




Dell™ Dimension™ 4400

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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.
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Abbreviations and Acronyms

For a complete list of abbreviations and acronyms, see the [Tell Me How](#) help file.

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May 2002 Rev. A04

System Codes and Messages

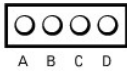
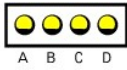
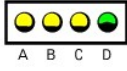
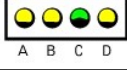
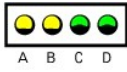
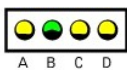
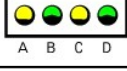
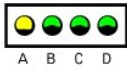
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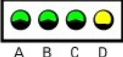
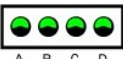



- [Diagnostic Codes](#)
- [POST Beep Codes](#)
- [System Messages](#)

Diagnostic Codes

Your computer is equipped with four diagnostic lights, which are labeled "A," "B," "C," and "D" on the back of the computer. Each of the four lights can be yellow, green, or off as shown in the following table. When the computer is turned on or restarted and it is functioning normally, the lights flash during POST. After the computer starts, the lights remain green to signify normal computer operation.

If a malfunction is detected and the computer fails to start, the lights display a code that identifies the problem. Write down the diagnostic code displayed and look it up in the following table.

Diagnostic Code	Definition	Corrective Action
	Power up default.	Make sure that the computer is connected to a known working electrical outlet, and then check whether the front-panel power light on the power button is on or off. If the power light is off, check the power supply . If the problem persists, see "Contacting Dell" in the <i>Owner's Manual</i> for instructions on obtaining technical assistance. See " Safety Instructions ," and then remove all cards . If the computer still does not start, see "Contacting Dell" in the <i>Owner's Manual</i> for instructions on obtaining technical assistance.
	System board is receiving power, but the BIOS is not executing.	Set the configuration jumper to Maintenance mode, and restart the computer. Exit and save changes in the system setup program . Turn off the computer and reset the configuration jumper to Normal mode, and then restart the computer. See " Safety Instructions ," and then remove all cards and restart the computer to determine if a resource conflict exists. If conflict exists, see " Resolving Software and Hardware Incompatibilities ." If the problem persists, see "Contacting Dell" in the <i>Owner's Manual</i> for instructions on obtaining technical assistance.
	Recovery mode from BIOS failure.	Set the configuration jumper to Maintenance mode and restart the computer. Exit and save changes in the system setup program . Turn off the computer and reset the configuration jumper to Normal mode, and then restart the computer. See " Safety Instructions ," and then remove all cards and restart the computer to determine if a resource conflict exists. If conflict exists, see " Resolving Software and Hardware Incompatibilities ." If the problem persists, see "Contacting Dell" in the <i>Owner's Manual</i> for instructions on obtaining technical assistance.
	Microprocessor has failed a BIOS test.	If the problem persists, see "Contacting Dell" in the <i>Owner's Manual</i> for instructions on obtaining technical assistance.
	Memory failed to be sized or enabled.	Reseat the memory modules . If the problem persists, see "Contacting Dell" in the <i>Owner's Manual</i> for instructions on obtaining technical assistance.
	PCI bus failure has occurred.	See " Safety Instructions ," and then remove all cards and restart the computer to determine if a resource conflict exists. If conflict exists, see " Resolving Software and Hardware Incompatibilities ." If the problem still persists, see "Contacting Dell" in the <i>Owner's Manual</i> for instructions on obtaining technical assistance.
	Video controller failed to initialize or respond.	If the computer has a video card, reseat the video card . If the problem persists or the computer has integrated video, see "Contacting Dell" in the <i>Owner's Manual</i> for instructions on obtaining technical assistance.
	IDE bus failure has occurred.	Reseat the drive cables . If the problem persists, see "Contacting Dell" in the <i>Owner's Manual</i> for instructions on obtaining technical assistance.
	USB port or a device connected to it has failed initialization.	Disconnect the device from the USB connector . If the problem persists, see "Contacting Dell" in the <i>Owner's Manual</i> for instructions on obtaining technical assistance.

	Other failure.	See "Contacting Dell" in the <i>Owner's Manual</i> for instructions on obtaining technical assistance.
	Computer has started and turned over control to the operating system.	No action is necessary.
<p>  = yellow  = green  = off </p>		

POST Beep Codes

If the monitor cannot display errors or problems, during POST the computer might emit a series of beeps, or beep code, that identifies the problem. The POST beep codes are listed below.

Beep Codes	Possible Cause	Corrective Action
1	A memory refresh failure occurred.	Reseat the memory modules.
2	Memory parity cannot be reset.	Reseat the memory modules.
3	A failure occurred in the first 64 KB of memory.	Reseat the memory modules.
4	The system timer is not operational.	See "Contacting Dell" in the <i>Owner's Manual</i> for instructions on obtaining technical assistance.
6	8042 Gate A20 cannot be toggled.	See "Contacting Dell" in the <i>Owner's Manual</i> for instructions on obtaining technical assistance.
7	An exception interrupt error occurred.	See "Contacting Dell" in the <i>Owner's Manual</i> for instructions on obtaining technical assistance.
8	A read/write error occurred in the display memory.	See "Contacting Dell" in the <i>Owner's Manual</i> for instructions on obtaining technical assistance.
10	A CMOS shutdown register test error occurred.	See "Contacting Dell" in the <i>Owner's Manual</i> for instructions on obtaining technical assistance.
11	An invalid BIOS is installed.	See "Contacting Dell" in the <i>Owner's Manual</i> for instructions on obtaining technical assistance.

System Messages

Message	Possible Cause	Corrective Action
8042 Gate-A20 error	The keyboard controller failed its test.	If you receive this message after making changes in the system setup program , enter the program and restore the original value(s).
Address Line Short!	Error in the address decoding circuitry in the memory.	Reseat the memory modules.
C: Drive Error C: Drive Failure	The hard drive is not working or is not configured correctly.	Ensure that the drive is installed correctly in the computer and defined correctly in the system setup program .
Cache Memory Bad, Do Not Enable Cache	Cache memory is not operating.	See "Contacting Dell" in the <i>Owner's Manual</i> for instructions on obtaining technical assistance.
CH-2 Timer Error	An error is occurring on the timer on the system board.	See "Contacting Dell" in the <i>Owner's Manual</i> for instructions on obtaining technical assistance.
CMOS Battery State Low CMOS Checksum Failure CMOS System Options Not Set CMOS Display Type Mismatch CMOS Memory Size Mismatch	The system configuration information in the system setup program is incorrect, or the battery charge may be low.	Enter the system setup program and verify the system configuration; then restart the computer.

CMOS Time and Date Not Set		
Diskette Boot Failure	Drive A or B is present but has failed the BIOS POST.	Ensure that the drive is installed correctly in the computer and defined correctly in the system setup program . Check the interface cable at both ends.
DMA Error DMA 1 Error DMA 2 Error	Error in the DMA controller on the system board.	The keyboard or system board may need to be replaced.
FDD Controller Failure HDD Controller Failure	BIOS cannot communicate with the floppy drive or hard-drive controller.	Ensure that the floppy drive or the hard drive is installed correctly in the computer and defined correctly in the system setup program . Check the interface cable at both ends.
INTR1 Error INTR2 Error	Interrupt channel on the system board failed the POST.	The keyboard or system board may need to be replaced.
Invalid Boot Diskette	The operating system cannot be located on drive A or drive C.	Enter the system setup program and confirm that drive A or drive C is properly identified.
Keyboard Error	The BIOS has detected a stuck key.	Make sure that nothing is resting on the keyboard; if a key appears to be stuck, carefully pry it up. If the problem persists, you may need to replace the keyboard.
KB/Interface Error	An error occurred with the keyboard connector.	Make sure that nothing is resting on the keyboard; if a key appears to be stuck, carefully pry it up. If the problem persists, you may need to replace the keyboard.
No ROM Basic	The operating system cannot be located on drive A or drive C.	Enter the system setup program and confirm that drive A or drive C is properly identified.

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Documentation

Dell™ Dimension™ 4400

- [Printed Documentation](#)
- [Online Documentation](#)


Printed Documentation

 **HINT:** You must right-click the link for a portable document format (PDF) file and save the file to your hard drive. Attempting to open large PDF files through your browser causes your system to freeze.

To save PDF files (files with an extension of **.pdf**) to your hard drive, right-click the document title, click **Save Target As** in Microsoft® Internet Explorer or **Save Link As** in Netscape Navigator, and specify a location on your hard drive.


Right-click only the following links:

[Dell Dimension 4400 Systems Owner's Manual \(.pdf\) \(1899 KB\)](#) — Provides information on adding upgrades, performing basic troubleshooting procedures, and reinstalling drivers. It also provides technical specifications.

 **HINT:** PDF files require Adobe™ Acrobat Reader, which can be downloaded from the Adobe World Wide Web site at <http://www.adobe.com/acrobat/>. To view a PDF file, launch Acrobat Reader. Click **File**—> **Open** and select the PDF file.

Online Documentation

The *Tell Me How* help file is already loaded on your hard drive when you receive your computer. See "[Accessing Help Files](#)" for instructions on how to open the file.

 **HINT:** *Tell Me How* help files (files with an extension of **.chm**) require Microsoft Internet Explorer 4.0 or later.

The *Tell Me How* help file allows you to search for information in multiple ways. You can quickly link to information on the following topics:

- 1 Hardware and software features of your computer
- 1 The Windows® desktop, where you can change your wallpaper and screen saver, create shortcuts, and position icons
- 1 Software access, installation, and removal
- 1 Basic file management, such as finding, copying, deleting, and renaming files
- 1 Tips on using your computer hardware

Downloading the *Tell Me How* Help File and Associated Files

1. Right-click the following link to the **hhactivex.dll** file: [hhactivex.dll](#).
2. Click **Save Target As** in Microsoft Internet Explorer or **Save Link As** in Netscape Navigator, and specify **c:\windows\system**.
3. Click the **Start** button on the Microsoft Windows desktop, and then click **Run**.
4. Type `regsvr32 hhactivex.dll` and then press <Enter>.
5. Click **OK** when the installation is complete.
6. Right-click the following link to the file: [Dell Dimension 4400 System Tell Me How \(.chm\) \(1224 KB\)](#).
7. Click **Save Target As** in Microsoft Internet Explorer or **Save Link As** in Netscape Navigator, and specify a location on your hard drive.

Viewing the *Tell Me How* Help File

1. Click the **Start** button on the Windows desktop, point to **Programs**, and then click **Windows Explorer**.
2. Navigate to the directory in which you saved the *Tell Me How* help file.
3. Double-click the file (**tellhow.chm**).

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Adding Parts

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- [Reattaching the Front Door and Hinge Arms](#)
- [Opening the Computer Cover](#)
- [Adding Cards](#)
- [Removing Cards](#)
- [Adding Memory](#)
- [Replacing an AGP Card](#)
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- [Adding Other Drives](#)
- [Replacing the Microprocessor](#)
- [Replacing the Front I/O Panel](#)
- [Replacing the Power Supply](#)
- [Replacing the System Board](#)
- [Closing the Computer Cover](#)

Safety Instructions

Use the following safety guidelines to protect yourself and your computer. For comfort and efficiency, observe the ergonomic guidelines provided in "Ergonomic Computing Habits" in the Dell *Owner's Manual*.

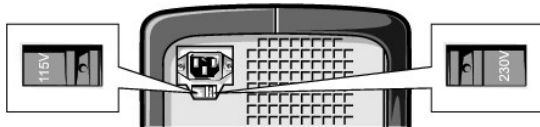
When Using Your Computer

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

- 1 To help avoid damaging your computer, be sure that the voltage selection switch is set to match the AC power available at your location:
 - o 115 V/60 Hz in most of North and South America and some Far Eastern countries such as South Korea and Taiwan
 - o 100 V/50 Hz in eastern Japan and 100 V/60 Hz in western Japan

🔍 NOTE: The voltage selection switch must be set to the 115V position even though the AC supply in Japan is 100 V.

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



Also be sure that your monitor and attached devices are electrically rated to operate with the AC power available in your location.

- 1 To help prevent damage to your computer when disconnecting a network cable from your computer, first unplug the cable from the computer network connector and then from the network wall jack. When reconnecting a network cable to your computer, first plug the network cable into the network wall jack and then into the computer network connector.
- 1 To help avoid possible damage to the system board, wait 5 seconds after turning off the computer before disconnecting or connecting a non-USB device.
- 1 To help prevent electric shock, plug the computer and device power cables into properly grounded power sources. These cables are equipped with 3-prong plugs to help ensure proper grounding. Do not use adapter plugs or remove the grounding prong from a cable. If you must use an extension cable, use a 3-wire cable with properly grounded plugs.
- 1 To help protect your computer from sudden, transient increases and decreases in electrical power, use a surge suppressor, line conditioner, or uninterruptable power supply.
- 1 Be sure that nothing rests on your computer cables and that the cables are not located where they can be stepped on or tripped over.
- 1 Do not spill food or liquids on your computer. If the computer gets wet, contact Dell.
- 1 Do not push any objects into the openings of your computer. Doing so can cause fire or electric shock by shorting out interior components.
- 1 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.

When Working Inside Your Computer

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

🔍 NOTICE: Do not attempt to service the computer yourself, except as explained in this guide and elsewhere in Dell documentation. Always follow installation and service instructions closely.

1. Turn off your computer and all devices.


2. Ground yourself by touching an unpainted metal surface at the back of the computer before touching anything inside your computer.

While you work, periodically touch an unpainted metal surface on the computer to dissipate any static electricity that might harm internal components.

3. Disconnect any devices connected to the computer, including the monitor, from their electrical outlets to reduce the potential for personal injury or shock. Also, disconnect any telephone or telecommunication lines from the computer.
4. Disconnect the power cable from your computer, and then press the power button to ground the system board.

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

1. When you disconnect a cable, pull on its connector, not on the cable itself. As you pull connectors apart, keep them evenly aligned to avoid bending any pins. Also, before you connect a cable, make sure that both connectors are correctly oriented and aligned.
1. Handle components and cards with care. Don't touch the components on a card. Hold a card by its edges or by its metal bracket.

 **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 instructions.

Protecting Against Electrostatic Discharge


To prevent static damage, discharge static electricity from your body before you touch anything inside your computer and periodically while you work inside the computer. You can do so by touching an unpainted metal surface on the back of the computer.

You can also take the following steps to prevent static damage:

1. Do not remove items from their antistatic packing material until you are ready to install them in your computer. Just before unwrapping the antistatic packaging, be sure to discharge static electricity from your body.
1. When transporting a sensitive component, first place it in an antistatic container or packaging.

Shutting Down the Computer


 **NOTICE:** To prevent data loss, you must turn off your computer through the **Start** menu rather than by pressing the power button.

 **HINT:** If you are having difficulty turning off your computer, see "[General Program Problems](#)."

Windows XP

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.

 **NOTICE:** Turn off your monitor and any other devices connected to power.

Windows 2000

1. Save and exit any programs and files you have open.
2. Click the **Start** button, and then click **Shut Down**.
3. Click the pull-down menu under **What do you want the computer to do?**
4. Click **Shut down** and then click **OK**.

The computer automatically turns off after the shutdown process finishes.

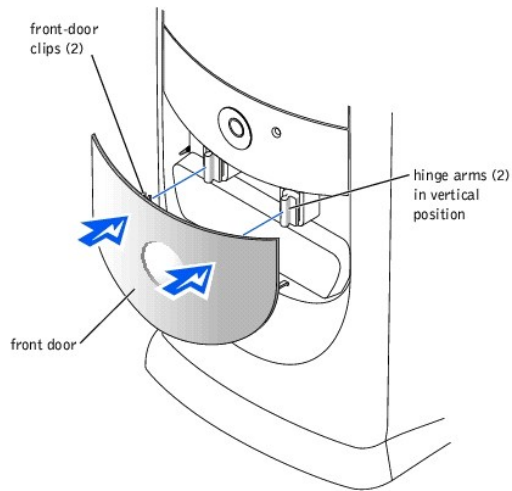
5. Turn off your monitor and any other devices connected to power.

Reattaching the Front Door and Hinge Arms

To prevent damage to your computer, the front door is designed to "break away" if it is lifted up too far. If the front door breaks away, you might need to reattach both the front door and the hinge arms.

Reattaching the Front Door

1. [Shut down the computer](#).
2. Lower the hinge arms to the vertical position.
3. Align the two clips on the inside of the front door with the two hinge arms.
4. Press inward on the front door until it clips to both hinge arms.



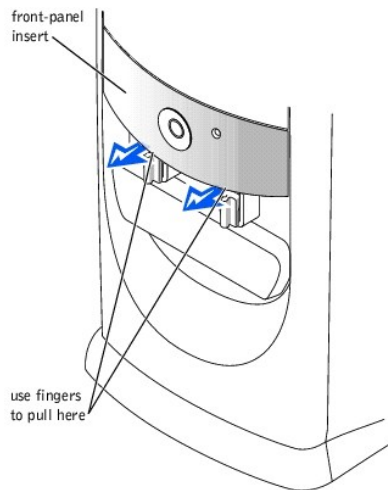
Reattaching the Hinge Arms

1. [Shut down the computer.](#)
2. Disconnect the power cable from your computer.
3. Remove the front door, if it is attached.

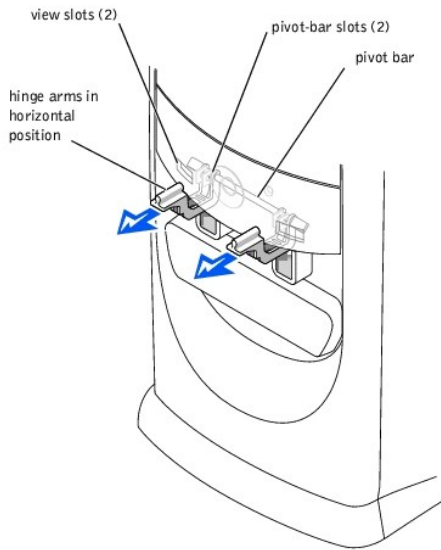
The front door snaps off of the two hinge arms.

4. Remove the front-panel insert above the front-door bay area.

Pull the bottom of the insert with your fingers to remove it.



5. Lift both hinge arms to the horizontal position.
6. Use the two view slots to align the pivot bar with the two pivot-bar slots.



➡ **NOTICE:** Using excessive force to pull the hinge arms into place may damage the arms or the front panel.

7. Pull the arms toward you until they snap into place.

If the hinge arms don't snap back into place on the first attempt, slightly reposition the arms and try again.

8. After the hinge arms clip into place, lower and raise the arms two or three times to properly seat them.

9. Reattach the front-panel insert.

10. Reconnect the power cable to your computer.

11. Reattach the front door as described in "[Reattaching the Front Door](#)."

Opening the Computer Cover

⚠ **CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions in "[Safety Instructions](#)."

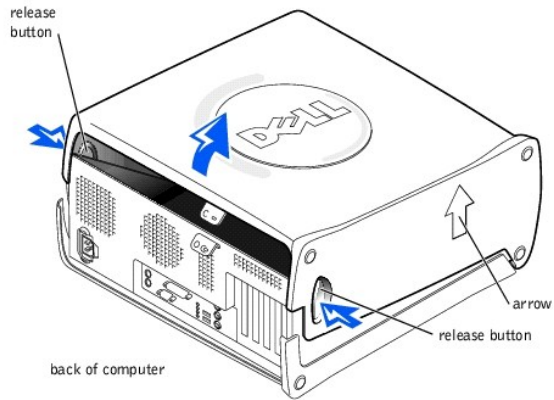
1. [Shut down the computer](#).
2. Turn off any attached devices and disconnect them from their electrical outlets.

➡ **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.

➡ **NOTICE:** Ensure that there is sufficient space to support the open cover—at least 30 cm (1 ft) of desk top space.

4. Lay the computer on its side so that the arrow on the bottom of the computer points up.
5. Locate the *two* release buttons shown in the illustration. Then, press the *two* release buttons as you lift the cover.



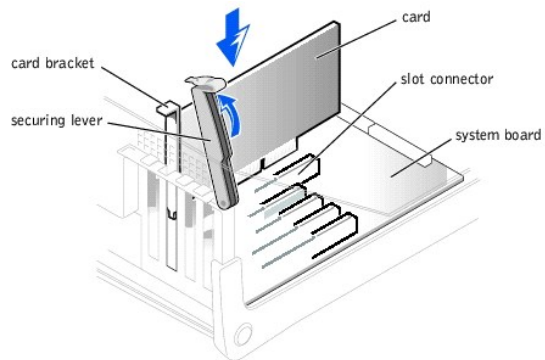
Adding Cards

- ⚠ **CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions in "[Safety Instructions](#)."
- ⚠ **CAUTION:** To guard against electrical shock, always unplug your computer from the electrical outlet before [opening the cover](#).

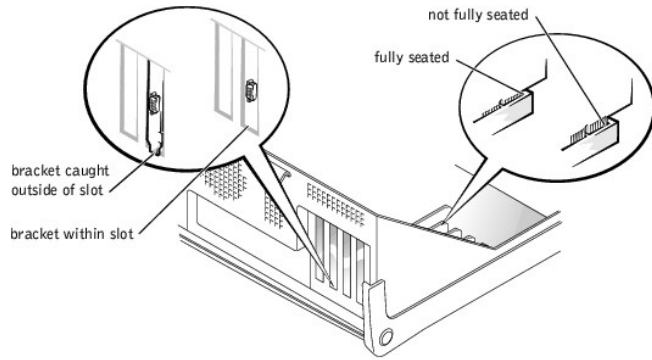
1. [Shut down the computer](#).
2. Turn off any attached devices and disconnect them from their electrical outlets.

🔄 **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 power cable from your computer, and then press the power button to ground the system board.
4. [Open the computer cover](#).
5. To raise the securing lever, press the tab until it is free from the latch and then lift the lever.
6. Insert the card into the connector.



7. Ensure that the card is fully seated in the connector.



8. Lower the plastic securing lever.
9. Connect any cables that should be attached to the card.

See the documentation that came with the card for information about the card cable connections.

10. [Close the computer cover.](#)

11. Connect your computer and devices to their electrical outlets, and turn them on.

➡ **NOTICE:** To connect a network cable, first plug the cable in to the network wall jack and then plug it in to the computer.

12. Install any drivers required for the card as described in the documentation that came with the card.

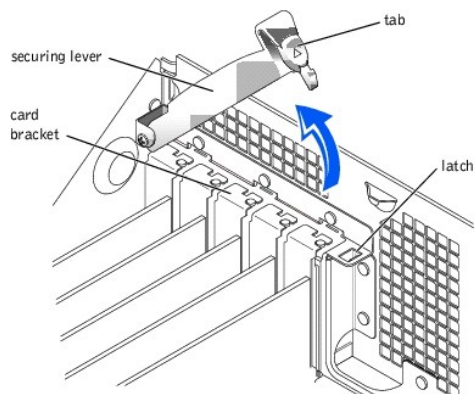
Removing Cards

⚠ **CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions in "[Safety Instructions.](#)"

1. [Shut down the computer.](#)
2. Turn off any attached devices and disconnect them from their electrical outlets.

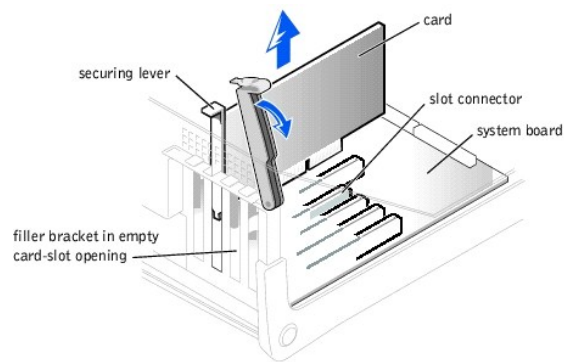
➡ **NOTICE:** To disconnect a network cable, first unplug the cable from your computer and then unplug it from the network wall jack.

3. Disconnect the power cable from your computer, and then press the power button to ground the system board.
4. [Open the computer cover.](#)
5. If necessary, disconnect any cables connected to the card.
6. To raise the securing lever, press the tab until it is free from the latch and then lift the lever.



7. To remove the card, grasp the card by the top corners and lift it out.

If the card is difficult to remove, gently ease the card back and forth to remove it from the connector.



HINT: Installing filler brackets over empty card-slot openings is necessary to maintain Federal Communications Commission (FCC) certification of the computer. The brackets also keep dust and dirt out of your computer.

8. If you are not replacing the card, install a filler bracket in the empty card-slot opening.

If you are adding a card, see "[Adding Cards](#)."

9. Lower the securing lever.
10. [Close the computer cover](#).
11. Connect your computer and devices to their electrical outlets, and turn them on.

NOTICE: To connect a network cable, first plug the cable into the network wall jack and then plug it into the computer.

Adding Memory

CAUTION: Before you begin any of the procedures in this section, follow the safety instructions in "[Safety Instructions](#)."

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, see "[Memory](#)" in "Technical Specifications."

HINT: Memory purchased from Dell is covered under your computer warranty.

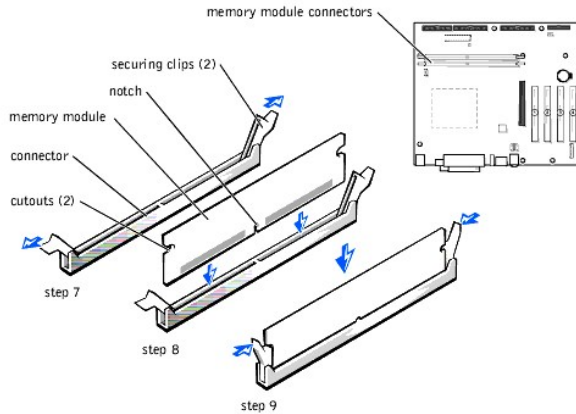
1. [Shut down the computer](#).
2. Turn off any attached devices and disconnect them from their electrical outlets.

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.
4. [Open the computer cover](#).
5. [Remove the AGP card](#).
6. If necessary, remove a memory module:
 - a. Press out the securing clip at each end of the memory module connector.
 - b. 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 notches on the bottom of the module with the crossbars in the connector.

👉 **NOTICE:** To avoid breaking the memory module, do not press near the middle of the module.

9. Insert the module straight down into the connector, ensuring that it fits into the vertical guides at each end of the connector. Press firmly on the ends of the module until it snaps into place.

During most installations, the securing clips snap into the cutouts at each end of the module. During some installations, you have to use your fingers to gently push the clips into the cutouts.

👉 **NOTICE:** Visually inspect the position of the securing clips and make sure that they have snapped into the vertical position in the cutouts on the ends of the memory modules. Otherwise, the securing clips may prevent the AGP card from being properly reinstalled.

10. [Reinstall the AGP card.](#)

11. [Close the computer cover.](#)

12. Connect your computer and devices to their electrical outlets, and turn them on.

👉 **NOTICE:** To connect a network cable, first plug the cable in to the network wall jack and then plug it in to the computer.

13. Right-click the **My Computer** icon and then click **Properties**.

14. Click the **General** tab.

15. To verify that the memory is installed correctly, check the amount of memory (RAM) listed.

Replacing an AGP Card

⚠️ **CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions in "[Safety Instructions](#)."

1. [Shut down the computer.](#)

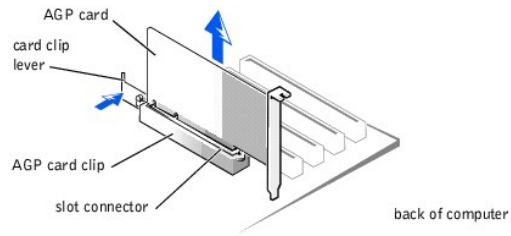
2. Turn off any attached devices and disconnect them from their electrical outlets.

👉 **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.

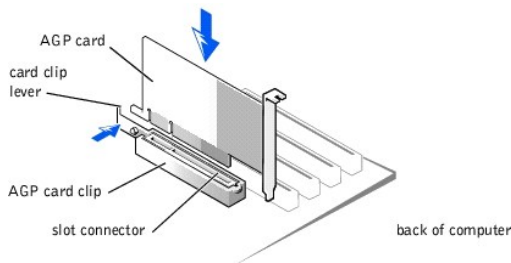
4. [Open the computer cover.](#)

5. Press the card clip lever on the side of the AGP card to release the card from the slot connector, and remove the card.



🔔 **NOTICE:** Visually inspect the position of the securing clips on the memory connectors and make sure that they are secured in the vertical position in the cutouts on the ends of the memory modules. Otherwise, the securing clips may prevent the AGP card from being properly reinstalled.

6. To replace the AGP card, gently press it down into the slot connector until it clicks into place. Press the card clip lever while inserting the card into the slot connector.



7. [Close the computer cover.](#)

8. Connect your computer and devices to their electrical outlets, and turn them on.

🔔 **NOTICE:** To connect a network cable, first plug the cable in to the network wall jack and then plug it in to the computer.

Adding a Second Hard Drive

⚠️ **CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions in "[Safety Instructions.](#)"

Your computer includes one hard drive. To add a second hard drive:

1. [Shut down the computer.](#)
2. 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.
4. Unpack the drive and prepare it for installation.

See the drive documentation to ensure that the drive is set up for your computer.

5. [Open the computer cover.](#)

🔍 **HINT:** Two sets of rails are attached to the inside of the computer cover. Use the two longer rails on 5.25-inch drives. Use the shorter rails for 3.5-inch drives. Rails for a second hard drive are attached inside the hard-drive bay.

6. Remove the two green plastic rails from the inside of the hard-drive bay.

These rails are not attached to the inside of the hard-drive bay with screws. To remove the rails, gently pull the rails up and out of the bay.

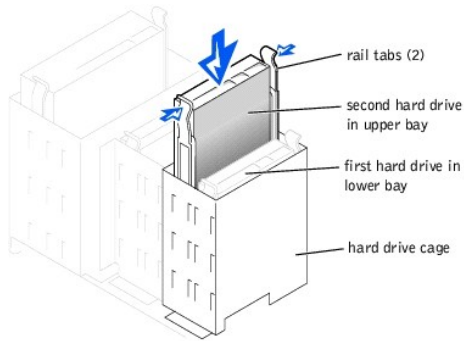
7. Attach the rails to the hard drive using the two screws attached to the rails.

Ensure that the rail tabs are positioned at the back of the hard drive.

8. Remove the first hard drive from the upper bay and install it in the lower bay.
 - a. Disconnect the power cable and the data cable from the back of the first hard drive.
 - b. Press in the two green rail tabs and pull the first hard drive out of the upper bay.

➔ **NOTICE:** Do not install any drive into the lower hard-drive bay until after you have removed the green drive rails from the inside of the hard-drive cage.

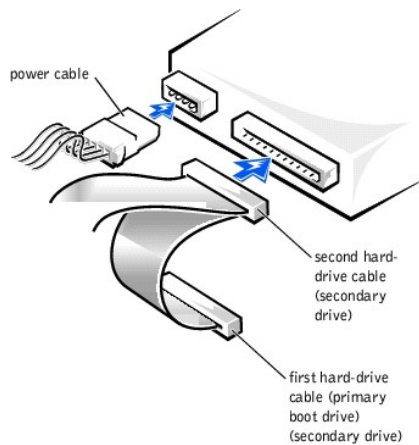
- c. Gently slide the first hard drive into the lower bay until you hear a click.
 - d. Reconnect the power cable and the data cable to the back of the first hard drive.
9. Gently slide the new hard drive into the upper bay until you hear a click.



➔ **NOTICE:** Match the colored strip on the cable with pin 1 on the drive.

10. Locate the extra connector on the drive cable that is attached to your first hard drive, and attach the connector to the second hard drive.

🔍 **HINT:** Your computer uses cable-select drive cables. This means that the device connected to the end connector of the drive cable is the master device and the device connected to the middle connector is the slave device. Be sure the jumper setting on the new device is set for "cable select" (see the documentation that came with the drive for information).



11. [Close the computer cover.](#)
12. Connect your computer and devices to their electrical outlets, and turn them on.

➔ **NOTICE:** To connect a network cable, first plug the cable in to the network wall jack and then plug it into the computer.

13. See the documentation that came with the drive for instructions on installing any software required for drive operation.

Adding Other Drives

⚠ **CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions in "[Safety Instructions.](#)"

🔍 **HINT:** Drives sold by Dell come with their own operating software and documentation. After you install a drive, refer to the documentation that came with the drive for instructions on installing and using the drive software.

➔ **NOTICE:** To avoid possibly damaging the drive by electrostatic discharge (ESD), ground yourself by periodically touching an unpainted metal surface on the back of the computer.

Your computer includes a floppy drive and a CD or DVD drive. You can add other devices, such as a Zip drive, a CD-RW drive, or a tape drive.

5.25-Inch Devices

CAUTION: Before you begin any of the procedures in this section, follow the safety instructions in "[Safety Instructions](#)."

1. [Shut down the computer](#).
2. 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 power cable from your computer, and then press the power button to ground the system board.
4. Unpack the drive and prepare it for installation.

See the documentation that came with the drive to ensure that the drive is set up for your computer.

HINT: Two sets of rails are attached to the inside of the computer cover. Use the two longer rails on 5.25-inch drives. Use the shorter rails on 3.5-inch drives. Rails for a second hard drive are attached inside the hard-drive bay.

5. Remove the two longer, green plastic rails from the inside of the computer cover.

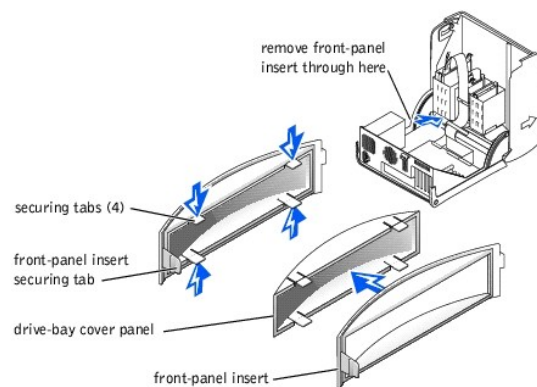
To remove the rails, gently ease the rails up and out.

6. Attach the rails to the drive using the screws supplied with the drive.

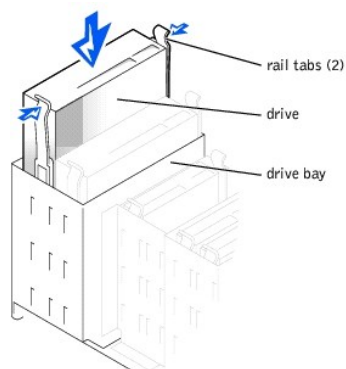
Ensure that the rail tabs are positioned at the back of the drive.

7. [Open the computer cover](#).

8. To remove the drive-bay cover panel, carefully press the panel out from the inside of the computer.



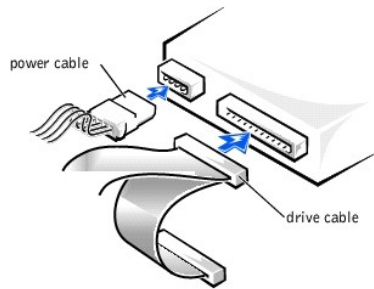
9. Gently slide the drive into the bay until you hear a click.



10. Connect a power cable to the drive.

See the documentation that came with the drive for instructions on connecting a drive cable to the drive and system board.

- HINT:** Your computer uses cable-select drive cables. This means that the device connected to the end connector of the drive cable is the master device and the device connected to the middle connector is the slave device. Be sure the jumper setting on the new device is set for "cable select" (see the documentation that came with the drive for information).



11. Connect your computer and devices to their electrical outlets, and turn them on.

- NOTICE:** To connect a network cable, first plug the cable into the network wall jack and then plug it into the computer.

See the documentation that came with the drive for instructions on installing any software required for drive operation.

3.5-Inch Devices

- CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions in "[Safety Instructions](#)."

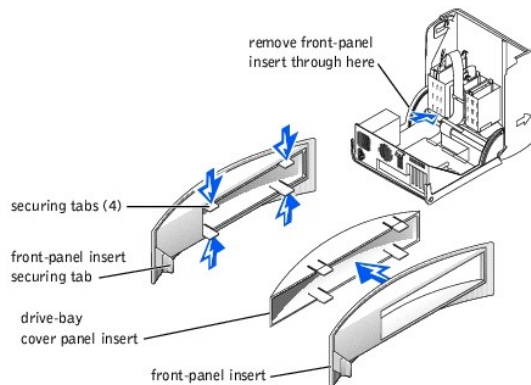
1. [Shut down the computer](#).
2. Turn off any attached devices and disconnect them from their electrical outlets.

- 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 power cable from your computer, and then press the power button to ground the system board.
4. Unpack the drive and prepare it for installation.

See the documentation that came with the drive to ensure that the drive is set up for your computer.

5. [Open the computer cover](#).
6. To remove the drive-bay cover panel, carefully press the panel out from the inside of the computer.
7. To remove the drive-bay cover panel insert, press the four securing tabs and pull the insert away from the panel.



- HINT:** Two sets of rails are attached to the inside of the computer cover. Use the two longer rails on 5.25-inch drives. Use the shorter rails for 3.5-inch drives. Rails for a second hard drive are attached inside the hard-drive cage.

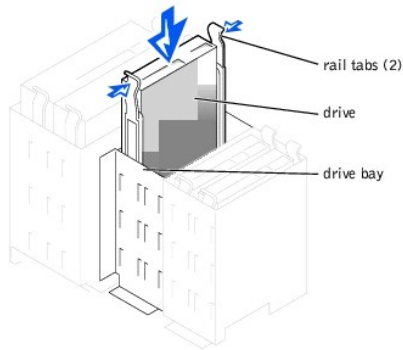
8. Remove the two shorter, green plastic rails from the inside of the computer cover.

These rails are not attached to the computer cover with screws. To remove the rails, firmly pull the rails from the drive cage.

9. Attach the rails to the drive using the screws supplied with the drive.

Ensure that the rail tabs are positioned at the back of the drive.

10. Gently slide the drive into the bay until you hear a click.



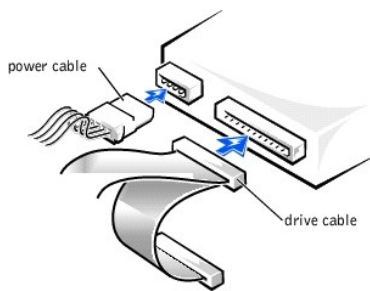
11. Carefully replace the drive bay cover.

You do not need to replace the cover insert.

12. Connect a power cable to the drive.

See the documentation that came with the drive for instructions on connecting a drive cable to the drive.

HINT: Your computer uses cable-select drive cables. This means that the device connected to the end connector of the drive cable is the master device and the device connected to the middle connector is the slave device. Be sure the jumper setting on the new device is set for "cable select" (see the documentation that came with the drive for information).



13. Connect your computer and devices to their electrical outlets, and turn them on.

NOTICE: To connect a network cable, first plug the cable into the network wall jack and then plug it into the computer.

14. Install any drivers required for the drive as described in the documentation that came with the drive.

Replacing the Microprocessor

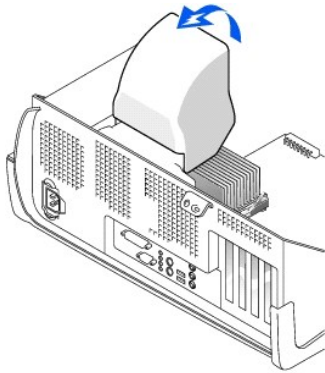
CAUTION: Before you begin any of the procedures in this section, follow the safety instructions in "[Safety Instructions](#)."

1. [Shut down the computer](#).
2. Turn off any attached devices and disconnect them from their electrical outlets.

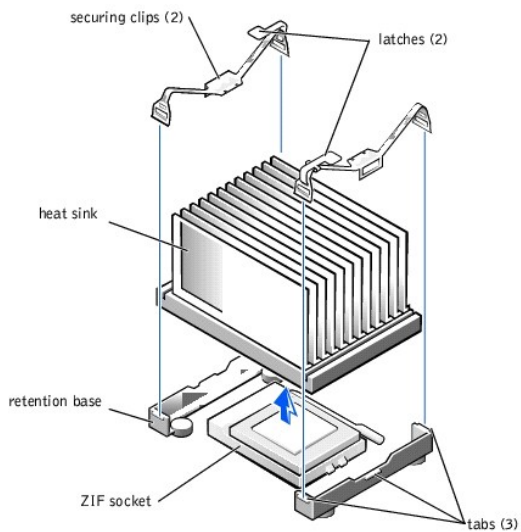
NOTICE: To disconnect a network cable, first unplug the cable from your computer and then unplug it from the network wall jack.

3. Disconnect the power cable from your computer, and then press the power button to ground the system board.
4. [Open the computer cover](#).
5. Disconnect the cooling fan power cable from the [CR3F1 connector](#) on the system board.

6. Disconnect the +12-VDC [P2 DC power cable](#) from the [J4B1 connector](#) on the system board.
7. Lift up the airflow shroud.



8. For each of the metal securing clips that secure the heat sink to the microprocessor, press down on the clip's latch to release the clip from the retention base. Then lift each clip out of the tabs on the retention base and away from the heat sink.



➡ **NOTICE:** Gently rock the heat sink and then lift it to remove it.

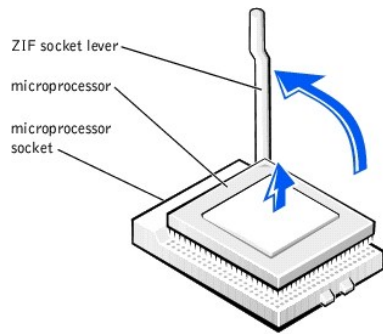
9. Lift the heat sink away from the microprocessor.

➡ **NOTICE:** Do not discard the original heat sink and securing clips unless you are installing a microprocessor upgrade kit from Dell. If you are *not* installing a microprocessor upgrade kit from Dell, reuse the original heat sink, blower, and securing clips when installing your new microprocessor.

10. Pull the socket lever up straight up until the microprocessor is released.

The microprocessor uses a ZIF socket with a lever-type handle that secures or releases the microprocessor.

➡ **NOTICE:** Be careful not to bend any of the pins when you remove the microprocessor package from the ZIF socket. Bending the package pins can permanently damage the microprocessor.



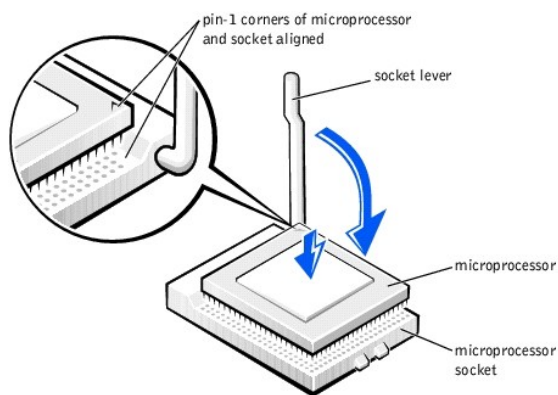
11. Remove the microprocessor from the socket.

Leave the release lever extended in the release position so that the socket is ready for the new microprocessor.

Installing the Microprocessor

NOTICE: You must position the microprocessor package correctly in the socket to avoid permanent damage to the microprocessor and the computer.

1. If the release lever on the ZIF socket is not extended to the release position, move it to that position.
2. Align pin-1 (the beveled corner) of the microprocessor package and pin-1 of the socket.



NOTICE: The microprocessor pins are delicate. To avoid damage, ensure that the microprocessor aligns properly with the socket, and do not use excessive force when installing the processor.

3. Carefully set the microprocessor in the socket and press it down lightly to seat it.
4. Rotate the lever back toward the system board until it snaps into place, securing the microprocessor package.
5. If you are installing a new heat sink, remove the film covering the bottom of the heat sink.
6. Lower the heat sink to the microprocessor so that the heat sink fits in the retention base.
7. For each of the replacement metal clips, fit the end of the clip that does not have the latch over its tab on the retention base. Then, fit the middle of the clip over the middle tab on the retention base, and press down on the clip's latch to secure the clip to the retention base.
8. Lower the airflow shroud over the heat sink.
9. Reconnect the cooling fan power cable to the [CR3F1 connector](#) on the system board.
10. Plug the +12-VDC [P2 DC power cable](#) into the [J4B1 connector](#) on the system board.
11. [Close the computer cover.](#)
12. Connect your computer and devices to their electrical outlets, and turn them on.

NOTICE: To connect a network cable, first plug the cable in to the network wall jack and then plug it in to the computer.

If you are installing a microprocessor replacement kit from Dell, return the original heat sink assembly and microprocessor package to Dell in the same package in which your replacement kit was sent. Your microprocessor replacement kit should include a replacement microprocessor heat sink and one replacement securing clip.

Removing the Front I/O Panel

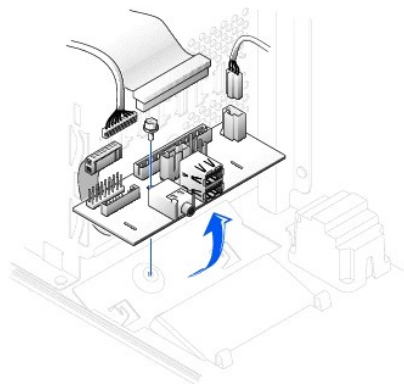
⚠ CAUTION: Before you begin any of the procedures in this section, follow the safety instructions in "[Safety Instructions](#)."

1. [Shut down the computer.](#)
2. 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 power cable from your computer, and then press the power button to ground the system board.
4. [Open the computer cover.](#)
5. Disconnect the control panel cable from the control panel connector. Disconnect the I/O cable from the connector on the system board.

Note the routing of the control panel cable as you remove it from the computer so that you can replace it correctly.



6. Remove all cables that are connected to the front I/O panel.
7. From inside the computer cover, remove the mounting screw that secures the front I/O panel to the computer.
8. Remove the front I/O panel from the computer.
9. Reinstall the front I/O panel by reversing steps 5 through 7.
10. [Close the computer cover.](#)
11. Connect your computer and devices to their electrical outlets, and turn them on.

➡ NOTICE: To connect a network cable, first plug the cable into the network wall jack and then plug it into the computer.

Replacing the Power Supply

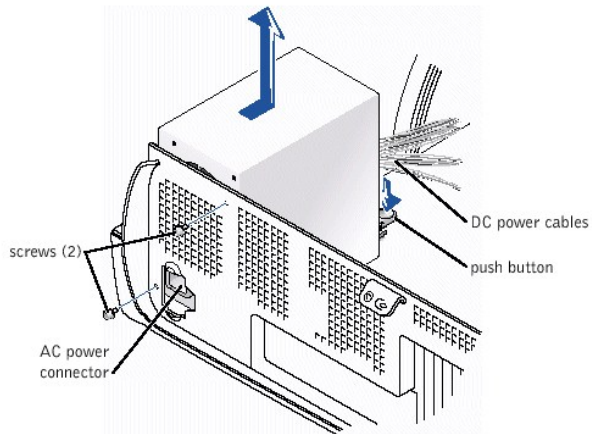
Removing the Power Supply

⚠ CAUTION: Before you begin any of the procedures in this section, follow the safety instructions in "[Safety Instructions](#)."

1. [Shut down the computer.](#)
2. 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 power cable from your computer, and then press the power button to ground the system board.
4. [Open the computer cover.](#)
5. Be sure the AC power cable is disconnected from the back of the power supply. Then disconnect the DC power cables from the system board and the drives.



Note the routing of the DC power cables underneath the tabs in the computer frame as you remove them from the system board and drives. It is important to route these cables properly when you replace them to prevent them from being pinched or crimped.

6. Remove the two screws that secure the power supply to the back of the computer.
7. Press the "PUSH" button located on the floor of the computer frame.
8. Slide the power supply toward the front of the system approximately 1 inch.
9. Lift the power supply up and out of the computer.

Replacing the Power Supply

1. Slide the power supply into place.
2. Replace the two screws that secure the power supply to the back of the computer frame.
3. Reconnect the DC power cables.
4. [Close the computer cover.](#)
5. Connect your computer and devices to their electrical outlets, and turn them on.

➡ **NOTICE:** To connect a network cable, first plug the cable into the network wall jack and then plug it into the computer.

Replacing the System Board

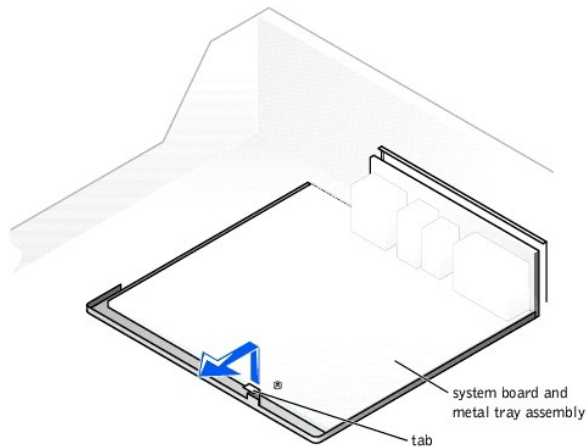
Removing the System Board

⚠ **CAUTION:** Before you begin any of the procedures in this section, see "[Safety Instructions.](#)"

1. [Shut down the computer.](#)
2. 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 power cable from your computer, and then press the power button to ground the system board.
4. [Open the computer cover.](#)



➔ **NOTICE:** The system board and the metal tray are attached and are removed as one piece.

5. Remove or move any components that restrict access to the system board.
6. Disconnect all cables from the system board.

Before you remove the existing system board, visually compare the replacement system board to the existing system board to make sure that you have the correct part.

7. Pull up on the tab and slide the system board toward the front of the computer; lift it up and away.
8. Place the system board that you just removed next to the replacement system board.

Replacing the System Board

1. Transfer components from the existing system board to the replacement system board:
 - a. Remove the memory modules and install them on the replacement board.

⚠ **CAUTION:** The microprocessor package and heat sink assembly can get hot. To avoid burns, be sure that the package and assembly have had sufficient time to cool before you touch them.

- b. Remove the fan/heat sink assembly and microprocessor package from the existing system board and transfer them to the replacement system board.
2. Configure the settings of the replacement system board. Set the jumper on the replacement system board so it is identical to the one on the existing board.

➔ **NOTICE:** Some components and connectors on the replacement system board may be in different locations than the corresponding connectors on the existing system board.

3. Orient the replacement board by aligning the notches on the bottom to the tabs on the computer frame floor.
4. Slide the board toward the back of the computer until it clicks into place.
5. Replace any components and cables that you removed from the system board.
6. Reconnect all cables to their connectors at the back of the computer, [close](#) the computer cover, and reconnect the computer and devices to their power sources and turn them on.

Closing the Computer Cover

1. Ensure that all cables are connected, and fold cables out of the way.
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.

➔ **NOTICE:** To connect a network cable, first plug the cable into the network wall jack and then plug it into the computer.

4. Connect your computer and devices to their electrical outlets, and turn them on.

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Solving Problems

Dell™ Dimension™ 4400

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- [Printer Problems](#)
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- [Resolving Other Technical Problems](#)
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- [Resolving Software and Hardware Incompatibilities](#)
- [Using System Restore](#)
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- [Reinstalling Windows 2000](#)

Accessing Help Files

To access the *Tell Me How* help file

Microsoft® Windows® XP

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 2000

Click the **Start** button, point to **Programs**, point to **User's Guides**, and then click **Tell Me How**.

To access help in Windows XP

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 access help in Windows 2000

1. Click the **Start** button, and then click **Help**.
2. Click the **Search** tab.
3. Type a word or phrase that describes your problem, and then click **List Topics**.
4. Click the topic that describes your problem, and then click **Display**.
5. Follow the instructions shown on the screen.

Power Problems

 **HINT:** See the [Tell Me How](#) help file for information on the standby mode.

Check the power light— When the power light is solid green, the computer has power. If the power light is blinking green, the computer is in standby mode—press a key on the keyboard or move the mouse. If the power light is off, the computer is either not turned on or is not receiving electrical power. If the power light is solid amber, the computer is receiving electrical power, but an internal power problem may exist—call Dell for technical assistance. See "Contacting Dell" in the Dell *Owner's Manual* for the correct number to call.

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

Check the power cable connection— Be sure that the power cable is firmly inserted into the electrical outlet and the computer power connector.

Connect the computer directly to an electrical outlet— Bypass power protection devices, power strips, and the extension cable to verify that the computer turns on.

Swap the computer and monitor power cables— Swap the computer and monitor power cables to determine if the power cable is defective.

Check for interference— Electrical appliances on the same circuit or operating near the computer can cause interference. Other causes of interference: power extension cables, keyboard and mouse extension cables, too many devices on a power strip, or multiple power strips connected to the same electrical outlet.


Check the Power Properties— See the [Tell Me How](#) help file or search for the keyword *standby* in the Help and Support Center (*Help* in Windows 2000). To access help files, see "[Accessing Help Files](#)."

Start-Up Error Messages

Operating system not found — Call Dell for technical assistance. See "Contacting Dell" in the Dell <i>Owner's Manual</i> for the correct number to call.
Insert bootable media — The operating system is trying to boot to a nonbootable floppy disk or CD. Insert a bootable floppy disk or CD.
Non-system disk error — A floppy disk is in the floppy drive. Remove the floppy disk and restart the computer.

Video and Monitor Problems

If the screen is blank

 **HINT:** See the documentation that came with your monitor for fault indications and troubleshooting procedures specific to your monitor.

Check the video cable connection — Check for bent pins (most video cable connectors have missing pins, but not bent pins). Ensure that the video cable is connected as shown on the <i>START HERE</i> sheet for your computer.
Press the monitor power button — Be sure that you firmly pressed the monitor power button.
Check the power light — When 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.
Test the electrical outlet — Ensure that the electrical outlet is working by testing it with another device, such as a lamp.
Swap the computer and monitor 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 the monitor — If another monitor is available, connect it to the computer.
Check the back panel lights — If all four lights below the serial connector are not green, call Dell for technical assistance. See "Contacting Dell" in the Dell <i>Owner's Manual</i> for the correct number to call.
Check the Power Properties — See the Tell Me How help file or search for the keyword <i>standby</i> in the Help and Support Center (<i>Help</i> in Windows 2000). To access help files, see " Accessing Help Files ."

If the screen is difficult to read

Adjust the contrast and brightness — See the documentation that came with your monitor for instructions on adjusting the contrast and brightness.
Move the subwoofer away from the monitor — If your speaker system includes a subwoofer, ensure that the subwoofer is at least 2 ft (60 cm) 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.
Degauss (demagnetize) the monitor — See the documentation that came with your monitor.
Run the monitor self-test — See the documentation that came with your monitor.
Restore the recommended settings — Restore the original resolution and refresh rate settings. See the Tell Me How help file for instructions.
Check for additional adjustments — See the documentation that came with your monitor for any additional adjustments that your monitor may require.
<p>Adjust the Windows display settings</p> <p><i>Windows XP</i></p> <ol style="list-style-type: none"> 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. <p><i>Windows 2000</i></p> <ol style="list-style-type: none"> 1. Click the Start button, point to Settings, and then click Control Panel. 2. Double-click the Display icon, and then click the Settings tab. 3. Try different settings for Colors and Screen area.
Check for interrupt request conflicts — See " Resolving Software and Hardware Incompatibilities ."


Sound and Speaker Problems

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

Ensure that the subwoofer and the speakers are turned on — See the setup diagram supplied with the speakers.

Adjust the speaker controls — Adjust the volume, bass, or treble controls to eliminate distortion.
Verify the speaker cable connections — Ensure that the speakers are connected as shown on the <i>START HERE</i> sheet for your computer and the setup diagram supplied with the speakers.
Be sure that headphones are not connected to the front-panel headphone connector — Sound from the speakers is automatically disabled when headphones are connected to the computer's front-panel headphone connector.
Adjust the Windows volume control — In Windows XP, click the speaker icon in the lower-right corner of your screen. In Windows 2000, double-click the speaker icon in the lower-right corner of your screen. Be sure that the volume is turned up and that the sound is not muted.
Run the speaker diagnostics — Some speaker systems have self-contained diagnostics. See the speaker documentation for diagnostics instructions.
Eliminate possible interference — Turn off nearby fans, fluorescent lights, or halogen lamps to check for interference.
Test the electrical outlet — Ensure that the electrical outlet is working by testing it with another device, such as a lamp.
Reinstall the Sound (audio) driver — See " Reinstalling Drivers ."
Check for interrupt request conflicts — See " Resolving Software and Hardware Incompatibilities ."

Printer Problems

 **HINT:** If you need technical assistance for your printer, call the printer's manufacturer (see the documentation that came with the printer for the correct phone number). Dell does not cover the printer's warranty.

If you cannot print to a parallel port printer

Verify the printer cable connections — Ensure that the printer cable is connected as described in "Connecting a Printer" in the Dell <i>Owner's Manual</i> .
Ensure that the printer is turned on — See the documentation supplied with the printer.
Verify that the printer is recognized by Windows <i>Windows XP</i> <ol style="list-style-type: none"> 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. Ensure that the Print to the following port(s): setting is LPT1 (Printer Port). <i>Windows 2000</i> <ol style="list-style-type: none"> 1. Click the Start button, point to Settings, and then click Printers. If the printer is listed, right-click the printer icon. 2. Click Properties, and then select the Ports tab. Ensure that the Print to the following port(s): setting is LPT1 (Printer Port).
Test the electrical outlet — Ensure that the electrical outlet is working by testing it with another device, such as a lamp.
Reinstall the printer driver — See "Installing the Printer Driver" in the Dell <i>Owner's Manual</i> .
Check for interrupt request conflicts — See " Resolving Software and Hardware Incompatibilities ."


If you cannot print to a USB printer

Verify the printer cable connections — Ensure that the printer cable is connected as described in "Connecting a Printer" in the Dell <i>Owner's Manual</i> .
Ensure that the printer is turned on — See the documentation supplied with the printer.
Verify that the printer is recognized by Windows <i>Windows XP</i> <ol style="list-style-type: none"> 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 name. 5. Click Properties, and then select the Ports tab. Ensure that the Print to the following port(s): setting is USB. <i>Windows 2000</i> <ol style="list-style-type: none"> 1. Click the Start button, point to Settings, and then click Printers. If the printer is listed, right-click the printer icon. 2. Click Properties, and then select the Ports tab. Ensure that the Print to the following port(s): setting is USB.
Test the electrical outlet — Ensure that the electrical outlet is working by testing it with another device, such as a lamp.

Reinstall the printer driver— See "Installing the Printer Driver" in the Dell *Owner's Manual*.

Check for interrupt request conflicts— See "[Resolving Software and Hardware Incompatibilities](#)."

Scanner Problems

 **HINT:** If you need technical assistance for your scanner, call the scanner's manufacturer (see the documentation that came with the scanner for the correct phone number). Dell does not cover the scanner's warranty.

Check the power cable connection— Ensure that the scanner power cable is firmly connected to a working electrical power source and that the scanner is turned on.


Check the scanner cable connection— Ensure that the scanner cable is firmly connected to the computer and to the scanner.

Unlock the scanner— Ensure that your scanner is unlocked if it has a locking tab or button.

Reinstall the scanner driver— Reinstall the scanner driver. See the scanner documentation for instructions.

Check for interrupt request conflicts— See "[Resolving Software and Hardware Incompatibilities](#)."

Modem Problems

 **HINT:** Connect the modem to an analog telephone jack only. The modem does not operate while it is connected to a digital telephone network.

Check the connection— Verify that the telephone line is connected to the green jack on the modem. (The green line-in jack has either a LINE IN label or a connector-shaped icon next to it.) Make sure you hear a click when you insert the telephone line connector.

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 connect the modem directly to the telephone wall jack with the telephone line.

Check the telephone line— Try using a different telephone line. If you are using a line that is 10 ft (3 m) or more in length, try a shorter one.

Verify that the modem is communicating with Windows

Windows XP

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.

Windows 2000

1. Click the **Start** button, point to **Settings**, and click **Control Panel**.
2. In the **Control Panel**, double-click **Phone and Modem Options**.

If there are multiple entries for the same modem or modems listed that are not installed, delete the entries and restart the computer.

3. Click the **Modems** tab.
4. Click the COM port for your modem.
5. Click the **Properties** button.
6. Click the **Diagnostics** tab to verify that the modem is communicating with Windows.

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

Be sure that you have subscribed to an Internet service provider— Contact an Internet service provider to subscribe.

Check for interrupt request conflicts— See "[Resolving Software and Hardware Incompatibilities](#)."

Mouse Problems

If you connected the mouse before turning on the computer, reconnect the mouse cable

1. Press <Ctrl><Esc> to display the **Start** menu.
2. In Windows XP, type u, press the keyboard arrow keys to highlight **Shut down** or **Turn Off**, and then press <Enter>. In Windows 2000, press the keyboard arrow keys to highlight **Shut Down**, and then press <Enter>.
3. After the computer turns off, reconnect the mouse cable as shown on the *START HERE* sheet 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 will appear 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 settings

Windows XP

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

Windows 2000

1. Click the **Start** button, point to **Settings**, and then click **Control Panel**.
2. Double-click the **Mouse** icon.
3. Try adjusting the settings.

Check for interrupt request conflicts— See "[Resolving Software and Hardware Incompatibilities](#)."


Keyboard Problems

Reconnect the keyboard cable— Shut down the computer (see "Turning Off the Computer" in the *Dell Owner's Manual*), reconnect the keyboard cable as shown on the *START HERE* sheet for your computer, and then restart the computer.

Check for interrupt request conflicts— See "[Resolving Software and Hardware Incompatibilities](#)."

Drive Problems

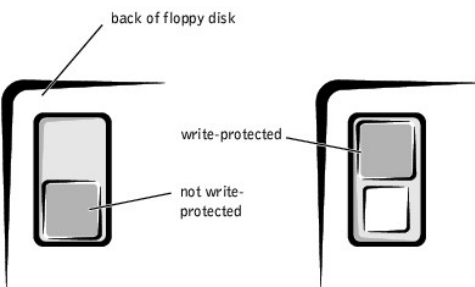
If you cannot save a file to a floppy disk

 **HINT:** See "[Accessing Help Files](#)" for information on saving files to a floppy disk.


Ensure that Windows recognizes the drive— In Windows XP, click the **Start** button, and then click **My Computer**. In Windows 2000, double-click the **My Computer** icon on the Windows desktop. If the floppy 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.

Test the drive with another floppy disk— Insert another floppy disk to eliminate the possibility that the original floppy disk is defective.

Cannot save files to a floppy disk— Ensure that the floppy disk is not full or write-protected (locked). See the following illustration.



If you cannot play a music CD or install a program from a CD

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

Ensure that Windows recognizes the drive— In Windows XP, click the **Start** button, and then click **My Computer**. In Windows 2000, double-click the **My Computer** icon on the Windows desktop. 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.

Test the drive with another CD— Insert another CD to eliminate the possibility that the original CD is defective.


Clean the disc— See the [Tell Me How](#) help file for instructions.

Adjust the Windows volume control— In Windows XP, click the speaker icon in the lower-right corner of your screen. In Windows 2000, double-click the speaker icon in the lower-right corner of your screen. Be sure that the volume is turned up and that the sound is not muted.

If headphones are connected to the front-panel headphone connector, check for sound from the headphones— Sound from the speakers is automatically disabled when headphones are connected to the computer's front-panel headphone connector.

Check the speakers and subwoofer— See "[Sound and Speaker Problems](#)."

If you cannot play a DVD movie


 **HINT:** Because of different worldwide file types, not all DVD titles work in all DVD drives.

Ensure that Windows recognizes the drive— In Windows XP, click the **Start** button, and then click **My Computer**. In Windows 2000, double-click the **My Computer** icon on the Windows 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.

Test the drive with another DVD— Insert another DVD to eliminate the possibility that the original DVD is defective.

Clean the disc— See the [Tell Me How](#) help file for instructions.

If the CD-RW drive stops writing

 **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.

Turn off Standby in Windows before writing to a CD-RW disc— See the [Tell Me How](#) help file or search for the keyword *standby* in the Help and Support Center (*Help* in Windows 2000). To access help files, see "[Accessing Help Files](#)."

Change the write speed to a slower rate— The CD-RW drive must receive a steady stream of data when writing. If the stream is interrupted, an error occurs. Closing all programs before writing to the CD-RW may also alleviate the problem.

If you have a hard drive problem

Run ScanDisk

1. In Windows XP click the **Start** button, and then click **My Computer**. In Windows 2000 double-click the **My Computer** icon on the Windows 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 "[Resolving Software and Hardware Incompatibilities](#)."

Network Problems

Check the network cable connector— Ensure that the network cable connector is firmly connected to the connector on the computer and the network wall jack as shown on the *START HERE* sheet for your computer.

Check the network lights on the back of the computer— A green light indicates a 10 Mbps network connection, and an orange light indicates a 100 Mbps network connection. The light blinks amber when there is any network traffic. If the light is dark, try replacing the network cable.

Restart the computer— Try to log on to the network again.

Contact your network administrator— Verify that your network settings are correct and that the network is functioning.

Check for interrupt request conflicts— See "[Resolving Software and Hardware Incompatibilities](#)."

Microsoft® Windows® Error Messages

x:\ is not accessible. The device is not ready— Insert a disk into the drive and try again.

A filename cannot contain any of the following characters: \ / : * ? " < > |— Do not use these characters in filenames.

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.

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 disk. Try copying the file to a blank disk or use a larger capacity disk.

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:

Windows XP

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.

Windows 2000

1. Click the **Start** button, point to **Settings**, and then click **Control Panel**.
2. Double-click the **Add/Remove Programs** icon.
3. Select the program that you want to remove.
4. Click **Change/Remove** and follow the prompts on the screen.
5. See the program documentation for installation instructions.

General Program Problems

A program crashes


See the software documentation— Many software manufacturers maintain websites with information that may help you to solve the problem.

A program stops responding

End the program


1. Simultaneously press <Ctrl><Shift><Esc>.
2. In Windows XP and Windows 2000, click the **Task Manager** button, click the **Applications** tab, and then select the program that is no longer responding.
3. Click the **End Task** button.

A program error causes the system to lock up

 **HINT:** ScanDisk may run when you restart the computer. Follow the instructions on the screen.

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 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 a Microsoft Windows shutdown.

A solid blue screen appears

 **HINT:** ScanDisk may run when you restart the computer. Follow the instructions on the screen.

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 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. The solid blue screen appears because you were not able to perform a proper Windows shutdown. You might lose data if you are unable to perform a Microsoft Windows shutdown.

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 to run in an environment more similar to older Windows operating system environments.

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

Internet Connection Problems

If you have a problem with your Internet connection

Review "Modem Problems."

Turn off call waiting (catch-phone)— See your telephone directory for instructions on deactivating this feature. Then adjust the dial-up networking connection properties.

Windows XP

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 to highlight your connection type in the displayed list.
4. Click the **Dialing Rules** tab, and then click the **Edit** button.
5. Click to place a checkmark in the **To Disable Call Waiting** box.
6. Select the disable code from the drop down menu (for example, *70).
7. Click **Apply**, and then click **OK**.

Windows 2000

1. Click the **Start** button, point to **Settings**, and then click **Control Panel**.
2. Double-click the **Phone and Modems Options** icon.
3. In the **Locations** window, select the location for which you want to disable call waiting, and then click **Edit**.
4. Ensure that **To disable call waiting, dial:** is checked and then select the proper code according to the information in your telephone directory.
5. Click **Apply** and then click **OK**.
6. Close the **Phone and Modems Options** window.
7. Close the Control Panel.

Be sure that you have subscribed to an Internet service provider— Contact an Internet service provider to subscribe.

E-Mail Problems

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


Resolving Other Technical Problems

Go to the Dell support website— Go to the Dell | Support website for help with general usage, installation, and troubleshooting questions.

E-mail Dell— Go to the Dell | Support website and then click **E-Mail Dell** in the **Communicate** list. Send an e-mail message to Dell about your problem; you can expect to receive an e-mail message from Dell within hours.

Call Dell— If you cannot solve your problem using the Dell | Support website or e-mail service, call Dell for technical assistance. See "Contacting Dell" in the *Dell Owner's Manual* for the correct number to call.

Reinstalling Drivers


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

A driver is a software program that allows a hardware device controller to function properly and to communicate with the computer. Sometimes you can fix a device problem by reinstalling its driver:

1. From the Windows desktop, insert the *Dell Dimension 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.
4. 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**.

 **HINT:** The *ResourceCD* displays drivers only for hardware that Dell installed at the time of purchase. If you installed any additional hardware, those drivers may not be displayed by the *ResourceCD*. If those drivers are not displayed, exit the ResourceCD program and refer to the documentation and drivers that came with that product.

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


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.

To view other contents on the *ResourceCD*:

1. Verify that your computer is selected in the **System Model** list.
2. Verify that your operating system is selected in the **Operating System** list.
3. Select the type of device in the **Device Type** list.

 **NOTICE:** The *ResourceCD* contains drivers for devices that are not part of your computer. Only reinstall the specific drivers for hardware included in your computer. Otherwise, your computer might not work correctly.

4. Select a topic in the **Topic** list.

If you select **Drivers** in the **Topic** list and a particular driver is not listed, then that driver is not required by your operating system.

Using the Windows XP Device Driver Rollback

If you install a new device driver that causes system instability and you need to replace a device driver with a previously installed version, the Windows XP Device Driver Rollback can replace the device driver. If you cannot reinstall your previous driver with the Driver Rollback process, then use [System Restore](#) to attempt to return your operating system to its previous operating state before the new device driver installation:

1. Click the **Start** button, and then right-click **My Computer**.
2. Click **Properties**.
3. Click the **Hardware** tab, and then click **Device Manager**.
4. In the **Device Manager** window, right-click the device for which the new driver was installed, and then click **Properties**.
5. Click the **Drivers** tab.
6. Click **Roll Back Driver**.

Resolving Software and Hardware Incompatibilities

Windows XP and Windows 2000 interrupt request (IRQ) conflicts occur if a device either is not detected during the operating system setup or is detected but incorrectly configured.

Windows XP

To check for conflicts on a computer running Windows XP:

1. Click the **Start** button, and then click **Control Panel**.
2. Click **Performance and Maintenance**, and then click **System**.
3. Click the **Hardware** tab, and then click the **Device Manager** button.
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 conflicting device listed to bring up the **Properties** window so you can determine what needs to be reconfigured or removed from the **Device Manager**.

Resolve these conflicts before checking specific devices.

6. Double-click the malfunctioning device type in the **Device Manager** list.
7. Double-click the icon for the specific device in the expanded list.

The **Properties** window appears.

8. Resolve any IRQ conflicts.

If there is an IRQ conflict, the **Device** status area in the **Properties** window reports what cards or devices are sharing the device's IRQ.

You can also use the Windows XP Hardware Troubleshooter. To use the troubleshooter, click the **Start** button and click **Help and Support**. Type *hardware troubleshooter* in the **Search** field, and then click the arrow to start the search. 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 then click **Next**.

Windows 2000

To check for conflicts on a computer running Windows 2000:

1. Click the **Start** button, point to **Settings**, and click **Control Panel**.
2. In the **Control Panel**, double-click **System**.
3. Click the **Hardware** tab.
4. Click **Device Manager**.
5. Click **View**, and then click **Resources by connection**.
6. Double-click **Interrupt request (IRQ)** to view the IRQ assignments.

Conflicts are indicated by a yellow exclamation point (!) beside the conflicting device or a red x if the device has been disabled.

7. Double-click any conflicting device listed to bring up the **Properties** window so you can determine what needs to be reconfigured or removed from the **Device Manager**. Resolve these conflicts before checking specific devices.
8. Double-click the malfunctioning device type in the **Device Manager** list.

9. Double-click the icon for the specific device in the expanded list.

The **Properties** window appears.

10. If there is an IRQ conflict, the **Device status** area in the **Properties** window reports what cards or devices are sharing the device's IRQ. Resolve the IRQ conflicts.

You can also use the Windows 2000 Hardware Troubleshooter. To use the troubleshooter, click the **Start** button and click **Help**. Click **Troubleshooting and Maintenance** on the **Contents** tab, click **Windows 2000 troubleshooters**, and then click **Hardware**. In the **Hardware Troubleshooter** list, click **I need to resolve a hardware conflict on my computer**, and then click **Next**.


Using System Restore

Windows XP provides a System Restore feature that allows you to return your computer to an earlier operating state if changes to the computer's hardware or software (including new hardware or program installations), or other system settings, have left the computer in an undesirable operating state. You can also undo the last System Restore.

System Restore automatically creates system checkpoints. You can also manually create your own checkpoints by creating Restore Points. To limit the amount of hard disk space used, older restore points will be automatically purged.

If your computer experiences an operating system problem, you can use System Restore from Safe Mode or Normal Mode to return your computer to an earlier operating state.

System Restore does not cause you to lose personal files stored in the **My Documents** folder, data files, or e-mail messages after restoring the computer to an earlier time. If you restore the computer to a point before you installed a program, the program's data files won't be lost, but you will have to reinstall the actual program again.

 **NOTICE:** It is important to make regular backups of your data files. System Restore does not monitor changes to or recover your data files. If the original data on the hard disk is accidentally erased or overwritten, or becomes inaccessible because of a hard disk malfunction, you will need your backup files to recover the lost or damaged data.

System Restore is enabled on your new computer. However, 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 then click **Control Panel**.
2. Click **Performance and Maintenance**.
3. Click **System**.
4. Click the **System Restore** tab.
5. Make sure that **Turn off System Restore** is unchecked.

Before proceeding with any System Restore function, Dell recommends that you thoroughly read Microsoft's information about using System Restore. To access this information:

1. Click the **Start** button, point to **All Programs**—> **Accessories**—> **System Tools**, and then click **System Restore**.
2. Click **Help** in the upper-right corner of the **Welcome to System Restore** screen.

Creating a Restore Point

Using the XP System Restore Wizard

In Windows XP, you can manually create restore points or you can use the System Restore Wizard to create the restore points for you. To use the System Restore Wizard, click the **Start** button, click **Help and Support**, click **System Restore**, and then follow the instructions on the screen. You can also create and name a restore point if you are logged on as the computer administrator or a user with administrator rights.

Manually Creating the Restore Points


1. Click the **Start** button, point to **All Programs**—> **Accessories**—> **System Tools**, and then click **System Restore**.
2. Click **Create a restore point**.
3. Click **Next**.
4. Type a name for your new restore point in the **Restore point description** field.

The present date and time are automatically added to your restore point.

5. Click **Create**.
6. Click **OK**.

Restoring the Computer to an Earlier Operating State

If problems occur after installing a device driver, first try using [Device Driver Rollback](#). If that is unsuccessful, then use System Restore.

 **NOTICE:** Before restoring the computer to an earlier time, 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. Be sure **Restore my computer to an earlier time** is selected, and then 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 then 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 want to use.

 **NOTICE:** 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.


5. Click **Next**.

The **Restoration Complete** screen appears after System Restore completes collecting data, and then the computer automatically 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 undoing 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**.

 **NOTICE:** 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.


3. Click **Next**.


The **System Restore** screen appears, and then the computer automatically restarts.

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

Reinstalling Windows XP


Before reinstalling the Windows XP operating system to correct a problem, try correcting the problem by performing a Windows XP [System Restore](#).

 **NOTICE:** The *Operating System* CD provides options for reinstalling your Windows XP operating system. The options can potentially overwrite files installed by Dell and possibly affect programs installed on your hard drive. Therefore, Dell does not recommend that you reinstall your operating system unless instructed to do so by a Dell technical support representative.

 **NOTICE:** To prevent conflicts with Windows XP, you must disable any virus protection software installed on your computer before you reinstall Windows XP.

1. Insert the *Operating System* CD into the CD or DVD drive.

Close any program or utility that may start to run after you insert the CD into the drive.

 **HINT:** The CD that you need to place in your CD or DVD drive is titled *Operating System*.

2. [Turn off the computer](#), and then turn the computer on again.
3. When the blue Dell logo appears, press <F12> immediately.

If you wait too long and the operating system logo appears, continue to wait until you see the Microsoft Windows desktop. Then shut down the computer and try again.

4. Use the arrow keys to select the CD-ROM option, and then press <Enter>.
5. When the **Windows XP Setup** screen appears, press <Enter> to select **To set up Windows now**.
6. Read the information in the **License Agreement** window, and then press <F8> on your keyboard to agree with the license information.
7. 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 go to step [15](#).

If you want to install a new copy of Windows XP, press <Esc> to select the fresh copy option, and then press <Enter> on the next screen to select the highlighted partition (recommended). Then follow the instructions on the screen.

The **Windows XP Setup** screen appears and Windows XP begins to copy files and install the devices. The computer automatically restarts multiple times before it requires additional input.

8. When the **Welcome to Microsoft** screen appears, click the green arrow icon at the bottom of the screen to continue. Follow the on-screen directions to finish.

9. When the **Regional Settings** screen appears, select the settings for your locale, and then click **Next**.
10. Enter your name and organization in the **Personalize Your Software** screen, and then click **Next**.
11. If you are reinstalling Windows XP Home Edition, enter a name for your computer when the **Computer Name** window appears, and then click **Next**.


If you are reinstalling Windows XP Professional, enter a name for your computer and a password when the **Computer Name and Administrator Password** window appears, and then click **Next**.


12. If you have a modem installed and the **Modem Dialing Information** screen appears, enter the requested information, and then click **Next**.
13. Enter the date, time, and time zone in the **Date and Time Settings** window, and then click **Next**.
14. If you have a network card in your computer, select the appropriate network settings. If you do not have a network card, this option does not appear.

Windows XP begins to install its components and configure the computer. The computer automatically restarts.

15. When the **Welcome to Microsoft** screen appears, click the green arrow icon at the bottom of the screen to continue. Follow the on-screen directions to finish.
16. Remove the CD from the drive.
17. Reinstall the appropriate drivers. See "[Reinstalling Drivers](#)."
18. Reinstall your virus protection software.


Reinstalling Windows 2000

 **NOTICE:** The *Operating System* CD provides options for reinstalling your Windows 2000 operating system. The options can potentially overwrite files installed by Dell and possibly affect programs installed on your hard drive. Therefore, Dell does not recommend that you reinstall your operating system unless instructed to do so by a Dell technical support representative.

 **NOTICE:** To prevent conflicts with Windows 2000, you must disable any virus protection software installed on your computer before you reinstall Windows 2000.

1. Insert the *Operating System* CD into the CD or DVD drive.

Close any program or utility that may start to run after you insert the CD into the drive.

 **HINT:** The CD that you need to place in your CD or DVD drive is titled *Operating System*.

2. [Turn off the computer](#), and then turn the computer on again.
3. When the blue Dell logo appears, press <F12> immediately.

If you wait too long and the operating system logo appears, continue to wait until you see the Microsoft Windows desktop. Then shut down the computer and try again.

4. Use the arrow keys to select the CD-ROM option, and then press <Enter>.
5. When the **Windows 2000 Setup** screen appears, ensure that the **To setup Win2000 now, press ENTER** option is highlighted. Then press <Enter>.
6. Read the information in the **License Agreement** screen, and then press <F8> to continue.
7. When the **Windows 2000 Professional Setup** screen appears, use the arrow keys to select the Windows 2000 partition option that you want. To continue, press the key specified in the partition option that you chose.
8. When the **Windows 2000 Professional Setup** screen reappears, use the arrow keys to select the type of filing system that you want Windows 2000 to use, and then press <Enter>.
9. Press <Enter> again to restart your computer.
10. Click **Next** when the **Welcome to the Windows 2000 Setup Wizard** screen appears.
11. When the **Regional Settings** screen appears, select the settings for your locale, and then click **Next**.
12. Enter your name and organization in the **Personalize Your Software** screen, and then click **Next**.
13. Type the Windows product key in the fields provided, and then click **Next**.

The product key is the bar code number found on the Microsoft Windows label, which is located behind the front-panel connector door as shown on the *START HERE* sheet for your computer.

14. When the **Computer Name and Administrator Password** screen appears, enter a name for your computer and a password, if desired. Then click **Next**.
15. Enter the date and time in the **Date and Time Settings** screen, and then click **Next**.

Windows 2000 now begins to install its components and configure the computer.

16. When the **Completing the Windows 2000 Setup Wizard** screen appears, remove the CD from the drive, and then click **Finish**.

The computer automatically restarts.

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Technical Specifications

Dell™ Dimension™ 4400

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Microprocessor	
Microprocessor type	Intel® Pentium® 4 microprocessor that runs at 1.50, 1.60, 1.70, 1.80, 1.90, 2.0, 2.20, or 2.40 GHz internally and 400 MHz externally
L1 cache	8 KB first-level
L2 cache	integrated 256-KB or 512-KB at full microprocessor speed

System Information	
System chip set	Intel 845 with DDR memory support
DMA channels	four
Interrupt levels	15
System BIOS chip	4 Mb (512 KB)
System clock	400-MHz data rate

Expansion Bus	
Bus types	PCI and AGP
Bus speed	PCI: 33 MHz; AGP: 66 MHz
AGP connector	one
AGP connector size	172 pins
AGP connector data width (maximum)	32 bits
AGP bus protocols	4x/2x modes at 1.5 V
PCI connectors	four
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
Maximum memory	1 GB
Memory type	DDR (non-ECC)
BIOS address	F8000h

Drives	
Externally accessible	two 5.25-inch bays two 3.5-inch bays
Internally accessible	two bays for 1-inch-high IDE hard drives
Available devices	ATA-66 or ATA-100 Ultra DMA hard drive, CD drive, Zip drive, DVD drive, DVD+RW drive, and CD-RW drive

Ports and Connectors	
Externally accessible:	
Serial	9-pin connector; 16550C-compatible

Parallel	25-hole connector (bidirectional)
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 two back-panel USB-compliant connectors
Headphone	front-panel miniature connector
Audio ¹	three miniature connectors for line-in, line-out, and microphone
Internally accessible:	
Primary IDE channel	40-pin connector on PCI local bus
Secondary IDE channel	40-pin connector on PCI local bus
Floppy drive	34-pin connector
¹ Present only on computers with integrated audio capabilities.	

Audio²	
Audio controller	ADI 1885
² Present only on computers with integrated audio capabilities.	

Video	
Video controller	AGP 4X

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; solid amber for possible internal power problem
Hard-drive access light	green
Diagnostic code lights	four bicolor (amber and green) located on back panel

Power	
DC power supply:	
Wattage	250 W
Heat dissipation	534 BTU (fully-loaded computer without monitor)
Voltage (switch-selectable on back panel)	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	42.5 x 18.1 x 44.7 cm (16.7 x 7.1 x 17.6 inches)
Weight	12.7 kg (28 lb)

Environmental	
Temperature:	
Operating	10° to 35°C (50° to 95°F) ³
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) ³
Storage	-15.2 to 10,670 m (-50 to 35,000 ft)

³ At 35°C (95°F), the maximum operating altitude is 914 m (3000 ft).

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System Setup Program

Dell™ Dimension™ 4400

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Overview

Each time you turn on or restart your computer system, the computer compares the hardware installed in the computer to the hardware listed in the configuration information stored in NVRAM on the system board. If the computer detects a discrepancy between the two, it generates error messages that identify the incorrect configuration settings. The computer then prompts you to enter the system setup program to correct the setting.

You can use the system setup program as follows:

- 1 To change the system configuration information after you add, change, or remove any hardware in your computer
- 1 To set or change user-selectable options—for example, the user password

Dell recommends that you write down the system setup program screen information for future reference.

The system setup screens are organized as follows:

- 1 At the top is a menu bar for accessing the main program screens.
- 1 The box on the left side of each screen lists options that define the installed hardware in the computer. Fields beside the options contain settings or values. You can change those that are enclosed in brackets. Values that are grayed out contain status information reported by the system.
- 1 The box on the right side of each screen displays help information for the option with a currently highlighted field.
- 1 The lower-right area lists keys and their functions for the currently displayed screen.

The menu bar provides access to the following screens:

- 1 [Main](#) screen — Provides settings for the basic computer configuration
- 1 [Advanced](#) screen — Provides detailed settings for some computer features
- 1 [Security](#) screen — Provides indications and settings for system password and setup password
- 1 [Power](#) screen — Provides settings for system power management features
- 1 [Boot](#) screen — Provides information about which device boots the computer
- 1 [Exit](#) screen — Provides selections for saving and loading the configurations and options

In addition to these screens, options identified by a right arrow provide access to submenus.

Entering the System Setup Program

1. Turn on (or restart) your computer.
2. When the blue DELL™ logo appears, press .

If you wait too long and the operating system begins to load into memory, let the system complete the load operation. Then shut down the computer and try again.

Main Screen

Dell Dimension 4400 Setup

Main	Advanced	Security	Power	Boot	Exit
BIOS Version	Axx	Item Specific Help			
Processor Type	Intel® Pentium® 4				
Processor Speed	(Displayed in MHz)				
System Bus Frequency	(Displayed in MHz)				
Cache RAM	(Displayed in KB)				
Service Tag	12ABC				
Total Memory	(Displayed in MB)				
Memory Bank 0	(Displayed in MB)				
Memory Bank 1	(Displayed in MB)				
System Time:	00:00:00	↕ Select Menu ↑ Select Item Enter Select ► Submenu F9 Setup Defaults F10 Save and Exit ESC Exit F1 Help			
System Date:	MO/DY/YR				

Option	Function
BIOS Version	Displays the version of the BIOS being used.
Processor Type	Displays the type of microprocessor installed.
Processor Speed	Displays the internal speed of the microprocessor.
System Bus Frequency	Displays the external speed of the microprocessor.
Cache RAM	Displays the cache random access memory.
Service Tag	Displays the service tag for the computer.
Total Memory	Displays the total computer memory.
Memory Bank 0	Displays the memory size and type in memory bank 0.
Memory Bank 1	Displays the memory size and type in memory bank 1.
System Time	Resets the time on the computer's internal clock.
System Date	Resets the time on the computer's internal calendar.

Advanced Screen

Dell Dimension 4400 Setup

Main	Advanced	Security	Power	Boot	Exit
Setup Warning	Item Specific Help				
Setting items on this menu to incorrect values may cause your system to malfunction					
<ul style="list-style-type: none"> ▶ Boot Configuration ▶ Peripheral Configuration ▶ IDE Configuration ▶ Diskette Configuration ▶ Event Log Configuration ▶ Video Configuration 					
	↕ Select Menu ↑ Select Item Enter Select ► Submenu F9 Setup Defaults F10 Save and Exit ESC Exit F1 Help				

Option	Function
Boot Configuration	Displays the Boot Configuration submenu.

Peripheral Configuration	Displays the Peripheral Configuration submenu.
IDE Configuration	Displays the IDE Configuration submenu.
Diskette Configuration	Displays the Diskette Configuration submenu.
Event Log Configuration	Displays the Event Log Configuration submenu.
Video Configuration	Displays the Video Configuration submenu.

Boot Configuration Submenu

Dell Dimension 4400 Setup		
Advanced		
Plug and Play OS	[No]	Item Specific Help
Reset Conf Data	[No]	
NumLock	[On]	
		↔ Select Menu ↑↓ Select Item Enter Select ► Submenu F9 Setup Defaults F10 Save and Exit ESC Exit F1 Help

Option	Function
Plug and Play OS	<p>Determines whether the computer is configured to support Plug and Play devices from the operating system or from the system BIOS. Leave this option set to Yes so the operating system handles all Plug and Play operation.</p> <p>Be sure that this option is set to No before running Dell Diagnostics. Otherwise, some diagnostics may incorrectly fail.</p> <p>The system setup program automatically checks the configuration of a Simple Boot Flag-compatible operating system at POST. Depending on its configuration, the system setup program may automatically set this option to No or Yes.</p>
Reset Config Data	Permits resetting Plug and Play configuration data to default values. Yes resets the data; No (default) retains the current Plug and Play settings. If set to Yes , configuration data reverts to default values the next time the computer boots. This option automatically reverts back to the No setting.
Numlock	Selects power-on state for Numlock.

Peripheral Configuration Submenu

Dell Dimension 4400 Setup

Advanced

Serial Port A:	[Auto]	Item Specific Help
Parallel Port:	[Auto]	
Mode:	[Bi-Directional]	
Onboard Audio Device	[Enabled]	
Legacy USB Support	[Disabled]	
		<ul style="list-style-type: none"> ↔ Select Menu ↑↓ Select Item Enter Select ► Submenu F9 Setup Defaults F10 Save and Exit ESC Exit F1 Help

Option	Function
Serial Port A	<p>Configures the serial port. Set this option to Auto (default), Enabled, or Disabled. Depending on the port setting, you can set the following additional options:</p> <ul style="list-style-type: none"> 1 Base I/O Address <p>If the port is set to Enabled, available I/O addresses are 3F8, 3E8, 2F8, and 2E8.</p> 1 Interrupt <p>If the port is set to Enabled, available interrupts are IRQ3 and IRQ4.</p>
Parallel Port	<p>Configures the parallel port. Set this option to Auto (default), Enabled, or Disabled. Depending on the port setting, you can set the following additional options:</p> <ul style="list-style-type: none"> 1 Mode <p>If the port is set to Auto or Enabled, available modes are Output Only, Bi-Directional (default), ECP, and EPP. See the device manufacturer's documentation for information on which mode to use before changing this setting.</p> 1 Base I/O Address <p>If the port is set to Enabled, available I/O addresses are 378 (default), 278, and 228.</p> 1 Interrupt <p>If the port is set to Enabled, available interrupts are 7 and 5.</p>
Onboard Audio Device	Sets the integrated audio controller to either Enabled (default) or Disabled .
Legacy USB Support	Set to Enabled (default) to allow support for legacy USB. Set to Disabled if legacy USB support is not desired.

IDE Configuration Submenu

Dell Dimension 4400 Setup

Advanced		Item Specific Help
IDE Controller	[Both]	
PCI IDE Bus Master	[Enabled]	
▶ Primary IDE Master	[WDC WD204BA]	
▶ Primary IDE Slave	[Not Installed]	
▶ Secondary IDE Master	[CRD-8480C]	
▶ Secondary IDE Slave	[Not Installed]	
		←→ Select Menu ↑↓ Select Item Enter Select ▶ Submenu F9 Setup Defaults F10 Save and Exit ESC Exit F1 Help

Option	Function
IDE Controller	Configures the integrated primary and secondary IDE controllers and detects the types of drives attached to them. If set to Primary , Secondary , or Both (default), the designated controller(s) are enabled, and the types of drives attached are displayed. If set to either Primary or Secondary , the other controller is not enabled and the IRQ it normally uses becomes available. If set to Disabled , the system cannot detect any drives attached to the controllers and displays None for all four IDE drive options.
PCI IDE Bus Master	Set to Disabled to disable the computer's PCI IDE Bus Master functions. Set Enabled (default) to enable the features.
Primary IDE Master	Identifies the first drive attached to the primary IDE interface, usually the boot hard drive. See " Primary IDE Master Submenu ."
Primary IDE Slave	Identifies the second drive attached to the primary IDE interface, usually a second hard drive. The format of this submenu is the same as the one described in " Primary IDE Master Submenu ."
Secondary IDE Master	Identifies the first drive attached to the secondary IDE interface, if there is one. The format of this submenu is the same as the one described in " Primary IDE Master Submenu ."
Secondary IDE Slave	Identifies the second drive attached to the secondary IDE interface, usually a CD, CD-RW, or DVD drive. The format of this submenu is the same as the one described in " Primary IDE Master Submenu ."

Primary IDE Master Submenu

Dell Dimension 4400 Setup

Advanced		Item Specific Help
Primary IDE Master		
Drive Installed	[WDC WD200BB-75AUA1]	
Type:	[Auto]	
Maximum Capacity	[20021 MB]	
Configuration Options Selected By BIOS		
LBA Mode Control	[Enabled]	
Multi-Sector Transfers	[16 Sectors]	
PIO Mode	[Mode 4]	
Ultra DMA	[Mode 5]	
Cable Detected	[80 Conductor]	
NOTE: The actual performance of the drive is dependent upon the operating system and IDE drivers.		←→ Select Menu ↑↓ Select Item Enter Select ▶ Submenu F9 Setup Defaults F10 Save and Exit ESC Exit F1 Help

Option	Function
Drive Installed	Displays the primary IDE device type.
Type	Specifies the type of hard drive. Settings for this option are User , Auto , CD-ROM , ATAPI Removable , Other ATAPI , IDE Removable , and None .

Maximum Capacity	Displays the maximum capacity of the primary IDE device.
LBA Mode Control	Displays whether LBA mode control is enabled or not on the primary IDE device.
Multi-Sector Transfers	Displays the multi-sector transfer setting of the primary IDE device.
PIO Mode	Displays the PIO mode setting of the primary IDE device.
Ultra DMA	Displays the ultra DMA setting of the primary IDE device.
Cable Detected	Displays the type of cable connected to the primary IDE device.

Diskette Configuration Submenu

Dell Dimension 4400 Setup

Advanced	
<p>Diskette Configuration</p> <p>Diskette Controller: [Enabled]</p> <p>Diskette A: [1.44/1.25 MB 3 1/2"]</p> <p>Diskette Write Protect: [Disabled]</p>	<p style="text-align: center;">Item Specific Help</p> <p> ←→ Select Menu ↑↓ Select Item Enter Select ► Submenu F9 Setup Defaults F10 Save and Exit ESC Exit F1 Help </p>

Option	Function
Diskette Controller	Configures the floppy drive interface. Options are Enabled (default) and Disabled .
Diskette A	Selects the floppy drive type from Not Installed , 360 KB 5 1/4" , 1.2 MB 5 1/4" , 720 KB 3 1/2" , 1.44/1.25 MB 3 1/2" , or 2.88 MB 3 1/2" .
Diskette Write Protect	Protects a floppy disk from being written to when set to Enabled . When this option is set to Disabled (default), the floppy disk is not protected unless the write-protect tab is in place.

Event Log Configuration Submenu

Dell Dimension 4400 Setup

Advanced	
<p>Event Log Configuration</p> <p>Event Log [Space Available]</p> <p>Event Log Validity [Valid]</p> <p>View Event Log</p> <p>Clear All Event Logs [No]</p> <p>Event Logging [Enabled]</p> <p>Mark Events As Read [Enter]</p>	<p style="text-align: center;">Item Specific Help</p> <p> ←→ Select Menu ↑↓ Select Item Enter Select ► Submenu F9 Setup Defaults F10 Save and Exit ESC Exit F1 Help </p>

Option	Function
Event Log	Displays the space available for the event log.
Event Log Validity	Displays the validity of the event log.
View Event Log	Press <Enter> to view the event log.
Clear All Event Logs	Clears all event logs when the computer restarts if set to Yes . Retains the event log information if set to No (default).
Event Logging	Enables or disables event logging.
Mark Events As Read	Press <Enter>, and then select Yes or No to mark DMI events as either read or unread.

Video Configuration Submenu

Dell Dimension 4400 Setup	
Advanced	
Video Configuration	Item Specific Help
AGP Aperture Size [64 MB] Primary Video Adapter [AGP]	
AGP Hardware Detected AGP Card	
NOTE: The actual performance of the video hardware is dependent upon the operating system and video drivers.	
	←→ Select Menu ↑↓ Select Item Enter Select ► Submenu F9 Setup Defaults F10 Save and Exit ESC Exit F1 Help

Option	Function
AGP Aperture Size	Sets the AGP aperture size as 64 MB (default) or 256 MB .
Primary Video Adapter	Supports the Windows® 2000 multiple-monitor feature. Select AGP (default) to specify the integrated AGP video controller as the primary video adapter. Select PCI to specify a PCI video card as the primary video adapter.
AGP Hardware Detected	Displays the type of AGP hardware detected by the computer.

Security Screen

Dell Dimension 4400 Setup

Main	Advanced	Security	Power	Boot	Exit
Security		Item Specific Help			
Supervisor Password Is: Not Installed					
User Password Is: Not Installed					
Set Supervisor Password [Enter]					
Set User Password [Enter]					
		↔ Select Menu ↑↓ Select Item Enter Select ► Submenu F9 Setup Defaults F10 Save and Exit ESC Exit F1 Help			

Option	Function
Supervisor Password Is	Indicates whether a supervisor password has been assigned.
User Password Is	Indicates whether a user password has been assigned.
Set Supervisor Password	Sets and confirms a supervisor password. If a supervisor password is set, a User Access Level option appears that enables you to set the user access level as Full (default), Limited , No Access , or View Only .
Set User Password	Sets and confirms a user password.

Power Screen

Dell Dimension 4400 Setup

Main	Advanced	Security	Power	Boot	Exit
ACPI Suspend State [S3 State]		Item Specific Help			
Restore on AC/Power Loss [Last State]					
The options below are not related to ACPI and may be ignored when shutting down using an ACPI OS.					
Wake on PME [Stay Off]					
		↔ Select Menu ↑↓ Select Item Enter Select ► Submenu F9 Setup Defaults F10 Save and Exit ESC Exit F1 Help			

Option	Function
ACPI Suspend State	Determines the ACPI suspend state. Options are State 1 and State 3 (default).
Restore on AC/Power Loss	Determines what state the computer enters when AC power is restored after a power loss. Settings are as follows: <ul style="list-style-type: none"> 1 Last State (default) Computer returns to the state it was in when power was lost. 1 Stay Off

	<p>Computer stays off when power is restored; you must press the power button to turn on the computer.</p> <p>Power On</p> <p>Computer turns on when power is restored.</p>
Wake on PME	Determines what state the computer enters when a PCI Power Management Enable wake-up event occurs. Settings are Power On and Stay Off (default).

Boot Screen

Dell Dimension 4400 Setup

Main	Advanced	Security	Power	Boot	Exit
Quiet Boot	[Enabled]				Item Specific Help
Quick Boot	[Enabled]				
Boot Device Priority					
Hard Disk Drives					
Removable Devices					
ATAPI CD-ROM Drives					
					<p>↔ Select Menu</p> <p>↑↓ Select Item</p> <p>Enter Select ► Submenu</p> <p>F9 Setup Defaults</p> <p>F10 Save and Exit</p> <p>ESC Exit</p> <p>F1 Help</p>

Option	Function
Quiet Boot	Enabled (default) displays the Dell logo during POST. Disabled displays the normal POST messages.
Quick Boot	When set to Enabled , this option shortens POST by eliminating some tests. If set to Disabled (default), all POST tests occur. The system setup program automatically checks the configuration of a Simple Boot Flag-compatible operating system at POST. Depending on its configuration, the system setup program may automatically set this option to Enabled or Disabled .

Exit Screen

Dell Dimension 4400 Setup

Main	Advanced	Security	Power	Boot	Exit
<ul style="list-style-type: none"> ▶ Exit Saving Changes ▶ Exit Discarding Changes ▶ Load Setup Defaults ▶ Load Custom Defaults ▶ Save Custom Defaults ▶ Discard Changes 					<p>Item Specific Help</p>
<ul style="list-style-type: none"> ↔ Select Menu ↑↓ Select Item Enter Select ▶ Submenu F9 Setup Defaults F10 Save and Exit ESC Exit F1 Help 					


Option	Function
Exit Saving Changes	Saves any changes you have made, exits the system setup program, and restarts the computer.
Exit Discarding Changes	Discards any changes you have made, exits the system setup program, and restarts the computer.
Load Setup Defaults	Discards any changes you have made and reverts all options to their defaults, but does not exit the system setup program.
Load Custom Defaults	Discards any changes you have made and reverts all options to their defaults, but does not exit the system setup program.
Save Custom Defaults	Saves any changes you have made, but does not exit the system setup program.
Discard Changes	Discards any changes you have made and reverts all options to their last saved settings, but does not exit the system setup program.

Clearing NVRAM


To clear NVRAM for all devices and restart the computer:

1. Enter the system setup program.
2. Press the right-arrow key to move to the **Advanced** menu.
3. Select the **Boot Configuration** submenu by pressing <Enter>.
4. Press the down-arrow key to highlight **Reset Config Data**. Then change the setting to **Yes** (see "[Boot Configuration Submenu](#)").
5. Press <F10> to exit the program and restart the computer.


Clearing Forgotten Passwords

 **CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions in "[Safety Instructions](#)."

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

 **NOTICE:** The following procedure resets all standard settings for your computer. Before proceeding, record all current settings so that you can restore them when you finish this procedure.

1. [Shut down the computer](#).
2. 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 power cable from your computer, and then press the power button to ground the system board.
4. [Open the computer cover](#).
5. Locate the [configuration jumper](#) on the system board, and move the jumper plug so that pins 2 and 3 are jumpered (to "clear" the password when you turn on the computer).
6. [Close the computer cover](#), connect your computer to an electrical outlet, and turn on the computer.

7. Access the [system setup program](#) and assign a new supervisor or setup password in the **Maintenance** menu.
 8. Exit and save the system setup program settings.
 9. After the computer boots, turn it off, and unplug it from the electrical outlet.
 10. Open the computer cover again.
 11. Move the configuration jumper plug so that pins 1 and 2 are jumpered (the "normal" setting).
 12. Close the computer cover, connect your computer to an electrical outlet, and turn on the computer.
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Technical Overview

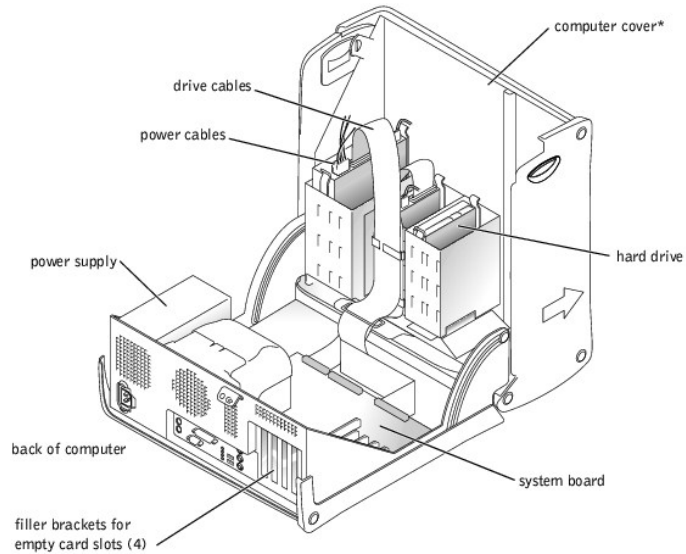
Dell™ Dimension™ 4400

- [Internal View](#)
 - [System Board Connectors and Sockets](#)
 - [Socketed Microprocessor](#)
 - [Power Supply](#)
 - [DC Power Connectors](#)
 - [IDE Interface Cable Connections for Dell-Installed Drives](#)
 - [Placement of Dell-Installed Cards](#)
-

Internal View

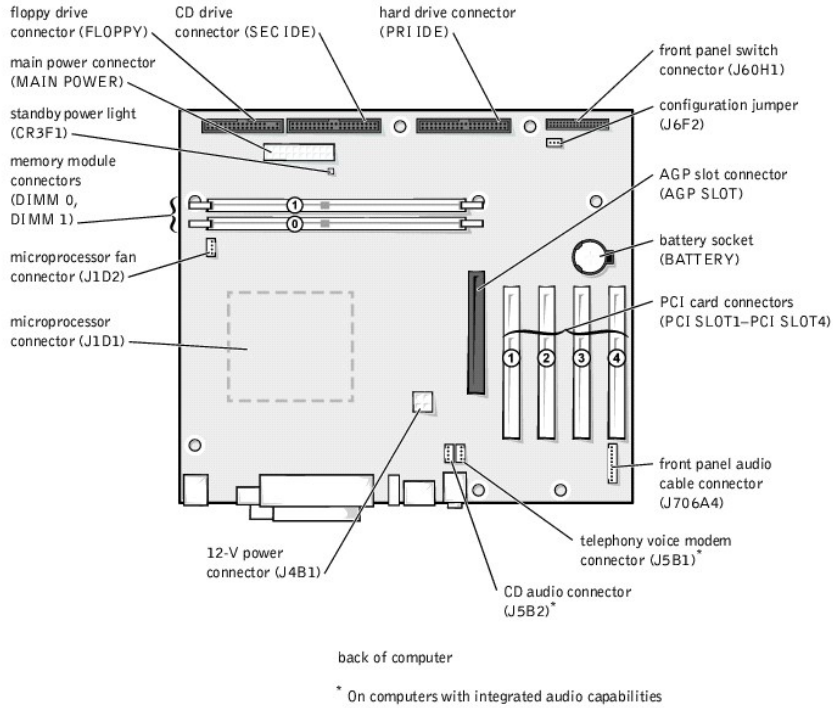
⚠ CAUTION: Before you begin any of the procedures in this section, read "[Safety Instructions](#)."

🔧 NOTICE: Be careful when [opening the computer cover](#) to ensure that you do not inadvertently disconnect cables from the system board.

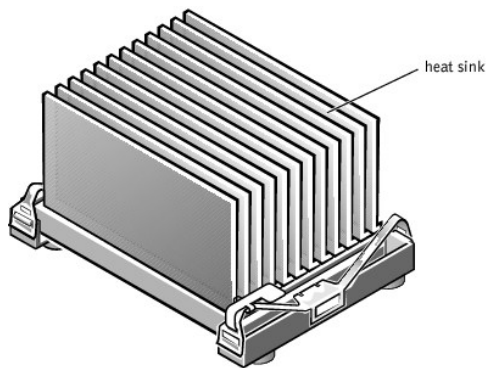


* Depending on the types of drives installed in your computer, the cover may not open as widely as shown in the figure.

System Board Connectors and Sockets



Socketed Microprocessor



The 478-pin, socketed Intel® Pentium® 4 microprocessor, shown above with the heat sink attached, contains an integrated 8-KB primary (L1) cache with a secondary (L2) 256-KB Advanced Transfer Cache that resides in the processor's core and runs at the processor's internal clock speed.

The socketed microprocessor inserts into the ZIF connector mounted on the [system board](#). A clip secures the heat sink to the connector.

Power Supply

The 250-W power supply can operate from an AC power source of 115 VAC at 60 Hz or 230 VAC at 50 Hz. The power supply provides the DC operating voltages and currents listed in the following table.

Output Voltage ¹	Regulation	Minimum Current (A)	Maximum Current (A) ²
+12 VDC	+/-5%	0.0	14.0 ³

+5 VDC	+/-5%	1.0/0.2 ⁴	22.0
+3.3 VDC	+/-5%	0.1/0.0 ⁵	18.0
-12 VDC	+/-10%	0.0	1.0
+5 VFP	+/-5%	0.0	2.0

¹Outputs meet and do not exceed SELV requirements per electrical standards (UL 1950, IEC 950, or EN60950 Par. 2.3).

²Maximum continuous combined load on +5 VDC and +3.3 VDC outputs do not exceed 150 W.

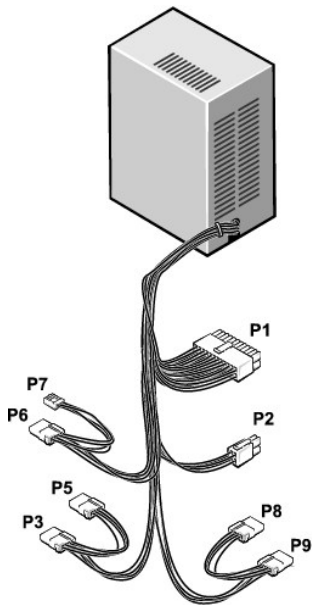
³Peak +12 VDC output power (up to 15.0 A) does not exceed 15 seconds in duration. Under this condition, tolerance on the +12 VDC output is allowed to be +/-10%.

⁴+5 VDC minimum load is 0.2 A when there is a minimum load of 0.3 A on the +12 VDC and 0.42 A on the +3.3 VDC outputs simultaneously. +5 V minimum load is 1 A for load transient tests.

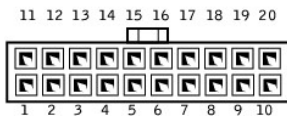
⁵In system configurations where +3.3 VDC is not used, all other outputs stay within regulation while the +3.3 VDC output is in a zero load condition.

DC Power Connectors

Power Supply DC Connector Pin Assignments



DC Power Connector P1



Pin Number	Signal name	18-AWG Wire
1	+3.3 VDC	Orange
2	+3.3 VDC	Orange
3	COM	Black
4	+5 VDC	Red
5	COM	Black
6	+5 VDC	Red

7	COM	Black
8	POK	Gray
9	+5 VFP	Purple
10	+12 VDC	Yellow
11	+3.3 VDC ⁷	Orange
12	-12 VDC	Blue
13	COM	Black
14	PS ON	Green
15	COM	Black
16	COM	Black
17	COM	Black
18	+5 VDC	N/C
19	+5 VCD	Red
20	+5 VCD	Red

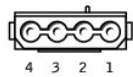
⁷Sense connector

DC Power Connector P2



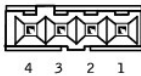
Pin Number	Signal Name	18-AWG Wire
1	COM	Black
2	COM	Black
3	+12 VDC	Yellow
4	+12 VDC	Yellow

DC Power Connectors P3, P5, P6, P8, and P9



Pin Number	Signal Name	18-AWG Wire
1	+12 VCD	Yellow
2	COM	Black
3	COM	Black
4	+5 VDC	Red

DC Power Connector P7



Pin Number	Signal Name	22-AWG Wire
1	+5 VCD	Red
2	COM	Black
3	COM	Black
4	+12 VDC	Yellow

IDE Interface Cable Connections for Dell-Installed Drives

IDE Channel IDE	Connector Location	Dell-Installed Drive
Primary IDE master	End connector on PRI IDE connector cable	Hard drive
Primary IDE slave	Middle connector on PRI IDE connector cable	Zip drive
Secondary IDE master	End connector on SEC IDE connector cable	CD or DVD drive
Secondary IDE slave	Middle connector on SEC IDE connector cable	CD-RW drive

Placement of Dell-Installed Cards

Card Connector	Card Description
AGP connector	Video
PCI1 connector	Sound
PCI2 connector	Modem
PCI3 connector	Network adapter, wireless network adapter, or swap box
PCI4 connector	1394 firewire

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Controls and Lights

Dell™ Dimension™ 4400

● [Front View](#)

● [Back View](#)

Front View



CD Activity Light

The CD activity light is on when the computer reads data from the CD drive.

CD Drive Eject Button

Press this button to eject your CD from the CD drive.

Floppy Drive Eject Button


Press this button to eject a disk from the floppy drive.

Hard-Drive Light

The hard-drive light is on when the computer reads data from or writes data to your hard drive.

Power Button

Press the power button to turn on the computer.

 **NOTICE:** To turn off your computer, perform a Windows® shutdown rather than pressing the power button. Otherwise, you may lose data.

Floppy Drive Light


The floppy drive light is on when the computer reads data from or writes data to the floppy drive.

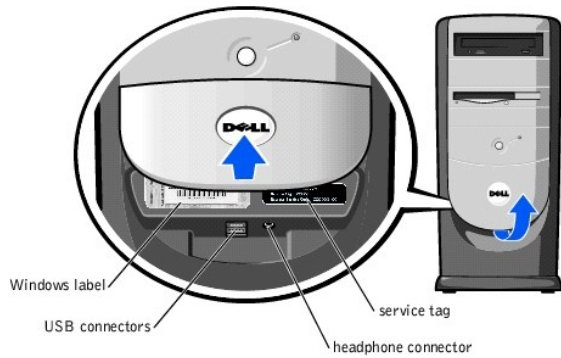
CD Audio Connector

Use the CD audio connector to attach headphones to the CD drive.

CD Volume Control Dial

Move the dial to adjust the volume of your audio CD.

 **HINT:** To prevent damage to your computer, the front door is designed to "break away" if it is lifted up too far. For instructions on how to reattach the door, see "[Reattaching the Front Door and Hinge Arms.](#)"



Windows Label

This Microsoft® Windows label provides the product key for your copy of Windows. You will need this information if you ever reinstall Windows.

USB Connectors

NOTICE: This system 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 system to unexpectedly reboot.

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.

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.

Headphone Connector

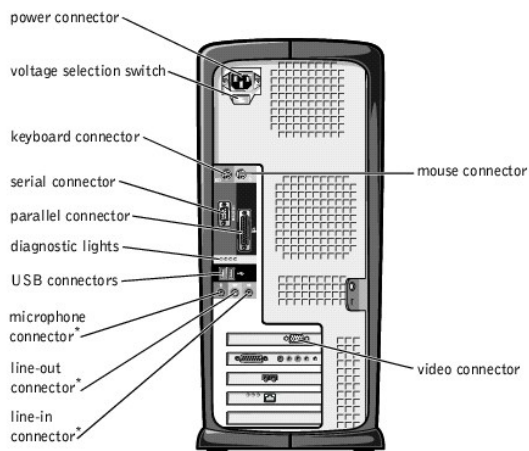
Use the headphone connector to attach headphones and most speakers for listening to all sounds in your computer, including your CD player and system sounds such as beeps.

Service Tag

HINT: Express Service may not be available in some countries.

This label lists your computer's service tag and your Express Service Code (if applicable). If you call Dell technical support, use your Express Service Code to route the call directly to the correct support personnel. The Dell technical support staff will ask for your service tag.

Back View




* On computers with integrated audio capabilities

Power Connector

Plug one end of your computer power cable into the power connector, and plug the other end into an electrical outlet.

Voltage Selection Switch

The voltage selection switch must be set to match the AC power available at your location. The switch should be set for 115 V in most of North and South America and some Far Eastern countries such as Japan, South Korea, and Taiwan. For most of Europe, the Middle East, and the Far East, the switch should be set for 230 V.

 **HINT:** The voltage selection switch must be set to the 115V position even though the AC supply in Japan is 100 V.

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.

Serial Connector

Connect a serial device, like a handheld device, to the serial connector.


Mouse Connector


Plug a standard mouse into the green mouse connector. If you have a USB mouse, plug it into a USB connector.

Keyboard Connector

If you have a standard keyboard, plug the keyboard into the purple keyboard connector. If you have a USB keyboard, plug it into a USB connector.

USB Connectors

 **NOTICE:** This system 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 system to unexpectedly reboot.

 **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.

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.

Line-Out Connector

Use the green line-out connector (available on computers with integrated sound) to attach headphones and most speakers with integrated amplifiers.

On computers with a sound card, the line-out connector is on the card.

Line-In Connector

Use the blue line-in connector (available on computers with integrated sound) to attach a record/playback device such as a cassette player, CD player, or VCR.

On computers with a sound card, the line-in connector is on the card.

Microphone Connector

Use the pink microphone connector (available on computers with integrated sound) to attach a personal computer microphone for voice or musical input into a sound or telephony program.

On computers with a sound card, the microphone connector is on the card.

Video Connector

Plug the cable from your monitor into the blue video connector.

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