



# PowerBook User's Guide

.....  
*Includes setup and important health-related information  
for PowerBook 500 series computers*

 Apple Computer, Inc.

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Apple Computer, Inc.  
1 Infinite Loop  
Cupertino, CA 95014-2084  
(408) 996-1010

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## Communications regulation information

### FCC statement

This equipment has been tested and found to comply with the limits for a Class B digital device in accordance with the specifications in Part 15 of FCC rules. See instructions if interference to radio or television reception is suspected.

### Radio and television interference

The equipment described in this manual generates, uses, and can radiate radio-frequency energy. If it is not installed and used properly—that is, in strict accordance with Apple’s instructions—it may cause interference with radio and television reception.

This equipment has been tested and found to comply with the limits for a Class B digital device in accordance with the specifications in Part 15 of FCC rules. These specifications are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation.

You can determine whether your computer system is causing interference by turning it off. If the interference stops, it was probably caused by the computer or one of the peripheral devices.

If your computer system does cause interference to radio or television reception, try to correct the interference by using one or more of the following measures:

- Turn the television or radio antenna until the interference stops.
- Move the computer to one side or the other of the television or radio.
- Move the computer farther away from the television or radio.
- Plug the computer into an outlet that is on a different circuit from the television or radio. (That is, make certain the computer and the television or radio are on circuits controlled by different circuit breakers or fuses.)

If necessary, consult an Apple-authorized service provider or Apple. See the service and support information that came with your Apple product. Or, consult an experienced radio/television technician for additional suggestions. You may find the following booklet helpful: *Interference Handbook* (stock number 004-000-00493-1). This booklet, prepared by the Federal Communications Commission, is available from the U.S. Government Printing Office, Washington, DC 20402.

**IMPORTANT** Changes or modifications to this product not authorized by Apple Computer, Inc., could void the FCC Certification and negate your authority to operate the product.

This product was tested for FCC compliance under conditions that included the use of Apple peripheral devices and Apple shielded cables and connectors between system components. It is important that you use Apple peripheral devices and shielded cables and connectors between system components to reduce the possibility of causing interference to radios, television sets, and other electronic devices. You can obtain Apple peripheral devices and the proper shielded cables and connectors through an Apple-authorized dealer. For non-Apple peripheral devices, contact the manufacturer or dealer for assistance.

### **DOC statement**

*DOC Class B Compliance* This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled “Digital Apparatus,” ICES-003 of the Department of Communications.

*Observation des normes—Classe B* Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe B prescrites dans la norme sur le matériel brouilleur : “Appareils Numériques”, NMB-003 édictée par le ministre des Communications.

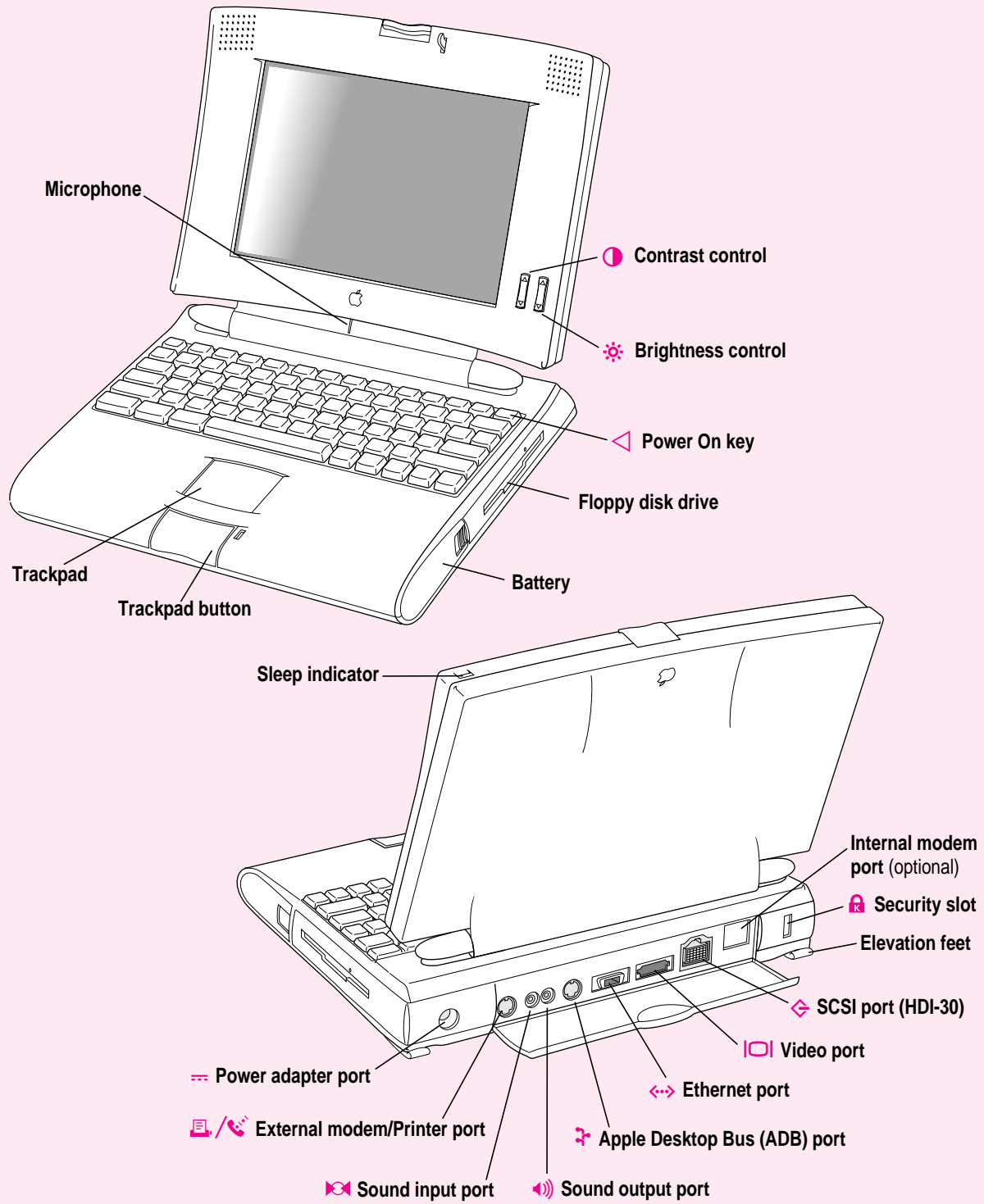
### **VCCI statement**

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この装置は、第二種情報装置（住宅地域又はその隣接した地域において使用されるべき情報装置）で住宅地域での電波障害防止を目的とした情報処理装置等電波障害自主規制協議会（VCCI）基準に適合しております。

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取扱説明書に従って正しい取り扱いをしてください。





Follow the instructions in this chapter to set up your computer and learn the basics.

# 1

## Getting Started



The illustration on the facing page provides an overview of your PowerBook computer. To set up your PowerBook for the first time, you need the power adapter and the power cord that came with your computer.

When setting up your computer, place your computer on a sturdy, flat surface near a grounded electrical outlet. Before following the setup instructions in this chapter, you may want to read “Arranging Your Work Area and Equipment” in Appendix A for tips on adjusting your work furniture and computer so that you’re comfortable when using the computer.

### Plugging in the computer


Plugging in the power adapter recharges the computer’s batteries. You should plug in the power adapter in case the battery has drained during shipping or storage.

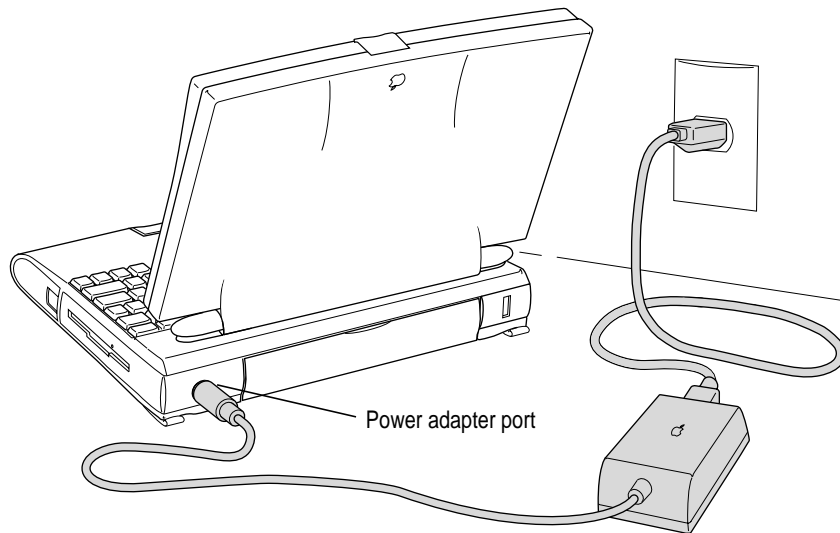
**WARNING** Use only the power adapter that came with your PowerBook. Adapters for other electronic devices (including other portable computers) may look similar, but they may damage your computer.

When you are ready to begin:

- 1 Plug one end of the power cord into the power adapter and the other end into a three-hole grounded outlet or power strip.

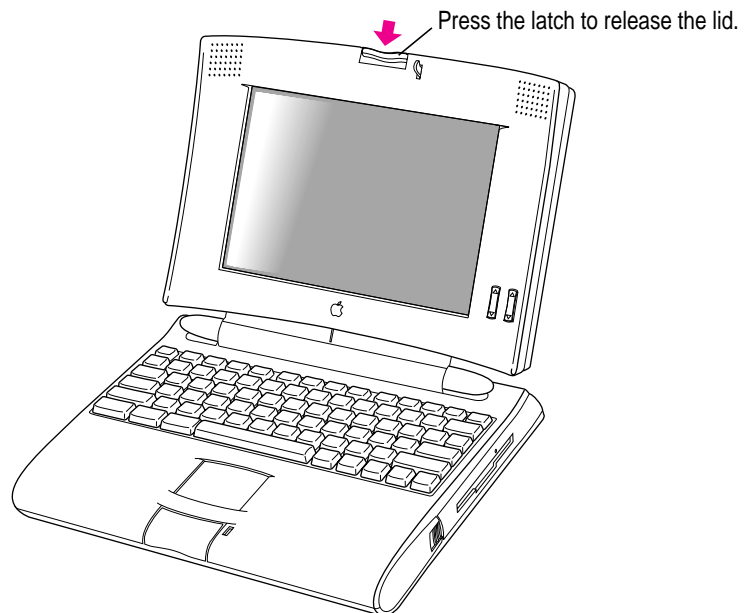
**WARNING** This equipment is intended to be electrically grounded. Your PowerBook is equipped with a three-wire grounding plug—a plug that has a third (grounding) pin. This plug will fit only a grounded AC outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact a licensed electrician to replace the outlet with a properly grounded outlet. Do not defeat the purpose of the grounding plug!

- 2 Plug the power adapter cable into the power adapter port (marked with the icon ) on the back panel of the computer.



## Opening the display

- 1 Press the latch and lift up the display.



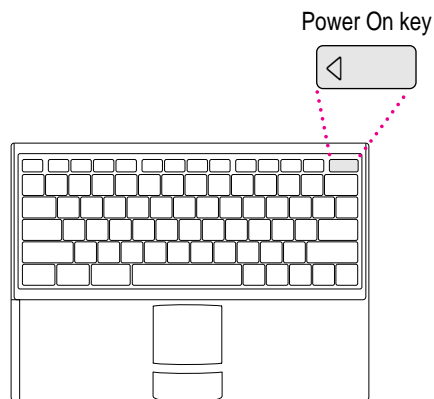
- 2 Position the display at a comfortable viewing angle.

You can adjust the angle of the display at any time by tilting it towards or away from you.

## Turning on the computer

To turn on the computer for the first time:

- Press the Power On key (marked with the icon ◀) at the upper-right corner of the keyboard to turn the computer on.



You should hear a tone when you turn on the computer. It takes the computer a moment to start up.

When you see something like this on your screen, the computer is ready to use:



*Note:* Your screen should look very similar to this picture but it might not look exactly the same.

## Problems turning on your computer?

- **The computer made a sound, but you can't see anything on the screen.**

Adjust the brightness control (marked with the icon ☼) and contrast control (●) until an image appears and the screen is easy to read.

- **Nothing happened when you pressed the Power On key.**

Make sure the power adapter is firmly connected to both the computer and a power source. If the power adapter is plugged into a power strip, make sure the power strip is plugged in and turned on. Then try pressing the key again.

If the computer still doesn't turn on, see the *PowerBook Troubleshooting Guide* you received with your computer for help.

- **You see a picture of a disk with a blinking question mark on the screen.**



This picture means that you need to install system software on the computer's hard disk. System software includes the programs the computer uses to start itself up. You received a set of system software disks in the accessory kit that came with your computer. For instructions on installing system software, see the *PowerBook Troubleshooting Guide* you received with your computer.

## What's next?

You've now finished setting up your PowerBook. Continue with one of the following steps:

- If you are new to the Macintosh, turn to the next section, “Learning the Basics.”
- If you are an experienced Macintosh user, turn to Chapter 2, “Getting Help,” to learn about Macintosh Guide, your main source of information when you're working with the Macintosh.
- If you have additional equipment to connect to your computer, see Chapter 3, “Connecting Additional Equipment,” for instructions. (If you are a new Macintosh user, you should complete “Learning the Basics” before connecting additional equipment.)
- If you have application programs that you want to install on your computer, see Chapter 4, “Installing and Using Application Programs,” for instructions. (If you are a new Macintosh user, you should complete “Learning the Basics” before installing application programs.)

**IMPORTANT** If you need to turn off your computer at any point, read the instructions in “Turning the Computer Off” later in this chapter to learn the correct procedure for turning off your PowerBook.



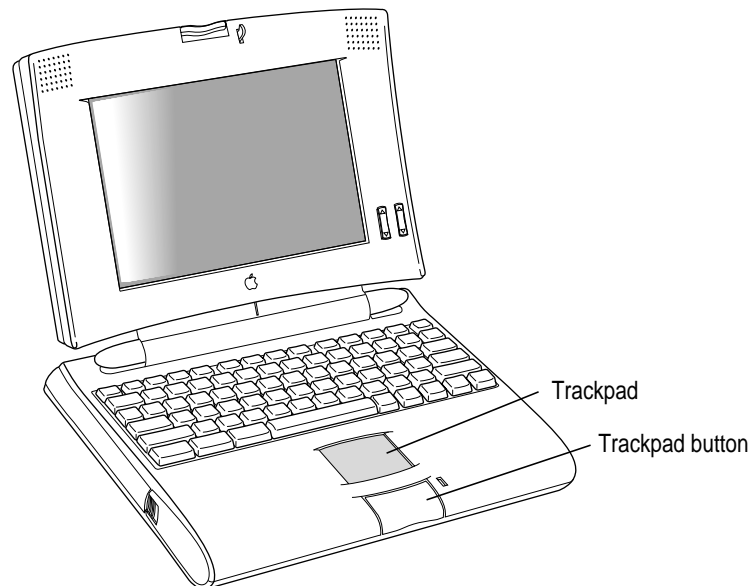
## Learning the basics

If you are new to the Macintosh, you should begin by looking at the easy-to-use program called the Macintosh Tutorial. The tutorial teaches you the basic skills you'll need to use your computer. To start the tutorial, follow these steps:

**1 Move your finger on the trackpad to move the arrow pointer (⏏) on the screen.**

Place your index finger on the trackpad and your thumb on the trackpad button. Don't press the trackpad button yet.

Move your finger across the trackpad, watching the arrow on the screen. Notice that the arrow on the screen moves in the same direction that you move your finger on the trackpad.



The trackpad is sensitive not only to the direction you move your finger, but also to how fast you move your finger. If you want the pointer to move a short distance across the screen, you move your finger slowly across the trackpad. The faster you move your finger, the farther the pointer moves on the screen.

## Tips for using the trackpad

For best results when using the trackpad:

- Use your index finger (left or right hand). Use only one finger.
- Use only your finger on the trackpad. Do not use a pen or any other object.
- Extend your PowerBook's elevation feet when it is placed on a desktop. This gives your fingers better access to the keyboard and makes it easier to use the tip of your finger on the surface of the trackpad.
- Sometimes humidity or condensation may cause moisture to gather on the trackpad. If this happens, gently wipe the trackpad with a clean cloth before you use it.

**2** Move your finger on the trackpad so that the tip of the arrow (↖) points to the question mark in the upper-right portion of the screen.

**3** With the tip of the arrow (↖) on the question mark, press and hold down the trackpad button.

A list of choices (called a *menu*) appears. This is the Guide menu, which is the place to go when you have a question about how to use your computer.



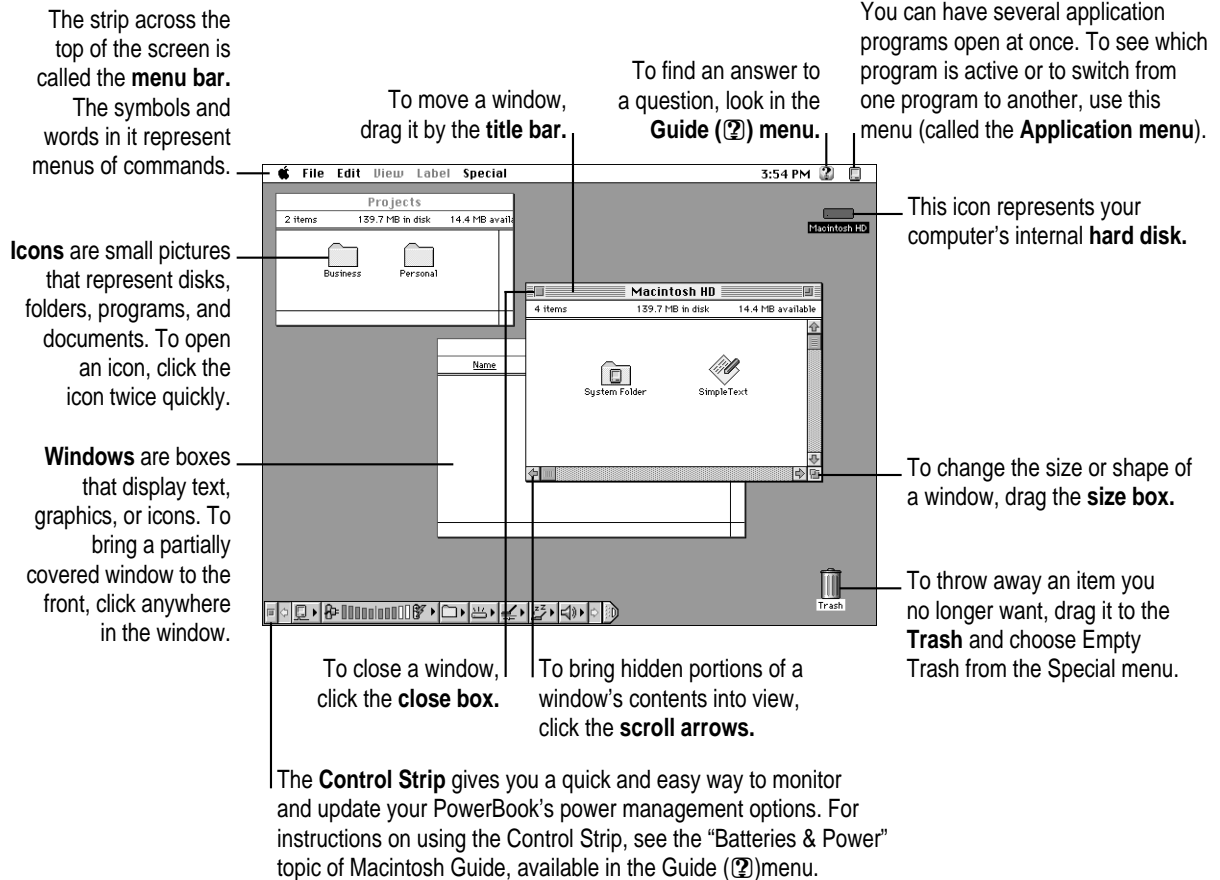
**4** While holding down the trackpad button, move the arrow (↖) until the words “Macintosh Tutorial” are highlighted, then release the trackpad button.

A window appears welcoming you to the tutorial. You can set aside this book for now and follow the instructions you see on the screen. When you have completed the tutorial, return to this book.



## Reviewing the basics

The following illustration summarizes many of the basic skills and terms you learned from the tutorial.



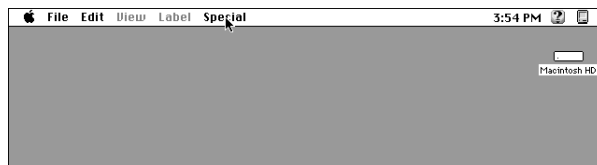
## Turning the computer off

To turn the computer off, you choose Shut Down from the Special menu. Detailed instructions follow.

- 1 If the computer is in sleep, press any key on the keyboard (except Caps Lock) to wake it.

For information on the sleep feature of your PowerBook, see “Putting the Computer to Sleep” on the next page.

- 2 Move the tip of the arrow to the word “Special” at the top center of the screen.



If the word “Special” does not appear at the top of the screen, you’re working in the wrong program. Click anywhere on the desktop.

- 3 With the tip of the arrow on the word Special, press and hold down the trackpad button.
- 4 While holding down the trackpad button, move the arrow until the words “Shut Down” are highlighted, then release the button.



*Trouble?* If a problem with the computer prevents you from choosing Shut Down—for example, if the computer “freezes” so that the pointer does not respond to the trackpad—you can turn off the computer by holding down the Control, Option, Command (⌘), and Power On (⏻) keys at the same time. You will lose any unsaved work. Use this method only if you cannot choose Shut Down or Restart from the Special menu.

## Putting the computer to sleep

Sleep is a power conservation feature of PowerBook computers, reducing the amount of power the computer draws when it's not being used. When the PowerBook is in sleep, it has a darkened screen and appears to be off. A green light flashes on the top of the display case when your computer is in sleep.

To put the computer to sleep:

- **Choose the Sleep command from the Special menu. (The computer must be on in order for you to put it to sleep.)**



For information on other ways of putting the computer to sleep, see the “Batteries & Power” topic of Macintosh Guide, available in the Guide (⌘) menu. (You can learn about using Macintosh Guide in Chapter 2 of this manual.)

## Automatic sleep

If you don't use the computer for several minutes, it goes to sleep automatically. This conserves battery power.

To wake the computer, press any key on the keyboard (except Caps Lock). The screen will reappear as it was before the computer went to sleep.

You can control the automatic sleep feature. For more information on sleep and automatic sleep, see the “Batteries & Power” topic of Macintosh Guide, available in the Guide (⌘) menu. (You can learn about using Macintosh Guide in Chapter 2 of this manual.)

## Restarting a computer that's already on

You need to restart your computer—turn it off and back on again—when you want to make certain changes to settings, use a newly installed system software file, or start up the computer using a different disk.

You also need to restart if you see a “system error” message on the screen (indicating a temporary software problem). In this case, use the trackpad to click the Restart button that appears.

To restart your computer:

- **Choose Restart from the Special menu.**



If the Special menu does not appear in the menu bar, you're working in the wrong program. Click anywhere on the desktop.

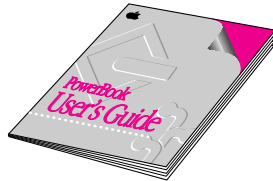
When you choose Restart, the computer prompts you to save your work, closes all open programs, and restarts itself.

Choosing Restart does not affect your RAM disk (if you created one) or its contents.

*Trouble?* If a problem with the computer prevents you from choosing Restart—for example, if the computer “freezes” so that the pointer does not respond to the trackpad—you can restart the computer by holding down the Control, Command (⌘), and Power On (⏻) keys at the same time. This turns the power off and on again, and you will lose any unsaved work. Use this method only if you cannot choose Restart or Shut Down from the Special menu.

## Where to find answers

When you have questions about using your PowerBook, there are several places you can look for answers:




### In this book

Use this book to set up and learn about your computer.



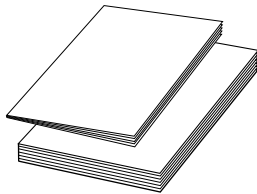
### In the Guide menu

The Guide menu (marked with the  symbol) is your main source of information about the Macintosh. To learn how to get different kinds of help from the Guide menu, refer to Chapter 2 of this book.



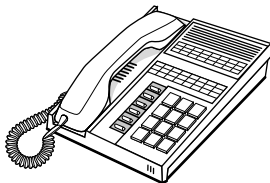
### In the *PowerBook Troubleshooting Guide*

The *PowerBook Troubleshooting Guide* is a portable manual that provides useful tips and suggestions if you have problems while using your computer.



### In other manuals

For answers to questions about other equipment or application programs you have purchased, see the manuals that came with them.



### From Apple's customer support hotline

If you can't find an answer in any of the materials provided, call the customer support hotline. (The phone number for the hotline is in the service and support information that came with your computer.)

Use the instructions in this chapter to learn about the help available to you in the Guide menu.

## 2 Getting Help

The Guide menu is your main source of information when you're working with your computer. The menu is identified by a question mark (🔍) in the upper-right corner of the screen.



## Getting answers to your questions

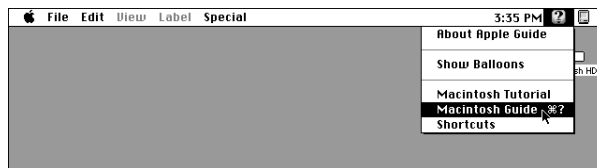
When you have a question while working with your computer, you can get the answer by choosing Macintosh Guide from the Guide menu.

- 1 Pull down the Application menu (in the upper-right corner of the screen) and choose Finder to make it the active application program.

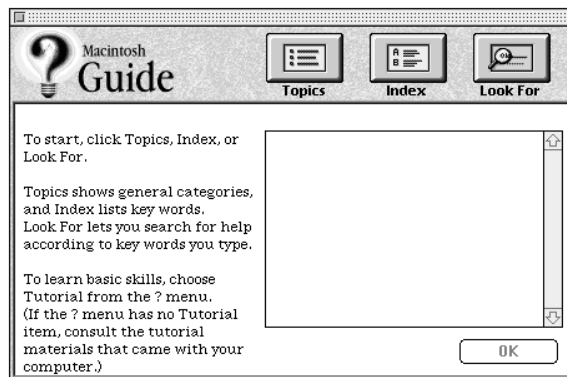


A checkmark in the menu indicates that the Finder is the active program.

- 2 Pull down the Guide menu (marked with the ? icon) and choose Macintosh Guide.



The Macintosh Guide window appears.



Whenever you use Macintosh Guide, its window remains in front of other windows. If the window gets in your way, you can move it by dragging its title bar (the gray bar across the top of the window).

- 3 Notice the three buttons at the top of the window: Topics, Index, and Look For.



Macintosh Guide gives you three ways of finding information:

- **Topics** lets you choose from a list of general subjects; it is like the table of contents in a book.
- **Index** lets you choose from an alphabetical list of more specific subjects; it is like the index in a book.
- **Look For** lets you search for information related to a specific word or phrase that you type.

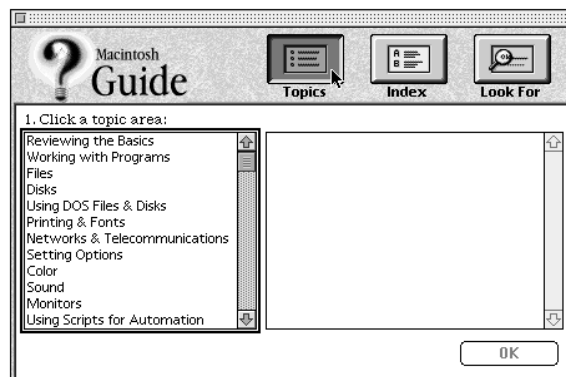
In the following sections you will practice using each method.

If you have problems while using Macintosh Guide, see “Tips for Using Macintosh Guide” later in this chapter.

### Getting answers with the Topics button

- 1 In the Macintosh Guide window, click the Topics button.

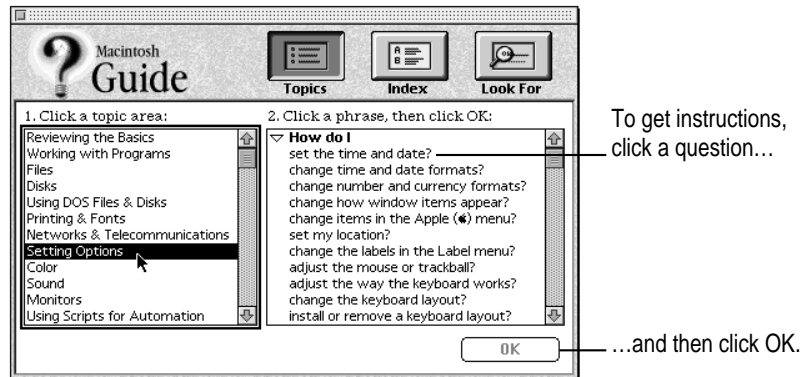
A list of general topics appears on the left side of the Macintosh Guide window. (Depending on the hardware and software you have, the list of topics may look different.)





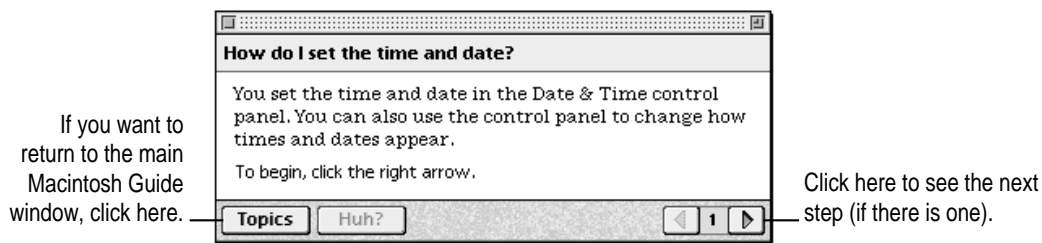
**2 Click “Setting Options” in the list of topics.**

When you click any topic area, a list of related questions appears on the right side of the Macintosh Guide window.



**3 Click the question “How do I set the time and date?” and then click OK. Or double-click the question.**

A small window appears with instructions for you to follow.



**4 Read and follow the instructions in this window.**

Macintosh Guide provides step-by-step instructions to answer the question you selected. When you have completed each step, click the right arrow in the lower-right corner to see the next step.

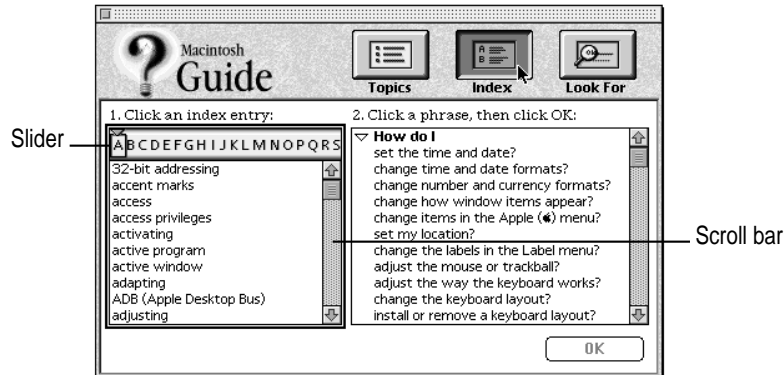
**5 When you have completed all the steps, click the Topics button in the lower-left corner to return to the main Macintosh Guide window.**

Now continue with the next section.

## Getting answers with the Index button

- 1 In the Macintosh Guide window, click the Index button.

An alphabetical list of subjects appears on the left side of the window.

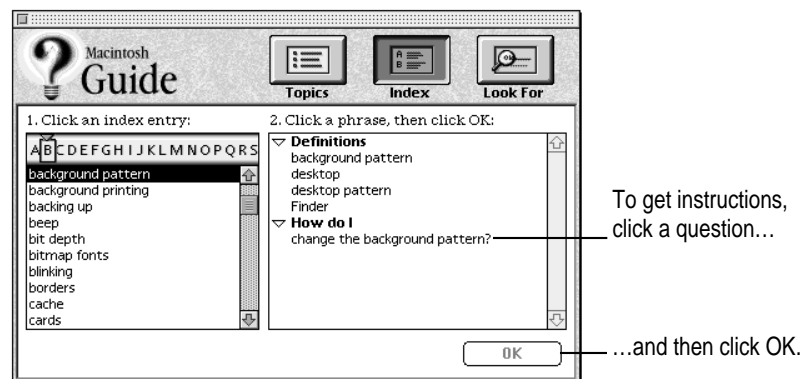


- 2 Scroll through the alphabetical list until the phrase "background pattern" is visible.

You can scroll through the list either by dragging the slider to the letter *B* or by using the scroll bar at the right of the list.

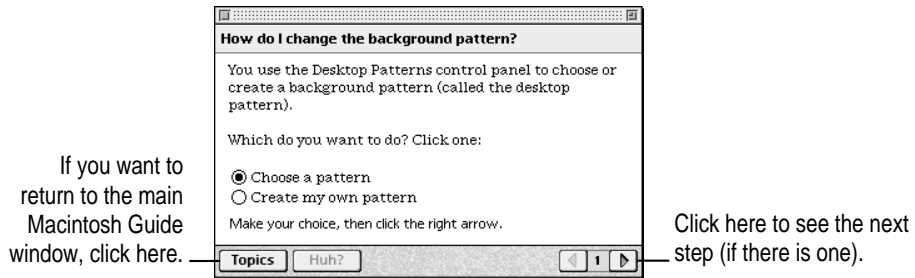
- 3 Click the phrase "background pattern" in the alphabetical list.

When you click any index entry, a list of related questions appears on the right side of the Macintosh Guide window.



- 4 Click the question “How do I change the background pattern?” and then click OK. Or double-click the question.

A small window appears with instructions for you to follow.



- 5 Read and follow the instructions in the window.

Macintosh Guide provides step-by-step instructions to answer the question you selected. When you have completed each step, click the right arrow in the lower-right corner to see the next step.

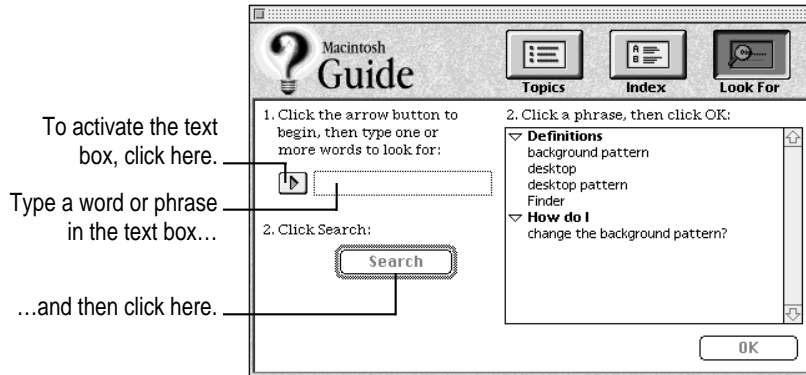
- 6 When you have completed all the steps, click the Topics button in the lower-left corner to return to the main Macintosh Guide window.

Now continue with the next section.

## Getting answers with the Look For button

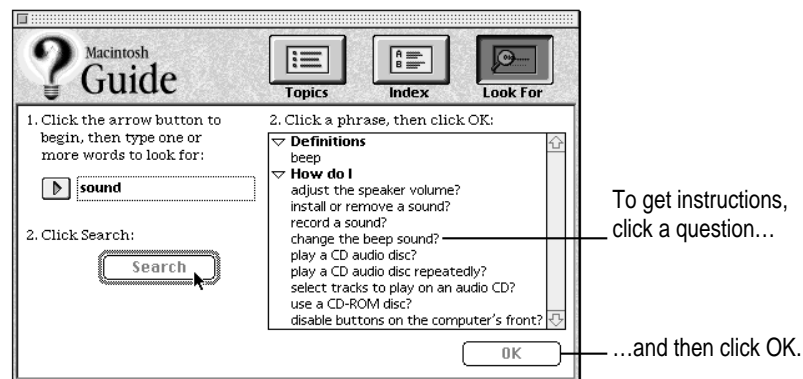
- 1 In the Macintosh Guide window, click the Look For button.

A small box appears on the left side of the window, where you can type text.



- 2 Click the arrow button to activate the text box.
- 3 Type "sound" in the text box and then click Search.

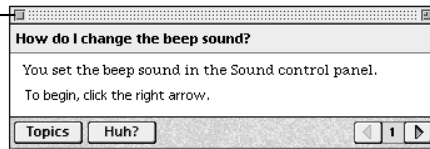
When you click Search, a list of questions related to the word or phrase you typed appears on the right side of the Macintosh Guide window.



- 4 Click the question “How do I change the beep sound?” and then click OK. Or double-click the question.

A small window appears with instructions for you to follow.

If you want to close  
Macintosh Guide,  
click here.



Click here to see the next  
step (if there is one).

- 5 Read and follow the instructions in the window.

Macintosh Guide provides step-by-step instructions to answer the question you selected. When you have completed each step, click the right arrow in the lower-right corner to display the next step.

- 6 When you have completed all the steps, click the close box in the upper-left corner to close Macintosh Guide.

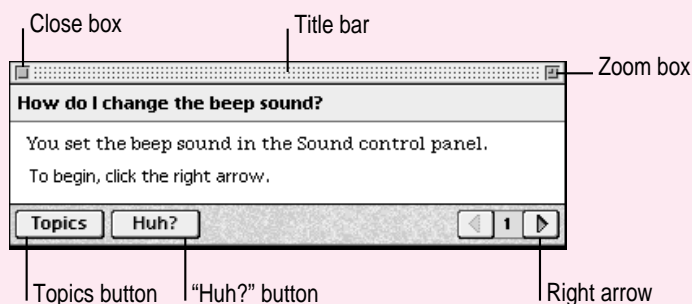
## Tips for using Macintosh Guide

Here are a few tips for using Macintosh Guide effectively:

- Macintosh Guide is available only when you are in the Finder—the desktop area where you can see the icons of disks, folders, and files. (Other programs may also have help available in the Guide menu, however.) If you don't see Macintosh Guide in the Guide menu, pull down the Application menu (to the right of the Guide menu) and choose Finder.
- Follow the steps when you're instructed to; don't skip ahead or read ahead. That way the computer can check to make sure you've done a step correctly.
- Unlike most windows, the Macintosh Guide window stays in front of other windows on the screen so that your instructions are never covered. If you need to move the Guide window out of the way, drag it by the title bar at the top of the window.

You can also move the window out of the way by clicking the zoom box. Click the box once to shrink the window; click it a second time to expand the window to its original size.

- If you need more information about an instruction or a term, click the button labeled “Huh?” to get further explanation. (The “Huh?” button is dimmed when no additional information is available.)
- If you want to return to the main Macintosh Guide window, click the Topics button in the lower-left corner of the Guide window.
- When you're finished using Macintosh Guide, click the close box in the upper-left corner of the window.



## Identifying objects on the screen

Sometimes you'll see an unfamiliar item on the screen and ask yourself, "What's that?" You can get an answer by using a Macintosh feature known as Balloon Help.

Balloon Help explains the function of icons, menus, commands, and other items on the Macintosh screen in balloons like those you see in comic strips.

Follow these steps to use Balloon Help:

- 1 Pull down the Guide menu (marked with the  icon) and choose Show Balloons.**



- 2 Point to any object on the screen that you want to identify.**

A balloon appears next to the object. In the following illustration, for example, pointing to the Trash displays a balloon that explains how to use the Trash to throw items away.




Although balloons appear next to items when you point to them, the way you work does not change; you can still select icons, choose commands, and so on.

- 3 When you're finished using Balloon Help, choose Hide Balloons from the Guide menu.**

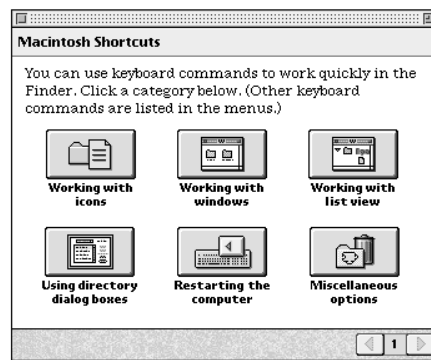
## Learning useful shortcuts

You can perform many tasks in the Finder more quickly if you use keyboard or mouse shortcuts. For example, instead of clicking an icon and choosing Open from the File menu, you can simply double-click the icon to open it.

Follow these steps to learn keyboard and mouse shortcuts:

- 1 Pull down the Guide menu (marked with the ) and choose Shortcuts.

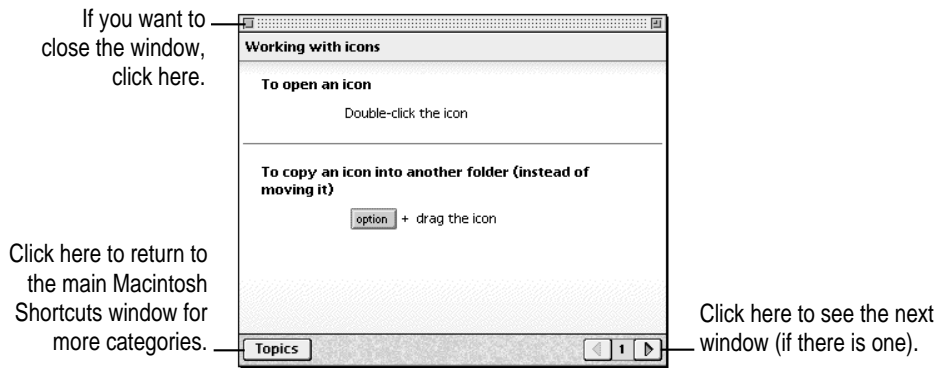
The main Macintosh Shortcuts window appears.





**2 Click one of the category buttons.**

Another window appears, describing shortcuts for that category.



**3 Read about the shortcuts available for the category you selected.**

Click the right arrow in the lower-right corner of the window to display the next window (if there is one).

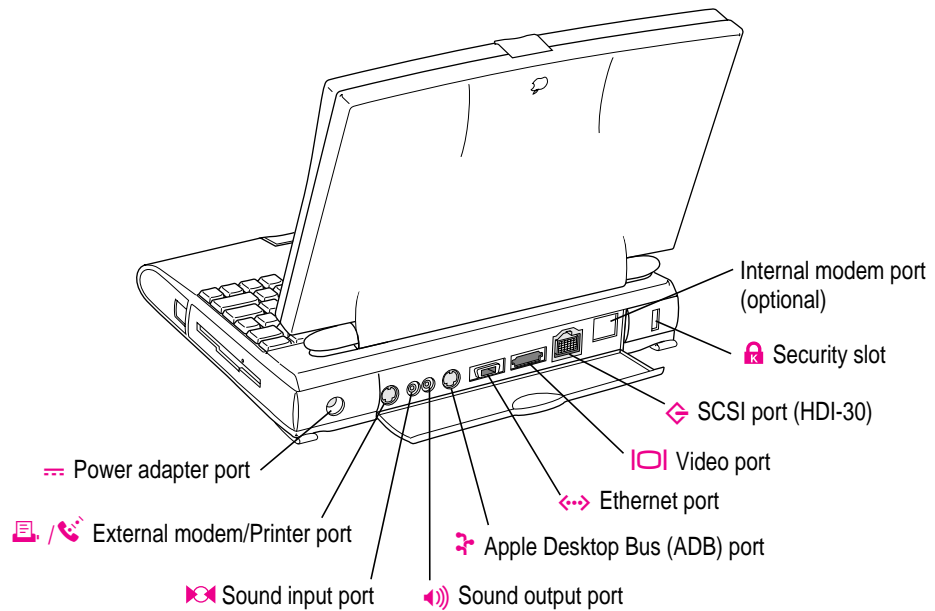
**4 When you finish reading about the shortcuts for your category, click the Topics button in the lower-left corner to return to the main Macintosh Shortcuts window. Or click the close box in the upper-left corner to close the window.**

Read this chapter for information on expanding your computer system with additional hardware.

# 3

## Connecting Additional Equipment

The illustration below shows where equipment should be connected to your PowerBook. In most cases, you should refer to the manuals that came with your equipment for instructions on connecting it.




Additional information is provided in this chapter for adding the following devices to your computer system:

- printers
- external modems
- SCSI devices
- external monitors
- sound input and output devices
- additional memory

## Connecting a printer

The modem/printer port on your computer can accept either a direct connection (to a printer such as a StyleWriter) or a network connection (to a printer such as a LaserWriter). If you are connecting a printer to the port, make sure that the modem selection in the PowerBook Setup control panel is set to Normal. See the next section, “Connecting a Modem,” for details.

Some printers, including the Personal LaserWriter SC, are connected to the SCSI port (marked with the icon ) . You can also connect your PowerBook to a printer with an Ethernet port.

## Connecting a modem

Apple offers optional low-power fax/data modems for your PowerBook. If your computer has an internal modem, see the documentation that came with your modem for more information.

You can also connect an external modem to the modem/printer port on the back panel of the computer.

To connect an external modem, follow these steps.

- 1** Make sure the computer is in sleep or shut down.
- 2** Connect the modem to a power source and to the phone line.

See the documentation that came with the modem.

- 3 Make sure the modem is turned off.
- 4 Connect the modem cable to the port marked with this icon:



- 5 Turn on the modem.
- 6 Wake or restart the computer.

If your computer does not have an internal modem, the external modem is ready to use.

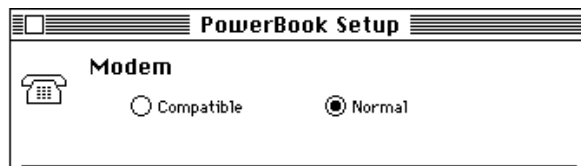
If your computer does have an internal modem, continue with step 7.

- 7 Choose Control Panels from the Apple (🍏) menu and open the PowerBook Setup control panel.



PowerBook Setup

- 8 Click the Normal button to activate the external modem.



- 9 Close the control panel.

The external modem is ready to use.

## Connecting SCSI devices

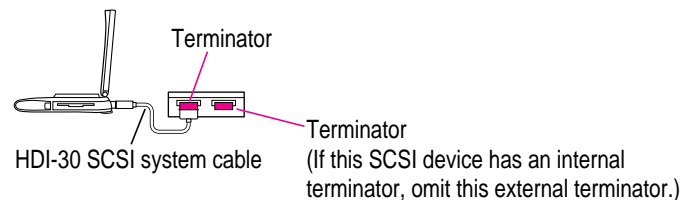
A SCSI device is any product—including hard disk drives, CD-ROM drives, scanners, and printers—that communicates with your computer by means of a standard electronic interface. (SCSI stands for Small Computer System Interface.) You can attach up to 6 SCSI devices to your computer by linking them together in a chain that starts at your computer's SCSI port.

To connect a SCSI device to your PowerBook, you need an Apple HDI-30 SCSI System Cable or equivalent. This cable is light gray (the same color as desktop Macintosh computers), is about 19 inches long, and has 29 pins (one “missing” pin).

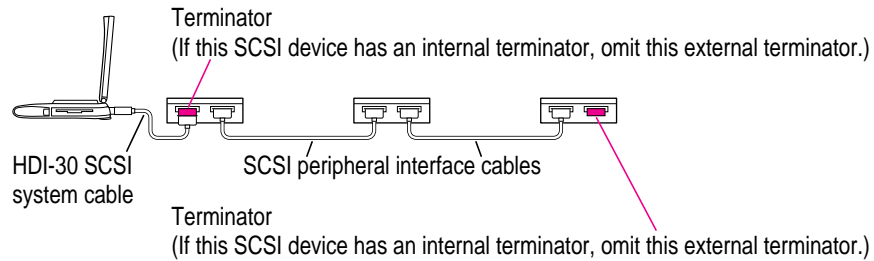
Refer to the manuals that came with your SCSI devices for instructions on installing any necessary software, setting SCSI ID numbers, and connecting SCSI cables and SCSI terminators. Refer to the illustrations below for the proper positioning of SCSI terminators.

**WARNING** When connecting SCSI equipment, *always* turn off power to all devices in the chain, including your computer. If you don't, you could lose information and damage your equipment.

### Where to add cable terminators when connecting a single SCSI device:



### Where to add cable terminators when connecting two or more SCSI devices:



### Using your PowerBook as a SCSI disk

You can purchase a cable called the Apple HDI-30 SCSI Disk Adapter which lets you connect your PowerBook to another computer as a hard disk. The PowerBook appears on the desktop of the other computer as a hard disk icon, and you can transfer information between the computers by dragging files. This feature is called SCSI disk mode.

The Apple HDI-30 SCSI Disk Adapter cable is dark gray (the same color as your PowerBook computers), is about 10 inches long, and has 30 pins.

**WARNING** Follow the steps for connecting and disconnecting SCSI devices carefully to avoid loss of information and damage to your equipment.

### Connecting your computer as a SCSI disk

Before making any connections, you need to assign a unique SCSI ID number to the PowerBook. (The unique ID number allows the computer to communicate with several connected devices.)

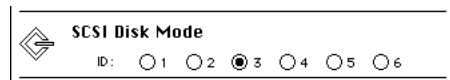
- 1 Choose Control Panels from the Apple (🍏) menu of your PowerBook computer.
- 2 Open the PowerBook Setup control panel.



PowerBook Setup

- 3 In the SCSI Disk Mode section of the control panel, click the ID number you want to assign.

If you are connecting the PowerBook to an existing SCSI chain, make sure to give it an ID number different from those of the other devices. (Many devices include an ID number indicator on the back panel.)



- 4 Close the PowerBook Setup control panel.
- 5 Turn off the PowerBook by choosing Shut Down from the Special menu.
- 6 Shut down the computer you are connecting to, and turn off any other devices in the SCSI chain.
- 7 Connect the small connector on the Apple HDI-30 SCSI Disk Adapter to the SCSI port on your PowerBook.
- 8 If you are connecting the PowerBook directly to the other computer (rather than to an external device in the SCSI chain), attach a SCSI system cable to the other computer.
- 9 Connect the large connector on the Apple HDI-30 SCSI Disk Adapter cable to a SCSI cable attached to the SCSI port on the last device in the SCSI chain, or to the SCSI system cable on the other computer.

Remove the terminator from the last device before connecting the PowerBook. (If the last device has an internal terminator, disconnect the device and connect the PowerBook to the end of the SCSI chain. An Apple-authorized service provider can remove the terminator.)

**WARNING** Always shut down the PowerBook before connecting or disconnecting the SCSI disk adapter cable. Connecting the adapter cable while the computer is turned on can damage the computer.

- 10 Turn on the PowerBook by pressing the Power On key.

After a few seconds a SCSI icon appears on the screen, showing the ID number you assigned in step 3.



**WARNING** If you do not see the SCSI icon, and the computer starts normally or displays an error message, choose Shut Down (if you can) and then immediately disconnect your computer from the SCSI chain. (If you can't choose Shut Down, try pressing the Power On, Command, Option, and Control keys simultaneously. If you cannot shut down your PowerBook, you should disconnect the cable anyway, or you may lose information.) Then go back and repeat steps 6 through 10, making sure to use the proper cables.

**11 Turn on the other SCSI devices in the chain, if any.**

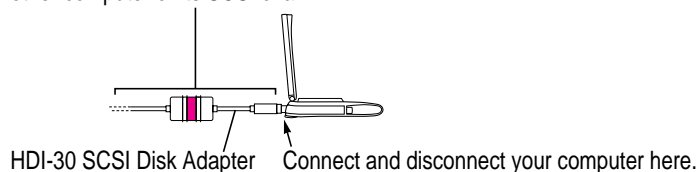
**12 Turn on the other computer.**

The PowerBook appears as a hard disk icon on the screen of the computer you connected it to. You can now transfer and use files as if the PowerBook were an external disk drive.

### Simplifying the connection process

If you regularly plan to use your PowerBook as a SCSI disk with the same computer, you can leave the SCSI disk adapter cable attached to the other computer or its SCSI chain. (Make sure a terminator is attached between the cable and the adapter.) When you want to use your PowerBook as a SCSI disk, simply shut down all devices and connect the adapter cable to the SCSI port on your PowerBook.

These cables can stay attached to your other computer or its SCSI chain.

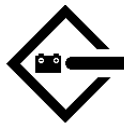




**WARNING** Always disconnect your PowerBook from the adapter cable when you are not using it as a SCSI disk. Your PowerBook will not work correctly if the adapter cable remains attached.

### Drawing battery power in SCSI disk mode

Your PowerBook continues to draw battery power when you use it as a SCSI disk. Low battery power is indicated by a blinking low-power warning on the PowerBook's screen.



If you see this warning while using your computer as a SCSI disk, either plug in the power adapter or quit SCSI disk mode, as described in the next section, so you can remove the battery for recharging.

### Quitting SCSI disk mode

- 1 Shut down the computer your PowerBook is connected to.
- 2 Tap the Power On (⏻) key once to turn the PowerBook off.
- 3 Turn off any other SCSI devices in the chain.
- 4 Disconnect the PowerBook from the adapter cable.

If you regularly plan to connect your PowerBook to the same computer, you can leave the adapter cable attached to the SCSI chain or the other computer.

**IMPORTANT** Do not leave the adapter cable attached to the PowerBook. If you do, the computer will behave as though it is still in SCSI disk mode when you try to restart.

- 5 If necessary, disconnect the adapter cable from the other computer or its SCSI chain.

Your equipment is now ready for normal use. Make sure that the SCSI chain is properly terminated.

## Connecting an external monitor

An external monitor connected to your computer can function as an extension of your PowerBook's built-in screen—that is, you can drag objects from one screen to another and do your work on either one. Or you can show the same image on both screens.

Your PowerBook has a video port to which you can connect most Apple monitors. Contact your Apple-authorized dealer for information on which monitors are compatible with your PowerBook. To connect an external monitor, you need a PowerBook video adapter cable. If your PowerBook configuration did not include a video adapter cable, you need to purchase one from your Apple-authorized dealer.

Your PowerBook also supports most VGA and SVGA monitors. To connect a VGA or SVGA monitor, you need an additional adapter cable, which should come from the same source as the monitor.

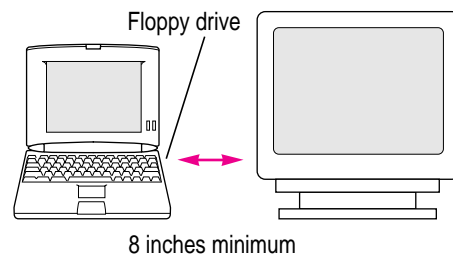
To connect an external monitor, follow these steps. Also consult the documentation that came with the monitor

**1 Choose Shut Down or Sleep from the Special menu.**

If you connect a monitor with your computer turned on, the computer will not recognize the monitor.

**2 Place the monitor where you will be using it.**

Keep the computer and the monitor at least 8 inches apart. Interference between the monitor and your computer's floppy disk drive can cause errors on your floppy disks.



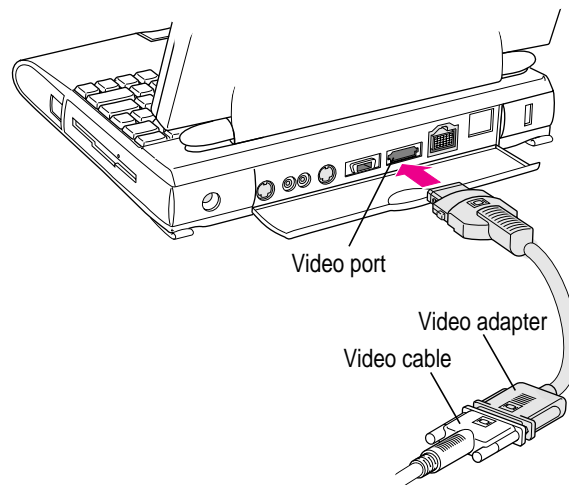
Arrange the monitor so the top of the screen is slightly below eye level while you work. Position the monitor to minimize glare and reflections on the screen from lights and windows.



- 3 Make sure the monitor's power cord is attached to the monitor, then plug the other end into a grounded outlet or power strip.**

If your monitor's power cord is designed to plug into the power receptacle on the back of a computer, rather than into an electrical outlet, you can obtain a cord with the correct plug from your Apple-authorized dealer.

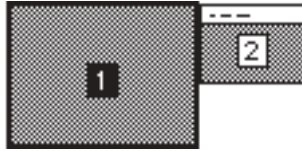
If you are using a power strip, make sure it is turned on.

- 4 Make sure the video cable is attached to the monitor, then attach the other end of the video cable to the PowerBook's video adapter. (If your PowerBook configuration did not include a video adapter cable, you need to purchase one from your Apple-authorized dealer.)**



- 5 Attach the video adapter to the video port (marked with the icon ) on the computer's back panel.**
- 6 Turn on the external monitor.**
- 7 Press the Power On () key to turn on your computer.**

- 8 Choose Control Panels from the Apple () menu, and open the Monitors control panel.  
You'll see two rectangles representing your two monitors.



- 9 Click the rectangle 1 (representing your external monitor).
- 10 Close the Monitors control panel.

### Trouble?

- **Nothing happened when you tried to turn on the PowerBook.**

Make sure that all your equipment is connected properly, then try pressing the Power On (⏻) key again.

Make sure that the power adapter is plugged into both the computer and an electrical outlet. If you are using a power strip, make sure it is turned on.

- **The computer is on, but the external monitor is dark.**

Make sure that the monitor's power cord is connected, and that its power switch is on. Try adjusting the monitor's brightness and contrast settings. If this doesn't work, try restarting your computer.


For more suggestions, see the *PowerBook Troubleshooting Guide*.

## Working with an external monitor

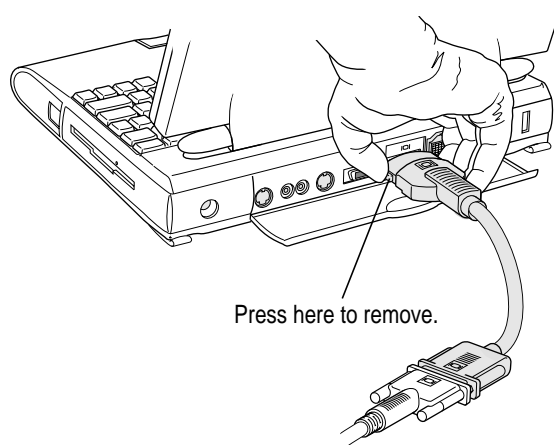
For information on displaying the menu bar on the external monitor or using an external monitor for presentations, see the “Monitors” topic of Macintosh Guide, available in the Guide (🔗) menu.

*Note:* The backlight dimming feature in the PowerBook control panel turns the screen brightness down to a low level when you haven’t used the computer for a few minutes. (You can think of dimming as “screen sleep.”) Dimming also affects the external monitor. When you move your finger on the trackpad or press a key on the keyboard, the brightness is restored on both screens. For more information on backlight dimming, see the “Batteries & Power” topic of Macintosh Guide, available in the Guide (🔗) menu.

## Disconnecting an external monitor

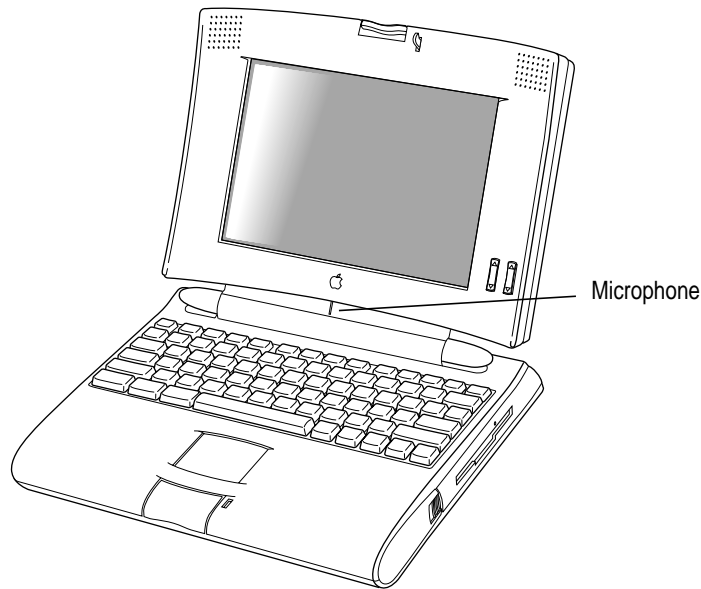
- 1** Make sure your computer is shut down or in sleep.
- 2** Make sure your monitor is switched off.
- 3** Disconnect the video adapter from the video port on the computer’s back panel. The video port is marked with this icon: .


Press the small buttons on both sides of the connector to remove the video adapter from the port.




## Connecting sound input and output devices

Your computer has a built-in microphone just below the display. For information on using the microphone to record sounds, see the “Sound” topic of Macintosh Guide, available in the Guide (🔍) menu.



Your PowerBook also has a stereo sound input port (marked with the icon ) for connecting external sound input devices that provide line-level output. You cannot use the internal microphone and an external sound input device at the same time. For instructions on selecting a sound device in the Sound control panel, see the “Sound” topic of Macintosh Guide, available in the Guide (🔍) menu.

**WARNING** Do not plug a sound output device (such as a pair of headphones) into the sound input port. Doing so may damage your audio equipment.

The PowerBook also has a stereo sound output port (marked with the icon ) to which you can connect speakers, an amplifier, headphones, or other audio output devices. The sound output port accepts a standard stereo miniplug, like that used to attach headphones to a portable tape player.

## Connecting other devices

For instructions on connecting a device not discussed in this chapter—for example, an external input device or networking hardware—refer to the manuals that came with the device.

## Adding memory to your computer

Your PowerBook computer comes with at least 4 MB of RAM. By adding memory upgrade cards, you can increase your computer's memory. You can find out how much memory your computer has by choosing About This Macintosh from the Apple () menu in the Finder.

You can purchase memory upgrades from Apple-authorized dealers.

**WARNING** To avoid damage to your PowerBook, Apple recommends that only an Apple-certified technician install additional RAM. Consult the service and support information that came with your computer for instructions on how to contact an Apple-authorized service provider or Apple for service. If you attempt to install additional RAM yourself, any damage you may cause to your equipment will not be covered by the limited warranty on your computer. See an Apple-authorized dealer or service provider for additional information about this or any other warranty question.

Your PowerBook computer also supports virtual memory, a feature that makes use of hard disk space to provide additional RAM. (When the power adapter is not plugged in, using virtual memory will reduce your battery life, however.) For information on using virtual memory, see the “Memory” topic of Macintosh Guide, available in the Guide (🔍) menu.

Read this chapter for information on installing and using application programs on your computer.

# 4

## Installing and Using Application Programs



### Installing application programs

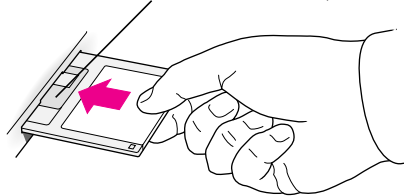
Your computer comes with several application programs already on the hard disk. You'll find these programs in either the Applications folder or the Apple Extras folder on your hard disk.

A program called Software Highlights gives you easy access to the programs in the Applications folder. To launch these programs and get tips on using them, double-click the Software Highlights icon.

You'll probably want to buy and install additional application programs. Refer to the manuals you receive with your programs for instructions on installing and using them.

In most cases, you install application programs onto your internal hard drive from floppy disks that you receive as part of an application program package. The following illustration shows how to insert a floppy disk in the floppy disk drive.

Insert metal end first, label side up.

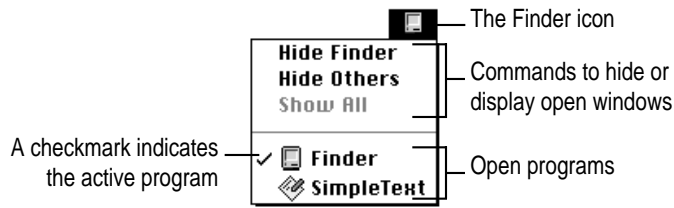




## Working with several programs at a time

You can open as many application programs and desk accessories as your computer's memory allows.

All open programs are listed in the Application menu at the right end of the menu bar. The name of the active program (the one you're using right now) has a checkmark next to it, and its icon appears in the menu bar.



## Finding out which programs are open

If you have several programs and windows open, you can find out which program is active and which other programs are open by pulling down the Application menu.

## Switching programs

You can switch to another open program or desk accessory by choosing its name from the Application menu.

If a program's icon is dimmed in the menu, that means its windows are hidden. Choosing the program from the Application menu displays its windows.

You can also switch to another program by clicking in a window that belongs to an open program, or by double-clicking a program icon (or the icon of a document that was created with the program).

## Hiding and showing windows on the desktop

You can hide all windows except those of the active program by choosing Hide Others from the Application menu.

The other programs remain open even though their windows are hidden. When you switch to another program, its windows become visible again.

If you want to see all the open windows, choose Show All from the Application menu.

## Backing up your files

Making backup copies of important files is good protection against possible damage to the originals.

- You can back up files stored on your hard disk by copying them onto floppy disks.
- You can back up an entire floppy disk by copying it to another floppy disk, or to a hard disk.
- You can use a commercial backup program to copy new and changed files from a hard disk to another hard disk, to a tape drive, or to a series of floppy disks.
- If your computer is on a network, you can back up files by copying them to a shared disk on the network.
- You can back up files by copying them from one computer to the other using SCSI disk mode. (See “Using Your PowerBook as a SCSI Disk” in Chapter 3 for more information on SCSI disk mode.)

Read this chapter for information about your PowerBook's battery.

# 5

## Power Management



### Power sources

Your computer can draw its operating power from two different sources.

- **Main batteries** Your computer came with one or two nickel-metal-hydride (NiMH) batteries (depending on the model you have). Two batteries provide power for up to 7 hours of work time (depending on the PowerBook model and type of battery you have and battery conservation features you choose).

Your PowerBook has space for two batteries. You can keep one or two batteries in the computer at a time. If you need maximum work time, you'll want to keep both batteries in the computer. If you want your PowerBook to weigh less, you can keep one battery in the computer. (If you have a two-battery model, you need to purchase a cover for the second battery compartment.)

- **AC power** You can run your computer from a grounded electrical outlet by plugging in the power adapter.

The power adapter includes two power supplies. It can run your computer and charge your batteries at the same time.

These power sources are described in more detail in the following sections.

## Responding to low-power messages

When the batteries run low, the computer displays a series of low-power messages. If you are using two batteries in your PowerBook, the low-power messages appear when both batteries are low.

The work time remaining after you see the first message varies depending on how you are using the computer. It's a good idea to act promptly.

### What you should do

When you see a low-power message, you should do any of the following:

- **Plug in the power adapter, or**
- **Save your work and put the computer to sleep, or**
- **Replace the empty batteries with charged ones.**

### What you should know

When the first low-power message appears, the screen dims automatically to save power.

If you continue to work without plugging in the power adapter or changing the batteries, the computer displays a second low-power message.

The second message is followed by a third and final message indicating that the computer is about to put itself to sleep. Within a few seconds, the computer goes to sleep automatically to protect the contents of RAM. All activities are interrupted. It's a good idea to save your work when you see the first two low-power messages to make sure you don't lose information.

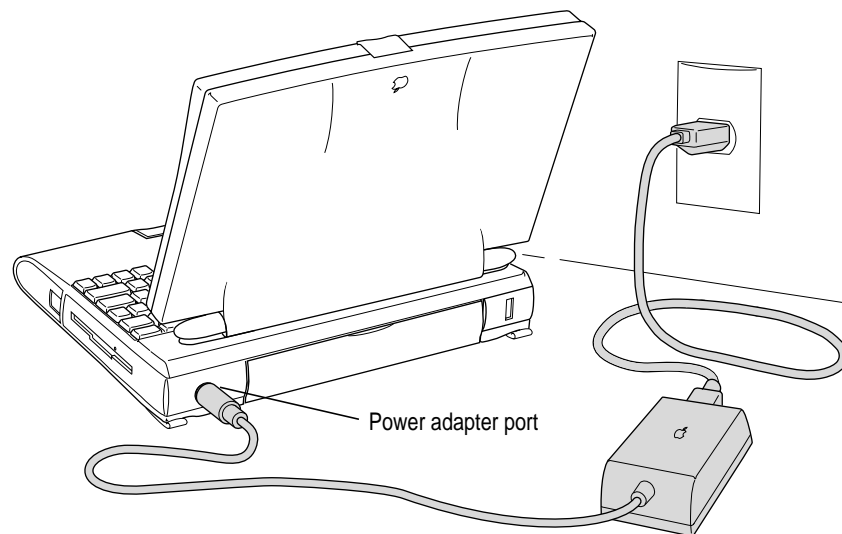
If you continue working until the computer goes to sleep automatically, you can wake it again as soon as you plug in the power adapter or replace one or both batteries with charged batteries. If you take both batteries out of the computer, make sure the power adapter is plugged in or you may lose any unsaved work.

If you can't plug in the power adapter, the contents of RAM are retained in sleep for about a day (as long as you don't remove the batteries).

**IMPORTANT** Recharge depleted batteries as soon as possible. Leaving depleted batteries in the computer for longer than 2 weeks (especially in a hot location, such as the trunk of a car) may damage the batteries so that they can't be recharged. If this happens, you need to replace the batteries.

## Recharging the batteries

To recharge the batteries in your computer, plug in the power adapter. (Do not use a recharger designed for another PowerBook model. PowerBook 500 Series batteries must be charged inside the computer.)



A lightning bolt icon appears in the battery monitor module in the Control Strip when the power adapter is plugged in and a battery is recharging.



The batteries are recharged regardless of whether you are using the computer, or the computer is off or in sleep. When the computer is shut down or in sleep, both batteries are charged at the same time, in 2–3 hours. When you're using the computer, one battery is charged at a time, and it takes 4–6 hours to charge both.

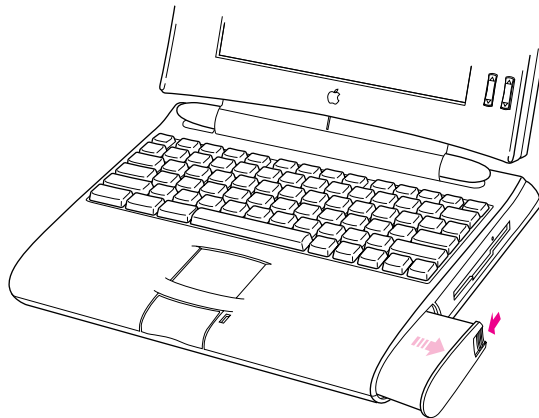
**WARNING** Use only the power adapter that came with your computer. Adapters for other electronic devices (including other portable computers) may look similar, but they may damage your computer.

## Removing or replacing the batteries

To remove or replace the batteries, follow these steps.

- 1** Save your work, and then choose **Shut Down** or **Sleep** from the **Special** menu, or plug in the power adapter.
- 2** Close the display.
- 3** Open the door of the battery you want to remove by sliding the button on the door in the direction indicated by the arrow.

The door is physically attached to the battery.



- 4** Carefully pull the battery out of its compartment.
- 5** Move the protective slider to cover the battery contacts.

The battery contacts should not be exposed when the battery is out of the computer.

- 6 If you are inserting another battery, move the slider to expose the contacts, then slide it into the battery compartment.

You cannot insert a battery when the protective slider is covering the battery contacts.

- 7 If you are not inserting another battery, attach the battery compartment cover to prevent dust or debris from accumulating in the empty compartment.

- 8 If you just inserted new batteries, it's a good idea to plug in the power adapter in case the batteries are not fully charged.

**IMPORTANT** Nickel-metal-hydride (NiMH) batteries contain metals which are hazardous when released in the environment. It is inappropriate, and in some cases unlawful, to throw batteries away with your household or business trash. Instead of throwing away your spent batteries, dispose of them as described here.

- **In the United States** Return spent batteries to your Apple-authorized service provider, who will make sure they are included in Apple's battery recycling program.
- **Elsewhere** Many locations have government or Apple-sponsored collection and/or recycling programs for spent batteries. Dispose of spent batteries in accordance with the mandatory or voluntary battery collection programs in your location. Contact your Apple-authorized service provider for information about the recommended disposal procedures in your area.

**WARNING** Damaged nickel-metal-hydride batteries may leak small amounts of potassium hydroxide. This substance can cause severe burns to the skin and eyes. If you touch a damaged battery, immediately wash your hands and any other affected areas with water for at least five minutes. *Do not use soap.*

## Maximizing the life of batteries

- **If your PowerBook has one battery**

If your PowerBook uses one battery, you can maximize the life of your battery by discharging and then recharging it completely once every 90 days. Just use the computer as you normally would, but ignore the low-power messages that appear on the screen. (Make sure to save your work, however.) When the computer goes to sleep automatically after the final warning, recharge the battery completely before using it again.

- **If your PowerBook has two batteries**

If you are using two batteries, swap the left and right batteries once a month.

Your batteries will last longer if you recharge them at or slightly below room temperature.

With proper care you can expect your batteries to last for at least a year. If you notice that the batteries no longer hold a charge for as long as they should, you may need to replace them.

## Maximizing work time

Your PowerBook's batteries can provide up to 3.5 hours of work time each before you need to recharge. The actual work time available depends on which model of PowerBook you have, what equipment you're using with your computer, and what steps you take to conserve power while you work.

For battery conservation tips, see the "Batteries & Power" topic of Macintosh Guide, available in the Guide (⌘) menu.



Refer to this appendix for important health-related information and safety tips.



## Appendix A Health, Safety, and Maintenance Tips



### Health-related information about computer use

Muscle soreness, eye fatigue, and other discomforts and injuries sometimes associated with using computers can occur from performing any number of activities. In fact, misuse of the same muscles during multiple activities can create a problem that might not otherwise exist. For example, if you engage in nonwork activities that involve repetitive stress on the wrist—such as bicycling—and also use your computer’s keyboard improperly, you may increase your likelihood of developing wrist problems. Some individuals are at greater risk of developing these problems because of their health, physiology, lifestyle, and general exposure to stress. Work organization and conditions, such as workstation setup and lighting, also play a part in your overall health and comfort. Preventing health problems is a multifaceted task that requires careful attention to the way you use your body every hour of every day.

The most common health effects associated with using a computer are musculoskeletal discomfort and eye fatigue. We’ll discuss each area of concern below.

## Musculoskeletal discomfort

As with any activity that involves sitting for long periods of time, using a computer can make your muscles sore and stiff. To minimize these effects, set up your work environment carefully, using the guidelines that follow, and take frequent breaks to rest tired muscles. To make working with your computer more comfortable, allow enough space in your work area so that you can change position frequently and maintain a relaxed posture.

Another type of musculoskeletal concern is repetitive stress injuries (RSIs), also known as cumulative trauma disorders (CTDs). These problems can occur when a certain muscle or tendon is repeatedly overused and forced into an unnatural position. The exact causes of RSIs are not totally understood, but in addition to awkward posture, such factors as the amount of repetition, the force used in the activity, the individual's physiology, workplace stress level, and lifestyle may affect the likelihood of experiencing an RSI.

RSIs did not suddenly arise when computers were invented; tennis elbow and writer's cramp, for example, are two RSIs that have been with us for a long time. Although less common than other RSIs, one serious RSI discussed more often today is a wrist problem called carpal tunnel syndrome, which may be aggravated by improper use of computer keyboards. This nerve disorder results from excessive pressure on the median nerve as it passes through the wrist to the hand.

This section offers advice on setting up your work area to enhance your comfort while you use your computer. Since the effects of repetitive movements associated with using a computer can be compounded by those of other work and leisure activities to produce or aggravate physical problems, proper use of your computer system must be considered as just one element of a healthy lifestyle.

No one, of course, can guarantee that you won't have problems even when you follow the most expert advice on using computer equipment. You should always check with a qualified health specialist if muscle, joint, or eye problems occur.

## Eye fatigue

Eye fatigue can occur whenever the eyes are focused on a nearby object for a long time. This problem occurs because the eye muscles must work harder to view an object that's closer than about 20 feet (6 meters). Improper lighting can hasten the development of eye fatigue. Although eye fatigue is annoying, there's no evidence that it leads to permanent damage.

Whenever you're engaged in an activity that involves close-up work—such as reading a magazine, doing craft work, or using a computer—be sure to have sufficient glare-free lighting and give your eyes frequent rest breaks by looking up and focusing on distant objects. Remember to have your eyes examined regularly.

To prevent discomfort and eye fatigue:

- Arrange your work space so that the furniture is properly adjusted for you and doesn't contribute to an awkward working posture.
- Take frequent short breaks to give your muscles and eyes a chance to rest.

## Arranging your work area and equipment

The suggestions in this section can help you work more comfortably with your computer.

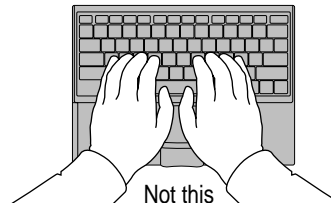
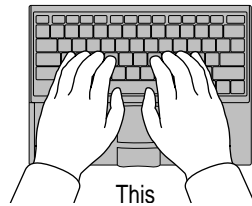
### Chair

- An adjustable chair that provides firm, comfortable support is best. Adjust the height of the chair so your thighs are horizontal and your feet flat on the floor.

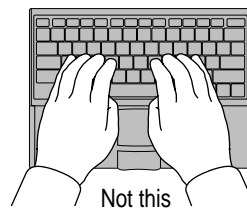
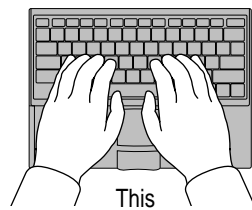
The back of the chair should support your lower back (lumbar region). Follow the manufacturer's instructions for adjusting the backrest to fit your body properly.

## Keyboard and trackpad

- When you use the keyboard and trackpad, your shoulders should be relaxed. Your upper arm and forearm should form an approximate right angle, with your wrist and hand in roughly a straight line.

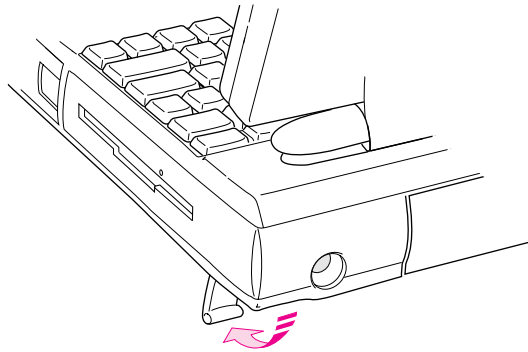


- You may have to raise your chair so your forearms and hands are at the proper angle to the keyboard. If this makes it impossible to rest your feet flat on the floor, you can use a footrest with adjustable height and tilt to make up for any gap between the floor and your feet. Or you may lower the desktop to eliminate the need for a footrest. Another option is to use a desk with a keyboard tray that's lower than the regular work surface.
- Use a light touch when typing or using the trackpad and keep your hands and fingers relaxed. When using the trackpad, avoid rolling your thumbs under your palms.



Some computer users may develop discomfort in their hands, wrists, or arms after intensive work without breaks. If you begin to develop chronic pain or discomfort in your hands, wrists, or arms, consult a qualified health specialist.

- Change hand positions often to avoid fatigue.
- If you prefer, you can adjust the angle of the keyboard by lowering the legs until they snap into position.



The back of the keyboard is slightly elevated when the legs are in use. Otherwise, the keyboard is level.

### Mouse

- If you use an external mouse, position the mouse at the same height as your keyboard. Allow adequate space to use the mouse comfortably.

### Built-in display

- Adjust the angle of the display to minimize glare and reflections from overhead lights and windows.
- You may need to adjust the brightness and contrast of the screen when you take the computer from one work location to another, or if the lighting in your work area changes.

### External monitor

If you use an external monitor, this suggestion may be helpful.

- If possible, arrange the monitor so the top of the screen is slightly below your eye level when you're sitting at the keyboard. The best distance from your eyes to the screen is up to you, although most people seem to prefer 18 to 28 inches (45 to 70 cm).

### Avoiding fatigue

- Change your seated position, stand up, or stretch whenever you start to feel tired. Frequent short breaks are helpful in reducing fatigue.
- Allow adequate work space so that you can work comfortably. Place papers or other items so you can view them easily while using your computer. A document stand may make reading papers more comfortable.
- Eye muscles must work harder to focus on nearby objects. Occasionally focus your eyes on a distant object, and blink often while you work.
- Clean your screen regularly. Keeping the screen clean helps reduce unwanted reflections.

### What about electromagnetic emissions?

There has been recent public discussion of the possible health effects of prolonged exposure to extremely low frequency (ELF) and very low frequency (VLF) electromagnetic fields. Such fields are associated with electromagnetic sources such as television sets, electrical wiring, and some household appliances—as well as computer monitors.

Apple has reviewed scientific reports and sought the counsel of government regulatory agencies and respected health organizations. Based on the prevailing evidence and opinions, Apple believes that the electric and magnetic fields produced by computer monitors do not pose a health risk. In response to those customers who wish to reduce their exposure to electromagnetic fields, Apple has lowered the emission levels of its products.



## Important care and safety instructions

For your own safety and that of your equipment, read and follow all the instructions in this section. Keep these instructions available for reference by you and others.

### Warning

- Electrical equipment may be hazardous if misused. Operation of this product, or similar products, must always be supervised by an adult. Do not allow children access to the interior of any electrical product and do not permit them to handle any cables.
- Do not use the computer in or near water.
- Do not use cables that are frayed or otherwise damaged. Hold a cable by its connector (the plug, not the cord) when connecting or disconnecting it.
- Always handle batteries carefully.
- Do not drop, puncture, mutilate, or burn the computer or battery.
- Recharge batteries only as described in this manual and only in ventilated areas.
- Transport batteries either inside the computer or with the protective slider covering the battery contacts.
- Do not short-circuit the battery terminals (that is, do not allow a metal object such as a paper clip or key chain to touch the terminals). Doing so may cause an explosion or a fire.

### Caution

- If you have a problem with your computer and nothing in the computer manuals solves the problem, take the computer to your Apple-authorized dealer or service provider. Attempting to repair the computer yourself may void the limited warranty.
- Do not move the computer when you can hear its hard disk spinning. When you put the computer to sleep, wait until the screen is blank before moving the computer.

- Never force a connector into a port. Make sure that the connector matches the port and that it's right side up. If the connector and port do not join easily, they do not match.
- Do not use the computer in wet or dusty environments.
- Keep dirt and liquids away from the ports on the back panel, the keyboard, and the trackpad. If you spill any food or liquid onto the computer, shut it down immediately and unplug it before cleaning up the spill. Depending on what you spilled and how much got into the computer, you may have to bring the computer to an Apple-authorized service provider for cleaning.
- Do not touch the screen with any sharp or pointed objects.
- Use only the battery supplied with your computer, or an identical model. Batteries designed for other portable computers may look similar, but they may not work with your computer and may damage it.
- Use only the power adapter supplied with your computer, or an identical model. Adapters designed for other electronic devices may not work with your equipment and may damage it.
- Do not leave batteries in hot locations (such as the trunk of a car).

### Important

- Use the computer only in environments where the temperature range is between 50°F/10°C and 104°F/40°C.
- Do not expose the computer to very low (less than -13°F/-25°C) or very high (more than 140°F/60°C) temperatures.
- If the computer has been in a cold place for several hours, let it warm up to room temperature before you use it.
- Clean the computer's outside surfaces with a damp (not wet) cloth. Clean the screen with soft, lint-free paper or cloth and a mild glass cleaner. Do not spray the glass cleaner directly onto the screen.



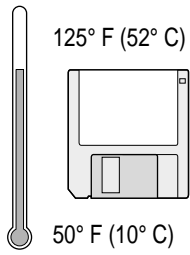


## Caring for batteries

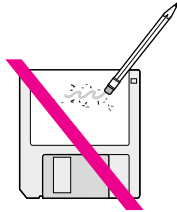
- Always handle batteries carefully.
- Do not short-circuit the battery terminals (that is, do not touch both terminals with a metal object). Doing so may cause an explosion or a fire.
- Do not drop, puncture, disassemble, mutilate, or incinerate the battery.
- Recharge batteries only as described in this manual and only in ventilated areas.
- Do not leave batteries in hot locations (such as the trunk of a car).
- Do not leave a battery in your computer for longer than a week without plugging in the power adapter.
- Do not leave a battery in storage for longer than 6 months without recharging it.
- Take dead batteries to an Apple-authorized service provider for recycling or proper disposal. The batteries contain hazardous chemicals and should not be thrown out with household or office trash.

## Handling floppy disks

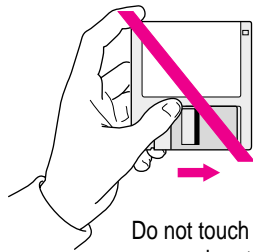
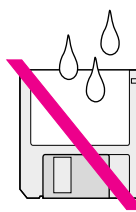
Store disks at temperatures between 50° F and 125° F.



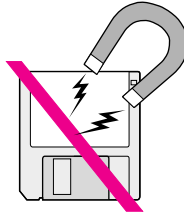
Do not use a pencil or an eraser on a disk or disk label.



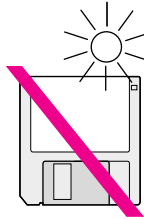
Keep disks dry.



Do not touch the exposed part of the disk behind the metal shutter.



Keep disks away from magnets.



Avoid exposing disks to extremely hot temperatures.

## Traveling with the PowerBook

The safety instructions earlier in this appendix also apply when you are traveling. In addition, note these precautions:

- Do not transport your PowerBook while it is turned on. Put your computer to sleep or shut it down before you move it.
- Transport batteries either inside the computer or with the protective slider covering the battery contacts. Do not transport unprotected batteries.
- Do not check your computer as baggage. Carry it with you.
- Have security officials manually inspect your computer and disks if you do not want to pass them through X-ray machines.
- Take the system software disks that came with your computer with you in case you need to reinstall system software.
- Be prepared to show security officials that your computer is working. Have a charged battery or a power adapter ready to use.
- Some airlines may restrict or prohibit the use of computers in flight. Check ahead to find out what restrictions, if any, apply.
- Take the necessary plug adapters if you're traveling overseas. (You may need to use them with the power adapter.) You do not need a voltage transformer. The power adapter can handle 90 volts to 260 volts AC (48 Hz to 62 Hz).

Check the diagrams below to determine which plug adapters you'll need, or ask your travel agent.

Outlet Type	Locations
	United States, Canada, parts of Latin America, Japan, Korea, the Philippines, Taiwan
	Former Soviet Union, most of Europe, parts of Latin America, the Middle East, parts of Africa, Hong Kong, India, most of South Asia
	Mexico, United Kingdom, Ireland, Malaysia, Singapore, parts of Africa
	China, Australia, New Zealand

## Storing the PowerBook

- 1 Save your work on a hard disk or floppy disks.**
- 2 Choose Shut Down from the Special menu.**
- 3 Close the display.**
- 4 Recharge the battery or batteries.**

Be sure your batteries are fully charged if you are taking the computer places where you cannot plug it in.

- 5 Store the computer in a cool, dry place.**

Storage temperatures should remain between 10°C and 40°C (between 50°F and 104°F). Avoid leaving the computer where temperatures may be extreme or unpredictable—in the trunk of a car, for example.

## Service and support

If your computer is malfunctioning but does not appear to be physically damaged, shut it down (and leave the power adapter plugged in, if possible) until you can get help.

If you know or suspect that your computer is physically damaged, disconnect the power adapter, remove the battery, and do not use the computer until it can be repaired.

See the service and support information that came with your computer for information about customer assistance.



Refer to this appendix for  
information on using the  
PowerBook 500 Series keyboard



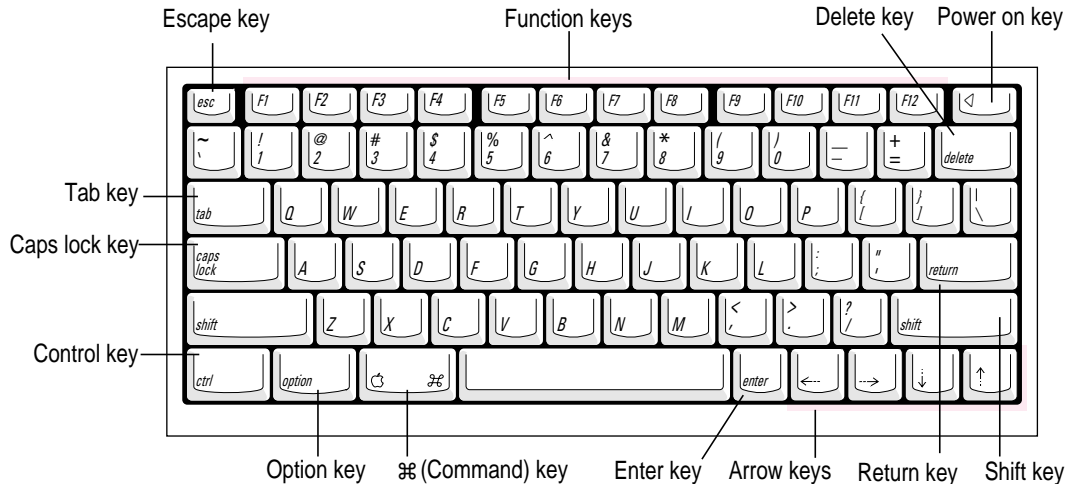
## Appendix B Using Your Keyboard



The PowerBook 500 Series keyboard works in much the same way as the keyboards on other computers and on electric typewriters. However, there are a few special keys you should know about.

The illustration on the following page explains the function of all the special keys on the PowerBook 500 Series keyboard.

## Special keys on the PowerBook 500 Series keyboard



<b>Arrow keys</b>	Move the insertion point, as an alternative to using the pointing device. In some programs, the arrow keys have other functions.
<b>Caps Lock key</b>	A locking Shift key for letters only (numbers and symbols aren't affected).
<b>⌘ (Command) key</b>	Works in combination with other keys as an alternative to choosing a menu command.
<b>Control key</b>	In combination with other keys, provides shortcuts or modifies actions.
<b>Delete key</b>	Deletes selected material, or the character to the left of the insertion point.
<b>Enter key</b>	In a dialog box, pressing Enter is the same as clicking the outlined button. In some programs, confirms information you have provided.
<b>Escape key</b>	The function of this key depends on the program you're using.
<b>Function keys</b>	Some programs allow you to use function keys to give commands. You can assign commands or action sequences to function keys with utility programs.
<b>Option key</b>	In combination with other keys, produces special characters or modifies actions.
<b>Power On key</b>	Turns on the computer.
<b>Return key</b>	Moves the insertion point to the beginning of the next line. In a dialog box, pressing Return is the same as clicking the outlined button.
<b>Shift key</b>	Produces capital letters (or the upper character on the key).
<b>Tab key</b>	Moves the insertion point to the next stopping place (such as a tab stop or data field).

If you can't find what you're looking for in this index, look in Macintosh Guide—available in the Guide (Ⓜ) menu on your computer.



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### **The Apple Publishing System**

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