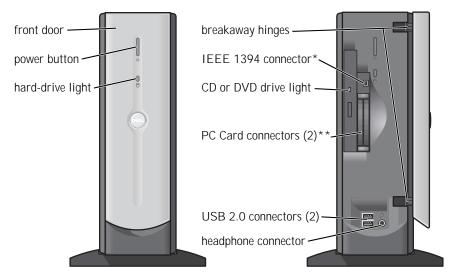
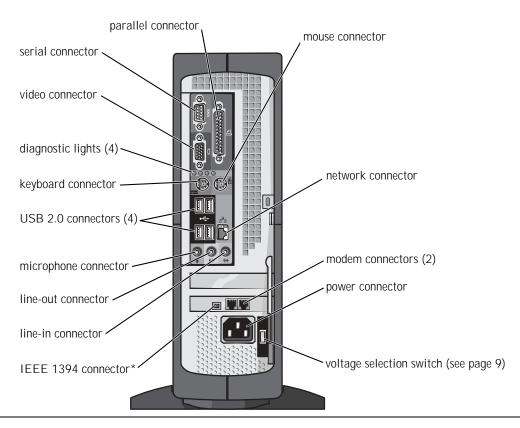
Dell™ Dimension™ 2300C



- * On computers with integrated IEEE 1394 connectors.
- ** On computers with integrated PC Card connectors.





Hints, Notices, and Cautions

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

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 potential for property damage, personal injury, or death.

Abbreviations and Acronyms

For a complete list of abbreviations and acronyms, see the *Tell Me How* help file. To access help files, see page 36.

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June 2003 P/N 2W209 Rev. A02

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⚠CAUTION: Safety Instructions

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

General

- Do not attempt to service the computer yourself unless you are a trained service technician. Always follow installation instructions closely.
- To help prevent electric shock, plug the computer and device power cables into properly grounded electrical outlets. 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.



- To help avoid the potential hazard of electric shock, do not use your computer during an electrical storm.
- 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.
- If your computer includes a modem, the cable used with the modem should be manufactured with a minimum wire size of 26 American wire gauge (AWG) and an FCCcompliant RJ-11 modular plug.
- Before you clean your computer, disconnect the computer from the electrical outlet. Clean your computer with a soft cloth dampened with water. Do not use liquid or aerosol cleaners, which may contain flammable substances.
- To help avoid possible damage to the system board, wait 5 seconds after turning off the computer before disconnecting a device from the computer.

CAUTION: Safety Instructions (continued)

- To avoid shorting out your computer when disconnecting a network cable, first unplug the cable from the network adapter on the back of your computer, and then from the network jack. When reconnecting a network cable to your computer, first plug the cable into the network jack, and then into the network adapter.
- To help protect your computer from sudden, transient increases and decreases in electrical power, use a surge suppressor, line conditioner, or uninterruptible power supply (UPS).
- Ensure that nothing rests on your computer's cables and that the cables are not located where they can be stepped on or tripped over.
- Do not push any objects into the openings of your computer. Doing so can cause fire or electric shock by shorting out interior components.
- Keep your computer away from radiators and heat sources. Also, do not block cooling vents. Avoid placing loose papers underneath your computer; do not place your computer in a closed-in wall unit or on a bed, sofa, or rug.
- Do not use your computer during an electrical storm unless the AC adapter cable has been disconnected from the electrical outlet.
- When you use the AC adapter to run the computer or to charge the battery, place the AC adapter in a ventilated area, such as a desk top or on the floor.
- The AC adapter may become hot during normal operation of your computer. Use care when handling the adapter during or immediately after operation.

When Using Your Computer

As you use your computer, observe the following safe-handling guidelines.

CAUTION: Do not operate your computer with any cover(s) (including computer covers, bezels, filler brackets, front-panel inserts, and so on) removed.

- Your computer is equipped with one of the following:
 - A fixed-voltage power supply Computers with a fixed-voltage power supply do not have a voltage selection switch on the back panel and operate at only one voltage (see the regulatory label on the outside of the computer for its operating voltage).
 - An auto-sensing voltage circuit Computers with an auto-sensing voltage circuit do not have a voltage selection switch on the back panel and automatically detect the correct operating voltage.
 - A manual voltage selection switch Computers with a voltage selection switch on the back panel must be manually set to operate at the correct operating voltage.





- NOTICE: To help avoid damaging a computer with a manual voltage selection switch, set the switch for the voltage that most closely matches the AC power available in your location. For Japan, the voltage selection switch must be set to the 115-V position even though the AC power available in Japan is 100 V. Also, ensure that your monitor and attached devices are electrically rated to operate with the AC power available in your location.
- Before working inside the computer, unplug the computer to help prevent electric shock or system board damage. Certain system board components continue to receive power any time the computer is connected to AC power.

When Using Your Computer (continued)

When Working Inside Your Computer

Before you open the computer cover, perform the following steps in the sequence indicated.



 $oldsymbol{\Lambda}$ CAUTION: Do not attempt to service the computer yourself, except as explained in your online Dell™ documentation or in instructions otherwise provided to you by Dell. Always follow installation and service instructions closely.



NOTICE: To help avoid possible damage to the system board, wait 5 seconds after turning off the computer before removing a component from the system board or disconnecting a device from the computer.

- 1 Perform an orderly computer shutdown using the operating system menu.
- 2 Turn off your computer and any devices connected to the computer.
- 3 Ground yourself by touching an unpainted metal surface on the chassis, such as the metal around the card-slot openings at the back of the computer, before touching anything inside your computer.
 - While you work, periodically touch an unpainted metal surface on the computer chassis to dissipate any static electricity that might harm internal components.
- Disconnect your computer and devices, including the monitor, from their electrical outlets. Also, disconnect any telephone or telecommunication lines from the computer.
 - Doing so reduces the potential for personal injury or shock.

In addition, take note of these safety guidelines when appropriate:

When you disconnect a cable, pull on its connector or on its strain-relief loop, not on the cable itself. Some cables have a connector with locking tabs; if you are disconnecting this type of cable, press in on the locking tabs before disconnecting the cable. As you pull connectors apart, keep them evenly aligned to avoid bending any connector pins. Also, before you connect a cable, ensure that both connectors are correctly oriented and aligned.

When Using Your Computer (continued)

Handle components and cards with care. Do not touch the components or contacts on a card. Hold a card by its edges or by its metal mounting bracket. Hold a component such as a microprocessor chip by its edges, not by its pins.



CAUTION: There is a danger of a new battery exploding if it is incorrectly installed. Replace the battery only with the same or equivalent type recommended by the manufacturer. Do not dispose of the battery along with household waste. Contact your local waste disposal agency for the address of the nearest battery deposit site.

Protecting Against Electrostatic Discharge

Static electricity can harm delicate 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 the microprocessor. You can do so by touching an unpainted metal surface on the computer chassis.

As you continue to work inside the computer, periodically touch an unpainted metal surface to remove any static charge your body may have accumulated.

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

- Do not remove components from their antistatic packing material until you are ready to install the component in your computer. Just before unwrapping the antistatic packaging, discharge static electricity from your body.
- When transporting an electrostatic sensitive component, first place it in an antistatic container or packaging.
- Handle all electrostatic sensitive components in a static-safe area. If possible, use antistatic floor pads and workbench pads.

Ergonomic Computing Habits

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



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

For comfort and efficiency, observe the ergonomic guidelines in the Tell Me How help file when setting up and using your computer.

When Using Your Computer (continued)



⇒ Battery Disposal

Your computer uses a lithium coin-cell battery. The lithium coin-cell battery is a long-life battery, and it is very possible that you will never need to replace it. However, should you need to replace it, see page 93.

Do not dispose of the battery along with household waste. Contact your local waste disposal agency for the address of the nearest battery deposit site.

Finding Information for Your Computer

What Are You Looking For?

Find it Here

- A diagnostic program for my computer
- Drivers for my computer
- My computer documentation
- My device documentation

ResourceCD



You can use this CD to access documentation and reinstall drivers (see page 61).

- How to set up a printer
- How to troubleshoot and solve problems
- · How to add parts
- How to contact Dell
- Warranty information

Owner's Manual



What Are You Looking For?

- **Express Service Code and Service Tag**
- Microsoft[®] Windows[®] License Label

Find it Here

Express Service Code and Product Key



Located on your computer.

· How to reinstall my operating system

Operating System CD



If you reinstall your operating system, use the ResourceCD to reinstall drivers for the devices that came with your computer.

- · Latest drivers for my computer
- · Answers to technical service and support questions
- · Online discussions with other users and technical support
- · Documentation for my computer

Dell Support website

The Dell Support website provides several online tools, including:

- Knowledge Base hints, tips, and online courses
- Customer Forum online discussion with other Dell customers
- Upgrades upgrade information for components, such as memory, the hard drive, and the operating system
- Customer Care contact information, order status, warranty, and repair information
- · Downloads drivers, patches, and software updates
- Reference computer documentation, product specifications, and white papers

What Are You Looking For?

Find it Here

• How to set up my computer

Setup Diagram



- Tips on using Windows
- · How to clean my computer
- · How to use my mouse and keyboard
- · How to use Windows XP
- · Documentation for my computer and devices

Tell Me How Help File

- 1 Click the Start button, and then click Help and Support.
- 2 Click User and system guides, and then click User's guides.
- 3 Click Tell Me How.
- Windows XP Help and Support Center
- 1 Click the Start button, and then click Help and Support.
- 2 Type a word or phrase that describes your problem, and then click the arrow icon.
- 3 Click the topic that describes your problem.
- 4 Follow the instructions shown on the screen.

SECTION 1

Setting Up and Using Your Computer

Connecting the AC Adapter
Attaching and Removing the Computer Stand
Setting Up a Printer
Connecting an IEEE 1394 Device (Optional)
Transferring Information to a New Computer
Setting Up a Home and Office Network
Connecting to the Internet
Copying CDs
Turning Off the Computer

Connecting the AC Adapter

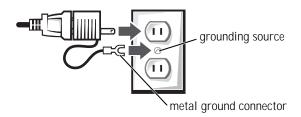
1 Connect the AC adapter to the plug on the AC power cable.



A CAUTION: If you decide to connect the green ground wire to an electrical outlet, do not permit contact between the green ground wire and power leads because electrical shock, fire, or damage to your computer can occur (see the following figure).



- 2 If you decide *not* to connect the green ground wire to the electrical outlet, go to step 4.
- 3 Connect the metal ground connector to the grounding source on the outlet (see the following figure):
 - Loosen the grounding source.
 - Slide the metal ground connector behind the grounding source, and tighten the grounding source.

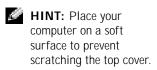


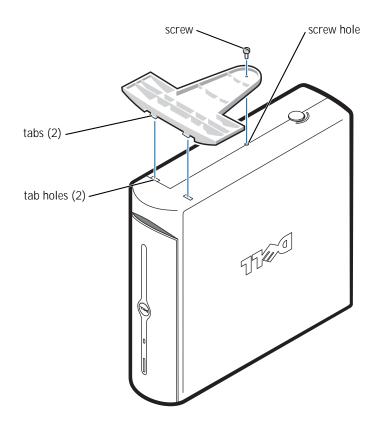
4 Connect the AC power cable to the outlet.

Attaching and Removing the Computer Stand

To attach the stand:

- 1 Rotate the computer to an upside-down position.
- 2 Insert the screw into the bottom of the stand.
- 3 Align the two tabs and the screw on the stand with the tab holes and screw hole in the bottom of the computer.





- 4 Tighten the screw.
- 5 Place the computer in the upright position.



To remove the stand:

- 1 Turn the computer over so that the stand is at the top.
- Loosen the screw and lift the stand away.
- 3 Place the computer in a horizontal position until you reattach the stand.



Setting Up a Printer

NOTICE: Complete the operating system setup before you connect a printer to the computer.

See the documentation that came with the printer for setup information, including how to:

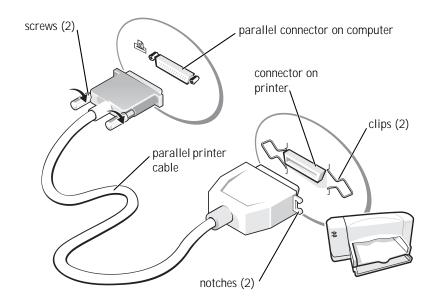
- Obtain and install updated drivers
- Connect the printer to the computer
- Load paper and install the toner or ink cartridge
- Contact the printer manufacturer for technical assistance

Printer Cable

Your printer connects to your computer with either a USB cable or a parallel cable. Your printer may not come with a printer cable, so if you purchase a cable separately, ensure that it is compatible with your printer. If you purchased a printer cable at the same time you purchased your computer, the cable may arrive in the computer box.

Connecting a Parallel Printer

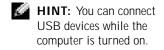
- 1 Complete the operating system setup, if you have not already done so.
- 2 Turn off the computer (see page 31).
- NOTICE: For best results, use a 3 m (10 ft) or shorter parallel cable.
- 3 Attach the parallel printer cable to the parallel connector on the computer and tighten the two screws. Attach the cable to the connector on the printer and snap the two clips into the two notches.

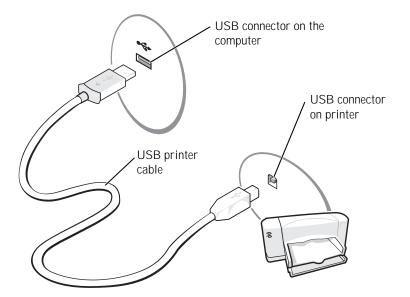


- Turn on the printer and then turn on the computer. If the Add New Hardware Wizard window appears, click Cancel.
- 5 Install the printer driver if necessary. See the documentation that came with your printer.

Connecting a USB Printer

- 1 Complete the operating system setup, if you have not already done so.
- 2 Install the printer driver if necessary. See the documentation that came with your printer.
- 3 Attach the USB printer cable to the USB connector on the computer and the printer. The USB connectors fit only one way.

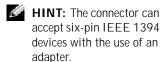


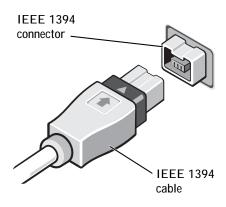


Connecting an IEEE 1394 Device (Optional)

IEEE 1394 devices can move large amounts of data between computers and devices and are ideal for use with multimedia devices, such as digital video cameras.

Your computer provides an IEEE 1394 connector on both the front and back panels. (See "Front and Back View of the Computer" on page 70 for locations.)





Transferring Information to a New Computer

Windows XP provides a Files and Settings Transfer Wizard to move data, such as e-mails, window sizes, toolbar settings, and Internet bookmarks, from one computer to another. First you collect the data from the source computer, and then you import the data to the new computer.

If the source computer uses another Windows operating system, the wizard can be launched from the Windows XP operating system CD. You can transfer the data to the new computer over a network or serial connection, or you can store it on a removable medium, such as a writable CD.

To transfer information to a new computer:

- 1 Click the **Start** button, point to **All Programs**→ **Accessories**→ **System** Tools, and then click Files and Settings Transfer Wizard.
- On the welcome screen, click **Next**.
- On the Which computer is this? screen, select New Computer, and 3 then click Next.
- Follow the instructions on the screen.
- HINT: The CD that you need to place in your CD or DVD drive is titled Operating System.

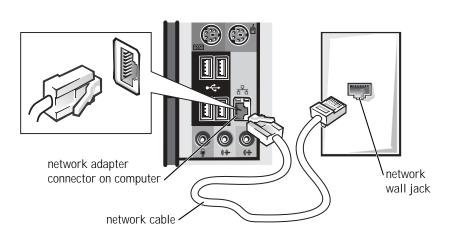
Setting Up a Home and Office Network

Connecting to a Network Adapter

Before you connect your computer to a network, it must have a network adapter installed and a network cable connected to it.

To connect a network cable:

- Connect the network cable to the network adapter connector on the back of your computer.
- 2 Connect the other end of the network cable to a network connection device.



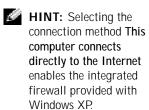
HINT: Insert the cable until it clicks into place, and then gently pull it to ensure that it is secure.

HINT: Do not use a network cable with a telephone wall jack.

Network Setup Wizard

Windows XP provides a Network Setup Wizard to guide you through the process of sharing files, printers, or an Internet connection between computers in a home or small office.

- 1 Click the **Start** button, point to **All Programs**→ **Accessories**→ Communications, and then click Network Setup Wizard.
- 2 On the welcome screen, click **Next**.
- Click checklist for creating a network.



HINT: ISPs may vary by country.

- 4 Complete the checklist and required preparations, and then return to the Network Setup Wizard.
- 5 Follow the instructions on the screen.

Connecting to the Internet

To connect to the Internet, you need a modem or network connection and an Internet service provider (ISP), such as AOL or MSN. Your ISP will offer one or more of the following Internet connection options:

- Dial-up connections that provide Internet access through a phone line. Dial-up connections are considerably slower than DSL and cable modem connections.
- DSL connections that provide high-speed Internet access through your existing phone line. With a DSL connection, you can access the Internet and use your phone on the same line simultaneously.
- Cable modem connections that provide high-speed Internet access through your local cable TV line.

If you are using a dial-up connection, connect a telephone cable to the modem connector on your computer and to the telephone wall jack before you set up your Internet connection. If you are using a DSL or cable modem connection, contact your ISP for setup instructions.

Setting Up Your Internet Connection

To set up an AOL or MSN connection:

- 1 Save and close any open files, and exit any open programs.
- 2 Double-click the **MSN Explorer** or **AOL** icon on the Windows[®] desktop.
- 3 Follow the instructions on the screen to complete the setup.

If you do not have an MSN Explorer or AOL icon on your desktop or if you want to set up an Internet connection with a different ISP:

- 1 Save and close any open files, and exit any open programs.
- 2 Click the **Start** button and click **Control Panel**.
- 3 Click Network and Internet Connections.

- 4 Click Set up or change your Internet connection.
- 5 In the **Internet Properties** window, click **Setup** and then click **Next**. The **New Connection Wizard** appears.
- 6 Click Connect to the Internet.
- 7 In the next window, click the appropriate option:
 - If you do not have an ISP and want to select one, click Choose from a list of Internet service providers (ISPs).
 - If you have already obtained setup information from your ISP but you did not receive a setup CD, click Set up my connection manually.
 - If you have a CD, click Use the CD I got from an ISP.
- 8 Click Next.

If you selected **Set up my connection manually**, continue to step 9. Otherwise, follow the instructions on the screen to complete the setup.

- Click the appropriate option under **How do you want to connect to** the Internet?, and then click Next.
- 10 Use the setup information provided by your ISP to complete the setup.

If you are having problems connecting to the Internet, see page 39. If you cannot connect to the Internet but have successfully connected in the past, the ISP might have a service outage. Contact your ISP to check the service status, or try connecting again later.

HINT: If you do not know which type of connection to select, contact your ISP.

Copying CDs

This section applies only to computers that have a CD- or DVD-recording device.

The information in this section is based on the Roxio Easy CD Creator Basic documentation that came with your computer. See the following section, "Using Easy CD Creator Basic," for instructions on how to locate that documentation.



HINT: Ensure that you follow all copyright laws when you create CDs.



HINT: The information in this section also applies to using Easy CD Creator Basic with a DVD+RW or a DVD+R drive.

HINT: Some music and game CDs are copyprotected. If you have a CD that cannot be copied, you must use the original CD for everyday use.

To burn CDs, you need to use CD-burner software. Roxio Easy CD Creator Basic is your computer's CD-burner software. The software includes these project programs that enable you to record specialty CDs for different types of uses:

- DirectCD allows you to format a blank CD-R or CD-RW disc so that you can use Microsoft[®] Windows[®] Explorer to drag and drop data files to the CD-RW drive. You can use a DirectCD-formatted CD-RW disc like another hard drive on your computer because CD-RW discs are fully rewritable (CD-R discs can be used with DirectCD, but that media type has overwriting limitations—see "Using Blank CD-R Discs or Blank CD-RW Discs" for recording media differences).
- MusicCD allows you to burn custom music CDs.
- DataCD allows you to copy a variety of your documents, such as spreadsheet or accounting files, to a CD for permanent storage.
- Disc Copier allows you to make a backup copy of almost any type of CD. This program allows you to make a copy of a CD for everyday use so that you can archive and save the original copy. (Disc Copier is titled "CD Copier" in some versions of Roxio CD Creator Basic.)

All four project programs are available on the Easy CD Creator Basic **Select** a Project menu screen. To view the Select a Project menu screen, click the Start button, point to All Programs -> Roxio Easy CD Creator, and then click **Project Selector**.

Using Easy CD Creator Basic

See the Easy CD Creator Basic documentation for instructions on how to use the program, information about different recording techniques, and CD media limitations. The Easy CD Creator Basic documentation is located in the Microsoft® Windows® XP Help and Support Center (see page 36). The documentation is also provided on the Dell Dimension ResourceCD, which is included with your computer. Each Easy CD Creator Basic project program also has thorough online help files.

Using Blank CD-R Discs or Blank CD-RW Discs

Your CD-RW drive writes to two different types of recording media—CD-R and CD-RW discs. Use blank CD-R (CD-Recordable) disks to record music or permanently store data files. After creating a CD-R disc, you cannot write to that disc again without changing your method of recording (see the Roxio documentation for more information). Use blank CD-RW (CD-ReWritable) discs when you want to write, erase, rewrite, and update your files onto CDs.

Helpful Tips

- You must use the Easy CD Creator Basic project programs to copy and record all music and data CDs. You can use Windows Explorer to drag and drop files to a CD-R or CD-RW disc only after you first use DirectCD to format the disc.
- You must use CD-R discs to burn music CDs that you want to play in regular stereos. CD-RW discs do not play in most home or car stereos.
- If you want to copy files from the Internet or files from a floppy or Zip drive, copy those files to your hard drive first, and then burn your CD. Your CD-RW drive requires a steady stream of data to properly record. Direct Internet downloads, floppy drives, and Zip drives may not be able to provide a steady data stream to your CD-RW drive.
- Music MP3 files can be played only on MP3 players or on computers that have MP3 software installed.
- Ensure that you set the sampling rate to at least 128 Kbps when you burn MP3 files to a CD. Otherwise, recording errors may occur.
- Do not burn a blank CD-R or CD-RW disc to its maximum capacity; for example, do not copy a 650-MB file to a 650-MB blank CD. The CD-RW drive needs 1 or 2 MB of the blank CD to finalize the recording.
- Use a blank CD-RW disc to practice CD recording until you are familiar with CD recording techniques. If you make a mistake, you can erase the CD-RW disc and try again. You can also use blank CD-RW discs to test music file projects before you record the project permanently to a blank CD-R disc.
- See the Roxio support website at **support.roxio.com** for additional helpful tips.



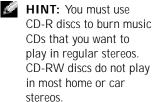
HINT: If you have a DVD/CD-RW combo drive and experience recording problems, first check for available software patches at the Dell Support website at support.dell.com and if necessary, the Roxio support website at support.roxio.com.

How to Copy a CD

This procedure assumes that your computer is equipped with a single CD-RW drive (without an additional CD drive). If your computer is equipped with both types of drives, see the Roxio documentation for instructions on how to copy CDs from a CD drive to a CD-RW drive.

- Click the Start button, point to All Programs→ Roxio Easy CD Creator, and then click Project Selector.
 - The **Select a Project** window appears.
- Click **Disc Copier** (Disc Copier is titled "CD Copier" in some versions of Easy CD Creator Basic.)
 - The **Disc Copier** window appears and displays your CD-RW drive in the Copy from and the Record to lists.
- 3 Insert the source CD that you want to copy into the CD-RW drive. The Disc Copier project program briefly checks the source CD in the CD-RW drive to ensure that it is a readable CD.
- 4 Click Copy.
 - Depending on the size of the files that are being copied, the copy process may take a few minutes.
- After the source CD is copied, remove the source CD from the CD-RW drive tray.
 - The CD-RW drive tray opens automatically after the source CD is copied.
- Insert a blank CD into the CD-RW drive and close the tray. The recording starts automatically.

After the recording completes, click OK.

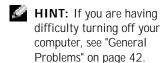


Turning Off the Computer

- NOTICE: To prevent data loss, you must turn off your computer through the Start menu rather than by pressing the power button.
 - 1 Save and close any open files and exit any open programs.
 - 2 Click the Start button and then click Turn off Computer.
 - 3 Click Turn off.

The computer automatically turns off after the shutdown process finishes.

4 Turn off your monitor and any other devices connected to power.



SECTION 2

Solving Problems

Finding Solutions

Finding Help Information

Battery Problems

Drive Problems

E-Mail, Modem, and Internet Problems

Error Messages

General Problems

IEEE 1394 Problems

Keyboard Problems

Mouse Problems

Network Problems

PC Card Problems

Power Problems

Printer Problems

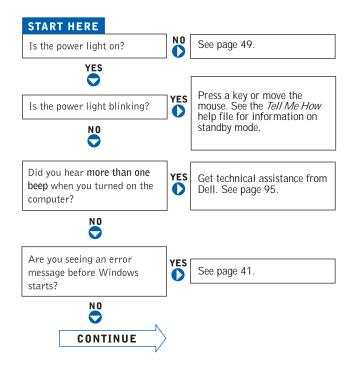
Scanner Problems

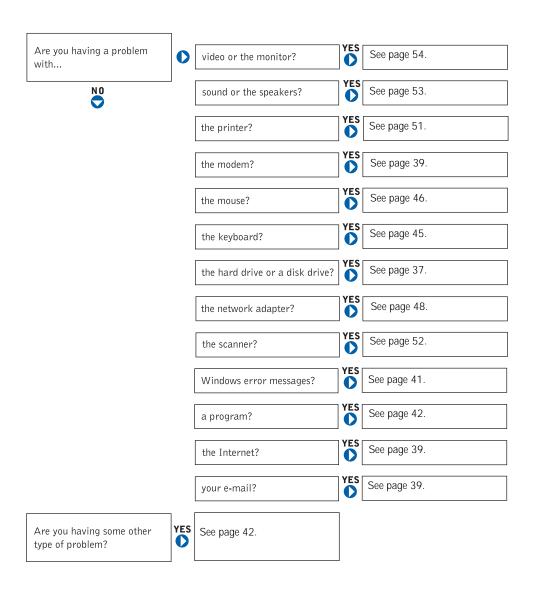
Sound and Speaker Problems

Video and Monitor Problems

Finding Solutions

Sometimes it's difficult to figure out where to go for answers. Use this chart to help you quickly find the answers to your questions.





Finding Help Information

TO ACCESS THE Tell Me How HELP FILE

- 1 Click the Start button, and then click Help and Support.
- 2 Click User and system guides, and then click User's guides.
- 3 Click Tell Me How.

TO ACCESS WINDOWS HELP

- 1 Click the Start button, and then click Help and Support.
- 2 Type a word or phrase that describes your problem, and then click the arrow icon.
- 3 Click the topic that describes your problem.
- 4 Follow the instructions shown on the screen.

TO LOCATE ADDITIONAL INFORMATION FOR YOUR COMPUTER - See page 13.



Battery Problems



⚠ CAUTION: There is a danger of a new battery exploding if it is incorrectly installed. Replace the battery only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.



CAUTION: Before you begin any of the procedures in this section, follow the safety instructions on page 7.

REPLACE THE BATTERY — If you have to repeatedly reset time and date information after turning on the computer, or if an incorrect time or date displays during start-up, replace the battery (see page 93). If the battery still does not work properly, contact Dell (see page 95).

Drive Problems

CD drive problems

ADJUST THE WINDOWS VOLUME CONTROL — Click the speaker icon in the lower-right corner of your screen.

- · Ensure that the volume is turned up by clicking the slidebar and dragging
- Ensure that the sound is not muted by clicking any boxes that are checked.

TEST THE DRIVE WITH ANOTHER CD — Insert another CD to eliminate the possibility that the original CD is defective.

CHECK THE SPEAKERS AND SUBWOOFER — See "Sound and Speaker Problems" on page 53.

ENSURE THAT WINDOWS RECOGNIZES THE DRIVE — Click the Start button and click My Computer. If the CD drive is not listed, perform a full scan with your antivirus software to check for and remove viruses. Viruses can sometimes prevent Windows from recognizing the drive.

CLEAN THE DISC — See the *Tell Me How* help file for instructions on cleaning your CDs. To access help files, see page 36.

CHECK FOR INTERRUPT REQUEST CONFLICTS — See page 64.

Problems writing to a CD-RW drive

TURN OFF STANDBY MODE IN WINDOWS BEFORE WRITING TO A **CD-RW DISC** — For information on power conservation modes, see the *Tell* Me How help file or search for the keyword standby in Windows Help. To access help files, see page 36.

CLOSE OTHER PROGRAMS — The CD-RW drive must receive a steady stream of data when writing. If the stream is interrupted, an error occurs. Try closing all programs before writing to the CD-RW.



HINT: High-speed CD drive vibration is normal and may cause noise. This does not indicate a defect in the drive or the CD.



HINT: If you disable standby mode to write to a CD-RW drive, remember to reenable standby mode when you finish writing to the CD.



HINT: Because of different regions worldwide and different disc formats, not all DVD titles work in all DVD drives.

DVD drive problems

TEST THE DRIVE WITH ANOTHER DVD — Insert another DVD to eliminate the possibility that the original DVD is defective.

ENSURE THAT WINDOWS RECOGNIZES THE DRIVE — Double-click My **Computer** on the desktop. If the DVD drive is not listed, perform a full scan with your antivirus software to check for and remove viruses. Viruses can sometimes prevent Windows from recognizing the drive.

CLEAN THE DISC — See the *Tell Me How* help file for instructions on cleaning your DVDs. To access help files, see page 36.

CHECK FOR INTERRUPT REQUEST CONFLICTS — See page 64.

Hard drive problems

RUN CHECK DISK

- 1 Double-click My Computer on the desktop.
- 2 Right-click the drive letter (local disk) that you want to scan for errors, and then click Properties.
- 3 Click the **Tools** tab.
- 4 Under Error-checking, click Check Now.
- 5 Click Start.

CHECK FOR INTERRUPT REQUEST CONFLICTS — See page 64.

E-Mail, Modem, and Internet Problems

CHECK THE TELEPHONE LINE CONNECTION — Verify that the telephone line is connected to the jack on the modem. (The jack has either a green label or a connector-shaped icon next to it.) Ensure that you hear a click when you insert the telephone line connector into the modem.

CHECK THE TELEPHONE JACK — Disconnect the telephone line from the modem and connect it to a telephone. Listen for a dial tone.

CONNECT THE MODEM DIRECTLY TO THE TELEPHONE WALL JACK -

If you have other telephone devices sharing the line, such as an answering machine, fax machine, surge protector, or line splitter, then bypass them and use the telephone to connect the modem directly to the telephone wall jack.

USE A DIFFERENT TELEPHONE LINE — If you are using a line that is 3 m (10 ft) or more in length, try a shorter one.

RUN THE MODEM HELPER DIAGNOSTICS — Click the Start button, point to All Programs, and then click Modem Helper. Follow the instructions on the screen to identify and resolve modem problems. (Modem Helper is not available on all computers.)

VERIFY THAT THE MODEM IS COMMUNICATING WITH WINDOWS®

- 1 Click the Start button, and then click Control Panel.
- 2 Click Printers and Other Hardware.
- 3 Click Phone and Modem Options.
- 4 Click the **Modems** tab.
- 5 Click the COM port for your modem.
- 6 Click Properties, click the Diagnostics tab, and then click Query Modem to verify that the modem is communicating with Windows.

If all commands receive responses, the modem is operating properly.



HINT: Connect the modem to an analog telephone jack only. The modem does not operate while it is connected to a digital telephone network. TURN OFF CALL WAITING (CATCH-PHONE) — See your telephone directory for instructions on deactivating this feature. Then adjust the dial-up networking connection properties.

- 1 Click the Start button, and then click Control Panel.
- 2 Click Printers and Other Hardware, and then click Phone and Modem Options.
- 3 Click your connection type to highlight it.
- 4 Click the Dialing Rules tab, and then click Edit.
- 5 Click the To Disable Call Waiting box to place a checkmark in it.
- 6 Select the disable code from the drop-down menu (for example, *70).
- 7 Click Apply, and then click OK.

Ensure that you are connected to the Internet — With the Outlook Express e-mail program open, click File. If Work Offline has a checkmark next to it, click the checkmark to remove it and connect to the Internet.

Ensure that you have subscribed to an Internet service **PROVIDER** — Contact an Internet service provider to subscribe.

CONTACT YOUR INTERNET SERVICE PROVIDER — Contact your Internet service provider for assistance.

CHECK FOR INTERRUPT REQUEST CONFLICTS — See page 64.

Error Messages

A FILENAME CANNOT CONTAIN ANY OF THE FOLLOWING filenames.

A REQUIRED .DLL FILE WAS NOT FOUND — The program that you are trying to open is missing an essential file. To remove and then reinstall the program:

- 1 Click the Start button.
- 2 Click Control Panel.
- 3 Click Add or Remove Programs.
- 4 Select the program you want to remove.
- 5 Click the Change or Remove Program icon.
- 6 See the program documentation for installation instructions.

INSERT BOOTABLE MEDIA — The operating system is trying to boot to a nonbootable CD. Insert a bootable CD.

NOT ENOUGH MEMORY OR RESOURCES. CLOSE SOME PROGRAMS AND TRY AGAIN — You have too many programs open. Close all windows and open the program that you want to use. In some cases, you might have to restart your computer to restore computer resources. If so, try running the program that you want to use first.

OPERATING SYSTEM NOT FOUND — Contact Dell (see page 95).

THE FILE BEING COPIED IS TOO LARGE FOR THE DESTINATION DRIVE — The file that you are trying to copy is too large to fit on the disc. Try copying the file to a blank disk or using a larger-capacity disc.

x:\ IS NOT ACCESSIBLE. THE DEVICE IS NOT READY — Insert a disc into the drive and try again.

General Problems

A program stops responding

END THE PROGRAM

- 1 Press < Ctrl> < Shift> < Esc> simultaneously.
- 2 Click Applications.
- 3 Click the program that is no longer responding.
- 4 Click End Task.

TURN THE COMPUTER OFF — If your computer locks up and you are unable to get a response by pressing a key on your keyboard or moving your mouse, press and hold the power button for at least 8 to 10 seconds until the computer turns off. Then press the power button again to turn on the computer. You might lose data if you are unable to perform an operating system shutdown.

A program crashes repeatedly

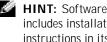
CHECK THE SOFTWARE DOCUMENTATION — Many software manufacturers maintain websites with information that may help you solve the problem. Ensure that you properly installed and configured the program. If necessary, uninstall and then reinstall the program.

A program is designed for an earlier Windows operating system

RUN THE PROGRAM COMPATIBILITY WIZARD

Windows XP provides a Program Compatibility Wizard that configures a program so it runs in an environment similar to non-Windows XP operating system environments.

- 1 Click the Start button, point to All Programs -> Accessories, and then click **Program Compatibility Wizard.**
- 2 In the welcome screen, click Next.
- 3 Follow the instructions on the screen.



HINT: Software usually includes installation instructions in its documentation or on a CD.

A solid blue screen appears

TURN THE COMPUTER OFF — If the computer does not respond to a keystroke or a proper shutdown, press the power button for at least 8 to 10 seconds until the computer turns off. Press the power button again to restart the computer. The chkdsk program automatically runs during the start-up process. Follow the instructions on the screen.

Other software problems

CHECK THE SOFTWARE DOCUMENTATION OR CONTACT THE SOFTWARE MANUFACTURER FOR TROUBLESHOOTING INFORMATION

BACK UP YOUR FILES IMMEDIATELY — If your computer has a CD-RW drive installed, see the drive's documentation for instructions.

ENSURE THAT YOU HAVE NOT MADE AN ERROR WHILE ENTERING **DATA** — See the program documentation to make sure that the values or characters you are entering are valid.

CHECK FOR VIRUSES — Use a virus-scanning program to check the hard drive or CDs.

RESTART THE COMPUTER — Save and close any open files, exit any open programs, and then shut down your computer through the Start menu instead of pressing the power button. Otherwise, you may lose data.

CHECK FOR COMPATIBILITY

- Ensure that the program is compatible with the operating system installed on your computer and that your computer meets the minimum hardware requirements needed to run the software. See the software documentation for information.
- If necessary, uninstall and then reinstall the program.

ENSURE THAT YOU PROPERLY INSTALLED AND CONFIGURED THE **PROGRAM** — See the software documentation for information. If necessary, uninstall and then reinstall the program.

Other technical problems

GO TO THE DELL SUPPORT WEBSITE — Go to support.dell.com for help with general usage, installation, and troubleshooting questions. The support website offers several different tools to help you, such as Dell Forum—a chat room where you can communicate with other Dell customers about their computers and gain access to technical support through e-mail. See "Dell Support website" on page 14 for more information about the website. See the Service and Support Guide that came with your computer for a description of the hardware and software support provided by Dell.

CALL DELL — If you cannot solve your problem using the Dell Support website or e-mail service, call Dell for technical assistance (see psge 93). See the Service and Support Guide that came with your computer for a description of the hardware and software support provided by Dell.

General hardware problems

If your computer exhibits one or more of the following symptoms, a device conflict may exist:

- Your computer locks up, particularly while using a specific device.
- A recently added device does not work.
- A sound card emits noise or demonstrates other problems.
- Unintelligible characters print from the printer.
- The mouse pointer does not move or "stutters" when it moves.
- Messages appear stating that the computer is not operating at maximum performance.
- Errors occur and programs crash for no apparent reason.
- Nothing displays on the monitor.

REMOVE ANY RECENTLY ADDED HARDWARE TO SEE IF IT RESOLVES THE CONFLICT — If removing the hardware resolves the conflict, see the hardware documentation for configuration and troubleshooting instructions. If the problem persists, contact the hardware manufacturer for technical assistance. CHECK YOUR OPERATING SYSTEM DOCUMENTATION FOR ADDITIONAL TROUBLESHOOTING INFORMATION

CHECK FOR INTERRUPT REQUEST CONFLICTS — See page 64.

IEEE 1394 Problems

CHECK THE IEEE 1394 DEVICE — Ensure that the IEEE 1394 device is properly inserted into the connector.

ENSURE THAT THE IEEE 1394 DEVICE IS RECOGNIZED BY WINDOWS®

- 1 Click the Start button.
- 2 Click Control Panel.
- 3 Click Printers and Other Hardware. If your IEEE 1394 device is listed, Windows recognizes the device.

IF YOU HAVE PROBLEMS WITH A DELL-PROVIDED IEEE 1394 DEVICE — Contact Dell (see page 95).

IF YOU HAVE PROBLEMS WITH AN IEEE 1394 DEVICE NOT PROVIDED BY DELL — Contact the IEEE 1394 device manufacturer.

Keyboard Problems

RESTART THE COMPUTER

- If the mouse is functioning, shut down the computer (see page 31). After the computer shuts down, press the power button to restart the computer.
- If the computer does not respond to a keystroke or the mouse, press the power button for at least 8 to 10 seconds until the computer turns off. Press the power button again to restart the computer.

CHECK THE KEYBOARD CABLE

- Shut down the computer (see page 31), reconnect the keyboard cable as shown on the setup diagram for your computer, and then restart the computer.
- Ensure that the keyboard cable is firmly connected to the computer.
- Check the cable connector for bent or broken pins and for damaged or frayed cables. Straighten bent pins.
- Remove keyboard extension cables and connect the keyboard directly to the computer.

TEST THE KEYBOARD — Connect a keyboard that works properly to the computer, and try using the keyboard. If the new keyboard works, the original keyboard is faulty.

CHECK FOR INTERRUPT REQUEST CONFLICTS — See page 64.

Mouse Problems

RESTART THE COMPUTER

- 1 Simultaneously press < Ctrl> < Esc> to display the **Start** menu.
- 2 Type u, press the keyboard arrow keys to highlight Shut down or Turn Off, and then press < Enter>.
- 3 After the computer turns off, press the power button to restart the computer.

IF YOU CONNECTED THE MOUSE BEFORE TURNING ON THE COMPUTER, RECONNECT THE MOUSE CABLE

- 1 Simultaneously press < Ctrl> < Esc> to display the **Start** menu.
- 2 Type u, press the keyboard arrow keys to highlight Shut down or Turn Off, and then press < Enter>.
- 3 After the computer turns off, reconnect the mouse cable as shown on the setup diagram for your computer.
- 4 Start the computer.

IF YOU CONNECTED THE MOUSE AFTER TURNING ON THE COMPUTER, REMOVE THE POWER CABLE, AND THEN RECONNECT THE MOUSE **CABLE** — If the mouse is connected after the power is turned on, the mouse appears to be nonfunctional. To make the mouse function properly:

- 1 While your computer is on, remove the power cable from the back of the computer.
- 2 Connect the mouse to the computer.
- 3 Reconnect the power cable.
- 4 Turn on your computer.

Pressing the power button does not clear the computer's settings and does not restore mouse functionality.

CHECK THE MOUSE CABLE

- Check the cable connector for bent or broken pins and for damaged or frayed cables. Straighten bent pins.
- Ensure that the cable is firmly connected to the computer.

TEST THE MOUSE — Connect a mouse that works properly to the computer, and try using the mouse. If the new mouse works, the original mouse was faulty.

CHECK THE MOUSE SETTINGS

- 1 Click the Start button, click Control Panel, and then click Printers and Other Hardware.
- 2 Click Mouse.
- 3 Try adjusting the settings.

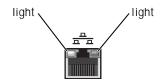
REINSTALL THE MOUSE DRIVER — See page 61.

CHECK FOR INTERRUPT REQUEST CONFLICTS — See page 64.

Network Problems

CHECK THE NETWORK CABLE CONNECTOR — Ensure that the network cable is connected as shown on page 25.

CHECK THE NETWORK LIGHTS ON THE BACK OF THE COMPUTER -No light indicates that there is no network communication. Try replacing the network cable.



RESTART THE COMPUTER AND TRY TO LOG ON TO THE NETWORK AGAIN

CHECK YOUR NETWORK SETTINGS — Contact your network administrator or the person who set up your network to verify that your network settings are correct and that the network is functioning.

CHECK FOR INTERRUPT REQUEST CONFLICTS — See page 64.

PC Card Problems

CHECK THE PC CARD — Ensure that the PC Card is properly inserted into the connector.

ENSURE THAT THE CARD IS RECOGNIZED BY WINDOWS® — Doubleclick the Unplug or Eject Hardware icon in the Windows taskbar. Ensure that the card is listed.

IF YOU HAVE PROBLEMS WITH A PC CARD NOT PROVIDED BY **DELL** — Contact the PC card manufacturer.

HINT: Your computer is designed for 16-bit PCMCIA cards only. Do not use a 32-bit CardBus.

Power Problems

CAUTION: Before you begin any of the procedures in this section, follow the safety instructions on page 7.

ADJUST THE POWER PROPERTIES — Your computer may be in standby or hibernate mode. For information on power conservation modes, see the *Tell Me How* help file, or search for the keyword *standby* or *hibernate* in Windows[®] Help. To access help files, see page 36.

IF THE POWER LIGHT IS BLINKING GREEN — The computer is in standby mode. Press a key on the keyboard or move the mouse to resume normal operation.



HINT: If the power light on the front of the computer is steady green (see page 70), the computer is operating normally.

IF THE POWER LIGHT IS OFF — The computer is either turned off or is not receiving power.

- Ensure that the power cable is firmly inserted into both the power connector on the back of the computer and the electrical outlet.
- If the computer is plugged into a power strip, ensure that the power strip is plugged into an electrical outlet and that the power strip is turned on.
- Ensure that the electrical outlet is working by testing it with another device, such as a lamp.
- Ensure that the voltage selection switch is set to match the AC power at your location (see page 9).
- Bypass power protection devices, power strips, and power extension cables to verify that the computer turns on.
- Swap the computer and monitor power cables to determine if the power cable is defective.
- Ensure that the microprocessor power cable is securely connected to the system board (see page 77).
- Ensure that the power supply cables are securely connected to the system board (see page 77).
- If the problem persists, contact Dell (see page 95).

IF THE POWER LIGHT IS STEADY AMBER — The computer is receiving electrical power, but an internal power problem might exist.

- Ensure that the power cable is firmly inserted into both the power connector on the back of the computer and the electrical outlet.
- Ensure that the voltage selection switch is set to match the AC power at your location (see page 9).
- Ensure that the microprocessor power cable is securely connected to the system board (see page 77).
- Ensure that the power supply cables are securely connected to the system board (see page 77).
- If the problem persists, contact Dell (see page 95).

IF THE POWER LIGHT IS BLINKING AMBER — A device might be malfunctioning or incorrectly installed.

- Remove and then reinstall the memory modules (see page 82).
- Remove and then reinstall any cards (see page 80).
- Remove and then reinstall the video card, if applicable (see page 82).
- If the problem persists, contact Dell (see page 95).

ELIMINATE INTERFERENCE — Electrical appliances on the same circuit or operating near the computer can cause interference. Other causes of interference are:

- Power extension cables
- · Keyboard and mouse extension cables
- Too many devices on a power strip
- Multiple power strips connected to the same electrical outlet

Printer Problems

CHECK THE PRINTER DOCUMENTATION — See the printer documentation for setup and troubleshooting information.

ENSURE THAT THE PRINTER IS TURNED ON — See the printer documentation for power button information.

VERIFY THE PRINTER CABLE CONNECTIONS

- See the printer documentation for cable connection information.
- Ensure that the printer cable is connected as described on page 21.
- Ensure that the printer cables are securely connected to the printer and the computer.

TEST THE ELECTRICAL OUTLET — Ensure that the electrical outlet is working by testing it with another device, such as a lamp.

VERIFY THAT THE PRINTER IS RECOGNIZED BY WINDOWS®

- 1 Click the **Start** button.
- 2 Click Control Panel.
- 3 Click Printers and Other Hardware.
- 4 Click View installed printers or fax printers. If the printer is listed, right-click the printer icon.
- 5 Click Properties, and then select the Ports tab. For a parallel printer, ensure that the **Print to the following port(s):** setting is **LPT1 (Printer Port)**. For a USB printer, ensure that the **Print to the following port(s):** setting is **USB**.

REINSTALL THE PRINTER DRIVER — See page 61.

CHECK FOR INTERRUPT REQUEST CONFLICTS — See page 64.



HINT: Dell does not cover the printer's warranty. If you need technical assistance for your printer, call the printer's manufacturer. See the printer documentation for the correct phone number.



HINT: Dell does not cover the scanner's warranty. If you need technical assistance for your scanner, call the scanner's manufacturer. See the scanner documentation for the correct phone number.

Scanner Problems

CHECK THE SCANNER DOCUMENTATION — See the scanner documentation for setup and troubleshooting information.

UNLOCK THE SCANNER — Ensure that your scanner is unlocked if it has a locking tab or button.

RESTART THE COMPUTER AND TRY THE SCANNER AGAIN

CHECK THE CABLE CONNECTIONS

- If your scanner has a power cable, ensure that the power cable is firmly connected to a working electrical outlet and that the scanner is turned on.
- Ensure that the scanner cable is firmly connected to the computer and to the scanner.

VERIFY THAT THE SCANNER IS RECOGNIZED BY MICROSOFT® WINDOWS®

- 1 Click the **Start** button.
- 2 Click Control Panel.
- 3 Click Printers and Other Hardware.
- 4 Click Scanners and Cameras. If your scanner is listed, Windows recognizes the scanner.

REINSTALL THE SCANNER DRIVER — See the scanner documentation for instructions.

Sound and Speaker Problems

CHECK THE SPEAKER CABLE CONNECTIONS — Ensure that the speakers are connected as shown on the setup diagram supplied with the speakers.

ENSURE THAT THE SUBWOOFER AND THE SPEAKERS ARE TURNED **ON** — See the setup diagram supplied with the speakers. If your speakers have volume controls, adjust the volume, bass, or treble to eliminate distortion.

ADJUST THE WINDOWS VOLUME CONTROL — Click or double-click the speaker icon in the lower-right corner of your screen. Ensure that the volume is turned up and that the sound is not muted.

DISCONNECT HEADPHONES FROM THE HEADPHONE CONNECTOR —

Sound from the speakers is automatically disabled when headphones are connected to the computer's front-panel headphone connector.

TEST THE ELECTRICAL OUTLET — Ensure that the electrical outlet is working by testing it with another device, such as a lamp.

ELIMINATE POSSIBLE INTERFERENCE — Turn off nearby fans, fluorescent lights, or halogen lamps to check for interference.

RUN THE SPEAKER DIAGNOSTICS — Some speaker systems have selfdiagnostics. See the speaker documentation for diagnostics instructions.

REINSTALL THE AUDIO (SOUND) DRIVER — See page 61.

CHECK FOR INTERRUPT REQUEST CONFLICTS — See page 64.



HINT: The volume control in some MP3 players overrides the Windows® volume setting. If you have been listening to MP3 songs, ensure that you did not turn the player volume down or off.

Video and Monitor Problems

If the screen is blank

HINT: See the monitor documentation for troubleshooting procedures.

CHECK THE MONITOR POWER LIGHT — If the power light is lit or blinking, the monitor has power. If the power light is blinking, press a key on the keyboard or move the mouse.

PRESS THE MONITOR POWER BUTTON — Firmly press the button to ensure that the monitor is turned on.

CHECK THE MONITOR CABLE CONNECTION — Check the connector for bent or broken pins. (It is normal for monitor cable connectors to have missing pins.) Ensure that the video cable is connected as shown on the setup diagram for your computer.

TEST THE ELECTRICAL OUTLET — Ensure that the electrical outlet is working by testing it with another device, such as a lamp.

SWAP THE POWER CABLES — Swap the computer and monitor power cables to determine if the power cable is defective.

TEST THE VIDEO EXTENSION CABLE (IF USED) — If you are using a video extension cable and removing the cable solves the problem, the cable is defective.

TEST ANOTHER MONITOR — If another monitor is available, connect it to the computer.

CHECK THE DIAGNOSTIC LIGHTS — See page 58.

If the screen is difficult to read

CHECK THE MONITOR SETTINGS — See the monitor documentation for instructions on adjusting the contrast and brightness, demagnetizing (degaussing) the monitor, and running the monitor self-test.

MOVE THE SUBWOOFER AWAY FROM THE MONITOR — If your speaker system includes a subwoofer, ensure that the subwoofer is at least 60 cm (2 ft) away from the monitor.

MOVE THE MONITOR AWAY FROM EXTERNAL POWER SOURCES -

Fans, fluorescent lights, halogen lamps, and other electrical devices can cause the screen image to appear "shaky." Turn off nearby devices to check for interference.

ROTATE THE MONITOR TO FACE A DIFFERENT DIRECTION — Eliminate sunlight glare, which can cause poor picture quality.

ADJUST THE WINDOWS® DISPLAY SETTINGS

- 1 Click the **Start** button, and then click **Control Panel**.
- 2 Click Appearance and Themes.
- 3 Click **Display**, and then click the **Settings** tab.
- 4 Try different settings for Screen resolution and Color quality.

RESTORE THE RECOMMENDED SETTINGS — Restore the original resolution and refresh rate settings. See the Tell Me How help file for instructions. To access help files, see page 36.

CHECK FOR INTERRUPT REQUEST CONFLICTS — See page 64.

SECTION 3

Advanced Troubleshooting

Diagnostic Lights

Drivers

Using System Restore

Resolving Software and Hardware Incompatibilities

Reinstalling Microsoft® Windows® XP

Diagnostic Lights

To help you troubleshoot a problem, your computer is equipped with four lights on the back panel labeled "A," "B," "C," and "D" (see page 72). These lights can be yellow or green. When the computer starts normally, the lights flash. After the computer starts, the lights remain green. If the computer malfunctions, the color and sequence of the lights identify the problem.



A CAUTION: Before you begin any of the procedures in this section, follow the safety instructions on page 9.

Diagnostic Code	Definition	Corrective Action
Y Y G G A B C D	Memory modules are detected, but a memory failure has occurred.	 If you have one memory module installed, reinstall it (see page 82) and restart the computer. If you have two or more memory modules installed, remove the modules, reinstall one module (see page 82), and then restart the computer. If the computer starts normally, reinstall an additional module. Continue until you have identified a faulty module or reinstalled all modules without error. If available, install properly working memory of the same type into your computer (see page 87). If the problem persists, contact Dell (see page 95).
G Y G Y A B C D	Memory modules are detected, but a memory configuration or compatibility error exists.	 Ensure that there are no special memory module/memory connector placement requirements (see page 82). Verify that the memory modules that you are installing are compatible with your computer (see page 87). If the problem persists, contact Dell (see page 95).

Diagnostic Code	Definition	Corrective Action
G Y Y Y A B C D	No memory modules are detected.	 Reinstall all memory modules (see page 82) and restart the computer. To eliminate the possibility of a faulty memory connector, remove all memory modules, install one memory module (see page 82), and then restart the computer. If the computer starts normally, move the memory module to a different connector and restart the computer. Continue until you have identified a faulty connector or reinstalled all modules without error. If the problem persists, contact Dell (see page 95).
Y G Y Y A B C D	A PCI bus failure has occurred.	 Determine if a conflict exists by removing a card and then restarting the computer. If the problem persists, reinstall the card that you removed, remove a different card (see page 80), and then restart the computer. Repeat this process for each card. If the computer starts normally, troubleshoot the last card removed from the computer for resource conflicts (see "Resolving Software and Hardware Incompatibilities" on page 64). If the problem persists, contact Dell (see page 95).
G G G Y A B C D	Other failure has occurred.	 Ensure that the cables are properly connected from the hard drive, CD drive, and DVD drive to the system board (see page 77). If the problem persists, contact Dell (see page 95).

Drivers

What Is a Driver?

A driver is a program that controls a device such as a printer, mouse, or keyboard. All devices require a driver program.

A driver acts like a translator between the device and the programs that use the device. Each device has its own set of specialized commands that only its driver recognizes.

Many drivers such as the keyboard driver come with your Microsoft® Windows[®] operating system. You may need to install drivers if you:

- Upgrade your operating system
- Reinstall your operating system
- Connect or install a new device

If you experience a problem with any device, perform the steps in the following sections to identify whether the driver is the source of your problem and if necessary, to update the driver.

Identifying Drivers

- 1 Click the **Start** button and click **Control Panel**.
- In the Control Panel window, under Pick a Category, click Performance and Maintenance.
- In the Performance and Maintenance window, click System.
- In the System Properties screen, click the Hardware tab.
- Click **Device Manager**
- In the **Device Manager** window, scroll down the list to see if any device has an exclamation point (a yellow circle with a [!]) on the device icon.

If an exclamation point is next to the device name, you may need to reinstall the driver or install a new driver.

Reinstalling Drivers

NOTICE: The Dell Support website and your Dell Dimension ResourceCD provide approved drivers for Dell™ computers. If you install drivers obtained from other sources, your computer might not work correctly.

Using Windows XP Device Driver Rollback

If a problem occurs on your computer after you install or update a driver, use Windows XP Device Driver Rollback to replace the driver with the previously installed version.

To use Device Driver Rollback:

- 1 Click the **Start** button and click **Control Panel**.
- 2 In the Control Panel window, under Pick a Category, click Performance and Maintenance.
- 3 In the Performance and Maintenance window, click System.
- 4 In the **System Properties** screen, click the **Hardware** tab.
- 5 Click Device Manager.
- 6 In the Device Manager window, right-click the device for which the new driver was installed and click Properties.
- 7 Click the **Drivers** tab.
- Click Roll Back Driver.

If Device Driver Rollback does not resolve the problem, then use System Restore (see page 62) to return your computer to the operating state that existed before you installed the new driver.



HINT: The ResourceCD displays drivers only for hardware that came on your computer. If you installed additional hardware, those drivers might not be displayed by the ResourceCD. If those drivers are not displayed, exit the ResourceCD program. For drivers information, see the documentation that came with that product.

Using the Dell Dimension ResourceCD

If using Device Driver Rollback or System Restore (see page 62) does not resolve the problem, then reinstall the driver from the *Dell Dimension* ResourceCD:

- 1 With the Windows desktop displayed, insert the ResourceCD into the CD or DVD drive.
 - If this is your first time to use the ResourceCD, go to step 2. If not, go to step 5.
- 2 When the ResourceCD installation program starts, follow the prompts on the screen.
- 3 When the InstallShield Wizard Complete window appears, remove the ResourceCD and click **Finish** to restart the computer.
- When you see the Windows desktop, reinsert the ResourceCD into the CD or DVD drive.
- 5 At the Welcome Dell System Owner screen, click Next.

A message stating that the ResourceCD is detecting hardware in your computer appears.

The drivers that are used by your computer are automatically displayed in the My Drivers—The ResourceCD has identified these components in your system window.

6 Click the driver that you want to reinstall and follow the instructions on the screen.

If a particular driver is not listed, then that driver is not required by your operating system.

Using System Restore

The Microsoft® Windows® XP operating system provides System Restore to allow you to return your computer to an earlier operating state (without affecting data files) if changes to the hardware, software, or other system settings have left the computer in an undesirable operating state. See Windows Help for information on using System Restore. To access Windows Help, see page 36.



NOTICE: Make regular backups of your data files. System Restore does not monitor your data files or recover them.

Creating a Restore Point

- 1 Click the **Start** button and click **Help and Support**.
- 2 Click System Restore.
- **3** Follow the instructions on the screen.

Restoring the Computer to an Earlier Operating State

If problems occur after installing a device driver, first try using Device Driver Rollback (see page 13) to resolve the problem. If that is unsuccessful, then use System Restore.

- **NOTICE:** Before you restore the computer to an earlier operating state, save and close all open files and close all open programs. Do not alter, open, or delete any files or programs until the system restoration is complete.
- 1 Click the **Start** button, point to **All Programs**—> **Accessories**—> System Tools, and then click System Restore.
- 2 Ensure that **Restore my computer to an earlier time** is selected and click Next.
- 3 Click a calendar date to which you want to restore your computer.
 - The **Select a Restore Point** screen provides a calendar that allows you to see and select restore points. All calendar dates with available restore points appear in bold.
- 4 Select a restore point and click Next.
 - If a calendar date has only one restore point, then that restore point is automatically selected. If two or more restore points are available, click the restore point that you prefer.
- 5 Click Next.
 - The **Restoration Complete** screen appears after System Restore finishes collecting data and then the computer restarts.
- 6 After the computer restarts, click **OK**.
 - To change the restore point, you can either repeat the steps using a different restore point, or you can undo the restoration.

Undoing the Last System Restore

- NOTICE: Before you undo the last system restore, save and close all open files and close all open programs. Do not alter, open, or delete any files or programs until the system restoration is complete.
- 1 Click the **Start** button, point to **All Programs**—> Accessories—> System Tools, and then click System Restore.
- 2 Select **Undo my last restoration** and click **Next**.
- 3 Click Next.

The **System Restore** screen appears and the computer restarts.

4 After the computer restarts, click **OK**.

Enabling System Restore

If you reinstall Windows XP with less than 200 MB of free hard-disk space available, System Restore is automatically disabled. To see if System Restore is enabled:

- 1 Click the **Start** button and click **Control Panel**.
- Click Performance and Maintenance.
- 3 Click System.
- Click the **System Restore** tab.
- Make sure that **Turn off System Restore** is unchecked.

If a particular driver is not listed, then that driver is not required by your operating system.

Resolving Software and Hardware Incompatibilities

Microsoft® Windows® XP IRQ conflicts occur if a device either is not detected during the operating system setup or is detected but incorrectly configured.

To check for conflicts on a computer running Windows XP:

- 1 Click the **Start** button and click **Control Panel**.
- 2 Click Performance and Maintenance and click System.

- 3 Click the Hardware tab and click Device Manager.
- 4 In the **Device Manager** list, check for conflicts with the other devices.
 - Conflicts are indicated by a yellow exclamation point (!) beside the conflicting device or a red x if the device has been disabled.
- 5 Double-click any conflict to display the **Properties** window. If an IRQ conflict exists, the **Device** status area in the **Properties** window reports the cards or devices that share the device's IRQ.
- **6** Resolve conflicts by reconfiguring the devices or removing the devices from the **Device Manager**.

To use the Windows XP Hardware Troubleshooter:

- 1 Click the **Start** button and click **Help and Support**.
- 2 Type hardware troubleshooter in the Search field and click the arrow to start the search.
- 3 Click Hardware Troubleshooter in the Search Results list.
- In the Hardware Troubleshooter list, click I need to resolve a hardware conflict on my computer, and click Next.

Reinstalling Microsoft® Windows® XP

Before You Reinstall

If you are reinstalling the Windows XP operating system to correct a problem with a newly installed driver, use Windows XP Device Driver Rollback (see page 61) to replace the device driver with the previously installed version.

If Device Driver Rollback does not resolve the problem, then use System Restore (see page 62) to return your operating system to the operating state it was in before you installed the new device driver.

Reinstalling Windows XP

To reinstall Windows XP, perform the steps in the following sections in the order in which they are listed.

The reinstallation process can take 1 to 2 hours to complete. After the reinstallation is complete, you need to reinstall the device drivers, virus protection program, and other software.

- **NOTICE**: The *Operating System* CD provides options for reinstalling Windows XP. The options can overwrite files and possibly affect programs installed on your hard drive. Therefore, do not reinstall Windows XP unless instructed to do so by a Dell technical support representative.
- **NOTICE:** To prevent conflicts with Windows XP, disable any virus protection software installed on your computer before you reinstall Windows XP. See the documentation that came with the software for instructions.

Preparing to Boot From the Operating System CD

- 1 Insert the *Operating System* CD into the CD or DVD drive.
- 2 Exit any program or utility that might run after you insert the CD.
- 3 Shut down (see page 31) and restart the computer.
- 4 Press < F12> immediately after the DELL[™] logo appears. If the operating system logo appears, wait until you see the Windows desktop, and then shut down the computer and try again.
- 5 Use the arrow keys to select CD-ROM, and then press < Enter>.
- 6 When the Press any key to boot from CD message appears on the screen, press any key.

Starting Windows XP Setup

- 1 When the **Windows XP Setup** screen appears, press < Enter> to select To set up Windows now.
- 2 Read the information in the Microsoft Windows Licensing **Agreement** screen, and then press < F8> on your keyboard to accept the license agreement.
- 3 If your computer already has Windows XP installed and you want to recover your current Windows XP data, type r to select the repair option, and then remove the CD from the drive.
- 4 If you want to install a new copy of Windows XP, press < Esc> to select the fresh copy option.

Press < Enter> to select the highlighted partition (recommended), and then follow the instructions on the screen.

The **Windows XP Setup** screen appears, and the operating system begins to copy files and install the devices. The computer restarts multiple times.

Completing the GUI Setup

- **NOTICE:** When the computer restarts, the following message appears: Press any key to boot from the CD. Do not press any key when this message appears.
- 1 When the **Regional and Language Options** screen appears, select the settings for your location and click Next.
- 2 Enter your name and organization (optional) in the Personalize Your Software screen and click Next.
- If you are reinstalling Windows XP Home Edition, at the What's your computer's name window, enter a name for your computer (or accept the name provided) and click Next.
 - If you are reinstalling Windows XP Professional, at the Computer Name and Administrator Password window, enter a name for your computer (or accept the one provided) and a password, and then click Next.
- If you have a modem installed, enter the requested information and click Next when the Modem Dialing Information screen appears.
- Enter the date, time, and time zone in the **Date and Time Settings** window and click Next.
- If your computer has a network adapter, click Typical in the Networking **Settings** screen and click **Next**.
 - If your computer does not have a network adapter, this option does not appear.
- If you are reinstalling Windows XP Professional, you may be prompted to provide further network information regarding your network configuration, such as the domain name or workgroup name. If you are unsure of your settings, accept the default selections.
 - Windows XP installs the operating system components, configures the computer, and then restarts the computer.



HINT: The time required to complete the setup depends on the size of the hard drive and the speed of your computer.

Completing the Operating System Setup

- **NOTICE:** When the computer restarts, the following message appears: Press any key to boot from the CD. Do not press any key when this message appears.
- 1 When the Welcome to Microsoft screen appears, click Next.
- 2 When the How will this computer connect to the Internet? message appears, click Skip.
- 3 When the Ready to register with Microsoft? screen appears, select No, not at this time and click Next.
- 4 When the Who will use this computer? screen appears, you can enter up to five users.
- 5 Click Next.
- Click **Finish** to complete the setup and remove the CD from the drive.

Reinstalling Drivers and Software

- 1 Reinstall the appropriate drivers (see page 61).
- Reinstall your virus protection software. See the documentation that came with the software for instructions.
- 3 Reinstall your other software programs. See the documentation that came with the software for instructions.

SECTION 4

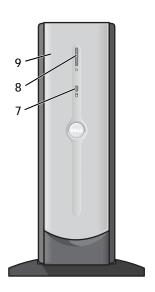
Adding Parts

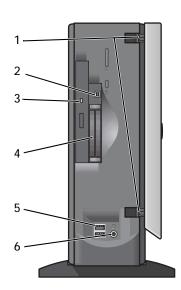
Front and Back View of the Computer
Reattaching the Front Door
Opening the Computer Cover
Looking Inside Your Computer
Adding PC Cards (Optional)
Adding Other Cards
Adding Memory
Closing the Computer Cover

Front and Back View of the Computer

Front View

HINT: The front door does not close when you are using certain PC Cards or the IEEE 1394, USB, or headphone connector(s).

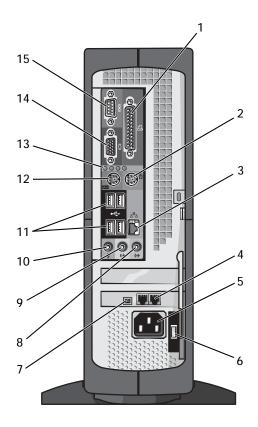




1	breakaway hinges (2)	To prevent damage to your computer, the front door is designed to "break away" if it is opened too far. To reattach the front door, see page 73.
2	IEEE 1394 connector	Use the IEEE 1394 connector (available on computers with an IEEE 1394 option) for high-speed data transfer between your computer and a device, such as a digital camera.
3	CD or DVD drive light	The drive light is on when the computer reads data from or writes data to the CD or DVD drive.
4	PC Card connectors(2)	Connect a PC Card into any of the PC Card connectors (available on computers with a PC Card option). Use the PC Card connectors for 16-bit PCMCIA cards only. Do not use a 32-bit CardBus.

5	USB 2.0 connectors (2)	For quick connections, Dell recommends using the front USB connectors for USB devices such as digital cameras, gaming controllers, and scanners. Use the back-panel USB connectors for USB devices that are seldom disconnected, such as USB mouse and keyboard devices.	
		NOTICE: This computer supports the use of a USB hub. However, do not connect two or more USB hubs to a USB connector. Doing so may cause the computer to unexpectedly restart.	
		HINT: If you attach a USB device that was not included in your original computer order, you may need to install a specific driver to make the device work. Check the documentation that came with the device or contact the USB device manufacturer for more information.	
6	headphone connector	Use the headphone connector to attach headphones and most speakers for listening to all sounds from your computer, including your CD player and computer sounds such as beeps.	
7	hard-drive light	The hard-drive light is on when the computer reads data from or writes data to the hard drive. The light might also be on when devices such as your CD player are operating.	
8	power button	Press this button to turn on the computer.	
		NOTICE: To avoid losing data, do not use the power button to turn off the computer. Instead, perform a Windows shutdown.	
9	front door	Open the door to use the front-panel connectors.	
		HINT: The front door is removable; if you remove it or accidentally knock it off its hinges, it snaps back in place. For instructions on how to reattach the door, see page 73.	

Back View



1	parallel connector	Connect a parallel device, such as a printer, to the parallel connector. If you have a USB printer, plug it into a USB connector.	
2	mouse connector	Plug a standard mouse into the green mouse connector. Turn off the computer and any attached devices before you connect a mouse to the computer. If you have a USB mouse, plug it into a USB connector.	
3	network connector	Connect your computer to a network using this connector.	
4	modem connectors (2)	Use the modem connector to connect your computer to the Internet.	

5	power connector	The connection for the power cable.	
6	voltage selection switch (may not be available on all computers)	Your computer is equipped with either an auto-sensing voltage selector or a manual voltage selection switch. See page 9 for more information.	
7	IEEE 1394 connector	Use the IEEE 1394 connector (available on computers with an IEEE 1394 option) for high-speed data transfer between your computer and a device, such as a digital camera.	
8	line-in connector	Use the blue line-in connector to attach a record/playback device such as a cassette player, CD player, or VCR.	
9	line-out connector	Use the green line-out connector to attach headphones and most speakers with integrated amplifiers.	
10	microphone connector	Use the pink microphone connector to attach a personal computer microphone for voice or musical input into a sound or telephony program.	
11	USB 2.0 connectors (4)	For quick connections, Dell recommends using the front USB connectors for USB devices such as digital cameras, gaming controllers, and scanners. Use the back-panel USB connectors for USB devices that are seldom disconnected, such as USB mouse and keyboard devices.	
		NOTICE: This computer supports the use of a USB hub. However, do not connect two or more USB hubs to a USB connector. Doing so may cause the computer to unexpectedly restart.	
		HINT: If you attach a USB device that was not included in your original computer order, you may need to install a specific driver to make the device work. Check the documentation that came with the device or contact the USB device manufacturer for more information.	
12	keyboard connector	If you have a standard keyboard, plug it into the purple keyboard connector. If you have a USB keyboard, plug it into a USB connector.	
13	diagnostic lights (4)	Use the lights to help you troubleshoot a computer problem based on the diagnostic code. For more information, see page 58.	
14	video connector	Plug the cable from your monitor into the blue connector.	
15	serial connector	Connect a serial device to the serial connector.	

Reattaching the Front Door

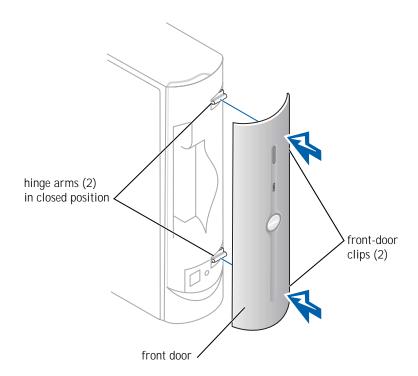
To prevent damage to your computer, the front door is designed to "break away" if it is opened too far. To reattach the front door:

- 1 Shut down the computer (see page 31).
- 2 Disconnect the computer's power cable from the electrical outlet.



HINT: The top hinge arm clicks when it is moved to the closed position—the bottom hinge arm does not.

- Move the hinge arms to the closed position.
- Align the two clips on the inside of the front door with the two hinge
- 5 Press inward on the front door until it clips to both hinge arms.



Opening the Computer Cover



A CAUTION: Before you begin any of the procedures in this section, follow the safety instructions on page 7.



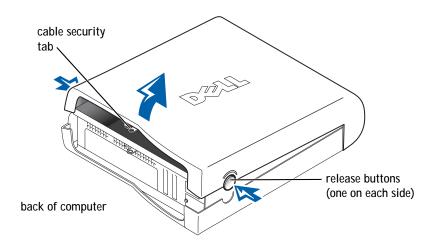
CAUTION: To guard against electrical shock, always unplug your computer from the electrical outlet before opening the cover.

1 Shut down the computer (see page 31).



NOTICE: To disconnect a network cable, first unplug the cable from your computer and then unplug it from the network wall jack.

- 2 Turn off any attached devices and disconnect them from their electrical outlets.
- 3 Disconnect the computer power cable from the wall outlet, and then press the power button to ground the system board.
- 4 Remove the computer stand (see page 19).
- NOTICE: Ensure that there is sufficient space to support the open cover—at least 30 cm (1 ft) of desk top space.
- 5 Press the two release buttons until the cover is free to swing up.
- **NOTICE:** Open the cover slowly to ensure that you do not damage any cables.
- 6 Raise the back of the cover, and pivot it toward the front of the computer.



HINT: Make sure that the computer is oriented with the cable security tab on top, as shown in the illustration.

Looking Inside Your Computer

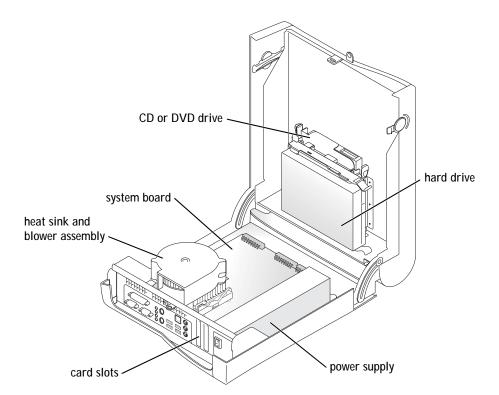
CAUTION: Before you begin any of the procedures in this section, follow the safety instructions on page 7.



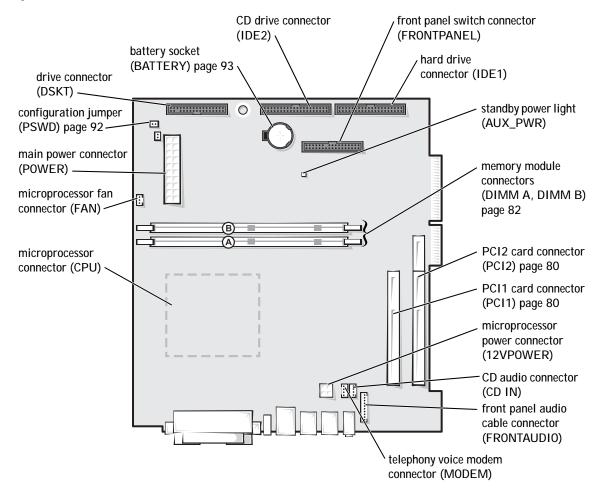
A CAUTION: To guard against electrical shock, always unplug your computer from the electrical outlet before opening the cover.



NOTICE: Be careful when opening the computer cover to ensure that you do not inadvertently disconnect cables from the system board.



System Board



back of computer

Adding PC Cards (Optional)

You can add PC Cards to computers with integrated PC Card connectors.

PC Card Types

The PC Card slot has two connectors that support four combinations of cards:

- A single Type I or Type II card (using either the upper or lower PC Card connector)
- One Type I card and one Type II card (using either connector)
- Two Type I cards or two Type II cards
- One Type III card (using the lower connector)

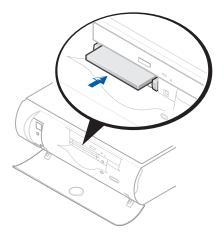
Both PC Card connectors support extended PC Cards.

Installing a PC Card

PC Cards are generally marked with a symbol (such as a triangle or an arrow) to indicate which end to insert into the slot, and the cards are keyed to prevent incorrect insertion. If card orientation is not clear, see the documentation supplied with the card.

- Hold the card with its orientation symbol pointing into the slot and the top side of the card facing up.
- Insert the card into the slot, and press firmly until the card is completely seated in the internal PC Card connector.

- HINT: "Type" of card refers to its thickness, not its functionality.
- HINT: Your computer is designed for either 5-V or 3.3-V 16-bit PCMCIA cards. Some cards are keyed for 3.3 V only but will not fit into the PC slot. Cards are keyed to prevent incorrect insertion into the slot. If card orientation is not clear, see the documentation supplied with the card.
- HINT: The length of some PC Cards may prevent the front-panel door from closing.
- HINT: A PC Card is not a bootable device.

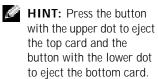


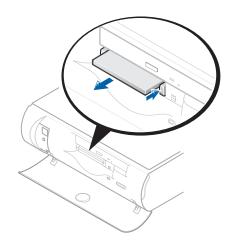
- 3 If you encounter too much resistance when you insert the card, do not force the card. Check the card's orientation, and try again.
- 4 Your computer recognizes most PC Cards and automatically loads the appropriate device driver for use with the computer. If the configuration program tells you to load the manufacturer's drivers, install them with the CD that accompanied the PC Card.

Removing a PC Card

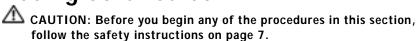
- **NOTICE:** Use the PC Card configuration utility on the taskbar to select and stop a card from functioning before you remove it from the computer. If you do not remove the card in the configuration utility, you could lose data from open programs.
- NOTICE: Do not attempt to eject a card by pulling its dongle, if one is attached.

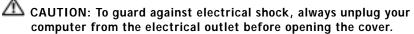
Press the eject button, and gently remove the card.





Adding Other Cards





NOTICE: You must use low-profile cards for your computer. A full-size card can cause damage to the computer or the card.

The computer's card connectors allow you to install different types of devices such as modems and network adapters.

- Shut down the computer (see page 31).
- NOTICE: To disconnect a network cable, first unplug the cable from your computer and then unplug it from the network wall jack.
 - Turn off any attached devices and disconnect them from their electrical outlets.
- Disconnect the computer power cable from the wall outlet, and then press the power button to ground the system board.
- Remove the computer stand (see page 19).
- Open the computer cover (see page 74).
- Press the lever on the retention arm and raise the retention arm.

- 7 If you are installing a new card, remove the filler bracket to create an empty card-slot opening.
 - If you are replacing a card that is already installed in the computer, remove the card. If necessary, disconnect any cables connected to the card. Grasp the card by its top corners, and ease it out of its connector.
- 8 Prepare the card for installation.
 - See the documentation that came with the card for information on configuring the card, making internal connections, or otherwise customizing it for your computer.
- ⚠ CAUTION: Some network adapters automatically start the computer when they are connected to a network. To guard against electrical shock, be sure to unplug your computer from its electrical outlet before installing any cards.
 - 9 Insert the card into the card connector.
- 10 Lower the retention arm and press it into place, securing the card(s) in the computer.
- 11 Reconnect any cables that you previously removed.
- 12 Connect any cables that should be attached to the card.
 - See the documentation for the card for information about the card's cable connections.
- NOTICE: Do not route card cables over or behind the cards. Cables routed over the cards can prevent the computer cover from closing properly or cause damage to the equipment.
- 13 Close the computer cover (see page 84).
- 14 Attach the computer stand (see page 19).
- NOTICE: To connect a network cable, first plug the cable into the network wall jack and then plug it into the computer.
- 15 Connect your computer and devices to electrical outlets, and turn them on.
- 16 Install any drivers required for the card as described in the card documentation.



Adding Memory



 $oldsymbol{\Delta}$ CAUTION: Before you begin any of the procedures in this section, follow the safety instructions on page 7.



CAUTION: To guard against electrical shock, always unplug your computer from the electrical outlet before opening the cover.

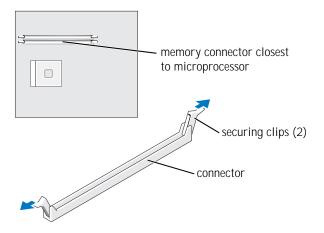
You can increase your computer memory by installing memory modules on the system board. For information on the type of memory supported by your computer, look under "Memory" in "Technical Specifications" on page 86.

1 Shut down the computer (see page 31).

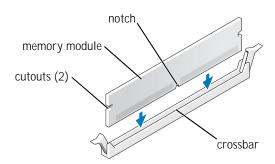


NOTICE: To disconnect a network cable, first unplug the cable from your computer and then unplug it from the network wall jack.

- Turn off any attached devices and disconnect them from their electrical outlets.
- Disconnect the computer power cable from the wall outlet, and then press the power button to ground the system board.
- Remove the computer stand (see page 19).
- Open the computer cover (see page 74).
- If necessary, remove a memory module:
 - Press out the securing clip at each end of the memory module connector.
 - Grasp the module and pull up. If the module is difficult to remove, gently ease the module back and forth to remove it from the connector.
- 7 To insert a module, press out the securing clip at each end of the memory module connector.

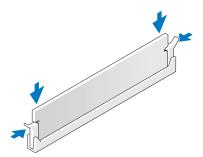


8 Align the notch on the bottom of the module with the crossbar in the connector.



- NOTICE: To avoid damage to the memory module, press the module straight down into the connector while you apply equal force to each end of the module.
- 9 Insert the module into the connector until the module snaps into position.

If you insert the module correctly, the securing clips snap into the cutouts at each end of the module.



- 10 Close the computer cover (see page 84).
- 11 Attach the computer stand (see page 19).
- NOTICE: To connect a network cable, first plug the cable into the network wall jack and then plug it into the computer.
- 12 Connect your computer and devices to electrical outlets, and turn them on.
- 13 Right-click the My Computer icon and then click Properties.
- Click the **General** tab.
- 15 To verify that the memory is installed correctly, check the amount of memory (RAM) listed.

Closing the Computer Cover

- 1 Ensure that all cables are connected, and fold cables out of the way. Make sure that cables are not routed over the drive cage—they will prevent the cover from closing properly.
- 2 Ensure that no tools or extra parts are left inside the computer.
- 3 Pivot the cover down and ensure that the release buttons click into place.
- 4 Attach the computer stand (see page 19).
- NOTICE: To connect a network cable, first plug the cable into the network wall jack and then plug it into the computer.
- Connect your computer and devices to electrical outlets, and turn them on.

SECTION 5

Appendix

Specifications
Standard Settings
Clearing Forgotten Passwords
Replacing the Battery
Dell Technical Support Policy
Contacting Dell
Regulatory Information

Specifications

Microprocessor			
Microprocessor type	Intel [®] Celeron [®]		
L1 cache	8-KB		
L2 cache	128-KB		
System Information			
System chip set	Intel 845G		
DMA channels	four		
Interrupt levels	24 APIC mode		
System BIOS chip	4 Mb (512 KB)		
System clock	400-MHz data rate		
Expansion Bus			
Bus types	PCI		
Bus speed	33 MHz		
PCI connectors	one low profile		
PCI connector size	120 pins		
PCI connector data width (maximum)	32 bits		

Memory		
Architecture	DDR SDRAM	
Memory connectors	two	
Memory capacities	128-, 256-, and 512-MB non-ECC DDR SDRAM	
Minimum memory	128 MB NOTE: Between 32 and 64 MB of system memory may be allocated to support graphics, depending on system memory size and other factors.	
Maximum memory	512 MB	
Memory type	266-MHz DDR SDRAM (non-ECC)	
Drives		
Externally accessible	one slimline optical bay	
Internally accessible	one bay for 1-inch-high IDE hard drive	
Available devices	ATA-100 Ultra DMA hard drive, CD drive, DVD drive, and CD-RW drive	
Ports and Connectors		
Externally accessible:		
Serial	One 9-pin connector; 16550C-compatible	
Parallel	25-hole connector (bidirectional)	
IEEE 1394	Two 4-hole, unpowered connectors	
Video	15-hole connector	
Keyboard	6-pin mini-DIN connector or USB connector	
Mouse	6-pin mini-DIN connector or USB connector	
USB	two front-panel and four back-panel USB 2.0-compliant connectors (compatible with 1.1)	
Headphone	front-panel miniature connector	
Audio	three miniature connectors for line-in, line-out, and microphone	

Ports and Connectors (contin	nued)		
Network	one 10/100 Ethernet network connector		
Internally accessible:			
Primary IDE channel	40-pin connector on PCI local bus		
Secondary IDE channel	40-pin connector on PCI local bus		
Audio			
Audio controller	ADI 1981A		
Controls and Lights			
Power control	push button		
Power light	green light on power button—blinking green in sleep state; solid green for power-on state		
Hard-drive access light	green		
Diagnostic code lights	four bicolor (amber and green) located on back panel		
Power			
DC power supply:			
Wattage	160 W		
Heat dissipation	500 BTU (fully-loaded computer without monitor)		
Voltage (see page 9 for important voltage setting information)	90 to 135 V at 50/60 Hz; 180 to 265 V at 50/60 Hz; 100 V at 50/60 Hz for Japanese computers		
Backup battery	3-V CR2032 coin cell		

Physical			
Height x Width x Depth	32.3 x 9.5 x 35.6 cm (12.7 x 3.8 x 14.0 inches)		
(With stand)	33.8 x 18.0 x 35.6 cm (13.3 x 7.1 x 14.0 inches)		
Weight	7.43 kg (16.4 lbs)		
Environmental			
Temperature:			
Operating	10° to 35°C (50° to 95°F)		
	NOTE: At 35°C (95°F), the maximum operating altitude is 914 m (3000 ft).		
Storage	-40° to 65° C (-40° to 149° F)		
Relative humidity	20% to 80% (noncondensing)		
Maximum vibration:			
Operating	0.25 G at 3 to 200 Hz at 1/2 octave/min		
Storage	0.5 G at 3 to 200 Hz at 1/2 octave/min		
Maximum shock:			
Operating	bottom half-sine pulse with a change in velocity of 50.8 cm/sec (20 inches/sec)		
Storage	23-G faired-square wave with a velocity change of 508 cm/sec (200 inches/sec)		
Altitude:			
Operating	-15.2 to 3048 m (-50 to 10,000 ft)		
Storage	-15.2 to 10,670 m (-50 to 35,000 ft)		

Standard Settings

The system setup program contains the standard settings for your computer.



NOTICE: Unless you are an expert computer user, don't change the settings for this program. Certain changes might make your computer work incorrectly.

See the following figure for an example of the main program screen.

Intel® Celeron® I Sevel 2 Cache: HO	rocessor: xxx GHz x KB Integrated	BIOS Termion: x Service Tag: x	00000E
Diskette Drive A	±		fot Installed
Primary Drive 1: Secondary Drive	0; 1;		D-ROM Reader
Boot Sequence			inter>
	on		
PCI IRQ Assignme IRQ Reservations Power Management			(Inter) (Inter) (Inter)
	Errors		
Remote Wake Up .	у) f f
System Event Log			(Inter>
Asset Tay			KNNN
√ to select	SPACE, +, - to chang	re ISC to exit	F1 - Help

Viewing Settings

1 Turn on (or restart) your computer.

down your computer and try again.

2 When the blue DELLTM logo appears, press < F2> immediately. If you wait too long and the operating system logo appears, continue to wait until you see the Microsoft® Windows® desktop. Then shut

System Setup Program Screens

The system setup program screens display the current configuration information for your computer. Information on the screen is divided into five areas:

- Title The area at the top of all system setup screens that displays your computer's model number.
- Computer data Two boxes below the title that display the system processor, L2 cache, service tag, and the version number of the BIOS.
- Options A scrollable box listing options that define the configuration of your computer (including installed hardware, power conservation, and security features).
 - Fields to the right of the listed options contain settings or values. The settings and values that you can change are brighter on the screen. All other settings and values are set by the computer and cannot be changed. When <Enter> appears to the right of an option, press < Enter> to access a pop-up menu of additional options.
- Key functions A line of boxes across the bottom of all system setup screens that lists keys and their functions within the system setup program.
- Help Press < F1 > for information on the option that is selected(highlighted).

Clearing Forgotten Passwords

A CAUTION: Before you begin any of the procedures in this section, follow the safety instructions on page 7.

If you forget your user or setup password, you cannot operate your computer or change settings in the system setup program until you clear the forgotten password(s).

- **NOTICE:** This process erases both the system and setup passwords.
- Shut down the computer (see page 31).
- Turn off any attached devices and disconnect them from their electrical outlets.
- NOTICE: To disconnect a network cable, first unplug the cable from your computer and then unplug it from the network wall jack.
- 3 Disconnect the computer power cable from the wall outlet, and then press the power button to ground the system board.
- Remove the computer stand (see page 19).
- Open the computer cover (see page 74).
- 6 Locate jumper PSWD on the system board (see page 77) and remove the jumper plug.
- Close the computer cover (see page 84), plug your computer into an electrical outlet, and turn on the computer.
 - The existing password(s) will be erased.
- 8 Shut down the computer (see page 31).
- NOTICE: To disconnect a network cable, first unplug the cable from your computer and then unplug it from the network wall jack.
 - Turn off any attached devices and disconnect them from their electrical outlets.
- 10 Disconnect the computer power cable from the wall outlet, and then press the power button to ground the system board.
- Open the computer cover (see page 74).
- 12 Reconnect the jumper plug to jumper PSWD (see page 77).
- Close the computer cover (see page 84).

- 14 Attach the computer stand (see page 19).
- NOTICE: To connect a network cable, first plug the cable into the network wall jack and then plug it into the computer.
- 15 Connect your computer and devices to electrical outlets, and turn them on.

Turning on your computer with the PSWD jumper installed reenables the password feature.

Replacing the Battery

A CAUTION: Before you begin any of the procedures in this section, follow the safety instructions on page 7.

A coin-cell battery maintains computer configuration, date, and time information. The battery can last several years.

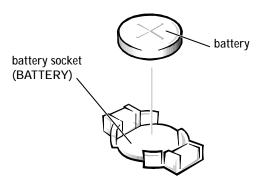
If you have to repeatedly reset time and date information after turning on the computer, replace the battery.



CAUTION: A new battery can explode if it is incorrectly installed. Replace the 3-V CR2032 battery only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

- 1 Record all the screens in the system setup program (see page 90) so that you can restore the correct settings in step 9.
- 2 Remove the computer stand (see page 19).
- 3 Open the computer cover (see page 74).
- 4 Locate the battery socket BATTERY (see page 77).
- 5 Remove the battery by carefully prying it out of its socket with your fingers or with a blunt, nonconducting object such as a plastic screwdriver.

NOTICE: To avoid damage to the system board while you pry the battery loose, be sure to insert the plastic screwdriver between the battery and the socket (not the system board).



- 6 Insert the new battery into the socket with the side labeled "+" facing up and snap it into place.
- 7 Attach the computer stand (see page 19).
- NOTICE: To connect a network cable, first plug the cable into the network wall jack and then plug it into the computer.
- Connect your computer and devices to electrical outlets, and turn them on.
- 9 Access the system setup program (see page 90) and restore the settings you recorded in step 1.
- 10 Properly dispose of the old battery (see page 12).

Dell Technical Support Policy

See the Service and Support Guide supplied with your computer.

Contacting Dell

When you need to contact Dell, use the telephone numbers, codes, and electronic addresses provided in the following table. If you need assistance in determining which codes to use, contact a local or an international operator.

HINT: Toll-free numbers are for use within the country for which they are

See the Service and Support Guide supplied with your computer for a description of the hardware and software support provided by Dell.

Country (City) International Access Code Country Code City Code	Department Name or Service Area, Website and E-Mail Address	Area Codes, Local Numbers, and Toll-Free Numbers
Japan (Kawasaki)	Website: support.jp.dell.com	
International Access Code: 001	Technical Support (servers)	toll-free: 0120-1984-98
Country Code: 81	Technical Support outside of Japan (servers)	81-44-556-4162
City Code: 44	Technical Support (Dimension™ and Inspiron™)	toll-free: 0120-1982-26
	Technical Support outside of Japan (Dimension and Inspiron)	81-44-520-1435
	Technical Support (Dell Precision TM , OptiPlex TM , and Latitude TM)	toll-free: 0120-1984-33
	Technical Support outside of Japan (Dell Precision, OptiPlex, and Latitude)	81-44-556-3894
	24-Hour Automated Order Service	044 556-3801
	Customer Care	044 556-4240
	Business Sales Division (up to 400 employees)	044 556-1465
	Preferred Accounts Division Sales (over 400 employees)	044 556-3433
	Large Corporate Accounts Sales (over 3500 employees)	044 556-3430
	Public Sales (government agencies, educational institutions, and medical institutions)	044 556-1469
	Global Segment Japan	044 556-3469
	Individual User	044 556-1760
	Faxbox Service	044 556-3490
	Switchboard	044 556-4300

Regulatory Information

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 Dell Technical Support representative or an experienced radio/television technician for additional suggestions.

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.

For additional regulatory information, see the *Tell Me How* help file that accompanied your computer. To access the help file, see page 36.

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