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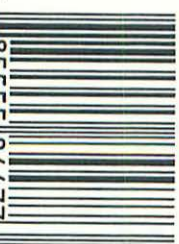
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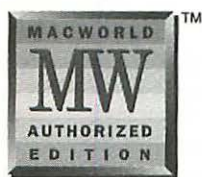
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# Introduction

Welcome to the *Macworld Ultimate Mac CD-ROM*, a special edition of the CD that I originally produced for my 1,100-page book, *Macworld Complete Mac Handbook Plus Interactive CD, 3rd Edition*.

The folks at IDG Books and I thought it would be nice to offer an enhanced version of my CD in a smaller, less-expensive package. To make the package harder to resist, I put together this book, which contains what I like to call *Deserted Island Tips* — the essential Mac tips and techniques that I'd want to have at my side if I was stranded on a deserted island.

## What's New on the CD?

First, I added nearly ten minutes of QuickTime video. This CD includes longer versions of some of the interviews and profiles, as well as a new interactive segment on Apple's hot Macintosh 630 series (the new, low-cost, multimedia Macs).

Second, I added more great software, including a fantastic new utility called GURU (*Guide to RAM Upgrades*). Created by the gurus at Newer Technology, GURU is a complete reference to Mac memory upgrades. Select a Mac model from its list, and GURU tells you everything that you need to know about upgrading your machine's memory. And it even tests your Mac's memory to ensure that it's healthy. The CD also includes

- ❖ A demo version of Opcode's Audioshop 2.01, an amazing sound-editing program that's compatible with Power Macs
- ❖ HyperTrecker and Sound-Trecker, two more amazing music programs
- ❖ A utility to enhance the Mac's Application menu
- ❖ Some System 7 sound files
- ❖ And more (see Chapter 5 for full details)

## About the Book

I'm proud as a papa of my 1,100-page *Macworld Complete Mac Handbook*, but I admit that it isn't exactly portable. The book weighs 4.2 pounds — about as much as a PowerBook Duo! I can't blame anyone who doesn't want to carry it on a business trip or schlepp it between the dorm and the classroom. What you need is something you can put in your pocket.

This light-as-a-hatful-of-feathers book contains some of the most useful Quick Tips and Step-by-Step boxes from the *Macworld Complete Mac Handbook*. Whether you're at home or on the road, this companion to the *Macworld Complete Mac Handbook* can answer an urgent question, walk you through a procedure, or round out your knowledge of the Mac universe.

## What You Should Already Know

This book serves more as a tip sheet than a tutorial. You won't find definitions of basic Mac techniques or components, such as *clicking* and *dragging* or *menus* and *dialog boxes*. I assume that you know how to set up and turn on a Macintosh, start programs, choose menu commands and dialog box options, select text, and so on. If you aren't familiar with these concepts and tasks, work through the tutorials in your Mac's manual or pick up a copy of the *Macworld Complete Mac Handbook*.

(If you don't own the *Macworld Complete Mac Handbook* yet, you'll find a discount coupon for it in the back of this book.)



# Tips for the Mac's System Software

This chapter is a collection of tips and techniques for the Mac's system software.

## Working Faster in the Finder

The first piece of software you encounter when you start up your Mac is the *Finder* — the link between you and the rest of the Mac's system software. You use the Finder to start programs, delete files, and copy, eject, and erase disks.

### Developing a filing scheme

The Finder lets you create a storage hierarchy, à la a filing cabinet. In the Mac's storage hierarchy, the hard disk corresponds to the cabinet, and folders are nested within. You can boost the Finder's performance by grouping documents and applications into folders. When you do this, you reduce the number of files the Finder has to scan when you open a disk icon.

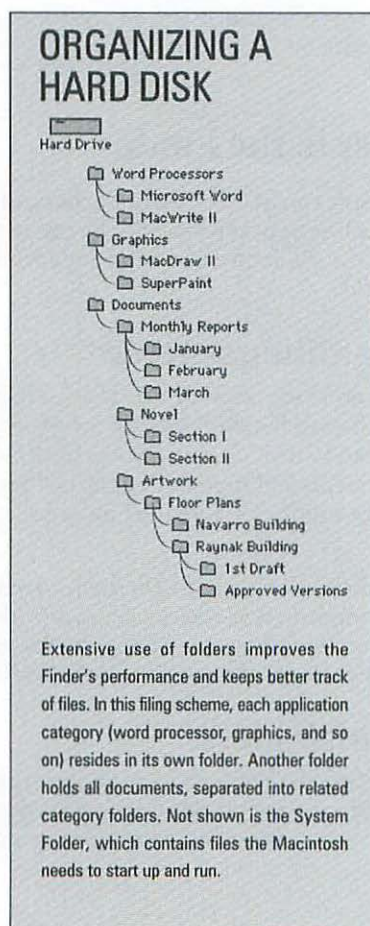
And don't forget the convenience factor: Instead of having to electronically paw through dozens of word processor files, you can go directly to the Proposals folder, the Memos folder, the Seedy Novel folder, or the Games folder and quickly locate the file you need.

### Working with folders

To create a folder, use the Finder's New Folder command (in the File menu). The Finder names new folders *untitled folder*; you should change this title to something a bit more appropriate.

At this point, to further develop your storage hierarchy, you can open the new folder and then invoke the Finder's New Folder command again to put a folder inside the first — just as you can nest a manila folder within another. You can nest folders more than a dozen levels deep, but navigating through more than five levels is cumbersome and time-consuming.

Some people create date-oriented folders (January Work, February Work, and so on) and then place folders within each for specific types of documents such as memos, publications, and artwork. Some people create 26 folders, one for each letter of the alphabet, and file documents within them. A sample filing scheme is shown in Figure 1-1 “Organizing a Hard Disk.”



**Figure 1-1: Organizing a Hard Disk**

### QUICK TIPS



### Standard Shortcuts for the Open and Save Dialog Boxes

System 7 provides several standard shortcuts for working with directory dialog boxes. Mastering these shortcuts, which work with any program, can save time when opening or saving files.

#### Locating a file or folder

To locate a file or folder in an Open dialog box, use the up- or down-arrow key or quickly type the first few characters of the item's name.

#### Opening a file

To open a file, you don't need to click the Open button; you can press Return or Enter.

#### Opening and closing a folder

To open a folder, select it and press Return or  $\mathbb{A}$ -down arrow; the Mac displays the folder's contents in the dialog box. To close a folder and move up one level in the storage hierarchy, press  $\mathbb{A}$ -up arrow.

#### Moving up one level in the hierarchy

To quickly move up one level (that is, move one level closer to the desktop) in the storage hierarchy, click the disk name that appears in the directory dialog box.

#### Switching between the file list and the text-entry box

In the Save or Save As dialog box, pressing Tab switches the keyboard focus between the file list and the text-entry box. When the keyboard focus is on the file list, you can select a folder by typing the first few characters of its name; when the keyboard focus is on the text-entry box, you can enter a filename. Pressing Enter saves the file. In other words, you can save a file in a particular folder without reaching for the mouse.

When the keyboard focus is on the file list, a bold border appears around the file list; when the focus is on the text-entry box, a bold border appears around the text-entry box.

#### Accessing the desktop

To jump to the desktop level, press  $\mathbb{A}$ -D or  $\mathbb{A}$ -Shift-up arrow.

#### Creating a new folder

You can create a new folder within a currently open folder by pressing  $\mathbb{A}$ -N.

#### Canceling the dialog box

You can cancel a directory dialog box by pressing Esc or  $\mathbb{A}$ -period (.).

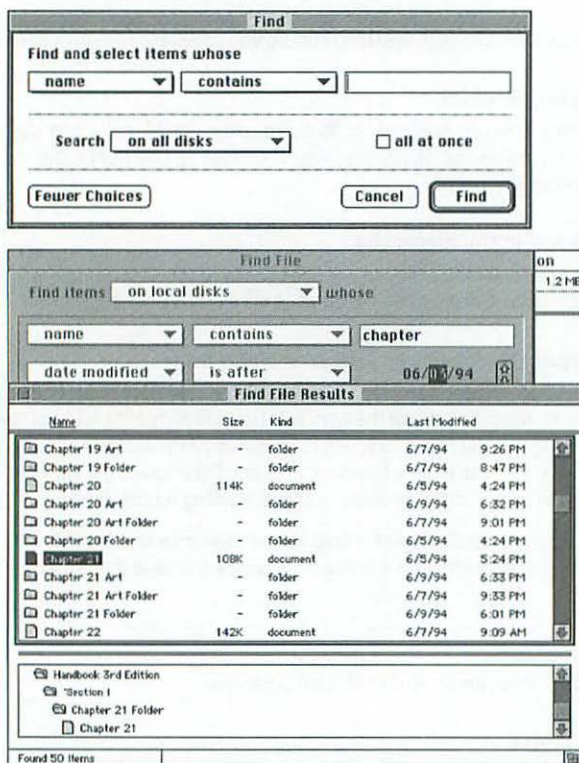


## Finding What You've Filed

As your filing system becomes more complex — folders within folders within folders — locating and opening a particular file becomes more difficult.

In System 7, the File menu contains a Find command that enables you to locate files easily. In Systems 7.0 and 7.1, choosing Find displays a dialog box; in System 7.5, choosing Find opens the Find File desk accessory. Both are illustrated in Figure 1-2 “Finding Your Files.”

Another great way to find items is with the shareware utility UltraFind, which is included on the Ultimate Mac CD.



**Figure 1-2: Finding Your Files** After you click More Choices in the Find dialog box (Systems 7.0 and 7.1), a new dialog box appears (top), whose pop-up menus give you more ways to search. Clicking the all at once check box tells the Finder to find and select all the files rather than stopping after the first one it finds. The System 7.5 Find File desk accessory (bottom) displays found items in a window. You can work with the items in this window — open them, drag them to other disks or folders, throw them away, and more.

## QUICK TIPS

**Keyboard Shortcuts for Find File**

System 7.5's Find File desk accessory provides an array of keyboard shortcuts. They're listed in the following table.

**Find File Shortcuts**

<i>To Do This</i>	<i>Do This</i>
Select an item	Type the first few characters of its name, or use the up- and down-arrow keys.
Switch the keyboard focus from the file listing to the folder hierarchy display	Press Tab
Choose More Choices	Press ⌘-M
Choose Fewer Choices	Press ⌘-R
Open an item	Press ⌘-O
Open the folder that encloses the selected item	Press ⌘-E
Print an item	Press ⌘-P
Close the Results or Find File window	Press ⌘-W

## Fast Access with the Apple Menu

The leftmost menu on the Mac's menu bar is the Apple menu; it's always available. As a result, you always have fast access to items in the Apple menu.

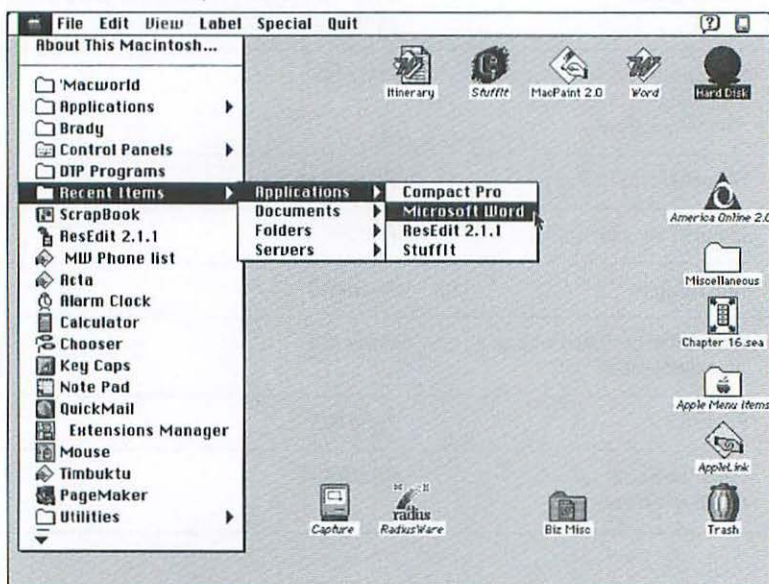
The content of the Apple menu is determined by the content of the Apple Menu Items folder, located within the System Folder. When you put an icon in the Apple Menu Items folder, it's immediately available in the Apple menu.

**Tip:** Don't store an actual file or application in the Apple Menu Items folder. Rather, create an alias of it (see the next section) and then move the alias into the Apple Menu Items folder.

If you modify the Apple Menu Items folder often, make an alias of it and move the alias to the Mac's desktop. Then you can open the folder

by double-clicking the alias; you don't have to root through the System Folder.

You can dramatically increase the usefulness of the Apple menu by using a hierarchical Apple menu utility, which turns folders or aliases to folders into submenus, allowing express access to even the most deeply nested files (see Figure 1-3 "Decking Out the Desktop"). Apple liked the concept so much that a hierarchical Apple menu is in System 7.5. If you haven't upgraded to System 7.5, use a utility such as MicroSeed's HAM or the shareware MenuChoice, which is included on the Ultimate Mac CD.



**Figure 1-3: Decking Out the Desktop** By placing aliases of often used files, folders, and programs on your desktop, you have fast access to items buried within folders. The alias of the Apple Menu Items folder makes it easier to hone your Apple menu. In addition, the Mac in this figure is running MicroSeed's HAM, which turns folders and folder aliases in the Apple menu into hierarchical menus. (System 7.5 includes a similar feature.) Also note the Quit command on the menu bar, which is added by Adam Stein's shareware System 7 Pack!; after starting a program, you can return to the Finder and choose Quit to reclaim roughly 300K of memory.

## The Amazing Alias

One of System 7's biggest conveniences is the *alias* — a small file that acts as a remote control for another item. When you double-click an



### STEP-BY-STEP



### Making an Alias

The instructions in this box show you how to create an alias by using the Finder.

#### To create an alias:

1. **Select the original file or folder.**
2. **Choose Make Alias from the Finder's File menu.**

The Finder creates the alias. The alias's icon appears adjacent to the original and has the word *alias* tacked onto its name; you can rename the alias if you like. An alias by another name . . .

3. **Drag the alias to its final destination.**

alias, the Mac opens the item that the alias points to. This lets you keep programs and files within their folders but maintain fast access to them. Instructions for creating aliases appear in the Step-by-Step box "Making an Alias." (The shareware MenuChoice, which is included on the Ultimate Mac CD, streamlines this process.)

If you want the Finder to append something other than *alias* to an alias name, use the Adam Stein shareware utility System 7 Pack!. System 7 Pack!, which enables you to modify System 7 in several other useful ways, is included on the Ultimate Mac CD.

After you've mastered aliases, you may want to experiment with an alias utility. Lawrence Harris's shareware Alias Director, for example, lets you create aliases that don't have icons — a nice way to avoid clutter if you like to keep aliases on the desktop. And Scott Johnson's PowerBar shareware package (included on the CD) also provides some powerful alias-management features.

## Other Ways to Improve Finder Efficiency

This section contains a collection of Finder efficiency tips.

### Customize directory windows with Views

Using the Views control panel, you can change the font and size of the text in disk and folder windows; you also can choose to see as much or as little information as you like about the items on your disks. Note that unchecking items such as size, date, and kind also eliminates those commands in the View menu. If you uncheck Kind, for example, you won't be able to sort the contents of a window according to icon type (folder, application, document).



## Alias Ideas

There are almost as many ways to use aliases as there are ways to use the Mac. Here's a collection of ideas to get you started.

### Access items quickly

For fast access, throw an alias of an original program, document, or folder in the Apple Menu Items folder. Remember that you can rename the alias.

By the way, aliases in your Startup Items folder open after any "real" programs located in the folder.

### Access a frequently used folder

For fast access to a folder that's usually buried within other folders, put an the alias on the desktop. You then can open or modify the folder's contents by opening its alias. You can even copy items to the folder by dragging them to its alias.

### Access a file-server volume

An alias provides an easy way to mount an AppleShare file-server volume or a disk or folder made available through System 7's file-sharing features. To do so, mount the volume as usual, select it, and choose Make Alias. Rename or move the alias as desired.

Thereafter, to connect to the server, simply open its alias; you then see the standard AppleShare log-on dialog box. (You won't even see the log-on dialog box if you access the server as a guest when making the alias.)

You can use this technique to copy a file to a server volume that you haven't yet mounted: just drag the file to the alias icon and respond to the log-on dialog box as necessary. The Finder connects to the server and then copies the file.

### Access your hard disk from any Mac on your network

After you use the Finder's Sharing command to make your hard disk available, copy an alias of your hard disk to a floppy disk. Then, to connect to your hard disk from a different Mac in your network, insert the floppy disk and double-click the alias.

### Access an extension or control panel from somewhere else

Normally, system extensions reside in the Extensions folder, in the System Folder. If you want to access an extension from the Control Panels window, make an alias of the extension and move the alias to the Control Panels folder (also within the System Folder). Similarly, if you want to access a certain Control Panel directly from the Apple menu, make an alias of it and move the alias to the Apple Menu Items folder.

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### Start programs and open documents

If you make an alias of a program, you can start the program and open a document by dragging the document icon to the alias icon. When you do, the alias icon becomes highlighted — just as a folder or disk icon is highlighted when you copy an item to it. When you release the mouse button, the Mac starts the program and opens the document. If the application icon doesn't highlight when you drag the document icon to it, the application may not be able to open that type of document.

### Gain fast access to every program on your hard disk

To have fast access to every program on your hard disk, make an alias for each and then move them into a single folder. To make all the aliases at once, use the Finder's Find command to search for and select all applications and then choose Make Alias.

### Automate access to archived files

Many people use file-compression utilities such as Stuffit to compress and archive older files, which they then copy to floppy disks. (The goal: Delete the old files from their hard disks, freeing up valuable space.) You can use aliases to easily locate archives — no more rooting through floppies trying to locate the disk that contains a certain archive.

To do so, first make your archive file as usual and then copy it to a floppy disk. Next, make an alias of the archive on the floppy and then copy the alias from the floppy to your hard disk — perhaps to a folder called Archive Aliases. Finally, delete the archive from your hard disk. When you need to access the archive, just double-click its alias. The Mac then asks you to insert the appropriate floppy.

Think twice about checking the Calculate Folder Sizes box; it can slow the Finder significantly under some circumstances.

If you're a neatnik, check the Always Snap to Grid box to put the Finder in what I call *mom mode* (the Finder always cleans up after you).

You can switch between views by using the Finder's View menu, but there's a faster way: click the view heading in the active directory window. If you have a large screen, this method can be faster than moving the mouse pointer all the way up to the menu bar.

## Getting rid of the Empty Trash warning dialog box

Normally, the Finder warns you when you choose the Empty Trash command. If you don't want to see the warning, you can temporarily bypass it by pressing the Option key while choosing Empty Trash. To get rid of the warning permanently, select the Trash icon, choose Get Info from the File menu, and uncheck the Warn Before Emptying box.



## Selecting icons with the keyboard

When using the Finder, you can select an icon on the desktop or in the active directory window by quickly typing the first few characters of its name — just as you can select items within an Open or Save dialog box. If the item you want isn't in the active window, you still can locate and select it from the keyboard — just use the Find command (see the section "Finding What You've Filed," earlier in this chapter).

You also can select icons by using the keyboard's arrow keys as well as the Tab key and Shift-Tab key sequence. See the Quick Tips box "Finder 7 Shortcuts" for a list of System 7 Finder shortcuts.

## Showing and hiding applications

The Mac's desktop metaphor is great, but does it have to be so accurate? To reduce the clutter that occurs when lots of windows are open, choose Hide Others from the Application menu (located at the right edge of the menu bar); all windows belonging to inactive applications vanish. (Choose an application's name from the menu to restore its windows.) To show and hide with a single click, press the Option key while selecting from the Application menu.

A great enhancement to the Application menu is Hiro Yamamoto's ApplWindows, a free control panel. With ApplWindows installed, the Application menu shows not only program names, but also the names of each application's open windows. Thus you can switch programs *and* activate a particular document window with a single click. (You can even get the hierarchical Application menu to pop up at the mouse pointer's location.) ApplWindows is included on the Ultimate Mac CD, in the Ultimate Mac CD Extras folder.

The CD also includes another terrific utility that enhances the application menu: Scott Johnson's shareware PowerBar. PowerBar not only adds hierarchical menus to the Application menu, it also streamlines creating aliases, launching programs and documents, and much more. Note that PowerBar and ApplWindows are not compatible with each other; you shouldn't install both on your system. (Of course, if you install PowerBar, you don't need ApplWindows because PowerBar provides most of ApplWindows's features.)

## Switching between monitor settings

All color Macs support a variety of monitor settings — black and white, 16 colors, and 256 colors (with some Macs, even thousands and millions of colors). If you want your Mac to run at top speed, though, you should switch to lower *bit depths* (fewer colors or gray shades) whenever possible. For example, your word processor files will scroll far faster when the Monitors control panel is set to 2 colors than when



## Finder 7 Shortcuts

With System 7, it's easier than ever to move around on the desktop. The accompanying table describes Finder 7's capabilities.

### Finder Shortcuts

<i>To Accomplish This</i>	<i>Do This</i>
Eject a disk and remove its icon from the desktop	Drag the icon to the Trash or select the disk and choose Put Away (⌘-Y)
Select an icon from the keyboard	Type the first few characters of the icon's name
Bypass the warning dialog box that appears when you choose Empty Trash	Press Option while choosing Empty Trash
Hide the current application when switching to another application	Press Option while choosing the program that you want from the Application menu
Rename an icon	Select the icon, press Return, and then start typing
Quickly determine whether a file is locked	Select the file and press Return; if no border appears around the name, the file is locked
Clean up everything	Choose Select All and then press Option and choose Clean Up All
Clean up selected items only	Press Shift and choose Clean Up Selection
Organize icons by name	Choose By Name from the View menu, choose By Icon or By Small Icon, and then press Option and choose Clean Up by Name
Close all disk and folder windows	Press Option while clicking a close box or choosing Close
Copy a file from one folder to another	Press Option while dragging the file to the destination folder
Copy an item to the desktop	Press Option and drag the item to the desktop
Open an item and close its window	Press Option and double-click the item

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Open the folder or disk window that holds the current directory window	Press ⌘ while clicking on the window's title and then choose the folder or disk name you want
Abort a program that seems to have crashed	Press ⌘-Option-Esc and click Force Quit
Open a document with a program that did not create the document	Drag the document's icon to the program's icon (or alias)
Skip installing all system extensions during a start-up	Hold down Shift during start-up
Select the item nearest the desktop's upper-right corner	Press ⌘-Shift-up arrow
Zoom a directory window to fill the screen	Press Option while clicking the window's zoom box

### Selecting Icons from the Keyboard

<i>To Select</i>	<i>Press This</i>
The icon to the left or right of the currently selected icon	The left- or right-arrow key (icon views only)
The icon above or below the currently selected icon	The up- or down-arrow key
The next icon alphabetically	Tab
The preceding icon alphabetically	Shift-Tab

### Keyboard Shortcuts for Outline Views

<i>To Do This</i>	<i>Press This</i>
Expand the selected folder's outline	⌘-right arrow
Collapse the selected folder's outline	⌘-left arrow
Expand the entire outline of a selected folder	⌘-Option-right arrow
Collapse the entire outline of the selected folder	⌘-Option-left arrow



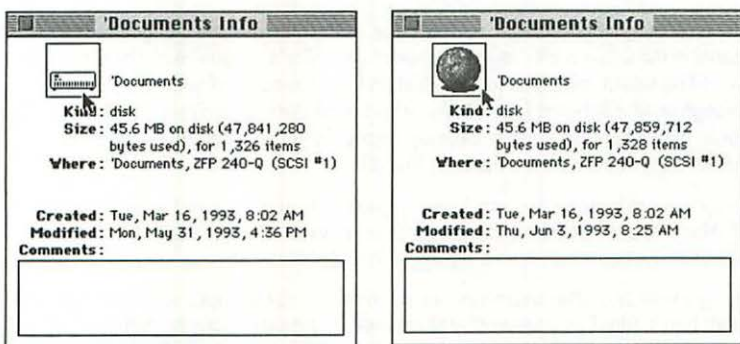
it's set to thousands or millions. But by the same token, you need those higher bit depths for viewing QuickTime movies, working with color images, and playing Myst.

CE Software's QuickKeys macro utility can help here; its ScreenEase extension lets you set up keyboard shortcuts for depth switching. You can create shortcuts that go to a specific depth, such as 256 colors, or you can create ones that increase or decrease the depth each time you press a certain sequence, such as Control-up arrow or Control-down arrow.

## Customizing Disk, File, and Folder Icons

Using custom icons is a great way to add pizzazz your desktop. They also enable you to distinguish between the types of Macs and storage media you use. (For example, you can use the SyQuest icon to represent a SyQuest cartridge or a PowerBook icon to represent your PowerBook's hard disk.)

System 7 makes it easy to customize icons for disks, files, and folders (see Figure 1-4 "Picture an Icon"). To do so, select a disk, file, or folder and choose Get Info. In the Info window, click the icon (a border appears around it) and choose Copy. Paste the icon into a paint program, such as SuperPaint or Photoshop, and then tweak the graphic as desired. When you're done, select the modified icon and copy it to the Clipboard. Return to the Info window from which you copied the icon, make sure the icon is still selected, and then paste.



**Figure 1-4: Picture an Icon** System 7 lets you customize your icons. First, select the image in a graphics program and choose Copy. Then select the icon in the Get Info window; if the icon can be modified, it appears within a rectangle (*left*). When you choose Paste, the Mac scales the graphic to fit and turns it into an icon (*right*).

You can use scanned images as icons: when you paste a large image into the Info window, the Finder shrinks it to fit. By using this technique, you can turn a disk or folder window into a thumbnail catalog of scanned images.

I used custom icons to dress up the folders on the Ultimate Mac CD. And speaking of the CD, you can find dozens of great-looking custom icons for Apple and third-party equipment in the Ultimate Mac CD Extras folder and in the Best of BMUG collection (for the latter, the icons are in the System 7 folder within the Utilities folder).

## Tweaking the System Folder

The System Folder, that folder with the small Mac icon on it, is really what transforms a box of chips into a Macintosh. In this section, I summarize the workings of the System Folder and provide tips for customizing yours.

Unless otherwise noted, the information here applies to Systems 7.0, 7.1, and 7.5. When I say *System 7*, I'm referring to all these versions.



### The Mac Sounds Off

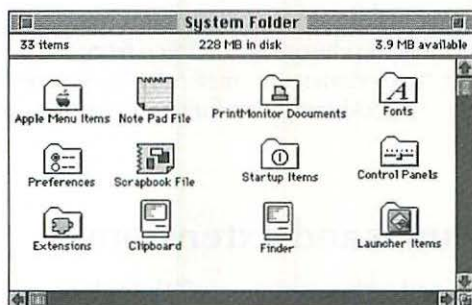
The error beeps that the Mac can produce — the monkey, the boing, and so on — are stored in the System file. You can enhance your Mac's repertoire of digital beep sounds by adding sound resources to your System file. Thousands of sounds are available through on-line services (such as America Online and CompuServe), user groups, and public domain and shareware clearinghouses. To get you started, I included a collection of sounds on the Ultimate Mac CD.

If you want to install a System 7 sound (you can hear a System 7 sound by double-clicking it in the Finder), simply drag it to your System Folder. You select an installed sound as the current system beep in the Sound control panel.

Using a variety of shareware system extensions, you can make your Mac sound off at other times, too. Two noteworthy shareware sound extensions are SoundMaster (by Bruce Tomlin; shareware) and Chime (by Robert Flickinger; free). SoundMaster lets you tell your Mac to play a sound when you perform any of over a dozen tasks (including inserting or ejecting a disk). Chime plays up to four separate sounds on the hour and at 15, 30, and 45 minutes past.

## What's in the System Folder?

When you open the System Folder, you see a directory window that resembles the one in Figure 1-5 “Inside the System Folder.” As this figure shows, the System Folder contains several folders of related files as well as several loose files. Two loose files — System and Finder — form the backbone of the Mac's system software.



**Figure 1-5: Inside the System Folder** When you open the System Folder, you see an arrangement similar to this one. The specific files and folders as well as the icon locations may vary.

Here's an overview of the folders in the System Folder:

- ❖ *Apple Menu Items* holds items whose names appear in the Apple menu.
- ❖ *Startup Items* holds items that you want the Mac to open automatically when it starts up.
- ❖ *Fonts* holds fonts (the fonts' names appear in your programs' Font menus). The Fonts folder is present in System 7.1 and later.
- ❖ *Preferences* holds *preferences files*, or files that hold program-specific settings. For example, if you change the font that a program uses for new, untitled documents, the program usually saves your setting in a preferences file.
- ❖ *Control Panels* contains *control panels*, or small programs that allow you to customize the Mac's operation.
- ❖ *Extensions* contains *extensions*, or files that often load into memory during start-up and add features to the Mac. Printer drivers, which enable the Mac to talk to specific printers, also live here (see Chapter 3). In fact, you can free up some space on your hard drive by deleting drivers for printers that you don't use.



- ❖ *PrintMonitor Documents* is a temporary storage place for files that are waiting to be printed by PrintMonitor, the Mac's background printing software.
- ❖ *Launcher Items* holds icons that you want to appear in the Launcher. If you want quick access to a program or document, toss an alias into this folder. (The Launcher control panel, included with Performas as well as with System 7.5, gives you one-click access to often used programs and documents.)
- ❖ *Shutdown Items*, present only in System 7.5, contains items that you want the Mac to run when you choose Shut Down from the Finder's Special menu. A macro that automatically backs up your hard disk, for example, is a good candidate for the Shutdown Items folder.

## Adding Control Panels and Extensions

The control panels discussed in this section aren't the only ones a System Folder can contain — not by a long shot. Many software



### Important Information about Power Macs and Extensions: The Patching Problem

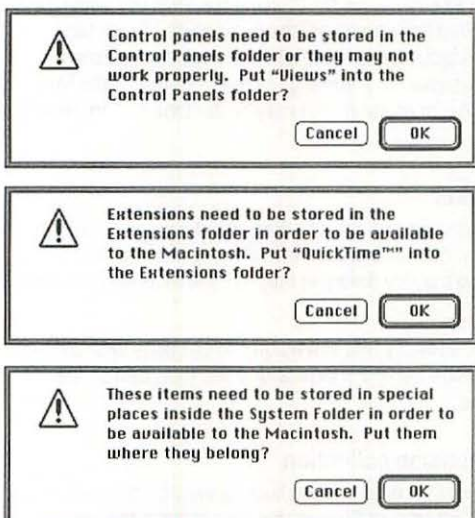
Shortly after the first Power Macs shipped, it became clear that a lot of popular utilities, including CE Software's QuicKeys and many screen savers, could slow the machines dramatically.

The problem occurs with utilities that install a large number of patches to tap into the inner workings of the Mac's system software. When these patches are written in the language of the 68000-family processors, they bypass the native-mode system software routines that they're patching, forcing the Power Mac to spend a greater portion of its time running in emulation mode. That can cause slow performance — even when you're running native-mode applications. I've heard of cases where a single start-up file caused as much as a 40 percent decrease in performance.

How can you tell whether a utility installs these patches? First look for the *Accelerated for Power Macintosh* sticker on the box; if it's there, you know the utility runs in native mode and won't slow down the Power Mac. Otherwise, I suggest installing Casady & Greene's Conflict Catcher II utility, which identifies extensions that are patching over native-mode code. A version of Conflict Catcher II, which of course runs in native mode, is included on the Ultimate Mac CD; it works for three days and then disables itself.

developers and Mac programming hobbyists have created useful control panels and extensions. (A number of them are included on the Ultimate Mac CD.)

Installing control panels and extensions in your System Folder is easy: Simply drag the file to the *closed* System Folder icon. When the Mac displays a message telling you that the control panel or extension needs to be stored in the Control Panels or Extensions folder, as shown in Figure 1-6 "Installing Control Panels and Extensions," click OK (or press Return).



**Figure 1-6: Installing Control Panels and Extensions**

The Finder displays one of three dialog boxes when you drag control panels and extensions to the System Folder icon. *Top:* Installing a control panel. *Middle:* Installing an extension. *Bottom:* Installing a control panel and an extension.

If you need to install a control panel or extension in a folder other than the one System 7 thinks it belongs in, drag it to the open System Folder directory window. (For example, suppose that you encounter a system problem. You suspect that it is related to the loading order of a particular control panel. You want to change the order in which the control panels load, so you drag it to the top level of the System Folder.)

## QUICK TIPS



## Extension Troubleshooting Strategies

When your System Folder is laden with control panels and extensions, finding the one that's causing a crash can be time-consuming and frustrating. The following procedure may help:

### Step 1: Start up without extensions

With System 7, you can bypass all extensions by pressing the Shift key while the Mac is starting up. (Simply hold the Shift key down until the *Extensions off* message appears below the *Welcome to Macintosh* message.) If the desktop appears, the problem is probably with your extensions — proceed to the next step. If the Mac doesn't start up, the System Folder or start-up area may be damaged — try reinstalling the system software.

### Step 2: Find the troublemaker

One strategy for isolating an extension conflict is to drag all extensions out of the System Folder and then put them back one at a time, restarting after each, until the bomb appears. To save time, you may try dragging only half the extensions out and then adding a couple at a time.

With Extensions Manager, you can easily test extension compatibility with System 7.5. To do so, load only the standard set of 7.5 extensions and then turn on the remaining extensions one by one.

### Step 3: Downsize your extension collection

While you're contemplating how much time troubleshooting wastes, think about removing the extensions that aren't absolutely essential. The more extensions you use, the greater the chance that two won't get along. Besides, if you downsize your extension collection, your Mac will start up faster and will have more memory for your programs.

### Curing extension woes

Casady & Greene's Conflict Catcher II utility, which lets you manage (disable and enable) extensions and tells you how much memory each uses, can help you track down extension conflicts. Conflict Catcher II also can ferret out extensions that are patching over native-mode system software routines; such extensions can slow down a Power Mac significantly (see the Backgrounder box "Important Information about Power Macs and Extensions: The Patching Problem"). A version of Conflict Catcher II is included on the Ultimate Mac CD; it works for three days and then disables itself.



## Understanding Enablers

Before System 7.1 came along, Apple often released a new system version along with each new Mac model — the new software supported the new model's features. But the constant turnover created headaches as people wondered which version was best for their machine.

With System 7.1, Apple devised a different scheme for supporting new models: *system enablers*. Like an extension, a system enabler loads at start up and provides the software that System 7.1 needs to work on a given Mac. This mechanism eliminates the need for Apple to release a machine-specific system software update each time a new Mac model comes out.

The base version of System 7.1 has built-in support for all Mac models shipped before the release of System 7.1 — from the Macintosh Plus through the Macintosh Quadra 950 and PowerBook 145. Macs shipped after System 7.1's release include system enablers specific to that model or family of models. System enablers are stored in the top level of the System Folder (not in the Extensions folder) and load before any extensions or control panels.

A full set of system enablers is not included in Apple's System 7 Upgrade Kit. This can mean trouble if you're on the road and you need to reinstall the system software on a PowerBook that requires a system enabler. If you can't find a dealer who will sell (or, even better, permit you to copy) the enabler you need, you may want to carry along a backup set of the system disks that came with your computer. Or carry a floppy that contains the enabler your PowerBook needs.

With System 7.5, you don't have to worry about having the correct enabler for your machine. Apple has consolidated the separate enablers for different Mac models into a single universal enabler — the mother of all enablers.



# Working with Fonts

**B**ecause type design plays such a large role in the Macintosh world, it's important to understand the basics of typography. And it helps to understand some of the technical details behind the Mac's approach to fonts.

This chapter begins with some tips for making your documents more readable and ends with instructions for installing and removing fonts. (The Ultimate Mac CD houses a huge collection of fonts, by the way.)

## Tips for Choosing Fonts

The most basic typographic choice is usually the *font*, or typeface. Each face has a personality; some are sophisticated, some are casual, while others are forceful and bold (see Figure 2-1 "Font Personalities"). Your goal is to choose faces whose personalities complement your message.

ITC Franklin Gothic is legible and honest.

**ITC Franklin Gothic Heavy carries weight.**

Futura is geometric and "moderne," no?

ITC New Baskerville is delicate and graceful.

Helvetica Condensed is space-efficient, yet legible.

ITC New Century Schoolbook is easy to read.

***Helvetica Condensed Bold Oblique is progressive.***

ITC Lubalin Graph is sturdy and distinctive.

**Figure 2-1 Font Personalities** This sampling of eight Adobe Systems PostScript typefaces shows how the shape and *weight* (or thickness) of each character contributes to a face's overall appearance. Note how idiosyncratic special flourishes, such as Futura's flashy question mark and the square serifs in ITC Lubalin Graph, help define a face's personality.



## Serif versus sans serif

*Serifs* are ornamental flourishes attached to the edges of characters that help lead the eye across a line of type. A face whose characters have serifs (such as Times) is called a *serif face*; a face that lacks serifs (such as Helvetica) is described as *sans serif* (without serifs).

Although some studies show little difference in legibility between serif and sans serif fonts, it's generally believed that serif faces are more legible and therefore better suited to lengthy text passages. I recommend that typographic newcomers follow this rule of thumb: Better serif than sorry.

## All in the family

After designers choose a primary typeface, they must decide whether to use the same font for all elements or a different font for headings and subheadings. A surefire solution is to use different fonts from the same family. For example, you may use Garamond for the body, Garamond Bold for headlines, and Garamond Italic for captions.

Although you can mix faces — for example, use New Baskerville for body and Helvetica Black for headlines — you should be consistent throughout your document. And don't mix with abandon.

## Line Length and Type Size Decisions

After choosing a font, you need to settle on a column width and a type size. Both decisions are related: the goal is to set a manageable number of words on each line.

Two rules of thumb exist for determining line length:

- ❖ Each line should have roughly 8 to 11 words.
- ❖ A column should be just wide enough to accommodate  $2\frac{1}{2}$  lower-case alphabets in the typeface and size you plan to use.

Experimentation with both rules reveals that they often provide the same results. The bottom line: Strive for lines containing between 50 and 70 characters.

Most people read groups of three or four words at a time rather than individual words. If too many words are on each line, the eyes tire as they move from left to right. Too few words on each line and the flow of the text is disrupted by line breaks and excessive hyphenation.

The choice of type size must take into account the amount of text you have and the space into which it must fit. For simple text documents, you usually needn't hit a particular page count: simply choose a type size that works with your column width to fit from 8 to 11 words per line.

For more complex documents, however, especially those you want to print commercially, you must determine the page count in advance and then fit in your text. Before *WYSIWYG* (what-you-see-is-what-you-get) screen displays, designers and typographers endured a complex *copyfitting* routine that involved crunching mysterious formulas to calculate optimum column widths. Today's *WYSIWYG* programs and displays let you adjust the type size as you work.

Of course, on-the-fly tweaking is effective only to a point. In a newsletter, for example, you shouldn't adjust each article's type size to accommodate its text. Doing so would destroy the publication's uniformity, and uniformity is a cornerstone of good typography and design. When an article is a tad long, try hyphenating more lines (this technique works best with text that's set ragged right). If it's still too long, consider cutting some text.

## Leading Guidelines

You can increase legibility by appropriately using line spacing, or *leading* (pronounced *led-ding*). For body text, the general rule is to add lead that's 20 percent of the type size. For 10-point type, for example, use 12 points of leading from one baseline to the next. The Mac's built-in autoleading specifications uses this 20 percent rule. When you specify "auto" in a word processor or publishing program, the program uses the font's autoleading value.

The 20 percent rule is a good starting place, but many other factors should influence your choice of leading — line length, for example. Too little leading with long lines causes readers to occasionally read the same line twice, a phenomenon known as *doubling*.

In addition, large type (14-point or larger) generally needs more leading than body type (8- to 12-point). Headlines, however, often look better when set *solid* — with no extra space. (For example, a 24-point headline set solid has 24 points of space between baselines.) With some fonts, you may even consider *minus line spacing*, such as 22-point leading with 24-point type. Just watch that one line's descenders don't touch the next line's ascenders.

Type smaller than 8 point sometimes needs more than 20 percent lead to make the tiny type appear less dense.

## Alignment Issues

You're probably familiar with the three most common forms of margin alignment: flush left, ragged right; justified; and flush right, ragged left. But which should you use and when?



Traditionally, large passages of text have been set justified. Many designers believe that neatly aligned left and right margins best support sustained reading; they give pages a quiet look that lets readers concentrate on content. These days, ragged-right margins have become more popular, even in such bastions of justification as textbooks and magazines. Ragged-right text requires fewer hyphenations, and its consistent word- and letterspacing give it a clean, even texture. And because the eyes stop at a different point in each line, ragged-right text may actually tax the eyes less than justified text.

Both centered and ragged-left text can be effective in small doses. Centered text, for example, is ideal for short passages, such as headlines. But because centered and ragged-left text force you to hunt for the start of each line, they are hard to read at length.

## Display Type: Details Count

Headlines and other attention-getting blocks of type are called *display type*.

Because display type is intended to grab the reader, you may be tempted to use all capital letters for added oomph. Resist the urge. A mix of upper- and lowercase characters gives words an overall shape that increases legibility; text set in all caps lacks these patterns. In fact, it's generally better to capitalize only the first letter of important words, leaving conjunctions and articles lowercase. That way you won't put undue emphasis on less-important words.

## Kerning

After you settle on case, concentrate on the space between characters and words. Most fonts produce too much space between certain character pairs, especially in large type sizes. In many programs, you can improve the look by tightening those spaced-out pairs, a process called *kerning*.

In smaller type sizes, kerning usually involves tightening only certain letter pairs, such as *To* or *Av*. But in large sizes, almost every combination of characters is a candidate (see Figure 2-2 "Kerned Versus Unkerned"). Use the manual kerning features in your publishing program or word processor to remove space between characters until they are tight but not touching. Also decrease the spaces between words.

Be sure to apply the same degree of kerning and word spacing throughout a document. Inconsistent spacing is worse than none at all.



## QUICK TIPS



## Type Tips

Professional typographers follow certain standards that apply regardless of font and specific formatting. In this box, I offer some tips to help you make your documents look professionally typeset.

**Use em and en dashes, not double hyphens**

To get an em dash (—), press Option-Shift-hyphen. For an en dash (–), press Option-hyphen. Use an em dash to set apart an expression; use an en dash to indicate a range of numbers or words.

**Use true quotes**

Press Option-] and Shift-Option-] for open and close single quotes; for double quotes, press Option-[ and Shift-Option-[. (By the way, always put commas and periods inside quotation marks.) Most word processors offer a smart quotes option so that the proper quotes are inserted as you type. And publishing programs can automatically convert quotes when you import word processing files.

**Don't put two spaces after punctuation**

I know, your high-school typing teacher taught you otherwise. Things are different now. Put only one space after periods, colons, and semicolons.

**Don't use a lowercase l for the numeral 1**

Though similar on a typewriter, an l (el) looks different than a 1 (one) in typographic fonts. In addition, because the l is narrower than the 1 in most fonts, using the l will misalign number columns in tables.

The same rules apply to the letter O and the numeral 0.

**Hyphenate judiciously**

Make sure words break correctly between syllables. Try not to end more than two or three consecutive lines with hyphens and avoid two-letter divisions (on-ly, un-til). Double-check the results of your program's automatic hyphenation against a dictionary: some words are spelled the same but hyphenated differently (for example, *project* the verb and *proj-ect* the noun).

**Shrink those symbols**

The register mark (®) and trademark symbol (™) in Macintosh fonts are far too big. (Maybe they were created by Apple's legal department.) Shrink them by several sizes and then shift them vertically so that their tops align with the top of the text.

If you think that your bullets overwhelm the text they're supposed to accent, shrink them. But remember to move them up so that they're vertically centered within the line.

You'll say, "wow."  
You'll say, "wow."

**Figure 2-2: Kerned Versus Unkerned** In display type, nearly every combination of characters is a candidate for kerning. Here, space was removed between the Y and the o, around the apostrophe, between the y and the comma, between each w, and between the period and the closing quotes. A little less space was removed between the a and the y. This headline was created with Letraset's LetraStudio display type program, which simplifies manual kerning tasks by enabling you to drag characters to more appropriate positions.

## For best results, press Return

With body text, you usually let your word processor or publishing program end each line for you. With display type, however, you should take a more active role in determining line breaks: to *force* line endings, press Return. Good typographers end lines at logical stopping points, such as after a comma or a key phrase (see Figure 2-3 "Breaking for Sense"). The best advertising typographers also apply this technique to body text.

**Today and tomorrow, the  
Southcom 300® will be  
there. We guarantee it.**

**Today and tomorrow,  
the Southcom 300®  
will be there.**

**We guarantee it.**

**Figure 2-3: Breaking for Sense** Readability of display type (in this example, 18-point Futura Extra Bold) is improved by breaking each line at a logical stopping point. Extra leading before the final sentence adds emphasis. This example also shows how to deal with a large, distracting register mark: select it, choose a smaller type size (in this case, 8 point), and then move it until its top aligns with the top of the text.

For body text, you get a more attractive rag if the text alternates between long lines and shorter ones. This gentle zigzag reinforces the ragged right margin, and some say it reduces reader fatigue.



### Finding Special Characters

Typesetters often refer to printed charts, called *keyboard layouts*, to recall the key-strokes that summon accents, fractions, and other special characters. For desktop typographers, the Mac provides an electronic keyboard layout: the Key Caps desk accessory, which displays an on-screen keyboard with a text-entry box above it.

To access the Mac's special characters, you need to press combinations of the Option and Shift keys with the character keys.

#### To locate a certain character in a given font:

1. Choose the font from the Key Caps menu.

**Note:** Not all fonts provide the same characters in the same keyboard locations.

2. Locate the desired character on the Key Caps keyboard. Press Option with and without Shift to cycle through the font's special characters.
3. When you find the character, continue holding down the Option and/or Shift key(s) and then click the character's key.  
The special character appears in the text-entry box, above the keyboard. Repeat this step to access any additional characters.
4. Select the character(s) in the text-entry box and choose Copy or Cut from the Edit menu.
5. Return to your document, position the blinking insertion point where you want the character to appear, and then choose Paste. If necessary, change the font to the desired face.

Other tips to consider when using Key Caps include the following:

- ❖ Instead of copying the character to the Clipboard, you can type the character directly by pressing its appropriate key combination.
- ❖ Close the Key Caps window when you're done; leaving it open while you type in other programs slows the Mac.
- ❖ Creating an accented character, such as é or ñ, requires a two-step key sequence. First, press Option along with the accent's character. Next, type the character that should appear under the accent. For example, to create an ñ with a tilde (ñ), press Option-N and then press N.



## Using Downloadable Fonts

If you use a PostScript printer, you probably already know that you can supplement the fonts built into a PostScript printer with *downloadable* fonts — fonts that reside on your Mac's hard disk and are transferred to the printer's memory.

Although you can buy commercial fonts from Adobe Systems, Monotype, and Bitstream, a large selection of free or inexpensive, high-quality downloadable fonts is available through user group libraries and on-line services and from software clearinghouses, such as Educorp. And the Ultimate Mac CD contains more than 50 top-notch fonts.

### How downloadable fonts work

When you print a document, the Mac's printer driver queries the printer to determine whether it contains the required fonts. If not, the driver automatically downloads the fonts; at the end of the job, the driver clears the fonts from the printer's memory.

Automatic downloading is convenient but time-consuming: one downloadable font takes up to 20 seconds to transfer over LocalTalk cabling. If you use a few downloadable fonts — for example, New Baskerville Roman, Italic, and Bold — you add a minute to the print time. And if you print a document a few times while fine-tuning your formatting, the wasted minutes pile up.

### Manual downloading

For many people, the answer is *manual downloading* — you take the time up front to download the fonts you plan to use. Fonts downloaded manually remain in the printer's memory until you nix the power or reset the printer.

You can download fonts by using a program called LaserWriter Utility, which ships with Apple PostScript printers. Most third-party printers include a similar utility.

### Where downloadable fonts live

In System 7.0, downloadable PostScript fonts are stored in the System Folder's Extensions folder; in Systems 7.1 and 7.5, they live in the System Folder's Fonts folder. In systems prior to 7.0, PostScript fonts reside within the top level of the System Folder.

### The downside to manual downloading

Each font you manually download leaves less room in the printer's memory for fonts that are automatically downloaded. At worst, you may receive an error message during a print job stating that the

document couldn't be printed. In this case, you need to reset the printer to clear its memory; you can't selectively remove fonts that you've manually downloaded.

The solution: Strike a balance between manual and automatic downloading. That is, manually download only those fonts you use most and let the LaserWriter driver download the bit players for you.

## Installing and Removing Fonts

With System 7, adding and removing fonts is a breeze. In this section, I show how to add fonts to and remove fonts from Systems 7.0 and 7.1/7.5.



### Bitmaps Versus Outlines, and How Adobe Type Manager Relates to Both

Under the hood, fonts can be structured in either of two ways:

- ❖ In a *bitmap* font, the font description specifies the exact arrangement of pixels to form a given character at a given size. With bitmap fonts, separate descriptions are required to accurately render different sizes.
- ❖ An *outline* font is much more versatile: the Mac (or a printer) can use one outline font description to create characters of any size.

For several years, the Macintosh relied exclusively on bitmap fonts for its screen display — until Adobe Systems introduced its Adobe Type Manager (ATM) system extension. Essentially, ATM teaches the Mac how to *rasterize* (that is, generate a specific size from an outline) Type 1 PostScript fonts — the most popular type of outline font used with PostScript printers. The first program to bring all the benefits of outline fonts to the Mac's screen and to non-PostScript printers, ATM was an instant success. And it has become one of the most popular extensions in the Macintosh world. (If you have a Power Mac, be sure to use ATM Version 3.8 or later.)

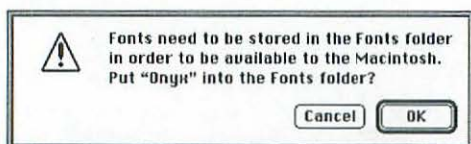
Valuable as ATM is, bitmap fonts still have their place: because the Mac displays bitmap fonts faster, you can boost your computer's performance by installing bitmap versions of common font sizes in your System Folder.

If you frequently work with large or nonstandard sizes, you can create bitmap versions of them by using the BitFont utility, which is on the Ultimate Mac CD. (BitFont is in the Font Utilities folder, within the Fonts folder, within the Best of BMUG collection.)



## Adding a font in System 7.0

First quit all programs. (You can't modify the system when programs or desk accessories are running.) Drag the font file to the System Folder icon. (**Note:** You can drag more than one font at a time.) A dialog box appears, asking whether you want to install the font (see Figure 2-4 "Font Moving Made Easy"). Click OK (or press Return), and the Mac installs the font in the System file.



**Figure 2-4: Font Moving Made Easy** To install a font in System 7.0, drag its icon to the System Folder (*top*). When the Mac asks whether you want to put the fonts in the System file (*bottom*), click OK. One catch: To install or remove a font, you must quit all open programs and close all desk accessories.

You don't have to drag a font to the System Folder icon; you also can drag it to the System file icon or to the opened System file window. But you can't install a font by dragging it to the open System Folder window. If you try, the Mac simply moves the font into the top level of the System Folder — the font won't be installed in the System file.

## Removing a font in System 7.0

To remove a font, quit all open applications and desk accessories, open the System Folder, and then open the System file. A directory window appears, listing the installed fonts. Select the font you want to remove and drag it to the Trash. Better still, drag the font to the desktop or to a disk or folder window or icon; you may want to reinstall it later. When you finish, close the System file and the System Folder windows.



## QUICK TIPS



## Font File Icons

Font icons indicate different types of font files:



Tekton Plus Regular

- ❖ The icon for a *TrueType outline font* contains three capital As, with each A a different size to indicate that a TrueType font can generate characters of any size.



Tekton Plus Regular 10

- ❖ The *bitmap font file* icon has a single capital A to indicate that the font file contains a bitmapped description for only one size of the font. A bitmap font file usually has the size in its name — for example, New York 24 or Venice 14.



Tekton Plus

- ❖ A *suitcase file* icon looks like — that's right — a suitcase. A suitcase file can contain more than one font, size, and style.



GaramB01

- ❖ *PostScript font file* icons vary, depending on the font vendor and the program used to create the font. The icon shown here is associated with fonts developed by Adobe Systems. **Note:** To use a PostScript font, you also need to put a corresponding bitmap font in the System file (or the Fonts folder in System 7.1 and later).

When you double-click a TrueType or bitmap font, the Finder displays a sample of the font. A TrueType font sample shows several sizes, while a bitmap font sample shows only the size represented in that file.

When you double-click a suitcase file, a window appears, listing the fonts contained in the file. This window is very similar to the Finder's standard directory windows.

## Adding a PostScript font in System 7.0

To add a PostScript font, you need to install both the screen font and the printer outline font. (The screen fonts have suitcase icons; printer outline font icons vary depending on the font vendor.)

Printer outline font files can go in the top level of the System Folder or in the Extensions folder, within the System Folder. (If you drag PostScript outline files to the System Folder icon, the Finder asks whether you want to store the files in the Extensions folder.)

## Removing a PostScript font in System 7.0

To remove a PostScript font, remove both the bitmap font from the System file and the PostScript outline font file from the Extensions folder.

## Adding a font in System 7.1 or 7.5

Systems 7.1 and 7.5 store all fonts in the Fonts folder (located within the System Folder). To add a font, drag the font file to the System Folder icon. A dialog box appears, asking whether you want to install the font in the Fonts folder.

If any programs or desk accessories are open, a second dialog box appears, telling you that the font will not appear in the programs currently running. Click OK (or press Return), and the Mac installs the font.

To access the new font in a currently active application, you need to quit the program and start it again — but you don't have to restart the Mac.

## Removing a font in System 7.1 or 7.5

To remove a font, quit all programs and desk accessories. Then open the Fonts folder and drag the font out of the folder. You can use the Finder's Find command to locate the font.

# Printing and Faxing Tips

No matter how you use the Mac, chances are you need to commit your work to paper. To help you along, I've compiled a collection of printing tips. And I've thrown in some faxing tips, too.

## Printing with Inkjet Printers

Inkjet printers, such as Apple's StyleWriter and Hewlett-Packard's DeskWriter families, have ably addressed the needs of students, small-business owners, and home-office workers for several years now. Inkjets provide a happy marriage of excellent output quality and economical operation.

But all Inkjet printers are more finicky about paper than their laser counterparts. Output quality can vary based on variations in humidity and temperature.

Another reason that StyleWriters and DeskWriters are inexpensive is because they're *QuickDraw* printers — your Mac and its QuickDraw graphics architecture handle all the calculations required to position text and graphics on each page. (Most laser printers are *PostScript* printers — they contain computers that do this crunching which adds to the cost.) This affects performance and compatibility.

In short, living with an ink jet printer means making some compromises in output quality, performance, and compatibility. You can't escape these trade-offs, but as this section shows, you can do a great deal to minimize their impact on your final document.



## Choosing and using paper

The factor that most affects inkjet output quality is the paper you use. Cheap photocopier bond works well in a laser printer, but its coarse fibers soak up the wet ink sprayed by an inkjet printer, causing mottled output.

You can get better results by using paper designed for inkjet printing, such as InkJet Ultra and InkJet Cotton, sold by Paper Direct. Most computer- and office-supply houses sell similar stocks.

Because of its textured surface and high cotton content, high-quality watermarked bond — the kind of paper often used for corporate letterhead — can deliver disappointing results with StyleWriters. A workaround is to print your letter on plain stock and then photocopy it on letterhead.

In a papermaking machine, paper is sandwiched between a felt belt and a wire mesh: The *felt* side of the paper is smoother than the *wire* side, with better distribution of fibers and smoother grain. Printing on the felt side generally yields sharper results.

How do you tell which side is which? Check the paper's wrapper; most manufacturers indicate which side to use for printing. If you're using watermarked bond, hold a sheet up to the light; if the watermark is backward, you're looking at the wire side.

## Thinking about ink

A StyleWriter II's ink is 70 to 90 percent water. Because the ink's pigments are water soluble, inkjet output can smear easily before it dries — or if it gets wet. Your documents may not be exposed to raindrops very often, but don't forget about your envelopes. To protect the address on an envelope, cover it with a piece of transparent tape. If you are printing something that will be exposed to moisture, you can improve durability by spraying the pages with Krylon Crystal Clear or some other fixative.

You also may want to photocopy your output. Besides getting more durable output, you improve the quality of the output itself: a photocopier's plastic toner creates "blacker blacks" than liquid ink. Photocopies also don't have that wavy, mottled look that often plagues ink-heavy pages.

## Refilling ink cartridges

Apple says a StyleWriter II ink cartridge is good for about 500 double-spaced text pages. When the ink is spent, you throw away the cartridge and buy a new one. Or do you? The cartridge's components are good for more than just a few hundred pages, and if you can get more ink into the cartridge, you can get more pages out of it.

In the early days of inkjet printing, some people used syringes to inject fountain-pen ink into cartridges. Things are a bit more civilized now; several companies sell refilling kits to help you replenish a cartridge. Refilling is easy but can be messy. (I trashed a favorite T-shirt in my first try.)

The first few pages I printed with a refilled cartridge were streaked, but things improved after a few cartridge cleanings (click the Print dialog box's Options button and then check the Clean Ink Cartridge Before Printing box; for more detail, see the next section). Indeed, I couldn't discern between output created with a fresh cartridge and a refilled one.

Is refilling worth the trouble? If you're on a tight budget, the answer is probably yes. But don't think that you're doing the environment any favors: refilling kits contain about as much disposable cardboard and plastic as a new cartridge. (By comparison, refilling a larger, more complex laser cartridge can be environmentally correct.)

## Cleaning ink cartridges

Streaking can occur when dust and paper fibers clog the ink nozzles. To improve your StyleWriter II output, click the Print dialog box's Options button and then check the Clean Ink Cartridge Before Printing box.

During the cleaning, the StyleWriter II wipes the surface of the ink nozzles to remove paper fibers, caps the ink cartridge with a rubber cover, and then pumps a small amount of fresh ink into the nozzles. The entire job takes about 13 seconds.

The StyleWriter II performs this cleaning automatically when you first switch it on after plugging it in, when you replace the ink cartridge, and when more than 72 hours have elapsed since the last cleaning.

One final ink tip: Always remove the ink cartridge before transporting a StyleWriter, or you may find an inky mess when you unpack. This tip is especially pertinent if you're shipping a printer by air: the lower pressure in some airliner cargo holds is likely to cause ink to pump from the cartridge. Ship a partially used cartridge in a sealed plastic bag.

## Setting up the StyleWriter driver

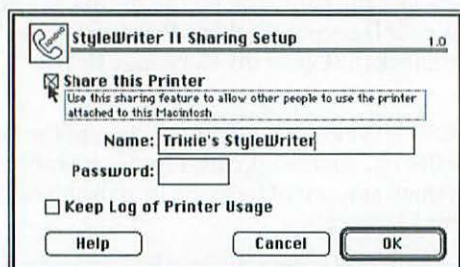
All printers require *driver software* — files that teach the Mac how to talk to specific printers. (You select a printer by clicking its driver icon in the Chooser desk accessory, located in the Apple menu.)

It's always a good idea to use the latest version of a printer driver. At this writing, the latest driver for the StyleWriter II is 1.2; the latest



driver for the original StyleWriter is 7.2.3. (To determine the version number, choose Print; the version number is in the upper-right corner of the Print dialog box.)

The latest versions of the StyleWriter drivers are included with new Macs; they're installed automatically (in the System Folder's Extensions folder) when you use the Easy Install option in System 7's installation utility. Both drivers provide an amalgam of features Apple calls GrayShare. The *Gray* refers to the drivers' ability to print grayscale images (such as image scans or illustrations). If you're printing a document containing a grayscale image, be sure the Print dialog box's Grayscale option is selected. The *Share* means you can make the printer available to other machines on a network. If you're connecting to a LocalTalk network, connect the StyleWriter to your Mac's modem port—the printer port is used for LocalTalk connections. (If you're using Ethernet, you can connect the StyleWriter to the modem or printer port.) To turn on printer sharing, click the Chooser's Setup button and check the Share this Printer box (see Figure 3-1 "Share Your StyleWriter II").



**Figure 3-1: Share Your StyleWriter II** To share a StyleWriter II on a network, click the Setup button in the Chooser to display the Sharing Setup dialog box. Then check the Share this Printer box. If you want, you can give the printer a name and password.

## Teaching a StyleWriter to speak PostScript

Printing a graphic created in a PostScript-oriented program (such as Illustrator) with an inkjet printer produces chunky-looking results. A StyleWriter driver, for example, in its zeal to print *something*, prints the 72-dpi (dots per inch) QuickDraw representation of the illustration.

To teach a StyleWriter (or any other non-PostScript printer) to speak PostScript, install TeleTypesetting Company's T-Script software. T-Script acts as an intermediary between your applications and a non-PostScript printer.



From the Chooser, select the T-Script driver. Thereafter, when you issue a Print command, T-Script intercepts and saves on disk the PostScript instructions; T-Script then uses the Mac's processor and memory to translate the PostScript into instructions that the StyleWriter can understand. Thus, the StyleWriter becomes an econo-PostScript printer — and a proofing device for documents that will eventually be printed on a PostScript laser printer or even an imagesetter.

## Printing with PostScript Laser Printers

If you use a laser printer, chances are it's a PostScript printer. Some non-PostScript laser printers are available for the Mac — examples include GCC's PLP series and Apple's Personal LaserWriter LS and LaserWriter Select 300 — but PostScript printers' superiority for graphics and publishing work and their ability to be easily shared on a network have made them the preferred printers in the Macintosh business world.

### No start-up page

When you switch on a PostScript printer, it ruminates for a minute or two and then prints a *start-up page*, listing the number of pages it has printed, the fonts it contains, and the settings of its various ports.

These statistics are occasionally useful, but the start-up page usually just wastes time, toner, and paper.

You can disable the start-up page in a few ways. The low-tech solution: Simply pull the paper tray out an inch or two when you first switch on the printer. When the printer's on-line indicator illuminates, indicating that the machine is warmed up and ready for print jobs, slide the tray back into place.

A better method is to explicitly tell the printer to stop printing its start-up page. Many of today's PostScript printers sport calculator-like keypads you can use to adjust various settings — including whether a start-up page is printed. If your printer doesn't have a keypad (none of Apple's do), you need to run a utility program to disable the start-up page. Apple's PostScript printers ship with a utility called LaserWriter Utility; if you have a non-Apple PostScript printer, you may be able to obtain a copy from an Apple dealer. An older, less-capable program called LaserWriter Font Utility is included on the System 7.1 Tidbits disk (it is also widely available through on-line services and user groups). Both programs have a Utilities menu containing a Start Page command that lets you enable or disable the start-up page.

## Name that printer

When you use the Chooser to select a PostScript printer, the printer's name appears in the Chooser's device list. Usually, the name corresponds to the printer's model number — *LaserWriter Pro 630*, for example. But you can change the name to something more descriptive *Art Department Printer* or *5th Floor LaserWriter* or *Trixie's Printer* or *Lil' Gutenberg* — by using the LaserWriter Utility (choose the Printer Name command). Naming a printer is especially valuable if your network contains two or more printers of the same model, a situation that can make it impossible to tell which printer in the Chooser is which.

If you can't round up LaserWriter Utility, check the disks that came with your printer for an older Apple utility called The Namer, which also lets you change a printer's name.

## Printing with the LaserWriter 8 Driver

The LaserWriter driver file, located in the System Folder's Extensions folder, is the link between your Mac and a PostScript printer. The latest version in the non-QuickDraw GX world is LaserWriter 8, also known as PSPrinter. In this section, I describe LaserWriter 8 tips and tricks.

If you're using System 7.5's QuickDraw GX (or are thinking of doing so), refer to the next section. QuickDraw GX provides many of the same printing options — and then some.



### Printing Font Samples

If you have a large font library, you may want to assemble a font catalog — a collection of printouts showing your fonts in various point sizes and styles.

With Jim Lewis's *theTypeBook*, a free utility available on the *Ultimate Mac CD*, creating font catalogs is as easy as choosing a few commands. *theTypeBook* can print font samples in six different formats, including charts showing the key sequences that summon special characters.

For a small fee, Jim Lewis will create a customized version of *theTypeBook* that prints a company name and logo on each page. It's a great way for a small graphics shop or freelancer to create a professional-looking type specimen book.

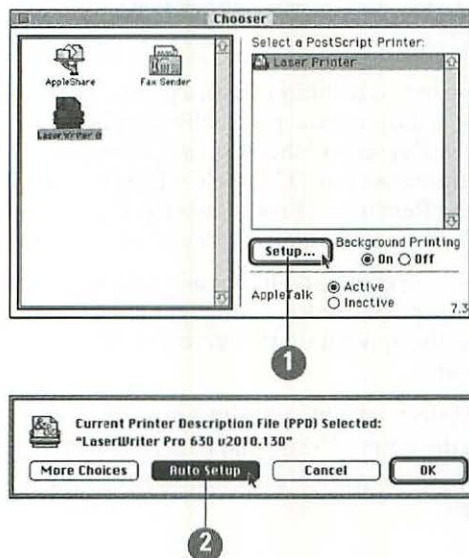


## How LaserWriter 8 works

The key to LaserWriter 8 is a special file called a *printer description file* (PDF). (PDF files reside in the Printer Descriptions folder, which is within your System Folder's Extensions folder.) True to its name, a PDF lists a specific printer's capabilities: its resolution, paper-handling features, and so on.

You can open PDFs, which are text-only files, with any word processor. But you never have to: PDFs are accessed automatically by the Chooser as part of an easy configuration process that you perform after installing LaserWriter 8 (see Figure 3-2 "Setting Up LaserWriter 8").

After the driver knows what your printer can do, it adjusts its Page Setup and Print dialog boxes accordingly — a trick earlier versions of the driver couldn't perform.



**Figure 3-2: Setting Up LaserWriter 8** After installing LaserWriter 8, open the Chooser (top), select your printer, and click the Setup button (1). In the dialog box (bottom) that appears, you configure the driver for your printer. When you click the Auto Setup button (2), the driver queries the printer to learn its brand and model, and then it selects the matching PDF file. You can manually select a different PDF by clicking the More Choices button and then clicking the Select PPD button. You might do this when preparing a print-to-disk file for a imagesetter or color printer at a service bureau.

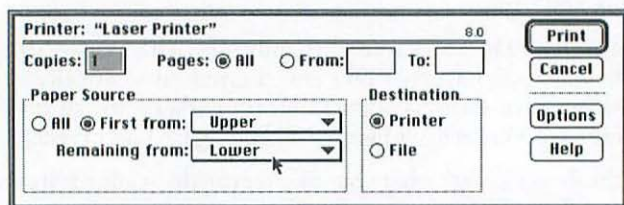
## Picking your paper

A growing number of PostScript printers include or accept multiple paper bins. Thanks to PDFs, LaserWriter 8 lets you tap these trays in several ways. If your printer has two or more trays, it's easy to bounce between stocks without walking over to the printer and sliding trays in and out. In an office, multiple bins can eliminate the fistfights that often occur when, say, one person installs transparency stock just as another person begins a 48-page print job.



Here are a few ways you can put two trays to work:

- ❖ *Multipage business letter:* Put letterhead in the upper tray and second sheets in the lower one. In the Paper Source area of the Print dialog box, choose Upper for the first page and Lower for the remaining pages (see Figure 3-3 “Paper Feeding Options”).



**Figure 3-3: Paper Feeding Options** The Paper Source pop-ups in LaserWriter 8's Print dialog box let you mix and match paper within a print job. In this example, the first page of a document will be printed on the paper in the printer's upper tray, while the remaining pages will go on the paper in the lower tray.

You can use a variation of this technique with a printer that has one paper cassette and one multipurpose tray, such as Apple's LaserWriter Pro series: Put second sheets in the cassette and letterhead in the multipurpose tray. Then select First From Multipurpose Tray and Remaining From Cassette. If you write more one-page letters than multipage ones, reverse this scheme.

- ❖ *Printing rough proofs:* Put cheap copier bond in the upper tray and high-quality laser paper in the lower one. When you want to proof a document, use the upper tray. When you're ready for final output, use the lower one.
- ❖ *Mixing paper and transparencies:* Put laser stock in one tray and transparency stock in the other. (Verify that your transparency stock can be fed automatically, however; some transparency stocks must be fed manually.)

If your printer has just one paper bin, you can still use the Paper Source options to streamline stock switching. For multipage business letters, put second sheets in the paper tray. When it's time to print, choose Manual for the letterhead page and Auto Select for the remaining pages.

## Printing thumbnail pages

LaserWriter 8's Page Setup dialog box contains a pop-up menu called Layout that lets you print several pages reduced to fit on a single sheet of paper. Choose the 2 Up option and your printer will print two

pages on each sheet. Choose 4 Up and the printer shoehorns four pages onto each sheet. On the printed output, each scaled-down page is framed by a black border.

You can use this feature to save paper and toner when you're printing simple documents, such as text manuscripts or electronic mail messages. You may be surprised at how readable the text remains when it's reduced, especially with 2 Up printing — text printed in 4 Up mode is a bit small. If the bottom rows of an eye chart give you trouble, don't go smaller than 2 Up.

Using the 2 Up or 4 Up option makes it easy to file large documents, see storyboards of presentations or video productions at a glance, and gauge how two-page spreads will appear when printed.

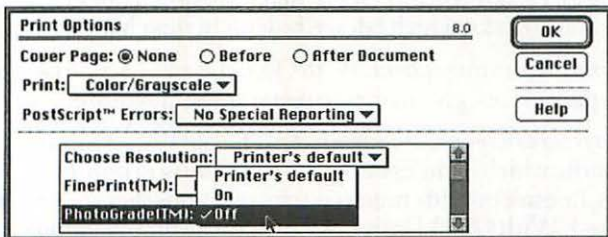
## Other Page Setup options

Here's another slick Page Setup feature previous LaserWriter drivers lacked: If you click the graphic representation of the page — the picture of the dogcow — the graphic is replaced by a text listing of your printer's exact imageable area (the portion of the page upon which the printer can apply toner). This is a handy way of discovering how close to the edges of a page you can get. (This information, by the way, comes from the PDF.)

Before leaving the Page Setup dialog box, explore some of the features in the Options dialog box, which appears when you click the Options button. These features are largely unchanged from LaserWriter 7.x.

## The power of the Print dialog box

Clicking the Print dialog box's Options button reveals more options that you can use to fine-tune print jobs and save time in the process (see Figure 3-4 “Exploring Print Options”).



**Figure 3-4: Exploring Print Options** Clicking the Print dialog box's Options button reveals another dialog box, where you can control unique printer features. In this example, the PhotoGrade feature, provided by many Apple LaserWriters, is disabled for faster printing.



If you're proofing a document containing scanned images or illustrations containing color or gray shades, you can cut printing times — often dramatically — by choosing the Black and White option rather than Color/Grayscale. In a similar vein, if your printer has a halftone-enhancement feature such as Apple's PhotoGrade, you can probably reduce printing times by disabling it: click Options, locate the PhotoGrade pop-up menu, and choose Off. (Generally, disabling a text-enhancement feature — for example, Apple's FinePrint or Hewlett-Packard's Resolution Enhancement Technology — does not decrease printing times.) Options you select in the bottom portion of the Print dialog box revert to their original, printer-resident settings after a document is printed.

## Printing with QuickDraw GX

QuickDraw GX, included with System 7.5, has some new, significant printing features. In this section, I summarize these features and tell you how to take advantage of them.

A note about application compatibility: You may have heard that software developers will need to adapt their applications to take advantage of QuickDraw GX. Some printing-related features in QuickDraw GX will require GX-aware applications, but many of the enhancements work with GX-unaware programs, too.

### What's new?

Here's a summary of the new printing features in QuickDraw GX:

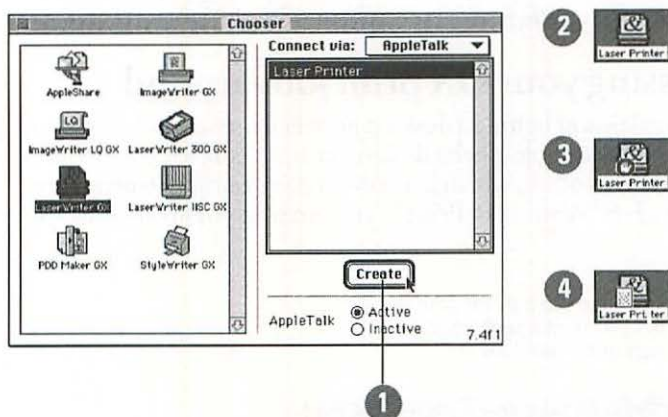
- ❖ *A new way to work with and switch between printers:* You no longer always access the Chooser to perform printer-related tasks. QuickDraw GX introduces the *desktop printer icon*, which represents a specific printer and a specific print queue (a list of jobs waiting to be printed). Desktop printer icons make possible a flock of printing shortcuts and tricks, which I describe later in this chapter.
- ❖ *More versatile printing options:* With QuickDraw GX, you can specify custom paper sizes, give names to paper trays, and more.
- ❖ *More ways to manage pending print jobs:* The old PrintMonitor application, which handles background printing in non-GX systems, doesn't provide much control over jobs that are waiting to be printed. With QuickDraw GX's desktop printer windows, you can pause print jobs, redirect them to different printers, schedule them to print at a certain time, and much more.



- ❖ *An expandable design that makes it easy to add printing features:* QuickDraw GX has an expandable architecture that lets Apple and third-party developers add printing features through *printing extensions*. Just as system extensions enhance the Mac — screen savers, for instance — printing extensions add printing features. For example, with certain extensions loaded, you can print watermarks or automatically print pages in the correct order for binding.

## The wonders of the desktop printer icon

Before printing with QuickDraw GX, you must make a desktop printer icon for your printer: from the Chooser, select a printer and then click the Create button (or press Return). A desktop printer icon appears on the desktop a moment later (see Figure 3-5 “Making a Desktop Printer Icon”).



**Figure 3-5: Making a Desktop Printer Icon** To make a desktop printer icon, select the printer in the Chooser and then click Create (1). The desktop printer icon appears on the desktop (2). The bold border around the icon indicates that this is the default printer. When a printer's queue has been paused, a small stop sign appears in the printer's icon (3). When a job is printing, a small page icon appears (4).

So your desktop has this cool icon that looks like a printer. What can you do with it?

### Drag documents to the desktop printer icon to print them

This technique is the drag-and-drop equivalent to the Finder's Print command. When you drag a document icon to a desktop printer icon, the Finder starts or switches to the program that created the document and displays the appropriate Print dialog box.

## Share the desktop printer icon with other Macs on your network

You can make the desktop printer icon available to other Macs on your network by selecting a desktop printer and choosing Sharing from the Finder's File menu. You can even assign a password to a desktop printer to keep certain people from using it — another way to keep that guy in the office from printing out family photos on the color printer.

## Make an alias of the desktop printer icon

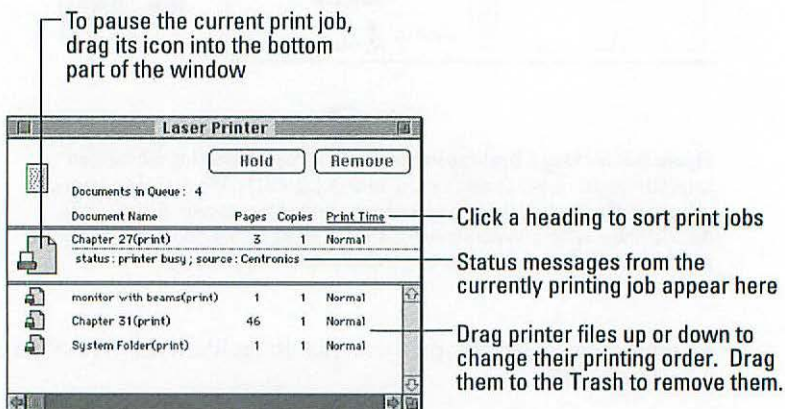
To access a desktop printer icon from the Apple menu, put an alias in the Apple Menu Items folder.

## Rename the desktop printer icon

You can change a desktop printer icon's name by using the Finder's standard icon-naming techniques. You might use a name that describes a certain setting — such as *Print After Midnight* for an icon whose print queue is set to start after midnight.

## Bossing your GX print jobs around

The real power behind a desktop printer icon surfaces when you open it. After you double-click a desktop printer icon, a window appears. From this window, which lists jobs that are waiting to print (see Figure 3-6 “Waiting to Print”), you can boss your print jobs around.



**Figure 3-6: Waiting to Print** The desktop printer window lists jobs that are in the queue; from here, you can organize and redirect your jobs.



### Pausing the print queue, or lining up jobs for later

Suppose that you want to send a bunch of print jobs to the printer while you take a long lunch break. Select a desktop printer icon and choose Stop Print Queue from the *Printing menu*, which is added to the menu bar when a desktop printer icon is selected. (This menu is one of the gateways to GX's industrial-strength printing features.) The Stop Print Queue command erects a temporary roadblock between QuickDraw GX and the printer.

Now use your applications' Print commands as you normally do. (Be sure the printer whose queue you've paused is selected as the current printer: with the printer's icon selected, choose Set Default Printer from the Printing menu.) As you "print" documents, their *print files* line up in the printer's queue. You can spot a paused queue by the stop sign icon that appears in the desktop printer's queue window.

You can reorganize the order of these pending print jobs or you can redirect one or more jobs to a different printer (see the next two tips).

To take down the roadblock and begin printing the queued jobs, choose Start Print Queue from the Printing menu. To schedule the jobs to print at a certain time, select them (with the queue window open, choose Select All from the Finder's Edit menu), and then choose Set Print Time from the Printing menu. In the dialog box that appears, specify the time. Finally, choose Start Print Queue from the Printing menu.

### Reorganizing the print queue

Seconds after sending a 57-page report to your printer, you realize you need to print an urgent memo. In the pre-GX world, you had to cancel the big job, print the small one, and then reprint the original one from where you left off.

In the GX world, you can postpone the big job and sneak the small one in. To do so, simply drag the big job to the bottom half of the window. (Or select the job and choose Hold Print Request from the Printing menu.) Then print the memo.

When you've finished, you can resume the big job by dragging it back into the status area of the desktop printer window or by selecting it and choosing one of the two Resume commands in the Printing menu. (Choose Resume on Page One to restart the entire job, or Resume On Page to start printing from a certain page.)

### Redirecting a print job

Say that instead of pausing that 57-page print job, you decide to print it on a different machine in your network. In the non-GX world, you had to go to the Chooser, select the new target printer, return to your application, and choose its Print command. With GX, you can simply drag the print file to the desktop printer icon for the desired printer.



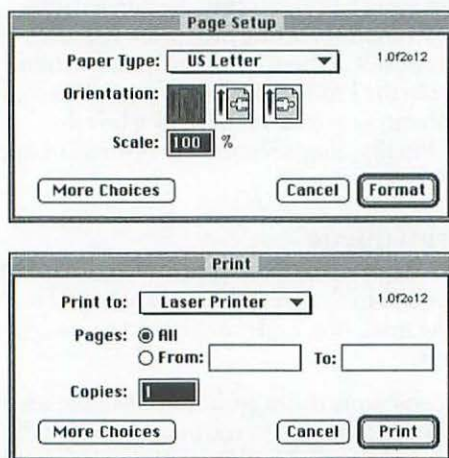
## Viewing a print job

You can look at a pending print job by double-clicking it. The Finder opens the SimpleText application and displays the print file. You can't edit the print file or copy part of it to the Clipboard, but you can reprint it by choosing SimpleText's Print command.

## QuickDraw GX's new Print dialog boxes

Programs that support QuickDraw GX printing have new Print and Page Setup dialog boxes (see Figure 3-7 "New Ways to Set Up and Print"). Clicking the More Choices button expands each dialog box to reveal more printing options.

By the way, if you're using a GX-aware application, you can redirect a job to a different printer *before* you okay the Print dialog box. To do so, just choose the desired printer's name from the Print To pop-up menu.

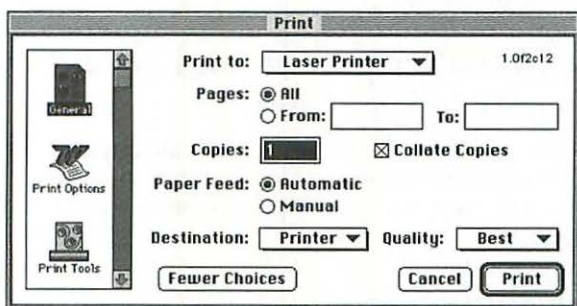


**Figure 3-7: New Ways to Set Up and Print**  
QuickDraw GX-aware applications use new Page Setup (top) and Print (bottom) dialog boxes.

## Adding print features with printing extensions

If you think the GX printing features I've described so far are worthwhile, fasten your seat belt. The real power of the GX printing architecture is that it's *extensible* — by adding printing extensions, you can add printing features to *all* your applications.

Printing extensions show up in the Page Setup or Print dialog box when you click the More Choices button (see Figure 3-8 “Expanded Printing Options”).



**Figure 3-8: Expanded Printing Options** When you click the More Choices button in the GX Print dialog box, additional options appear. Printing extensions are listed along the left edge of the dialog box. *Tip:* You can use the keyboard's arrow keys to select printing extensions.



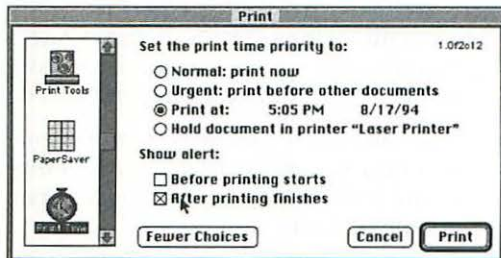
### Scheduling Printing in the Print Dialog Box

Using the desktop printer window to specify a print time is just one way to schedule print jobs under QuickDraw GX. Another way is to use the Print Time option in the Print dialog box.

Click More Choices and select Print Time from the options on the left side of the dialog box. A series of scheduling options appears, as shown in the accompanying figure.

**Tip:** You can use the keyboard to type the time and date. Just press Tab to move from one set of numbers to the next; press A for AM and P for PM.

Note that you can designate a job as urgent to push it ahead of any other documents waiting to print. You also can tell the Mac to display an alert message when the job begins and/or ends.



## Achieving Better Fax Quality

The phrase *fax quality* is as much a contradiction in terms as *military intelligence*. But there are some steps you can take to get the best possible results out of a fax modem.

### Use Type 1 PostScript fonts and Adobe Type Manager or TrueType fonts

You're probably using these popular font formats already, so I won't belabor this point. Suffice it to say that these outline font technologies result in smooth text at any size — an important plus for printed and faxed documents alike.

### Use sturdy fonts

Keep in mind fax type is distorted by the relatively low resolution. The subtleties of delicate typefaces such as Caslon and Garamond disappear in a shower of pixel shrapnel. So use fonts that have been designed to withstand the rigors of low-resolution imaging — Adobe's ITC Stone Informal is a good choice, as is Lucida.

### Use the right resolution

Standard fax resolution is 200 x 100 dpi. (If you're faxing documents formatted for wide orientation — for example, 11 1/2 x 8 inches — the resolution is 100 x 200 dpi.) You'll get better quality if you fax documents in fine mode, which provides 200 x 200 dpi resolution. Keep in mind, though, doubling the horizontal resolution slows faxing times.

### Think twice about using EPS art

If you want to include artwork in a fax — for example, a company logo on letterhead — don't use encapsulated PostScript (EPS) artwork. Unless installed in a PostScript printer, a fax modem is a QuickDraw-based device — it relies on the Mac's built-in graphics routines for imaging text and graphics. Because it cannot properly translate the PostScript, a fax modem transmits an EPS image at a chunky 72 dpi.

The solution: Import EPS art into a QuickDraw-oriented drawing program, such as MacDraw, and then save the art as a PICT file. Finally, import the PICT image into the document you're faxing.

If you must fax EPS art, here's a workaround that yields better resolution: Create the art three to four times larger than its intended size and then import the art into a program where you can reduce it by the same amount.



## **Create a scanned version of your signature**

If you're faxing correspondence, you may want to create an electronic version of your signature so that your faxed correspondence looks signed.

If you have a scanner, scan your John Hancock and then save the image as a TIFF or PICT file. If you don't have a scanner, use a drawing program: First, select the Tablet speed (to obtain finer control over the rodent) from the Mouse control panel. Then draw your signature at roughly twice its normal size. Save the result as a TIFF or PICT file.

When it's time to sign a document, import the image and scale it down 50 percent. If you're signing documents created with Microsoft Word or another word processor with a glossary or autotext feature, you can store the signature as a glossary entry and retrieve it with a keystroke or two. Or you can paste the image into the Mac's Scrapbook; from there, you can copy it to any program (or, with System 7.5, drag it to a drag-aware application).

## **Don't go gray**

To save time, eliminate any gray shading in your document.

When you send a fax, the fax software compresses the page image by replacing groups of identical white or black pixels with a code. Gray shades made up of alternating black and white dots can't be efficiently compressed.

In one test I performed, a page containing several large 50 percent gray shades took over five minutes to transmit. The same page without the gray areas took only a minute and a half. When I replaced the 50 percent gray shades with a lighter (10 percent) gray, transmission time took just under two minutes — not much slower than the grayless version. The lesson: If you want to use gray shading — to dress up a page or highlight a row of spreadsheet figures — use a light pattern. (Shades darker than 50 percent usually end up printing as black, by the way.)

## **Scan hard copy at 200 dpi**

If you are scanning some hard copy as a prelude to faxing, set up your scanner software to scan at 200 dpi. If you scan at 300 or more dpi, faxing slows as the fax software works to downsample the page image to 200 dpi.

## QUICK TIPS

**More Ways to Save Time with a Fax Modem**

An obvious way to save time when faxing is to nix the cover page. Must you announce every fax with a full-page fanfare? Put the to-and-from information at the top of the first page or in a header or footer. If you don't want to foul your pages with address information, consider using a short cover page. FaxSTF, for example, lets you send a cover sheet as short as a half page. If you use a different fax program, you can create a short cover page by using the cover-page customizing software all programs include. Even if the receiving fax is a sheet-fed machine (which uses the same-sized sheet of paper no matter how short the original is), the shorter cover page takes less time to transmit.

If you just want to peck a quick note ("The express package arrived safely — thanks"), consider using the quick-faxing desk accessory many fax programs include (such as FaxSTF's QuickFax). However, these desk accessories don't let you save your miniature missives. If you need a record of what you send ("I faxed a counteroffer at noon — didn't you get it?!"), use a word processor and fax it conventionally.

# PowerBook Tips

All the tips and techniques in this book apply to the PowerBook line of portable Macs — after all, PowerBooks *are* Macs. In this chapter, I present a collection of PowerBook-specific tips, ranging from ways to extend battery life to strategies for transferring files between a PowerBook and another Mac.

## Squeezing More Juice from a PowerBook

As every PowerBook owner knows, battery power is like money: you can't have too much. Here are some tips for extending your PowerBook's battery charge.

### Turn down screen backlighting

Backlighting helps make PowerBook screens legible, but it's also a major drain on battery power. If you turn backlighting off and work under a bright light or with your back to a window, you'll extend battery life significantly.

With the PowerBook Display control panel that debuted with System 7.1, you can easily control backlighting; you can tell the PowerBook to turn off backlighting after a specified period of inactivity.

The PowerBook control panel that accompanies the 500-series PowerBooks and System 7.5 also provides backlight control. For more information, see "The PowerBook Control Panel" section, later in this chapter.

### Know when to spin-down the hard drive

The other major power consumer in a PowerBook is a hard disk. As a result, you may think it's best to put the hard drive to sleep whenever possible. Apple reinforces this thinking by providing the PowerBook Control Strip, which gives you one-click access to hard drive slumber. In System 7.5, you can also spin-down the hard drive by pressing ⌘-Control-Shift-0 (zero).



However, it takes four times the power to wake up a sleeping hard disk than it does to keep it spinning. If you frequently alternate between putting the drive to sleep and waking it up, you are using more battery power than if you simply leave the hard disk spinning. You also waste time, because it takes a few seconds for the disk to spin up to operating speed. If you find yourself putting the hard drive to sleep every few minutes, you may be using more power than you're saving.

## Turn off AppleTalk

Turning off AppleTalk saves power and lets a sleeping PowerBook wake up faster. Nonetheless, you should have AppleTalk turned on when you start up; you then can turn AppleTalk off and on without restarting. (If AppleTalk is turned off when you start up a PowerBook, certain system software doesn't get loaded and you must restart to activate AppleTalk.) Note that if the PowerBook File Assistant extension is installed, AppleTalk is always available: you needn't restart the system to activate AppleTalk.

## Don't use System 7 virtual memory

Virtual memory forces the PowerBook to access its hard disk more frequently, so don't use System 7 virtual memory when you're running under battery power. Rather, use a RAM disk as your start-up disk. The PowerBook's Memory control panel lets you set up a RAM disk.

## Quit your telecom program

When you finish a communications session, quit your communications program. When a communications program is running, the PowerBook's modem is drawing power — even if you aren't actually connected. Also don't activate the auto-answer feature of your PowerBook's fax modem.

## Don't use external devices

Mice, keyboards, external hard drives, and so on impose their own power requirements.

## Don't use floppy disks

Use floppy disks as little as possible. And eject any floppy you aren't actively using.

## Use a lightweight word processor

Instead of using a heavy hitter such as Microsoft Word or WordPerfect, use a lean word processor such as WriteNow or ClarisWorks. If you're just pecking out text, consider using the TeachText or SimpleText utilities that come with the Mac. Also try to avoid using a spell checker when you're running on battery power because spell checkers access the hard disk frequently.

## Use a RAM disk

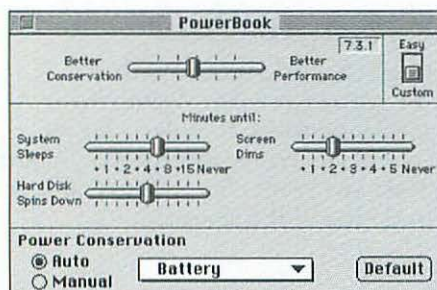
A RAM disk sets aside some memory to act like a disk. Because RAM is faster than a hard disk, anything stored on a RAM disk opens at top speed. If your PowerBook has enough memory, you can create a pared-down System Folder and store it as well as a compact program, such as WriteNow or ClarisWorks, in the RAM disk. Use the Startup Disk control panel to specify the RAM disk as your start-up disk and then restart. Finally, put your hard drive to sleep and work from the RAM disk. If you save your documents on the RAM disk, it's a good idea to wake up your hard drive every hour or so and copy the documents to the hard drive; if the PowerBook crashes, the RAM disk — and the documents you've stored on it — could vanish.

One drawback to a RAM disk is that the RAM it uses isn't available for running programs. Another drawback is that a RAM disk's contents vanish when the power goes out. You need to restore the contents of a RAM disk each time you start up your PowerBook after shutting down (this situation doesn't apply to the PowerBook 100, 160, 180, 180c, 500-series, or Duo-series models). Connectix Corporation's Maxima and Apple's PowerBook File Assistant utilities have features that let you save the contents of a RAM disk on PowerBooks other than the 100.

## The PowerBook Control Panel

Apple has shipped two basic versions of the PowerBook control panel. The version that debuted with System 7.1 provided a bare-bones interface designed to shield you from the ugly technicalities of power management. But it didn't help you understand which activities and work habits affect battery life.

Apple learned its lesson, however, and the latest PowerBook control panel lets you choose between easy and custom power-management options (see Figure 4-1 "The PowerBook Control Panel"). For more control over performance and battery usage, click the Custom switch in the upper-right corner of the control panel's window.



**Figure 4-1: The PowerBook Control Panel**

This control panel lets you fine-tune your PowerBook's operation to achieve the optimum balance of performance and battery life. The sliders for adjusting system sleep, screen dimming, and hard drive spin-down are visible only when the button in the upper-right corner is set to Custom.

PowerBooks offer two additional power-savings options:

- ❖ *Processor Cycling:* To maximize your battery's life, you can tell the PowerBook's processor to turn itself off when you aren't using the computer. (The processor turns back on the moment you move the trackball or touch a key.) Deselect the Don't Allow Cycling button on the older PowerBook control panel or check the Allow Processor Cycling on the newer PowerBook control panel.
- ❖ *Processor Speed:* Some PowerBook models — such as the 160, 170, and 180 — can save battery power by slowing their processors down to 16MHz. Select the Reduced Speed button on the older PowerBook control panel or check the Reduced Processor Speed button on the new PowerBook control panel.

## The PowerBook Control Strip

The PowerBook 500-series models include the PowerBook Control Strip, which gives you quick access to all the power-management features of the machine. The Control Strip, which is included with System 7.5, is shown in Figure 4-2 “Control Strip at a Glance.”



**Figure 4-2: Control Strip at a Glance** The Control Strip's functions (l-r): AppleTalk Control, Battery Monitor, File Sharing Control, Hard Drive Spin-Down, Power Settings, Sleep Now, Sound Volume.



Here's a closer look at the Control Strip's functions.

- ❖ *AppleTalk Switch* shows whether AppleTalk is on or off, and also lets you turn AppleTalk on or off without opening the Chooser.
- ❖ *Battery Monitor* displays the status of the battery.
- ❖ *File Sharing* displays the state of file sharing (on, off, or users connected), lets you turn file sharing on or off, and lets you open the Sharing Setup control panel.
- ❖ *Hard Drive Spin Down* shows whether the internal hard disk is on or off, and lets you spin-down the hard disk.
- ❖ *Power Settings* lets you select between maximum conservation or maximum performance without opening the PowerBook control panel, and also lets you open the PowerBook control panel.
- ❖ *Sleep Now* puts the computer into sleep mode.
- ❖ *Sound Volume* lets you select the sound volume.
- ❖ *Video Mirroring* lets you turn video mirroring on or off if an external monitor is connected.

## Customizing the Control Strip

One end of the Control Strip is anchored to the left or right edge of the display. The Control Strip has a tab on its unattached end. Table 4-1 lists Control Strip shortcuts.

Table 4-1  
**Control Strip Shortcuts**

<i>To Do This</i>	<i>Do This</i>
Adjust the length of the strip	Drag the tab
Move the strip to a new position on-screen	Hold down the Option key and drag the tab
Hide all but the Control Strip's tab	Click the tab (to redisplay the Control Strip, click the tab again)
Make the Control Strip disappear	Click the Hide Control Strip button in the Control Strip control panel

## Adding modules to the Control Strip

The PowerBook Control Strip's modular design enables you to add new controls. Where can you find additional controls? The Ultimate Mac CD holds a few, including three from Jeremy Kezer:

- ❖ Control Strip Clock adds a digital clock to the Control Strip.
- ❖ Control Strip Volume makes adjusting the sound volume a bit more convenient.
- ❖ Control Strip Sleep lets you put the PowerBook to sleep without having to OK the dialog box displayed by the standard Apple Control Strip.

These modules are in the Jeremy's Control Strip Modules folder, in the PowerBook Utilities folder, inside the Utilities folder, in the Best of BMUG collection. While you're there, check out rest of the other PowerBook utilities.



### Presentation Pointers for PowerBooks

A PowerBook is ideal for giving presentations. (It's not bad for creating them in the hotel room, either.) All PowerBooks except the 100, 140, 145, 145B, 150, 170, and the PowerBook Duo models have a connector to which you can attach an external monitor. You then can use the Portable Display control panel to put the PowerBook's video circuitry into video mirroring mode.

Mirroring causes the PowerBook to display the same image on the external monitor as appears on the PowerBook's display; as a result, you can see your presentation without having to look behind you at the large screen. When the PowerBook isn't in video mirroring mode, the external monitor extends the Mac's desktop.

If you have a PowerBook that lacks a built-in monitor port, you can add external video support with a third-party upgrade, such as Invisio's Notebook Display Adapter. Or you can attach a SCSI-based monitor to the PowerBook's SCSI port. A video card upgrade provides better performance — SCSI isn't fast enough for the demands of a real-time display.

For PowerBook Duo models, consider buying a docking unit that provides an external video port (for example, Apple's Duo MiniDock). E-Machines' PowerLink Presenter even lets you use a TV set as a monitor.

## The PowerBook Trackball

The trackball that's built into some PowerBooks is harder for many people to operate than a mouse. The trackballs on the PowerBook Duo models can be especially frustrating because of their small size.

The best way to avoid problems with the trackball is to avoid using the trackball. Luckily, every large PowerBook model has an Apple Desktop Bus (ADB) port into which you can plug a conventional mouse. And the PowerBook Duo models can connect to a mouse when docked to a Duo MiniDock or Duo Floppy Adapter. Be sure to use a low-power mouse: it has a symbol on the bottom of it that looks a bit like a C. Note, however, that plugging in any external device drains your battery faster.

You can avoid using a pointing device altogether by relying on the keyboard for scrolling, issuing commands, and even selecting icons. This is a good excuse to memorize your programs'  $\mathcal{R}$ -key combinations; in fact, you may want to seek out programs that offer a wide selection of keyboard shortcuts. It's also a good reason to buy a keyboard-enhancement utility such as CE Software's QuicKeys to create keyboard shortcuts that open desk accessories, control panels, and frequently used files.

Don't forget that the PowerBook's system software is rich with keyboard shortcuts: you can select icons, open and close folders, choose devices in the Chooser, and start programs. For details, see the "System 7 Keyboard Shortcuts" section in Chapter 1.

## The Apple Trackpad

The Apple trackpad, used in 500-series PowerBooks, is a new kind of input device. The trackpad, which relies on a principle called *coupling capacitance* to sense the presence of your finger, offers some significant advantages over the trackball:

- ❖ *No moving parts.* There's nothing to break or get dirty.
- ❖ *Low power consumption.* The trackpad uses less power than a trackball—a significant improvement in a battery-operated device.
- ❖ *Small and lightweight.* As a result, Apple devoted more space to other internal components.
- ❖ *Its proportions match the screen's.* The correlation between the trackpad and the screen is more direct than between the trackball and the screen.



Here are some tips for using the trackpad:

- ❖ *You have to use your finger.* You can't use a stylus, a pen, or even a long fingernail to work the trackpad. These devices, unlike your body, do not conduct electricity, and the trackpad relies on that in order to operate.
- ❖ *Rock your finger for precise positioning.* The trackpad is very sensitive, able to measure 387 dots per inch in the horizontal and vertical directions. For extra-precise positioning, just rock your finger on the pad; you can move the mouse pointer in single-pixel increments.



### Alternative Input Devices for the PowerBook Line

A PowerBook's input devices are built-in, but that doesn't mean there isn't room for improvement. In this box, I list some alternatives.

#### Numeric keypads

If you work with numbers extensively, you can add an external numeric keypad to the PowerBook. Keypads such as Sophisticated Circuits' PowerPad, Plusware's Plusware Numeric Keypad, and Kensington's NoteBook KeYPad allow for calculator-like number entry and also provide Page Up, Page Down, Home, End, and other convenient scrolling keys.

#### Alternative trackballs

If you don't like the built-in pointing device, consider MicroSpeed's MicroTrac trackball, which has three programmable buttons.

#### Alternative balls for the trackball

These aren't so much input devices as fashion accessories. APS Technologies and other firms sell replacement balls for the trackball — little billiard balls, multicolored balls — you name it.

#### Keyboards

On PowerBook 100- and 200-series models, the keyboard is about 2 percent narrower and 5 percent shorter than Apple's standard desktop keyboards. As a result, the keyboard may feel cramped, especially if you have large hands or you're used to conventional Mac keyboards. Take it from me, working on a cramped keyboard for long periods can cause big problems. So if you frequently use a PowerBook in the office, attach an external keyboard to its ADB port. If you use an extended keyboard, you get the added benefit of function keys, a numeric keypad, and navigation keys.

- ❖ *Use the Trackpad control panel to fine-tune sensitivity.* Like the mouse, the trackpad uses acceleration curves: the faster your finger moves across the pad, the faster and further the pointer moves across the display. If your finger darts across the pad, the pointer will traverse the display completely. If your finger moves slowly, the pointer does, too. If you find the pointer moves too quickly, use the Trackpad control panel to specify a slower setting. In Apple's user testing, most people preferred the fourth setting up from the slowest setting.

## Taking Care of a PowerBook's Screen

If you're running a PowerBook from the AC adapter, avoid leaving the computer on for more than 24 hours at a time, or you may encounter temporary screen problems, such as shadows appearing when you move windows. You can fix the problem by putting the computer to sleep for several hours.

Clean a PowerBook's screen with soft, lint-free paper or cloth moistened with mild glass cleaner. Don't spray the glass cleaner directly onto the screen.

When you fly with your PowerBook, carry it on rather than checking it as baggage. If a PowerBook is shipped in an unpressurized airplane cargo hold, its screen may crack.

### QUICK TIPS



#### Buying Preformatted Floppies

Many disk manufacturers and computer-supply houses now sell preformatted floppies that you can use immediately — no initialization routine required. Isn't buying preformatted floppies a bit like buying presharpened pencils? Have we become so lazy that we can't even format our floppies anymore?

Actually, preformatted floppies are ideal for PowerBooks. If you need a fresh floppy on an airplane at 36,000 feet, you don't want to waste precious battery power initializing a disk.

Of course, you can save money along with your battery by simply formatting a few floppies yourself before you unplug your PowerBook's AC adapter. While you're at it, sharpen a few pencils, too.



Don't get in the habit of setting a pen down above the PowerBook's keyboard. If you close the lid, the pen will crack the screen. Then, you'll get to use the pen to write a check for a new screen.

## PowerBook Memory

Thanks to their rear-panel SCSI connectors, all PowerBooks can tap into the same universe of external storage options as their deskbound cousins. (To use a SCSI device with a PowerBook Duo model, you need to add an appropriate dock, such as Apple's Duo MiniDock.)

### The hard drive

The PowerBook's tight internal confines require a 2 1/2 inch hard drive. At this writing, you can get drives of up to 256MB in this petite size.

Most hard drive manufacturers sell internal drives for PowerBooks, and some offer trade-in allowances for your existing drive. Some manufacturers also offer case kits that let you turn your existing internal drive into an external drive — a nice alternative.

### SCSI disk mode

SCSI disk mode lets you connect a PowerBook to another Mac, which then treats the PowerBook's hard drive as an external drive — it's a boon for beaming files between Macs. SCSI disk mode is supported on the PowerBook 100, 160, 165, 165c, 180, 180c, 500-series models, and Duo models equipped with MiniDocks.

To set up SCSI disk mode, use the PowerBook control panel to specify your PowerBook's SCSI ID (use the Portable control panel for the PowerBook 100). Verify that the PowerBook's hard disk name is different from that of the Mac you're connecting to. Shut down both Macs and then attach a SCSI Disk Adapter cable to the PowerBook. (The Disk Adapter Cable is dark gray and shorter than the standard SCSI system cable.) Attach a terminator to the end of the cable. Make sure all devices in the SCSI chain are off and then connect the other end of the terminator to either a cable leading to the desktop Mac or to the end of the SCSI chain (you may need to remove the last device's terminator). Finally, turn on the PowerBook.

If all's well, the SCSI symbol (the diamond-shaped symbol that's next to the SCSI port) begins moving on-screen, bearing the PowerBook's SCSI ID. Turn on the desktop Mac; you should see the PowerBook's hard drive on the desktop.

When you're ready to shut down, shut down the desktop Mac; then power off the PowerBook by holding down the power switch for two seconds. (For the PowerBook 100, press both buttons on the left side of the unit.)



## QUICK TIPS

**Tips for Mobile Modems**

On the road with a PowerBook? Here are some survival tips to help you make and keep your connections.

**Ask in advance about phone services**

When making hotel reservations, ask whether the hotel's phones provide connectors for portable computers. A growing number of hotel telephones contain so-called datalink ports—standard RJ-11 telephone jacks into which you can plug your PowerBook's modem cable. You may also want to seek out hotels that offer free local calls.

**Don't forget your phone numbers**

Make sure you have the local phone access numbers for the area to which you're traveling and the on-line services you'll be using. All on-line services will list their numbers for you upon demand. Consider saving these lists on your PowerBook's hard disk so you won't misplace them.

**Connecting to hotel phones**

If you're patronizing an as-yet unenlightened innkeeper whose phones can't accommodate your PowerBook, check whether the phone is hard-wired into the wall. If it isn't, unplug it and plug your PowerBook modem into the wall jack. If the phone is hard-wired, you may be able to make a connection by disassembling the phone's handset or wall outlet and connecting directly to the red and green wires within. (Don't try this unless you're comfortable working around wires. Although phone line voltages aren't as dangerous as those inside a power outlet, you can get a shock.) Radio Shack sells a cable with a male RJ-11 jack on one end and spade lugs on the other (catalog number 279-391). You also can make your own: cut a standard RJ-11 cable in half and then strip the insulation off the red and green wires and connect an alligator clip to each.

**Dialing through a hotel system**

Remember that most hotels require you to dial 8 or 9 to make an outside call. If you're using your modem's autodial capability, be sure to add the required prefix. Put a comma between the prefix and the phone number to tell your modem to wait a moment after dialing the prefix.

**Carry an extension cord**

Hotels traditionally put power outlets in illogical or inaccessible places. If you plan to use your AC adapter with your PowerBook (you'll probably need to: using a modem drains the battery faster), bring along an extension cord.

**After the call, save battery power**

An internal modem uses battery power whenever a communications program is running. After you make your call, quit the communications program. Also keep in mind that a PowerBook won't go to sleep if its modem is in auto-answer mode.

**Need hard copy? Fax a document to yourself**

If you're on the road and you need hard copy, just fax the documents to the hotel's fax machine. Of course, don't expect high-resolution output.

## File Sharing

System 7 file sharing lets you exchange files between Macs without having to use floppy disks. Connect a cable, click a few times, and one Mac's hard drive icon appears on the other Mac's desktop. You can then shuttle files and folders between Macs by using standard click-and-drag techniques.

### First steps

To exchange files between any two Macs — for example, a PowerBook and a Quadra 650 — first connect the computers with a pair of Farallon PhoneNet StarConnectors (which you can buy for under \$20 each). Then open the PowerBook's Sharing Setup control panel. Type a name in the Owner Name and Macintosh Name boxes; then in the Sharing area, click Start. When the control panel tells you file sharing is on, close the control panel. (If you don't see the Sharing Setup control panel, use the System 7 Installer disk to install file-sharing software.)

Select the PowerBook's hard disk icon (or if you just want to share a single folder on the hard disk, select that folder's icon instead) and choose Sharing from the Finder's File menu. In the Sharing window, check the Share this item and its contents box. Below that item, choose Any User from the Owner pop-up menu (see Figure 4-3 "Sharing Strategies"). Close the window, clicking Save when asked to save changes. You've just set up the PowerBook as a file server.

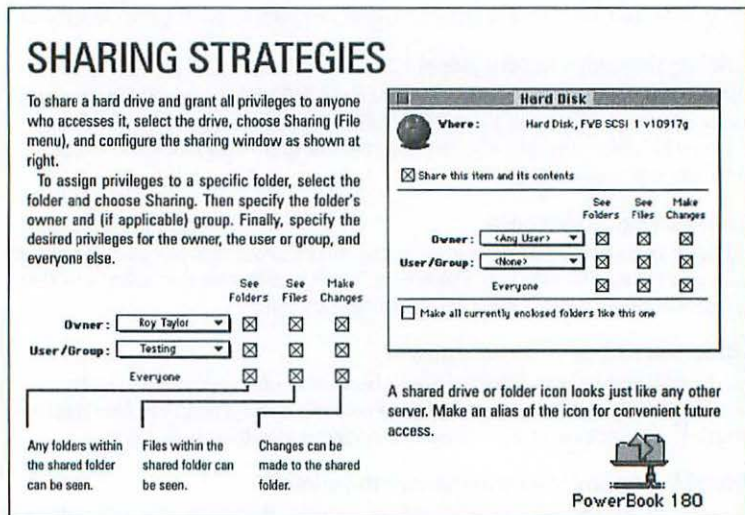


Figure 4-3: Sharing Strategies

Now go to the other Mac and open the Chooser. Click the AppleShare icon, and the PowerBook name that you specified a moment ago appears in the right side of the Chooser. Double-click that name. In the dialog box that appears, click Guest and press Return. In the next dialog box, select the hard drive name and press Return again. In a moment, an icon for the PowerBook's hard drive appears on the desktop. You can now copy files back and forth between the two Macs.

## File sharing tips

To keep from winding your way through the Chooser every time you want to access the PowerBook's hard drive, make an alias of the PowerBook's hard drive icon while you're connected. Then you can automatically connect to the PowerBook by double-clicking the alias. (Some users stash the alias in the Apple Menu Items folder.)

When you're done with the shared hard drive, drag its icon to the Trash. Then return to the PowerBook and turn off file sharing. Turning off file sharing when you aren't using it saves memory; the Mac also runs a bit faster.

## Access has its privileges

For convenience's sake, I've deliberately avoided discussing the security features in System 7 file sharing. When it's just you, a couple of Macs, and some files to be moved, passwords get in the way. When you're part of a larger network, though, you'll probably want to set up *access privileges* — settings for who can see and modify shared files and folders.

To lock some people out of certain folders, first use the Users & Groups control panel to specify a list of *registered users* — people who are allowed access to shared items. You also may want to assemble registered users into *groups* — collections of users who work on related projects or in the same department. After creating users and groups, you can control access privileges for a given folder by selecting the folder and choosing the Sharing command (again refer to Figure 4-3 "Sharing Strategies").



Table 4-2 lists some typical access privilege settings. Table 4-3 shows which privileges you need to perform various tasks.

**Table 4-2**  
**Access Privilege Reference**

<i><b>If You Want to . . .</b></i>		<i><b>Set Privileges Like This . . .</b></i>		
		<i><b>See Folders</b></i>	<i><b>See Files</b></i>	<i><b>Make Changes</b></i>
Give everyone on the network all access privileges	Owner	•	•	•
	User/Group	•	•	•
	Everyone	•	•	•
Share a folder with one person or group	Owner	•	•	•
	User/Group	•	•	•
	Everyone			
Keep a folder private so that only you can access it from other machines	Owner	•	•	•
	User/Group			
	Everyone			
Keep a folder private but allow others to drop files or folders into it	Owner	•	•	•
	User/Group			•
	Everyone			•

**Table 4-3**  
**Access Privilege Sampler**

<i><b>If You Want to . . .</b></i>	<i><b>Set Privileges Like This . . .</b></i>		
	<i><b>See Folders</b></i>	<i><b>See Files</b></i>	<i><b>Make Changes</b></i>
Copy a file to a folder			•
Copy a file from a folder	•	•	
Copy a folder to a folder	•		•
Copy a folder from a folder	•		
Create a file	•	•	•
Create a folder	•		•
Delete a file	•	•	
Move a folder to a folder	•		•
Move a folder from a folder	•		•
Open a file		•	
Save changes to a file		•	•

# Using the Ultimate Mac CD-ROM

The *Macworld Ultimate Mac CD-ROM* is an enhanced edition of the CD that accompanies my 1,100-page IDG book, *Macworld Complete Mac Handbook Plus Interactive CD, 3rd Ed.*

What's enhanced about the CD? For starters, it includes 5MB of software not on the *Complete Mac Interactive CD*—programs, utilities, custom icons, and sound files. Better still, the CD's interactive multimedia portion, called *Handbook Interactive*, contains almost ten minutes of new video, including a new segment on the Macintosh 630 series.

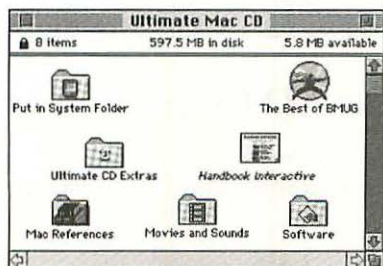
This chapter summarizes the contents of the Ultimate Mac CD and provides instructions and tips for using it.

## Navigating the CD

The Ultimate Mac CD has two main parts:

- ❖ *Handbook Interactive*, a multimedia production that complements *Macworld Complete Mac Handbook Plus Interactive CD, 3rd Ed.*
- ❖ Software libraries containing hundreds of megabytes of free software, shareware, fonts, digitized sounds, QuickTime movies, and demonstration versions of many applications

When you insert the CD, a directory window appears (see Figure 5-1 “Main CD Window”). Table 5-1 describes the CD's main icons.



**Figure 5-1: Main CD Window** When you insert the CD, you see this window. If you use System 7, you see these custom icons. If you use System 6, you see standard folder icons.

Table 5-1  
**The Ultimate Mac CD at a Glance**

<b>Folder</b>	<b>Contents/Comments</b>
Put in System Folder	The QuickTime 2.0 and QuickTime Musical Instruments extensions, and the QuickTime PowerPlug. To install QuickTime 2.0, drag these items to the System Folder of your start-up disk and then restart your Mac. (See the detailed installation instructions later in this chapter.)
Handbook Interactive	Open this icon to start Handbook Interactive. (Be sure to install QuickTime 2.0 first.)
The Best of BMUG	Over 65MB — 50 disks' worth — of shareware and freeware, organized into the following categories: AfterDark, Business, Education, Entertainment, Fonts, Graphics, Power Mac, Sound, Telecom, and Utilities.
Software	Demonstration versions of many of today's top programs. Shareware from France & Associates and Software Perspectives. More fonts and other miscellaneous goodies.
Movies and Sounds	A small collection of fun digitized sounds and QuickTime movies. To play these or any other QuickTime movies, you can use the Peter's Player program, which is in the Specular folder, within the Software folder. ( <b>Note:</b> Don't try to open Peter's Player by double-clicking the icon in the Movies and Sounds folder. Because of a bug in the Mac's Finder, this alias doesn't work properly.)
Mac References	A library of useful electronic reference materials for the Mac. When you're looking for details on memory upgrade options, viruses, computing health hazards, or Mac bulletin board systems, look here.
Ultimate Mac CD Extras	A collection of bonus goodies, described in the next section.

## Inside the Ultimate Mac CD Extras Folder

The Ultimate Mac CD includes a library of bonus software that was not included on the CD that accompanies the *Macworld Complete Mac Handbook*.



## QUICK TIPS

**At Least Read This!**

Even if you don't read this entire chapter, at least read this section — it contains important information about working with the programs on the CD.

Many of the programs are ready to run directly from the CD. (Of course, the programs run much faster if you copy them to a hard disk.) However, some programs may create items in your System Folder that refer to the CD.

**The right way to install DarkSide**

Specifically, the installer for the screen saver DarkSide of the Mac (in The Best of BMUG collection) creates an alias in your System Folder's Startup Items folder. (Aliases are discussed in Chapter 1.) If you run the DarkSide installer from the CD, your Mac will ask you to insert the CD every time you start up or restart. Unless you're really nuts about this CD, you probably won't want to do this. If you want to install DarkSide, therefore, copy the DarkSide folder to your hard drive and then run the installer from the hard drive. In general, this is a good approach to follow when installing a program.

If you find that your Mac is asking for the CD when you start up or that you can't eject the CD (the Mac says some "items are in use"), you probably have an alias in your System Folder that refers to the CD. Check your System Folder's Startup Items, Control Panels, and Extensions folders for these aliases. (Of course, if the Mac doesn't let you eject the CD, make sure that no programs or documents on the CD are open. Also be sure that System 7 file sharing is turned off.)

**The right way to run HyperTracker**

The Ultimate Mac CD Extras folder contains a fun music program called HyperTracker by Kevin Harris Software Perspectives. If you try to run this program from the CD, you'll receive error messages galore. (This problem occurs because HyperTracker writes information to itself when it runs, but it obviously can't write on a CD-ROM, which isn't a writable medium.) To run HyperTracker, copy its entire folder to your hard drive.

**Read the read me files**

The read me file for a given program will reveal any special installation procedures or requirements.

Here's a quick tour of the Ultimate Mac CD Extras folder.

- ❖ *ApplWindows*, a terrific (and free) control panel, enhances the Application menu. When ApplWindows is installed, the Application menu shows not only program names, but the names of each application's open windows. Thus, you can switch programs *and* activate a particular document window with a single click.

- ❖ *Audioshop 2.0 Demo* is a demo version of a fun digital audio program from Opcode Systems. Audioshop can open, play, and modify sounds in a variety of formats, including the System 7 sound format. Even better, Audioshop can open and play back the tracks on standard audio CDs inserted in your CD-ROM drive. The program's beautiful interface wouldn't be out of place in a home entertainment unit.
- ❖ *GURU 1.0.3*, a free utility from the gurus at Newer Technology, tells you everything you ever wanted to know about expanding your Mac's memory. (If you have Apple's PlainTalk speech manager installed, GURU really will *tell* you!) The utility covers all Mac models through the Quadra/Performa 630 series. GURU also can test your Mac's memory for problems, such as defective RAM chips.
- ❖ *More Custom Icons* contains a vast assortment of beautiful icons for various Mac models, third-party hardware, and more. Refer to Chapter 1 to learn how easy it is to add custom icons to disks, files, and folders.
- ❖ *System 7 Sounds* contains an assortment of sounds in standard System 7 sound format.
- ❖ *Zounds Holiday Cheer* contains a version of Zounds, a cute little control panel from Digital Eclipse that can play sounds in the background while you work. The full version of Zounds includes a vast array of sound effects—babbling brooks, crashing surf, and so on. This version contains an assortment of Christmas holiday sounds—sleigh bells, Christmas carols, and the like. By the way, you can add your own sounds; after installing Zounds, just copy System 7 sound files into the Zounds Files folder.
- ❖ *Sound-Trecker*, one of my all-time favorite Mac shareware programs, turns your Mac into a digital jukebox by playing a special type of music file called a MOD file. The documentation included with Sound-Trecker tells you everything you need to know about MOD files. (A huge assortment of MOD files is available from on-line services such as America Online.)
- ❖ *HyperTrecker*, from Kevin Harris Software Perspectives; this firm is crafting some of today's best shareware. HyperTrecker is another program that plays MOD files. It introduces some new innovations, however, that you won't find in the SoundTrecker. (You'll find a lot more great freeware and shareware from Software Perspectives in the More Freeware/Shareware folder, which is within the Software folder.)



## Exploring Handbook Interactive

I like to describe Handbook Interactive as an interactive newsmagazine about the Macintosh. Handbook Interactive uses animations, QuickTime-based interviews, digital audio, and 3-D graphics to illustrate Mac concepts, trends, and personalities.

Although I originally designed Handbook Interactive to complement my *Macworld Complete Mac Handbook*, it stands alone nicely, too. Indeed, that's one reason it's included on this CD. What's the other reason? To entice you into buying the *Macworld Complete Mac Handbook*, of course! Check the back of this book for instructions on how to order a copy — at a substantial discount.

Before starting Handbook Interactive, be sure to do the following:

- ❖ Install QuickTime 2.0 (see the Step-by-Step box “How to Install QuickTime 2.0”).



### How to Install QuickTime 2.0

In this box, I describe how to install QuickTime 2.0 on your system.

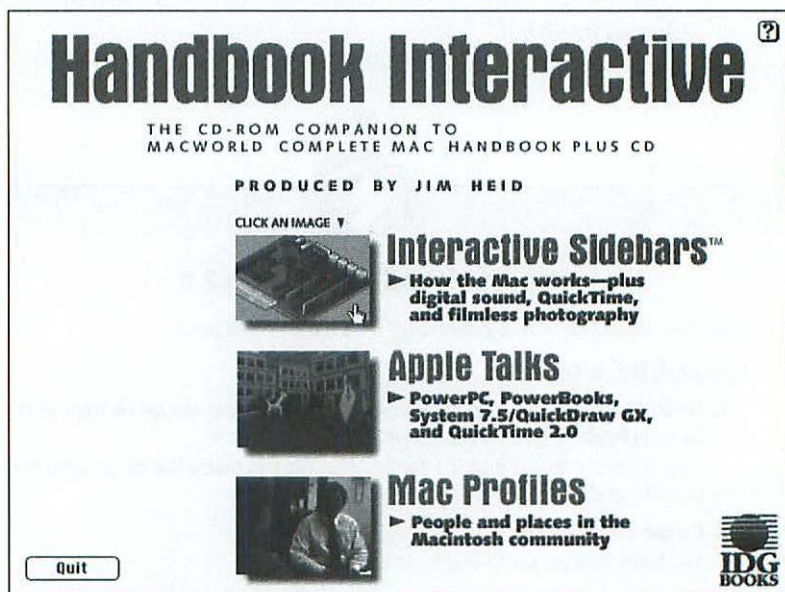
#### To install QuickTime 2.0:

- 1. If you're already using an older version of QuickTime, remove it from your System Folder's Extensions folder.**  
For now, just drag the icon to your desktop. You can delete the earlier version of QuickTime after you install QuickTime 2.0 and restart.
- 2. On the CD, open the Put in System Folder folder.**  
You see a window containing three icons.
- 3. If you have a Power Mac, select all three files. If you do not have a Power Mac, select only the files named QuickTime and QuickTime Musical Instruments.**  
The QuickTime PowerPlug extension works only with Power Macs. You won't hurt anything if you install this extension on a non-Power Mac, but you will waste a bit of disk space.
- 4. Drag the selected files to your System Folder.**  
When the Mac informs you that the items need to be installed in the Extensions folder, click OK.
- 5. Restart your Mac (choose Restart from the Special menu).**



- ❖ Use the Monitors control panel to set your monitor for Thousands of colors. If your video hardware doesn't support the Thousands setting, use the 256 colors setting.
- ❖ Connect a set of speakers or headphones to your Mac. Although neither are required, you'll get far more out of Handbook Interactive if you listen to it through something other than a Mac's built-in speaker.

To start Handbook Interactive, double-click its icon. After a few moments, the production's main screen appears (see Figure 5-2 "Handbook Interactive"). As this screen shows, Handbook Interactive is divided into three primary sections: Interactive Sidebars, Apple Talks, and Mac Profiles. To work with a section, click the image that's next to its description.



**Figure 5-2: Handbook Interactive** The main Handbook Interactive screen. Click an image to go to its section.

## Interactive Sidebars

A sidebar, as you probably know, is a boxed element within a book or magazine article that provides information relating to the subject of the book or article. The Interactive Sidebars (see Figure 5-3) use QuickTime movies, digital sounds, and color graphics to provide information relating to chapters in my *Macworld Complete Mac Handbook*.

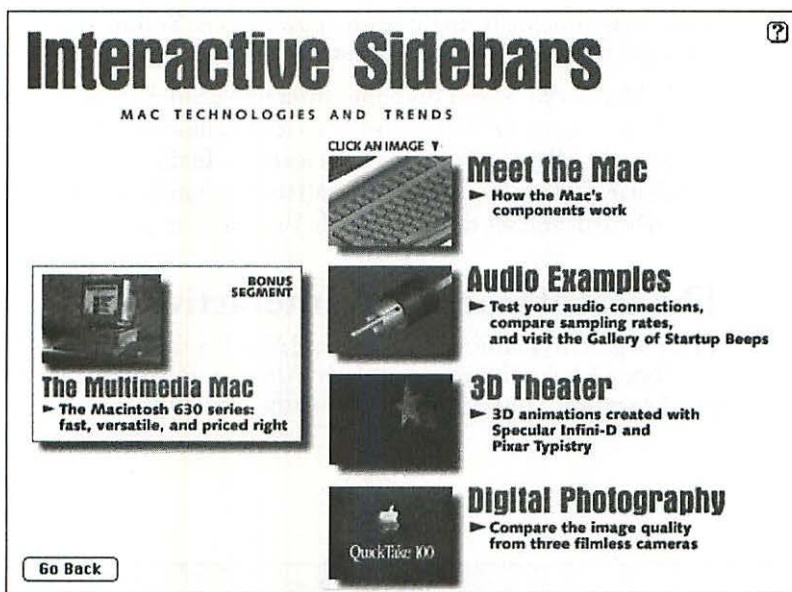


Figure 5-3: The Interactive Sidebars Screen

Here are some general instructions and tips for navigating and using the Interactive Sidebars.

- ❖ *Meet the Mac:* Intended for Mac newcomers, this Interactive Sidebar describes how the components in a Mac system operate. The centerpiece of this Interactive Sidebar is an illustration of a Mac system. When you point to a component without clicking, the component's name flashes. When you point and click, a movie plays describing how the component works. You also can play a movie by clicking the buttons along the right side of the screen.
- ❖ *Audio Examples:* This Interactive Sidebar lets you hear the Mac's sound features and compare the effects of various sampling rates. Every book tells you that higher sampling rates yield better sound but use more disk space. With this Interactive Sidebar, you can hear examples of various sampling rates; notice that music in particular benefits from higher sampling rates.
- ❖ *3D Theater:* This straightforward Interactive Sidebar contains two beautiful 3-D animations, both of which have stereo soundtracks. These movies look great in full-screen mode. (Refer to the Quick Tips box "How to Play Handbook Interactive's Movies in Full-Screen Mode.")
- ❖ *Digital Photography:* In Chapter 13 of the *Macworld Complete Mac Handbook*, I describe the new breed of filmless cameras, such as the Apple QuickTake 100. In this Interactive Sidebar, you can compare



the image quality from three filmless cameras. You also can watch movies that describe a specific camera's features.

- ❖ *The Multimedia Mac:* This bonus Interactive Sidebar is a guided tour of Apple's Quadra/Performa 630 series, the new low-cost Macs that come with all the nifty multimedia features. In this Interactive Sidebar, you can learn how to install the 630's multimedia expansion boards and see the 630's Apple Video Player program in action.

## The rest of Handbook Interactive

All the segments in the Apple Talks and Mac Profiles portions of Handbook Interactive work similarly. After you make your way to a specific section, you see a screen containing headings (in red) with text



### How to Play Handbook Interactive's Movies in Full-Screen Mode

QuickTime 2.0 makes it possible to get full-screen movie playback from a CD-ROM. I designed Handbook Interactive's movies and buttons with this breakthrough feature in mind.

#### Playing a movie in full-screen mode

To watch any movie in full-screen mode, simply press the Option key while you click the button or object corresponding to the movie. There it is: Glorious, full-screen video from a CD-ROM. Didja ever think you'd see it? Thanks, Apple!

To create full-screen video from a movie whose actual dimensions are 320 x 240 pixels, QuickTime 2.0 uses a cheating technique, called *pixel doubling*. One side effect is that movies tend to have a slightly jaggy appearance when viewed at normal monitor viewing distances. Try moving back a few feet — to a normal TV viewing distance. You'll be amazed at how much better the movie looks.

#### Controlling a full-screen movie

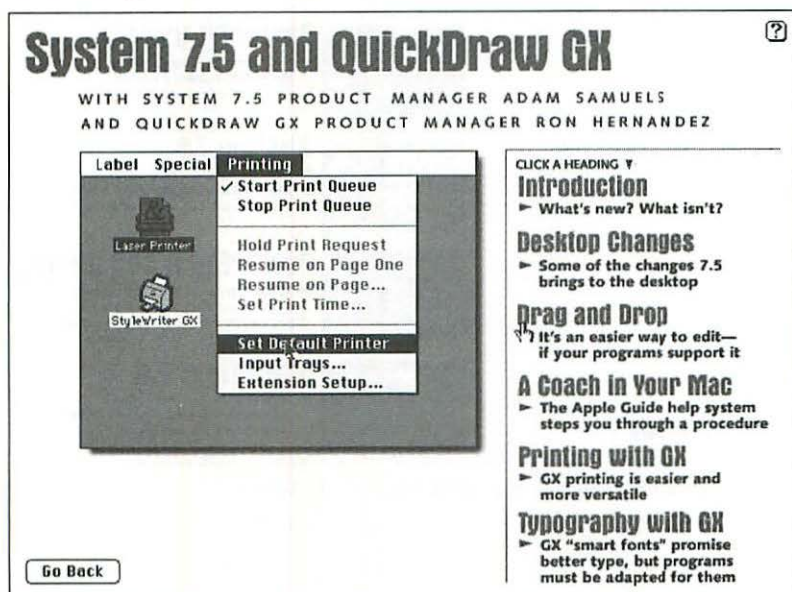
When a movie is playing in full-screen mode, there isn't room on-screen to show QuickTime's controller (that little scroll bar-like thing you use to pause, play, and navigate movies). But you can still control a full-screen movie with these techniques:

- ❖ To pause a full-screen movie, double-click anywhere on-screen.
- ❖ To resume playback, double-click again.
- ❖ To close a full-screen movie before it has finished, press Return.

All three shortcuts also work when you're playing movies in normal-size view.



descriptions below them, as shown in Figure 5-4 “Navigating a Segment.” To play the movie that corresponds to a heading, just click the heading. (To play the movie in full-screen mode, Option-click the heading.)



**Figure 5-4: Navigating a Segment** To play a movie in a Handbook Interactive segment, click a heading. You can click the heading again to close the movie before it's finished.

If you want to skip to a different movie while a movie is playing, just click the heading for the movie you want. Handbook Interactive automatically closes the current movie and then opens the new one.

## Apple Talks

In this section, you can watch excerpts from interviews I conducted with the product managers of the Power Macs, QuickTime 2.0, System 7.5, QuickDraw GX, and the PowerBook 500 series (see Figure 5-5). You'll hear a bit of Apple propaganda now and then, but you'll also get some solid information on some of Apple's latest products. Many of these segments also include animations and Mac screen recordings that illustrate the concepts or features being discussed.

## Mac Profiles

The Mac world is full of interesting people and places, and this portion of Handbook Interactive contains profiles of some of them (see Figure 5-6). The Next Exit: Home Movies profile spotlights Dana Atchley, a San Francisco-based video producer and performance artist who uses QuickTime. The Behind BMUG profile takes you behind the scenes at BMUG, the world's largest Mac user group.



Figure 5-5: Handbook Interactive's Apple Talks Screen

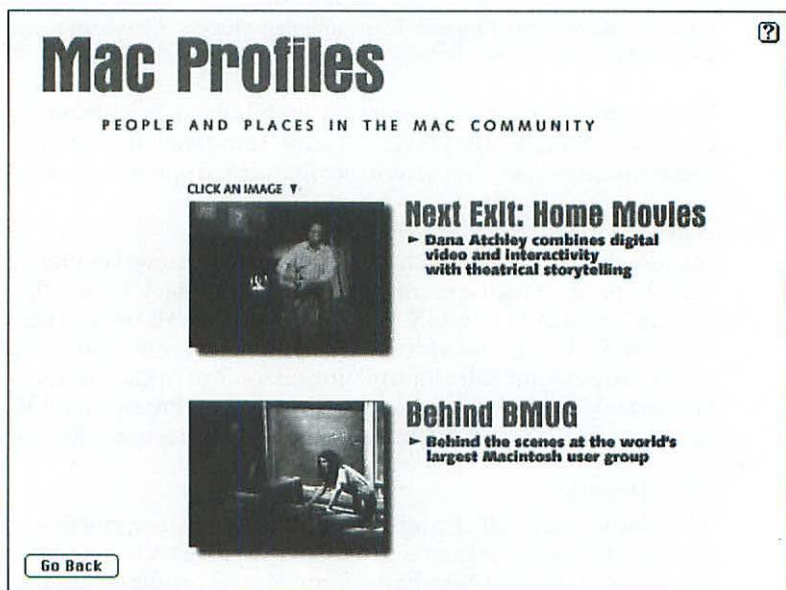


Figure 5-6: Handbook Interactive's Mac Profiles Screen

## QUICK TIPS

**In Case of Difficulty . . .**

Although the Ultimate Mac CD is straightforward, and you aren't likely to have any problems, here are some possible symptoms and their remedies. (If you experience problems with any of the other software on the CD — the demo software or the Best of BMUG software — please contact its publisher or author.)

*You tried to open the Peter's Player alias (in the Movies and Sounds folder) or the GURU 1.0.3 alias (in the Mac References folder), but an error message appeared, saying that the alias couldn't be opened because the original item couldn't be found.*

I think this is a bug in the Mac's Finder. The original items *are* on the CD. And if you select one of these aliases and choose the Finder's Get Info command, you'll even see *where* they are on the CD. But the Finder can't find 'em. Squirrely, no? Here's the workaround: The Peter's Player application, which plays QuickTime movies, is located in the Specular folder, within the Software folder. GURU, a memory diagnostic and reference utility, is in the Ultimate Mac CD Extras folder.

*When you start Handbook Interactive, all you see is a blank screen with a button that says Quit.*

Your Mac probably doesn't have enough free memory to display Handbook Interactive's color graphics. Click Quit to return to the Finder. Then quit any open applications and try again.

*Handbook Interactive's movies play back poorly — the sound and video aren't synchronized, and the sound sometimes breaks up.*

First, be sure you've installed QuickTime 2.0 — the larger, faster movies on Handbook Interactive require it.

If you have installed QuickTime 2.0 but the movies still play back poorly, try any (or all) of the following:

- ❖ Turn off file sharing.
- ❖ Quit any background tasks (such as printing or downloading).
- ❖ Disable all extensions except for QuickTime and QuickTime Musical Instruments.
- ❖ Use the Monitors control panel to switch to fewer colors.
- ❖ Be sure the Calculate Folder Sizes box is *not* checked in the Views control panel.

If you still have trouble, chances are your machine just isn't fast enough to play back large QuickTime movies. (Based on my testing, I recommend a 11vx or faster machine with a double-speed CD-ROM drive.) Try out Handbook Interactive on a friend's faster Mac — and start saving for an upgrade. You're going to see more and more CDs taking advantage of QuickTime 2.0's features.

*(continued on next page)*



*(continued from preceding page)*

*While running Handbook Interactive, you switched from 256 colors to thousands or more, but the graphics don't look any better.*

Because of a dumb quirk in HyperCard and its Color Tools software (which I used to create Handbook Interactive), you must quit and restart Handbook Interactive to put your new monitor settings into effect. From now on, switch to the desired number of colors before starting Handbook Interactive.

*When you use the QuickTime movie controller to zip around a movie, the movie's window gets all garbled.*

Sigh. This is the price you pay for being on the cutting edge. I prepared some of the movies in Handbook Interactive by using prerelease versions of QuickTime 2.0, and this problem is a side effect. To restore the movie's image, drag the slider to the leftmost side of the controller.

## Getting help

You can also see a quick overview of Handbook Interactive by clicking the question mark icon at the upper-right corner of the screen. The help screen also contains a credits movie.

## Exploring the Demo Software

The Software folder contains demonstration versions of dozens of leading applications in a variety of categories, from integrated packages (such as ClarisWorks) to 3-D packages (such as Macromodel) to CAD programs (such as MiniCad). Most of these programs are covered in the *Macworld Complete Mac Handbook*. Indeed, each chapter in the *Handbook* contains an On the CD box that refers you to relevant software on the CD.

There are no *self-running demos* on this CD. (Self-running demos are basically animated brochures or advertisements. They're presentations designed to run at a trade show, for example.) I included only demo software that actually lets you try out a program. These demos are a great way to experiment with a program you're thinking of buying. At the very least, you can expand your Mac horizons by playing with software you might not otherwise have access to.

You can perform real tasks with all the demo software (except for the Casady & Greene games, of course — but hey, everyone needs a break from real tasks now and then). What you generally can't do is save the work that you create. Demo versions are usually limited in some

fashion — you can't save the documents you create (or, with some programs, you can save only small documents). Or, if you print a document, the text "SAMPLE" appears across each page.

For this CD, I tried to select demo versions of offbeat programs — applications you may have heard about but not used — including the 3-D graphics and CAD programs from Strata, Specular International, and Graphsoft; the music and sound software from Opcode Systems and Passport Designs; and the video-editing and special-effects packages from Adobe and VideoFusion.

Many of the 3-D and CAD packages run in native mode on Power Macs. If you have a Power Mac but haven't shelled out \$1,000 for a high-end CAD or 3-D program, these demo versions enable you to see what your machine is capable of.

At the same time, though, I made sure that the CD includes demos of mainstream packages, such as the Claris product line and WordPerfect. That's the great thing about CD-ROMs: they hold so much that you can include something for everyone.

### Important notes about the Software folder

Many of the programs in the Software folder are ready to run directly from the CD. Still other programs must be installed, using an installation utility included with the program. Within this must-be-installed category are two categories:

- ❖ Programs that you can install from the CD
- ❖ Programs that must be installed from a set of floppy disks

Most of the programs that must be installed fall into the latter category. You must copy these programs to floppies because their installation programs ask you to insert those floppies when they run. If you run the installer directly from the CD, you will be asked to insert floppy disks that you don't have.

When creating a set of installation floppies for a given program, count how many folders comprise the program and then set aside that many floppy disks. Give each disk the exact same name as its respective folder. Then open each folder and copy its contents to the folder's corresponding floppy disk.

Table 5-2 lists each folder within the Software folder and describes its contents and installation routine. If all developers wrote their programs so that they could be installed (or run) from a locked volume, these hassles wouldn't exist.

<b>Table 5-2</b> <b>Inside the Software Folder</b>	
<b>Folder</b>	<b>Contents and Notes</b>
Adobe Systems	Dimensions, Illustrator, Photoshop, and Premiere are ready to run.
Aldus	PageMaker 5.0 must be installed from floppy disks.
Ares Software	FontChameleon is ready to run. See the readme file in its folder for details.
Casady & Greene	<ul style="list-style-type: none"> <li>• Conflict Catcher II must be installed.</li> <li>• The addictive game Crystal Crazy is ready to run.</li> <li>• The game Glider must be copied to a hard drive.</li> <li>• Snap Mail is ready to run.</li> <li>• The game Spaceway 2000 should be copied to a hard drive because you may need to adjust its memory requirements.</li> </ul>
Claris Corporation	ClarisImpact, ClarisWorks, FileMaker Pro, MacDraw Pro, and MacWrite Pro are ready to run.
Deneba Software	Canvas is ready to run.
Engineered Software	PowerDraw must be installed from an unlocked volume. Copy the PowerDraw Demo Version file to your hard drive and then double-click it to install.
Graphsoft	MiniCad must be installed; it can be installed from the CD.
Imspace Systems	Kudo Image Browser is ready to run. Double-clicking an image displays a "disk not found" error message, however. To fix this problem, copy the demo version to a floppy disk called Kudo® Image Browser™ Trial. (The disk must have this exact name, including the trademark and copyright symbols.)

(continued on next page)



Macromedia	All programs are ready to run. Swivel 3D asks you to specify a disk for its temporary work files. (Note that the SoundEdit Pro demo version does not run on AV or Power Macs.)
Opcode Systems	<ul style="list-style-type: none"><li>• Audioshop is ready to run.</li><li>• Claire must be installed; it can be installed from the CD.</li></ul>
Passport Designs	Pro 5, Encore, Passport Producer, and MusicTime are ready to run.
Pixar	Typestry is ready to run.
PrairieSoft	DiskTop is ready to run.
Specular International	<ul style="list-style-type: none"><li>• Infini-D is ready to run (If you have a Power Mac, run the version named Infini-D 2.6 Demo PPC. Otherwise, run the version named Infini-D 2.6 Demo 68k.)</li><li>• Peter's Player is ready to run.</li></ul>
Strata	<ul style="list-style-type: none"><li>• StrataVision 3d must be installed; it can be installed from the CD.</li><li>• StrataStudio Pro and StrataType 3d must be installed from floppy disks.</li></ul>
VideoFusion	QuickFLIX! and VideoFusion are ready to run.
WordPerfect	WordPerfect is ready to run.

## Exploring the Best of BMUG Collection

The Best of BMUG folder contains over 65 MB of free software and shareware, all of it compatible with Power Macs and System 7.5.

The best way to explore the Best of BMUG library is to dive into each folder and read the read me files that accompany each program. Most of these files are SaintEdit files. SaintEdit, which is included on the Ultimate Mac CD, is a great shareware text editor utility. (Choose its About command to learn how it got its name.)

By the way, if you have Apple's PlainTalk text-to-speech software installed, you can have SaintEdit files read aloud. Just choose Speak to Me from its Bedtime Stories menu.

SaintEdit can even read aloud in the background. As I'm writing this chapter in Microsoft Word, SaintEdit is reading a file to me.

## Please pay for the shareware you use

If you make any of the shareware programs or fonts a part of your regular computing routine, please take the time to pay the author's requested shareware fee. Help keep the shareware system alive!

## Other Ways to Explore the CD

To locate files, you can use PrairieSoft's DiskTop desk accessory (included on the CD). To use DiskTop to locate all QuickTime movies, for example, click DiskTop's Find button. In the Find dialog box, be sure the CD is selected and then check the Type box. In the text box next to the pop-up menu, type **MooV**. Case matters, so be sure to type MooV just as it appears here (with an uppercase M and an uppercase V).

There are a lot of graphics files scattered through the CD — many are PICT sample images that come with the demo versions of graphics software. To locate them with DiskTop, specify PICT as the file type.

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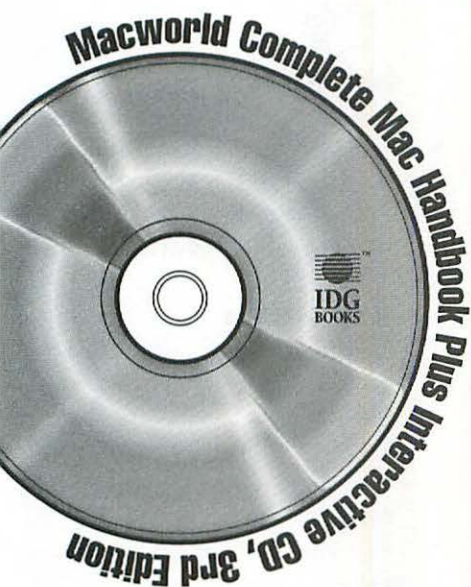
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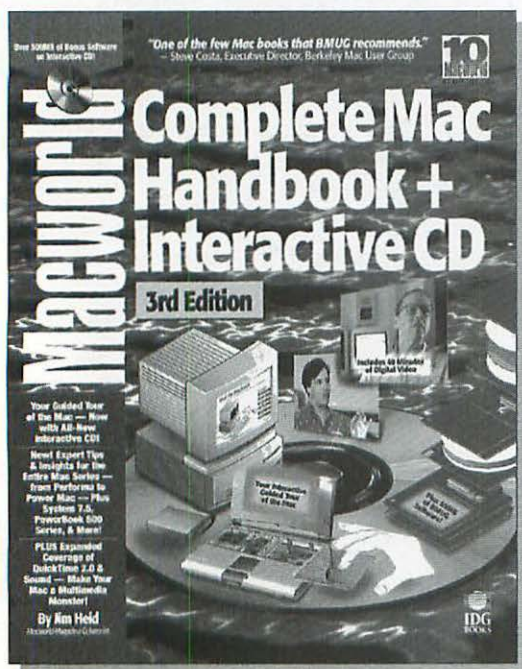
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I have a CD ROM: ☐ yes <sup>(42)</sup> ☐ no <sup>(43)</sup>

I plan to buy or upgrade computer hardware this year: ☐ yes <sup>(44)</sup> ☐ no <sup>(45)</sup>

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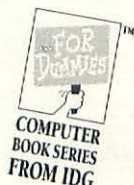
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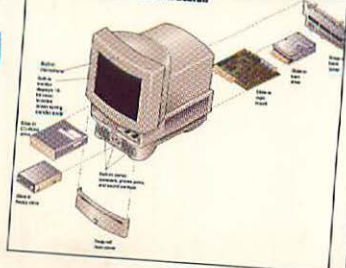


# Macworld ULTIMATE MAC CD-ROM

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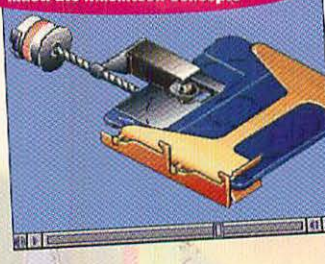
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## About the Author

Jim Heid is an award-winning columnist for Macworld Magazine and was one of the first journalists to preview the original Macintosh in 1983. He's the author/producer of IDG's bestselling Macworld Complete Mac Handbook + Interactive CD, 3rd Edition, and Macworld Word 6 Companion, 2nd Edition.

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System Requirements: Macintosh, CD-ROM drive required to use CD. For Handbook Interactive: Color Macintosh (16x or faster recommended), QuickTime 2.0 (included), approximately 3500K application memory.

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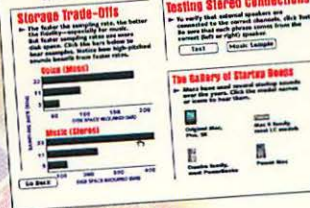
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