

## **Dell™ Inspiron™ 7000**

[Specifications](#)

[Jumpers, Switches, Controls, and Indicators](#)

[Tech Notes](#)

[Documentation](#)

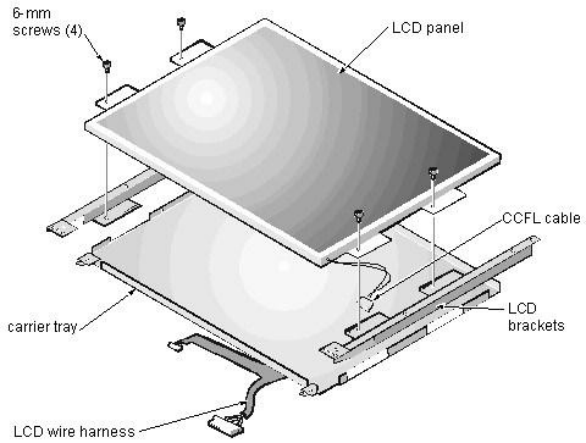
[Graphics](#)

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*Initial release: 26 Aug 1998*

*Last revised: 17 Aug 1999*

## 13.3-Inch LCD Brackets and Carrier Tray Removal: Dell™ Inspiron™ 7000



**NOTICE: The metal on the carrier tray is sharp. Be careful not to cut yourself.**

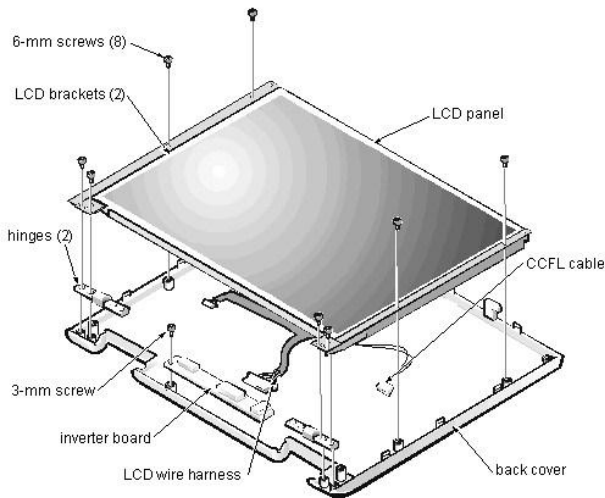
This procedure assumes that you have removed the [front bezel](#) and the [13.3-inch LCD panel](#). To remove the brackets from the LCD panel, follow these steps:

1. Detach the LCD wire harness from connector CN1 on the top left side of the inverter board.
2. Remove the (4) 6-mm screws from the sides of the mounting brackets.
3. Remove the brackets from the LCD panel.

To remove the 13.3-inch LCD panel from the carrier tray, follow these steps:

1. Remove any Kapton tape covering the CCFL cable.
2. Gently pull the cable out of its connector.
3. Remove any Kapton tape from the LCD wire harness.
4. Disconnect the LCD wire harness from the LCD panel.
5. Lift the LCD panel out of carrier tray.

## 13.3-Inch LCD Panel Removal: Dell™ Inspiron™ 7000



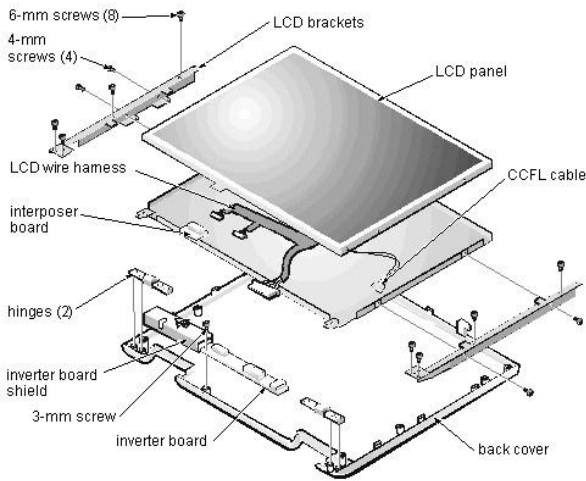
This procedure assumes that you have removed the [front bezel](#). Follow these steps to remove the 13.3-inch LCD panel:

1. Remove the (8) 6-mm screws that secure the left and right LCD brackets to the front plastic cover.
2. Detach the LCD wire harness from connector CN2 on the right side of inverter board.
3. If present, carefully remove the grounding tape between the inverter board and LCD panel.
4. Loosen the 3-mm screw securing the inverter board.
5. Lift the LCD panel, LCD brackets, and carrier tray, as a unit, out of the back cover.  
Rotate upward from the bottom of the panel because the top slides underneath the plastic hooks.
6. Remove the hinges, which were previously held in place by pressure and screws.

To remove the inverter board, follow these steps:

1. Remove the 3-mm screw securing the inverter board to the back cover.
2. If you have not removed the LCD panel, disconnect the LCD wire harness from connectors CN1 and CN2 on the inverter board.
3. Remove the inverter board from the back cover.

## 14.1-Inch LCD Panel, Brackets, and Carrier Tray Removal: Dell™ Inspiron™ 7000



This procedure assumes that you have removed the [front bezel](#). Follow these steps to remove the 14.1-inch LCD panel:

1. Remove the (8) 6-mm screws that secure the left and right LCD brackets to the front plastic cover.
2. Detach the CCFL cable from connector CN2 on the right side of inverter board.
3. Carefully remove the grounding tape between the inverter board and LCD panel.
4. Remove the 3-mm screw securing the inverter board, and unsnap the inverter board from the back cover.
5. Lift the LCD panel, LCD brackets, and inverter board as one unit out of the back cover.  
Rotate upward from the bottom of the panel because the top slides underneath the plastic hooks.
6. Remove the hinges, which were previously held in place by pressure and screws.

To remove the LCD brackets from the LCD panel, follow these steps:

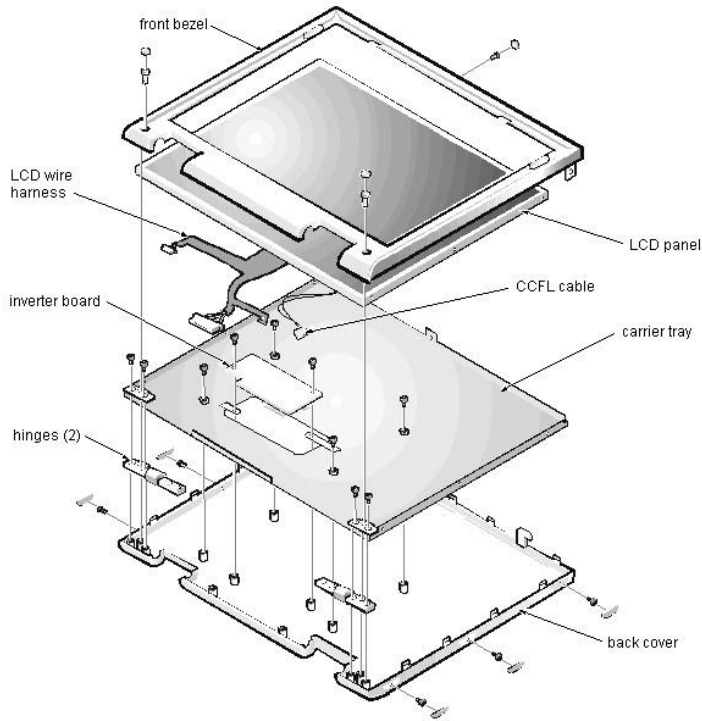
1. Remove the (4) 4-mm screws from the sides of the LCD brackets.
2. Remove the brackets from the LCD panel.

**NOTICE: The metal on the carrier tray is sharp. Be careful not to cut yourself.**

To remove the LCD panel from the carrier tray, follow these steps:

1. Lift the inverter board shield, pull it slightly away from the panel to expose the cabling, and detach the LCD wire harness from connector CN1 on the inverter board.
2. Remove any Kapton tape covering the CCFL cable on the back of the LCD.
3. Gently pull the interposer board off the connector to the LCD panel.
4. Lift the LCD panel up and remove any tape between the LCD wire harness and the carrier tray.
5. Disconnect the LCD wire harness from the LCD panel.
6. Lift the LCD panel out of the carrier tray.
7. Disconnect the LCD wire harness from the LCD panel.

## 15-inch LCD Panel Removal: Dell™ Inspiron™ 7000



To remove the 15-inch LCD panel, perform the following steps:

1. Turn the computer over and remove the 4 screws from the bottom of the computer.
2. Turn the computer back over and open the display.
3. Remove the plastic hinge covers.
4. Insert a small flat-blade screwdriver or a similar plastic tool along the top-right edge of the keyboard, above the row of function keys. Working from right to left, free the keyboard by prying it toward the front of the unit. When free, lift the top of the keyboard slightly to clear the palmrest assembly.
5. Remove the keyboard bracket (located in the upper-right corner of the keyboard).
6. Remove the four screws that secure the two hinges.
7. Unplug the LCD wire harness and lift the assembly off the computer base.

To remove the front bezel, follow these steps:

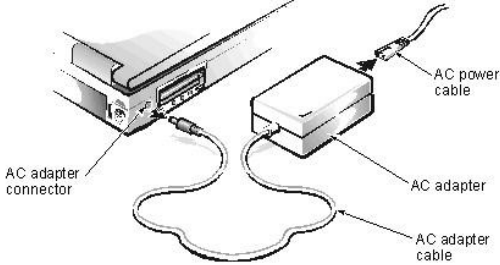
1. Remove the two rubber screw covers and screws on the LCD near the hinge. Remove the remaining three plastic screw covers and screws, one on either side and one in the front.
2. With all screws removed, unsnap the front bezel from the back cover and remove the bezel from the assembly.

To remove the LCD panel, hinges, and inverter board, follow these steps:

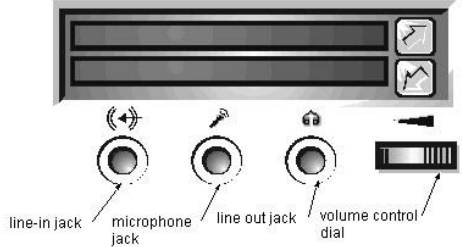
1. Remove the 4 remaining screw covers and screws on the sides of the LCD.
2. With all screws removed, lift the LCD panel out and disconnect the CCFL wire from the inverter board.
3. Detach the LCD wire harness from connector CN2 on the right side of the inverter board.
4. Carefully remove the grounding tape between the inverter board and the LCD panel.
5. Remove the two 2.5-mm screws securing the inverter board to the back cover.
6. Remove the inverter board from the back cover.

To reassemble, perform the steps in reverse order.

**AC Adapter: Dell™ Inspiron™ 7000**



**Audio Jacks: Dell™ Inspiron™ 7000**




## Audio Devices: Dell™ Inspiron™ 7000

You can connect speakers, a microphone, headphones, and record/playback devices such as cassette players, CD players, and VCRs to the sound jacks on the computer. Dell recommends using amplified speakers for the best sound.

Connect headphones or speakers to the line-out jack on the far right of the sound jacks. Connect a microphone to the microphone jack in the middle. Connect record/playback devices such as cassette players, CD players, and VCRs to the line-in jack on the far left.

See your Microsoft® Windows® 98 documentation for the location of sound applications such as mixers and volume control.

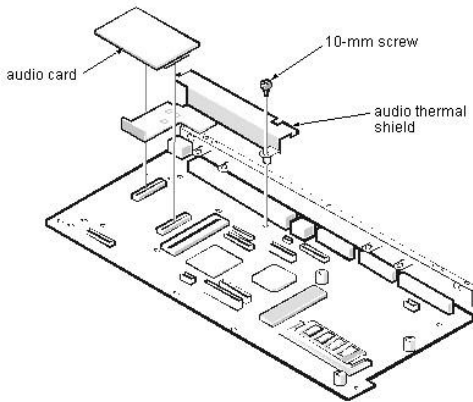
You can control the sound coming from the external speakers and from the computer's built-in speakers with the volume control dial. You can also use the keyboard to adjust the volumes. Press <Fn><Page Down> to lower the volume. Press <Fn><Page Up> to increase the volume. Press <Fn><End> to enable or disable both the built-in and external speakers.

 **NOTE:** *If no sound comes from the speakers, make sure that the sound is not disabled by pressing <Fn><End> and checking the volume control dial.*

See [Reinstalling Utilities and Drivers](#) for information about reinstalling the audio drivers. The drivers are located on the *Dell Inspiron 7000 System Software CD*.



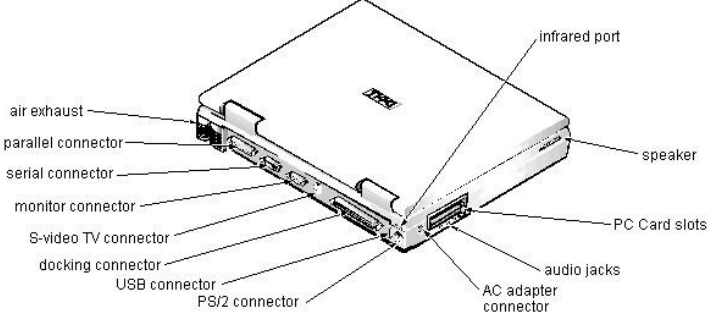
## Audio Card and Audio Thermal Shield Removal: Dell™ Inspiron™ 7000



This procedure assumes that you have removed the [system board](#) from the plastic case and have removed the [PC Card cage](#) from the system board. To remove the audio card and audio thermal shield, follow these steps:

1. Gently pull the audio card off of connectors JP12 and JP13 on the system board. Do not rock the card to remove it, because this may damage the connectors.
2. Remove the 10-mm screw securing the audio thermal shield, and then remove the shield.

**Component Locations (Back View): Dell™ Inspiron™ 7000**

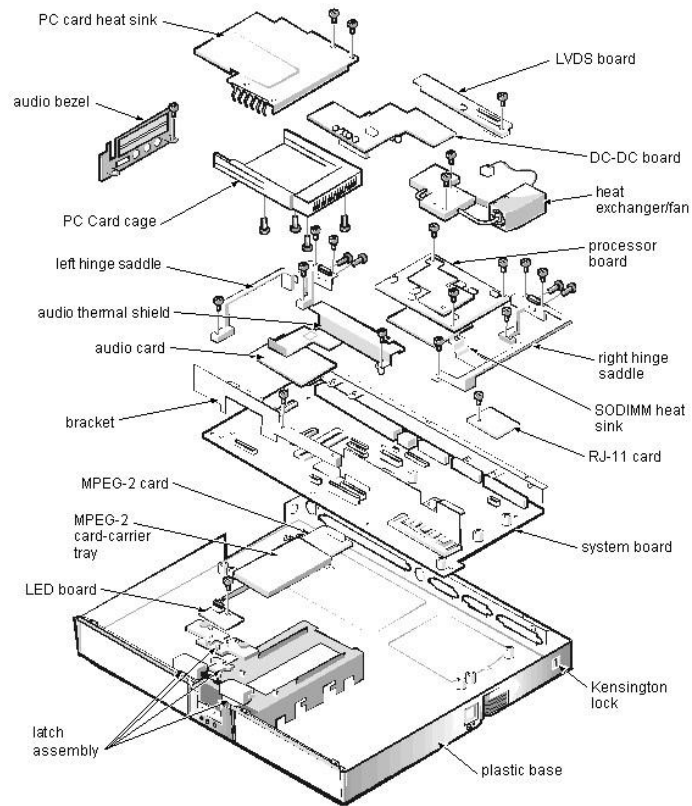


# Base Assembly Component Removal: Dell™ Inspiron™ 7000

[Base Assembly](#) | [Base Assembly Component Removal](#)

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## Base Assembly



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## Base Assembly Component Removal

The following procedures assume that the [keyboard](#), [thermal shield](#), [display assembly](#), and [palmrest assembly](#) have been removed.

[PC Card Heat Sink Removal](#)

[Heat Exchanger/Fan Removal](#)

[DC-DC Board Removal](#)

[LVDS Board Removal](#)

[Processor Board and Memory Module Removal](#)

[Hinge Saddle Removal](#)

[RJ-11 Card Removal](#)

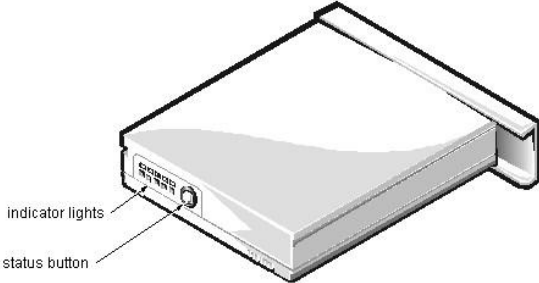
[System Board Removal](#)

[PC Card Cage Removal](#)

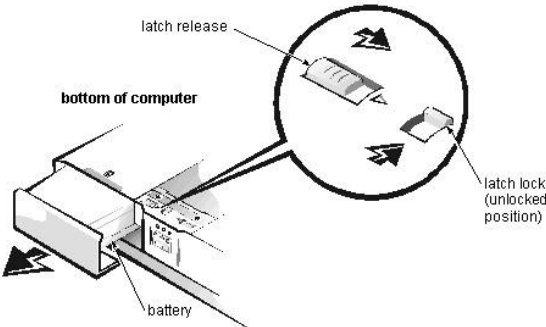
[Audio Card and Audio Thermal Shield Removal](#)

[Latch Assembly Removal](#)

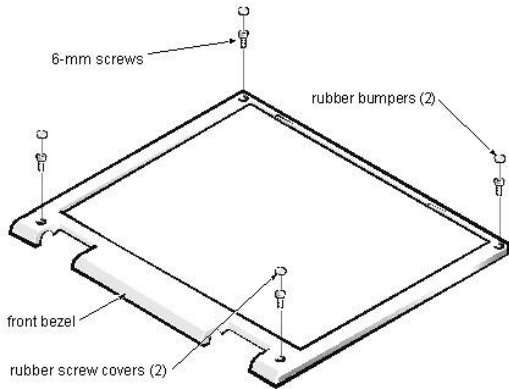
**Battery Charge Gauge: Dell™ Inspiron™ 7000**



# Removing and Installing a Battery: Dell™ Inspiron™ 7000



## Front Bezel Removal: Dell™ Inspiron™ 7000

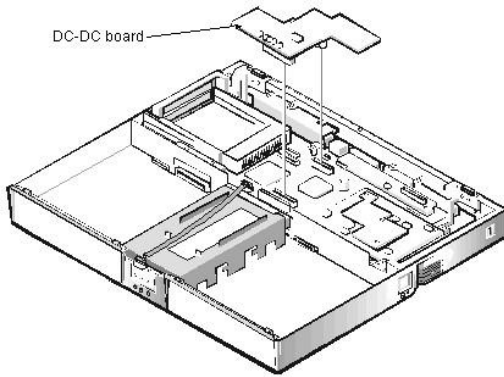


This procedure assumes that you have removed the [display assembly](#) from the computer base. To remove the front bezel, follow these steps:

1. Use a dental pick to pry the rubber screw covers off of the bottom 2 screws and the rubber bumpers off of the top 2 screws.
2. Remove the (4) 6-mm screws from the front bezel.
3. Unsnap the front bezel from the back cover and remove it from the assembly.  
Carefully insert your fingers between the LCD panel and the bezel. Roll the plastic up slightly to insert your fingers further in, and then lift upward to free the snaps. Start at the middle bottom and then work around.

When replacing the bezel, ensure that the LCD wire harness is routed correctly through the openings in the back cover and is not pinched.

## DC-DC Board Removal: Dell™ Inspiron™ 7000



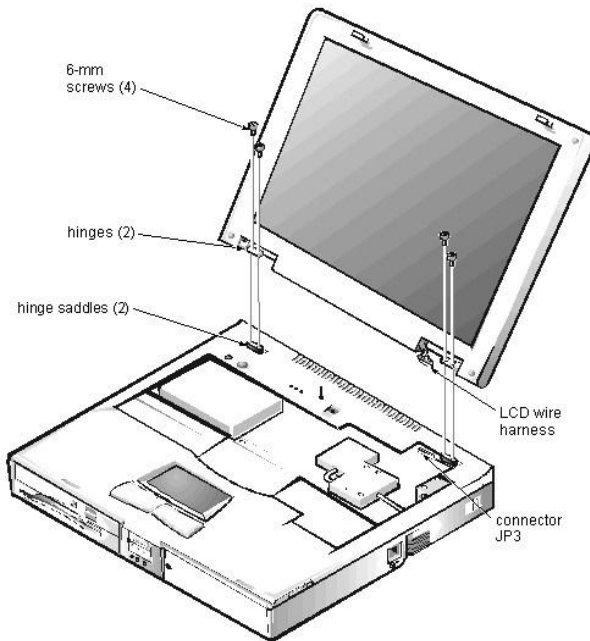
To remove the DC-DC board, gently pull the DC-DC board off of connectors JP11 and JP16 on the system board. Do not rock the board to remove it, because this may damage the connectors.

# Display Assembly and Display Assembly Component Removal: Dell™ Inspiron™ 7000

[Display Assembly Removal](#) | [Display Assembly Component Removal](#)

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## Display Assembly Removal



This procedure assumes that you have removed the [keyboard](#) and [thermal shield](#). To remove the display assembly from the computer, follow these steps:

1. Disconnect the LCD wire harness from connector JP3.  
Use a dental pick or flat-blade screwdriver to pry up each end of the connector to release it.
  2. Close the display.
  3. Remove the (4) 6-mm screws that secure the 2 hinges.
  4. Unlatch the display assembly and lift the assembly off the computer base.
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## Display Assembly Component Removal

[Front Bezel Removal](#)

[13.3-Inch LCD Panel Removal](#)

[13.3-Inch LCD Brackets and Carrier Tray Removal](#)

[14.1-Inch LCD Panel, Brackets and Carrier Tray Removal](#)

[15-Inch LCD Panel Removal](#)



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## Documentation: Dell™ Inspiron™ 7000


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

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### Printed Documentation

- You must right-click the link for a portable document format (PDF) file and save the file to your hard-disk drive. Attempting to link directly to large PDF files causes your system to freeze.

To save PDF files (files with an extension of **.pdf**) to your hard-disk 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-disk drive.

 **NOTES:** PDF files require Adobe™ Acrobat Reader, which can be downloaded from the 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.

Right-click only the following links:

[Dell Inspiron 7000 Reference and Troubleshooting Guide \(.pdf\)](#)

[Dell Inspiron 7000 Series Installing Drivers and Utilities \(Windows 98\) \(.pdf\)](#)

[Dell Inspiron 7000 Series Windows NT 4.0 Workstation Installing Drivers and Utilities \(.pdf\)](#)

[Dell Inspiron 7000 Port Replicator User's Guide \(.pdf\)](#)

[Dell Inspiron 7000 Service Manual \(.pdf\)](#)

[Dell Inspiron Systems Setup Guide \(.pdf\)](#)

[Dell Inspiron 7000 Portable Computer Documentation Update \(.pdf\)](#)

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### Online Documentation

- Compiled HTML Help files (files with an extension of **.chm**) require Microsoft Internet Explorer 4.0 or later.

#### Downloading the Help and Associated Files

1. Right-click the following link to the **popup.ocx** file:  
[popup.ocx](#)
2. Click **Save Target As** in Microsoft Internet Explorer or **Save Link As** in Netscape Navigator, and specify **c:\windows\system** on your hard-disk drive.
3. Click the **Start** button on the Microsoft Windows® desktop, and then click **Run**.
4. Type `regsvr32 popup.ocx` and then press <Enter>.
5. Click **OK** when the installation is complete.
6. Right-click the following link to the Help file:  
[Dell Inspiron 7000 Series Help \(.chm\) \(1179 KB\)](#)
7. Click **Save Target As** in Microsoft Internet Explorer or **Save Link As** in Netscape Navigator, and specify a location on your hard-disk drive.

#### Viewing the Help File

To view the Help file, perform the following steps:

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 Help file.
  3. Double-click the file (**7000help.chm**).
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## Reinstalling Utilities and Drivers: Dell™ Inspiron™ 7000

To reinstall utilities and drivers on a computer running the Microsoft® Windows® 98 operating system, use the program diskette set from Dell or the backup diskettes that you made after receiving the computer.

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


- 1 The *Microsoft Windows 98* CD
- 1 The *Microsoft Boot Disk Windows 98 Series* diskette
- 1 The *Dell Inspiron 7000 System Software* CD

[Reinstalling Video Drivers](#) | [Reinstalling Touch Pad Drivers](#) | [Reinstalling Audio Drivers](#) | [Reinstalling Internal Modem Drivers](#) | [Reinstalling DVD-ROM Decoder Drivers](#) | [Creating the Save-to-Disk Suspend File](#) | [Reinstalling the System User's Guide](#)

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### Reinstalling Video Drivers

Video drivers control features such as screen resolution and the number of screen colors.

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

To reinstall the video drivers, perform the following steps:

1. Save your work in all open application programs, because you will need to restart your computer at the end of this procedure to complete the installation.
  2. Insert the *Dell Inspiron 7000 System Software CD* into the CD-ROM or DVD-ROM drive.
  3. Click the **Start** button, and then click **Run**.
  4. In the **Run** dialog box, type `x:\video\setup.exe`, where `x` is the letter designation for the CD-ROM drive.
  5. Click **OK**.
  6. When the **ATI Setup** window appears, click **Finish**.  
The video files are copied to your hard-disk drive.
  7. When prompted, click **Yes** to restart the computer.
- 

### Reinstalling Touch Pad Drivers

Touch pad drivers and associated utilities allow you to customize the operation of your touch pad and cursor features. To reinstall the touch pad drivers, perform the following steps:

1. Save your work in all open application programs, because you will need to restart your computer at the end of this procedure to complete the installation.
  2. Insert the *Dell Inspiron 7000 System Software CD* into the CD-ROM or DVD-ROM drive.
  3. Click the **Start** button, and then click **Run**.
  4. In the **Run** dialog box, type `x:\touchpad\setup.exe`, where `x` is the letter designation for the CD-ROM drive.
  5. Click **OK**.
  6. At the **Welcome** screen, click **Next>**.
  7. At the **Choose Destination Location** window, click **Next>**.
  8. At the **Start Copying Files** window, click **Next>**.  
The touch pad files are copied to your hard-disk drive.
  9. At the **Setup Complete** window, click **Yes, I want to restart my computer now**, and then click **Finish**.
- 

### Reinstalling Audio Drivers

Audio drivers allow you to customize the sound features of your computer. To reinstall the audio drivers, perform the following steps:

1. Save your work in all open application programs, because you will need to restart your computer at the end of this procedure to complete the installation.
2. Insert the *Dell Inspiron 7000 System Software CD* into the CD-ROM or DVD-ROM drive.
3. Click the **Start** button, and then click **Run**.
4. In the **Run** dialog box, type `x:\audio\setup.exe` where `x` is the letter designation for the CD-ROM drive.
5. Click **OK**.
6. At the **Main** menu, click **Upgrade Drivers** and then click **Next>**.  
The audio files are copied to your hard-disk drive.
7. When prompted, click **Yes, I want to restart my computer now**, and then click **Finish**.
8. After Windows 98 restarts, the **New Hardware Wizard** appears.
9. Click **Next>**.
10. At the next screen, click **Search for the best driver for your device**, and then click **Next>**.
11. At the next screen, click **Specify a location**, and specify the **Audio** folder on your CD-ROM or DVD-ROM drive.
12. Click **Next>**.
13. When the driver has been detected, click **Next>**.  
Messages that indicate that files are being copied and driver information is being built appear on your screen.

14. When prompted, click **Finish**.  
The **New hardware found** window appears, the driver is installed, and the installation is completed.

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## Reinstalling Internal Modem Drivers

Modem drivers allow you to customize the operation of your optional internal modem. If your computer has an internal modem, perform the following steps to install the drivers:

1. Save your work in all open application programs, because you will need to restart your computer at the end of this procedure to complete the installation.
2. Insert the *Dell Inspiron 7000 System Software CD* into the CD-ROM or DVD-ROM drive.
3. Click the **Start** button, and then click **Run**.
4. In the **Run** dialog box, type `x:\modem\setup.exe`, where *x* is the letter designation for the CD-ROM drive.
5. Click **OK**.
6. At the **Welcome Screen**, click **Next>**.  
The internal modem files are copied to your hard-disk drive.
7. At the **Setup Complete** window, click **Yes, I want to restart my computer now**, and then click **Finish**.  
The **New hardware found** window appears and states that the system has detected the new hardware.
8. Click **Remove** and then click **OK**.

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## Reinstalling DVD-ROM Decoder Drivers

DVD-ROM decoder drivers allow the MPEG decoder on your optional DVD-ROM drive to decode MPEG files, such as DVD movies. If your computer has a DVD-ROM drive, perform the following steps to install the drivers:

1. Save your work in all open application programs, because you will need to restart your computer at the end of this procedure to complete the installation.
2. Restart your computer.
3. Press <F2> at the Dell logo screen.  
The **Setup** menu window appears.
4. Press <Tab> to highlight **System Devices**, and verify that the option **Internal MPEGii** is enabled.
5. Insert the *Dell Inspiron 7000 System Software CD* into the DVD-ROM drive.
6. At the **Welcome** screen, click **Next>**.
7. Click the **Start** button, and then click **Run**.
8. In the **Run** dialog box, type `x:\dvd[mpeg]\setup.exe`, where *x* is the letter designation for the CD-ROM drive.
9. Click **OK**.


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## Creating the Save-to-Disk Suspend File

If you are installing a new hard-disk drive or if you are rebuilding a hard-disk drive that has corrupted software and you want to be able to use the save-to-disk suspend mode, you must use the **phdisk.exe** utility on your System Utilities diskette to create a save-to-disk suspend file. When save-to-disk suspend mode is activated, all system data is stored in this file.

To create the save-to-disk suspend file, perform the following steps:

1. Insert the *Microsoft Boot Disk Windows 98 Series* diskette into the diskette drive.
2. Restart the system.
3. When the **Microsoft Windows 98 Startup Menu** appears, select **Start computer with CD-ROM Support** and press <Enter>.
4. When the MS-DOS® prompt appears, insert the *Dell Inspiron 7000 System Software CD* into the CD-ROM or DVD-ROM drive.
5. At the MS-DOS prompt, type `d:` and press <Enter>, where *d* is the drive letter for your CD-ROM or DVD-ROM drive.  
Your MS-DOS prompt changes from an `A:\>` to a `D:\>`, assuming *D* is the drive letter for your CD-ROM or DVD-ROM drive.
6. Type `cd\utility` and press <Enter>.
7. Type `phdisk /create /file` and press <Enter>.

 **NOTE:** Make sure that there is a space between `phdisk /create` and `/file`.

The utility calculates the size of the file, in kilobytes, based on the amount of system memory in your computer, plus 2 MB to handle video memory and additional system requirements.

8. Follow the instructions on your screen to create the save-to-disk suspend file.  
To check the size of the save-to-disk suspend file, at an MS-DOS prompt type `phdisk /info` and press <Enter>.

If you need to delete the save-to-disk suspend file, at an MS-DOS prompt type `phdisk /delete /file` and press <Enter>.

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## Reinstalling the System User's Guide

If needed, you can download the *Dell Inspiron 7000 User's Guide* from Dell's World Wide Web site at <http://www.dell.com/>:

1. Click the **Support** icon.  
The Dell Support main menu appears.

2. Click **Troubleshoot Your Dell System**, and then locate the link to the Inspiron page.
3. Select **7000**.
4. Click **Technical Information**, and then click **Documentation**.
5. Click **System User's Guide**.
6. When prompted, save the file to your hard-disk drive.

# Reinstalling Utilities and Drivers for Microsoft® Windows® 98: Dell™ Inspiron™ 7000

[Overview](#) | [Reinstalling Video Drivers](#) | [Reinstalling Touch Pad Drivers](#) | [Reinstalling Audio Drivers](#) | [Reinstalling Internal Modem Drivers](#) | [Reinstalling DVD-ROM Decoder Drivers](#) | [Reinstalling the Hardware DVD Decoder Driver](#) | [Reinstalling Softex BayManager Software](#) | [Creating the Save-to-Disk Suspend File](#) | [Reinstalling the System Help File](#)

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## Overview


To reinstall utilities and drivers on a computer running the Microsoft Windows 98 operating system, use the program diskette set from Dell or the backup diskettes that you made after receiving the computer.

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

- 1 The *Microsoft Windows 98* CD
  - 1 The *Microsoft Boot Disk Windows 98 Series* diskette
  - 1 The *Dell Inspiron 7000 System Software* CD
- 

## Reinstalling Video Drivers

Video drivers control features such as screen resolution and the number of screen colors.

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

To reinstall the video drivers, perform the following steps:

1. Save your work in all open application programs, because you will need to restart your computer at the end of this procedure to complete the installation.
  2. Insert the *Dell Inspiron 7000 System Software* CD into the CD-ROM or DVD-ROM drive.
  3. If the **Welcome to Windows 98** screen appears, click the **x** in the upper-right corner of the screen to close it and continue with the installation.
  4. Click the **Start** button, and then click **Run**.
  5. In the **Run** dialog box, type `x:\video\setup.exe`, where *x* is the letter designation for the CD-ROM or DVD-ROM drive.  
The CD-ROM or DVD-ROM drive letter is usually *D*.
  6. Click **OK**.
  7. At the **Welcome** screen, click **Next >**.
  8. At the **Main Menu**, the **Upgrade Drivers** radio button is selected. Click **Next >**.
  9. The video files are copied to your hard-disk drive.
- 

## Reinstalling Touch Pad Drivers

Touch pad drivers and associated utilities allow you to customize the operation of your touch pad and cursor features. To reinstall the touch pad drivers, perform the following steps:

1. Save your work in all open application programs, because you will need to restart your computer at the end of this procedure to complete the installation.
2. Insert the *Dell Inspiron 7000 System Software* CD into the CD-ROM or DVD-ROM drive.
3. If the **Welcome to Windows 98** screen appears, click the **x** in the upper-right corner of the screen to close it and continue with the installation.
4. Click the **Start** button, and then click **Run**.
5. In the **Run** dialog box, type `x:\touchpad\setup.exe`, where *x* is the letter designation for the CD-ROM or DVD-ROM drive.  
The CD-ROM or DVD-ROM drive letter is usually *D*.
6. Click **OK**.
7. At the **Welcome** screen, click **Next>**.  
At the **Choose Destination Location** window, click **Next>**.
8. At the **Start Copying Files** window, click **Next>**.
9. The touch pad files are copied to your hard-disk drive.
10. At the **Setup Complete** window, click **Yes, I want to restart my computer now**, and then click **Finish**.
- 11.

The **Information about your TouchPad** window appears. If you do not want this window to appear each time you start the computer, uncheck the box that says **Show this message the next time Windows starts**. Then click **Close**.

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## Reinstalling Audio Drivers

Audio drivers allow you to customize the sound features of your computer. To reinstall the audio drivers, perform the following steps:

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

2. Insert the *Dell Inspiron 7000 System Software* CD into the CD-ROM or DVD-ROM drive.
  3. If the **Welcome to Windows 98** screen appears, click the **x** in the upper-right corner of the screen to close it and continue with the installation.
  4. Click the **Start** button, and then click **Run**.
  5. In the **Run** dialog box, type `x:\audio\setup.exe` where *x* is the letter designation for the CD-ROM or DVD-ROM drive.  
The CD-ROM or DVD-ROM drive letter is usually *D*.
  6. Click **OK**.
  7. At the **Welcome** screen, click **Next >**.
  8. At the **Main** menu, click **Upgrade Drivers** and then click **Next >**.  
The audio files are copied to your hard-disk drive.
  9. When prompted, be sure that the **Yes, I want to restart my computer now** radio button is selected, and then click **Finish**.  
After Windows 98 restarts, the **New Hardware Wizard** appears.
  10. Click **Next>**.
  11. At the next screen, be sure that the **Search for the best driver for your device (Recommended)** radio button is selected and then click **Next >**.
  12. When the **Add New Hardware Wizard** window appears, deselect **Floppy Disk Drives** and select **Specify a Location**.
  13. Type `d:\audio` in the **Path Location** field and then click **Next >**.
  14. When the driver has been detected, click **Next >**.
  15.  
Messages that indicate that files are being copied and driver information is being built appear on your screen.
  16. When prompted, click **Finish**.
  17.  
The **New Hardware Found** window appears, the driver is installed, and the installation is completed.
- 

## Reinstalling Internal Modem Drivers

Modem drivers allow you to customize the operation of your optional internal modem. If your computer has an internal modem, perform the following steps to install the drivers:

1. Save your work in all open application programs, because you will need to restart your computer at the end of this procedure to complete the installation.
  2. Insert the *Dell Inspiron 7000 System Software* CD into the CD-ROM or DVD-ROM drive.
  3. If the **Welcome to Windows 98** screen appears, click the **x** in the upper-right corner of the screen to close it and continue with the installation.
  4. Click the **Start** button, and then click **Run**.
  5. In the **Run** dialog box, type `x:\modem\setup.exe`, where *x* is the letter designation for the CD-ROM or DVD-ROM drive.  
The CD-ROM or DVD-ROM drive letter is usually *D*.
  6. Click **OK**.
  7. At the **Welcome Screen**, click **Next>**.  
The internal modem files are copied to your hard-disk drive.
  8. At the **Setup Complete** window, click **Yes, I want to restart my computer now**, and then click **Finish**.  
The **New hardware found** window appears and states that the system has detected the new hardware.
  9. Click **Remove** and then click **OK**.
- 

## Reinstalling DVD-ROM Decoder Drivers

DVD-ROM decoder drivers allow the Moving Pictures Experts Group (MPEG) decoder on your optional DVD-ROM drive to decode MPEG files, such as DVD movies. If your computer has a DVD-ROM drive, perform the following steps to install the drivers:

1. Save your work in all open application programs, because you will need to restart your computer at the end of this procedure to complete the installation.
2. Restart your computer.
3. Press <F2> at the Dell logo screen.  
The **Setup** menu window appears.
4. Press the right-arrow key to select the **System Devices** menu.  
If the **Internal MPEG II** option appears on the **System Devices** menu, make sure the option is enabled. Then press <F10> to exit the Setup program. Proceed to the next subsection, "Installing the Hardware DVD Decoder Driver."

If the **Internal MPEG II** option does not appear on the **System Devices** menu, see the section on installing the software DVD decoder driver in the document titled *Installing a DVD-ROM Drive and Software DVD Decoder Driver* that accompanied your *Dell Inspiron 7000 Series System Software* CD.

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## Reinstalling the Hardware DVD Decoder Driver

To install the hardware DVD decoder driver, perform the following steps:

1. If the **Welcome to Windows 98** screen appears, click the **x** in the upper-right corner of the screen to close it and continue with the installation.
2. Insert the *Dell Inspiron 7000 Series System Software* CD into the DVD-ROM drive.
3. Click the **Start** button, and then click **Run**.
4. In the **Run** dialog box, type `x:\hwdvd\setup.exe`, where *x* is the DVD-ROM drive letter.  
The CD-ROM or DVD-ROM drive letter is usually *D*.
5. Click **OK**.
6. The **Welcome** window appears. Click **Next>**.
7. The **Software License Agreement** window appears. Click **Yes** to accept the terms of the agreement.
8. At the **Choose Destination Location** screen, click **Next>**.
9. At the **Start Copying Files** screen, click **Next>**.

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

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

 **NOTE:** To play MPEG - 2 clips, you must install Microsoft DirectX® 6.X and MediaPlayer 6.X. You can download this file at: <http://www.microsoft.com/directx> and <http://www.microsoft.com/windows/mediaplayer>.

---

## Reinstalling Softex BayManager Software

The Softex BayManager software allows you to remove and install devices without turning off your system. To install BayManager, perform the following steps:

- Insert the *Dell Inspiron 7000 Series System Software* CD into the CD-ROM or DVD-ROM drive.
- Double-click the **My Computer** icon, and then double-click the **CD-ROM** or **DVD-ROM** icon.
- Double-click the **BayMgr** folder.
- Double-click **setup.exe**.
- At the **Welcome** screen, click **Next**.  
An InstallShield message indicates that the files are being copied.
- At the **Setup Complete** window, click **Yes, I want to restart my computer now**, and click **Finish**.

The system restarts.

- Remove the *Dell Inspiron 7000 Series System Software* CD from the drive.

After your computer restarts, a BayManager icon appears in the icon tray at the right of the taskbar.


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## Creating the Save-to-Disk Suspend File

If you are installing a new hard-disk drive or if you are rebuilding a hard-disk drive that has corrupted software and you want to be able to use the save-to-disk suspend mode, you must use the **phdisk.exe** utility on your *System Utilities* diskette to create a save-to-disk suspend file. When save-to-disk suspend mode is activated, all system data is stored in this file.

To create the save-to-disk suspend file, perform the following steps:

- Insert the *Microsoft Boot Disk Windows 98 Series* diskette into the diskette drive.
- Restart the system.
- When the **Microsoft Windows 98 Startup Menu** appears, select **Start computer with CD-ROM Support** and press <Enter>.
- When the MS-DOS® prompt appears, insert the *Dell Inspiron 7000 Series System Software* CD into the CD-ROM or DVD-ROM drive.
- When the A:\> prompt appears on the screen, insert the *Dell Inspiron 7000 Series System Software* CD into your CD-ROM or DVD-ROM drive.
- At the A:\> prompt, type the drive letter for your CD-ROM or DVD-ROM drive, and press <Enter>.  
The CD-ROM or DVD-ROM drive letter is usually *D*.
- Type `cd\utility` and press <Enter>.
- Type `phdisk /create /file` and press <Enter>.

 **NOTE:** Make sure a space is between `phdisk /create` and `/file`.

The utility calculates the size of the file, in kilobytes, based on the amount of system memory in your computer, plus 2 MB to handle video memory and additional system requirements.

- Follow the instructions on your screen to create the save-to-disk suspend file.  
To check the size of the save-to-disk suspend file, at an MS-DOS prompt type `phdisk /info` and press <Enter>.
  - If you need to delete the save-to-disk suspend file, at an MS-DOS prompt type `phdisk /delete /file` and press <Enter>.
  - Remove the *Microsoft Boot Disk Windows 98 Series* diskette, and press <Ctrl><Alt><Del> to restart the system.
- 

## Reinstalling the System Help File

If needed, you can download the *Dell Inspiron 7000 Series Help File* from Dell's World Wide Web site at <http://www.dell.com/>:

- Click the **Support** icon.  
The Dell Support main menu appears.
- Click **Support Your Dell**, and then click **Inspiron Notebook**.
- Click **7000**.
- Click **Documentation**.
- Click **Online Documentation**, and follow the instructions provided to download and view the *Help* file.

## Reinstalling Utilities and Drivers for Microsoft® Windows NT®: Dell™ Inspiron™ 7000

[Overview](#) | [Reinstalling Video Drivers](#) | [Reinstalling Touch Pad Drivers](#) | [Reinstalling Audio Drivers](#) | [Reinstalling Internal Modem Drivers](#) | [Reinstalling the System Help File](#)

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### Overview

To reinstall utilities and drivers on a computer running the Microsoft Windows NT operating system, use the program diskette set from Dell or the backup diskettes that you made after receiving the computer.

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


- 1 Microsoft Windows NT 4.0 CD
  - 1 Microsoft Windows 4.0 Service Pack 4 CD
  - 1 Dell Inspiron 7000 Windows NT 4.0 Workstation System Software CD
  - 1 CD-ROM drive (installed)
  - 1 One formatted diskette
- 

### Reinstalling Video Drivers


Video drivers control features such as screen resolution and the number of screen colors.

To reinstall the video drivers, perform the following steps:

1. Log on as Administrator.
2. Insert the *Dell Inspiron 7000 Windows NT 4.0 Workstation System Software* CD into the CD-ROM drive.
3. Double-click the **My Computer** icon, and then double-click **Control Panel**.
4. In the **Control Panel** window, double-click the **Display** icon.
5. In the **Display Properties** window, click the **Settings** tab and click **Display Type**.
6. In the **Adapter Type** area, click **Change**.
7. In the **Change Display** dialog box, click **Have Disk**.
8. In the **Install From Disk** dialog box, type `x:\video`, where *x* is the drive letter of the CD-ROM drive.
9. Click **OK**.  
A list of devices supported by this driver appears.
10. Highlight **ATI 3d RAGE MOBILITY PAGP**, and then click **OK**.

 **NOTE:** Select the appropriate language.

11. Click **Yes** when the third-party drivers message appears.  
The files are copied to the hard-disk drive.  
A message appears stating that the drivers were successfully installed.
12. Click **OK**.
13. Click **Close** to close the **Display Type** dialog box.
14. Click **Close** to close the **Display Properties** dialog box.
15. When prompted, click **Yes** to restart your computer.

 **NOTE:** After the computer restarts, you may change the video resolution. See the following section, "Changing Video Resolution."

---

### Reinstalling Touch Pad Drivers

Touch pad drivers and associated utilities allow you to customize the operation of your touch-pad driver controls features such as touch pad and mouse functions, scrolling, touch features, and sensitivity. To reinstall the touch pad drivers, perform the following steps:

1. Log on as Administrator.
2. Insert the *Dell Inspiron 7000 Windows NT 4.0 Workstation System Software* CD into the CD-ROM drive.
3. Double-click the **My Computer** icon, and then double-click the CD-ROM drive icon.
4. Double-click the **Touch pad** folder.
5. Double-click **Setup**.
6. In the Welcome window, click **Next>**.
7. In the **Important Information** window, click **Next>**.  
Another Important Information window appears recommending you create or update an emergency repair diskette before you install the Synaptics Touch Pad driver.
8. Ensure that the **Run the Emergency Repair Disk utility before installing** check box is selected, and then click **Next >**.
9. Click **Next>** to install the files in the default directory.
10. Click **Next>** to begin copying the files.
11. When prompted to create an emergency repair diskette, click **Yes**.
12. Label a blank diskette "Emergency Repair Diskette," insert it into the diskette drive, and then click **OK**.




13. Click **OK** at the dialog box regarding sensitive information.
  14. After the appropriate files are copied onto the hard-disk drive and the emergency repair diskette is created, remove the *Emergency Repair Diskette* and select **Yes, I want to restart my computer now**.  
Do not remove the *Dell Inspiron 7000 Windows NT 4.0 Workstation System Software* CD.
  15. Click **Finish** to exit the installation and restart your computer.
- 

## Reinstalling Audio Drivers

Audio drivers allow you to customize the sound features of your computer. To reinstall the audio drivers, perform the following steps:

1. Log on as Administrator.
2. Insert the *Dell Inspiron 7000 Windows NT 4.0 Workstation System Software* CD into the CD-ROM drive.
3. Double-click the **My Computer** icon and then double-click **Control Panel**.
4. In the **Control Panel** window, double-click the **Multimedia** icon.
5. In the **Multimedia Properties** window, click the **Devices** tab.
6. Click **Add**.
7. In the **Add** pop-up window, highlight **Unlisted** or **Updated Driver** Click **OK**.
8. Type `x:\audio`, where `x` is the drive letter of the CD-ROM drive, and then click **OK**.  
The **Add Unlisted** or **Updated Driver** dialog box appears with **ESS Audio Driver M2/M2E 4.02.37** highlighted.
9. Click **OK**.

 **NOTE:** If the following message appears, click **NEW**, and then continue with step 10.


The required `mastro.dll` is already on the system. Do you want to use the current driver or install a new driver?

10. Click **OK**, and then click **OK** again.
  11. Click **Restart Now** to restart the computer.
- 

## Reinstalling Internal Modem Drivers

Modem drivers allow you to customize the operation of your optional internal modem. If your computer has an internal modem, perform the following steps to install the drivers.

**NOTICE: Do not install this driver if the computer does not have an internal modem installed.**

 **NOTE:** The internal modem is not available in all regions.

1. Log on as Administrator.
  2. Insert the *Dell Inspiron 7000 Windows NT 4.0 Workstation System Software* CD into the CD-ROM drive.
  3. Double-click the **My Computer** icon, and then double-click the CD-ROM drive icon.
  4. Double-click the **Internal Modem** folder.
  5. Double-click **Setup**. The **Installing Modem Drivers** window appears.
  6. At the **Modem Installation** window, click **Next>**.
  7. When prompted, select **Install new modem driver and components** and click **Next>**.
  8. When prompted, select the **Yes, I want to restart my computer now** check box and click **Finish** to restart the computer.
- 

## Reinstalling the System Help File

If needed, you can download the *Dell Inspiron 7000 Series Help* file from Dell's World Wide Web site at <http://www.dell.com/>:

1. Click the **Support** icon.  
The Dell Support main menu appears.
2. Click **Support Your Dell**, and then click **Inspiron Notebook**.
3. Click **7000**.
4. Click **Documentation**.
5. Click **Online Documentation**, and follow the instructions provided to download and view the *Help file*.

## Using an External Monitor: Dell™ Inspiron™ 7000

Use the 15-pin monitor connector to attach an external monitor to the computer. If you reconfigure your hardware, you may need pin number and signal information for the monitor connector. Use the following procedure to connect an external monitor:

1. Turn off the external monitor.

**NOTICE: Do not place the external monitor directly on top of your portable computer, even if it is closed. Doing so can crack the computer case, the display, or both.**


Set the monitor on a monitor stand, desktop, or other level surface near the computer.

2. Connect the external monitor's video cable to the computer.  
Plug the monitor cable connector into the matching monitor connector at the back of the computer. If the cable is not permanently attached to the monitor, connect it to the monitor also. Tighten all the screws on the monitor cable connector(s) to eliminate RFI.
3. Connect your external monitor to a grounded AC power source.  
Plug the 3-prong connector on one end of the monitor's power cable into a grounded power strip or some other grounded power source. If the cable is not permanently attached to the monitor, connect it to the monitor also.

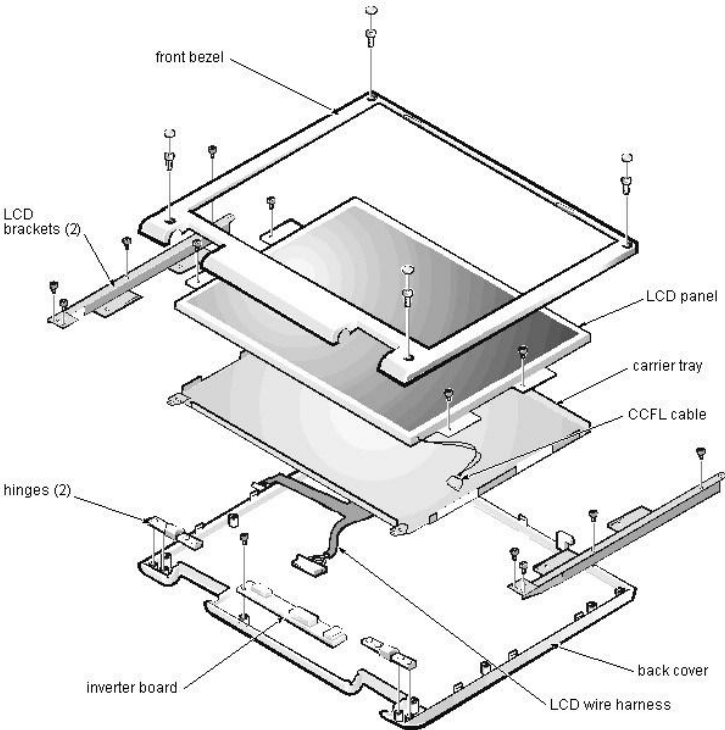
The video image can be displayed on an external monitor, on the computer's display, or on both simultaneously. To toggle between the three display modes, press <Fn><F8>.

If the external monitor is turned off when you boot the computer, and if the **Video Display Device** category is set to **CRT Mode** in the **Main** menu of the Setup program, the computer sends the video image to the external monitor. In this case, you do not see an image on either the computer's display or on the external monitor. To resolve this situation, turn on the external monitor or press <Fn><F8> to switch the video image to the computer's display.

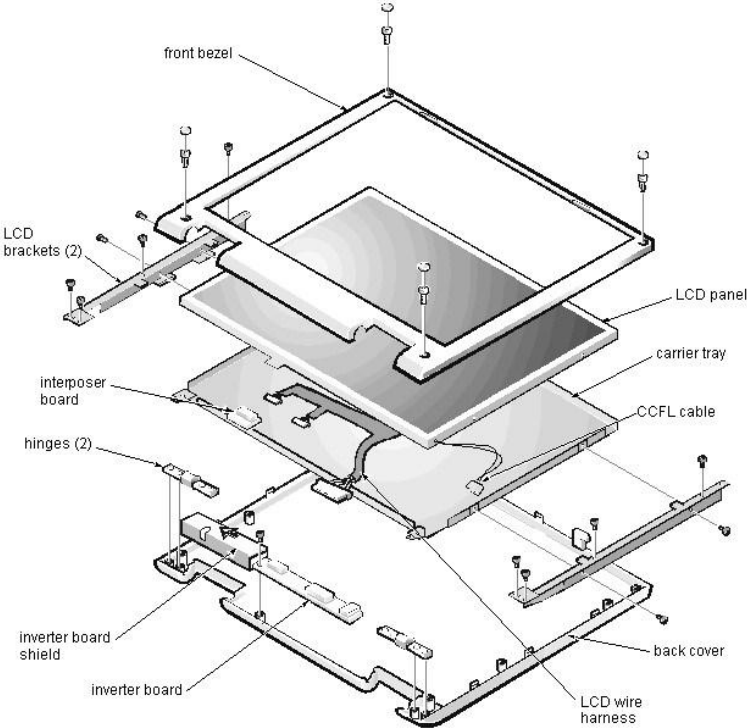
Whether you are using an appropriately equipped multifrequency monitor only or are using an external monitor and the built-in display simultaneously, you can display up to 64,000 colors at a noninterlaced resolution of 1024 x 768 pixels.

 **NOTE:** When the external monitor and built-in display are used simultaneously, the refresh rate is always 60 Hz.

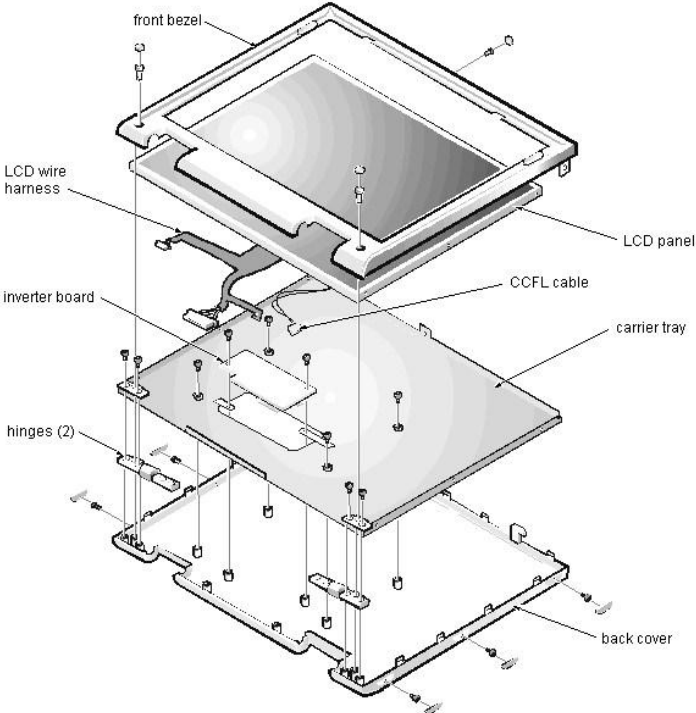
**Exploded View of 13.3-Inch Display Assembly: Dell™ Inspiron™ 7000**



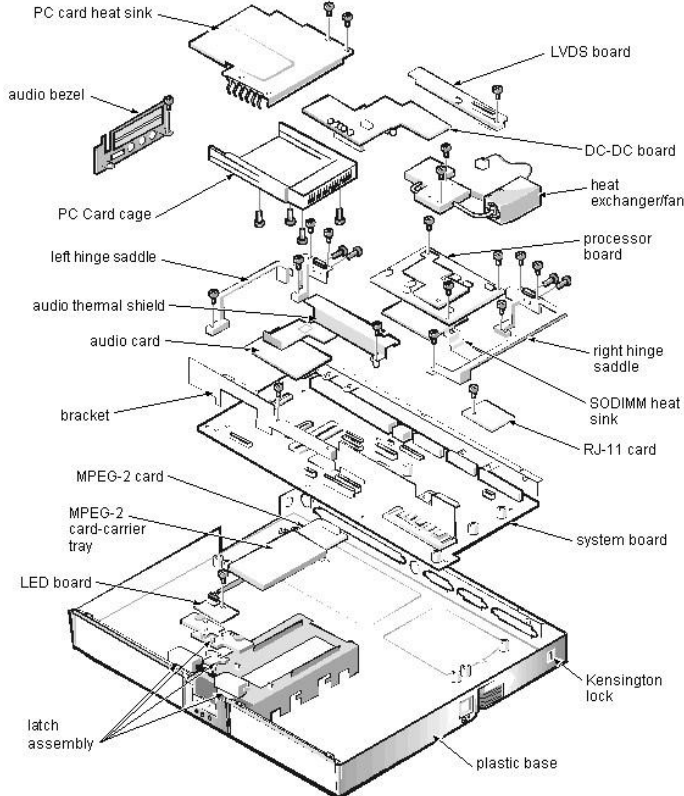
**Exploded View of 14.1-Inch Display Assembly: Dell™ Inspiron™ 7000**



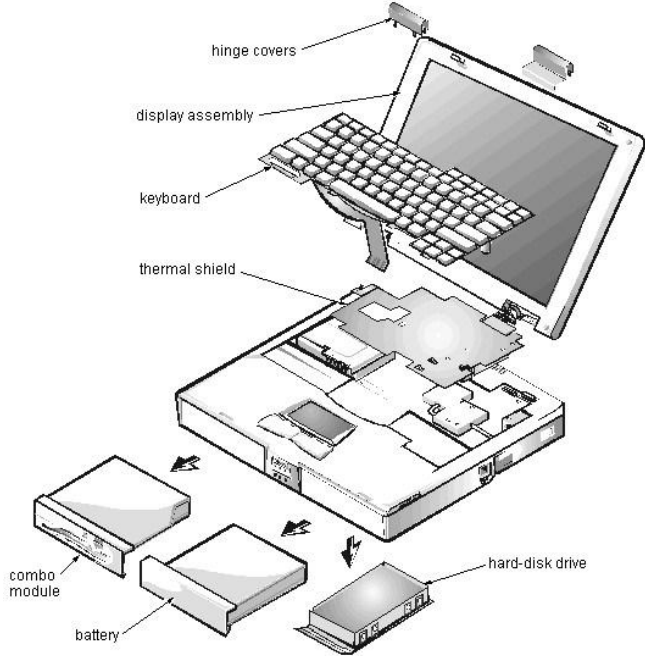
**Exploded View of 15-Inch Display Assembly: Dell™ Inspiron™ 7000**



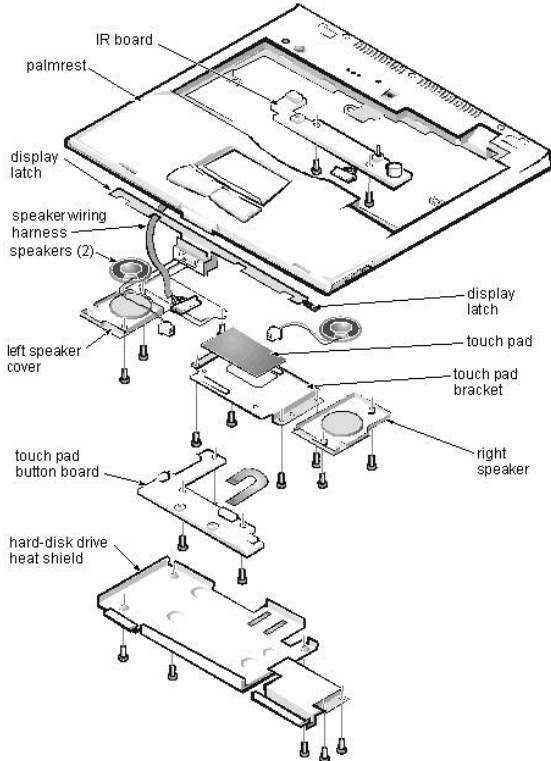
# Exploded View of Base Assembly: Dell™ Inspiron™ 7000



**Exploded View of Computer: Dell™ Inspiron™ 7000**



**Exploded View of Palmrest Assembly: Dell™ Inspiron™ 7000**






## Using an External Keyboard, Keypad, or Mouse: Dell™ Inspiron™ 7000

You can connect a keyboard with a standard connector to the PS/2 connector on the computer by using an adapter available from Dell. You can use the built-in keyboard when an external keyboard is attached to the computer. Turn off the computer before connecting or disconnecting a keyboard.

You can attach an external numeric keypad to the PS/2 connector. Turn off the computer before connecting or disconnecting a keypad.

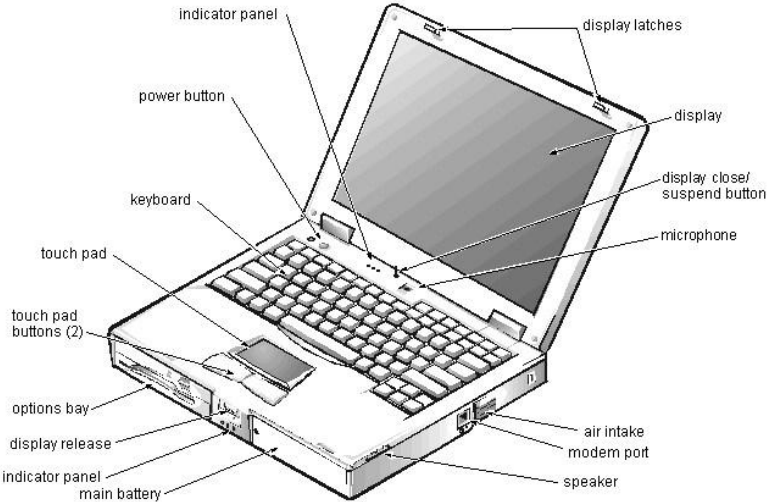
Attach a PS/2-compatible mouse to the PS/2 connector on the computer or a USB-compatible mouse to the USB connector. If you attach a USB mouse to the computer, you do not need to reboot in order to use the mouse. If you attach a serial mouse to the serial connector, set the **PS/2 Mouse** option in the **System Devices** menu to **Disabled**.

The touch pad device drivers that Dell installed on your hard-disk drive work with a PS/2 mouse, serial mouse, or USB mouse from Dell. If you did not receive your mouse from Dell, you must install device drivers separately to use the mouse. This software is usually included with mouse installation kits.

 **NOTES:** *If you attach a serial mouse to the serial connector, set the **PS/2 Mouse** option in the **System Devices** menu to **Disabled**. The serial (external) port permits use of a modem without touch pad conflict.*

*If you are using a PS/2 mouse that is not Microsoft-compatible and the mouse does not work properly, reboot the computer. If the mouse still does not work, install the drivers from the diskette that came with the mouse, and reboot the computer.*

**Component Locations (Front View): Dell™ Inspiron™ 7000**



## General Disassembly: Dell™ Inspiron™ 7000

**NOTICE:** During the removal and replacement procedures, you will see Kapton tape in many places on the computer. When reinstalling or replacing parts, be sure to replace the Kapton tape correctly to retain the electrical protection and noise reduction the tape provides.

General disassembly procedures assume that following components have been removed:

- 1 AC adapter
- 1 Port replicator
- 1 Battery
- 1 PC Card
- 1 Hard-disk drive
- 1 Memory modules and cover
- 1 Video card and cover
- 1 Combo module or secondary battery

Be careful not to scratch the computer plastic case by allowing screws to get between the disassembly surface and the plastic case. Dell suggests a soft padded work surface.

The Inspiron 7000 contains many screws of various sizes. To help keep track of the screws, use a tackle or pill box as a storage device. Use the following location template to store the screws during disassembly.

<a href="#">Hard-disk drive</a> 4X K-head M3x3L		<a href="#">Combo module</a> 2X K-head, M2x2.5L 3X K-head, M2.5x3L 8X K-head M2x3L	<a href="#">Keyboard</a> 4X pan head, M2.5x20L
<a href="#">Thermal shield</a> 1X K-head, M2.5x4L 4X flat head, M2x4L	<a href="#">Display assembly</a> 4X binding head, M2.5x6L	<a href="#">Front bezel</a> 4X binding head, M2.5x6L	<a href="#">LCD panel (13.3-inch)</a> 8X binding head, M2.5x6L
<a href="#">LCD brackets (13.3-inch)</a> 4X binding head, M2.5x6L	<a href="#">Inverter board (13.3-inch)</a> <a href="#">Inverter board (14.1-inch)</a> 1X K-head, M2.5x3L	<a href="#">LCD panel (14.1-inch)</a> 4X pan head, M2x4L 8X binding head, M2.5x6L	<a href="#">Palmrest assembly</a> 4X binding head, M2.5x6L 6X K-head, M2.5x4L 1X K-head, M2.5x4L
<a href="#">IR board</a> 2X K-head M2.5x4L	<a href="#">Hard-disk drive heat shield</a> 5X K-head M2.5x4L	<a href="#">Touch pad assembly</a> 4X K-head M2.5x4L 3X K-head M2.5x4L	<a href="#">Speakers</a> 5X K-head M2.5x4L
<a href="#">PC Card heat sink</a> 2X K-head, M2.5x4L	<a href="#">Heat exchanger/fan</a> 2X binding head, M2x5L	<a href="#">LVDS board</a> 1X K-head, M2.5x4L	<a href="#">Processor board</a> 3X binding head, M2x5L
<a href="#">Hinge saddles</a> 1X binding head, M2.5x6L	<a href="#">Left hinge saddle</a> 4X K-head, M2.5x4L 1X binding head, M2.5x10L 1X pan head, M2.5x20L	<a href="#">Right hinge saddle</a> 4X K-head, M2.5x4L 1X pan head, M2.5x20L 1X binding head M2.5x10L	<a href="#">RJ-11 card</a> 1X K-head, M2.5x4L
<a href="#">System board</a> 3X K-head, M2.5x4L	<a href="#">PC Card cage</a> 1X K-head, M2.5x4L 4X pan head, M2x18L	<a href="#">Audio thermal shield</a> 1X binding head, M2.5x10L	<a href="#">Latch assembly</a> 1X K-head, M2.5x4L 2X K-head, M2.5x4L

Information on removing and replacing parts is also available in the [Service Manual](#).

## **Graphics: Dell™ Inspiron™™ 7000**

[Status Display](#)

[Component Locations \(Front View\)](#)

[Component Locations \(Back View\)](#)

[AC Adapter](#)

[Removing and Installing a Battery](#)

[Battery Charge Gauge](#)

[Removing Devices From the Options Bay](#)

[Removing the Hard-Disk Drive](#)

[Removing the Memory Module](#)

[Touch Pad](#)

[Audio Jacks](#)

[PC Card Slots](#)

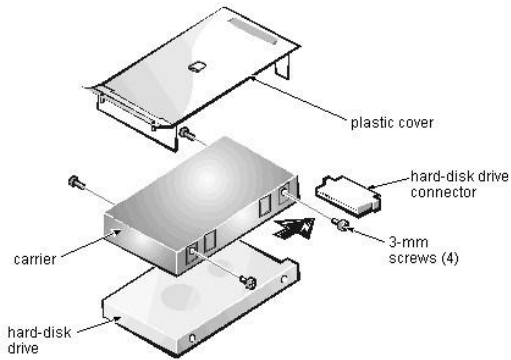
[Embedded Numeric Keypad](#)

[Security Cable Slot](#)

[I/O Connectors](#)

[30° Cone of Infrared Light](#)

## Hard-Disk Drive Disassembly: Dell™ Inspiron™ 7000

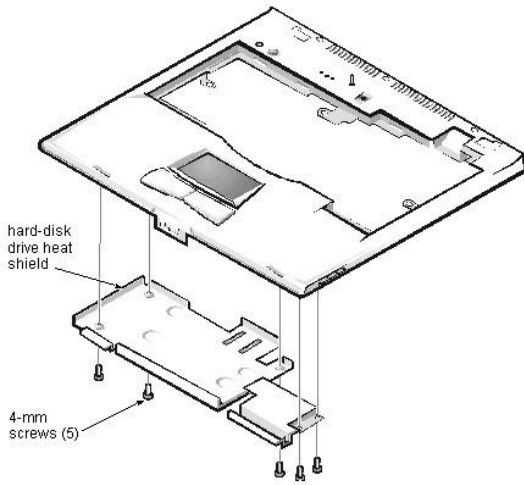


The hard-disk drive resides in a carrier that mounts in the hard-disk drive compartment in the bottom of the computer. 4 screws secure the drive inside the carrier.

To remove the hard-disk drive from the carrier, follow these steps:

1. Remove the hard-disk drive assembly.  
See step 7 of [Precautionary Measures](#).
2. Remove the (4) 3-mm screws securing the hard-disk drive inside the carrier.
3. Remove the hard-disk drive from the carrier.  
Turn the carrier over with one hand and let the drive fall out of the carrier into your other hand.
4. Remove the metal carrier from the plastic cover.  
The metal carrier is held in the plastic cover by 2 tabs on each end. Carefully pry the carrier away from the tabs.
5. Pull the hard-disk drive connector off of the hard-disk drive.

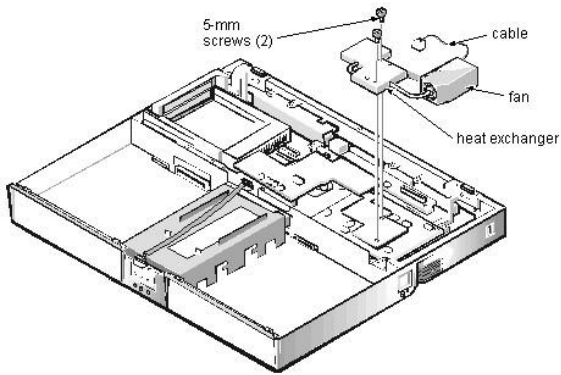
## Hard-Disk Drive Heat Shield Removal: Dell™ Inspiron™ 7000



This procedure assumes that you have removed the [palmrest assembly](#) from the base assembly. To remove the hard-disk drive heat shield, follow these steps:

1. Place the palmrest assembly face down.
2. Remove the (5) 4-mm screws securing the hard-disk drive heat shield.
3. Remove the hard-disk drive heat shield.

## Heat Exchanger/Fan Removal: Dell™ Inspiron™ 7000



To remove the heat exchanger/fan, follow these steps:

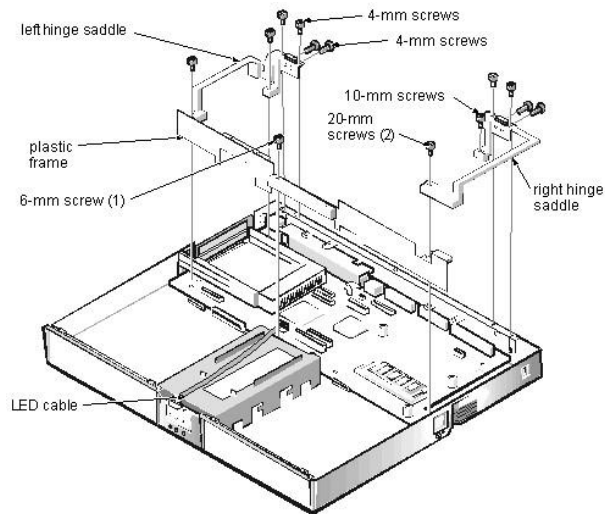
1. Remove the (2) 5-mm screws securing the heat exchanger.
2. Disconnect the fan cable from connector JP17 on the system board.
3. Remove the heat exchanger/fan.
4. Inspect the 2 thermal pads on the bottom of the heat exchanger and replace them if necessary.

To remove the heat exchanger/fan without removing the palmrest assembly, follow these steps.

1. Remove the (2) 5-mm screws securing the heat exchanger.
2. Disconnect the fan cable from connector JP17 on the system board.
3. Lift the heat exchanger and rotate it upward.
4. Slide the heat exchanger/fan toward the front of the computer until the fan is completely clear of the overhanging palmrest plastic.
5. Lift the heat exchanger/fan out at an angle.
6. Inspect the 2 thermal pads on the bottom of the heat exchanger and replace them if necessary.

When reinstalling the heat exchanger/fan, be sure to reconnect the fan cable to JP17; if you have an internal modem, there is an identical connector (JP2) next to JP17.

## Hinge Saddle Removal: Dell™ Inspiron™ 7000

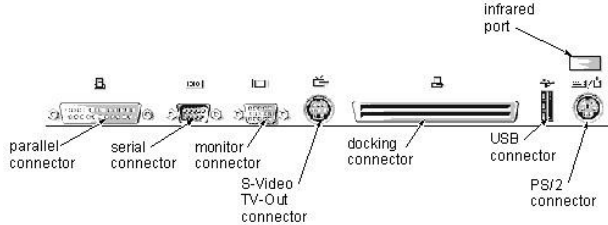


This procedure assumes that you have removed the [PC Card heat sink](#) and [LVDS board](#). To remove the hinge saddles, follow these steps:

1. Remove the (4) 4-mm screws from the top of the left and right hinge saddles.
2. Remove the (4) 4-mm screws from the back of the computer above the ports.
3. Remove the 10-mm screw and 20-mm screw from the right hinge saddle and remove the saddle.
4. Remove the 10-mm screw and 20-mm screw from the left hinge saddle and remove the saddle.
5. Disconnect the LED cable from connector J6 on the system board.
6. Remove the 6-mm screw from the plastic frame, remove any tape, and remove the plastic frame.



# I/O Connectors: Dell™ Inspiron™ 7000



## I/O: Dell™ Inspiron™ 7000

[Infrared Port](#) | [Modem Port](#) | [USB Connector](#) | [Serial Connector](#) | [Parallel Connector](#) | [Monitor Connector](#) | [PS/2 Connector](#) | [S-Video TV-Out Connector](#)

### [I/O Connectors](#)

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#### Infrared Port

The infrared port is IrDA 1.1-compliant. An infrared data stream is transmitted through a lens in the computer, up to a distance of 1 m, and received by a compatible computer, printer, mouse, or remote control. The infrared port allows the transfer of files from one computer to another infrared-compatible device, without using cable connections. Dell has installed data communications software for you to use with your infrared port. You can also use other commercially available infrared-capable application programs.

For information on configuring the standard infrared drivers that come with Windows 98, see your operating system documentation. To install the fast infrared drivers provided by Dell, see the instructions in the **readme.doc** file on your *Fast Infrared Drivers* program diskette.

If for some reason you need to change the infrared port address, be careful not to create a conflict with the addresses of the serial port or the parallel port.

To use the infrared port, point the computer's infrared port directly at the infrared port of the compatible device. Infrared devices transmit data in a [30° cone of infrared light](#). Start the data communications software on both devices, and then begin transferring files. Read the documentation that came with your compatible device to make sure you operate it correctly.

 **NOTE:** Make sure that there are no books, papers, or other objects between the 2 infrared devices and that the 2 devices are within the 30° cone.

---

#### Modem Port

The **Modem Port** option appears only if your computer has an integrated modem. This option allows you to map the address of the port to avoid address conflicts with other devices.

When this option is set to **Customized** (the default), the Base I/O address/IRQ is 2F8 IRQ3, the Configuration port is 130, and the 16-bit DMA channel is DMA 6.

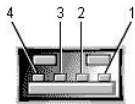
Set **Modem Port** to **Off** if you want to disable the port and free its assigned address for another device. When this option is set to **Auto**, the operating system or the BIOS configures the port automatically.

---

#### USB Connector

Use the USB connector to attach 1 or more USB devices, such as a mouse, to the computer. USB is a peripheral bus standard that enables automatic detection of USB-compliant peripheral devices.

##### Pin Assignments for the USB Connector



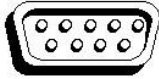
Pin	Signal	Definition
1	VCC	Cable power
2	-Data	N/A
3	+Data	N/A
4	Ground	Cable ground

---

#### Serial Connector

Use the 9-pin serial connector to attach a serial device to the computer. The serial port passes data in serial format (1 bit at a time over one line). This port supports a variety of devices, including a serial mouse, that require serial data transmission. If you reconfigure your hardware, you may need pin number and signal information for the serial connector.

##### Pin Assignments for the Serial Connector



1 2 3 4 5  
6 7 8 9

Pin	Signal	I/O	Definition
1	DCD	I	Data carrier detect
2	RXDA	I	Receive data
3	TXDA	O	Transmit data
4	DTR	O	Data terminal ready
5	GND	N/A	Signal ground
6	DSR	I	Data set ready
7	RTS	O	Request to send
8	CTS	I	Clear to send
9	RI	I	Ring indicator
Shell	N/A	N/A	Frame ground

### Parallel Connector

Use the 25-hole parallel connector to attach a parallel device to the computer. The parallel connector is used primarily for printers. The parallel port sends and receives data in parallel format, where 8 data bits (one byte) are sent simultaneously over 8 separate lines.

The parallel port can also be configured for compatibility with the PS/2 standard. Support for the EPP feature improves network adapter performance (adapters connect to the computer's parallel port and require the appropriate software drivers from the adapter's manufacturer).

If you reconfigure your hardware, you may need pin number and signal information for the serial connector.

### Pin Assignments for the Parallel Connector



13 12 11 10 9 8 7 6 5 4 3 2 1  
25 24 23 22 21 20 19 18 17 16 15 14

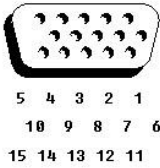
Pin	Signal	I/O	Definition
1	STB#	I/O	Strobe
2	PD0	I/O	Printer data bit 0
3	PD1	I/O	Printer data bit 1
4	PD2	I/O	Printer data bit 2
5	PD3	I/O	Printer data bit 3
6	PD4	I/O	Printer data bit 4
7	PD5	I/O	Printer data bit 5
8	PD6	I/O	Printer data bit 6
9	PD7	I/O	Printer data bit 7
10	ACK#	I	Acknowledge
11	BUSY	I	Busy
12	PE	I	Paper end
13	SLCT	I	Select
14	AFD#	O	Automatic feed

15	ERR#	I	Error
16	INIT#	O	Initialize printer
17	SLIN#	O	Select in
18-25	N/A	N/A	Signal ground
Shell	N/A	N/A	Frame ground

### Monitor Connector

Use the 15-pin monitor connector to attach an external monitor to the replicator. If the image does not appear on the monitor immediately, press <Fn><F8>.

#### Pin Assignments for the Monitor Connector

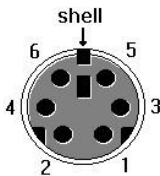


Pin	Signal	I/O	Definition
1	RED	O	Red video
2	GREEN	O	Green video
3	BLUE	O	Blue video
4	NC	N/A	No connection
5	GND	N/A	Signal ground
6	GND	N/A	Signal ground
7	GND	N/A	Signal ground
8	GND	N/A	Signal ground
9	NC	N/A	No connection
10	GND	N/A	Signal ground
11	NC	N/A	No connection
12	NC	N/A	Reserved
13	HSYNC	O	Horizontal synchronization
14	VSYNC	O	Vertical synchronization
15	NC	N/A	No connection
Shell	N/A	N/A	Frame ground

### PS/2 Connector

Use the 6-hole, miniature DIN PS/2 connector to attach PS/2-compatible devices such as a mouse, keyboard, or external numeric keypad. If you reconfigure your hardware, you may need pin number and signal information for the PS/2 connector.

#### Pin Assignments for the PS/2 Connector



Pin	Signal	I/O	Definition
-----	--------	-----	------------

1	EXK_MSDATA	I/O	External keyboard/keypad/mouse data
2	NC	N/A	No connection
3	GND	N/A	Signal ground
4	EXK_MSPWR	N/A	External keyboard/keypad/mouse supply voltage
5	EXK_MSCLK	I/O	External keyboard/keypad/mouse clock
6	NC	N/A	No connection
Shell	N/A	N/A	Chassis ground

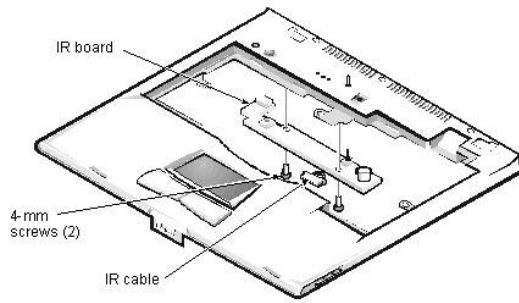
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### **S-Video TV-Out Connector**

If the television has an S-video cable, plug it directly into the system at the S-video TV-out connector. If the television has a composite cable, complete the following steps:

1. Connect the cable that came with your system to the S-video TV-out connector.
2. Connect the other end of the cable to the television's composite cable.

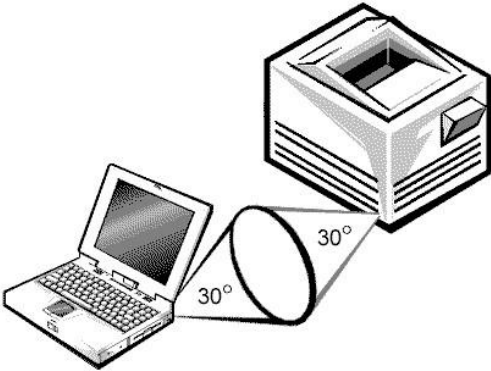
## IR Board Removal: Dell™ Inspiron™ 7000



This procedure assumes that you have removed the [palmrest assembly](#) from the base assembly. To remove the IR board, follow these steps:

1. Remove the (2) 4-mm screws securing the IR board.
2. Disconnect the IR cable from connector JP2 on the IR board.
3. Remove the IR board.

**30° Cone of Infrared Light: Dell™ Inspiron™ 7000**



# Jumpers, Switches, Controls, and Indicators: Dell™ Inspiron™ 7000

[Jumpers](#) | [Switches](#) | [Controls and Indicators](#)

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## Jumpers

There are no jumpers on this system.

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## Switches

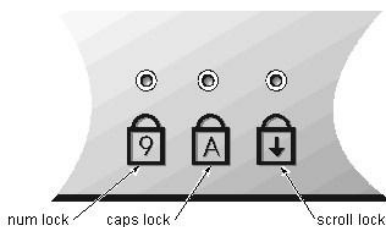
There are no configuration switches on this system.

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## Controls and Indicators

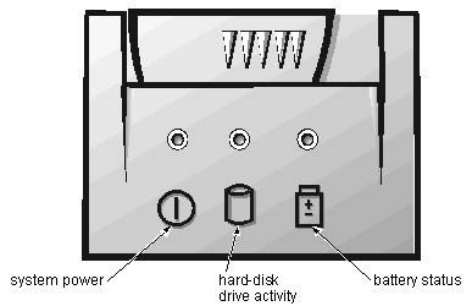
[Front View](#)

### Status Lights



3 status lights are located in the indicator panel directly above the keyboard:

- 1 Num Lock: Solid green light when Num Lock is on. Press <Num Lock> to turn this feature on or off.
- 1 Caps Lock: Solid green light when Caps Lock is on. Press <Caps Lock> to turn this feature on or off.
- 1 Scroll Lock: Solid green light when Scroll Lock is on. Press <Scroll Lock> to turn this feature on or off.

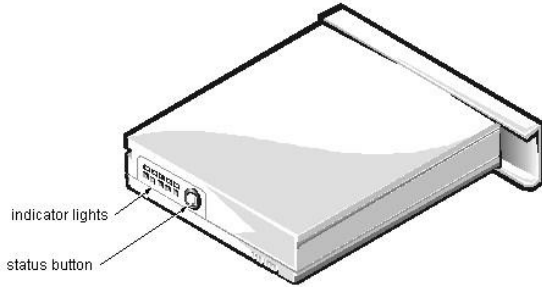


5 additional status lights are located on the front of the unit, 3 in the indicator panel below the display latch and 2 on the left side:

- 1 System power: Solid green light when the system is on; blinking green light when the system is in suspend state.
- 1 Hard-disk drive activity: Blinking green light as the drive is being accessed.
- 1 Battery status:
  - o Solid green light when the battery is fully charged.
  - o Blinking green light when the battery is charging.
  - o No light when the battery is discharging.
  - o Solid amber light when the battery charge is low (7% life remaining).
  - o Blinking amber light when the battery charge is critically low (1.5% life remaining). The system beeps when this level is first reached.
- 1 Floppy disk drive activity: Blinking green light on the left of the unit as the drive is being accessed.
- 1 CD-ROM or DVD-ROM drive activity: Blinking green light in the middle of the unit as the drive is being accessed.

### Battery Charge Gauge





The battery charge gauge on the rear of the main and secondary batteries has 5 charge-level indicator lights that indicate how much battery charge remains. Each light indicates approximately 20% battery charge. Press the status button to the right of the lights to check the total battery charge. If none of the lights are on, the battery has no charge left.

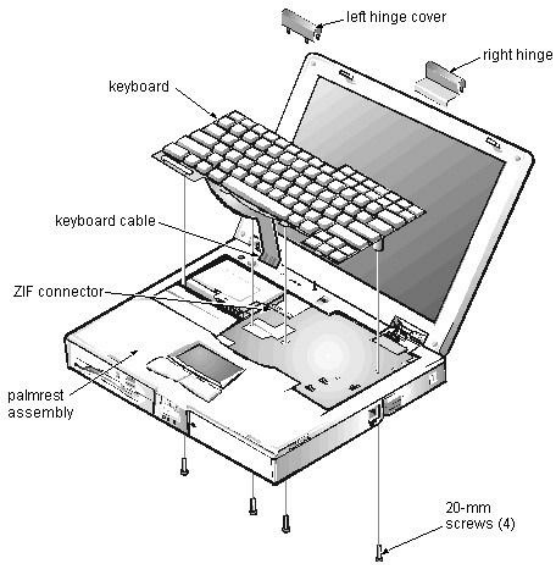
**Power Button**

Under normal circumstances, you should only use the power button to turn on the computer or to resume from save-to-disk suspend or standby mode. To shut down the computer, click the **Start** button in the Microsoft® Windows® 98 operating system, and then click **Shut Down**. If the computer is hung and the operating system does not respond, press and hold the power button until the system turns off completely (this may take 4 to 8 seconds).

**Display Close Button**

When you close the display, this button activates Standby mode. Do not press this button.

## Keyboard Removal: Dell™ Inspiron™ 7000



To remove the keyboard, follow these steps:

1. Turn the computer over and remove the (4) 20-mm screws from the bottom of the computer.
2. Turn the computer back over and open the display.
3. Insert a small flat-blade screwdriver or scribe along the right top of the keyboard, just above the row of function keys. Working from right to left, free the keyboard by prying it toward the front of the unit. When free, lift the top of the keyboard slightly to clear the palmrest assembly.
4. Slide the keyboard toward the display assembly to release the front edge of the keyboard from the palmrest assembly.
5. Rotate the bottom of the keyboard up toward the display assembly to expose the keyboard cable.
6. Disconnect the keyboard cable from ZIF connector JP14 on the system board. Use the pick to pry up the latches on each side of the connector.

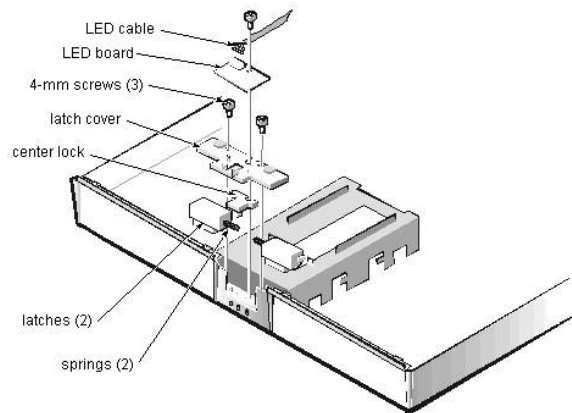
**NOTICE:** Lift the cable away only after the [ZIF connector](#) is opened. Pulling the cable from the connector damages the conductive coating on the end of the cable.

7. Remove the keyboard from the palmrest assembly.

**Embedded Numeric Keypad: Dell™ Inspiron™ 7000**



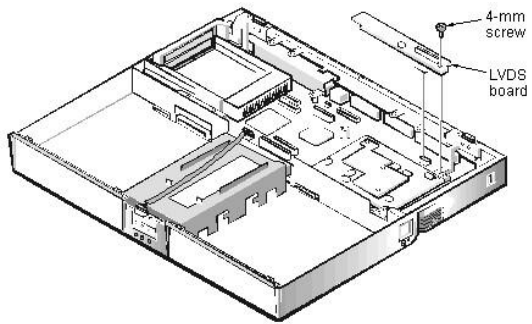
## Latch Assembly Removal: Dell™ Inspiron™ 7000



To remove the latch assembly, follow these steps:

1. Disconnect the LED cable from connector JP2 on the LED board.
2. Remove the 4-mm screw securing the LED board to the plastic base.
3. Remove the LED board.
4. Remove the (2) 4-mm screws holding the latch cover for the battery bay and options bay.
5. Remove the latch cover.
6. Remove the center lock over the 2 latches with springs.
7. Remove each spring and latch.  
Be careful not to lose the small springs.

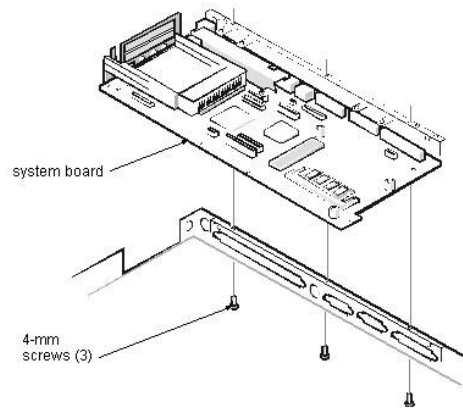
## LVDS Board Removal: Dell™ Inspiron™ 7000



To remove the LVDS board, follow these steps:

1. Remove the 4-mm screw securing the LVDS board.
2. Gently pull the LVDS board off of connectors JP9 and JP8 on the system board. Do not rock the board to remove it, because this may damage the connectors.

## System Board Removal: Dell™ Inspiron™ 7000



This procedure assumes that you have removed the [PC Card heat sink](#), [LVDS board](#), and [hinge saddles](#). To remove the system board, follow these steps:

1. Remove the (3) 4-mm screws from the bottom of the computer.
2. Remove the system board from the bottom case.

## Memory: Dell™ Inspiron™ 7000

[Memory Installation Guidelines](#) | [Valid Memory Configurations](#) | [Removing and Installing Memory](#) | [Upper Memory Map](#) | [Conventional Memory Map](#)

---

### Memory Installation Guidelines

- 1 The system can accommodate up to 384 MB of SDRAM.
  - 1 The system comes with 32 MB, 64 MB, or 128 MB of memory on the system board.
  - 1 To increase memory, install 32-MB, 64-MB, or 128-MB memory modules.
- 

### Valid Memory Configurations\*

Base	Install	Total
32 MB	32 MB	64 MB
32 MB	32 MB + 32 MB	96 MB
32 MB	64 MB	96 MB
32 MB	32 MB + 64 MB	128 MB
32 MB	64 MB + 64 MB	160 MB
32 MB	128 MB	160 MB
32 MB	128 MB + 32 MB	192 MB
32 MB	128 MB + 64 MB	224 MB
32 MB	128 MB + 128 MB	288 MB
64 MB	32 MB	96 MB
64 MB	32 MB + 32 MB	128 MB
64 MB	64 MB	128 MB
64 MB	32 MB + 64 MB	160 MB
64 MB	64 MB + 64 MB	192 MB
64 MB	128 MB	192 MB
64 MB	128 MB + 32 MB	224 MB
64 MB	128 MB + 64 MB	256 MB
64 MB	128 MB + 128 MB	320 MB
128 MB	32 MB	160 MB
128 MB	32 MB + 32 MB	192 MB
128 MB	64 MB	192 MB
128 MB	32 MB + 64 MB	224 MB
128 MB	64 MB + 64 MB	256 MB
128 MB	128 MB	256 MB
128 MB	128 MB + 32 MB	288 MB
128 MB	128 MB + 64 MB	320 MB
128 MB	128 MB + 128 MB	384 MB

\*Not all valid memory configurations are available at all times. Contact Dell for details.

---

### Removing and Installing Memory

**NOTICE:** Ground yourself by attaching an antistatic grounding strap to your wrist and to an unpainted metal surface on the computer's I/O panel. If an antistatic grounding strap is not available, periodically discharge static electricity from your body by touching one of the connectors on the I/O panel.


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

1. Save any open files.
2. Shut down your computer and peripherals and unplug them from the electrical outlets.
3. Remove any [installed batteries](#).
4. Ground yourself by touching a metal I/O connector on the back of the computer.
5. Turn the computer over, and [remove the memory module cover](#).

Slide the memory module cover as far as it will go in the direction of the arrow and then lift it away from the computer.

**NOTICE: To prevent damage to the computer, do not use tools to spread the inner metal tabs of the socket when you are installing or removing a memory module.**

6. If you are replacing one or more memory modules, remove the memory module(s).  
Using your fingernails, carefully spread apart the inner metal tabs of the memory module socket just far enough for the memory module to disengage from the socket (the module should pop up slightly). Then lift the memory module away from the socket.

 **NOTE:** If there is 1 memory module already installed and you are adding a second memory module, the second module should be put in the available slot. Removing existing module(s) is necessary only if they are being replaced. Depending on how you ordered your computer, there may be 1, 2, or no modules already installed.

7. Install the new memory module(s).  
Align the notch in the edge connector with the slot in the center of the memory module socket. Press the memory module's edge connector firmly into the socket. Pivot the module down until it clicks.
8. Replace the memory module cover.
9. Reinstall any batteries you removed in step 3, and reconnect your computer and peripherals to electrical outlets. Turn on the peripherals and then turn on the computer.

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

10. Confirm that the system configuration information reflects the newly installed memory by checking the **System Memory** option on the **Main Menu** of the system Setup program.  
To enter the system Setup program, press <F2> while the computer is booting. The **Main Menu** appears. If the **System Memory** total is incorrect, the memory modules may not be installed properly. Repeat steps 1 through 10 until the memory total is correct.
11. Run the **RAM** test group in the Dell Diagnostics to confirm that the installed memory modules are operating correctly.  
For instructions on running the **RAM** test group in the Dell Diagnostics, see Chapter 4, "Running the Dell Diagnostics," in your [Reference and Troubleshooting Guide](#).
12. If you added additional memory to your computer, you need to delete and recreate the save-to-disk suspend file on your hard-disk drive so that it is large enough to accommodate the new memory. For instructions, see "Save-to-Disk Suspend File" in your online [User's Guide](#).

## Upper Memory Map

Location	Description
10FFF0–	Extended memory
100000–10FFEF	High memory area
0F0000–0FFFFFFF	System BIOS
0E0000–0EFFFF	Video BIOS
0DC000–0DFFFF	Available
0D0000–0DBFFF	PC Card memory
0C0000–0CFFFF	Available
0A0000–0BFFFF	Video RAM
09FC00–09FFFF	PS/2 mouse-data area
000000–09FBFF	Conventional memory

## Conventional Memory Map

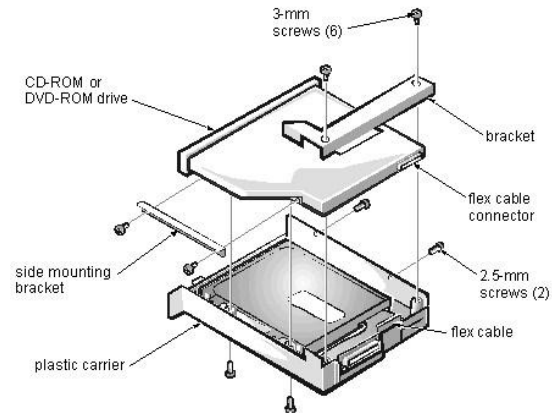
Segment	Address Range	Use
0	00000h–003FFh	Interrupt vector table
	00400h–004FFh	BIOS data area
	00500h–005FFh	MS-DOS <sup>®</sup> work area
	00600h–0FFFFh	User memory
1	10000h–1FFFFh	User memory
2	20000h–2FFFFh	User memory
3	30000h–3FFFFh	User memory
4	40000h–4FFFFh	User memory
5	50000h–5FFFFh	User memory



6	60000h-6FFFFh	User memory
7	70000h-7FFFFh	User memory
8	80000h-8FFFFh	User memory
9	90000h-9FBFFh	User memory
	9FC00h-9FFFFh	PS/2 mouse-data area

## Combo Module Disassembly: Dell™ Inspiron™ 7000

The combo module contains either a CD-ROM drive or a DVD-ROM drive on top of a floppy diskette drive. The combo module resides in a carrier that slides into the options bay on the left side of the computer.

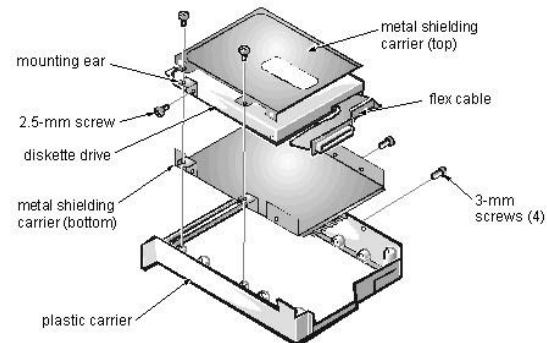


To remove the CD-ROM drive or DVD-ROM drive from the plastic carrier, follow these steps:

1. Remove the combo module.
2. Remove the (2) 3-mm screws from the L-shaped bracket.
3. Remove the bracket.
4. Remove the (2) 3-mm screws from the side of the plastic carrier.
5. Remove the (2) 3-mm screws from the bottom of the plastic carrier.
6. Disconnect the flex cable from the CD-ROM/DVD-ROM drive connector.
7. Remove the CD-ROM/DVD-ROM drive from the plastic carrier.  
Turn the carrier over with one hand and let the drive fall out of the carrier into your other hand.

To remove the side mounting bracket from the CD-ROM/DVD-ROM drive, follow these steps:

1. Remove the (2) 2.5-mm screws from the side of the CD-ROM/DVD-ROM drive.
2. Remove the side mounting bracket.



To remove the diskette drive from the plastic carrier, follow these steps:

1. Remove the (2) 3-mm screws from the top of the metal shielding carrier.
2. Remove the (2) 3-mm screws from the side of the plastic carrier.

**NOTICE: The metal on the shielding carrier is sharp. Be careful not to cut yourself.**

3. Lift the metal shielding carrier out of the plastic carrier.  
Lift the back of the metal shielding carrier first and then slide it out.
4. Unsnap the metal latches along the top of the metal shielding carrier from the metal tabs on the bottom of the metal shielding carrier, and then remove the top.
5. Remove the diskette drive from the metal shielding carrier.
6. Remove the flex cable from the diskette drive.
7. Remove the 3-mm screw securing the mounting ear from the diskette drive, and remove the mounting ear.

When reassembling the diskette drive, be sure that the bottom of the metal shielding carrier sits inside the groove at the front of the plastic carrier.

## **Tech Notes: Dell™ Inspiron™ 7000**

[Video](#)

[I/O](#)

[Memory](#)

[Power Sources](#)

[Storage Devices](#)

[Touch Pad](#)

[Audio Devices](#)

[PC Cards](#)

[Using the Embedded Numeric Keypad](#)

[Using an External Monitor](#)

[Using an External Keyboard, Keypad, or Mouse](#)

[Power Conservation](#)

[Passwords and Security](#)

[Setup Program](#)

[Removing and Replacing Parts](#)

[Reinstalling Utilities and Drivers for Windows 98](#)

[Reinstalling Utilities and Drivers for Windows NT](#)

## Using the Embedded Numeric Keypad: Dell™ Inspiron™ 7000

As you work, you may want to use the [embedded numeric keypad](#) to enter numbers into a spreadsheet or financial program. The embedded numeric keypad shares some of the keys on the computer's keyboard. The embedded keypad numbers and symbols are marked on the right of the keypad keys in blue.

To activate the embedded numeric keypad, press <Num Lk>. The Number Lock indicator lights up.


To deactivate the embedded keypad, press <Num Lk>. The Number Lock indicator is no longer illuminated.

When the embedded keypad is activated, the following key combinations temporarily disable specific keypad keys:

When Keypad Is Activated (Number Lock Indicator ON)	Function
<Fn><key>	Enables the lowercase letter or primary function of that specific key
<Fn><Shift><key>	Enables the uppercase letter or shift function of that specific key

To use the embedded arrow keys, ensure that <Num Lk> is off. Press and hold <Fn> and the corresponding key as displayed in the following list:

When Keypad Is Deactivated (Number Lock Indicator OFF)	Function
<Fn><j>	Performs the same function as pressing <End>
<Fn><7>	Performs the same function as pressing <Home>
<Fn><k>	Performs the same function as pressing the down-arrow key
<Fn><8>	Performs the same function as pressing the up-arrow key
<Fn><l>	Performs the same function as pressing the left-arrow key
<Fn><o>	Performs the same function as pressing the right-arrow key
<Fn><. >	Performs the same function as pressing <Delete>

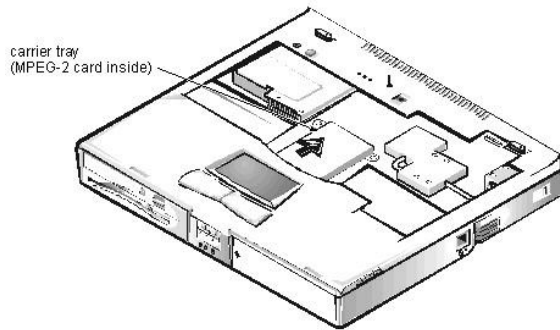
 **NOTE:** The embedded numeric keypad is automatically disabled if an external keyboard or keypad is connected to the computer.

## Palmrest Assembly and Palmrest Assembly Component Removal: Dell™ Inspiron™ 7000

[MPEG-2 Card Removal](#) | [Palmrest Assembly Removal](#) | [Palmrest Assembly Component Removal](#)

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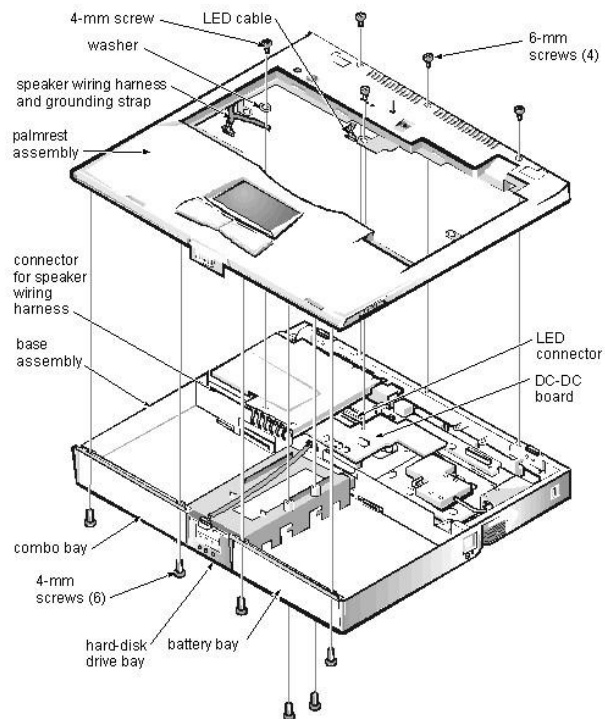
### MPEG-2 Card Removal



To remove the MPEG-2 card, follow these steps:

1. Gently pull the carrier tray off of connector JP19 on the system board. Do not rock the card to remove it, because this may damage the connectors.
  2. Remove the carrier tray by sliding it toward the back of the computer
  3. Remove the MPEG-2 card from the carrier tray.
- 

### Palmrest Assembly Removal



This procedure assumes that you have removed the [keyboard](#), [thermal shield](#), and [display assembly](#). To remove the palmrest assembly, follow these steps:

1. Turn the unit over and place it face down.
2. Remove the (2) 4-mm screws from the top inside of the combo bay.

3. Remove the (2) 4-mm screws from the top inside of the battery bay.
4. Remove the (2) 4-mm screws from the top inside of the hard-disk drive bay.
5. Turn the unit back over.
6. Remove the (3) 6-mm screws from the top of the base assembly, along the back edge.
7. Remove the 6-mm screw from the DC-DC board.
8. Remove the 4-mm screw and the washer securing the grounding strap to the PC Card heat shield.
9. Disconnect the speaker wire harness from connector JP18 on the left side of the system board.  
This wire harness also contains wiring for the touch pad and the touch pad buttons.
10. Disconnect the LED cable from connector JP10 on the system board.
11. Remove the palmrest assembly from the base assembly.  
Start at the back right of the computer and move forward around the computer. Carefully lift the palmrest assembly up and pull it forward to unsnap the hidden tabs spaced around the sides and along the top of the battery bay and options bay.

When replacing the palmrest assembly, orient the assembly in its original position on the base assembly and press firmly near each tab until the palmrest assembly snaps into place. Start at the front to align those tabs first. Make sure that all the tabs are aligned.

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## **Palmrest Assembly Component Removal**

[IR Board Removal](#)

[Hard-Disk Drive Heat Shield Removal](#)

[Touch Pad Assembly Removal](#)

[Speaker Removal](#)

# Passwords and Security: Dell™ Inspiron™ 7000

[About Passwords](#) | [Physically Securing the Computer](#) | [Disabling the Serial and Parallel Ports](#)

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## About Passwords

When you receive the computer, the password features are disabled so that you can assign passwords if you wish. Once you assign a password, you must enter the password to access the Setup program.

Use the **Security** menu in the Setup program to assign a password.

**NOTICE: The password features provide a high level of security for the data in the computer. However, they are not foolproof. If your data requires more security, it is your responsibility to obtain and use additional forms of protection, such as data encryption programs or PC Cards with encryption features.**


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## Physically Securing the Computer

To prevent unauthorized removal of the computer, use a security cable to attach the computer to an immovable object.

The [security cable slot](#) lets you attach a commercially available antitheft device to the computer. Antitheft devices for portable computers usually include a segment of metal-stranded cable with an attached locking device and associated key. Complete instructions for installing this kind of antitheft device are usually included with the device.

To prevent unauthorized removal of the computer, loop the cable around an immovable object, insert the locking device into the security cable slot, and lock the device.

 *NOTE: Antitheft devices are of differing designs. Before purchasing such a device, make sure it will work with the security cable slot in the computer.*

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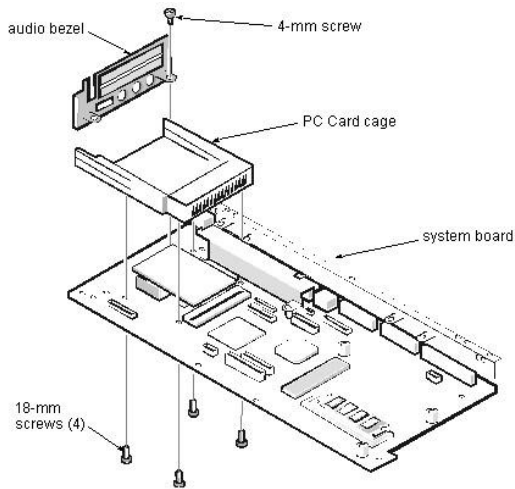
## Disabling the Serial and Parallel Ports

You can disable the serial port to prevent unauthorized access to the computer through an external serial device. To disable the serial port, set the **Serial Port** option to **Disabled** in the **System Devices** menu of the Setup program. In addition, you should set up a password in the **Security** menu of the Setup program.

You can disable the parallel port to prevent unauthorized access to the computer through an external parallel device. To disable the parallel port, set the **Parallel Port** option to **Disabled** in the **System Devices** menu of the Setup program.

Disabling either port also prevents the unauthorized download of data from that port.

## PC Card Cage Removal: Dell™ Inspiron™ 7000



This procedure assumes that you have removed the [system board](#) from the plastic case. To remove the PC Card cage, follow these steps:

1. Remove the 4-mm screw securing the audio bezel.
2. Remove the audio bezel.
3. Remove the (4) 18-mm screws securing the PC Card cage to the system board.  
Use a support for the system board to prevent the board from flexing when the card cage screws are removed.
4. Gently pull the card cage off of connector UP9 on the system board. Do not rock the cage to remove it, because this may damage the connectors.

Replace the PC Card cage if it is damaged.



## PC Cards: Dell™ Inspiron™ 7000

[PC Card Slots](#) | [Installing a PC Card](#) | [Removing a PC Card](#) | [Configuring a PC Card](#)

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### PC Card Slots

The computer has [2 slots](#) into which up to (2) 3.3- or 5-V PC Cards that adhere to the PCMCIA standard and JEIDA Release 4.2 can be installed. Both PC Card slots support CardBUS technology. In addition, a ZV port is available from the lower slot (slot 0). If you ordered an MPEG-2 decoder PC Card from Dell, install it in the lower PC slot for high-performance graphics.

The computer supports 2 type I, 2 type II, or 1 type III PC Card, including such memory devices as SRAM cards that emulate diskettes, RAM cards, OTP ROM cards, and ATA cards that emulate IDE hard-disk drives. Also supported are I/O cards such as modem communication cards, LAN cards, wireless LAN cards, SCSI cards, and sound cards. You can also use extended PC Cards in the computer.

 **NOTE:** A PC Card is not a boot device.

---

### Installing a PC Card

**NOTICE:** Take extra precautions if you use extended PC Cards in the computer. Extended cards are longer versions of standard PC Cards. They fit into, and operate correctly with, the computer. However, they extend beyond the edge of the computer when installed. If something strikes the exposed end of an installed card, the card or the system board can be damaged.

**NOTICE:** Because of space considerations, you may have trouble using 2 PC Cards in the computer if one of them is an extended card. Always install an extended card in the top PC Card connector. Always remove an extended PC Card before you pack the computer for traveling.

The PC Card slot has 2 PC Card connectors and can hold up to 2 cards in one of the following configurations:

- 1 A single type I or type II card (using either the top or bottom PC Card connector)
- 1 1 type I card and 1 type II card (using either connector)
- 1 2 type I cards or 2 type II cards
- 1 A single type III card (using the bottom connector)

The **type** of card refers to its thickness, not its functionality. Because a type III card is thicker than type I and type II cards, it takes up the entire PC Card slot, although it uses only 1 PC Card connector.

PC Cards are generally marked (with a triangle or an arrow) to indicate which end should be inserted into the slot. The cards are keyed to prevent incorrect insertion. If card orientation is not clear, see the documentation that came with the card.

You can install a PC Card while the computer is running. The PC Card is automatically detected. To install a PC Card, hold the card with its orientation symbol pointing into the slot and the top side of the card facing up. Insert the card into the slot, and press in firmly until the card is completely seated in the internal PC Card connector. If there is too much resistance when inserting the card, do not force the card. Check the card's orientation, and try again.

When a PC Card is being used, the PC Card access indicator appears in the status display panel. The computer recognizes most I/O cards and automatically loads the appropriate device driver. If you have older modem communications software that cannot use IRQ8 or higher, you must disable the serial port or infrared port to use the software.

---

### Removing a PC Card

To remove a PC card from the top connector, press the top eject button twice (identified by an arrow pointing up). To remove a PC card from the bottom connector, press the bottom eject button twice (identified by an arrow pointing down). If you are removing a type III card, press the bottom eject button twice.

The first time you press an eject button, the eject button itself pops out. The second time you press the eject button, the PC Card is released and extends slightly from the slot. Grasp the end of the card, and pull it completely from the slot.

See [Installing Utilities and Drivers](#) for information on installing utilities and drivers.

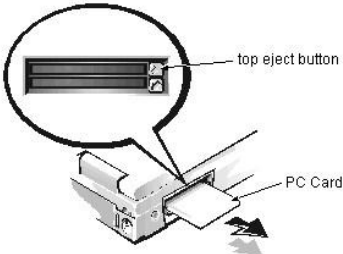
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### Configuring a PC Card

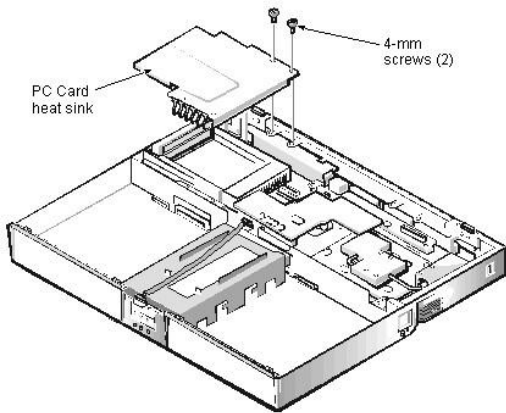
If you are using the Microsoft® Windows® 98 operating system, click the **Start** button, point to **Settings**, and then click **Control Panel**. Double-click the PC Card to open the **PC Card Properties** window. For more information, check the documentation that came with your operating system.

You can also double-click the **PC Card** icon on the Windows 98 desktop.

**PC Card Slots: Dell™ Inspiron™ 7000**



## PC Card Heat Sink Removal: Dell™ Inspiron™ 7000



To remove the PC Card heat sink, follow these steps:

1. Remove the (2) 4-mm screws securing the PC Card heat sink.
2. Remove the heat sink.

# Power Sources: Dell™ Inspiron™ 7000

[AC Adapter](#) | [Battery](#) | [Removing and Installing the Main Battery](#) | [Removing and Installing a Secondary Battery](#) | [Charging the Battery](#) | [Checking a Battery's Charge Level](#)

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## AC Adapter

The [AC adapter](#) kit includes the AC adapter and an AC power cable.

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

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

**NOTICE: The AC adapter works with AC power sources worldwide. However, electrical outlets vary between countries. Before using electrical outlets outside of the U.S., you may need to obtain a power cable designed for use in that country.**

**NOTICE: The AC adapter is designed to work only with Dell Inspiron portable computers. Do not use adapters from other computers, and do not attempt to use this adapter with other computers.**

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## Battery

The computer supports up to 2 lithium ion batteries simultaneously. The main battery is a standard feature and is used in the battery compartment; an optional secondary battery can be installed in the options bay.

Either battery can power the computer by itself. When 2 batteries are installed, the computer draws power from both of them serially. The lithium ion battery has a life span of up to 500 full charges when it is charged at normal room temperature.

A number of factors affect [battery operating time](#):

- 1 The power conservation features used
- 1 The number and type of PC Cards used
- 1 The kinds of application programs run
- 1 The capacity of the optional memory modules installed (the higher the capacity, the more power used)
- 1 The use of a CD-ROM or DVD-ROM drive, which uses more power than a hard-disk drive or a diskette drive

See also [Power Conservation](#).

---

## Removing and Installing the Main Battery

1. Save any files you have open.
  2. Shut down the computer.
  3. Close the display and turn the computer over.
  4. Remove the [main battery](#).  
Press the latch lock toward the back of the computer and slide the latch release away from the battery. Hold the latch release with one hand and pull the battery out of the battery bay.
  5. Install the new battery.  
Make sure the bezel on the battery is in the correct position by sliding it into place. Slide the new battery into the battery compartment until you hear it click into place. Move the latch lock back to the locked position.
  6. Turn on the computer.
- 


## Removing and Installing a Secondary Battery

1. Save any open files.
  2. Shut down the computer.
  3. Close the display and turn the computer over.
  4. Remove the [combo module](#).  
Push the latch lock toward the back of the computer, and slide the latch release away from the options bay. Hold the latch release with one hand and pull the device out of the options bay.
  5. Install a secondary battery.  
Make sure the bezel on the battery is in the correct position by sliding it into place. Slide the second battery into the options bay. Move the latch lock back to the locked position.
  6. Turn on the computer.
- 

## Charging the Battery

Each time you connect the computer to AC power or install a battery in a computer that is connected to AC power, the computer checks the battery's charge and temperature. The AC adapter charges the battery (if necessary) and maintains the battery's charge.

The AC adapter needs from 2 to 2.5 hours (depending on whether the system is on or off) to fully charge a battery that has been completely discharged. If 2 batteries are installed in the computer, the AC adapter charges the main battery first, then the secondary battery. (The secondary battery is discharged first.)

 **NOTE:** You can leave the battery in the computer as long as you like. The battery's built-in circuitry prevents the battery from overcharging.

For maximum battery performance, charge the battery only at normal room temperature. To charge the battery, follow these steps:

1. Connect the computer to the AC adapter.
2. Install the main battery and/or a secondary battery in the computer.  
The battery starts charging immediately. The battery LED on the front of the computer appears as a solid green light while the battery is charging. If you remove a battery from the computer while the battery is charging, the indicator lights on the battery will stay lit for a few minutes.

---

## Checking a Battery's Charge Level

Use one of the following methods to check the battery's charge level:

- 1 Check the [battery charge gauge](#) before you insert the battery into your computer. When the battery is in the computer, you cannot see the gauge. The gauge has 5 charge-level indicator lights that show how much battery charge remains. Press the status button to the right of the lights to check the charge level. Each light represents approximately 20% of the total battery charge. For example, if the battery has 80% of its charge remaining, 4 of the lights are on. If none of the lights are on, the battery has no charge left.

**NOTICE: If only 1 or none of the charge-level indicator lights are lit, it indicates a critically low battery state. Do not use the battery unless the computer is connected to AC power or unless you install a second charged battery.**

- 1 A low-battery warning occurs when the battery is about 90% depleted. The speaker beeps 3 times, and the battery status LED is a solid amber. About 12 minutes of battery life remains. If both the main battery and the secondary battery are installed, the low-battery warning means that the combined charge of both batteries is about 90 percent depleted.

**NOTICE: To avoid losing data (and possibly corrupting data areas on your hard-disk drive), save your work immediately after a low-battery warning. Then connect the computer to AC power, or install a secondary battery in the options bay. If the battery runs completely out of power, the computer activates save-to-disk suspend mode.**

- 1 If you are using the Microsoft® Windows® 98 operating system, click the **Start** button, point to **Settings**, and then click **Control Panel**. Double-click the **Power** icon to open the **Power Properties** window. (Alternatively, right-click the battery icon in the taskbar of the Windows 98 desktop. From there you can open the **Power Properties** window or the battery meter.) The Windows 98 battery meter displays a battery icon that shows the amount of battery charge remaining. If an AC adapter is connected to the computer, the battery meter displays a plug icon. The battery meter icons are visible in the desktop taskbar. For more information, see your Windows 98 documentation.

## Power Conservation: Dell™ Inspiron™ 7000

[How to Conserve Battery Power](#) | [Using Microsoft Windows 98 to Conserve Battery Power](#) | [Experimenting with Power Conservation](#) | [Checking the Battery Status](#) | [Standby Mode](#) | [Turn Off Monitor](#) | [Turn Off Hard-Disk Drive](#) | [Save-to-Disk Suspend Mode](#) | [Save-to-Disk Suspend File](#)

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### How to Conserve Battery Power


You automatically conserve battery power each time you attach an AC power source to the computer. When the AC adapter is attached, the battery is being charged while the computer uses AC power. The life expectancy of your battery is determined largely by the number of charges it receives, so use an AC power source to run the computer if one is available.

Use the Microsoft Windows 98 **Power Management Properties** window to adjust the way the computer uses battery power. Options in the window slow or stop some internal devices when the computer is idle.

Take advantage of the computer's power management modes when you leave the computer unattended for long periods of time. **Standby**, **Turn Off Monitor**, and **Turn Off Hard Drive** allow you to maximize power conservation when your work is interrupted.

When the computer is using battery power, remove PC Cards that you are not using.

Experiment with power conservation features to achieve the optimum power conservation for your work environment.

 **NOTE:** You might have to trade some of the computer's performance for increased battery operating time. For example, if you activate the **Turn Off Hard Drive** mode, you may experience a delay the next time the computer tries to access the drive.

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### Using Microsoft® Windows® 98 to Conserve Battery Power

Complete the following steps in Windows 98 to access the **Power Management Properties** window and set the power management features:

1. Click the **Start** button, point to **Settings**, and click **Control Panel**.
2. Double-click the **Power Management Properties** icon.

The **Power Management Properties** window contains the following tabs:

- 1 **Power Scheme** allows you to select one of 3 power mode settings.
- 1 **Alarms** allows you to set the **Low battery** and **Critical battery** alarms to alert you when the system battery falls below a certain percentage. When you received your computer, the **Low battery** and **Critical battery** alarms check boxes were not checked. Dell recommends that you do not select these options.
- 1 **Power Meter** allows you to view the percentage of battery life remaining when your system is operating on battery power. If your system is operating on AC power, the system displays a message.
- 1 **Advanced** allows you to display the **Power Meter** on the Windows 98 taskbar and to display a password prompt when the computer resumes from **Standby** mode.

3. Select the appropriate settings for the power management features you want.
- 

### Experimenting with Power Conservation

In general, the lower the value you set for each time-out option, the longer your battery's charge lasts. On the other hand, setting high time-out values tends to optimize the computer's performance. For best results, experiment as follows:

- 1 Use the computer with all the options set to their defaults.
- 1 Use the computer with all the time-out options disabled or set to **Off**.
- 1 Use the computer with all the time-out options set to their minimum values.

Evaluate the way that the different time-out settings affect how long you can operate the computer on battery power versus the relative efficiency of how your software performs.

---

### Checking the Battery Status

The battery LED on the front of the computer indicates the battery's current operating status. The LED has 5 states:

- 1 Off when the computer is operating on battery power.
  - 1 Flashing green, which indicates that the battery is charging.
  - 1 Solid green, which indicates that the battery is fully charged.
  - 1 Solid amber, which indicates that the power is low; you should save your work and attach AC power.
  - 1 Fast blinking amber, which indicates that the battery power is critically low. Save your work and attach AC power immediately.
- 

### Standby Mode

**Standby** turns off the display, stops the hard-disk drive, and turns off other internal devices so that the computer uses less battery power. When the computer resumes operation from Standby mode, the desktop is restored exactly as it was before entering Standby mode.

**NOTICE: Windows 98 saves data to RAM, not to your hard-disk drive, before entering Standby mode. If the computer enters Standby mode while running on battery power, data loss from RAM can occur if the battery discharges completely.**

You can activate Standby mode by pressing <Fn><Esc> or by selecting **Standby** in the **Shutdown** window. To resume operation from Standby mode, press the power button.

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## Turn Off Monitor

The **Turn Off Monitor** option turns off the display so that the computer uses less battery power. You can press any key or the touch pad to turn on the display. The desktop is restored exactly as it appeared before the display was turned off.

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## Turn Off Hard-Disk Drive

The **Turn Off Hard-Disk Drive** option turns off the hard-disk drive so that the computer uses less battery power. You can press any key or the touch pad to turn on the hard-disk drive. The desktop is restored exactly as it appeared before the hard-disk was turned off.

---

## Save-to-Disk Suspend Mode

Save-to-disk suspend mode copies all system data to a reserved area on the hard-disk drive and then turns off all power to the computer. When you resume normal operation, the same programs will be running and the same files will be open that were open before you activated this mode.


 **NOTES:** *Save-to-disk suspend mode helps preserve system data by quickly saving it on to the hard-disk drive if you are about to run out of battery power.*

*Place the computer in save-to-disk suspend mode if you do not intend to store the computer for longer than 40 days. Save-to-disk suspend mode preserves the configuration information stored in NVRAM. The reserve battery maintains this information, but may run out of energy after 40 days.*

To activate save-to-disk suspend mode immediately, press <Fn> <A> (or <Fn> <Q> on the French keyboard).

To resume using the computer after activating save-to-disk suspend mode, press the power button. It may take a few seconds for the computer to return to its previous state.

Some PC Cards may not operate correctly after exiting from save-to-disk suspend mode. If you encounter problems with a card, remove and replace it.


 **NOTE:** *Save-to-disk suspend mode requires a special file on your hard-disk drive that sets aside enough disk space to store the contents of the computer's memory. Dell creates an appropriately sized save-to-disk suspend file before shipping the computer to you. If you remove the file or add memory to the computer, or if your hard-disk drive becomes corrupted, you must recreate the file before you can again use save-to-disk suspend mode.*

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## Save-to-Disk Suspend File


The save-to-disk suspend file on your hard-disk drive cannot be accessed by the operating system or application programs. When save-to-disk suspend mode is activated, all system data is stored in this file.

Use the following instructions to create a save-to-disk suspend file if you installed a new hard-disk drive, if you removed the file, or if you are rebuilding a corrupted hard-disk drive. If possible, print these instructions before you begin this procedure.

 **NOTE:** *If you installed memory to increase system memory, delete the save-to-disk suspend file and then complete this procedure. To delete the save-to-disk suspend file, type the following at the MS-DOS prompt and press <Enter>:*

```
phdisk /delete /file
```

1. Save and exit any application programs and files that you have open and shut down the computer.
2. Insert the *Microsoft Boot Disk Windows 98 Series* diskette into the diskette drive.
3. When the **Microsoft Windows 98 Startup Menu** appears, use the down-arrow key to select **Start computer with CD-ROM support** and press <Enter>.
4. When **A:\>** appears on the screen, insert the *Dell Inspiron 7000 System Software CD* into your CD-ROM or DVD-ROM drive.  
Your MS-DOS prompt changes from an A:\ to a D:\, assuming that D is the drive letter of your CD-ROM or DVD-ROM drive.
5. Type `cd\utilities` and press <Enter>.
6. Type `phdisk /create /file` and press <Enter>.

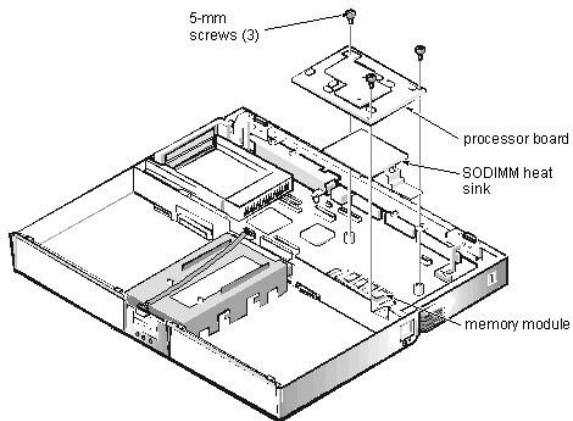
 **NOTE:** *Make sure that there is a space between `phdisk /create` and `/file`.*

The utility calculates the size of the file, in kilobytes, based on the amount of system memory in your computer, plus 2 MB to handle video memory and additional system requirements.

7. Follow the instructions on your screen to create the save-to-disk suspend file.  
To check the size of the save-to-disk suspend file, type `phdisk /info` at an MS-DOS prompt and press <Enter>.  
If you need to delete the save-to-disk suspend file, type `phdisk /delete /file` at an MS-DOS prompt and press <Enter>.



## Processor Board and Memory Module Removal: Dell™ Inspiron™ 7000



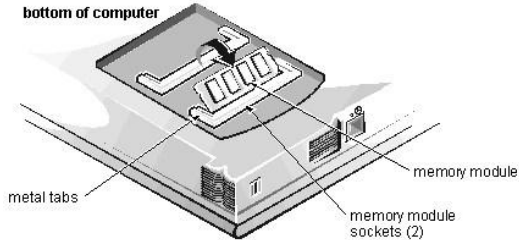
This procedure assumes that you have removed the [heat exchanger/fan](#). To remove the processor board and memory module, follow these steps:

1. Remove the (3) 5-mm screws securing the processor board to the system board.
2. Gently pull the processor board off of connector JP15 on the system board. Do not rock the board to remove it, because this may damage the connectors.
3. Lift the SODIMM heat sink off of the memory module.
4. Remove the memory module.  
Carefully spread the inner metal tabs of the memory module socket to disengage the module from the socket. The module should pop up slightly. Then pull the memory module out of the socket.
5. Inspect the thermal pad beneath the memory module to see if it needs replacement.

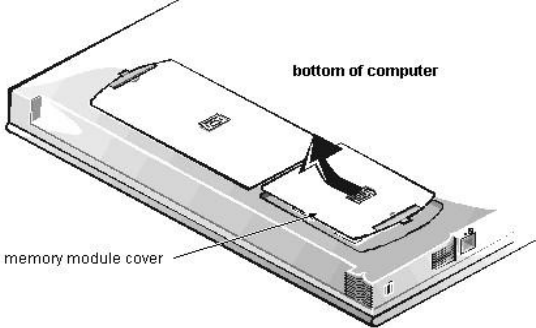
When reinstalling the SODIMM heat sink, be careful to align the hole in the SODIMM heat sink over the metal clip soldered to the system board.

When reinstalling the processor board, align the board with the notch on the system board connector. Press down on the left side of the board over the system board connector. This is the best spot to apply pressure to seat the processor correctly on connector JP15.

# Removing the Memory Module: Dell™ Inspiron™ 7000



# Removing the Memory Module Cover: Dell™ Inspiron™ 7000



# Removing and Replacing Parts: Dell™ Inspiron™ 7000

[Precautionary Measures](#) | [Service Procedures](#) | [Recommended Tools](#)

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## Precautionary Measures

### WARNING FOR YOUR PERSONAL SAFETY AND PROTECTION OF THE EQUIPMENT

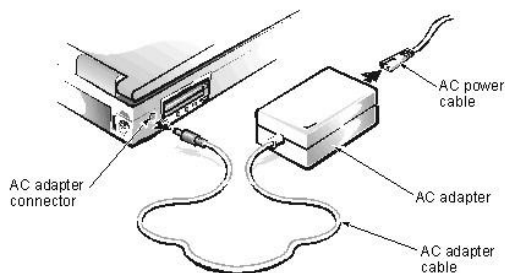
Before you start to work on the computer, perform the following steps in the sequence indicated:

1. Ground yourself by attaching an antistatic grounding strap to your wrist and to an unpainted metal surface on the computer's I/O panel. If an antistatic grounding strap is not available, periodically discharge static electricity from your body by touching one of the connectors on the I/O panel.
2. Turn off the computer and any attached peripherals.
3. Disconnect the computer and any attached peripherals from electrical outlets to reduce the potential for personal injury or shock.

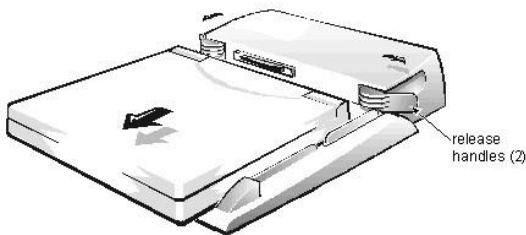
Precautionary measures include disconnecting the computer from the AC adapter and port replicator and removing the main battery, PC Cards, hard-disk drive, memory module cover, memory modules, and devices in the options bay.

To take these precautionary measures, follow these steps:

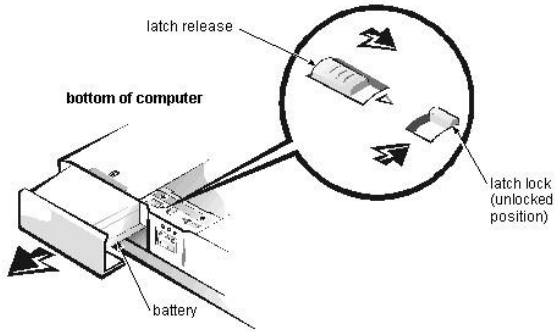
1. Determine the power state of the computer.  
If the system is on, go to step 2. If you are unsure whether the system is on, shut down and restart the system, and then go to step 2.
2. Turn off any attached peripherals, and then shut down the computer.
3. Disconnect the computer and any attached peripherals from electrical outlets to reduce the potential for personal injury or shock.  
If the computer has an AC adapter, disconnect the AC power cable from the electrical outlet and then from the AC adapter; then disconnect the AC adapter from the computer or from the Inspiron Port Replicator II.



4. If the computer is connected to a port replicator, pull both release handles on the sides of the replicator to undock the computer.



5. Remove the main battery from the battery compartment.  
Unlock the latch lock on the bottom of the computer by flipping it toward the back of the computer. Slide the latch release in the direction of the arrow. Keep holding the latch release with one hand while pulling the battery out of the compartment with the other.

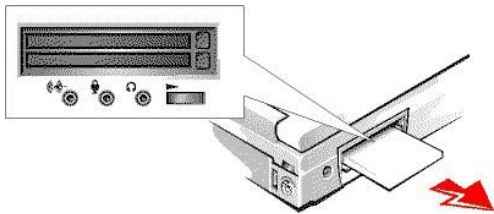


6. Remove PC Cards.

To remove PC Cards from the top connector, press the top eject button. **When the button slides out, press it again to release the card. Gently remove the card. Press the eject button again until it is flush with the computer casing.** To remove PC Cards from the bottom connector, follow the same procedure.

**NOTICE: Use the PC Card configuration utility on the taskbar to select and stop a card before removing it from the computer. If you do not remove the card in configuration utility, you could lose data from open application programs.**

Grasp the end of the card, and pull it completely from the slot.

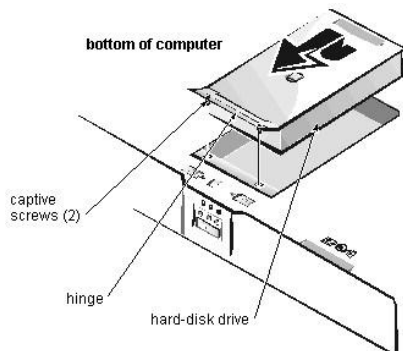


7. Remove the hard-disk drive assembly.

Loosen the 2 captive screws that secure the hard-disk drive into the bottom of the computer. The front edge of the cover pops up slightly. Slide the hard-disk drive toward the front of the computer and then lift the drive out of the computer.

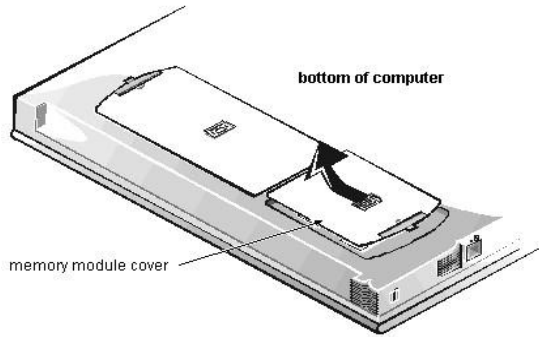
**NOTICE: When the hard-disk drive is not in the computer, store it in a hard-disk drive case to protect it from exposure to static electricity.**

**NOTICE: Handle the hard-disk drive gently and don't bump or drop the drive. Rough handling of the drive could induce failure or loss of data.**



8. Remove the memory module covers.

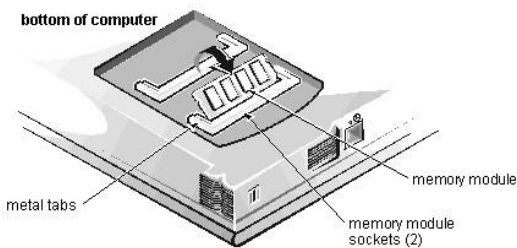
Slide the memory module cover as far as it will go in the direction of the arrow, and then remove the cover.



To replace a cover, place it over the opening, leaving a small gap along the rounded edge, and then slide the cover toward the outside of the computer until it snaps into place.

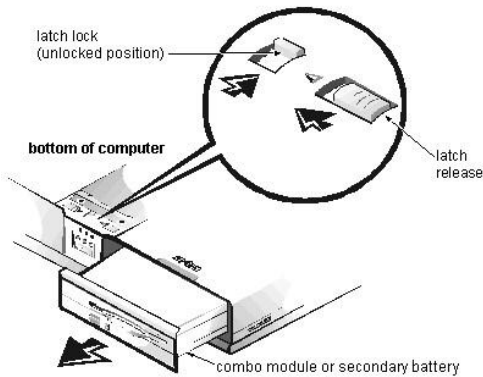
9. Remove the memory modules.

Carefully spread apart the inner metal tabs of the memory module socket to disengage the module from the socket. The module should pop up slightly. Then pull the memory module out of the socket.



10. If present, remove the combo module or secondary battery from the options bay.

Unlock the latch lock by flipping it toward the back of the computer. Slide the latch release in the direction of the arrow. Keep holding the latch release with one hand while pulling the combo module or secondary battery straight out of the options bay with the other.



**NOTE:** If the computer is booted with a diskette drive or secondary battery in the options bay, you must reboot after installing the combo module in the options bay.

## Service Procedures

**NOTICE:** Only a certified service technician should perform the following procedures for removing and replacing parts. The warranty on the computer becomes void if anyone other than a certified technician performs these procedures.

Unless otherwise noted, each procedure assumes the following:

- 1 You have the recommended tools.
- 1 You have performed the steps in [Precautionary Measures](#).
- 1 The computer and any attached peripherals are turned off and the peripherals are disconnected from the computer's I/O panel.
- 1 You can replace or reinstall a part by performing the removal procedure in reverse order unless additional information is provided.

### [Screw Identification and Tightening](#)

[ZIF Connectors](#)  
[Exploded View of Computer](#)  
[Exploded View of 13.3-Inch Display Assembly](#)  
[Exploded View of 14.1-Inch Display Assembly](#)  
[Exploded View of 15-Inch Display Assembly](#)  
[Exploded View of Palmrest Assembly](#)  
[Exploded View of Base Assembly](#)  
[Hard-Disk Drive Disassembly](#)  
[Combo Module Disassembly](#)  
[General Disassembly](#)  
[Keyboard Removal](#)  
[Thermal Shield and Internal Modem Removal](#)  
[Display Assembly and Display Assembly Component Removal](#)  
[Palmrest Assembly and Palmrest Assembly Component Removal](#)  
[Base Assembly Component Removal](#)

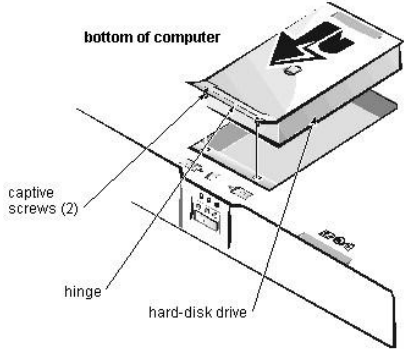
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## **Recommended Tools**

Most of the procedures require the use of one or more of the following tools:

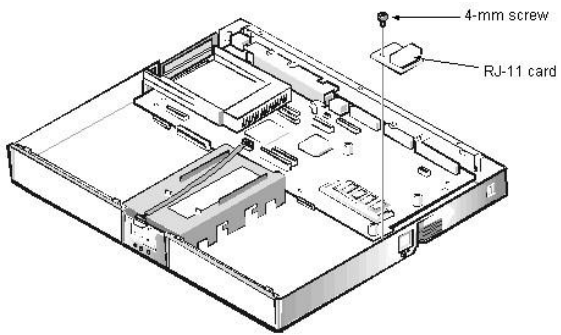
- 1 Small flat-blade screwdriver
- 1 Number 1 Phillips-head screwdriver
- 1 Antistatic grounding strap
- 1 Dental pick
- 1 Small scribe or nylon flat blade
- 1 Nut drivers (5 mm and 5.5 mm)

# Removing the Hard-Disk Drive: Dell™ Inspiron™ 7000





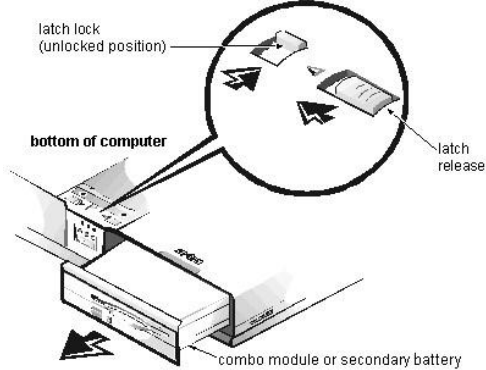
## RJ-11 Card Removal: Dell™ Inspiron™ 7000



To remove the RJ-11 card, follow these steps:

1. Remove the 4-mm screw securing the RJ-11 card to the system board.
2. Lift the card off the system board.

# Removing Devices From the Media Bay: Dell™ Inspiron™ 7000

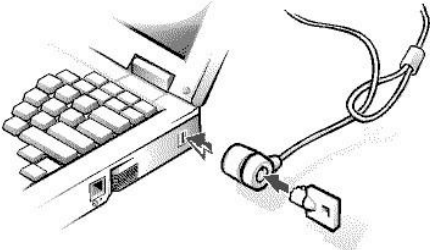


## **Screw Identification and Tightening: Dell™ Inspiron™ 7000**

Where applicable, information about screw lengths is provided in illustrations. A complete screw inventory and location template is included in [General Disassembly](#).

**NOTICE:** The correct-length screw must be used when reinstalling a screw. Otherwise, hardware damage could result. Make sure that the screw is properly aligned with its corresponding hole, and avoid overtightening.

**Security Cable Slot: Dell™ Inspiron™ 7000**



# Setup Program: Dell™ Inspiron™ 7000

[Using the Setup Program](#) | [Main Menu](#) | [System Devices Menu](#) | [Security Menu](#) | [Power Menu](#) | [Boot Menu](#) | [Exit Menu](#)

## Using the Setup Program

For detailed information about the Setup menus and options, see the online [User's Guide](#).


You can enter the Setup program only when the computer is booting. Each time you turn on or boot the computer, the following message appears:

Press <F2> to enter Setup

To open the **Main** menu of the Setup program, press <F2> before the message disappears.

From the **Main** menu, you can access the **System Devices** menu, the **Security** menu, the **Power** menu, the **Boot** menu, and the **Exit** menu.

Change option settings in the menus to customize the configuration of the computer. The legend at the bottom of each menu tells you which keys to use for navigating through the Setup program.

 **NOTE:** Press <F9> to restore the default values for each option in a menu. To save changes and exit from the Setup program, press <F10>. Press <F5> or <F6> to change the value for an option.

## Main Menu

PhoenixBIOS Setup Utility			
Main	System Devices	Security Power Boot Exit	
System Time:	[03:06:18]	Item Specific Help	
System Date:	[08/15/1998]		
Floppy Drive:	1.44 MB, 3 1/2"		
Hard Disk:	4100 MB		
Quiet Boot:	[Enabled]		
Video Display Device:	[Simul Mode]		
Television Type:	[Disabled]		
System Memory:	640 KB		
Extended Memory:	32 MB		
Visit our Web site at <a href="http://www.dell.com/">http://www.dell.com/</a>			
F1 Help	↑↓ Select Item	F5/F6 Change Values	F9 Setup Defaults
ESC Exit	←→ Select Menu	Enter Select % Sub-Menu	F10 Save and Exit

## System Devices Menu

PhoenixBIOS Setup Utility			
Main	System Devices	Security Power Boot Exit	
IDE Controller:	[Both]	Item Specific Help	
FDD Controller:	[Enabled]		
Internal MPEG II:	[Enabled]		
Serial Port:	[Auto]		
Infrared Port:	[Disabled]		
Parallel Port:	[Auto]		
Mode:	[ECP]		
F1 Help	↑↓ Select Item	F5/F6 Change Values	F9 Setup Defaults
ESC Exit	←→ Select Menu	Enter Select % Sub-Menu	F10 Save and Exit

## Security Menu

**NOTICE:** The password features provide a high level of security for the data in the computer. However, they are not foolproof. If your data requires more security, it is your responsibility to obtain and use additional forms of protection, such as data encryption programs or PC Cards with encryption features.

PhoenixBIOS Setup Utility			
Main	System Devices	<b>Security</b>	Power Boot Exit
System Password is Clear			Item Specific Help
Set System Password [Enter]			
Password On Boot [Disabled]			
F1 Help	↑↓ Select Item	F5/F6 Change Values	F9 Setup Defaults
ESC Exit	↔ Select Menu	Enter Select % Sub-Menu	F10 Save and Exit

## Power Menu

PhoenixBIOS Setup Utility			
Main	System Devices	Security	<b>Power</b> Boot Exit
Power Management Mode [Customized]			Item Specific Help
Smart CPU Mode: [Off]			
Standby Time-out: [Disabled]			
Suspend Time-out: [Disabled]			
Suspend Mode [Save to Ram]			
Resume On Modem Ring: [Disabled]			
Resume On Time of Day: [Disabled]			
Resume Time: [00:00:00]			
F1 Help	↑↓ Select Item	F5/F6 Change Values	F9 Setup Defaults
ESC Exit	↔ Select Menu	Enter Select % Sub-Menu	F10 Save and Exit

## Boot Menu

PhoenixBIOS Setup Utility			
Main	System Devices	Security	Power <b>Boot</b> Exit
1. [Diskette Drive]			Item Specific Help
2. [Hard Drive]			
3. [CD-ROM Drive]			
F1 Help	↑↓ Select Item	F5/F6 Change Values	F9 Setup Defaults
ESC Exit	↔ Select Menu	Enter Select % Sub-Menu	F10 Save and Exit

## Exit Menu

PhoenixBIOS Setup Utility

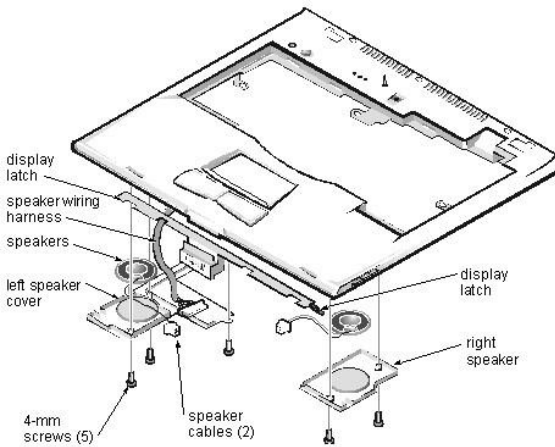
Main System Devices Security Power Boot **Exit**

Save Changes and Exit  
Discard Changes and Exit  
Get Default Values  
Load Previous Values  
Save Changes

Item Specific Help


F1 Help    ↑↓ Select Item    F5/F6 Change Values    F9 Setup Defaults  
ESC Exit   ← Select Menu    Enter Select % Sub-Menu    F10 Save and Exit

## Speaker Removal: Dell™ Inspiron™ 7000



This procedure assumes that you have removed the [palmrest assembly](#) from the base assembly and that you have removed the [hard-disk drive heat shield](#) and [touch pad assembly](#). To remove the speakers, follow these steps:

1. Remove any tape securing the speaker cables.
2. Remove the (3) 4-mm screws securing the left speaker cover.

 **NOTE:** Before removing the speaker cables and wire harness, be sure to note their routing through the slots and pins so you can correctly reinstall the components.

3. Remove the left speaker cover, speaker, and speaker cable.
4. Remove the speaker wire harness.
5. Remove the (2) 4-mm screws securing the right speaker cover.
6. Remove the right speaker cover, speaker, and speaker cable.  
The display latch is no longer secured by the speaker covers. Be careful not to lose the spring.
7. Remove the display latch and spring.  
To replace the speaker, resolder the speaker cable to the new speaker.

When reinstalling the speakers, be especially careful to route the speaker cables and speaker wire harness through the appropriate slots and pins.



## Specifications: Dell™ Inspiron™ 7000

[Microprocessor](#) | [Chip Set and Bus](#) | [PC Card](#) | [Memory](#) | [Connectors](#) | [Audio](#) | [Video](#) | [14.1-Inch Display](#) | [15-Inch Display](#) | [Keyboard](#) | [Touch Pad](#) | [Battery](#) | [AC Adapter](#) | [Environmental](#) | [Regulatory](#)

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### Microprocessor

Microprocessor type and speed:

Dell Inspiron 7000A	Intel® Mobile Pentium® II microprocessor running at 400, 366, or 333 MHz
Dell Inspiron 7000D	Intel Mobile Pentium II microprocessor running at 300 or 266 MHz
Dell Inspiron 7000C	Intel Celeron™ microprocessor running at 400 or 366 MHz

L1 cache:

Dell Inspiron 7000A	32 KB (internal)
Dell Inspiron 7000D	32 KB (internal)
Dell Inspiron 7000C	32 KB (internal)

L2 cache:

Dell Inspiron 7000A	256 KB (integrated)
Dell Inspiron 7000D	512 KB pipe-lined-burst SRAM (external)
Dell Inspiron 7000C	128 KB (integrated)

Math coprocessor                      internal to the microprocessor

---

### Chip Set and Bus

System chip set	Intel Mobile 440BX AGP
Data bus width	64 bits
DRAM bus width	64 bits
Address bus width	32 bits
Flash EPROM	4 Mb

---

### PC Card

PCI controller	Texas Instruments PCI 1220 CardBus controller
PC Card connectors	2 type I, 2 type II cards, or 1 type III card
Cards supported	3.3 and 5 V
PC Card connector size	68 pins
Data width (maximum)	32 bits

---

### Memory

Architecture	SDRAM
Memory module capacities	32-, 64-, and 128-MB SODIMM
Maximum RAM	384 MB
Memory access time/clock frequency	66 MHz
BIOS address	F000:0000

---

## Connectors

Serial (DTE)	(1) 9-pin connector; 16550-compatible, 16-byte buffer
Parallel	(1) 25-hole connector; normal (unidirectional), bidirectional, EPP 1.9 or ECP
Monitor	(1) 15-hole connector
PS/2 keyboard/mouse	(1) 6-pin mini-DIN connector
Infrared	1 IrDA 1.1 port
Expansion connector	240 pins
TV-out	(1) 7-pin S-video
Audio	microphone, headphones/speakers, and line-out jacks
USB	(1) 4-pin connector
RJ11	1 RJ11 modem port (optional)

---

## Audio

Audio type	Sound Blaster Pro-compatible voice and music functions, HRTF 3D positional audio, hardware wavetable
Audio controller	ESS Technology Maestro-2
Conversion	20 bit (stereo analog-to-digital and digital-to-analog)
Hardware wavetable synthesizer	64-voice
Interfaces:	
Internal	PCI bus, integrated stereo speakers and microphone
External	microphone (minijack, mono), headphones, line-in
Internal speaker amplifier	1.0-W stereo (0.5 W per speaker)
External microphone input voltage range	280 mV peak-to-peak
Line/audio input voltage range	2.8 V peak-to-peak
Controls	volume can be controlled through thumb wheel, software application menus, and keyboard

---

## Video

Video type	AGP 2X with sideband signals, hardware 3D accelerator, DVD motion compensation, ImpactTV2-quality TV output
Video controller	ATI RAGE Mobility - P video with AGP 2x, 4M/8M SGRAM
Video memory	4- or 8-MB 100-MHz SGRAM
LCD interface	65-MHz LVDS
TV support	NTSC or PAL in S-video and composite modes

---

## 14.1-Inch Display

Type	active-matrix color (XGA)
Dimensions (active area):	
Height	54 mm (2.1 inches)
Width	318 mm (12.5 inches)
Depth	254 mm (10 inches)
Diagonal	358.1 mm (14.1 inches)

Weight*	3.8 kg (8.37 lb)
Maximum resolution	1024 x 768 pixels; 4 billion colors as supported by application software
Response time (typical)	40 ms
Operating angle	0° (closed) to 170°
Dot pitch	0.28 mm
Power consumption	4.6 W
Controls	brightness can be controlled through key combinations

\* Includes hard-disk drive, diskette drive, and CD-ROM drive.

---

### 15-Inch Display

Type	active-matrix color (XGA)
Dimensions (viewable image area):	
Height	59 mm (2.3 inches)
Width	328 mm (12.9 inches)
Depth	263 mm (10.4)
Weight*	4.1 kg (8.9 lb)

\* Includes hard-disk drive, diskette drive, and CD-ROM drive.

---

### Keyboard

Number of keys	87 (U.S. and Canada); 88 (Europe); 88 (Japan)
Key travel	3.0 ± 0.5 mm (0.12 ± 0.02 inch)
Key spacing	19.1 mm (0.75 inch)
Layout	QWERTY/AZERTY/Kanji

---

### Touch Pad

Interface	PS/2-compatible
X/Y position resolution (graphics table mode)	20 points/mm (500 points/inch)
Size:	
Thickness	4.65 mm (0.18 inch) at highest component
Width	64-mm (2.52-inch) sensor-active area
Height	47.0-mm (1.85-inch) rectangle with 0.5-mm (0.02-inch) tabs
Weight*	15 g (0.52 ounce) ± 0.5 g (0.001 ounce)
Power:	
Supply voltage	5 V ± 10%
Supply current	4 mA (maximum operating current)

---

### Battery

Type	lithium ion
Dimensions:	
Height	23.8 mm (0.94 inch)

Depth	148.2 mm (5.83 inches)
Width	116.2 mm (4.58 inches)
Weight*	0.66 kg (1.45 lb)
Voltage	14.8 VDC
Capacity	74 WH
Charge time (approximate)*	3.75 hours (computer on); 3.25 hours (computer off)
Operating time (approximate)*	2.75 to 3.75 hours with 1 battery; 5.5 to 7.5 hours with 2 batteries
Life span (approximate)*	500 discharge/charge cycles
Ambient temperature range:	
Charge	0° to 45°C (32° to 113°F)
Discharge	0° to 60°C (32° to 140°F)
Storage	-20° to 60°C (-4° to 140°F)

*\* Battery performance features such as charge time, operating time, and life span can vary according to the conditions under which the computer and battery are used.*

---

## AC Adapter

Input voltage	90 to 264 VAC
Input current (maximum)	1.5 A at 90 VAC, full load
Input frequency	47 to 63 Hz
Output current	3.5 A (continuous)
Output power	70 W
Rated output voltage	20 VDC
Dimensions:	
Height	29.6 mm (1.17 inches)
Width	60.0 mm (2.36 inches)
Depth	105 mm (4.13 inches)
Weight (with cables)	0.3 kg (0.66 lb)
Temperature range:	
Operating	5° to 35°C (41° to 95°F)
Storage	-20° to 50°C (-4° to 122°F)

---

## Environmental

Temperature:	
Operating	5° to 35°C (41° to 95°F)
Storage	-20° to 50°C (-4° to 122°F)
Relative humidity	10% to 90% (noncondensing)
Maximum vibration:	
Operating	0.8 GRMS using a random-vibration spectrum that simulates air/truck shipment
Storage	1.3 GRMS using a random-vibration spectrum that simulates air/truck

	shipment
Maximum shock:*	
Operating	1.52 m/sec (4.98 ft/sec) (less than or equal to a pulse width of 2 ms)
Storage	2.03 m/sec (6.66 ft/sec) (less than or equal to a pulse width of 2 ms)
Altitude:	
Operating	0 to 3048 m (0 to 10,000 ft)
Storage	0 to 12,192 m (0 to 40,000 ft)

\* Measured with the hard-disk drive in head-parked position

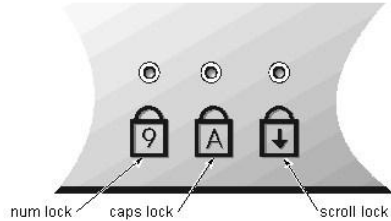
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## Regulatory

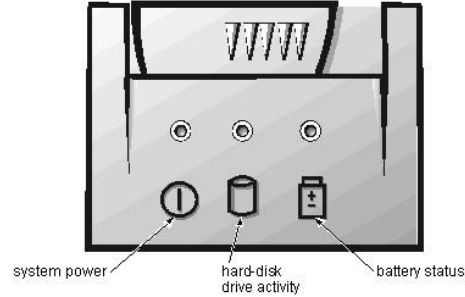
U.S.	FCC Class B
Canada	IC Notice
Europe	CE NOTICE: EN 55022, EN 50082-1, IEC 801-2, IEC 801-3, IEC 801-4, EN 60950:1992 + Amd.1:1993 + Amd.2:1993
Czech Republic	EN 55022 Compliance
Japan	VCCI Class A or Class B ITE
Korea	Class A or Class B
Poland	PN-93/T-42107 and PN-89/E-06251
Mexico	NOM 024
Taiwan	BSMI notice

# Status Display: Dell™ Inspiron™ 7000

on top of computer, above keyboard:

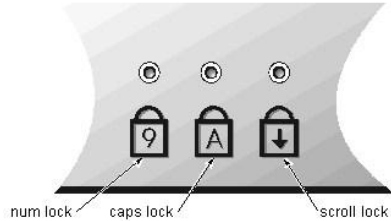


on front of computer, beneath display latch:

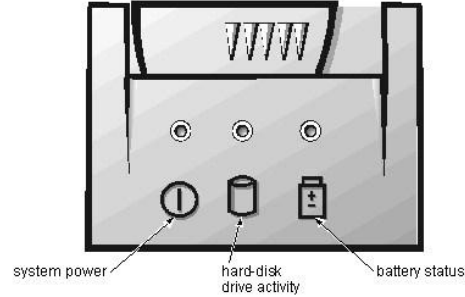


# Status Display: Dell™ Inspiron™ 7000

These status lights are above the keyboard:



These status lights are on the front of the computer, beneath the display latch:



## Storage Devices: Dell™ Inspiron™ 7000


[Removing and Installing a Device in the Media Bay](#)  
[Installing and Removing Devices Using Softex BayManager](#) | [Hard-Disk Drive](#)

---

### Removing and Installing a Device in the Media Bay


The media bay holds a second battery, a combination CD-ROM drive/diskette drive, or a combination DVD-ROM drive/diskette drive.

 **NOTE:** If you are using Softex BayManager, refer to [Installing and Removing Devices Using Softex BayManager](#) and skip the following procedure.

 **NOTE:** All devices are removed and installed the same way.

To remove a device from the media bay, perform the following steps:


1. Save any open files.
2. Shut down the computer.
3. [Remove the currently installed device from the media bay.](#)  
Close the display and turn the computer over. Push the latch lock to the unlocked position, and slide the latch release in the direction of the arrow. Keep holding the latch release with one hand while pulling the device out of the media bay with the other.
4. Install the new device in the media bay.  
Insert the device into the media bay and push the latch lock back into the locked position. The label on the device will be facing away from you when the computer is turned over.
5. Reboot the system.

 **NOTE:** If you boot the system with a device in the media bay, you must reboot after installing another type of device in the media bay.

---

### Installing and Removing Devices Using Softex BayManager

To install or remove a device from the media bay using Softex BayManager, perform the following steps.

 **NOTE:** If you do not have Softex BayManager, the icon does not appear in the **Control Panel** or on the taskbar. If you do not have Softex BayManager, see [Removing and Installing a Device in the Media Bay](#).

1. Double-click the **Softex BayManager** icon,  , on the taskbar.
  2. Click either **Remove/Swap Bay Device(s)** or **Insert Bay Device(s)** and follow the instructions on the screen.
- 

### Hard-Disk Drive

 **NOTES:** You will need the Microsoft® Windows® 98 CD and the Dell Inspiron 7000 System Software CD to install software on the new hard-disk drive.

*The computer's BIOS may not support hard-disk drives obtained from vendors other than Dell. Dell does not guarantee compatibility or provide support for hard-disk drives obtained from other sources.*

Use the following procedure to install a hard-disk drive.

**NOTICE:** To prevent data loss, shut down your computer before removing or installing your hard-disk drive. Do not remove the hard-disk drive if the computer is in suspend mode or save-to-disk mode or if the hard-disk drive access indicator is lit.

1. Save any open files.
2. Shut down the computer and remove any [installed batteries](#).
3. [Remove the currently installed drive.](#)  
Turn the computer over, and loosen the two screws securing the hard-disk drive cover. The screws are held captive in the lip of the carrier. A spring causes the front edge of the cover to pop up. If the front edge of the cover does not pop up, pull on one of the screws to lift the front edge.

**NOTICE:** When the hard-disk drive is not in the computer, protect the drive from exposure to static electricity by storing it in protective packaging.

4. Push the hard-disk drive forward until it stops, and then pull it up.
5. Remove the new drive from its packaging.  
Save the original packaging to use when storing or shipping the hard-disk drive.

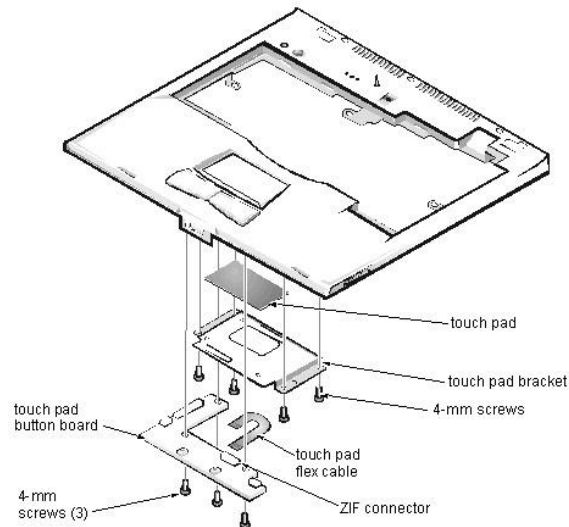
**NOTICE:** While sliding the drive in, do not force it into place.



6. Slide the new drive into place.  
There may be some resistance as the drive connects to its interface connector at the back of the bay.
7. Tighten the screws you loosened in step 3.
8. Test the drive by running the **Hard-Disk Drives (Non-SCSI)** test group in the Dell Diagnostics.

For information on running the diagnostics, see Chapter 4, "Running the Dell Diagnostics," in the [Dell Inspiron 7000 Reference and Troubleshooting Guide](#).

## Touch Pad Assembly Removal: Dell™ Inspiron™ 7000



This procedure assumes that you have removed the [palmrest assembly](#) from the base assembly and that you have removed the [hard-disk drive heat shield](#). To remove the touch pad assembly, follow these steps:

1. Remove the (3) 4-mm screws securing the touch pad button board.
2. Disconnect the 2 speaker cables from connectors JP5 and JP3 on the touch pad button board.
3. Disconnect the speaker wire harness from connector JP1 on the touch pad button board.
4. Disconnect the touch pad flex cable from ZIF connector JP4 on the touch pad button board. Use the pick to pry up the latches on each side of the connector.

**NOTICE:** Lift away the cable only after the [ZIF connector](#) is opened. Pulling the cable from the connector damages the conductive coating on the end of the cable.

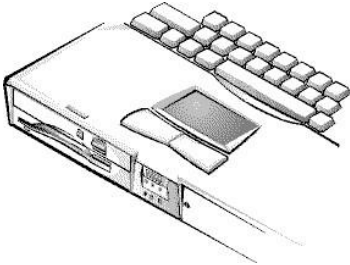
5. Disconnect the touch pad flex cable from ZIF connector J1 on the touch pad. Use the pick to pry up the brown center piece on the connector.

**NOTICE:** Lift away the cable only after the [ZIF connector](#) is opened. Pulling the cable from the connector damages the conductive coating on the end of the cable.

6. Remove the touch pad button board.
7. Remove the (4) 4-mm screws securing the touch pad bracket.
8. Remove the touch pad bracket.
9. Remove the touch pad.

The touch pad buttons are heat-staked into the palmrest assembly and are not removable.

**Touch Pad: Dell™ Inspiron™ 7000**



## Touch Pad: Dell™ Inspiron™ 7000

[Using the Touch Pad](#) | [Installing the Touch Pad/Mouse Driver](#)

---

### Using the Touch Pad


The PS/2-compatible touch pad detects the position of your finger over a touch-sensitive area and provides the computer full mouse functionality. The touch pad's 2 buttons correspond to the left and right buttons on a standard mouse.

To move the cursor, lightly slide your finger over the smooth sensor area. To select an object, gently tap once on the surface of the touch pad. To select and move (or drag) an object, position the cursor on the object and tap down-up-down on the touch pad. On the second down motion, leave your finger on the touch pad and move the selected object by sliding your finger across the surface. To double-click an object, position the cursor on the object and then tap twice.

To customize touch pad and cursor features, follow these steps:

1. Click the **Start** button, point to **Settings**, and then click **Control Panel**.  
The **Control Panel** window appears.
2. Double-click the **Mouse** icon.
3. Select the **Touch Pad** tab.
4. Make your selections. Click the **Help** button if you need more information.

To use the touch pad, the **PS/2 Mouse** option in the **System Devices** menu of the Setup program must be set to **Enabled**. Dell has already installed the touch pad drivers for you.

 **NOTE:** Keep your fingers away from the touch pad while the computer is booting or loading the operating system. If you touch the touch pad at either time, the cursor will not move until you remove your finger from the touch pad surface.

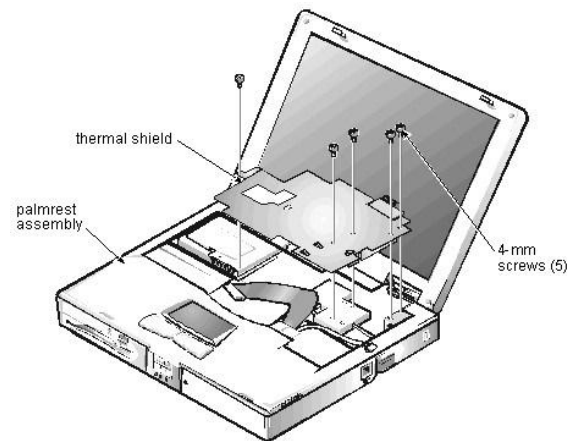
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### Installing the Touch Pad/Mouse Driver

See [Reinstalling Utilities and Drivers](#) for information about reinstalling touch pad/mouse drivers.

## Thermal Shield and Internal Modem Removal: Dell™ Inspiron™ 7000

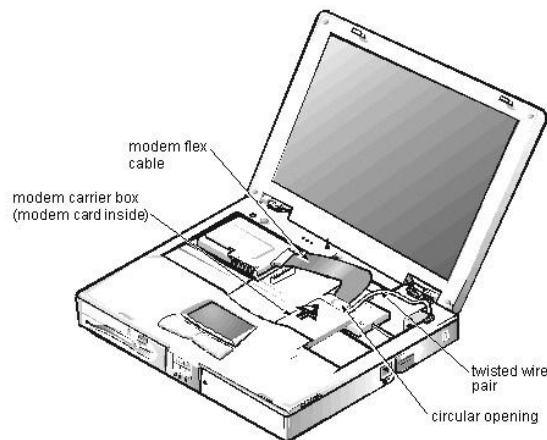
The thermal shield serves as a heat shield for the system board, as well as an EMI fence for the processor board.



This procedure assumes that you have removed the [keyboard](#). To remove the thermal shield, follow these steps:

### 1. Remove the hinge covers.

Open the computer to 170 degrees, supporting the display assembly. From the outside edge of the unit, carefully insert a flat-blade screwdriver or scribe into the space on the inside of the hinge cover. Bring the tool against the front wall of the hinge cover and pull toward the keyboard to loosen the plastic snaps at the back of the hinge cover. Move the tool to the inside top of the hinge cover and lift the hinge cover off. If the hinge covers are tight, use a plastic wedge or scribe to loosen and pop them off. Be careful not to accidentally turn on the computer when removing the left hinge cover.



2. If your computer has an internal modem, disconnect the modem flex cable from connector JP20 on the system board and disconnect the twisted wire pair from connector JP2 on the RJ-11 card. Bend the cables back over the palmrest assembly to move them out of the way of the thermal shield.
3. Remove the 4 flat-head 4-mm screws and the 1 K-head 4-mm screw securing the thermal shield. Note that the K-head screw is leftmost and is thicker than the other 4.
4. Remove the thermal shield from the palmrest assembly. Note that the bottom of the shield has an EMI fence that surrounds the processor board.
5. If needed, remove the 2 screws securing the EMI fingers to the thermal shield and remove the fingers.
6. If you have an internal modem, remove it by inserting a screwdriver through the circular opening and pulling the modem carrier box carefully toward the back of the computer. Lift the top off the metal carrier and remove the modem card if needed. Disconnect the flex cable from the modem card if needed.

## Video: Dell™ Inspiron™ 7000

[Text Modes](#) | [Graphics Modes](#)

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### Text Modes


Resolution; Colors	Refresh Rate (Hz)
360 x 400; 16	70
720 x 400; 16	70
720 x 400; mono	70

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### Graphics Modes

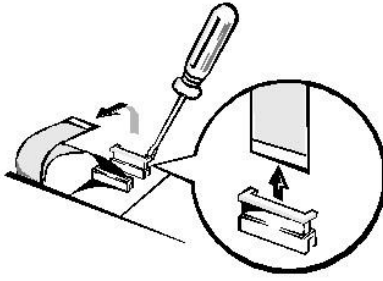
Resolution; Colors	Refresh Rate (Hz)
320 x 200; 4	70
640 x 200; 2	70
720 x 400; mono	70
320 x 200; 16	70
640 x 200; 16	70
640 x 350; mono	70
640 x 350; 16	70
640 x 480; 256	85
640 x 480; 64,000	85
640 x 480; 16 million	85
640 x 480; 4 billion	85
800 x 600; 256	85
800 x 600; 64,000	85
800 x 600; 16 million	85
800 x 600; 4 billion	85
1024 x 768; 256	85
1024 x 768; 64,000	85
1024 x 768; 16 million	85
1024 x 768; 4 billion	85
1280 x 1024; 256 (external monitor)	85
1280 x 1024; 64,000 (external monitor)	85
1280 x 1024; 16 million (external monitor)	85
1280 x 1024; 4 billion (external monitor with 8-MB video memory option)	85
1600 x 1200; 256 (external monitor)	85

1600 x 1200; 64,000 (external monitor)	85
1600 x 1200; 16 million (external monitor with 8-MB video memory option)	85

 **NOTES:** If you are using an external monitor, see the documentation that came with the external monitor to determine the correct refresh rate. To change the refresh rate in Microsoft® Windows® 98, click the **Start** button, point to **Settings**, and then click **Control Panel**. Double-click the **Display** icon, and then click the **Settings** tab. Click the **Advanced** button to reset the refresh rate.

You may need to adjust the vertical and horizontal size and position controls on your external multifrequency monitor to properly display extended-video modes.

## ZIF Connectors: Dell™ Inspiron™ 7000



**NOTICE: ZIF connectors are fragile. To avoid breaking the connectors, touch them carefully. Do not apply too much pressure to the movable part of the connector when opening or closing it.**

Some of the computer's interface connectors are ZIF connectors. These connectors are not removable; they must be released to disconnect a cable from them.

To disconnect a cable from a ZIF connector, follow these steps:

1. Insert a small flat-blade screwdriver or dental pick under the movable part of the connector.  
For most ZIFs, carefully pry up one end of the movable part of the connector and then the other end. Some ZIFs may need to be lifted in the center.
2. Pull up gently on the movable part of the connector until the cable is released.
3. Grasp the cable and pull it out of the connector.

To reconnect an interface cable to a ZIF connector, follow these steps:

1. Use the flat-blade screwdriver or dental pick to open the movable part of the ZIF connector.
2. Orient the end of the cable with the ZIF connector, and insert the end of the cable into the connector.
3. While holding the cable in place, close the ZIF connector.  
To ensure a firm connection, make sure the ZIF connector is completely closed.