data loss, do not replace a battery while the computer is turned on unless the computer is connected to an electrical outlet or a second battery is installed.

3. If the media bay contains a battery, go to step 5. Otherwise, continue to step 4.

4. If the only battery in the computer is in the battery bay and that is the battery you want to replace, connect the computer to an electrical outlet and then preserve your data in one of the following ways:

   • Use standby mode.

     Place the computer in standby mode by pressing <Fn><Esc> (or by pressing <Scroll Lock><Esc> on an external keyboard if the **External Hot Key** option is enabled in the System Setup program). Then shut down the computer.

   • Use save-to-disk suspend mode.

     Place the computer in save-to-disk suspend mode by pressing <Fn><a> (or <Fn><q> on a French keyboard).

   When the green power indicator turns off, continue to step 5.

5. Remove the battery from the battery bay.

   a. Close the computer display and turn the computer over (see Figure 2-4).

   b. Slide the battery bay latch toward the unlock icon.

   c. Hold the latch in this position with one hand while pulling the battery out of the bay with your other hand (see Figure 2-5).

d. Release the latch after you remove the battery.

6. Slide the new battery firmly into the battery bay.

 You should hear a click when the battery is fully seated.
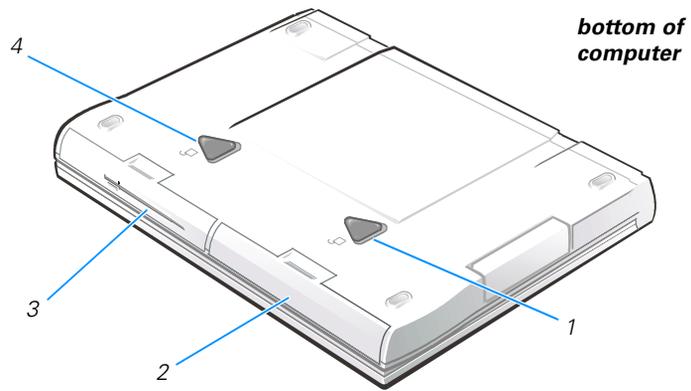
Figure 2-4. Media Bay and Battery Bay Latches

1	Battery bay latch	**3**	Media bay
2	Battery bay	**4**	Media bay latch
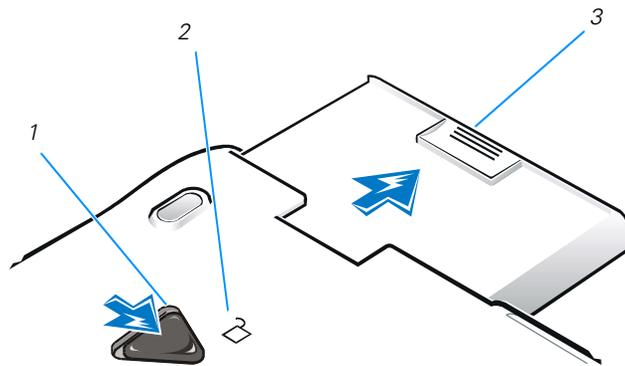
Figure 2-5. Removing a Battery From the Battery Bay

1	Battery bay latch
2	Unlock icon
3	Battery

7. If you put the computer into standby or save-to-disk suspend mode, press the power button to resume normal operation.

Installing a Second Battery

NOTICE: To avoid data loss, do not replace a battery in the media bay while the computer is turned on unless the computer is connected to an electrical outlet or a battery is already installed in the battery bay.

If your computer is running Windows 98 with Softex BayManager or Windows NT with Softex Docking Services, see the next section "Installing a Second Battery With Softex Docking Services or BayManager Software."

To install a battery in the media bay, perform the following steps:

1. Save and close any open files, exit any open application programs, and shut down the computer.

2. If the computer is docked, undock it. For instructions, see your *Advanced Port Replicator User's Guide*.

3. Remove any device that may be installed in the media bay (see Figure 2-6):

    a. Close the computer display and turn the computer over.

    b. Slide the media bay latch toward the unlock icon to release the device in the bay.

    c. Hold the latch in the unlock position while pulling the device out of the bay.

    d. Release the latch after you remove the device.

4. Slide the new battery firmly into the media bay.

    You should hear a click when the battery is fully seated.
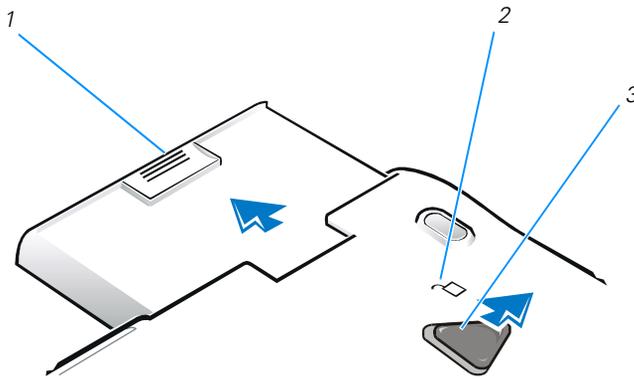
Figure 2-6. Removing a Device From the Media Bay

1	Device in media bay
2	Unlock icon
3	Media bay latch

5. Press the power button to resume normal operation.

Installing a Second Battery With Softex Docking Services or BayManager Software

NOTICE: To avoid data loss, do not replace a battery in the media bay while the computer is turned on unless the computer is connected to an electrical outlet or a battery is already installed in the battery bay.

To install a battery in the media bay with Softex Docking Services or Softex BayManager, perform the following steps:

1. Save and close any open files, and exit any open application programs.

2. If the computer is docked, undock it. For instructions, see your *Advanced Port Replicator User's Guide*.

3. Double-click the **Docking Services** or **BayManager** icon in the Windows system tray on the taskbar.

   The **Softex BayManager** window appears for Windows 98. The **Docking Services** window appears for Windows NT.

4. Click the **Remove/Swap** button.

5. Preserve your data in one of the following ways:

- Place the computer in standby mode by pressing <Fn><Esc> (or by pressing <Scroll Lock><Esc> on an external keyboard if the **External Hot Key** option is enabled in the System Setup program).

- Place the computer in save-to-disk suspend mode by pressing <Fn><a> (or <Fn><q> on a French keyboard).

When the green power indicator turns off, continue to step 6.

6. Remove any device that may be installed in the media bay (see Figure 2-6):

a. Close the computer display and turn the computer over.

b. Slide the media bay latch toward the unlock icon to release the device in the bay.

c. Hold the latch in the unlock position while pulling the device out of the bay.

d. Release the latch after you remove the device.

7. Slide the new battery firmly into the media bay.

You should hear a click when the battery is fully seated.

*NOTE: Softex BayManager and Softex Docking Services do not report a second battery installed in the media bay on the **Storage Devices** tab.*

8. Click **OK**, and then click **OK** again to close the Softex window.

9. Press the power button to resume normal operation.

Attaching the Composite TV-Out Adapter Cable

Your computer has a TV-out S-video connector for connecting a television to the computer. To connect a television, perform the following steps:

1. Save and close any open files, exit any open application programs, and shut down the computer.

2. *If the television has an S-video cable*, connect the S-video cable from the TV to the computer's TV-out S-video connector.

If the television has only a composite video cable connector, plug the composite TV-out adapter cable that came with your computer into the TV-out S-video connector on the computer (see Figure 2-7). Connect the other end of the composite TV-out adapter cable to the television's composite video cable, and then plug the composite video cable into the TV.

NOTE: If your television did not come with a composite video cable, you can purchase one from a local electronics store.

3. Turn on the computer.
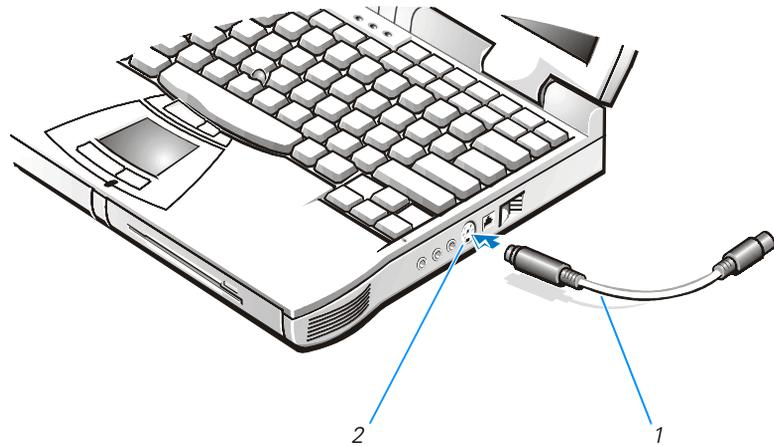
Figure 2-7. Using the Composite TV-Out Adapter Cable

1   Composite TV-out adapter cable

2   TV-out S-video connector

Installing an Internal Hard-Disk Drive

NOTES: If you ordered a second hard-disk drive from Dell, refer to the documentation that accompanied the drive for instructions on installing it in the media bay.

You will need the Microsoft Windows installation CD and the System Software CD to install software on the new hard-disk drive.

The computer's basic input/output system (BIOS) may not support hard-disk drives obtained from vendors other than Dell. Dell does not guarantee compatibility or provide support for hard-disk drives obtained from other sources.

NOTICE: Hard-disk drives are extremely fragile and must be handled carefully. Follow these guidelines when handling hard-disk drives:

- **The hard-disk drive is installed in a metal carrier to protect the drive and make installation easier. When removing and installing hard-disk drives, handle the drive carrier, not the drive itself.**

- **Never press down on the top of the drive.**

- **Do not drop the drive. Even a slight jar or bump can damage the spinning heads and plates, thus rendering the drive inoperable.**

⚠️ **CAUTION: The hard-disk drive may be hot to the touch. Do not touch the metal housing of the hard-disk drive if you remove the drive from the computer when the drive is hot.**

1. Save and close any open files, exit any open application programs, and shut down the computer.

   Wait for the computer's power indicator to turn off before continuing this procedure.

2. If the computer is docked, undock it. For instructions, see your *Advanced Port Replicator User's Guide*.

3. Remove any batteries installed in the battery bay or media bay.

4. If necessary, remove the hard-disk drive currently installed in the hard-disk drive bay.

   a. Close the computer display and turn the computer over.

   b. Use a small Phillips-head screwdriver to remove the screw that holds the drive carrier in the drive bay (see Figure 2-8).

      Save the screw for use later in this procedure.

   c. Gently pull the drive carrier out of the drive bay.

bottom of computer
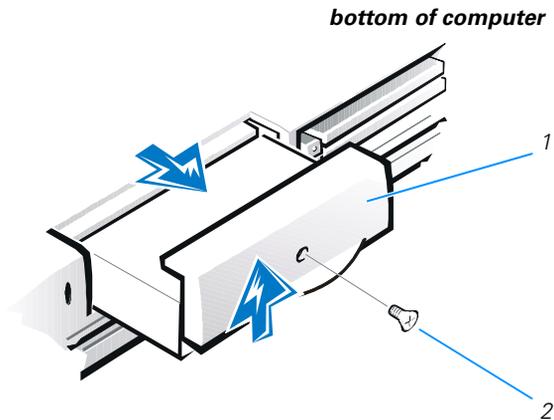
Figure 2-8. Removing the Internal Hard-Disk Drive

1	Drive carrier
2	Screw

5. Remove the new hard-disk drive from its packaging.

    Save the original packaging to use when storing or shipping the hard-disk drive.

6. Install the new hard-disk drive into the computer (the drive comes in a drive carrier).

    NOTICE: If the drive does not slide easily into the drive bay, pull it out and try again. Do not force the drive into the drive bay.

    NOTICE: When replacing the screws, be sure that the screws are set straight into the holes. Do not try to tighten the screws if they are angled into the holes. If the screws do not tighten easily, remove them and try again. Do not overtighten the screws.

    Gently push the drive carrier containing the hard-disk drive into the drive bay until the drive carrier is flush with the computer case.

7. Replace the screw you removed in step 4.

8. Turn on the computer.

9. Partition and format the drive as described in "Partitioning and Formatting the Hard-Disk Drive" in Chapter 4.

    The first time you install a second hard-disk drive in the media bay, you must format that drive. For instructions, see the documentation that came with the drive.

10. Install the operating system on the drive. For instructions, see Chapter 4, "System Software Solutions."

11. Test the drive by running the **IDE Devices** tests in the Dell Diagnostics. For instructions, see "Running the Dell Diagnostics" in Chapter 3.

Returning a Hard-Disk Drive to Dell

If you need to return your hard-disk drive, you must ship it to Dell in its original foam packaging (see Figure 2-9). Otherwise, the hard-disk drive may be damaged in transit.
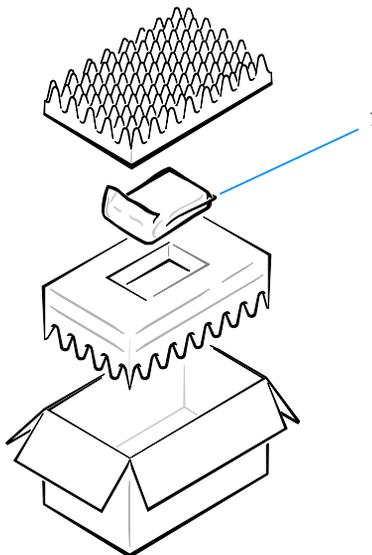
Figure 2-9. Repackaging the Hard-Disk Drive

1   Hard-disk drive

Installing a Second Hard-Disk Drive

For instructions on installing a second hard-disk drive in the media bay, refer to the documentation that came with the drive.

Installing Memory Modules

Memory modules for your computer are available in 32-, 64-, 128-, 192-, and 256-MB sizes.

NOTE: Your computer has two memory module sockets, labeled "DIMM A" and "DIMM B." You can install all sizes of memory modules you purchase from Dell (but which Dell does not install), except the 192-MB memory module, in either socket. If you purchase a non-Dell-installed 192-MB memory module, you must install it in the socket labeled "DIMM B."

To install memory module(s), perform the following steps.

NOTICE: See "Protecting Against Electrostatic Discharge" in the safety instructions at the front of this guide.

NOTICE: Do not install or remove a memory module when the computer is turned on or in save-to-disk suspend mode.

1. Save and close any open files, exit any open application programs, and shut down the computer.

2. Turn off any peripherals, and disconnect them from their electrical outlets.

3. If the computer is docked, undock it. For instructions, see your *Advanced Port Replicator User's Guide*.

4. Disconnect the AC adapter and any attached peripherals, including telephone or telecommunication lines, from the computer.

5. Remove the battery from the battery bay or the media bay.

6. Close the display, turn the computer upside down, and remove the memory module cover.

   a. Locate the small rectangular indentation at one end of the memory module cover.

   b. Place the tip of your finger under the cover at the indentation, and firmly lift it up.

   c. When the cover pops up, lift it up to remove it and expose the memory modules underneath it.

NOTICE: Ground yourself by touching the unpainted metal surface of a connector on the back of the computer. While you work, periodically touch the connector to dissipate any static electricity that might harm internal components.

7. If you are *replacing* a memory module, remove the old one.

   Carefully spread apart the *inner* tabs of the memory module socket just far enough for the memory module to disengage from the socket (it should pop up slightly). Then lift the memory module away from the socket (see Figure 2-10).
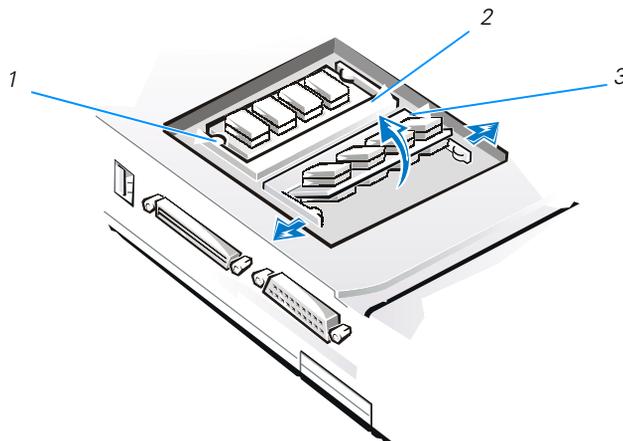
Figure 2-10. Removing a Memory Module

1	Inner tabs (2 per socket)
2	DIMM A socket
3	DIMM B socket

8. Ground yourself, and unpack the memory module from the memory upgrade kit.

9. Install the new memory module in the appropriate socket.

   The socket labeled "DIMM A" should be used before the socket labeled "DIMM B." If you only have one memory module, you should install it in the "DIMM A" socket (see Figure 2-10).

   Memory modules are keyed, or designed to fit into their sockets in only one direction. The slots on the system board are notched so that the memory module can be firmly seated only one way.

   a. Align the memory module's edge connector with the slot in the center of the memory module socket.

   b. With the module at a 45-degree angle, press the memory module's edge connector firmly into the memory module socket.

   c. Pivot the memory module down until it clicks into place.

   d. If you do not hear a click as each end of the memory module snaps into the tabs, remove the memory module and reinstall it.

10. Replace the memory module cover.

    a. Set the memory module cover loosely over the opening, making sure that the tabs on the bottom of the cover catch in the slots on either side of the opening.

    b. Slide the cover into place and press down on it until you hear it click.

    NOTICE: After installation, if the memory module cover does not fit or is difficult to close, you may have installed the memory modules improperly or in the wrong slots. Remove the memory modules and reinstall them. Do not force the memory module cover to close because you may damage your computer.

11. Reattach any peripherals you disconnected in step 4 to the computer.

12. Reconnect your computer and peripherals to their electrical outlets, and turn them on.

    As the computer boots, it detects the presence of additional memory and automatically updates the system configuration information.

13. In one of the following ways, verify that the computer recognizes the newly installed memory:

    • Click the **Start** button, point to **Settings**, click **Control Panel**, and double-click the **System** icon. Click the **General** tab

      The amount of memory installed in the computer is displayed in the lower-right corner of the **General** tab window.

    • Enter the System Setup program to verify that the **System Memory** option reflects the additional memory.

      To enter the System Setup program, press <Fn><F1> on the computer's keyboard (or press <Scroll Lock><F1> on an external keyboard if the **External Hot Key** option is enabled in the System Setup program).

    If the total amount of random access memory (RAM) displayed is incorrect, the memory module(s) may not be installed properly. Repeat steps 1 through 13 until the total amount of RAM displayed is correct.

14. Run the **System Memory** device group of the Dell Diagnostics to confirm that all installed memory modules are operating correctly. For instructions, see "Running the Dell Diagnostics" in Chapter 3.

15. Use the save-to-disk (S2D) suspend utility to update the S2D partition on your hard-disk drive. For instructions, see "Save-to-Disk Suspend Utility" in Chapter 4.

NOTE: The S2D partition receives the system data transferred during save-to-disk suspend mode.

Port Replicator

If you purchased a port replicator from Dell, see the documentation that came with the port replicator for instructions on its use.

Connecting Other External Devices

You can connect a variety of external devices to your computer. For instructions, see "Connecting External Devices" in the system *Help*. To open the system *Help*, click the **Start** button, point to **Programs—> Dell Documents**, and click **Dell Inspiron 3800 System Help**.

C H A P T E R   3
Troubleshooting

This chapter helps you to solve some typical computer problems. Complete the steps in this chapter before you call Dell for technical assistance. If you find that you need technical assistance to solve your problem, record your findings on a copy of the Diagnostics Checklist (see Figure 5-1) before you call Dell.

CAUTION: To help prevent the risk of electrical shock, disconnect all external devices, remove the battery, and disconnect the AC adapter from the computer before installing or replacing the hard-disk drive and memory modules.

Checking the Basics

NOTE: If your computer is wet or damaged, proceed directly to "Dry Out a Wet Computer" or "Test a Dropped or Damaged Computer," found later in this chapter.

If the problem you are experiencing began after making a change to your computer, such as installing new hardware or software, undo the change if possible. If undoing the change resolves the problem, review the documentation and any updates or supplements (for example, readme files) for the software or hardware that you changed. Typically, readme files provide installation information, describe new product enhancements or corrections that have not yet been documented, and list known problems.

If you were trying to install new hardware, make sure that you changed the appropriate settings in the System Setup program for the new hardware configuration (see Appendix B, "Using the System Setup Program").

NOTE: DellWare™ products are supported by the product manufacturer. Refer to the manufacturer's documentation that accompanies the item.

Check Connections

Be sure the following items are properly connected or installed:

- AC adapter and AC power cable
- Second battery or other optional device in the media bay
- Cables that connect external devices through the input/output (I/O) connectors and ports on the computer.

NOTE: See "System Features" in the system Help for the location of the external connectors and controls.

Loose or improperly connected cables are likely sources of problems for your computer, external monitor, or other peripherals (such as a printer, external keyboard, or mouse). A quick check of all cable connections can easily solve these problems. If the connector has two small thumbscrews, ensure that the screws are tight. In addition, check for damaged or frayed cables and for bent pins on connectors.

Evaluate Environmental Factors

A number of external factors, including temperature extremes and humidity, magnetic influences, sources of electromagnetic interference (EMI), and poor input power or signal quality, can interfere with the performance of your computer and attached devices. Monitors are especially susceptible to environmental factors. The following can adversely affect the performance of a computer:

- Inadequate ventilation caused by operating the computer in a confined space, such as a desk enclosure
- Direct sunlight
- Power sags and surges
- Substandard electrical wiring
- Excessive telephone line noise
- High-voltage electrical appliances on the same circuit as or in close proximity to the computer
- Magnetic fields generated by speakers (especially a subwoofer) or by a telephone placed too close to the monitor
- Fluorescent lights
- Use of electrical extension cords and keyboard and mouse extension cables
- Use of an overloaded power strip or multiple power strips from one electrical outlet
- Presence of electrical conduits in an adjoining wall or elevators on the other side of the wall
- Presence of large metal beams inside the wall behind the computer

To alleviate the effects of these factors, try removing the potential problem source or move the computer to another location.

Check the Electrical Power Source

If you are experiencing problems with power, perform the following checks:

- Check the computer power indicator. When lit, the power indicator verifies that the power supply is operating.

- Verify that the electrical outlet is functional by plugging an operational device, such as a lamp, into the outlet.

- Plug the computer directly into a functioning electrical outlet.

- If your computer is connected to a power strip, shut down the computer. Turn off and then turn on the power strip to reset it.

Running the Dell Diagnostics

The Dell Diagnostics helps you to check your computer hardware without any additional equipment and without destroying any data. By using the diagnostics, you can have confidence in your computer's operation. If you find a problem you cannot solve by yourself, the diagnostic tests can provide you with important information. Record this information on a copy of the Diagnostics Checklist (see Figure 5-1) before you call Dell for technical assistance.

NOTICE: The Dell Diagnostics is designed specifically for your computer. Do not run the Dell Diagnostics on any other computer. Using this diagnostic program with other computers may cause incorrect computer responses or may result in error messages.

The Dell Diagnostics provides a series of menus and options from which you can choose particular device group tests. You can also control the sequence in which the tests are run. Other helpful features include the following:

- A menu category called **Options** that lets you run tests individually or collectively

- An option that allows you to choose the number of times a device group test is repeated

- The ability to display test results, print them out, or to save them in a file

- The option to temporarily suspend testing if an error is detected or to terminate testing if an adjustable error limit is reached

- A menu category called **Devices** that briefly describes each test and its parameters

- A menu category called **Config** that describes the configuration of the devices in the selected device group

- Status messages that inform you whether device group tests ran successfully

- Error messages that appear if problems are detected

If a major component or device in your computer does not function properly, you may have a component failure. You can use the Dell Diagnostics as long as the following components are functioning properly:

- Microprocessor
- Display
- Keyboard
- CD-ROM or DVD-ROM drive

If you know which components you need to test, select the appropriate diagnostic device group tests you want to run. If you are unsure about how to begin diagnosing a problem, see the following sections.

Start the Dell Diagnostics

NOTES: The Dell Diagnostics runs in MS-DOS® mode. If the computer runs on a battery in MS-DOS mode, the battery status indicator glows amber when approximately 10 percent of the battery charge remains, and it flashes amber when approximately 3 percent of the battery charge remains. If the battery status indicator becomes amber, connect the computer to AC power by using the AC adapter. If AC power is not available, turn off the computer until AC power is available.

The standby and hibernate modes are Windows power management features. These power management modes are not available while the computer is running in MS-DOS mode. For information on the standby and hibernate modes, see "Conserving Power" in the system Help.

External Universal Serial Bus (USB) keyboards function only when Windows 98 Second Edition or Windows 2000 is running. Use the integrated keyboard when you use the Dell Diagnostics.

1. Save and close any open files, exit any open application programs, and shut down the computer.

2. If the computer is docked, undock it. For instructions, see the *Advanced Port Replicator User's Guide.*

3. Turn on the computer.

4. When you see the Dell logo, press <F2> to access the System Setup program.

5. Press the down-arrow key to highlight a device, and then press <F5> to move the device down the list or press <F6> to move the device up the list. Select the following boot sequence:

   - **Floppy**
   - **CD ROM/DVD**
   - **Internal Hard Drive**

6. Press <F10> to save your changes and exit the System Setup program.

7. When the **Setup Confirmation** screen appears, press <Enter> to confirm that you want to save the configuration changes and exit the System Setup program.

   The computer restarts automatically.

8. Insert the *System Software* CD into the CD-ROM or DVD-ROM drive.

9. Ensure that the diskette drive does not contain a diskette.

10. Shut down the computer.

11. Turn on the computer.

    The Dell Diagnostics begins automatically.

NOTES: You must turn off the computer and turn on the computer with the System Software CD in the CD-ROM or DVD-ROM drive to run the Dell Diagnostics.

Do not run the Dell Diagnostics while Windows is running.

Before you read the rest of this section, you may want to start the Dell Diagnostics so that you can see it on your display.

When you start the diagnostics, the Dell logo screen appears, followed by a message telling you that the diagnostics utility is loading.

After the diagnostic utility loads, the **Diagnostics Menu** appears (see Figure 3-1).

```
Fully Test All Devices
Quickly Test All Devices
Select Devices to Test
Exit to MS-DOS
```

Figure 3-1. Diagnostics Menu

The menu allows you to choose to run all or specific diagnostic tests or to exit to the MS-DOS prompt. You can choose from the following options:

- **Fully Test All Devices** — This option thoroughly checks all computer components.

- **Quickly Test All Devices** — This option runs only the subtests that do not require your interaction. Dell recommends that you choose this option—you may be able to trace the problem quickly.

- **Select Devices to Test** — This option allows you to select particular components for testing.

To select an option from this menu, press the up- or down-arrow key to highlight the option and press <Enter>.

Dell Diagnostics Main Screen

When you select **Select Devices to Test** from the **Diagnostics Menu**, the main diagnostics screen appears (see Figure 3-2).

Information on the main screen of the diagnostics is presented in the following areas:

- Text at the top of the screen identifies the Dell Diagnostics version on your computer.

- On the left side of the screen, the **Device Groups** area lists the diagnostic test groups in the order they will run if you select **All** from the **Run tests** menu. Press the up- or down-arrow key to highlight a device group.

- On the right side of the screen, the **Devices for Highlighted Group** area lists the currently detected hardware.

- The lines at the bottom of the screen show the menu choices. The first line lists the categories you can select; press the left- or right-arrow key to highlight a menu category. The last line gives information about the category currently highlighted

```
            Dell Computer Corporation (www.dell.com)

                      Diagnostics Version X.XX

         Device Groups            Devices for Highlighted Group

   System Board Devices              DMA Controller
   Processor Cache                   Realtime Clock
   System Memory                     System Timer
   Inspiron                          Interrupt Controller
   VESA/VGA Interface                System Speaker
   Universal Serial Bus Interface    Floating Point Unit
   PC-AT Compatible Keyboards
   Pointing Devices
   Serial Ports
   Parallel Ports
   Diskette
   IDE Devices
   Audio Controller
   Misc. PCI Devices

   Device Groups: Run Tests Devices Select Config Help

   Display the Run tests menu.      Press ESC for previous menu.
```

Figure 3-2. Dell Diagnostics Main Screen

Confirm the System Configuration Information

When you boot your computer from your *System Software* CD, the diagnostics program displays a list of the computer devices and components in the **Device Groups** area on the main screen.

Do not be concerned if the **Device Groups** area does not list the names of all the components or devices connected to your computer. For example, you may not see a printer listed, although you know one is attached to your computer. If the printer is connected to the computer through the parallel port connector, you can test the printer connection with the **Parallel Ports** test.

Use the Dell Diagnostics Help Menu

Several comprehensive categories in the **Help** menu provide instructions on how to use the Dell Diagnostics. Each category explains the menu item, test group, subtest, and test and error results. To enter the **Help** menu, perform the following steps:

1. Press the up- or down-arrow key to highlight **Select Devices to Test** in the **Diagnostics Menu**.

2. Press <Enter>.

3. Press <h>.

The categories on the **Help** menu are **Menu**, **Keys**, **Device Group**, **Device**, **Test**, and **Versions**. The categories provide detailed descriptions of the devices that you are testing.

Menu

The **Menu** category provides descriptions of the main screen, the device groups, and the different diagnostic menus and commands as well as instructions on how to use them.

Keys

The **Keys** category explains the functions of all of the keystrokes available in the Dell Diagnostics.

Device Group

The **Device Group** category describes the test group that is presently highlighted in the **Device Groups** list on the main screen. For example, the following information appears when **System Memory** is highlighted in the **Device Groups** list and you select the **Device Group** category in the **Help** menu:

```
System Memory

This module provides tests for system memory. The address
lines, data lines, and memory cells are tested for coupling
faults, opens, and shorts.
```

Device

The **Device** category is the educational section the Dell Diagnostics **Help**. It describes the function of the device highlighted in the **Device Groups** area. For example, the following information appears when **System Memory** is highlighted in the **Device Groups** list and you select the **Device** category in the **Help** menu:

```
System Memory

System memory is the primary mechanism in a computer used for
storage of data. Because a computer works by manipulating data,
memory is vital for most operations performed by a computer.
```

Test

The **Test** category provides a thorough explanation of the test procedure of each sub-test. For example, the following information appears when **System Memory** is highlighted in the **Device Groups** list and you select the **Test** category in the **Help** menu:

```
System Memory Line Address Test

This test checks the system DRAM to find multiple "stuck-at"
faults in address lines, decoder logic, and the memory cell
array.
```

Versions

The **Versions** category lists the version numbers of the tests in the Dell Diagnostics.

Exit the Dell Diagnostics

1. Press <Esc> until the **Diagnostics Menu** appears (see Figure 3-1).

2. Press the down-arrow key to select **Exit to MS-DOS** and then press <Enter>.

3. When `X:\DIAGS` appears on your screen, press the power button until the computer turns off.

4. Remove the *System Software* CD from the CD-ROM or DVD-ROM drive.

Dell recommends that you return the boot sequence to the original configuration:

*   **Floppy**
*   **Internal Hard Drive**
*   **CD ROM/DVD**

For instructions, see "Start the Dell Diagnostics," found earlier in this chapter.

Troubleshooting Procedures

Before performing any of the procedures in this section, see "Checking the Basics," found earlier in this chapter, and read the "Safety Instructions" at the front of this guide. Then perform the appropriate troubleshooting procedure.

Restart Your Computer

Several of the following sections advise you to restart the computer as part of the troubleshooting process. To perform a proper restart, perform the following steps:

1. Save and close any open files, and exit any open application programs.

2. Click the **Start** button, click **Shut Down**, select **Restart**, and then click **OK**.

   The computer restarts automatically.

Dry Out a Wet Computer

Liquids, rain, and excessive humidity can cause damage to the computer.

CAUTION: Perform the following procedure only after you are certain that it is safe to do so. If the computer is connected to an electrical outlet, Dell recommends that you turn off AC power at the circuit breaker before attempting to remove the power cables from the electrical outlet. Use the utmost caution when removing wet cables from a live power source.

1. Turn off the computer and disconnect the AC adapter from the computer.

2. Disconnect the AC adapter from the electrical outlet.

3. Turn off any attached peripherals, and disconnect them from their power sources and then from the computer.

4. Ground yourself by touching one of the metal connectors on the back of the computer.

5. Remove the media bay device and PC Cards (if installed.)

   Put the device and cards in a safe place to dry.

6. Remove the batteries from the battery bay and the media bay.

   Wipe off the batteries and put them in a safe place to dry.

7. Remove the hard-disk drive. For instructions, see "Installing an Internal Hard-Disk Drive" in Chapter 2.

8. Remove the memory modules. For instructions, see "Installing Memory Modules" in Chapter 2.

9. Open the display, and place the computer right-side up across two books or similar props to let air circulate all around it.

   Let the computer dry for at least 24 hours in a dry area at room temperature.

NOTICE: Do not use artificial means to speed up the drying process.

⚠ **CAUTION: To help prevent electrical shock, verify that the computer is thoroughly dry before continuing with the remainder of this procedure.**

10. Ground yourself by touching one of the unpainted metal connectors on the back of the computer.

11. Replace the memory modules.

12. Replace the memory module cover.

13. Replace the hard-disk drive.

14. Replace the media bay device and PC Cards.

15. Replace the batteries.

16. Connect the peripherals to the computer.

17. Connect the computer and peripherals to an electrical outlet.

18. Turn on the computer and the peripherals.

If you cannot identify the damaged components, call Dell for technical assistance. For instructions, see Chapter 5, "Getting Help."

Test a Dropped or Damaged Computer

1. Save and close any open files, exit any open application programs, and shut down the computer.

2. Remove the batteries from the battery bay and the media bay.

3. Disconnect the AC adapter from the computer, and then disconnect the AC adapter from the electrical outlet.

4. Turn off any attached peripherals, and disconnect them from the electrical outlet and then from the computer.

5. Ground yourself by touching one of the metal connectors on the back of the computer.

6. Remove the media bay device.

7. Remove the hard-disk drive. For instructions, see "Installing an Internal Hard-Disk Drive" in Chapter 2.

8. Remove the memory module cover and the memory modules. For instructions, see "Installing Memory Modules" in Chapter 2.

9. Replace the memory modules.

10. Replace the memory module cover.

11. Replace the hard-disk drive.

12. Ensure that the PC Cards are properly seated in the PC Card connectors.

13. Replace the batteries.

14. Connect the peripherals to the computer.

15. Connect the computer and peripherals to the electrical outlet.

NOTE: Do not dock the computer at this time.

16. Insert the *System Software* CD into the CD-ROM or DVD-ROM drive.

17. Ensure that the diskette drive does not contain a diskette.

18. Turn on the computer.

The Dell Diagnostics loads automatically.

19. Select **Fully Test All Devices**.

See "Running the Dell Diagnostics," found earlier in this chapter, for more information.

If the computer does not operate properly, make a copy of the Diagnostics Checklist (see Figure 5-1) and fill it out. Then call Dell for technical assistance. For instructions, see Chapter 5, "Getting Help."

Recover From a Program That Is Not Responding

1. Press <Ctrl><Alt><Delete>.

The **Close Program** window appears.

2. Click the program that no longer responds.

3. Click **End Task**.

Restart a Computer That Is Not Responding

1. Press and hold the power button until the computer turns off.

2. To turn on the computer, press the power button.

ScanDisk, a program that checks for and repairs errors on the hard-disk drive, may run during the boot process. Windows loads and runs after the scan is completed.

Resolve Audio Problems

• Use the volume control buttons on the left side of the computer to adjust the volume.

• Run the **Audio Controller** test as described in "Running the Dell Diagnostics," found earlier in this chapter.

If you still have an audio problem, call Dell for technical assistance. For instructions, see Chapter 5, "Getting Help."

Resolve CD-ROM or DVD-ROM Drive Problems

NOTE: Inconsistencies in the manufacturing of CD-ROM media may cause some high-speed CD-ROM drives to vibrate more than others. This vibration and the associated noise does not indicate a defect in the drive or the CD.

• Double-click the **My Computer** icon on your desktop and verify that the drive is recognized by the operating system. Most of the common boot sector viruses cause the CD-ROM or DVD-ROM drive to "disappear." Use the virus-scanning software to check for and remove viruses.

• Clean the disc using a commercially available cleaning kit.

• Clean the drive using a commercially available cleaning kit.

• Try another CD or DVD.

NOTE: Because different DVD file types are currently used in the industry, not all DVDs work in all DVD-ROM drives.

• Run the **IDE Devices** tests as described in "Running the Dell Diagnostics," found earlier in this chapter.

• Turn off the computer and remove the CD-ROM or DVD-ROM drive from the media bay. Replace the drive and turn on the computer.

If you still have a CD-ROM or DVD-ROM drive problem, call Dell for technical assistance. For instructions, see Chapter 5, "Getting Help."

Resolve Diskette Drive Problems

• Ensure that the diskette is not write-protected if you are trying to copy data to it.

• Try a different diskette in the drive. If the new diskette works, the original diskette may be defective.

• Check the settings on the **Page 1** submenu of the System Setup program as described in Appendix B, "Using the System Setup Program."

• Run the **Diskette** tests as described in "Running the Dell Diagnostics," found earlier in this chapter.

• Clean the drive using a commercially available cleaning kit.

• Restart the computer.

If you still have a diskette drive problem, call Dell for technical assistance. For instructions, see Chapter 5, "Getting Help."

NOTICE: Do not attempt to clean drive heads with a swab. You could accidentally misalign the heads and render the drive inoperable.

Resolve Display Problems

- If the display is blank, the computer may be in standby or hibernate (save-to-disk suspend) mode. To resume normal operations, press the power button.

- Adjust the brightness setting.

- Run the **VESA/VGA Interface** tests as described in "Running the Dell Diagnostics," found earlier in this chapter.

- Restart the computer.

If you still have a display problem, call Dell for technical assistance. For instructions, see Chapter 5, "Getting Help."

Resolve External Monitor Problems

- If the display is blank, the computer may be in standby or hibernate (save-to-disk suspend) mode. To resume normal operations, press the power button.

- Ensure that the video cable is firmly attached to the video connector on the back of the computer and that the monitor power cable is plugged into a functional electrical outlet.

- Adjust the brightness and contrast settings.

- Run the **VESA/VGA Interface** tests as described in "Running the Dell Diagnostics," found earlier in this chapter.

- Restart the computer.

If you still have an external monitor problem, call Dell for technical assistance. For instructions, see Chapter 5, "Getting Help."

Resolve External Keyboard Problems

NOTE: External Universal Serial Bus (USB) keyboards function only when Windows 98 Second Edition or Windows 2000 is running. Use the integrated keyboard when you use the Dell Diagnostics or the System Setup program and when you are working in MS-DOS mode.

- Disconnect the keyboard cable from the computer and check the cable connector for bent or broken pins.

- Run the **PC-AT Compatible Keyboards** tests as described in "Running the Dell Diagnostics," found earlier in this chapter.

- Restart the computer.

If you still have a an external keyboard problem, call Dell for technical assistance. For instructions, see Chapter 5, "Getting Help."

Resolve Hard-Disk Drive Problems

- Run the ScanDisk utility. Click the **Start** button, point to **Programs—> Accessories—> System Tools**, and then click **ScanDisk**.

- Run the **IDE Devices** tests as described in "Running the Dell Diagnostics," found earlier in this chapter.

- Check the settings on the **Page 1** submenu of the System Setup program as described in Appendix B, "Using the System Setup Program."

If you still have a hard-disk drive problem, call Dell for technical assistance. For instructions, see Chapter 5, "Getting Help."

Resolve Hardware Conflicts

Hardware conflicts occur if a device is detected by the operating system but is configured incorrectly. To check for conflicts, perform the following steps:

1. Click the **Start** button, point to **Settings**, and click **Control Panel**.

2. In the **Control Panel**, double-click the **System** icon.

3. Click the **Device Manager** tab.

   Conflicts are indicated in the **Device Manager** list by a yellow exclamation point (**!**) beside the conflicting device. A red X beside a device indicates that the device is disabled in the current hardware profile.

   If a hardware conflict exists, the **Device status** area in the **Properties** window shows the conflicting expansion cards or devices.

To resolve conflicts, you can use the Windows Hardware Conflict Troubleshooter.

1. Click the **Start** button and then click **Help**.

2. Click the **Contents** tab and then double-click **Troubleshooting**.

3. Double-click **If you have a hardware conflict** and follow the instructions on the screen.

Resolve Infrared Port Problems

To configure the infrared port, perform the following steps:

1. Click the **Start** button, point to **Settings**, and then click **Control Panel**.

2. In the **Control Panel**, double-click the **System** icon.

3. Click the **Device Manager** tab.

4. If you previously attempted to configure the infrared port, remove all device listings that refer to **Infrared** or **Virtual Devices** in the following categories:

  - **Infrared devices**
  - **Network adapters**
  - **Ports (COM & LPT)**

  Click the listing(s) you wish to remove and then click **Remove**.

5. If you remove a device, ensure that **Yes, I want to restart my computer now** is selected, and then click **Finish**.

  The computer restarts automatically.

  *NOTE: If you have not attempted to configure the infrared port, the infrared and virtual entries will not be listed in the **Device Manager**. If you do not need to remove a device, restart the computer and continue with the next step.*

6. When you see the Dell logo, press <F2> to enter the System Setup program.

7. Press <Alt><P> to display **Page 2** of the System Setup program.

8. Press the down-arrow to highlight **Infrared Data Port**, and then press the right-arrow key to change the setting to **COM1**, **COM2**, **COM3**, or **COM4**. **COM3** is recommended.

9. Press the down-arrow key to highlight **Infrared Mode**, and then press the right-arrow key to change the setting to **Slow IR** or **Fast IR**. Refer to the infrared device documentation to determine the correct setting.

10. Press <Esc> to save your changes and exit the System Setup program.

11. Restart your computer.

12. After the computer restarts, click the **Start** button, point to **Settings**, and then click **Control Panel**.

13. In the **Control Panel**, double-click the **Infrared** icon.

14. Click the **Options** tab.

15. Ensure that the following options are checked:

  - **Enable infrared communication.**
  - **Search for and provide status for devices within range.**
  - **Install software for Plug and Play devices within range.**

16. Click **Apply** and then click **OK**.

17. Try using your external infrared device.

If you still have an infrared port problem, call Dell for technical assistance. For instructions, see Chapter 5, "Getting Help."

Resolve Memory Problems

- If an insufficient memory message appears, save and close any open files and exit any open application programs not in use.

- Consider installing additional system memory.

- Run the **System Memory** test as described in "Running the Dell Diagnostics," found earlier in this chapter.

- Reseat the memory modules. See "Installing Memory Modules" in Chapter 2.

- Restart the computer.

If you still have a memory problem, call Dell for technical assistance. For instructions, see Chapter 5, "Getting Help."

Resolve Modem, Fax, and Internet Connection Problems

NOTICE: Connect the modem to an analog line only. Connecting your modem to a nonanalog line, such as a digital or private branch exchange (PBX) line, will damage the modem.

NOTE: If you can connect to your Internet service provider (ISP) and send or receive a fax, your modem is functioning properly. If you are sure that your modem is working properly and you still experience problems connecting to your ISP, contact the ISP technical support department for assistance.

- Ensure that you have touchtone telephone service.

- If you have call-waiting service, disable call-waiting. Refer to your local telephone directory or call your telephone service provider for information on temporarily disabling call-waiting.

- If you have voice mail service, you may hear an irregular dial tone when you have messages. Contact your telephone service provider for information on restoring a normal dial tone.

- If you have any other telephone devices plugged into the line, such as answering machines, dedicated fax machines, or line splitters, bypass them and plug the modem cable directly into the telephone connector on the wall.

- Reseat the cable connections.

- Try a different cable. If you are using a cable that is 10 feet or more in length, try a shorter one.

- Disconnect the cable from the modem and plug it directly into a telephone. Listen for a dial tone.

- Line noise can cause low connection speeds. If you have persistent problems, try connecting the modem to a different telephone connector. You may also wish to contact your telephone company to report the problem.

If you still have problems with a Dell-provided modem, call Dell for technical assistance. For instructions, see Chapter 5, "Getting Help." If you have problems with a non-Dell-provided modem, call the modem manufacturer.

Resolve PC Card Problems

- Ensure that the PC Card is properly inserted into the connector.

- Ensure that the card is recognized by the Windows operating system by performing the following steps:

  1. Click the **Start** button, point to **Settings**, and then click **Control Panel**.

  2. In the **Control Panel**, double-click the **PC Card (PCMCIA)** icon.

  3. Ensure that the card is listed in the **PC Card (PCMCIA) Properties** window.

If you still have problems with a Dell-provided PC Card, call Dell for technical assistance. For instructions, see Chapter 5, "Getting Help." If you have problems with a non-Dell-provided PC Card, call the card manufacturer.

Resolve Software Problems

Software problems can result from the following circumstances:

- Improper installation or configuration of an application program
- Input errors
- Drivers that may conflict with certain application programs
- Memory conflicts

You can confirm that a problem is software related by running the **System Board Devices** tests as described in "Running the Dell Diagnostics," found earlier in this chapter. If all tests in the device group run successfully, the error condition may be related to a software problem.

NOTE: For detailed troubleshooting information on a particular application program, see the software documentation or contact the software manufacturer.

Install and Configure Software

Before installing additional software, ensure that the application program is compatible with the Windows operating system installed on your computer and that your computer meets the minimum hardware requirements needed to run the software.

Before installing software on your hard-disk drive, use a virus-scanning application program to check the diskettes or CDs for viruses. Viruses can quickly use all available system memory, damage and/or destroy data stored on the hard-disk drive, and permanently affect the performance of the application programs they infect.

Software usually includes installation instructions in the accompanying documentation and a software setup program (usually called **setup.exe** or **install.exe**) on a diskette or CD.

Resolve Touch Pad and Mouse Problems

- If you are using a PS/2 or USB mouse, ensure that the connector is firmly attached.

- If you are using the touch pad or a PS/2 mouse, run the **Pointing Devices** test as described in "Running the Dell Diagnostics," found earlier in this chapter.

- Reinstall the touch pad driver. For instructions, see "Installing the Touch Pad Driver" in Chapter 4.

- Restart the computer.

If you still have a touch pad or mouse problem, call Dell for technical assistance. For instructions, see Chapter 5, "Getting Help."

C H A P T E R   4
System Software Solutions

This chapter explains how to reinstall Dell device drivers and utilities on your Dell computer running the Microsoft Windows 98 Second Edition, Windows 2000, or Windows NT operating system. You may need to use this document under the following conditions:

- You are reinstalling the version of the Windows operating system that came with your computer, and you need to reinstall the drivers and utilities that Dell provides.

- You have a new hard-disk drive and you need to install all of the system software.

Partitioning and Formatting the Hard-Disk Drive

Before you can store data on a hard-disk drive, you must partition and format the drive. Then you must assign logical drive letters to the partitions you created.

To partition and format the new hard-disk drive and then assign logical drive letters to the partitions you created, perform the following steps.

NOTICE: Formatting a hard-disk drive erases all data stored on the drive; however, the formatting utility included with the operating system may allow you to restore the data on a hard-disk drive immediately after you format it. Partitioning a hard-disk drive permanently deletes all data stored on the drive.

1. Partition the hard-disk drive by using the partitioning software for your particular operating system.

   When you set up the partition(s) on the hard-disk drive, set aside some disk space for the save-to-disk (S2D) suspend partition rather than allocating the entire hard-disk drive to your operating system. Use the following guidelines to determine the size of the S2D partition:

   - For a 16-bit file allocation table (FAT16), leave 4 megabytes (MB) of storage space for an S2D partition. For a 32-bit file allocation table (FAT32), leave 8 MB.

- For any operating system that uses a file system other than FAT16 or FAT32, including compressed file systems such as DriveSpace, use the following algorithm to determine the amount of disk space to reserve for an S2D partition:

  Size of system memory + size of video memory + 1 percent of size of system memory and video memory + 2 MB rounded up to the next cylinder

  Examples:

  32 MB + 4 MB + 0.36 MB + 2 MB = 38.36 MB (approximately 1.25 percent of a 3-GB drive)

  256 MB + 6 MB + 2.62 MB + 2 MB = 266.62 MB (approximately 4.4 percent of a 4-GB drive)

2. Format the hard-disk drive and assign logical drive letters to the partitions you created according to the instructions provided with your operating system.

3. Restart the computer from a bootable diskette such as the *Microsoft Boot Disk Windows 98 Series* diskette.

4. Create the S2D partition. For instructions, see "Save-to-Disk Suspend Utility," found later in this chapter.

5. Follow the instructions found later in this chapter to install the appropriate device drivers.

6. Install your application programs on the hard-disk drive.

   If you have trouble with the hard-disk drive, run the **IDE Devices** device group tests in the Dell Diagnostics. For instructions, see "Running the Dell Diagnostics" in Chapter 3.

7. If you ever need to remove the S2D partition to free up storage space on the hard-disk drive, do so by using the **rms2d.exe** utility on the *System Software* CD. For instructions, see "Removing the Save-to-Disk Suspend Partition," found later in this chapter. When more space is available on the drive, you can also recreate the S2D partition by using the **mks2d.exe** utility. For instructions, see "Creating the Save-to-Disk Suspend Partition," found later in this chapter.

Installing the Windows 98 Operating System

You must install Windows 98 on the hard-disk drive, as described in the following steps, before you install any device drivers:

1. Insert the *Microsoft Boot Disk Windows 98 Series* diskette into the diskette drive.

2. Restart the computer.

3. When the **Microsoft Windows 98 Startup** menu appears, insert the *Microsoft Windows 98* CD into the CD-ROM or DVD-ROM drive.

4. Select **Start Windows 98 Setup from CD-ROM** and press <Enter>.

   The Setup program runs ScanDisk to check your hard-disk drive.

5. When the hard-disk drive check is completed, type x to exit ScanDisk.

6. Follow the prompts on your screen to continue the installation.

7. When prompted to create a start-up diskette, remove the *Microsoft Boot Disk Windows 98 Series* diskette, and click **Next>**.

8. Label a blank, high-density diskette as instructed, insert the diskette into the diskette drive, and then click **OK**.

9. Follow the prompts on your screen to complete the installation.

Installing Drivers and Utilities for Windows 98

All of your computer's drivers for Dell-installed devices are operative when you receive the computer; no further installation or configuration is needed. However, if you ever need to reinstall any of these drivers, the driver files are provided on the *System Software* CD. For instructions on reinstalling a particular driver, see the following subsection that corresponds to that driver.

Often device problems can be corrected by reinstalling the appropriate drivers. Also, hardware manufacturers frequently provide updated drivers that support feature enhancements or that correct problems. Obtain updated drivers for products purchased from Dell from the support section of the Dell World Wide Web site (**http://support.dell.com**).

NOTICE: Drivers available on the Dell Web site have been validated for correct operation on Dell systems. Installing drivers obtained from other sources may cause errors or performance degradation.

To install the system software, you need the following items:

- *System Software* CD
- CD-ROM or DVD-ROM drive installed in the media bay of the computer
- *Microsoft Windows 98* CD
- *Microsoft Boot Disk Windows 98 Series* diskette

NOTE: Verify that the Windows 98 operating system is already installed on the hard-disk drive before you install any device drivers. For instructions, see the preceding section, "Installing the Windows 98 Operating System."

The following subsections describe the installation instructions for the drivers and utilities that are provided on the *System Software* CD for use with a system running the Windows 98 Second Edition operating system.

Installing the Video Driver (Windows 98)

The video driver controls features such as video resolution and the color palette.

NOTE: If you need to use extended video modes, check the documentation that came with the application program to determine if the drivers are provided. If not, contact the software manufacturer to get the necessary drivers.

To install the video driver for Windows 98, perform the following steps:

1. Save your work in all open application programs because you will need to restart your computer at the end of this procedure to complete the installation.

2. Insert the *System Software* CD into the CD-ROM drive.

3. Click the **Start** button, and then click **Run**.

   The **Run** dialog box appears.

4. Type `x:\win98\video\setup`, where *x* is the drive letter of your CD-ROM drive, and click **OK** or press <Enter>.

5. Follow the instructions on the screen.

6. After the files are copied to your hard-disk drive, remove the *System Software* CD from the CD-ROM drive, and click **Finish** to restart your computer.

After installing the video drivers and restarting your computer, perform the following steps to set the display parameters:

1. Click the **Start** button, point to **Settings**, and then click **Control Panel**.

   The **Control Panel** window appears.

2. Double-click the **Display** icon.

   The **Display Properties** window appears.

3. Click the **Settings** tab.

4. Change the **Colors** option from **256 colors** to **True Color (24-bit)**.

5. Set the **Screen** area for your display to **1024 x 768**.

6. Click **Apply**.

Installing the Audio Driver and the Modem Driver (Windows 98)

The audio driver allows you to customize the sound features of your computer. Installing the audio driver also installs the modem driver, which allows you to use your computer to send and receive information over telephone lines. To install the audio and modem drivers, perform the following steps:

1. Save your work in all open application programs because you will need to restart your computer at the end of this procedure to complete the installation.

2. Insert the *System Software* CD into the CD-ROM drive.

3. Click the **Start** button, and then click **Run**.

   The **Run** dialog box appears.

4. Type `x:\win98\audio\setup`, where *x* is the drive letter of your CD-ROM drive, and click **OK** or press <Enter>.

5. Follow the instructions on the screen.

6. After the files are copied to your hard-disk drive, remove the *System Software* CD from the CD-ROM drive, and click **Finish** to restart your computer.

Installing the DualPoint Integrated Pointing Device Drivers (Windows 98)

DualPoint integrated pointing device drivers and associated utilities allow you to use and customize the integrated touch pad, track stick, or external mouse. To install these drivers, perform the following steps.

NOTICE: Use these steps to install touch pad drivers only if your computer has a track stick. If your computer does not have a track stick, follow the instructions in the next section, "Installing the Touch Pad Drivers."

1. Save your work in all open application programs because you will need to restart your computer at the end of this procedure to complete the installation.

2. Insert the *System Utilities* CD into the CD-ROM drive.

3. Click the **Start** button, and then click **Run**.

   The **Run** dialog box appears.

4. Type `x:\win98\touchpad\dual\setup`, where *x* is the drive letter of your CD-ROM drive, and click **OK** or press <Enter>.

5. Follow the instructions on the screen.

6. After the files are copied to your hard-disk drive, remove the *System Software* CD from the CD-ROM drive, and click **Finish** to restart your computer.

Installing the Touch Pad Drivers (Windows 98)

Touch pad drivers and associated utilities allow you to use and customize the integrated touch pad or external mouse. To install these drivers, perform the following steps.

NOTICE: Use these steps to install touch pad drivers only if your computer does not have a track stick. If your computer has a track stick, follow the instructions in the previous section, "Installing the DualPoint Integrated Pointing Device Drivers."

1. Save your work in all open application programs because you will need to restart your computer at the end of this procedure to complete the installation.

2. Insert the *System Utilities* CD into the CD-ROM drive.

3. Click the **Start** button, and then click **Run**.

   The **Run** dialog box appears.

4. Type *x*:\win98\touchpad\single\setup, where *x* is the drive letter of your CD-ROM drive, and click **OK** or press <Enter>.

5. Follow the instructions on the screen.

6. After the files are copied to your hard-disk drive, remove the *System Software* CD from the CD-ROM drive, and click **Finish** to restart your computer.

Installing Softex BayManager (Windows 98)

The Softex BayManager software allows you to swap media bay devices without shutting down and rebooting your computer. For example, you can boot your computer with the diskette drive installed and then, using the Softex BayManager software, safely remove the diskette drive and install a CD-ROM drive. The computer automatically recognizes the CD-ROM drive.

To install Softex BayManager, perform the following steps:

1. If the computer is docked, undock it. For instructions, see your *Advanced Port Replicator User's Guide.*

2. Make sure that the CD-ROM, DVD-ROM, or CD-RW drive is installed in the modular or media bay.

3. Turn on the computer and insert the *System Software* CD into your CD-ROM or DVD-ROM drive.

4. Click the **Start** button, and then click **Run**.

   The **Run** dialog box appears.

5. Type *x*:\win98\baymgr\setup, where *x* is the drive letter of your CD-ROM drive, and click **OK** or press <Enter>.

6. Follow the instructions on the screen.

7. After the files are copied to your hard-disk drive, remove the *System Software* CD from the CD-ROM drive, and click **Finish** to restart your computer.

After you run the Softex BayManager setup program, you can install and use the drives.

Installing the Intel® SpeedStep™ Utility (Windows 98)

Intel SpeedStep technology conserves battery power by automatically adjusting the processor speed when you run your computer from the battery instead of AC power. SpeedStep reduces the processor speed when using the battery, and resumes maximum processor speed when plugged into an electrical outlet. To install SpeedStep, perform the following steps:

1. Save your work in all open application programs because you will need to restart your computer at the end of this procedure to complete the installation.

2. Insert the *System Software* CD into the CD-ROM drive.

3. Click the **Start** button, and then click **Run**.

   The **Run** dialog box appears.

4. Type x:\win98\speedstp*language*\setup, where x is the drive letter of your CD-ROM drive and *language* is **Dutch**, **English**, **French**, **German**, **Japanese**, **Korean**, **Spanish**, **Swedish**, **SChinese** (Simplified Chinese), **TChinese** (Traditional Chinese), or **Thai**.

5. Click **OK** or press <Enter>.

6. Follow the instructions on the screen.

7. After the files are copied to your hard-disk drive, remove the *System Software* CD from the CD-ROM drive, and click **Finish** to restart your computer.

Installing System Utilities (Windows 98)

System utilities allow you to configure features such as the save-to-disk (S2D) suspend file. To copy the system utilities to your hard-disk drive, perform the following steps.

NOTE: You can also run the system utilities directly from the System Software CD.

1. Insert the *System Software* CD into the CD-ROM drive.

2. Copy each of the following utilities on the *System Software* CD to the **c:\dell** directory on your hard-disk drive: **mks2d.exe**, **rms2d.exe**, **asset.com**, and **readme.s2d**.

   For more information on copying files, see the documentation that came with the operating system.

After you copy the utilities to your hard-disk drive, you must restart your computer in the MS-DOS mode to use the utilities.

See the **readme.s2d** file on the *System Software* CD for more information on using the S2D suspend utilities.

Installing Docking Drivers (Optional) (Windows 98)

If you have an advanced port replicator (APR), you must install the Dock QuickInstall drivers before installing the APR.

1. *If the computer has never been turned on*, turn it on now while it is undocked and complete the operating system setup, and then continue to step 2. *If you have completed the operating system setup*, turn on the computer, and then continue to step 2. For setup instructions, see the *Dell Inspiron Systems Setup Guide* that came with the computer.

2. Save your work in all open application programs because you will need to restart your computer at the end of this procedure to complete the installation.

3. Insert the *System Software* CD into the CD-ROM drive.

4. Click the **Start** button, and then click **Run**.

   The **Run** dialog box appears.

5. Type `x:\win98\dockquik\setup`, where *x* is the drive letter of your CD-ROM drive, and click **OK** or press <Enter>.

6. Follow the instructions on the screen.

7. When the **CMD PCI IDE Driver Setup Utility** window appears, click **Yes** to continue.

8. When prompted to restart the Windows operating system, remove the *System Software* CD from the CD-ROM drive, and then click **Yes**.

9. After Windows restarts, shut down the computer.

10. Dock the computer as described in your *Advanced Port Replicator User's Guide*.

11. Turn on the computer.

12. When the **Add New Hardware Wizard** window appears, click **Next**.

13. When prompted, click the **Search for the best driver for your device (Recommended)** radio button, and then click **Next**.

14. When prompted to specify where Windows should search for the driver, click **Next**.

15. When Windows locates the driver, click **Next** to begin the driver installation.

   NOTE: The installation may appear to pause for 10 to 15 seconds while Windows copies files.

16. When Windows has finished installing the driver, click **Finish**.

17. When prompted to restart, click **Yes** to restart the computer.

18. After Windows restarts, makes adjustments, and finishes setting up the new configuration (called **Dock 1**), click **OK**.

19. When prompted to restart, click **OK**.

    The computer restarts.

20. When the **New Display Settings** window prompts you to restart, click **OK**.

21. When the **Latitude Docking Utility for Windows 98** window appears and notifies you that an adjustment must be made, click **OK.**

    The computer shuts down and turns off.

22. Press the power button to restart the computer.

    The APR is now ready to use.

Installing the DVD Decoder Driver (Optional) (Windows 98)

The DVD decoder driver allows you to play DVD movies on the computer.

NOTE: When you are prompted to select a directory, Dell recommends using the default directory settings.

1. Insert the *Software DVD Decoder* CD into the DVD-ROM drive.

2. Click the **Start** button, and then click **Run**.

3. In the **Run** dialog box, type *x*:\setup.exe, where *x* is the DVD-ROM drive letter.

    The DVD-ROM drive letter is usually *D*.

4. Click **OK**.

    The **Welcome** window appears.

5. Click **Next>**.

6. At the **Choose Destination Location** screen, click **Next>**.

7. At the **Select Program Folder** screen, click **Next>**.

8. At the **Start Copying Files** screen, click **Next>**.

9. At the **Setup Complete** screen, be sure that the **Yes, I want to restart my computer now** radio button is selected, and then click **Finish**.

The first time you play a DVD after installing this driver, you may be prompted to change the region setting.

Installing the System Help (Windows 98)

The Dell Inspiron system *Help* is available on the *System Software* CD. You can also access it from Dell's Web site (**http://support.dell.com**).

Installing Help From the CD

To install the system *Help* from the *System Software* CD, perform the following steps:

1. Insert the *System Software* CD into the CD-ROM or DVD-ROM drive.

2. Double-click the **My Computer** icon, and then double-click the **CD-ROM** or **DVD-ROM** drive icon.

3. Double-click the **Guide** folder.

4. Right-click the **popup.ocx** file, and then click **Copy**.

    *NOTE: You must copy the **popup.ocx** file into the Windows registry; otherwise, error messages may appear.*

5. Double-click the **My Computer** icon, and then double-click the **C:** drive icon.

6. Double-click the **Windows** folder, double-click the **System** folder, and then right-click **Paste**.

7. Click **Start**, and then click **Run**.

8. Type `regsvr32 popup.ocx`, and then press <Enter>.

9. Click **OK** when the screen indicates that the file was successfully registered.

10. Double-click the **My Computer** icon, and then double-click the **CD-ROM** or **DVD-ROM** icon.

11. Double-click the **Guide** folder, and then double-click the appropriate language folder for the version of *Help* that you want to install.

12. Right-click and hold **3800help** and drag it to the Windows desktop.

13. Release the right mouse button.

14. Click **Copy Here**.

15. Double-click the **3800help** icon to access the system *Help*.

Downloading Help From the Support Web Site

To download the system *Help* from **http://support.dell.com**, perform the following steps:

1. Click **Support Your Dell**.

2. Type your computer's service tag sequence, if available, click **Submit**, and continue to step 5. If the service tag sequence is not available, continue to step 3.

3. Click **Inspiron Notebooks**.

4. Click **3800**.

5. Click **Documentation**.

6. Click **Online Documentation**.

7. Follow the instructions to save the *Help* file to your hard-disk drive.

Installing Drivers and Utilities for Windows NT

This section explains how to reinstall device drivers and utilities on your Dell portable computer running the Microsoft Windows NT 4.0 operating system.

To install the system software, you need the following items:

*   *Microsoft Windows NT 4.0* CD

*   *Microsoft Windows NT 4.0 Service Pack 5* CD

*   *System Software* CD

*   CD-ROM drive (installed)

*   One formatted diskette

The following subsections describe the installation instructions for the drivers and utilities that are provided on the *System Software* CD for use with a system running the Windows NT 4.0 operating system.

NOTE: To install the drivers and utilities correctly, you must install them in the order presented in this document.

Installing the Video Driver (Windows NT)

The video driver controls features such as video resolution and the color palette.

NOTE: If you need to use extended video modes, check the documentation that came with the application program to determine if the drivers are provided. If not, contact the software manufacturer to get the necessary drivers.

To install the video driver for Windows NT 4.0, perform the following steps:

1. Save your work in all open application programs because you will need to restart your computer at the end of this procedure to complete the installation.

2. Insert the *System Software* CD into the CD-ROM drive.

3. Click the **Start** button, and then click **Run**.

    The **Run** dialog box appears.

4. Type *x*:\winnt4\video\setup, where *x* is the drive letter of your CD-ROM drive, and click **OK** or press <Enter>.

5. Follow the instructions on the screen.

6. After the files are copied to your hard-disk drive, remove the *System Software* CD from the CD-ROM drive, and click **Finish** to restart your computer.

After installing the video drivers and restarting your computer, perform the following steps to set the display parameters:

1. Click the **Start** button, point to **Settings**, and then click **Control Panel**.

   The **Control Panel** window appears.

2. Double-click the **Display** icon.

   The **Display Properties** window appears.

3. Click the **Settings** tab.

4. Change the **Colors** option from **256 colors** to **True Color (24-bit)**.

5. Set the **Screen** area for your display to **1024 x 768**.

6. Click **Apply**.

Installing the Power Management Utility (Windows NT)

Dell provides a power management utility that helps you conserve battery power and view available power levels. To install the power management utility, perform the following steps:

1. Save your work in all open application programs because you will need to restart your computer at the end of this procedure to complete the installation.

2. Insert the *System Software* CD into the CD-ROM drive.

3. Click the **Start** button, and then click **Run**.

   The **Run** dialog box appears.

4. Type *x*:\winnt4\powermgt\setup, where *x* is the drive letter of your CD-ROM drive, and then click **OK** or press <Enter>.

5. Follow the instructions on the screen.

6. When prompted to restart, remove the *System Software* CD from the CD-ROM drive, and restart your computer to activate the utility.

Installing the Intel SpeedStep Utility (Windows NT)

Intel SpeedStep technology conserves battery power by automatically adjusting the processor speed when you run your computer from the battery instead of AC power. SpeedStep reduces the processor speed when using the battery and resumes maximum processor speed when plugged into an electrical outlet. To install SpeedStep, perform the following steps:

1. Save your work in all open application programs because you will need to restart your computer at the end of this procedure to complete the installation.

2. Insert the *System Software* CD into the CD-ROM drive.

3. Click the **Start** button, and then click **Run**.

   The **Run** dialog box appears.

4. Type x:\winnt4\speedstp*language*\setup, where *x* is the drive letter of your CD-ROM drive and *language* is **Dutch**, **English**, **French**, **German**, **Japanese**, **Korean**, **Spanish**, **Swedish**, **SChinese** (Simplified Chinese), **TChinese** (Traditional Chinese), or **Thai**.

5. Click **OK** or press <Enter>.

6. Follow the instructions on the screen.

7. After the files are copied to your hard-disk drive, remove the *System Software* CD from the CD-ROM drive, and click **Finish** to restart your computer.

Installing the PC Card Utility (Windows NT)

Dell provides a PC Card utility that allows you to view and configure settings for your PC Card(s). To install the PC Card utility, perform the following steps:

1. Save your work in all open application programs because you will need to restart your computer at the end of this procedure to complete the installation.

2. Insert the *System Software* CD into the CD-ROM drive.

3. Click the **Start** button, and then click **Run**.

   The **Run** dialog box appears.

4. Type x:\winnt4\pccard\setup, where *x* is the drive letter of your CD-ROM drive, and then click **OK** or press <Enter>.

5. Follow the instructions on the screen.

6. Restart your computer.

   After the computer completes the starting sequence, the **Softex PC Card Controller Diagnostics** window appears.

7. Follow the instructions on the screen.

8. When prompted to restart, remove the *System Software* CD from the CD-ROM drive, and restart your computer to activate the utility.

Installing Softex Docking Services (Windows NT)

Softex Docking Services enables you to connect a computer running Windows NT to a port replicator and to hot-swap devices to and from the computer's media bay. It also enables you to dock and undock the computer while it is in standby mode. Softex Docking Services provides compatibility with the power management controller, which allows you to suspend and resume the operation of your computer without affecting your ability to use the port replicator.

To install Softex Docking Services, perform the following steps:

1. Insert the *System Software* CD into the CD-ROM drive.

2. Click the **Start** button, and then click **Run**.

    The **Run** dialog box appears.

3. Type `x:\winnt4\docking\setup`, where *x* is the drive letter of your CD-ROM drive, and then click **OK** or press <Enter>.

4. Follow the instructions on your screen.

5. When the installation is complete, click **OK.**

6. When the **Reboot Now** dialog box appears, remove the *System Software* CD from the CD-ROM drive, and click **Restart Now** to reboot the computer.

Installing the Audio Driver and the Modem Driver (Windows NT)

The audio driver allows you to customize the sound features of your computer. Installing the audio driver also installs the modem driver, which allows you to use your computer to send and receive information over telephone lines. To install the audio and modem drivers, perform the following steps:

1. Save your work in all open application programs because you will need to restart your computer at the end of this procedure to complete the installation.

2. Insert the *System Software* CD into the CD-ROM drive.

3. Click the **Start** button, and then click **Run**.

    The **Run** dialog box appears.

4. Type `x:\winnt4\audio\setup`, where *x* is the drive letter of your CD-ROM drive, and click **OK** or press <Enter>.

5. Follow the instructions on the screen.

6. After the files are copied to your hard-disk drive, remove the *System Software* CD from the CD-ROM drive, and click **Finish** to restart your computer.

Installing the DualPoint Integrated Pointing Device Drivers (Windows NT)

DualPoint integrated pointing device drivers and associated utilities allow you to use and customize the integrated touch pad, track stick, or external mouse. To install these drivers, perform the following steps.

NOTICE: Use these steps to install touch pad drivers only if your computer has a track stick. If your computer does not have a track stick, follow the instructions in the next section, "Installing the Touch Pad Drivers."

1. Save your work in all open application programs because you will need to restart your computer at the end of this procedure to complete the installation.

2. Insert the *System Utilities* CD into the CD-ROM drive.

3. Click the **Start** button, and then click **Run**.

    The **Run** dialog box appears.

4. Type `x:\winnt4\touchpad\dual\setup`, where *x* is the drive letter of your CD-ROM drive, and click **OK** or press <Enter>.

5. Follow the instructions on the screen.

6. After the files are copied to your hard-disk drive, remove the *System Software* CD from the CD-ROM drive, and click **Finish** to restart your computer.

Installing the Touch Pad Drivers (Windows NT)

Touch pad drivers and associated utilities allow you to use and customize the integrated touch pad or external mouse. To install these drivers, perform the following steps.

NOTICE: Use these steps to install touch pad drivers only if your computer does not have a track stick. If your computer has a track stick, follow the instructions in the previous section, "Installing the DualPoint Integrated Pointing Device Drivers."

1. Save your work in all open application programs because you will need to restart your computer at the end of this procedure to complete the installation.

2. Insert the *System Software* CD into the CD-ROM drive.

3. Click the **Start** button, and then click **Run**.

    The **Run** dialog box appears.

4. Type `x:\winnt4\touchpad\single\setup`, where *x* is the drive letter of your CD-ROM drive, and click **OK** or press <Enter>.

5. Follow the instructions on the screen.

6. After the files are copied to your hard-disk drive, remove the *System Software* CD from the CD-ROM drive, and click **Finish** to restart your computer.

Installing System Utilities (Windows NT)

System utilities allow you to configure features such as the save-to-disk (S2D) suspend partition. To copy the system utilities to your hard-disk drive, perform the following steps.

NOTE: You can also run the system utilities directly from the System Software CD.

1. Insert the *System Software* CD into the CD-ROM drive.

2. Copy each of the following utilities on the *System Software* CD to the **c:\dell** directory on your hard-disk drive: **mks2d.exe**, **rms2d.exe**, **asset.com**, and **readme.s2d**.

    For more information on copying files, see the documentation that came with the operating system.

After you copy the utilities to your hard-disk drive, you must restart your computer in the MS-DOS mode to use the utilities.

See the **readme.s2d** file on the *System Software* CD for more information on using the S2D suspend partition utilities.

Installing the System Help (Windows NT)

The Dell Inspiron system *Help* is available on the *System Software* CD. You can also access it from Dell's Web site (**http://support.dell.com**).

NOTE: You must install Microsoft Internet Explorer 4.01 from the Microsoft Windows NT 4.0 Service Pack 5 CD before installing the system Help.

Installing Help From the CD

To install the system *Help* from the *System Software* CD, perform the following steps:

1. Insert the *System Software* CD into the CD-ROM drive.

2. Double-click the **My Computer** icon, and then double-click the **CD-ROM** drive icon.

3. Double-click the **Guide** folder, and then double-click the appropriate language folder for the version of *Help* that you want to install.

4. Right-click and hold **3800help**, and drag it to the Windows desktop.

5. Release the right mouse button.

6. Click **Copy Here**.

7. Double-click the **3800help** icon to access the system *Help*.

Downloading Help From the Support Web Site

To download the system *Help* from **http://support.dell.com**, perform the following steps:

1. Click **Support Your Dell**.

2. Type your service tag sequence, if available, click **Submit**, and continue to step 5. If the service tag sequence is not available, continue to step 3.

3. Click **Inspiron Notebooks**.

4. Click **3800**.

5. Click **Documentation**.

6. Click **Online Documentation**.

7. Follow the instructions to save the *Help* file to your hard-disk drive.

Installing Drivers and Utilities for Windows 2000

This section explains how to reinstall device drivers and utilities on your Dell portable computer running the Microsoft Windows 2000 operating system.

To install the system software, you need the following items:

- *System Software* CD
- CD-ROM or DVD-ROM drive installed in the media bay of the computer
- *Microsoft Windows 2000* CD

The following subsections describe the installation instructions for the drivers and utilities that are provided on the *System Software* CD for use with a system running the Windows 2000 operating system.

NOTE: To install the drivers and utilities correctly, you must install them in the order presented in this document.

Installing the Audio Driver and the Modem Driver (Windows 2000)

The audio driver allows you to customize the sound features of your computer. Installing the audio driver also installs the modem driver, which allows you to use your computer to send and receive information over telephone lines. To install the audio and modem drivers, perform the following steps:

1. Save your work in all open application programs because you will need to restart your computer at the end of this procedure to complete the installation.

2. Insert the *System Software* CD into the CD-ROM drive.

3. Click the **Start** button, and then click **Run**.

    The **Run** dialog box appears.

4. Type `x:\win2000\audio\setup`, where *x* is the drive letter of your CD-ROM drive, and click **OK** or press <Enter>.

5. Follow the instructions on the screen.

6. After the files are copied to your hard-disk drive, remove the *System Software* CD from the CD-ROM drive, and click **Finish** to restart your computer.

Installing the Video Driver (Windows 2000)

The video driver controls features such as video resolution and the color palette.

NOTE: If you need to use extended video modes, check the documentation that came with the application program to determine if the drivers are provided. If not, contact the software manufacturer to get the necessary drivers.

To install the video driver for Windows 2000, perform the following steps:

1. Save your work in all open application programs because you will need to restart your computer at the end of this procedure to complete the installation.

2. Insert the *System Software* CD into the CD-ROM drive.

3. Click the **Start** button, and then click **Run**.

    The **Run** dialog box appears.

4. Type `x:\win2000\video\setup`, where *x* is the drive letter of your CD-ROM drive, and click **OK** or press <Enter>.

5. Follow the instructions on the screen.

6. After the files are copied to your hard-disk drive, remove the *System Software* CD from the CD-ROM drive, and click **Finish** to restart your computer.

After you install the video driver and restart your computer, perform the following steps to set the display parameters:

1. Click the **Start** button, point to **Settings**, and then click **Control Panel**.

    The **Control Panel** window appears.

2. Double-click the **Display** icon.

    The **Display Properties** window appears.

3. Click the **Settings** tab.

4. Change the **Colors** option to **High Color (16-bit)** or **True Color (24-bit)**.

5. Set the **Screen area** for your display to the appropriate size.

6. Click **OK**.

Installing the DualPoint Integrated Pointing Device Drivers (Windows 2000)

DualPoint integrated pointing device drivers and associated utilities allow you to use and customize the integrated touch pad, track stick, or external mouse. To install these drivers, perform the following steps.

NOTICE: Use these steps to install touch pad drivers only if your computer has a track stick. If your computer does not have a track stick, follow the instructions in the next section, "Installing the Touch Pad Drivers."

1. Save your work in all open application programs because you will need to restart your computer at the end of this procedure to complete the installation.

2. Insert the *System Utilities* CD into the CD-ROM drive.

3. Click the **Start** button, and then click **Run**.

   The **Run** dialog box appears.

4. Type `x:\win2000\touchpad\dual\setup`, where *x* is the drive letter of your CD-ROM drive, and click **OK** or press <Enter>.

5. Follow the instructions on the screen.

6. After the files are copied to your hard-disk drive, remove the *System Software* CD from the CD-ROM drive, and click **Finish** to restart your computer.

Installing the Touch Pad Drivers (Windows 2000)

Touch pad drivers and associated utilities allow you to use and customize the integrated touch pad or external mouse. To install these drivers, perform the following steps.

NOTICE: Use these steps to install touch pad drivers only if your computer does not have a track stick. If your computer has a track stick, follow the instructions in the previous section, "Installing the DualPoint Integrated Pointing Device Drivers."

1. Save your work in all open application programs because you will need to restart your computer at the end of this procedure to complete the installation.

2. Insert the *System Software* CD into the CD-ROM drive.

3. Click the **Start** button, and then click **Run**.

   The **Run** dialog box appears.

4. Type `x:\win2000\touchpad\single\setup`, where *x* is the drive letter of your CD-ROM drive, and click **OK** or press <Enter>.

5. Follow the instructions on the screen.

6. After the files are copied to your hard-disk drive, remove the *System Software* CD from the CD-ROM drive, and click **Finish** to restart your computer.

Installing the Intel SpeedStep Utility (Windows 2000)

Intel SpeedStep technology conserves battery power by automatically adjusting the processor speed when you run your computer from the battery instead of AC power. SpeedStep reduces the processor speed when using the battery and resumes maximum processor speed when plugged into an electrical outlet. To install SpeedStep, perform the following steps:

1. Insert the *System Software* CD into the CD-ROM drive.

2. Click the **Start** button, and then click **Run**.

   The **Run** dialog box appears.

3. Type `x:\win2000\speedstp\`*language*`\setup`, where *x* is the drive letter of your CD-ROM drive and *language* is **Dutch**, **English**, **French**, **German**, **Japanese**, **Korean**, **Spanish**, **Swedish**, **SChinese** (Simplified Chinese), **TChinese** (Traditional Chinese), or **Thai**.

4. Click **OK** or press <Enter>.

5. Follow the instructions on the screen.

6. After the files are copied to your hard-disk drive, remove the *System Software* CD from the CD-ROM drive, and click **Finish** to restart your computer.

Save-to-Disk Suspend Utility (for Windows 98 and Windows NT)

The save-to-disk (S2D) suspend utility allows you to manage the S2D partition in your file system as your computing needs change. For instance, you can remove the S2D partition if you need the space on the hard-disk drive for other purposes, or you can use the S2D utility to create the partition if you have removed it.

Only computers running Windows 98 or Windows NT use an S2D partition. If your computer runs Windows 2000, you can place the computer into hibernation through **Power Options Properties** in the **Control Panel**.

Removing the Save-to-Disk Suspend Partition

If you want to use the S2D partition on your hard-disk drive for another purpose (for instance, if you are running out of file space), perform the following steps to remove the partition:

1. Insert the *System Software* CD into the CD-ROM drive.

2. Shut down the computer.

3. If the computer is docked, undock it. For instructions, see your *Advanced Port Replicator User's Guide.*

4. Turn on the computer.

5. Press <F2> at the Dell BIOS splash screen to access the System Setup menu.

6. Press the down-arrow key to move through the field, and press the left- or right-arrow key to change the device setting. Select the following boot sequence:

   - **Boot First Device: Diskette Drive**
   - **Boot Second Device: CDROM/DVDROM Drive**
   - **Boot Third Device: Internal HDD**

7. Shut down the computer.

8. If your computer has a diskette drive attached, make sure that the drive does not contain a diskette.

9. Turn the computer on.

   The computer restarts and automatically begins to run the Dell Diagnostics.

10. Type x to exit to MS-DOS.

11. At the MS-DOS prompt, type r:*winx*\suspend\rms2d (where *winx* is your operating system), and press <Enter>.

NOTE: When you run the Dell Diagnostics from the System Software CD, the CD-ROM drive letter is r.

Status messages appear on the screen as the removal process progresses. When the S2D partition has been removed, the following message appears:

```
The S2D partition was successfully removed.
```

NOTE: After you remove the S2D partition, the computer cannot activate save-to-disk suspend mode until you re-create the partition. If you try to activate save-to-disk suspend mode and receive the message No Suspend-To-Disk partition available, *you must create an S2D partition.*

Creating the Save-to-Disk Suspend Partition

The **mks2d.exe** file creates the S2D partition that the computer uses to store the system data that is saved when you put the computer in S2D suspend mode. Use the **mks2d.exe** file to create a new S2D partition in the following cases:

- If you increase the amount of system memory by adding a memory module
- If you used the **rms2d.exe** file to remove the original S2D partition and now want to re-create the partition
- If your hard-disk drive becomes corrupted

- If you install a new hard-disk drive
- If you received the system utilities separately on CD or if you deleted the S2D utility from your hard-disk drive

To create an S2D partition, perform the following steps:

1. Insert the *System Software* CD into the CD-ROM drive.

2. Shut down the computer.

3. If the computer is docked, undock it. For instructions, see your *Advanced Port Replicator User's Guide.*

4. Turn on the computer.

5. Press <F2> at the Dell BIOS splash screen to access the System Setup menu.

6. Press the down-arrow key to move through the field, and press the left- or right-arrow key to change the device setting. Select the following boot sequence:

   - **Boot First Device: Diskette Drive**
   - **Boot Second Device: CDROM/DVDROM Drive**
   - **Boot Third Device: Internal HDD**

7. Shut down the computer.

8. If your computer has a diskette drive attached, make sure that the drive does not contain a diskette.

9. Turn the computer on.

   The computer restarts and automatically begins to run the Dell Diagnostics.

10. Type x to exit to MS-DOS.

11. At the MS-DOS prompt, type r:*winx*\suspend\mks2d (where *winx* is your operating system), and press <Enter>.

NOTE: When you run the Dell Diagnostics from the System Software CD, the CD-ROM drive letter is r.

Status messages appear on the screen. If an error message appears, it provides information about what steps to take to continue building the partition.

When the S2D partition has been built and verified, the following message appears:

```
The S2D partition was successfully created.
```

Contacting Dell

Dell's technical assistance Web site (**http://support.dell.com**) provides driver and utility updates, as well as technical assistance with questions about your computer. In addition, if you have access to a computer with a modem or fax capabilities, you can access Dell's TechConnect bulletin board service (BBS), AutoTech service, and TechFax service. Dell's Web site also contains links to some of these services.

Dell regularly tests and officially releases new drivers and utilities for Inspiron computers. A list of the latest drivers and utilities is available at **http://support.dell.com**.

CHAPTER 5

Getting Help

This chapter describes the tools Dell provides to help you when you have a problem with your computer. It also tells you when and how to call Dell for technical or customer assistance.

Technical Assistance

If you need assistance with a technical problem, perform the following steps:

1. Complete the troubleshooting checks in Chapter 3, "Troubleshooting."

2. Run the Dell Diagnostics as described in "Running the Dell Diagnostics" in Chapter 3.

3. Make a copy of the Diagnostics Checklist (found later in this chapter), and fill it out.

4. Use Dell's extensive suite of online services available at Dell's World Wide Web site (**http://www.dell.com**) for help with installation and troubleshooting procedures.

   For more information, refer to "World Wide Web" found later in this chapter.

5. If the preceding steps have not resolved the problem, call Dell for technical assistance.

   When prompted by Dell's automated telephone system, enter your Express Service Code to route the call directly to the proper support personnel. If you do not have an Express Service Code, open the **Dell Accessories** folder, double-click the **Express Service Code** icon, and follow the directions.

   NOTES: The Express Service Code is shown on the bottom of the computer.

   Dell's Express Service Code system may not be available in all countries.

   For instructions on using the technical support service, refer to "Technical Support Service" and "Before You Call" found later in this chapter.

Help Tools

Dell provides a number of tools to assist you. These tools are described in the following subsections.

NOTE: Some of the following tools are not always available in all locations outside the continental U.S. Please call your local Dell representative for information on availability.

World Wide Web

The Internet is your most powerful tool for obtaining information about your computer and other Dell products. Through the Internet, you can access most of the services described in this chapter, including AutoTech, TechFax, order status, technical support, and product information.

You can access Dell's support Web site at **http://support.dell.com.** Click the map that appears to select your country. The **Welcome to support.dell.com** page opens. Enter your system information to access help tools and information such as:

- **Support Your Dell** — From this page you can access a number of tools and information such as system documentation, drivers and BIOS updates, and self-diagnostic tools that allow you to resolve many computer-related issues by following interactive flowcharts.

- **Ask Dudley** — Enter a question about your computer or about software. This tool searches the Dell Knowledge Base and Dell Support for answers and related topics.

- **Communicate With Dell** — Use the Dell Talk Forum, a public discussion moderated by Dell technical support specialists, to obtain technical information and submit requests via e-mail to Dell Support.

Dell can be accessed electronically using the following addresses:

- World Wide Web

  http://www.dell.com/

  http://www.dell.com/ap/ (for Asian/Pacific countries only)

  http://www.euro.dell.com (for Europe only)

  http://www.dell.com/la (for Latin American countries)

- Anonymous file transfer protocol (FTP)

  ftp.dell.com/

  Log in as user: anonymous, and use your e-mail address as your password.

- Electronic Support Service

   mobile_support@us.dell.com

   apsupport@dell.com (for Asian/Pacific countries only)

   support.euro.dell.com (for Europe only)

- Electronic Quote Service

   sales@dell.com

   apmarketing@dell.com (for Asian/Pacific countries only)

- Electronic Information Service

   info@dell.com

AutoTech Service

Dell's automated technical support service—AutoTech—provides recorded answers to the questions most frequently asked by Dell customers.

When you call AutoTech, you use your touch-tone telephone to select the subjects that correspond to your questions. You can even interrupt an AutoTech session and continue the session later. The code number that the AutoTech service gives you allows you to continue your session where you ended it.

The AutoTech service is available 24 hours a day, seven days a week. You can also access this service through the technical support service. For the telephone number to call, refer to "Dell Contact Numbers" found later in this chapter.

TechFax Service

Dell takes full advantage of fax technology to serve you better. Twenty-four hours a day, seven days a week, you can call the Dell TechFax line toll-free for all kinds of technical information.

Using a touch-tone phone, you can select from a full directory of topics. The technical information you request is sent within minutes to the fax number you designate. For the TechFax telephone number to call, refer to "Dell Contact Numbers" found later in this chapter.

TechConnect BBS

Use your modem to access Dell's TechConnect bulletin board service (BBS) 24 hours a day, seven days a week. The service is menu-driven and fully interactive. The protocol parameters for the BBS are 1200 to 19.2K baud, 8 data bits, no parity, 1 stop bit.

Automated Order-Status System

You can call this automated service to check on the status of any Dell products that you have ordered. A recording prompts you for the information needed to locate and report on your order. For the telephone number to call, refer to "Dell Contact Numbers" found later in this chapter.

Technical Support Service

Dell's industry-leading hardware technical-support service is available 24 hours a day, seven days a week, to answer your questions about Dell hardware.

Our technical support staff pride themselves on their track record: more than 90 percent of all problems and questions are taken care of in just one toll-free call, usually in less than 10 minutes. When you call, our experts can refer to records kept on your Dell system to better understand your particular question. Our technical support staff use computer-based diagnostics to provide fast, accurate answers to questions.

To contact Dell's technical support service, first refer to the section titled "Before You Call" and then call the number for your country as listed in "Dell Contact Numbers" found later in this chapter.

Problems With Your Order

If you have a problem with your order, such as missing parts, wrong parts, or incorrect billing, contact Dell Computer Corporation for customer assistance. Have your invoice or packing slip handy when you call. For the telephone number to call, refer to "Dell Contact Numbers" found later in this chapter.

Product Information

If you need information about additional products available from Dell Computer Corporation, or if you would like to place an order, visit Dell's World Wide Web site at **http://www.dell.com/**. For the telephone number to call to speak to a sales specialist, refer to "Dell Contact Numbers" found later in this chapter.

Returning Items for Warranty Repair or Credit

Prepare all items being returned, whether for repair or credit, as follows:

1. Call Dell to obtain an authorization number, and write it clearly and prominently on the outside of the box.

   For the telephone number to call, refer to "Dell Contact Numbers" found later in this chapter.

2. Include a copy of the invoice and a letter describing the reason for the return.

3. Include a copy of the Diagnostics Checklist indicating the tests you have run and any error messages reported by the Dell Diagnostics.

4. Include any accessories that belong with the item(s) being returned (power cables, software diskettes, guides, and so on) if the return is for credit.

5. Pack the equipment to be returned in the original (or equivalent) packing materials.

    You are responsible for paying shipping expenses. You are also responsible for insuring any product returned, and you assume the risk of loss during shipment to Dell Computer Corporation. Collect-on-delivery (C.O.D.) packages are not accepted.

Returns that are missing any of the preceding requirements will be refused at our receiving dock and returned to you.

Before You Call

NOTE: Have your Express Service Code ready when you call. The code helps Dell's automated-support telephone system direct your call more efficiently.

Remember to fill out the Diagnostics Checklist (Figure 5-1). If possible, turn on your system before you call Dell for technical assistance and call from a telephone at or near the computer. You may be asked to type some commands at the keyboard, relay detailed information during operations, or try other troubleshooting steps possible only at the computer system itself. Make sure that the system documentation is available.

CAUTION: To help prevent the risk of electrical shock, disconnect all external devices, remove the battery, and disconnect the AC adapter from the computer before installing or replacing the hard-disk drive and memory modules.

Diagnostics Checklist

Name: _____Date: _____

Address: _____Phone number: _____

Service tag (bar code on the back of the computer): _____

Express Service Code: _____

Return Material Authorization Number (if provided by Dell support technician):_____

Operating system and version: _____

Peripherals: _____

 _____

 _____

Expansion cards:_____

 _____

 _____

Are you connected to a network?   ☐ yes   ☐ no

Network, version, and network card: _____

Programs and versions:_____

 _____

 _____

 _____

Refer to your operating system documentation to determine the contents of the system's start-up files. If the computer is connected to a printer, print each file. Otherwise, record the contents of each file before calling Dell.

Error message, beep code, or diagnostic code: _____

Description of problem and troubleshooting procedures you performed: _____

 _____

 _____

Figure 5-1. Diagnostics Checklist

Dell Contact Numbers

When you need to contact Dell, use the telephone numbers, codes, and electronic addresses provided in Tables 5-1 and 5-2. Table 5-1 provides the various codes required to make long-distance and international calls. Table 5-2 provides local telephone numbers, area codes, toll-free numbers, Web site and e-mail addresses, if applicable, for each department or service available in various countries around the world. If you are making a direct-dialed call to a location outside of your local telephone service area, determine which codes to use (if any) in Table 5-1 in addition to the local numbers provided in Table 5-2. For example, to place an international call from Paris, France to Bracknell, England, dial the international access code for France followed by the country code for the U.K., the city code for Bracknell, and then the local number as shown in the following illustration.

00	**44**	**1344**	_____
International Access Code (in France)	Country Code (for U.K.)	City Code (Bracknell)	Local Number
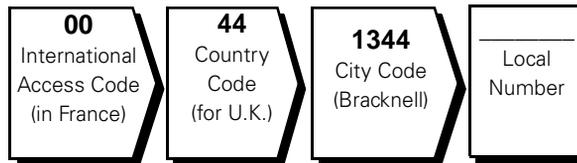
To place a long-distance call within your own country, use area codes instead of international access codes, country codes, and city codes. For example, to call Paris, France from Montpellier, France, dial the area code plus the local number as shown in the following illustration.

01	_____
Area Code (for Paris from outside Paris)	Local Number
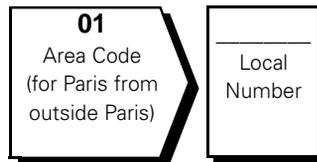
The codes required depend on where you are calling from as well as the destination of your call; in addition, each country has a different dialing protocol. If you need assistance in determining which codes to use, contact a local or an international operator.

NOTE: Toll-free numbers are for use only within the country for which they are listed. Area codes are most often used to call long distance within your own country (not internationally)—in other words, when your call originates in the same country you are calling.

Table 5-1. International Dialing Codes

Country (City)	International Access Code	Country Code	City Code
Australia (Sydney)	0011	61	2
Austria (Vienna)	900	43	1
Belgium (Brussels)	00	32	2
Brazil	0021	55	51
Brunei	—	673	—
Canada (North York, Ontario)	011	—	Not required
Chile (Santiago)	—	56	2
China (Xiamen)	—	86	592
Czech Republic (Prague)	00	420	2
Denmark (Horsholm)	009	45	Not required
Finland (Helsinki)	990	358	9
France (Paris) (Montpellier)	00	33	(1) (4)
Germany (Langen)	00	49	6103
Hong Kong	001	852	Not required
Ireland (Bray)	16	353	1
Italy (Milan)	00	39	2
Japan (Kawasaki)	001	81	44
Korea (Seoul)	001	82	2
Luxembourg	00	352	—
Macau	—	853	Not required
Malaysia (Penang)	00	60	4
Mexico (Colonia Granada)	95	52	5
Netherlands (Amsterdam)	00	31	20
New Zealand	00	64	—
Norway (Lysaker)	095	47	Not required
Poland (Warsaw)	011	48	22
Singapore (Singapore)	005	65	Not required
South Africa (Johannesburg)	09/091	27	11

Table 5-1. International Dialing Codes (continued)

Country (City)	International Access Code	Country Code	City Code
Spain (Madrid)	07	34	91
Sweden (Upplands Vasby)	009	46	8
Switzerland (Geneva)	00	41	22
Taiwan	002	886	—
Thailand	001	66	—
U.K. (Bracknell)	010	44	1344
U.S.A. (Austin, Texas)	011	1	Not required

Table 5-2. Dell Contact Numbers

Country (City)	Department Name or Service	Area Code	Local Number or Toll-Free Number
Australia (Sydney)	Home and Small Business		1-300-65-55-33
	Government and Business		toll free: 1-800-633-559
	Preferred Accounts Division (PAD)		toll free: 1-800-060-889
	Customer Care		toll free: 1-800-819-339
	Corporate Sales		toll free: 1-800-808-385
	Transaction Sales		toll free: 1-800-808-312
	Fax		toll free: 1-800-818-341
Austria (Vienna) *NOTE: Customers in Austria call Germany for technical support and customer assistance.*	Home/Small Business Sales	01	795 567602
	Home/Small Business Fax	01	795 67605
	Home/Small Business Customer Care	01	795 67603
	Preferred Accounts/Corporate Customer Care		0660 8056
	Home/Small Business Technical Support	01	795 67604
	Preferred Accounts/Corporate Technical Support		0660 8779
	Switchboard	01	491 04 0
	Web site: **http://support.euro.dell.com/at**		
	E-mail: tech_support_germany@dell.com		

Table 5-2. Dell Contact Numbers *(continued)*

Country (City)	Department Name or Service	Area Code	Local Number or Toll-Free Number
Belgium (Brussels)	Technical Support	02	481 92 88
	Customer Care.	02	481 91 19
	Home/Small Business Sales		toll free: 0800 16884
	Corporate Sales	02	481 91 00
	Fax	02	481 92 99
	Switchboard	02	481 91 00
	Web site: **http://support.euro.dell.com/be**		
	E-mail: tech_be@dell.com		
Brazil	Sales, Customer Support, Technical Support		0800 90 3355
Brunei NOTE: Customers in Brunei call Malaysia for sales, customer, and technical assistance.	Customer Technical Support (Penang, Malaysia)		810 4966
	Customer Service (Penang, Malaysia)		810 4949
	Transaction Sales (Penang, Malaysia).		810 4955
Canada (North York, Ontario) NOTE: Customers in Canada call the U.S.A. for access to TechConnect BBS.	Automated Order-Status System		toll free: 1-800-433-9014
	AutoTech (Automated technical support)		toll free: 1-800-247-9362
	Customer Care (From outside Toronto)		toll free: 1-800-387-5759
	Customer Care (From within Toronto)	416	758-2400
	Customer Technical Support		toll free: 1-800-847-4096
	Sales (Direct Sales—from outside Toronto)		toll free: 1-800-387-5752
	Sales (Direct Sales—from within Toronto)	416	758-2200
	Sales (Federal government, education, and medical)		toll free: 1-800-567-7542
	Sales (Major Accounts)		toll free: 1-800-387-5755
	TechConnect BBS (Austin, Texas, U.S.A.)	512	728-8528
	TechFax		toll free: 1-800-950-1329

Table 5-2. Dell Contact Numbers (continued)

Country (City)	Department Name or Service	Area Code	Local Number or Toll-Free Number
Chile (Santiago) *NOTE: Customers in Chile call the U.S.A for sales, customer, and technical assistance.*	Sales, Customer Support, and Technical Support.		toll free: 1230-020-4823
China (Xiamen)	Customer Service		toll free: 800 858 2437
	Sales.		toll free: 800 858 2222
Czech Republic (Prague)	Technical Support	02	22 83 27 27
	Customer Care.	02	22 83 27 11
	Fax	02	22 83 27 14
	TechFax.	02	22 83 27 28
	Switchboard	02	22 83 27 11
	Web site: **http://support.euro.dell.com/cz**		
	E-mail: czech_dell@dell.com		
Denmark (Horsholm) *NOTE: Customers in Denmark call Sweden for fax technical support.*	Technical Support		45170182
	Rational Customer Care		45170184
	Home/Small Business Customer Care.		32875505
	Switchboard		45170100
	Fax Technical Support (Upplands Vasby, Sweden)		859005594
	Fax Switchboard		45170117
	Web site: **http://support.euro.dell.com/dk**		
	E-mail: den_support@dell.com		
Finland (Helsinki)	Technical Support	09	253 313 60
	Technical Support Fax.	09	253 313 81
	Relational Customer Care.	09	253 313 38
	Home/Small Business Customer Care.	09	693 791 94
	Fax	09	253 313 99
	Switchboard	09	253 313 00
	Web site: **http://support.euro.dell.com/fi**		
	E-mail: fin_support@dell.com		

Table 5-2. Dell Contact Numbers (continued)

Country (City)	Department Name or Service	Area Code	Local Number or Toll-Free Number
France (Paris/Montpellier)	Technical Support	0803	387 270
	Customer Care (Paris)	01	47 62 68 92
	Customer Care (Montpellier)	04	67 06 61 96
	TechConnect BBS (Montpellier)	04	67 22 53 04
	Fax (Montpellier)	04	67 06 60 07
	Switchboard (Paris)	01	47 62 69 00
	Switchboard (Montpellier)	04	67 06 60 00
	Web site: **http://support.euro.dell.com/fr**		
	E-mail: web_fr_tech@dell.com		
Germany (Langen)	Technical Support	06103	766-7200
	Technical Support Fax	06103	766-9222
	Home/Small Business Customer Care		0180-5-224400
	Global Segment Customer Care	06103	766-9570
	Preferred Accounts Customer Care	06103	766-9420
	Large Accounts Customer Care	06103	766-9560
	Public Accounts Customer Care	06103	766-9555
	TechConnect BBS	06103	766-9666
	Switchboard	06103	766-7000
	Web site: **http://www.dell.de/support**		
	E-mail: tech_support_germany@dell.com		
Hong Kong NOTE: Customers in Hong Kong call Malaysia for customer assistance.	Technical Support		toll free: 800 96 4107
	Customer Service (Penang, Malaysia)		810 4949
	Transaction Sales		toll free: 800 96 4109
	Corporate Sales		toll free: 800 96 4108

Table 5-2. Dell Contact Numbers (continued)

Country (City)	Department Name or Service	Area Code	Local Number or Toll-Free Number
Ireland (Bray) *NOTE: Customers in Ireland call the U.K. for Home/Small Business customer assistance.*	Technical Support 1-850-543-543		
	Customer Care.	01	. . . . 204 4026
	Home/Small Business Customer Care (Bracknell, U.K.).		0870 906 0010
	Sales. 1-850-235-235		
	SalesFax.	01	. . . . 286 2020
	Fax	01	. . . . 286 6848
	TechConnect BBS.	01	. . . . .204 4711
	TechFax.	01	. . . . 204 4708
	Switchboard	01	. . . . 286 0500
	Web site: **http://support.euro.dell.com/ie**		
	E-mail: dell_direct_support@dell.com		
Italy (Milan)	Technical Support	2	. . . . 57782.690
	Customer Care.	2	. . . . 57782.555
	Sales.	2	. . . . .57782.411
	Fax	2	57503530
	Switchboard	2	. . . . 57782.1
	Web site: **http://support.euro.dell.com/it**		
	E-mail: support_italy@dell.com		
Japan (Kawasaki)	Technical Support (Server) . . . . toll free: 0120-1984-35		
	Technical Support (Dimension™ and Inspiron) . . . . toll free: 0120-1982-56 or 0088-25-3355		
	Technical Support (Workstation, OptiPlex™, and Latitude™) . . . . toll free: 0120-1984-39 or 0088-22-7890		
	Y2K Support.	044	 556-4298
	Customer Care.	044	 556-4240
	Home and Small Business Group Sales.	044	 556-3344
	Preferred Accounts Division Sales	044	 556-3433
	Large Corporate Accounts	044	 556-3430
	Faxbox Service. 03-5972-5840		
	Switchboard	044	 556-4300

Table 5-2. Dell Contact Numbers *(continued)*

Country (City)	Department Name or Service	Area Code	Local Number or Toll-Free Number
Korea (Seoul)	Technical Support.		toll free: 080-200-3800
	Sales		toll free: 080-200-3777
	Customer Service (Seoul, Korea).		2194-6220
	Customer Service (Penang, Malaysia)		604-810-4949
	Fax		2194-6202
	Switchboard		2194-6000
Latin America NOTE: Customers in Latin America call the U.S.A. for sales, customer, and technical assistance.	Customer Technical Support (Austin, Texas, U.S.A.)	512	728-4093
	Customer Service (Austin, Texas, U.S.A.)	512	728-3619
	Fax (Technical Support and Customer Service) (Austin, Texas, U.S.A.)	512	728-3883
	Sales (Austin, Texas, U.S.A.)	512	728-4397
	SalesFax (Austin, Texas, U.S.A.).	512	728-4600
			728-3772
Luxembourg NOTE: Customers in Luxembourg call Belgium for sales, customer, and technical assistance.	Technical Support (Brussels, Belgium)	02	481 92 88
	Home/Small Business Sales (Brussels, Belgium)		toll free: 080016884
	Corporate Sales (Brussels, Belgium)	02	481 91 00
	Customer Care (Brussels, Belgium).	02	481 91 19
	Fax (Brussels, Belgium)	02	481 92 99
	Switchboard (Brussels, Belgium)	02	481 91 00
	Web site: **http://support.euro.dell.com/be**		
	E-mail: tech_be@dell.com		
Macau NOTE: Customers in Macau call Malaysia for customer assistance.	Technical Support.		toll free: 0800 582
	Customer Service (Penang, Malaysia)		810 4949
	Transaction Sales		toll free: 0800 581
Malaysia (Penang)	Technical Support.		toll free: 1 800 888 298
	Customer Service	04	810 4949
	Transaction Sales		toll free: 1 800 888 202
	Corporate Sales		toll free: 1 800 888 213

Table 5-2. Dell Contact Numbers (continued)

Country (City)	Department Name or Service	Area Code	Local Number or Toll-Free Number
Mexico (Colonia Granada) *NOTE: Customers in Mexico call the U.S.A. for access to the Automated Order-Status System and AutoTech.*	Automated Order-Status System (Austin, Texas, U.S.A.)	512	728-0685
	AutoTech (Automated technical support) (Austin, Texas, U.S.A.)	512	728-0686
	Customer Technical Support.	525	228-7870
	Sales.	525	228-7811
			toll free: 91-800-900-37
			toll free: 91-800-904-49
	Customer Service	525	228-7878
	Main	525	228-7800
Netherlands (Amsterdam)	Technical Support	020	581 8838
	Customer Care.	020	581 8740
	Home/Small Business Sales		toll free: 0800-0663
	Home/Small Business Sales Fax	020	682 7171
	Corporate Sales	020	581 8818
	Corporate Sales Fax	020	686 8003
	Fax	020	686 8003
	Switchboard	020	581 8818
	Web site: **http://support.euro.dell.com/nl**		
	E-mail: tech_nl@dell.com		
New Zealand	Home and Small Business		0800 446 255
	Government and Business.		0800 444 617
	Sales.		0800 441 567
	Fax		0800 441 566
Norway (Lysaker) *NOTE: Customers in Norway call Sweden for fax technical support.*	Technical Support		671 16882
	Rational Customer Care		671 17514
	Home/Small Business Customer Care.		23162298
	Switchboard		671 16800
	Fax Technical Support (Upplands Vasby, Sweden)		590 05 594
	Fax Switchboard.		671 16865
	Web site: **http://support.euro.dell.com/no**		
	E-mail: nor_support@dell.com		

Table 5-2. Dell Contact Numbers (continued)

Country (City)	Department Name or Service	Area Code	Local Number or Toll-Free Number
Poland (Warsaw)	Technical Support.	22	60 61 999
	Customer Care.	22	60 61 999
	Sales	22	60 61 999
	Fax	22	60 61 998
	Switchboard	22	60 61 999
	Web site: **http://support.euro.dell.com/pl**		
	E-mail: pl_support@dell.com		
Singapore (Singapore) *NOTE: Customers in Singapore call Malaysia for customer assistance.*	Technical Support.		toll free: 800 6011 051
	Customer Service (Penang, Malaysia)	04	810 4949
	Transaction Sales		toll free: 800 6011 054
	Corporate Sales		toll free: 800 6011 053
South Africa (Johannesburg)	Technical Support.	011	709 7710
	Customer Care.	011	709 7710
	Sales	011	706 7700
	Fax	011	709 0495
	Switchboard	011	709 7700
	Web site: **http://support.euro.dell.com/za**		
	E-mail: dell_za_support@dell.com		
Southeast Asian/ Pacific Countries (excluding Australia, Brunei, China, Hong Kong, Japan, Korea, Macau, Malaysia, New Zealand, Singapore, Taiwan, and Thailand—refer to individual listings for these countries)	Customer Technical Support, Customer Service, and Sales (Penang, Malaysia).		60 4 810-4810

Table 5-2. Dell Contact Numbers (continued)

Country (City)	Department Name or Service	Area Code	Local Number or Toll-Free Number
Spain (Madrid)	Technical Support		902 100 130
	Corporate Customer Care		902 118 546
	Home/Small Business Customer Care.		902 118 540
	TechConnect BBS.	91	329 33 53
	Corporate Sales		902 100 185
	Home/Small Business Sales		902 118 541
	Switchboard	91	722 92 00
	Web site: **http://support.euro.dell.com/es**		
	E-mail: es_support@dell.com		
Sweden (Upplands Vasby)	Technical Support	08	590 05 199
	Relational Customer Care.	08	590 05 642
	Home/Small Business Customer Care.	08	587 70 527
	Fax Technical Support.	08	590 05 594
	Sales.	08	590 05 185
	Web site: **http://support.euro.dell.com/se**		
	E-mail: swe_support@dell.com		
Switzerland (Geneva)	Technical Support		0844 811 411
	Customer Care		0848 802 802
	Fax	022	799 01 90
	Switchboard	022	799 01 01
	Web site: **http://support.euro.dell.com/ch**		
	E-mail: swisstech@dell.com		
Taiwan	Technical Support . . . . toll free: 0080 60 1255		
	Technical Support (servers) . . . . toll free: 0080 60 1256		
	Transaction Sales . . . . toll free: 0080 651 228/0800 33 556		
	Corporate Sales . . . . toll free: 0080 651 227/0800 33 555		

Table 5-2. Dell Contact Numbers (continued)

Country (City)	Department Name or Service	Area Code	Local Number or Toll-Free Number
Thailand *NOTE: Customers in Thailand call Malaysia for customer assistance.*	Technical Support. . . . . toll free: 088 006 007 Customer Service (Penang, Malaysia) . . . . 810 4949 Sales . . . . toll free: 088 006 009		
U.K. (Bracknell)	Technical Support. 0870-908-0800		
	Corporate Customer Care	01344	 720206
	Home/Small Business Customer Care 0870-906-0010		
	TechConnect BBS 0870-908-0610		
	Sales	01344	 720000
	AutoFax 0870-908-0510		
	Web site: **http://support.euro.dell.com/uk**		
	E-mail: dell_direct_support@dell.com		

Table 5-2. Dell Contact Numbers (continued)

Country (City)	Department Name or Service	Area Code	Local Number or Toll-Free Number
U.S.A. (Austin, Texas)	Automated Order-Status System		toll free: 1-800-433-9014
	AutoTech (Automated technical support)		toll free: 1-800-247-9362
	Dell Home and Small Business Group:		
	Customer Technical Support (Return Material Authorization Numbers)		toll free: 1-800-624-9896
	Customer Technical Support (Home sales purchased via **http://www.dell.com**)		toll free: 1-877-576-3355
	Customer Service (Credit Return Authorization Numbers)		toll free: 1-800-624-9897
	National Accounts (systems purchased by established Dell national accounts [have your account number handy], medical institutions, or value-added resellers [VARs]):		
	Customer Service and Technical Support (Return Material Authorization Numbers)		toll free: 1-800-822-8965
	Public Americas International (systems purchased by governmental agencies [local, state, or federal] or educational institutions):		
	Customer Service and Technical Support (Return Material Authorization Numbers)		toll free: 1-800-234-1490
	Dell Sales		toll free: 1-800-289-3355
			toll free: 1-800-879-3355
	Spare Parts Sales		toll free: 1-800-357-3355
	Dedicated Technical Support for Inspiron 3800 Systems . . .		toll free: 1-877-595-3355
	DellWare.		toll free: 1-800-753-7201
	DellWare FaxBack Service	512	 728-1681
	Fee-Based Technical Support		toll free: 1-800-433-9005
	Sales (Catalogs)		toll free: 1-800-426-5150
	Fax		toll free: 1-800-727-8320
	TechFax.		toll free: 1-800-950-1329
	TechConnect BBS.	512	 728-8528
	Dell Services for the Deaf, Hard-of-Hearing, or Speech-Impaired		toll free: 1-877-DELLTTY (1-877-335-5889)
	Switchboard	512	 338-4400

A P P E N D I X   A
Technical Specifications

The most complete specifications for your computer are available on Dell's World Wide Web support site at **http://support.dell.com**. Enter your service tag sequence (or, if you have one, your Express Service Code) and click **Submit**. The service tag sequence and Express Service Code are shown on the bottom of the computer.

You can also access the same support information by clicking **Inspiron** and selecting your system by name, but you have to select options from a series of menus to reach the same information.

Table A-1. Technical Specifications

Microprocessor	
Microprocessor type	Intel mobile microprocessor
L1 cache	32 KB (internal)
L2 cache	128- or 256-KB (integrated) or 512-KB pipelined-burst SRAM (external)
External bus frequency	100 MHz
Math coprocessor	internal to the microprocessor

Chip Set and Bus Architecture	
System chip set	Intel mobile 440BX AGP
Data bus width	64 bits
DRAM bus width	64 bits
Microprocessor address bus width.	32 bits
Flash EPROM	4 Mb
AGP bus.	133 MHz
PCI bus	33 MHz

NOTE: For the full name of an abbreviation or acronym used in this table, see the Glossary in the system Help.

Table A-1. Technical Specifications *(continued)*

PC Card	
PCI controller.	Texas Instruments PCI 1225 CardBus controller
PC Card connectors	two (supports Type I and Type II cards in any combination; Type III cards can be used only in the lower connector; the lower connector supports zoomed video cards on computers using the Microsoft Windows 98 or Windows 2000 operating systems)
Cards supported	3.3 V and 5 V
PC Card connector size	68 pins
Data width (maximum):	
PCMCIA	16 bits
CardBus	32 bits

Memory	
Architecture.	SDRAM
Memory module sockets	two
Memory module capacities and type	32-, 64-, 128-, 192-, and 256-MB 3.3-V SDRAM modules
Minimum RAM	32-MB memory module
Maximum RAM.	512 MB
Memory clock speed.	100 MHz
Memory access time	CL2 or CL3 (Note: CL3 indicates a CAS latency of 3 clocks.)
BIOS address	F000:0000-F000:FFFF

Connectors	
Serial (DTE)	9-pin connector; 16550-compatible, 16-byte buffer
Parallel.	25-hole connector; unidirectional, bidirectional, or ECP
Video	15-hole connector
PS/2.	6-pin mini-DIN connector
Infrared	IrDA 1.1 lens

NOTE: For the full name of an abbreviation or acronym used in this table, see the Glossary in the system Help.

Table A-1. Technical Specifications (continued)

Connectors (*continued*)	
Audio	microphone-in, line-in, and line-out connectors
USB	4-pin connector
Docking	240-pin connector
TV-out S-video	7-pin mini-DIN connector (an S-video to composite video adapter is also included with the computer)
Modem	
Modem type/speed	internal 56K software modem
Modem cable.	minimum wire size of 26 American wire gauge (AWG) and FCC-compliant RJ-11 connector
Audio	
Audio type	DirectX/PCI, Sound Blaster emulation
Audio controller	ESS Maestro 3I
Stereo conversion	16 bit (analog-to-digital and digital-to-analog)
Interfaces:	
Internal	PCI bus/AC97
External	microphone (minijack); headphone; line-in
Speakers	two 8-ohm speakers
Internal speaker amplifier	1 W into 8 ohms stereo
Controls	Volume can be controlled through key combinations or application program menus.
Video	
Video type	256-bit hardware-accelerated
Data bus	2X AGP
Video controller	ATI Mobility M3
Video memory	8.0 MB

NOTE: For the full name of an abbreviation or acronym used in this table, see the Glossary in the system Help.

Display

Type. . . . . SVGA, active-matrix color (TFT)

Maximum resolution/colors. . . . 1024 x 768 pixels; 262,144-color display

Response time (typical). . . . . . . 30 ms rise; 20 ms fall

Operating angle. . . . . 0° (closed) to 180°

Dot pitch . . . . 0.30 mm

Power consumption:

    Panel (typical). . . . . 0.7 W

    Backlight. . . . . 1.6 W

Controls. . . . . Brightness can be controlled through a key combination.

Keyboard

Number of keys. . . . . 87 (U.S., Canada, Korea, Thailand, and locations that use traditional Chinese); 88 (Europe); 90 (Japan)

Key travel. . . . . 3.0 mm + 0.5 mm/–0.2 mm (0.12 inch + 0.02 inch/ –0.0008 inch)

Key spacing . . . . 19.05 mm ± 0.3 mm (0.75 inch ± 0.012 inch)

Batteries

Type. . . . . lithium ion or nickel-metal hydride

Dimensions:

    Height . . . . 21.5 mm (0.83 inch)

    Depth . . . . 88.5 mm (3.48 inches)

    Width . . . . 139.0 mm (5.47 inches)

    Weight . . . . lithium-ion — 0.39 kg (0.87 lb)
                              nickel-metal hydride — 0.46 kg (1.01 lb)

Voltage . . . . lithium-ion — 14.8 VDC
                                 nickel-metal hydride — 9.6 VDC

Capacity . . . . lithium-ion — 53 WH
                                 nickel-metal hydride — 32 WH

NOTE: For the full name of an abbreviation or acronym used in this table, see the Glossary in the system Help.

Table A-1. Technical Specifications (continued)

Batteries (continued)

Charge time (approximate)[1]:

    Computer on . . . . 2.5 hours

    Computer off . . . . lithium-ion — 1 hour
                                nickel-metal hydride — 2.5 hours

Life span (approximate)[1] . . . . . . 400 discharge/charge cycles

Temperature range:

    Charge . . . . 0° to 40°C (32° to 104°F)

    Storage . . . . −20° to 60°C (−4° to 140°F)

AC Adapter

Input voltage . . . . 90 to 135 VAC and 164 to 264 VAC

Input current (maximum) . . . . . . 1.5 A

Input frequency . . . . 47 to 63 Hz

Output current . . . . 4.5 A (maximum at 4-second pulse);
                                  3.51 A (continuous)

Output power . . . . 70 W

Rated output voltage . . . . 20.0 VDC

Dimensions:

    Height . . . . 27.94 mm (1.1 inches)

    Width . . . . 58.42 mm (2.3 inches)

    Depth . . . . 133.35 mm (5.25 inches)

Weight (with cables) . . . . 0.4 kg (0.9 lb)

Temperature range:

    Operating . . . . 0° to 40°C (32° to 104°F)

    Storage . . . . −20° to 60°C (−4° to 140°F)

[1] *Battery performance features such as charge time and life span can vary according to the conditions under which the computer and battery are used.*

NOTE: For the full name of an abbreviation or acronym used in this table, see the Glossary in the system Help.

Physical	
Dimensions:	
Height	38.6 mm (1.52 inches)
Width	306.0 mm (12.05 inches)
Depth	241.0 mm (9.49 inches)
Environmental (Computer)	
Temperature:	
Operating	0° to 40°C (32° to 104°F)
Storage.	–20° to 60°C (–4° to 140°F)
Relative humidity (maximum):	
Operating	10% to 90% (noncondensing)
Storage.	5% to 95% (noncondensing)
Maximum vibration:	
Operating	0.9 GRMS using a random-vibration spectrum that simulates user environment
Storage.	1.3 GRMS using a random-vibration spectrum that simulates air/truck shipment
Maximum shock[1]:	
Operating	152.4 cm/sec (60.0 inches/sec) (equal to a half-sine pulse width of 2 ms)
Storage.	203.2 cm/sec (80 inches/sec) (equal to a half-sine pulse width of 2 ms)
Altitude (maximum):	
Operating	–18 to 3048 m (–59 to 10,000 ft)
Storage.	–18 to 10,600 m (–59 to 35,000 ft)

[1] *Measured with the hard-disk drive in head-parked position.*

NOTE: For the full name of an abbreviation or acronym used in this table, see the Glossary in the system Help.

Table A-1. Technical Specifications (continued)

Touch Pad

Interface . . . . PS/2 compatible

X/Y position resolution
(graphics table mode) . . . . 240 cpi

Size:

     Thickness . . . . 2.8 mm (0.11 inch) at highest component

     Width
     (sensor-active area) . . . . 55 mm (2.17 inches)

     Height . . . . 39-mm (1.54-inch) rectangle

     Weight . . . . 9.02 g (0.29 oz)

Power:

     Supply voltage . . . . 5 V ± 10%

     Supply current . . . . 25 mA (maximum for track stick and touch pad combined)

ESD . . . . in accordance with IEC-801-2

Track Stick

Interface . . . . PS/2 compatible

X/Y position resolution . . . . 250 counts/sec at 100 gf

Size . . . . Protrudes 0.5 mm above surrounding keys

Power:

     Supply voltage . . . . 5 V ± 0.5 VDC

     Supply current . . . . 25 mA (maximum for track stick and touch pad combined)

ESD . . . . in accordance with IEC-801-2

NOTE: For the full name of an abbreviation or acronym used in this table, see the Glossary in the system Help.

A P P E N D I X   B

Using the System Setup Program

NOTICE: Dell recommends that you change the System Setup program settings only when absolutely necessary. Changing certain system device settings could cause hardware conflicts.

You can use the System Setup program to:

- Change your system configuration information after you add, change, or remove hardware connected to or installed inside your computer

- Verify information about your current computer configuration, such as the amount of system memory

- Set or change selectable settings—for example, the system password

For some options, you must reboot the computer before any changes take effect. Changes for other options take effect immediately.

NOTE: If you change an option that is activated by rebooting, the System Setup program displays the setting you selected rather than the setting currently in effect. You must reboot the computer for the new setting to take effect.

After you set up your computer, run the System Setup program to familiarize yourself with your system configuration information and optional settings. Dell recommends that you write down the information for future reference.

Accessing the System Setup Program

NOTICE: To avoid data loss, save and close any open files and exit any open application programs before you access the System Setup program.

For systems running the Microsoft Windows 98 or Windows NT operating system, you may enter the System Setup program as follows:

- Press <Fn><F1> at any time on the keyboard (or <Scroll Lock><F1> on an external keyboard if the **External Hot Key** option is enabled). If you press <Fn><F3> (or <Scroll Lock><F3> on an external keyboard if the **External Hot Key** option is enabled), the System Setup program opens directly to the **Battery Status** screen.

For systems running any of the Windows operating systems, you may enter and use the System Setup program as follows:

- To enter the System Setup program while your computer is booting, press <F2> when the Dell screen appears.

- Press <Esc> to exit the System Setup program. If you change the setting of an option that requires rebooting to take effect, exit the operating system before rebooting. (The text in the upper-right corner of System Setup pages 1, 2, and 4 tells you whether the computer must be rebooted.)

NOTE: If the System Setup program is running when the computer enters standby mode, the computer exits the System Setup program and then activates standby mode.

Navigating Through the System Setup Program

Use the integrated keyboard (see Table B-1) to make all selections in the System Setup program.

Table B-1. System Setup Program Navigation Keys

Key	Function
<↑> or **<↓>**	Moves to the next option on the page
<Alt><P>	Moves to the next page
<←> or **<→>**	Displays available settings for an option
<Esc>	Exits the System Setup program

System Setup Program Screens

The System Setup screens display the current setup and configuration information and the optional settings for your computer. Information on the screens (or "pages") is organized in five boxed areas:

- **Title** — The box at the top of all screens lists the page number, system name, and version number of the basic input/output system (BIOS).

- **Options** — The box on the left half of pages 1, 2, and 4 lists options that define the installed hardware in your computer and the power conservation and security features for your computer.

  Fields next to the options contain settings or values. You can change the values that appear bright on the screen. Values that you cannot change (because they are determined or calculated by the computer) appear less bright.

- **Help** — The box on the upper-right half of pages 1, 2, and 4 displays help information for the option with a currently highlighted field.

- **Computer data** — The box in the lower-right corner of pages 1, 2, and 4 displays information about your computer.
- **Key functions** — The line of boxes across the bottom of all screens lists keys and their functions within the System Setup program.

Page 1

```
                    Dell Computer Corporation <www.dell.com>
  Page 1 of 4                    Dell Inspiron 3800    Setup    BIOS Version:

  Time:    15:26:23      Date:   Thu Nov 18, 1999    This category sets the time in
                                                     24-hour format <hours:
  Primary Hard Drive:             6495 MB            minutes:seconds> for the
                                                     built-in system clock.
   Diskette Drive A:          Not Installed
   Diskette Drive B:          Not Installed          To change the value in a field,
  Diskette Reconfig:            Any Time             enter digits or use the left-
                                                     or right-arrow key to decrease
        Modular Bay:          Not Installed          or increase the value.

   Docking Ethernet:            Enabled
        Docking IRQ:           Optimized             Changes take effect immediately.
     Docking Status:           Undocked
  Universal Connect:           Disabled
                                                     Microprocessor:
        Boot Speed:            500MHz                 System Memory: 128MB
  Boot First device:        Diskette Drive            Video Memory: 8MB
  Boot Second device:        Internal HDD                   Cache: 256KB
   Boot Third device:           NONE                  Service Tag: Not Installed
  CPU Serial Number:          Disabled                  Asset Tag: Not Installed
      ↑,↓ change fields      ←,→ change values     Alt-P page       Esc exit
```

Figure B-1. Page 1 of the System Setup Program
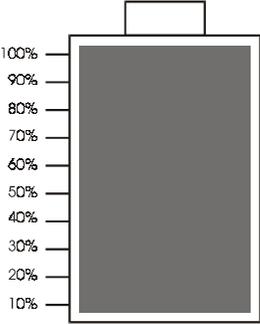
Page 2

```
                    Dell Computer Corporation <www.dell.com>
Page 2 of 4                    Dell Inspiron 3800    Setup    BIOS Version:
```

```
         Serial Port:         COM1              This category lets you avoid
                                                address conflicts between serial
Infrared Data Port:           COM3              devices by allowing you to map
     Infrared Mode:          Slow IR            the address of the serial port,
     Parallel Mode:            ECP              or to disable the port.
        Audio Mode:        Full Duplex

        Click Volume:       [||||||||]          A change to this category takes
      Keyboard Click:       Disabled            effect when you reboot.
           Num Lock:        Disabled
     Pointing Device:   Touch Pad-PS/2 Mouse
     External Hot Key:     Scroll Lock

 ************* System   Security ***********    Microprocessor:
   Primary Password:       Disabled              System Memory: 128MB
     Admin Password:       Disabled              Video Memory: 8MB
                                                         Cache: 256KB
    **** Hard-disk drive password(s) *********   Service Tag: Not Installed
     System Primary:       Disabled               Asset Tag: Not Installed
System Modular Bay:        Disabled
     Dock Media Bay:       Disabled
```

```
     ↑,↓ change fields      ←,→ change values      Alt-P page        Esc exit
```

Figure B-2. Page 2 of the System Setup Program

Page 3
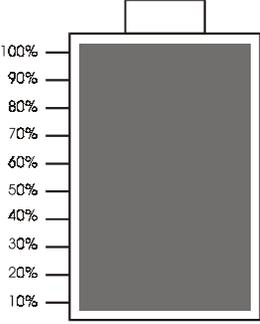
```
                    Dell Computer Corporation <www.dell.com>
Page 3 of 4                    Dell Inspiron 3800      Setup      BIOS Version:
```

```
           Left Battery                           Right Battery



          100% ─┌──────────┐                   100% ─┌──────────┐
           90% ─│          │                    90% ─│          │
           80% ─│          │                    80% ─│          │
           70% ─│          │                    70% ─│          │
           60% ─│          │                    60% ─│          │
           50% ─│          │                    50% ─│          │
           40% ─│          │                    40% ─│          │
           30% ─│          │                    30% ─│          │
           20% ─│          │                    20% ─│          │
           10% ─└──────────┘                    10% ─└──────────┘


           100% Charged                         100% Charged

Battery Status: Idle               Battery Status: Idle
   Additional batteries and other accessories are available from www.dell.com
```

```
                                            Alt-P page       Esc exit
```

Figure B-3. Page 3 of the System Setup Program

support.dell.com   *Using the System Setup Program*   *B-5*

```
                    Dell Computer Corporation <www.dell.com>
 Page 4 of 4                     Dell Inspiron 3800     Setup      BIOS Version:

                                                    This category lets you select the
   ************** Power  Management **********        brightness of the display when
                                                    the system boots up.
                          BATTERY        AC
                          -------        --          A change to this category takes
            Brightness:   [|       ]  [|||||||]      effect immediately.
     Power Management:    Enabled    Enabled
     Display Time-Out:    4 minutes  Disabled
        Disk Time-Out:    3 minutes  Disabled
     Suspend Time-Out:   10 minutes  Disabled
         S2D Time-Out:    8 hours    Disabled
       Smart CPU Mode:    Enabled    Enabled
        Display Close:    Suspend    Active         Microprocessor:
                                                     System Memory: 128MB
    Ring/Event Resume:        Enabled                Video Memory: 8MB
        Alarm Resume:         Enabled                        Cache: 256KB
       Wakeup On LAN:         Disabled             Service Tag: Not Installed
   SpeedStep(tm) Setup:        Auto                  Asset Tag: Not Installed

        ↑,↓ change fields      ←,→ change values     Alt-P page        Esc exit
```

Figure B-4. Page 4 of the System Setup Program

A P P E N D I X   C

System Messages

Your application programs, the operating system, and the computer itself can provide you with status and error information in the form of system messages that appear on the computer's display or an external monitor. This appendix documents the system messages generated by the basic input/output system (BIOS). For other messages, refer to the documentation for your application program or operating system.

If a message appears on the display or external monitor, make a note of the message. See Table C-1 for an explanation of the message and suggestions for correcting any errors. The system messages are listed alphabetically.

NOTE: If the message is not listed in Table C-1, check the documentation for the application programs that were running at the time the message appeared or the operating system documentation for an explanation of the message and a recommended action.

Table C-1. System Error Messages

Message	Cause	Action
`Auxiliary device failure`	The touch pad, track stick, or external PS/2 mouse may be faulty.	If you are using an external mouse only, check the connection for a loose or improperly connected cable. If the problem persists, enable the **Pointing Device** option in the System Setup program. For instructions, see Appendix B, "Using the System Setup Program." If the problem persists, call Dell for technical assistance. For instructions, see Chapter 5, "Getting Help."
`Bad command or file name`	The command you entered does not exist or is not in the pathname you specified.	Make sure that you have typed the command correctly, placed spaces in the proper locations, and used the correct pathname.
`Cache disabled due to failure`	The primary cache internal to the microprocessor has failed.	Call Dell for technical assistance. For instructions, see Chapter 5, "Getting Help."

NOTE: For the full name of an abbreviation or acronym used in this table, see the Glossary in the system Help.

Table C-1. System Error Messages (continued)

Message	Cause	Action
`CD-ROM drive controller failure 1`	The CD-ROM drive does not respond to commands from the computer.	Turn off the computer, remove the drive, and boot the computer from a bootable diskette. Then turn off the computer again, reinstall the drive, and reboot the computer. If the problem persists, try another drive. Then run the **IDE Devices** tests in the Dell Diagnostics. For instructions, see "Running the Dell Diagnostics" in Chapter 3.
`Data error`	The diskette or hard-disk drive cannot read the data.	Run the appropriate utility to check the file structure of the diskette drive or hard-disk drive. See the documentation that came with your operating system.
`Decreasing available memory`	One or more memory modules may be faulty or improperly seated.	Reseat the memory modules and, if necessary, replace them. For instructions, see "Installing Memory Modules" in Chapter 2.
`Disk C: failed initialization`	The hard-disk drive failed initialization.	Run the **IDE Devices** tests in the Dell Diagnostics. For instructions, see "Running the Dell Diagnostics" in Chapter 3.
`Diskette drive 0 seek failure`	A cable may be loose, or the system configuration information may not match the hardware configuration.	Run the **Diskette** tests in the Dell Diagnostics. For instructions, see "Running the Dell Diagnostics" in Chapter 3. If error is not corrected, have the cables checked by an authorized service technician.
`Diskette read failure`	A cable may be loose, or the diskette may be faulty.	If the diskette-drive access indicator lights up, try a different diskette.
`Diskette subsystem reset failed`	The diskette drive controller may be faulty.	Run the **Diskette** tests in the Dell Diagnostics. For instructions, see "Running the Dell Diagnostics" in Chapter 3.
`Diskette write-protected`	Because the diskette is write-protected, the operation cannot be completed.	Slide the write-protect notch up.
`Drive not ready`	No diskette is in the diskette drive, or no hard-disk drive is in the media bay. The operation requires a diskette in the drive or a hard-disk drive in the media bay.	Put a diskette in the diskette drive, push the diskette all the way into the drive until the eject button pops out, or install a hard-disk drive in the media bay. For instructions, see the documentation that accompanied your hard-disk drive.
`Error reading PCMCIA card`	The computer cannot identify the PC Card.	Reseat the card or try another PC Card that you know works.
`Extended memory size has changed`	The amount of memory recorded in NVRAM does not match the memory installed in the computer.	Reboot the computer. If the error appears on the display again, call Dell for technical assistance. For instructions, see Chapter 5, "Getting Help."

NOTE: For the full name of an abbreviation or acronym used in this table, see the Glossary in the system Help.

Table C-1. System Error Messages *(continued)*

Message	Cause	Action
`Gate A20 failure`	An installed memory module may be loose.	Reseat the memory modules and, if necessary, replace them. For instructions, see "Installing Memory Modules" in Chapter 2.
`General failure`	The operating system is unable to carry out the command.	This message is usually followed by specific information—for example, `Printer out of paper`. Respond by taking the appropriate action.
`Hard-disk drive configuration error`	The computer cannot identify the drive type.	Turn off the computer, remove the drive, and boot the computer from a bootable diskette. Then turn off the computer again, reinstall the drive, and reboot the computer. (For instructions, see "Installing an Internal Hard-Disk Drive" in Chapter 2.) If the problem persists, try another drive. Then run the **IDE Devices** tests in the Dell Diagnostics. For instructions, see "Running the Dell Diagnostics" in Chapter 3.
`Hard-disk drive controller failure 0`	The hard-disk drive does not respond to commands from the computer.	Turn off the computer, remove the drive, and boot the computer from a bootable diskette. Then turn off the computer again, reinstall the drive, and reboot the computer. (For instructions, see "Installing an Internal Hard-Disk Drive" in Chapter 2.) If the problem persists, try another drive. Then run the **IDE Devices** tests in the Dell Diagnostics. For instructions, see "Running the Dell Diagnostics" in Chapter 3.
`Hard-disk drive failure`	The hard-disk drive does not respond to commands from the computer.	Turn off the computer, remove the drive, and boot the computer from a bootable diskette. Then turn off the computer again, reinstall the drive, and reboot the computer. (For instructions, see "Installing an Internal Hard-Disk Drive" in Chapter 2.) If the problem persists, try another drive. Then run the **IDE Devices** tests in the Dell Diagnostics. For instructions, see "Running the Dell Diagnostics" in Chapter 3.
`Hard-disk drive read failure`	The hard-disk drive may be faulty.	Turn off the computer, remove the drive, and boot the computer from a bootable diskette. Then turn off the computer again, reinstall the drive, and reboot the computer. (For instructions, see "Installing an Internal Hard-Disk Drive" in Chapter 2.) If the problem persists, try another drive. Then run the **IDE Devices** tests in the Dell Diagnostics. For instructions, see "Running the Dell Diagnostics" in Chapter 3.

NOTE: For the full name of an abbreviation or acronym used in this table, see the Glossary in the system Help.

Table C-1. System Error Messages (continued)

Message	Cause	Action
`Invalid configuration information- please run System Setup Program`	The system configuration information does not match the hardware configuration. This message is most likely to occur after a memory module is installed.	Correct the appropriate options in the System Setup program. For instructions, see Appendix B, "Using the System Setup Program."
`Keyboard clock line failure`	A cable or connector may be loose, or the keyboard may be faulty.	Run the **PC-AT Compatible Keyboards** test in the Dell Diagnostics. For instructions, see "Running the Dell Diagnostics" in Chapter 3.
`Keyboard con- troller failure`	A cable or connector may be loose, or the keyboard may be faulty.	Reboot the computer, and avoid touching the keyboard or the mouse during the boot routine. If the problem persists, run the **PC-AT Compatible Keyboards** test in the Dell Diagnostics. For instructions, see "Running the Dell Diagnostics" in Chapter 3.
`Keyboard data line failure`	A cable or connector may be loose, or the keyboard may be faulty.	Run the **PC-AT Compatible Keyboards** test in the Dell Diagnostics. For instructions, see "Running the Dell Diagnostics" in Chapter 3.
`Keyboard stuck key failure`	If an external keyboard or keypad is being used, a cable or connector may be loose or the keyboard may be faulty. If the integrated keyboard is being used, the keyboard may be faulty. A key on the integrated keyboard or external keyboard may have been pressed while the computer was booting.	Run the **PC-AT Compatible Keyboards** test in the Dell Diagnostics. For instructions, see "Running the Dell Diagnostics" in Chapter 3.
`Memory address line failure at address, read value expect- ing value`	An installed memory module may be faulty or improperly seated.	Reseat the memory modules and, if necessary, replace them. For instructions, see "Installing Memory Modules" in Chapter 2.
`Memory allocation error`	The software you are attempting to run is conflicting with the operating system, another application program, or a utility.	Turn off the computer, wait 30 seconds, and then restart it. Try to run the program again. If the problem persists, contact the software company.

NOTE: For the full name of an abbreviation or acronym used in this table, see the Glossary in the system Help.

Table C-1. System Error Messages (continued)

Message	Cause	Action
`Memory data line failure at address, read value expecting value`	An installed memory module may be faulty or improperly seated.	Reseat the memory modules and, if necessary, replace them. For instructions, see "Installing Memory Modules" in Chapter 2.
`Memory double word logic failure at address, read value expecting value`	An installed memory module may be faulty or improperly seated.	Reseat the memory modules and, if necessary, replace them. For instructions, see "Installing Memory Modules" in Chapter 2.
`Memory odd/even logic failure at address, read value expecting value`	An installed memory module may be faulty or improperly seated.	Reseat the memory modules and, if necessary, replace them. For instructions, see "Installing Memory Modules" in Chapter 2.
`Memory write/ read failure at address, read value expecting value`	An installed memory module may be faulty or improperly seated.	Reseat the memory modules and, if necessary, replace them. For instructions, see "Installing Memory Modules" in Chapter 2.
`No boot device available`	The computer cannot find the diskette or hard-disk drive.	If the diskette drive is your boot device, make sure that there is a bootable diskette in the drive. If the hard-disk drive is your boot device, make sure that the drive is installed, properly seated, and partitioned as a boot device. (For instructions, see "Installing an Internal Hard-Disk Drive" in Chapter 2.)
`No boot sector on hard-disk drive`	The operating system may be corrupted.	Reinstall your operating system. See the documentation that came with your operating system.
`No timer tick interrupt`	A chip on the system board may be malfunctioning.	Run the **System Board Devices** tests in the Dell Diagnostics. For instructions, see "Running the Dell Diagnostics" in Chapter 3.
`Non-system disk or disk error`	The diskette in drive A or your hard-disk drive does not have a bootable operating system installed on it.	If you are trying to boot from the diskette, replace it with one that has a bootable operating system.
`Not a boot diskette`	There is no operating system on the diskette.	Boot the computer with a diskette that contains an operating system.

NOTE: For the full name of an abbreviation or acronym used in this table, see the Glossary in the system Help.

Table C-1. System Error Messages (continued)

Message	Cause	Action
`Optional ROM bad checksum`	The optional ROM apparently failed.	Call Dell for technical assistance. For instructions, see Chapter 5, "Getting Help."
`Sector not found`	The operating system cannot locate a sector on the diskette or hard-disk drive. You probably have a bad sector or corrupted FAT on the diskette or hard-disk drive.	Run the appropriate utility to check the file structure on the diskette or hard-disk drive. If a large number of sectors are defective, back up the data (if possible), and then reformat the diskette or hard-disk drive.
`Seek error`	The operating system cannot find a specific track on the diskette or hard-disk drive.	If the error is on the diskette drive, try another diskette in the drive.
`Shutdown failure`	A chip on the system board may be malfunctioning.	Run the **System Board Devices** tests in the Dell Diagnostics. For instructions, see "Running the Dell Diagnostics" in Chapter 3.
`Time-of-day clock lost power`	Data stored in NVRAM has become corrupted.	Connect your computer to an electrical outlet to charge the battery. If the problem persists, try to restore the data. To restore the data, press <Fn><F1> to enter the System Setup program. Then immediately exit it. If the message reappears, call Dell for technical assistance. For instructions, see Chapter 5, "Getting Help."
`Time-of-day clock stopped`	The reserve battery that supports the data stored in NVRAM may be dead.	Connect your computer to an electrical outlet to charge the battery. If the problem persists, call Dell for technical assistance. For instructions, see Chapter 5, "Getting Help."
`Time-of-day not set-please run the System Setup program`	The time or date stored in the System Setup program does not watch the system clock.	Correct the settings for the **Date** and **Time** options. For instructions, see Appendix B, "Using the System Setup Program."
`Timer chip counter 2 failed`	A chip on the system board may be malfunctioning.	Run the **System Board Devices** tests in the Dell Diagnostics. For instructions, see "Running the Dell Diagnostics" in Chapter 3.
`Unexpected interrupt in protected mode`	The keyboard controller may be malfunctioning, or an installed memory module may be loose.	Run the **System Memory** tests and the **PC-AT Compatible Keyboards** test in the Dell Diagnostics. For instructions, see "Running the Dell Diagnostics" in Chapter 3.
`Warning: Battery is critically low.`	The battery is running out of charge.	Replace the battery, or connect the computer to an electrical outlet. Otherwise, activate save-to-disk suspend mode or turn off the computer. For instructions, see "Save-to-Disk Suspend Utility" in Chapter 2.

NOTE: For the full name of an abbreviation or acronym used in this table, see the Glossary in the system Help.

A P P E N D I X D

Regulatory Notices

Electromagnetic Interference (EMI) is any signal or emission, radiated in free space or conducted along power or signal leads, that endangers the functioning of a radio navigation or other safety service or seriously degrades, obstructs, or repeatedly interrupts a licensed radio communications service. Radio communications services include but are not limited to AM/FM commercial broadcast, television, cellular services, radar, air-traffic control, pager, and Personal Communication Services (PCS). These licensed services, along with unintentional radiators such as digital devices, including computer systems, contribute to the electromagnetic environment.

Electromagnetic Compatibility (EMC) is the ability of items of electronic equipment to function properly together in the electronic environment. While this computer system has been designed and determined to be compliant with regulatory agency limits for EMI, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference with radio communications services, which can be determined by turning the equipment off and on, you are encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna.
- Relocate the computer with respect to the receiver.
- Move the computer away from the receiver.
- Plug the computer into a different outlet so that the computer and the receiver are on different branch circuits.

If necessary, consult a Technical Support representative of Dell Computer Corporation or an experienced radio/television technician for additional suggestions. You may find the *FCC Interference Handbook, 1986*, to be helpful. It is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00450-7 or on the World Wide Web at **http://www.fcc.gov/Bureaus/Compliance/WWW/ tvibook.html**.

Dell computer systems are designed, tested, and classified for their intended electromagnetic environment. These electromagnetic environment classifications generally refer to the following harmonized definitions:

- Class A is typically for business or industrial environments.
- Class B is typically for residential environments.

Information Technology Equipment (ITE), including peripherals, expansion cards, printers, input/output (I/O) devices, monitors, and so on, that are integrated into or connected to the system should match the electromagnetic environment classification of the computer system.

A Notice About Shielded Signal Cables: Use only shielded cables for connecting peripherals to any Dell device to reduce the possibility of interference with radio communications services. Using shielded cables ensures that you maintain the appropriate EMC classification for the intended environment. For parallel printers, a cable is available from Dell Computer Corporation. If you prefer, you can order a cable from Dell Computer Corporation on the World Wide Web at http://www.dell.com/ products/dellware/index.htm.

Most Dell computer systems are classified for Class B environments. To determine the electromagnetic classification for your system or device, refer to the following sections specific for each regulatory agency. Each section provides country-specific EMC/EMI or product safety information.

FCC Notices (U.S. Only)

Most Dell computer systems are classified by the Federal Communications Commission (FCC) as Class B digital devices. However, the inclusion of certain options can change the rating of some configurations to Class A. To determine which classification applies to your computer system, examine all FCC registration labels located on the bottom or back panel of your computer, on card-mounting brackets, and on the cards themselves. If any one of the labels carries a Class A rating, your entire system is considered to be a Class A digital device. If *all* labels carry an FCC Class B rating as distinguished by either an FCC ID number or the FCC logo, (**FC**), your system is considered to be a Class B digital device.

Once you have determined your system's FCC classification, read the appropriate FCC notice. Note that FCC regulations provide that changes or modifications not expressly approved by Dell Computer Corporation could void your authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

Class A

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the

manufacturer's instruction manual, may cause harmful interference with radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case you will be required to correct the interference at your own expense.

Class B

This equipment 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 manufacturer's instruction manual, may cause interference with radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, you are 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 the 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/television technician for help.

The following information is provided on the device or devices covered in this document in compliance with FCC regulations:

• Model number: PPX

• Company name: Dell Computer Corporation
EMC Engineering Department
One Dell Way
Round Rock, Texas 78682 USA
512-338-4400

Modem Regulatory Information

This equipment complies with Part 68 of the FCC rules. On the bottom of your computer is a label that contains, among other information, the FCC registration number and ringer equivalence number (REN) for your equipment. If requested, you must provide this information to the telephone company.

The REN is used to determine the quantity of devices that may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most areas, the sum of all the RENs on your telephone line should be less than five to ensure proper service from the telephone company. To be certain of the number of devices that you may connect to a line, as determined by the total RENs, contact your local telephone company.

The registration jack Universal Service Order Code (USOC) used by this equipment is RJ-11C. An FCC compliant telephone cord and modular plug is provided with this equipment. This equipment is designed to be connected to the telephone network or premises wiring using a compatible modular jack that is Part 68 compliant.

This equipment cannot be used on public coin-phone service provided by the telephone company. Connection to party line service is subject to state tariffs.

There are no user serviceable parts on the modem contained in your computer.

If your telephone equipment causes harm to the telephone network, the telephone company will notify you in advance that service may be temporarily discontinued. If advance notice is not practical, the telephone company will notify you as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of this equipment. If this happens, the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

If you experience trouble with this telephone equipment, see Chapter 5, "Getting Help", to find the appropriate telephone number for obtaining customer assistance. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

Fax Branding

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device, including fax machines, to send any message unless such message clearly contains in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent, identification of the business, other entity, or individual sending the message, and the telephone number of the sending machine or such business, other entity, or individual. The telephone number provided may not be a 900 number or any other number for which charges exceed local or long-distance transmission charges.

IC Notice (Canada Only)

Most Dell computer systems (and other Dell digital apparatus) are classified by the Industry Canada (IC) Interference-Causing Equipment Standard #3 (ICES-003) as Class B digital devices. To determine which classification (Class A or B) applies to your computer system (or other Dell digital apparatus), examine all registration labels located on the bottom or the back panel of your computer (or other digital apparatus). A statement in the form of "IC Class A ICES-003" or "IC Class B ICES-003" will be located on one of these labels. Note that Industry Canada regulations provide that changes or modifications not expressly approved by Dell Computer Corporation could void your authority to operate this equipment.

> This Class B (or Class A, if so indicated on the registration label) digital apparatus meets the requirements of the Canadian Interference-Causing Equipment Regulations.
>
> Cet appareil numérique de la Classe B (ou Classe A, si ainsi indiqué sur l'étiquette d'enregistration) respecte toutes les exigences du Reglement sur le Materiel Brouilleur du Canada.

Modem Regulatory Information

The IC label identifies certified equipment. This certification means that the equipment meets telecommunications network protective, operational, and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The IC label does not guarantee that the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alteration made by a user to this equipment, or equipment malfunctions, may give the telephone communications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection, that the electrical ground connections of the power utility, telephone lines, and internal metallic water-pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

NOTICE: Users should not attempt to make such connections themselves. Contact the appropriate electric inspection authority, or electrician, as appropriate.

NOTE: The REN assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to

the requirement that the sum of the RENs of all the devices does not exceed the number five.

The REN for the internal modem as stated on the IC regulatory label located on the bottom of the computer is 0.6B.

The following information is provided in compliance with IC regulations:

Dell Computer Corporation
Warranty and Repair Service Center
One Dell Way
Round Rock, TX 78682 USA

512-338-4400

CTR21 Declaration

This equipment is approved to [Commission Decision 98/482/EC - CTR 21"] for pan-European single terminal connection to the Public Switched Telephone Network (PSTN). However, due to differences between the individual PSTNs in different countries, the approval does not, of itself, give an unconditional assurance of successful operation on every PSTN termination point. In the event of problems, you should contact your equipment supplier in the first instance.

The equipment is known to work with the Public Switched Telephone Networks in the following countries: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Norway, Portugal, Spain, Sweden, Switzerland, The Netherlands, and the United Kingdom. There are no known interworking difficulties with the PSTNs of the above mentioned countries.

New Zealand Telecom Warnings

General

The grant of a Telepermit for any item of terminal equipment indicates only that Telecom has accepted that the item complies with minimum conditions for connection to its network. It indicates no endorsement of the product by Telecom, nor does it provide any sort of warranty. Above all, it provides no assurance that any item will work correctly in all respects with another item of Telepermitted equipment of a different make or model, nor does it imply that any product is compatible with all of Telecom's network services.

This equipment does not fully meet Telecom's impedance requirements. Performance limitations may occur when used in conjunction with some parts of the network. Telecom will accept no responsibility should difficulties arise in such circumstances.

This equipment shall not be set up to make automatic calls to the Telecom '111' Emergency Service.

If a charge for local calls is unacceptable, the 'Dial' button should *not* be used for local calls. Only the 7-digits of the local number should be dialed from your telephone. *Do not* include the area code digit or the '0' prefix.

This equipment may not provide for the effective hand-over of a call to another device connected to the same line.

Important Notice

Under power failure conditions, this telephone may not operate. Please ensure that a separate telephone, not dependent on local power, is available for emergency use.

Some parameters required for compliance with Telecom's Telepermit requirements are dependent on the equipment (PC) associated with this device. The associated equipment shall be set to operate within the following limits for compliance with Telecom's Specification:

1. (a) There shall be no more than 10 call attempts to the same number within any 30-minute period for any single manual call initiation, and

    (b) The equipment shall go on-hook for a period of not less than 30 seconds between the end of one attempt and the beginning of the next attempt.

2. Where automatic calls are made to different numbers, the equipment shall go on-line for a period of not less than 5 seconds between the end of one attempt and the beginning of the next attempt.

3. The equipment shall be set to ensure that calls are answered between 3 and 30 seconds of receipt of ringing.

All persons using this device for recording telephone conversations shall comply with New Zealand law. This requires that at least one party to the conversation is to be aware that it is being recorded. In addition, the Principles enumerated in the Privacy Act 1993 shall be complied with in respect to the nature of the personal information collected, the purpose for its collection, how it is used, and what is disclosed to any other party.

CE Notice (European Union)

Marking by the symbol CE indicates compliance of this Dell system to the EMC Directive and the Low Voltage Directive of the European Union. Such marking is indicative that this Dell system meets the following technical standards:

*   EN 55022 — "Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment."

*   EN 50082-1: 1992 — "Electromagnetic compatibility—Generic immunity standard Part 1: Residential, commercial, and light industry."

*   EN 60950 — "Safety of Information Technology Equipment."

NOTE: EN 55022 emissions requirements provide for two classifications:

- *Class A is for typical commercial areas.*
- *Class B is for typical domestic areas.*

This Dell device is classified for use in a typical Class B domestic environment.

A "Declaration of Conformity" in accordance with the preceding directives and standards has been made and is on file at Dell Products Europe BV, Limerick, Ireland.

Battery Disposal

Your computer uses a lithium-ion battery and a nickel-metal hydride (NiMH) coin cell battery. For instructions about replacing the lithium-ion battery in your computer, refer to "Installing a Battery" in Chapter 2. The NiMH battery is a long-life battery, and it is very possible that you will never need to replace it. However, should you ever need to replace it, the procedure must be performed by an authorized service technician.

Do not dispose of the battery(s) along with household waste. Contact your local waste disposal agency for the address of the nearest battery deposit site.

EN 55022 Compliance (Czech Republic Only)

This device belongs to Class B devices as described in EN 55022, unless it is specifically stated that it is a Class A device on the specification label. The following applies to devices in Class A of EN 55022 (radius of protection up to 30 meters). The user of the device is obliged to take all steps necessary to remove sources of interference to telecommunication or other devices.

Pokud není na typovém štitku počítače uvedeno, že spadá do třídy A podle EN 55022, spadá automaticky do třídy B podle EN 55022. Pro zařízení zařazená do třídy A (ochranné pásmo 30m) podle EN 55022 platí následující. Dojde-li k rušení telekomunikačních nebo jinych zařízení, je uživatel povinen provést taková opatření, aby rušení odstranil.

VCCI Notice (Japan Only)

Most Dell computer systems are classified by the Voluntary Control Council for Interference (VCCI) as Class B information technology equipment (ITE). However, the inclusion of certain options can change the rating of some configurations to Class A. ITE, including peripherals, expansion cards, printers, input/output (I/O) devices, monitors, and so on, integrated into or connected to the system, should match the electromagnetic environment classification (Class A or B) of the computer system.

To determine which classification applies to your computer system, examine the regulatory labels/markings (see Figures D-1 and D-2) located on the bottom or back panel of your computer. Once you have determined your system's VCCI classification, read the appropriate VCCI notice.

Class A ITE

> この装置は、情報処理装置等電波障害自主規制協議会 (VCCI) の基準に基づくクラス A 情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

This is a Class A product based on the standard of the Voluntary Control Council for Interference (VCCI) for information technology equipment. If this equipment is used in a domestic environment, radio disturbance may arise. When such trouble occurs, the user may be required to take corrective actions.

VCCI-A

Figure D-1. VCCI Class A ITE Regulatory Mark

Class B ITE

> この装置は、情報処理装置等電波障害自主規制協議会 (VCCI) の基準に基づくクラス B 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、この装置がラジオやテレビジョン受信機に近接して使用させると、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下さい。

This is a Class B product based on the standard of the Voluntary Control Council for Interference (VCCI) for information technology equipment. If this equipment is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual.

Figure D-2. VCCI Class B ITE Regulatory Mark

MOC Notice (South Korea Only)

To determine which classification (Class A or B) applies to your computer system (or other Dell digital device), examine the South Korean Ministry of Communications (MOC) registration labels located on your computer (or other Dell digital device). The MOC label may be located separately from the other regulatory marking applied to your product. The English text, "EMI (A)," for Class A products, or "EMI (B)" for Class B products, appears in the center of the MOC label (see Figures D-3 and D-4).

NOTE: MOC emissions requirements provide for two classifications:

- *Class A devices are for business purposes.*
- *Class B devices are for nonbusiness purposes.*

Class A Device

장치 종류	사용자 안내문
A급 기기	이 장치는 업무용으로 전자파 적합등록을 한 장치이오니 판매자 또는 사용자는 이 점을 주의하시기 바라며 만약 잘못 판매 또는 구입하였을 때에는 가정용으로 교환하시기 바랍니다.

Please note that this device has been approved for business purposes with regard to electromagnetic interference. If you find that this device is not suitable for your use, you may exchange it for a nonbusiness device.

EMI (A)
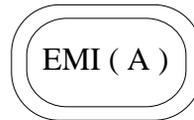
Figure D-3. MOC Class A Regulatory Mark

Class B Device

장치 종류	사용자 안내문
B급 기기	이 장치는 가정용으로 전자파 적합등록을 한 장치로서 주거지역에서는 물론 모든 지역에서 사용할 수 있습니다.

Please note that this device has been approved for nonbusiness purposes and may be used in any environment, including residential areas.

EMI (B)
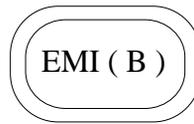
Figure D-4. MOC Class B Regulatory Mark

Polish Center for Testing and Certification Notice

The equipment should draw power from a socket with an attached protection circuit (a three-prong socket). All equipment that works together (computer, monitor, printer, and so on) should have the same power supply source.

The phasing conductor of the room's electrical installation should have a reserve short-circuit protection device in the form of a fuse with a nominal value no larger than 16 amperes (A).

To completely switch off the equipment, the power supply cable must be removed from the power supply socket, which should be located near the equipment and easily accessible.

A protection mark "B" confirms that the equipment is in compliance with the protection usage requirements of standards PN-93/T-42107 and PN-EN55022:1996.

Wymagania Polskiego Centrum Badań i Certyfikacji

Urządzenie powinno być zasilane z gniazda z przyłączonym obwodem ochronnym (gniazdo z kołkiem). Współpracujące ze sobą urządzenia (komputer, monitor, drukarka) powinny być zasilane z tego samego źródła.

Instalacja elektryczna pomieszczenia powinna zawierać w przewodzie fazowym rezerwową ochronę przed zwarciami, w postaci bezpiecznika o wartości znamionowej nie większej niż 16A (amperów).

W celu całkowitego wyłączenia urządzenia z sieci zasilania, należy wyjąć wtyczkę kabla zasilającego z gniazdka, które powinno znajdować się w pobliżu urządzenia i być łatwo dostępne.

Znak bezpieczeństwa "B" potwierdza zgodność urządzenia z wymaganiami bezpieczeństwa użytkowania zawartymi w PN−93/T−42107 i PN−EN55022:1996.

Pozostałe instrukcje bezpieczeństwa

- Nie należy używać wtyczek adapterowych lub usuwać kołka obwodu ochronnego z wtyczki. Jeżeli konieczne jest użycie przedłużacza to należy użyć przedłużacza 3-żyłowego z prawidłowo połączonym przewodem ochronnym.

- System komputerowy należy zabezpieczyć przed nagłymi, chwilowymi wzrostami lub spadkami napięcia, używając eliminatora przepięć, urządzenia dopasowującego lub bezzakłóceniowego źródła zasilania.

- Należy upewnić się, aby nic nie leżało na kablach systemu komputerowego, oraz aby kable nie były umieszczone w miejscu, gdzie można byłoby na nie nadeptywać lub potykać się o nie.

- Nie należy rozlewać napojów ani innych płynów na system komputerowy.

- Nie należy wpychać żadnych przedmiotów do otworów systemu komputerowego, gdyż może to spowodować pożar lub porażenie prądem, poprzez zwarcie elementów wewnętrznych.

- System komputerowy powinien znajdować się z dala od grzejników i źródeł ciepła. Ponadto, nie należy blokować otworów wentylacyjnych. Należy unikać kładzenia luźnych papierów pod komputer oraz umieszczania komputera w ciasnym miejscu bez możliwości cyrkulacji powietrza wokół niego.

NOM Information (Mexico Only)

The following information is provided on the device(s) described in this document in compliance with the requirements of the official Mexican standards (NOM):

Exporter:	Dell Computer Corporation One Dell Way Round Rock, TX 78682
Importer:	Dell Computer de México, S.A. de C.V. Rio Lerma No. 302 - 4° Piso Col. Cuauhtemoc 16500 México, D.F.
Ship to:	Dell Computer de México, S.A. de C.V. al Cuidado de Kuehne & Nagel de México S. de R.I. Avenida Soles No. 55 Col. Peñon de los Baños 15520 México, D.F.
Supply voltage:	100–240 VAC
Frequency:	60–50 Hz
Input current rating:	1.5 A

Información para NOM (únicamente para México)

La información siguiente se proporciona en el dispositivo o en los dispositivos descritos en este documento, en cumplimiento con los requisitos de la Norma Oficial Mexicana (NOM):

Exportador:	Dell Computer Corporation One Dell Way Round Rock, TX 78682
Importador:	Dell Computer de México, S.A. de C.V. Rio Lerma No. 302 - 4° Piso Col. Cuauhtemoc 16500 México, D.F.

Embarcar a:	Dell Computer de México,
	  S.A. de C.V. al Cuidado
	  de Kuehne & Nagel de
	  México S. de R.I.
	Avenida Soles No. 55
	Col. Peñon de los Baños
	15520 México, D.F.

Tensión alimentación:	100–240 VAC
Frecuencia:	60–50 Hz
Consumo de corriente:	1.5 A

A P P E N D I X   E

Limited Warranty and Return Policy

Three-Year Limited Warranty (U.S. Only)

Dell Computer Corporation ("Dell") manufactures its hardware products from parts and components that are new or equivalent to new in accordance with industry-standard practices. Dell warrants that the hardware products it manufactures will be free from defects in materials and workmanship. The limited warranty term is three years beginning on the date of invoice, as described in the following text.

Damage due to shipping the products to you is covered under this limited warranty. Otherwise, this limited warranty does not cover damage due to external causes, including accident, abuse, misuse, problems with electrical power, servicing not authorized by Dell, usage not in accordance with product instructions, failure to perform required preventive maintenance, and problems caused by use of parts and components not supplied by Dell.

This limited warranty does not cover any items that are in one or more of the following categories: software; external devices (except as specifically noted); accessories or parts added to a Dell system after the system is shipped from Dell; accessories or parts added to a Dell system through Dell's system integration department; accessories or parts that are not installed in the Dell factory; or DellWare products. Monitors, keyboards, and mice that are Dell-branded or that are included on Dell's standard price list are covered under this limited warranty; all other monitors, keyboards, and mice (including those sold through the DellWare program) are not covered. Batteries for portable computers are covered only during the initial one-year period of this limited warranty.

Coverage During Year One

During the one-year period beginning on the invoice date, Dell will repair or replace products covered under this limited warranty that are returned to Dell's facility. To request warranty service, you must call Dell's Customer Technical Support within the warranty period. Refer to Chapter 5, "Getting Help," or the section titled "Contacting Dell" in your system *Help* to find the appropriate telephone number for obtaining customer assistance. If warranty service is required, Dell will issue a Return Material Authorization Number. You must ship the products back to Dell in their original or equivalent packaging, prepay shipping charges, and insure the shipment or accept the

risk of loss or damage during shipment. Dell will ship the repaired or replacement products to you freight prepaid if you use an address in the continental U.S., where applicable. Shipments to other locations will be made freight collect.

NOTE: Before you ship the product(s) to Dell, back up the data on the hard-disk drive(s) and any other storage device(s) in the product(s). Remove any removable media, such as diskettes, CDs, or PC Cards. Dell does not accept liability for lost data or software.

Dell owns all parts removed from repaired products. Dell uses new and reconditioned parts made by various manufacturers in performing warranty repairs and building replacement products. If Dell repairs or replaces a product, its warranty term is not extended.

Coverage During Years Two and Three

During the second and third years of this limited warranty, Dell will provide, on an exchange basis and subject to Dell's Exchange Policy in effect on the date of the exchange, replacement parts for the Dell hardware product(s) covered under this limited warranty when a part requires replacement. You must report each instance of hardware failure to Dell's Customer Technical Support in advance to obtain Dell's concurrence that a part should be replaced and to have Dell ship the replacement part. Dell will ship parts (freight prepaid) if you use an address in the continental U.S., where applicable. Shipments to other locations will be made freight collect. Dell will include a prepaid shipping container with each replacement part for your use in returning the replaced part to Dell. Replacement parts are new or reconditioned. Dell may provide replacement parts made by various manufacturers when supplying parts to you. The warranty term for a replacement part is the remainder of the limited warranty term.

You will pay Dell for replacement parts if the replaced part is not returned to Dell. The process for returning replaced parts, and your obligation to pay for replacement parts if you do not return the replaced parts to Dell, will be in accordance with Dell's Exchange Policy in effect on the date of the exchange.

You accept full responsibility for your software and data. Dell is not required to advise or remind you of appropriate backup and other procedures.

General Provisions

THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS WHICH VARY FROM STATE TO STATE (OR JURISDICTION TO JURISDICTION). DELL'S RESPONSI-BILITY FOR MALFUNCTIONS AND DEFECTS IN HARDWARE IS LIMITED TO REPAIR AND REPLACEMENT AS SET FORTH IN THIS LIMITED WARRANTY STATEMENT. ALL EXPRESS AND IMPLIED WARRANTIES FOR THE PRODUCT, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF AND CONDITIONS OF MER-CHANTIBILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE WARRANTY PERIOD SET FORTH ABOVE AND NO WARRAN-TIES, WHETHER EXPRESS OR IMPLIED, WILL APPLY AFTER SUCH PERIOD.

SOME STATES (OR JURISDICTIONS) DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE PRECEDING LIMITATION MAY NOT APPLY TO YOU.

DELL DOES NOT ACCEPT LIABILITY BEYOND THE REMEDIES SET FORTH IN THIS LIMITED WARRANTY STATEMENT OR LIABILITY FOR INCIDENTAL OR CONSE-QUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION ANY LIABILITY FOR PRODUCTS NOT BEING AVAILABLE FOR USE OR FOR LOST DATA OR SOFTWARE.

SOME STATES (OR JURISDICTIONS) DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE PRECEDING EXCLUSION OR LIMITATION MAY NOT APPLY TO YOU.

These provisions apply to Dell's three-year limited warranty only. For provisions of any service contract covering your system, refer to your invoice or the separate service contract that you will receive.

If Dell elects to exchange a system or component, the exchange will be made in accordance with Dell's Exchange Policy in effect on the date of the exchange. In any instance in which Dell issues a Return Material Authorization Number, Dell must receive the product(s) for repair prior to the expiration of the warranty period in order for the repair(s) to be covered by the limited warranty.

NOTE: If you chose one of the available warranty and service options in place of the standard three-year limited warranty described in the preceding text, the option you chose will be listed on your invoice.

Three-Year Limited Warranty (Canada Only)

Dell Computer Corporation ("Dell") manufactures its hardware products from parts and components that are new or equivalent to new in accordance with industry-standard practices. Dell warrants that the hardware products it manufactures will be free from defects in materials and workmanship. The warranty term is three years beginning on the date of invoice, as described in the following text.

Damage due to shipping the products to you is covered under this limited warranty. Otherwise, this limited warranty does not cover damage due to external causes, including accident, abuse, misuse, problems with electrical power, servicing not authorized by Dell, usage not in accordance with product instructions, failure to per-form required preventive maintenance, and problems caused by use of parts and components not supplied by Dell.

This limited warranty does not cover any items that are in one or more of the follow-ing categories: software; external devices (except as specifically noted); accessories or parts added to a Dell system after the system is shipped from Dell; accessories or parts added to a Dell system through Dell's system integration department; accesso-ries or parts that are not installed in the Dell factory; or DellWare products. Monitors, keyboards, and mice that are Dell-branded or that are included on Dell's standard price

list are covered under this limited warranty; all other monitors, keyboards, and mice (including those sold through the DellWare program) are not covered. Batteries for portable computers are covered only during the initial one-year period of this limited warranty.

Coverage During Year One

During the one-year period beginning on the invoice date, Dell will repair or replace products covered under this limited warranty that are returned to Dell's facility. To request warranty service, you must call Dell's Customer Technical Support within the warranty period. Refer to Chapter 5, "Getting Help," or the section titled "Contacting Dell" in your system *Help* to find the appropriate telephone number for obtaining customer assistance. If warranty service is required, Dell will issue a Return Material Authorization Number. You must ship the products back to Dell in their original or equivalent packaging, prepay shipping charges, and insure the shipment or accept the risk of loss or damage during shipment. Dell will ship the repaired or replacement products to you freight prepaid if you use an address in Canada, where applicable. Shipments to other locations will be made freight collect.

NOTE: Before you ship the product(s) to Dell, back up the data on the hard-disk drive(s) and any other storage device(s) in the product(s). Remove any removable media, such as diskettes, CDs, or PC Cards. Dell does not accept liability for lost data or software.

Dell owns all parts removed from repaired products. Dell uses new and reconditioned parts made by various manufacturers in performing warranty repairs and building replacement products. If Dell repairs or replaces a product, its warranty term is not extended.

Coverage During Years Two and Three

During the second and third years of this limited warranty, Dell will provide, on an exchange basis and subject to Dell's Exchange Policy in effect on the date of the exchange, replacement parts for the Dell hardware product(s) covered under this limited warranty when a part requires replacement. You must report each instance of hardware failure to Dell's Customer Technical Support in advance to obtain Dell's concurrence that a part should be replaced and to have Dell ship the replacement part. Dell will ship parts (freight prepaid) if you use an address in Canada, where applicable. Shipments to other locations will be made freight collect. Dell will include a prepaid shipping container with each replacement part for your use in returning the replaced part to Dell. Replacement parts are new or reconditioned. Dell may provide replacement parts made by various manufacturers when supplying parts to you. The warranty term for a replacement part is the remainder of the limited warranty term.

You will pay Dell for replacement parts if the replaced part is not returned to Dell. The process for returning replaced parts, and your obligation to pay for replacement parts if you do not return the replaced parts to Dell, will be in accordance with Dell's Exchange Policy in effect on the date of the exchange.

You accept full responsibility for your software and data. Dell is not required to advise or remind you of appropriate backup and other procedures.

General Provisions

DELL MAKES NO EXPRESS WARRANTIES OR CONDITIONS BEYOND THOSE STATED IN THIS LIMITED WARRANTY STATEMENT. DELL DISCLAIMS ALL OTHER WARRANTIES AND CONDITIONS, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES AND CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. SOME STATES (OR JURISDICTIONS) DO NOT ALLOW LIMITATIONS ON IMPLIED WARRANTIES OR CONDITIONS, SO THIS LIMITATION MAY NOT APPLY TO YOU.

DELL'S RESPONSIBILITY FOR MALFUNCTIONS AND DEFECTS IN HARDWARE IS LIMITED TO REPAIR AND REPLACEMENT AS SET FORTH IN THIS LIMITED WAR-RANTY STATEMENT. THESE WARRANTIES GIVE YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE (OR JURISDICTION TO JURISDICTION).

DELL DOES NOT ACCEPT LIABILITY BEYOND THE REMEDIES SET FORTH IN THIS LIMITED WARRANTY STATEMENT OR LIABILITY FOR INCIDENTAL OR CONSE-QUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION ANY LIABILITY FOR PRODUCTS NOT BEING AVAILABLE FOR USE OR FOR LOST DATA OR SOFTWARE.

SOME STATES (OR JURISDICTIONS) DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE PRECEDING EXCLUSION OR LIMITATION MAY NOT APPLY TO YOU.

These provisions apply to Dell's three-year limited warranty only. For provisions of any service contract covering your system, refer to your invoice or the separate service contract that you will receive.

If Dell elects to exchange a system or component, the exchange will be made in accordance with Dell's Exchange Policy in effect on the date of the exchange. In any instance in which Dell issues a Return Material Authorization Number, Dell must receive the product(s) for repair prior to the expiration of the warranty period in order for the repair(s) to be covered by the limited warranty.

NOTE: If you chose one of the available warranty and service options in place of the standard three-year limited warranty described in the preceding text, the option you chose will be listed on your invoice.

One-Year End-User Manufacturer Guaran-tee (Latin America and the Caribbean Only)

Guarantee

Dell Computer Corporation ("Dell") warrants to the end-user in accordance with the following provisions that its branded hardware products, purchased by the end-user from a Dell company or an authorized Dell distributor in Latin America or the Carib-bean will be free from defects in materials, workmanship and design affecting normal

use, for a period of one year as of the original purchase date. Products for which proper claims are made will, at Dell's option, be repaired or replaced at Dell's expense. Dell owns all parts removed from repaired products. Dell uses new and reconditioned parts made by various manufacturers in performing repairs and building replacement products.

Exclusions

This Guarantee does not apply to defects resulting from: improper or inadequate installation, use or maintenance; actions or modifications by unauthorized third parties or the end-user; accidental or willful damage or normal wear and tear.

Making a Claim

Claims must be made in Latin America or the Caribbean by contacting the Dell point of sale within the guarantee period. The end-user must always supply proof of purchase, indicating name and address of the seller, date of purchase, model and serial number, name and address of the customer and details of symptoms and configuration at the time of malfunction, including peripherals and software used. Otherwise, Dell may refuse the guarantee claim. Upon diagnosis of a warranted defect, Dell will make arrangements, and pay for ground freight and insurance to and from Dell's repair/replacement center. The end-user must ensure that defective product is available for collection properly packed in original or equally protective packaging together with the details listed above and the return number provided to the end-user by Dell.

Limitation and Statutory Rights

Dell makes no other warranty, guarantee or like statement other than as explicitly stated above and this Guarantee is given in place of all other guarantees whatsoever, to the fullest extent permitted by law. In the absence of applicable legislation, this Guarantee will be the end-user's sole and exclusive remedy against Dell or any of its affiliates, and neither Dell nor any of its affiliates shall be liable for loss of profit or contracts, or any other indirect or consequential loss arising from negligence, breach of contract, or howsoever.

This Guarantee does not impair or affect mandatory statutory rights of the end-user against and/or any rights resulting from other contracts concluded by the end-user with Dell and/or any other seller.

Dell World Trade LP
One Dell Way, Round Rock, TX 78682, USA

Dell Computadores do Brasil Ltda (CNPJ No. 72.381.189/0001-10)/
Dell Commercial do Brasil Ltda (CNPJ No. 03 405 822/0001-40)
Avenida Industrial Belgraf, 400
92990-000 - Eldorado do Sul – RS - Brasil

Dell Computer de Chile Ltda
Coyancura 2283, Piso 3- Of.302,
Providencia, Santiago - Chile

Dell Computer de Colombia Corporation
Carrera 7 #115-33 Oficina 603
Bogota, Colombia

Dell Computer de Mexico SA de CV
Rio Lerma #302- 4 Piso
Col. Cuauhtemoc, Mexico, D.F. 06500

"Total Satisfaction" Return Policy (U.S. and Canada Only)

If you are an end-user customer who bought new products directly from a Dell company, you may return them to Dell within 30 days of the date of invoice for a refund or credit of the product purchase price. If you are an end-user customer who bought reconditioned or refurbished products from a Dell company, you may return them to Dell within 14 days of the date of invoice for a refund or credit of the product purchase price. In either case, the refund or credit will not include any shipping and handling charges shown on your invoice. If you are an organization that bought the products under a written agreement with Dell, the agreement may contain different terms for the return of products than specified by this policy.

To return products, you must call Dell Customer Service to receive a Credit Return Authorization Number. Refer to Chapter 5, "Getting Help," or the section titled "Contacting Dell" in your system *Help* to find the appropriate telephone number for obtaining customer assistance. To expedite the processing of your refund or credit, Dell expects you to return the products to Dell in their original packaging within five days of the date that Dell issues the Credit Return Authorization Number. You must also prepay shipping charges and insure the shipment or accept the risk of loss or damage during shipment. You may return software for refund or credit only if the sealed package containing the diskette(s) or CD(s) is unopened. Returned products must be in as-new condition, and all of the manuals, diskette(s), CD(s), power cables, and other items included with a product must be returned with it. For customers who

want to return, for refund or credit only, either applications software or an operating system that has been installed by Dell, the whole system must be returned, along with any media and documentation that may have been included in the original shipment.

This "Total Satisfaction" Return Policy does not apply to DellWare products, which may be returned under DellWare's then-current return policy. In addition, recondi-tioned parts purchased through Dell Spare Parts Sales in Canada are nonreturnable.

Macrovision Product Notice

The following product notice applies to the Macrovision Corporation product that is included with the DVD-ROM drive:

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation, and it is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

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