

Chapter 19 (Number & Data Crunching)

Fill up, fill left

The Fill Right and Fill Down commands (Edit menu) have been classic time-savers. They let you copy the same number or formula into all the cells to the right, or below, the selected one.

If you press *Shift* while choosing these commands, they change to read Fill Up and Fill Left. They do what they say.

Edit just one graph bar

To edit a chart, you double-click it. You can edit just one bar or slice of a chart, too, if you ⌘-double-click it. That way you can change its color or its border style without affecting the rest of the chart.

More page-numbering tricks

In the latest version of Excel, you have far less reason to type out the arcane codes needed for time-stamping, date-stamping, or page-numbering your printout. As we discussed in the previous Secret, you can just click one of the little icons in the Header or Footer dialog box to insert the correct code into the text box.

Usually you precede a code with the ampersand (&) symbol. For example, *&L*, *&C*, and *&R* make the text that follows the code left-justified, centered, or right-aligned, respectively. Then there's *&D*, *&T*, and *&F*, which print the date, time, and file name.

But what if you really *want* to print an ampersand symbol? They think of everything: that code is *&&*.

How to set up startup documents

When you install Excel, its Installer puts a folder called Excel Startup into your System folder. You can put almost any kind of Excel document into this folder: chart, macro sheet, add-in, and so on (anything except a Template).

When you next run Excel, these items will open automatically.

Lotus stomping (version 3.0 only)

In a new spreadsheet, press ⌘-right arrow and then ⌘-down arrow; you'll jump to the very last cell in the immense spreadsheet. Use the scroll bars to scroll down and rightward until only a single cell is

showing. Using the Row Height and Column Width commands, set the last cell's height and width to zero.

Finally, click the tiny square that remains. You get a brief display of anti-Lotus Corp. propaganda, and then you'll see a list of the Excel design team. To end the display, just use the scroll bars.

Our only regret is that this trick doesn't work in Excel 4.0 or later.

3-D in System 6

In System 7, Excel's toolbar icons use shading to give a three-dimensional look.

You can get this nice visual aid in System 6, too, by holding down the Shift, 3, and D keys while Excel is launching.

Create a folder on your hard drive and name it Network Install. (It can be named anything, of course, but this is at least an indicator of its purpose.) One after another, insert your system disks into the floppy drive of a Mac on the network and drag the floppy's icon into this folder. Each floppy's contents are copied into the Network Install folder, one folder for each disk.

Now open the Network Install folder. Open the first System 7 installation disk folder (called either Install, Install 1, or Install Me First). Drag the items called Installer Script and Installer out of their folder into the enclosing Net Install folder.

You can double-click the Installer to run it. You finally are able to install the system software onto any Mac on the network — without having to feed the Mac any floppy disks at all!

Design a layout for the Classic-sized screen (ClarisWorks, too)

Suppose that you have a nice big monitor, and you're trying to design a layout that will work equally well on compact

Macs like the SE and Classic. It's hard to guess exactly how big to make the layout.

But Claris has done the work for you! Choose Help from the Apple menu. The Help screen is exactly the correct size for the compact Macs. Use this window as a model for sizing your own layout.

Look up only one record

You can set up a field in a FileMaker database that gets filled in automatically by consulting *another* FileMaker file. This is the famous lookup function.

When you type a customer ID number into an order blank, for example, FileMaker consults your master customer name-and-address file and automatically fills the name and address into the order blank.

But this lookup function is one way, one time. If you change the spelling of someone's name in your customer list, the change *doesn't* ripple through to the order blank.

Of course, the Edit menu contains a Relookup command. With that order-blank file open, you can choose Relookup; FileMaker consults the customer file, compares those ID numbers again, and pastes the updated address information into the order blank.

Here's the tip, though. Instead of waiting while FileMaker scans every single record in the file, looking for records to update, you can force it to look up only *one* record. To do so, just edit some tiny aspect of it. Type a letter, for example, and then immediately delete it. Press Enter and FileMaker will look up only the record you
Drag-and-drop

One of Excel's neatest features (version 4 and later) is that you can drag a selected block of cells, either to copy them or simply to move them. (You may recognize this feature from its invaluable counterpart in Word.)

Two obstacles may stand in the way of your making this work. First, choose Workspace from the Options menu and make sure Cell Drag and Drop is selected.

Second, you have to know *where* to drag. You can't just click in the center of some selected cells. Instead, carefully position the cursor at the edge of the *outline* of the selected cells and drag *that*.

(To copy the cells instead of moving them, press Option as you drag.)

One-key Category-window splitting

Quicken versions starting with 3.0 let you subdivide a particular transaction into any number of categories. For example, in one credit card payment, you may want to record payments for office supplies, work-related publications, and a medical expense.

Trouble is, to see your categories, you have to click the Split button at the bottom of the screen. The same goes with *collapsing* the category

list, too — again, you have to click the Split button. That’s a lot of mousing.

But not if you realize that there’s a keyboard shortcut for clicking the Split button. It’s ⌘-E.

So, they’re not always perfectly logical. But for the true power user who encounters the same old dialog boxes frequently, these one-key shortcuts, after you’ve learned them, can be a handy time-saver.

Chapter 20 (Graphics and 3-D)

The Auto-trace feature

FreeHand, Illustrator, and Canvas all offer auto-trace features. You open a bitmapped image (PICT or TIFF, for example). The program automatically draws a PostScript path — a series of Bézier curves — along every edge where white meets black in the image. When you’re done, you delete the original bitmapped image, and you’re left with a smooth, high-resolution, sharp-printing PostScript graphic.

The best autotraces come from images where there *are* clear changes from black to white. If your original is a grayscale scanned image, therefore, coax it toward being a black-and-white image before tracing. Use the program’s contrast controls, for example, to blanch the whites and darken the grays. Or save the image as black-and-white, and then reopen it before tracing.

Bypass the “Open template” dialog box

If you’re not somebody who uses Illustrator to trace scanned images much, then the “Please open a template or click None” dialog box (which appears every single time you start a new document) can get tiresome fast.

To bypass it, press the Option key while you choose New from the File menu (or while you press ⌘-N).

MacDraw Pro, ClarisDraw, and ClarisWorks

Why are we lumping these together? Because they come from the same company, look and work almost exactly alike, and are modeled on each other.

The discontinued MacDraw Pro (reissued as ClarisDraw) is, of course, the more powerful of the two — drawing is all it does. But many of these

shortcuts apply equally well to both of these polished, easy-to-learn programs. We've indicated which tips apply to both. When we mention ClarisWorks, of course, we mean its drawing module.

begin sidebar: True Fact

What happened to SuperPaint?

We'll be honest. There are three reasons we left SuperPaint out of this discussion.

Reason 1: We didn't really. All of our general painting tips apply to SuperPaint's paint layer, and all of our universal drawing tips apply to its drawing layer.

Reason 2: SuperPaint has been eclipsed by the other programs. Canvas and ClarisWorks are each far superior bargains and far superior programs in the paint-and-draw field.

Reason 3: SuperPaint is slow. We absolutely can't stand the way when you zoom in, the actual-size view takes up half your screen. And when you're zoomed in, everything in the draw layer is just as crude and jaggy-looking as art in the paint layer.

Sorry, SuperPaint fans — we just couldn't see ourselves promoting this program's cause in our own pages.

end sidebar

Enclose touched objects with the Marquee

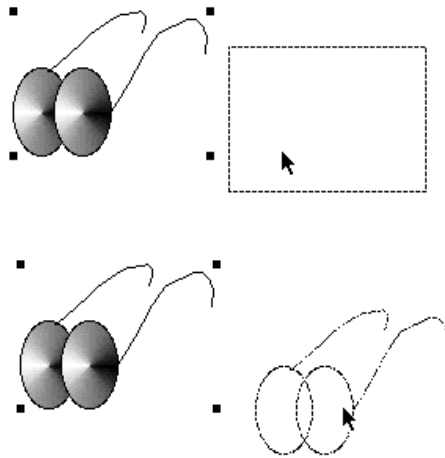
Under normal circumstances, you can only select objects you completely enclose with the selection marquee (as you drag the Arrow tool). But if you ⌘-drag, you select everything even partially enclosed by the marquee (much as just as you do selecting icons in the System 7 Finder).

Layer Secrets (MacDraw only)

The Option key is your key to objects lying on other MacDraw layers. For example, you can Option-click an object in an inactive layer to select it. You can Option-drag a selection rectangle to select all enclosed objects in all layers.

Drag more than just the outline

If you drag a selected object, you usually see only its outline during the drag. But if you ⌘-drag it, you get to see the complete image as it's being moved (see Figure 20-15).



Incidentally, the ⌘ key performs this function when you're rotating or scaling an object, too.

Lock in that tool

Normally, a MacDraw tool doesn't remain selected after you draw something (the arrow tool gets automatically reselected). If you double-click the Drawing tool to begin with, however, it turns black, and thus remains selected even after you draw.

Or, if the Arrow tool does reselect itself, you can just press Enter to reselect the most recent Drawing tool you used.

Selecting type with clicks

With the Text tool selected, double-click to select a word; triple-click to select a line; quadruple-click to select a paragraph; and

quintuple-click (or press ⌘-A) to select all the text inside the block.

(All but the quintuple-click business works in ClarisWorks, too.)

Power keystrokes (MacDraw only)

n ⌘-Option-A selects all objects in all layers.

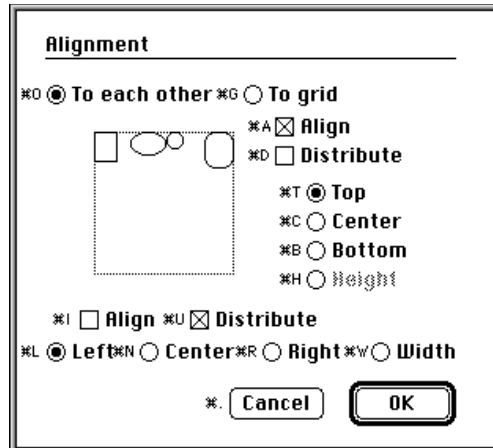
n ⌘-Option-C copies one frame of a QuickTime movie to the clipboard.

- n ⌘-Option-G switches between two modes of displaying gradient (blended) fills: the faster, cruder-looking one, and the higher-quality, slower-to-draw one.
- n ⌘-Option-I flips you into and out of image-*greek*ing mode. When greeking is on, all imported images and QuickTime movies appear on the screen as an empty box with an X through it. (That saves redrawing and recalculating time.)
- n ⌘-Option-M changes the zoom level to actual size. (⌘-left and right arrows halve and double the magnification level with each key press.)
- n ⌘-Option-P prints your document directly (one copy), without subjecting you to the Print dialog box.
- n ⌘-Option-S switches the “Typing activates shortcuts” feature on and off. (MacDraw wants to know what you’re doing when you start typing. Are you typing the initial of a tool you want to switch to? Are you beginning a new text block? If you want the former, turn on “Typing activates shortcuts.”)
- n ⌘-Option-V pastes whatever is on the clipboard into the new scale of your document (if you changed it). (By scale, we mean 1 inch = one foot, for example.)
- n ⌘-Shift-W brings the next window to the front (if you have more than one open).
- n Page Up and Page Down scroll one screenful up or down. *Option*-Page Up and Page Down scroll one screenful right or left.

See hidden keyboard shortcuts (MacDraw only)

Press and hold the ⌘ key when a dialog box is open on the screen. In small lettering, you see the keyboard shortcuts available in that dialog box, displayed right beside the commands they activate (see Figure 20-16).

We quite enjoy this last trick, by the way. We wouldn’t mind if more programs adopted it, since it’s a quick and natural way to learn which keyboard shortcuts are available in one of these boxes. (Then again, we’re not quite so zealous as to claim that all programs already *do* have this feature, as we recently read in a certain rival Macintosh book!)



Canvas

Deneba's Canvas program continues to get more densely packed with powerful features with every version. It's a tough program to describe. It's primarily a drawing program, but it has a nice set of painting tools so that you can paint on any object you draw. There's even a set of PostScript drawing tools, too, giving you three bangs for three hundred bucks.

We don't claim that Canvas is easy to use. On the other hand, we've almost never been run up against a brick wall in something we were trying to achieve. As such a feature-rich piece of software, it's absolutely ripe with secrets.

Save memory and loading time

Canvas's modular construction means you can leave out pieces that you won't need; each tool you omit saves memory and loading time. To select which features will load, hold down the Space bar just after you double-click the Canvas program icon. The Tool Picker will appear, showing a list of the plug-in tools you can double-click to switch on or off. Here are a few suggestions:

If you're not exchanging files with IBMs, turn off *CGM I/O*, *DXF I/O*, *IGES I/O*.

If you're not exporting or importing graphics from other programs, turn off *Canvas 1.0 I/O*, *Canvas 2.0 I/O*, *Illustrator I/O*, *MacDraw I/O*, *MacPaint I/O*, *StartupScreen*

I/O, UltraPaint I/O.

If you're running in black-and-white, turn off *Dropper, Pantone Colors, RGB Color Manager, Separations.*

If your graphic doesn't contain text, turn off *Bézier Text, Search & Replace, Spelling, Text Ruler, Text Utilities.*

Conversely, if a feature isn't working, you probably didn't load the tool. You may discover that sometimes even a major menu command is dimmed: Align, for instance. Your first instinct should be to make sure you haven't turned it off with the Tool Picker.

Keep the tool locked in

Exactly as with MacDraw, Canvas switches back to the Arrow tool after each object you draw. To switch back to the tool you just used, press ⌘ and start drawing. To permanently switch the auto-arrow selection feature off, choose Preferences from the File menu, click General, and select Retain Selected Tool. Now Canvas won't change tools unbidden.

Quick removal and replacement of objects

If you're in some complex tangle of objects, and some are getting in your way, here's a quick way to toss them aside momentarily. Group them. Press ⌘-right arrow three times; each time, the selected group will jump 10 pixels to the right. After they are out of the way, you can work on the remaining objects unencumbered.

When you're ready to put the offending object group back in place, select it and press ⌘-left arrow three times. Not only do they jump back precisely to their original positions, but even their position in the front-to-back lineup remains intact. (If you press Option instead of ⌘, the selected object jumps 50 pixels at a time instead of 10.)

Neat positioning of duplicates

That ⌘-arrow trick is also useful after you duplicate an object. The Duplicate command puts the copy in front of the original, 10 pixels down and 10 to the right. If you want to pop it squarely back on top of the original, press ⌘-up arrow and ⌘-left arrow. Because the ⌘-arrow trick moves a selection by 10 pixels every time, your duplicate will now be perfectly superimposed on the original.

Note that you can *change* the distance an object jumps when you press ⌘-arrow (using the Preferences command).

You can also change how far away a duplicate is placed from the original (using the Duplication command). In other words, these last two Secrets only work if you haven't changed Canvas's default settings.

Keyboard shortcuts

Here are the Canvas tools you can switch to without using the mouse:

To switch to this tool... ..hold down these keys:

Dropper tool

Option and Tilde (~)

Hand tool

Space bar

Zoom tool (magnifying glass)

⌘-Shift-Option

Text tool

⌘-Option-T

Quick window jumping

If you have more than one window open, you usually switch from one to another by choosing its name from the Window menu. Here's a shortcut that can save you at least an inch or two of mouse motion: press Option and click the title bar of any window. You get a pop-up menu listing the Canvas windows and palettes; choose the name of the one you want.

Pasting scaled screen shots

Wow, did we learn this the hard way!

Writing a book like this involves taking a number of screen shots (PICT files of the Macintosh screen). We reduce each screen shot to 60 percent of its actual size, so it won't look ridiculously huge on a page.

Sometimes, though, we want to add an element to the image: an arrow or a caption, for example. We thought Canvas was a natural for this because its Text and Line tools are so good.

But whenever we pasted in a reduced-size graphic to Canvas, it wound up looking terrible (see Figure 20-18).

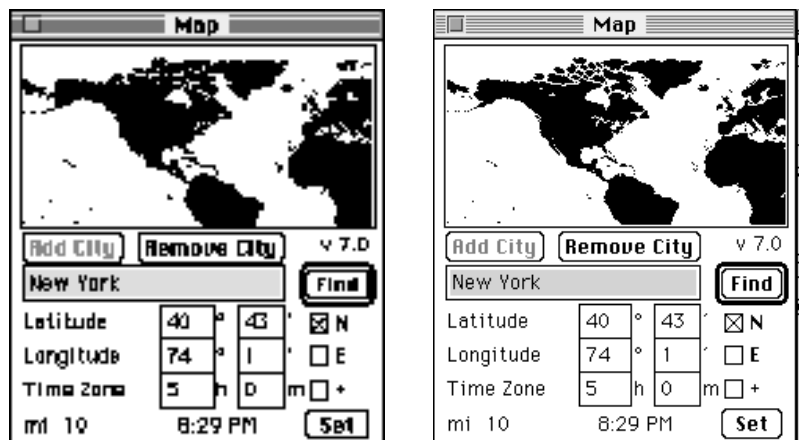


Figure 20-18: If you paste a reduced-sized screen shot into Canvas, you get a

blotchy mess (left). Unless you use our Secret (right). *{Ed. note: You can't really see the difference if you're reading this on the screen; in the printout, you'll see it!}*

Turns out the Secret is not to use the Paste command at all. Instead, use the Paste Picture Object command (in the Edit Special submenu).

Hidden palettes

You probably haven't even seen all of Canvas's pop-out palettes. The Text tool, for example, has four. You control which pops out by holding down a particular key.

Normally, if you hold the mouse down on the Text tool, a list of text styles pops out. If you ⌘-click the tool icon, you see a list of your fonts. Shift-click it for a list of type sizes. And ⌘-Option-click the icon to see a list of fonts displayed in their actual type faces.

Move a guide line and everything it touches

Adding and moving guide lines in Canvas works much as it does in page-layout programs. And you bring them onto your screen the same way: by clicking in the ruler and dragging into the drawing area.

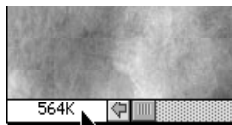
Our Secret: Option-drag the guide, and any objects touching it will move along with it.

Quick before-and-after views in dialog boxes

Here's one of the simplest but least-known Secrets: Whenever you make some adjustments in a dialog box — the Curves or Levels dialog boxes, for example — you can compare the new setting with the original by holding the mouse down on the window's *title bar*. When you release the mouse button, the image snaps back to the new setting you made in the dialog box.

Two hidden information screens

The little file-size indicator at the lower-left corner of the screen conceals two different panels full of useful information (see Figure 20-8).



If you click on this indicator and hold the button down, you

get the Page Preview (see Figure 20-9). If you Option-click here, you get a panel showing the dimensions, resolution, and number of channels for the active window.

Chapter 21 (ResEdit)

Rebuild the System 6 Desktop and preserve comments

Much as this Secret's name appears to be an oxymoron, it's true. You *can* rebuild your invisible Desktop file (see Chapter 1) without losing all the comments you've typed into the Get Info boxes of your files. (This trick, alas, works only on System 6.)

Launch ResEdit. Open the Desktop File (at the outer level of your hard drive). Save a copy of it with a different name. Then rebuild the desktop, as described in Chapter 1. Open the copy of the earlier Desktop File with ResEdit. Select the FCMT (Finder comments) resource, copy it, and paste it into the new Desktop File. Your comments, are back!

The built-in screen-font editor

ResEdit's font editor doesn't affect the printouts if you're editing a TrueType or PostScript font. ResEdit only changes bitmapped fonts and the *on-screen* portion of outline fonts. For more serious font-editing work — and to edit the printer fonts too — you need more serious tools, such as Fontographer. (For an introduction to fonts, see Chapter 24.)

If you do a lot of manuscript reading on the screen, you may wish to touch up a certain punctuation mark or letter to make it easier to read. Here's how you do it:

Launch ResEdit. Open the font file you want to edit. Double-click the NFNT resource. In the window that appears, double-click the specific style and size whose screen font you want to edit. You're warned not to change the widths or heights or characters — only to change the look of the actual character. ResEdit's font editor opens (see Figure 21-20).

To select a character to edit, just type it on the keyboard. You can also drag sideways through the displayed letters at lower-right. Then use the painting tools to change the look of the letters. Save your changes and quit ResEdit. Keep in mind that you have to edit each *size* of the font separately.

Actually, we draw your attention to this secret only half-heartedly. Fact is, ResEdit's font editor has some problems, especially with System 7.1. For one thing, you have to turn 32-bit addressing off to use the ascent, descent, and character limit controls. Even then, the sample text window doesn't always show the correct font. (Notice this weirdness reflected in our screen shot.)

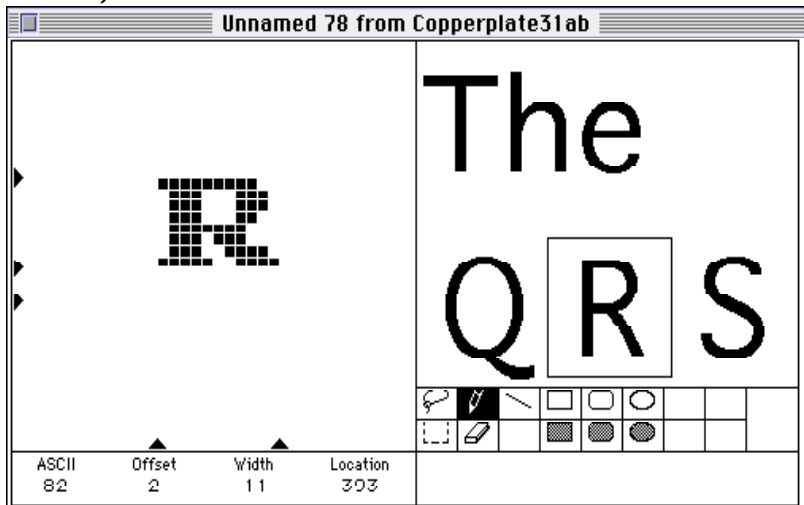


Figure 21-20: ResEdit's

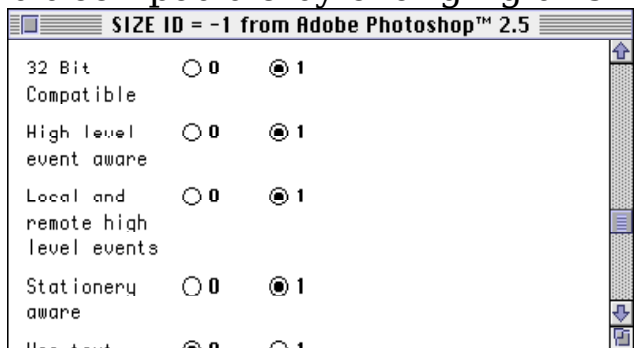
built-in screen-font editor.

Is it 32-bit clean?

If you read Chapter 8, you know that some programs can run with 32-bit addressing turned on, and others can't. (32-bit addressing lets your Mac use more than eight megabytes of memory.) But how can you tell, short of risking a system crash by trying it?

Easily. Open the application you want to examine. Open the SIZE resource icon; then double-click the -1 item. Scroll down until you see the "32-bit compatible" item (see Figure 21-38). If it's set to 1, then you're okay. If it's set to zero, that program may not be 32-bit clean. (It won't *necessarily* crash in 32-bit addressing; it's just that nobody's yet confirmed its 32-bit cleanliness.) And no, you can't *make* a program 32-

bit compatible by changing this indicator from a zero to a 1!

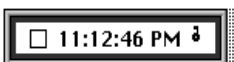
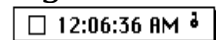


Building a better Alarm Clock

Let's face it: the Alarm Clock is a drab desk accessory. With a little ResEditing, you can make it a lot prettier.

Open the Alarm Clock with ResEdit. Open the WIND resource. Double-click the only resource contained within (number -16000). Select a new window type. The bordered window without a title bar looks great.

While you're at it, select the Custom radio button and add a new border color and content color. The content color will appear as a thin frame of color just inside the window border. If you feel ambitious, copy the solitary PICT resource into a paint program and colorize the clock, alarm, and date icons; then paste them back in. You end up with a flashy-looking alarm clock that works just as it did — but is much more attractive on the desktop (see Figure 21-42).



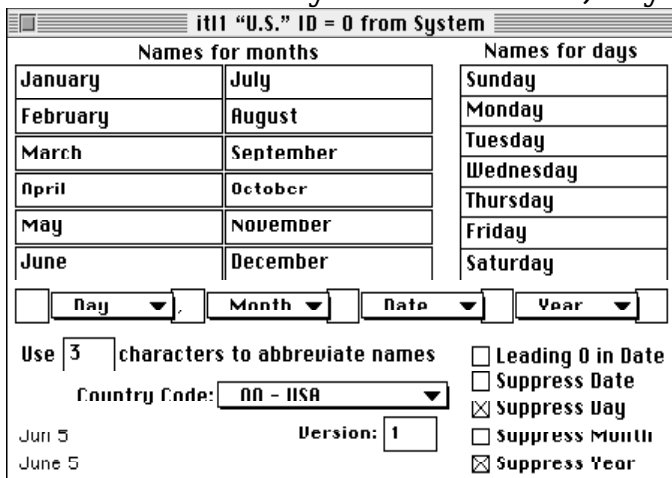
Changing date formats

Some folks get annoyed that under System 7.0 and 7.0.1, the Finder's list views use a full version of the creation and modification dates for your files. You don't see 2/5/94; you see Saturday, February 5, 1993, 9:47 A.M.

Not only is that more information than most people need, but it crowds up list-view windows. Fortunately, you can fix all this with ResEdit. In fact, you can transform the date info displayed in the Finder into just about any format you prefer. (In essence, you can do with ResEdit what the Date & Time control panel does for System 7.1.)

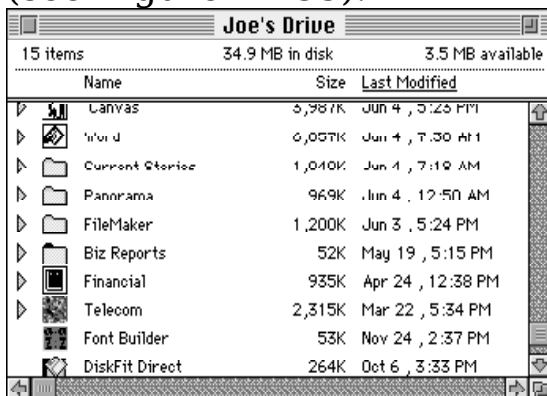
Open a copy of the System file with ResEdit and open the itl1 resource icon. (Watch closely; there are also itl2, itl3 and itl4 icons.) It contains a single resource, called *U.S.*, with an ID of 0. Open it.

Now adjust the settings in the window to reformat the date. You can suppress any element of the date, such as the day of the week or the year, by checking the appropriate checkboxes (see Figure 21-54). You can use the pop-up menus to shift the order of the elements (changing day-month-date-year to day-date-month-year, for example). You can also change the punctuation that appears between each element (you can separate the month and date with a dash instead of a comma). You can even change the *names* of the days and months, if you are so inclined.



When you've made the

needed adjustments, save the changes before quitting ResEdit. Any program that has a date-stamp feature, such as Word, will use your new date format. And, of course, the Finder will, too (see Figure 21-55).



Eliminating the rename delay

When you click on the name of an icon, System 7 pauses momentarily before activating the name's selection box so

that you can edit it. The

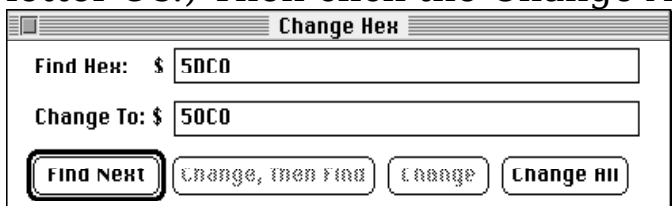
rename delay is there supposedly to prevent you from accidentally renaming an icon you meant to open.

As we mentioned in Chapter 1, you can change this renaming-delay by adjusting the double-click setting in the Mouse control panel. At least you could until System 7.1 came along.

This version of the system requires ResEdit to change the rename delay. (In fairness, System 7 Pack, included with this book, does this trick with much more efficiency; see Chapter 33.)

It's easy to eliminate this delay. (This little hack, however, doesn't work with System 7.5.) Open a copy of the Finder with ResEdit. Open the CODE resource icon and find the resource with ID number 11. Open this resource and choose the Find Hex command in the Find menu.

In the Find Hex field, type `5DC0`. In the Change To field, type in `50C0`, exactly as shown in Figure 21-56. (Those are all zeros, not letter Os.) Then click the Change All button.



You can perform this same

change by searching for the `5DC0` hex string, selecting it, and manually typing in the new code, as shown in Figure 21-57. However you do it, save the change when you're done. Restart your Mac with the modified Finder installed to see the results.

```
Change this      ...to thi
000A 4EAD 090A 7204  000A 4EAD 090A 7204
B280 5DC0 0240 0001  B280 50C0 0240 0001
```

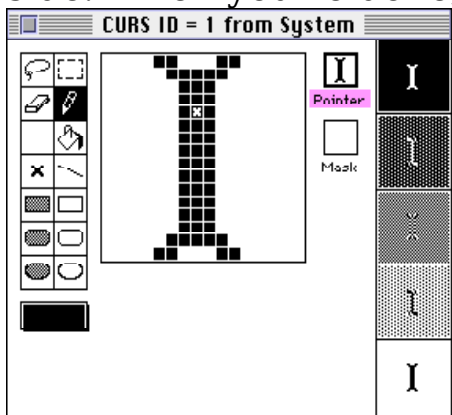
Fatten the PowerBook cursor

The Mac's narrow I-beam cursor can be hard to see — especially on a PowerBook. So why not fatten it up a bit with ResEdit?

Open a copy of the System file using ResEdit and open the CURS resource. You'll see a window displaying the various cursor shapes used by the System. Double-click the I-beam to open an editing window, as shown in Figure 21-58. Now, just use the drawing tools to thicken up the vertical beam, adding an extra

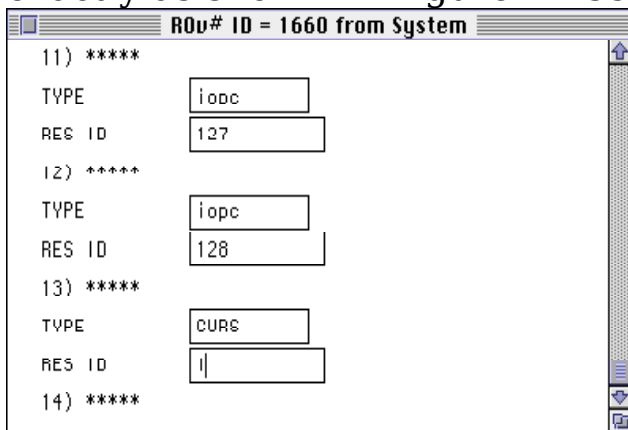
column of pixels on each

side. When you're done, close the window.



Next, open the ROv# resource and open

ID 1600. Scroll to the very bottom of the window and click in the last item — a row of five asterisks. Choose Insert New Field(s) from Resource menu. This adds two new fields in the window — Type and ID. In Type field, enter CURS and in ID field, enter 1, exactly as shown in Figure 21-59.



When you restart your Mac

with the edited System, you'll have a chunky and easy-to-spot cursor.

Making a StartupScreen

Making a custom startup screen for your Mac normally involves using a graphics program that saves a file in a special StartupScreen format. But with ResEdit, you can transform *any* PICT image into a startup screen. Here's how.

Create the artwork you want to use as a startup screen. (You can use a graphics or painting program, the painting tools in HyperCard, the drawing tools in Word, or some clip art. Or you can use Color-It, the full-blown 24-bit color painting and image-editing program that came with this book.) Copy it to the Clipboard.

Then launch ResEdit. Choose New from the File menu. You're asked for a title; call it StartupScreen (no spaces), and save it into the System folder.

Next, choose Create New Resource from the Resource menu. The Select New Type window appears, in which you must indicate the type of resource you want to add to the file. Double-click PICT from the scrolling menu or just type PICT into the text field and press Return.

There's a new, empty window on the screen. Choose paste (⌘-V) from the Edit menu to place your copied graphic into the window. If it's a large image, you won't see all of it; that's okay.

Now, choose Get Resource Info from the Resource menu. In the window that appears, change the ID number from 128 to 0. Save the change and quit ResEdit.

When you next start up your Mac, you'll see your customized graphic in place of the "Welcome to Macintosh" message!

Chapter 22 (Utilities)

Super Boomerang

The crown jewel of Now Utilities (*not* the component that comes free with this book, obviously) is Super Boomerang.

Super Boomerang adds a menu bar to your Open File box. It offers File and Folder menus that list the last 30 or so files and folders you opened. What's more, Super Boomerang doesn't automatically highlight the first file in the list, as the Mac does; instead, it highlights the file you opened most recently.

Finally, Super Boomerang gives every program's Open menu command a pop-up menu that lists the most recently opened files.

The other utilities

The remaining utilities include WYSIWYG Menus (included with this book; see Chapter 34); Now Menus, which lets you assign a keystroke to any menu item in any program,

adds a launch menu to your menu bar, and more; NowSave, which automatically saves your work at predefined intervals (and can create a backup text file containing everything you type); Startup Manager, an extensions-and-control-panels manager (see "Extension managers," below); Now Scrapbook, a replacement for your Apple menu Scrapbook with keywords, sorting, exporting to various graphics formats, and even some basic graphics-editing tools (crop and

resize); and Now Profile, which reports on your Mac's model, configuration, and installed software.

Font-management utilities

Apple's old Font/DA Mover was one of the most grave violations of the Mac's "computer for the rest of us" ease of use. So programmer Steve Brecher wrote Suitcase, and the world has never been the same. System 6, in particular, isn't complete without this program. It lets you install and remove fonts instantaneously. You don't have to restart the Mac, and you certainly don't have to use the Font/DA Mover.

System 7's revamped font-installation scheme makes life with fonts much easier, and lessens the urgency of a font manager like Suitcase. We cover Suitcase and fonts in greater detail in Chapter 24.

Defeating the submenu

Now Menus automatically adds a submenu to any folder or disk listed in the Apple menu, so that you can see its contents. It also adds one to any application listed there, so that you can launch any recently opened documents.

Sometimes, though, this submenu gets in the way. For example, when you launch ResEdit, you don't generally care about recently opened documents; you're only interested in whatever you're *about* to open.

To turn off the submenu for an individual item in the Apple menu, just highlight it with the cursor and press the Space bar. (Press Space again to make the submenu return.)

Solving the mysterious After Dark crashes

We didn't know where else to file these particular bug reports. But we've never seen it in print, so we wanted the world to know.

Performer, the bestselling MIDI music recorder/editor, gives thousands of musicians the impression that it's an incredibly buggy piece of work. It freezes every five

minutes, on the dot.

Well, there's a good *reason* for that: it conflicts with After Dark (which, of course, typically comes on about every five minutes). Actually, it only conflicts with After Dark's *sounds*. So the solution isn't too difficult: just turn off your screen saver's sounds, all of them.

Furthermore, After Dark strikes many people as being incompatible with the Centris and Quadra models: in conjunction with Word, MacWrite Pro, and other programs, After Dark crashes. The solution is to call Berkeley Systems and get an upgrade to version 2.0.x or later.

(The letter X should clue you in that new After Dark versions are introduced frequently. If you buy a new Mac, it pays to keep up.)

Art of Darkness Secrets

You can add modules to your collection of After Dark flavors in a number of ways. One module is More After Dark, from Berkeley Systems. Another is the book/disk combo Art of Darkness.

This latter book contains a module called Fractal Forest. Set it to Winter, set your Mac clock to December 25, and enjoy (see Figure 22-12).



Incidentally, Christmas trees that appear on December 25 are a time-honored Mac hidden-surprise tradition. The classic Mac games Airborne and Dark Castle also have special surprises in store when you play them on Christmas Day (and so does Maelstrom, the outstanding shareware space arcade game).

Screen shots of screen shots

We're sure this next one will hit home with all of two people in the whole world. But it hit home with us: How do you take a picture of a screen-grabber program? For example, if you've got Screenshot's floating palette on the screen in readiness for taking a screen shot, how do you take a picture of *it*?

No, you can't use System 7's ⌘-Shift-3 to take the shot; it doesn't operate when a screen grabber's palette is on the screen. The only way to do it is to *duplicate* the screen-grabber control panel. Give them different names, and give them different trigger key combinations. Then, when one's

on the screen, invoke the other to capture it!

A blue tint to Screenshot shots — or transparency

Here's a Secret for Screenshot, the screen-grabber program from Baseline Publishing. In the early years of Mac magazines, published screen shots had a faint bluish tint to them. You add this tint to any screen shot you take if you press Option while clicking any of the four capture buttons. (If you use the Selection button, hold Option until you finish dragging across the screen.)

Otherwise, white areas of the screen you're capturing will be given a white color in the resulting PICT files. But if you press ⌘ while capturing a screen image, the resulting image will turn what was white on the screen *transparent* in the captured image. Using this technique, you can paste the screen shot on top of a light tint of *any* color that you laid down in advance in a painting program.

begin sidebar: Answer Man

What's verify after writes?

Q: This guy at the office got into a big fight over which program does file compression better. He kept saying that the faster program shouldn't really count, because it didn't verify after writes. What's he talking about?

A: File verification is a hot buzzword among file-compression nuts. When a compression program "verifies after writes," it essentially checks its work. It compares the compressed version of the file that it just "wrote" onto the disk with the original; technically, it uses a *checksum*. It checks to make sure that there were no errors in storing the compressed file (caused by a bad spot on the disk, for example).

As you can imagine, this double-checking process makes the overall compressing take longer (perhaps 20 percent longer). It's safer, though, especially if you're compressing the file onto a potentially flaky disk like a floppy or a removable cartridge.

The guy at the office was right, by the way. You can't compare the compression speeds of two programs if only one of them is verifying after writes.

end sidebar: Answer Man

Hard drive in a menu

Now Menu lets your Apple menu become a hierarchical table of contents for any folder listed there. But why stop there? Put an alias of your hard drive into the Apple Menu Items folder (in the System folder). Now Menu shows you its entire contents, popping out as submenus and sub-submenus from the hard drive's name in the Apple menu.

No-fuss unstuffing with StuffIt

If you have StuffIt (Lite or Deluxe) on your hard drive somewhere, here's a time-saver. Normally, unstuffing

something involves several

steps, including double-clicking the files you want to extract, naming (and choosing a folder for) them, clicking OK, and so on.

You can turbocharge the whole process by holding down the Shift key after you've double-clicked the archive icon in the Finder. (If you haven't yet registered your version of StuffIt Lite, then press Shift after you click the Not Yet button in the opening dialog box.)

Or, if you're already in the program, use the Open command, and then press Shift just after you double-click the name of the archive you want to open.

Your name in lights

Compact Pro is a shareware program. When you send in your money, you register your copy of the program. And that's not all: if you choose About Compact Pro from the Apple menu and wait a moment, you see your name scroll past, surrounded by diamonds.

Stepping Out

This is among the cleverest and weirdest of the Mac screen utilities (from Berkeley Systems [*Ed. note: we don't think they sell it anymore*]). It sets aside a large chunk of memory to use as a *virtual screen*. That is, it tricks your Mac into thinking that it's got a huge monitor. The actual glass of your real monitor becomes just a movable window onto the much larger virtual display. To pan around the virtual monitor, you push your cursor into the edges of your actual screen. The hidden area of the virtual screen scrolls into view. (This is a great advantage to the unfortunate owners of the Apple 12" monitor, upon which many games either won't run or lose important parts of their interface. With Stepping Out, the Mac *thinks* it has a bigger screen, and you can scroll the hidden portions into view.)

Here's the tip: If you find an application that's incompatible with Stepping Out, press Option while it's starting up. Stepping Out will disable itself. Use the Stepping Out control panel to turn the virtual screen back on.

Screen savers on PowerBooks

You don't need them. (Screen savers, that is, not PowerBooks.) A PowerBook LCD screen can't get burn-in syndrome like a regular CRT computer monitor (see Chapter 10 for more on monitors). If you do leave the backlighting on for more than 24 hours, you may get some faint persistence of the image, but it's temporary. It goes away again after the screen is dark for awhile.

But After Dark and Sunset are great on *any* monitor for their fun factor alone (especially on a PowerBook with an active-matrix color screen!).

If it enhances your prestige on the flight to London, then run a screen saver by all means.

Log on once a day only

There are some automatic tasks, such as checking your e-mail, that you probably want to take place only *once* each day. Of course, it's easy to create a macro that runs each time you *turn on* the Mac; even QuicKeys can do that. But if you turn on your Mac several times in a day, such a macro fires itself too many times. This trick lets you trigger a macro just once each *day*, regardless of how many times the Mac is subsequently restarted.

The solution is to set a "flag" for itself that says "Today, I have performed this task." Each time the Mac starts, a macro checks to see if the flag has been set. If it hasn't, it runs the macro and sets the flag.

Assign the macro you want to be run only once per day — we'll call it *E-mail Check* — to a Tempo Autoboot, which you put into your System 7 Startup Items folder. (Under System 6, select the Autoboot icon, then choose Set Startup in the Finder's Special menu, and set the Mac to run the Tempo Autoboot when it starts up.)

On startup, the first thing E-Mail Check does is branch to a macro called *Eval(checked yet?=date)*. If the answer is no, which means that the variable called *checked yet?* doesn't contain today's date, then Tempo branches to your "Log on and download E-Mail" macro. Then Tempo branches to one more macro, called "checked yet?=Eval(date)". This sets the value of *checked yet?* to today's date.

If the Macintosh restarts during the current day, the same thing happens again. But this time, the value of *checked yet?* does indeed equal the value of "date," so Tempo doesn't run the "Log on and download E-Mail" macro.

Tempo can actually make further tests as part of this macro. If you want the logon macro to run only on weekdays, for example, Tempo can also test to see if today's day of week starts with an S. If it does, that means it's a Saturday or Sunday, and your macro gets the day off.

Open a cranky control panel with QuicKeys

There are a couple of ways to open a control panel's panel directly without the bother of choosing Control Panels from the Apple menu and double-clicking an icon. First, you can define a File QuicKey to open it directly. Second, you can use the Panels Extension to do the same thing.

But these macros may not always work. You may run into trouble trying to open a file over a network using one of these macros. The

surefire solution is to use a Finder Events macro (one of the Extensions). Use its Open option to specify a control panel (or any file at all) that you want to open.

Hide-application macros

Here are a couple of our favorite QuicKeys. Define one key to hide the frontmost program by choosing Hide **ClarisWorks** (or whatever) from the application menu. Define another one to choose Hide Others from the same menu. It works like a charm!

QuicKeys also has predefined macros (in the Extension called Process Swap) that can shuffle between multiple running System 7 programs. With one keystroke, for example, you can jump back to the *last* program you were in, or to the *next* program in the list — and you have the option to auto-hide the program you're switching out of!

Instant Fax/Modem switching

Most of the software that comes with today's fax/modems works like this: when you want to fax the document that's on the screen, you press Option or the ⌘ key while pulling down the File menu. Everywhere it usually says Print, it now says Fax (Fax Setup, for example).

Some of the less elegant fax/modems (and network modems), on the other hand, come with software that requires you to open the Chooser and click the fax/modem icon to send a fax. That's a lot of trouble — and QuicKeys can take care of it.

Use the Choosy extension, which comes on the QuicKeys disks. It has one purpose in life: to switch Chooser-selectable drivers (icons) at the touch of a key. You don't even have to open up the Chooser to do it. (Set up a second macro to switch back to your regular printer after you're done faxing.)

The best floppy-saving program in the world

We're about to reveal what we consider one of the truly best-kept secrets in the Mac industry. (We're *not* being paid

by any of these companies, by the way.) This is a program that can salvage the files from almost *any* bad floppy disk. It's an aging, underpublicized piece of software. But we've used it hundreds of times on disks that the Mac insisted were "unreadable." Old disks, new disks, 400K disks, high-density: this program can save almost all of them.

It's called 1st Aid HFS (not to be confused with Apple's Disk First Aid). Unfortunately, *because* it's such a well-kept secret, it got rolled into a package called 911 Utilities, which included Virex, the anti-virus program. And then *that* got rolled into a package called SuperSet, which includes still *other* programs (like the Citadel security

program). The company that made the program has been similarly gulped up a couple of times by other companies.

At this writing, anyway, the company responsible is now called Datawatch, and the package is called SuperSet — and buried deep, deep inside it is the Number One floppy-disk recovery program in the world.

Kill the WDEF virus

One of the most frequent virus attacks (if such attacks can even be called frequent) is that of the WDEF virus. It's as easy to kill as they come: just rebuild the desktop, as described in Chapter 1. Furthermore, System 7 is immune to this virus.

Chapter 23 (Speech, Sound, Movies)

Notes on the AV models

Speech Recognition

The primary pair of controls in this control panel are the On/Off switch and the tolerance slider.

The On/Off buttons, of course, switch speech recognition on or off; the salient point here is that the On option gulps down the 2.5MB required for speech recognition to work. (Click Off to regain that memory instantly.)

The Tolerant/Strict slider is the single most important setting for getting good results from speech recognition. Set the slider toward Strict if you work in a noisy environment; the Mac will execute a command only if it's pretty darned sure what you uttered. If the Mac seems to be ignoring you completely, set the slider toward Tolerant.

The Options pop-up menu

This pop-up menu lists four setup options:

n **Introduction.** Choosing this option reveals the Introduction *button*, which, when clicked, launches the Introduction program (stored elsewhere on your hard drive). This screen is important reading; follow it all the way through. The tour is more fun if speech recognition is on so that you can try the little lessons.

n **Name.** You're generally supposed to address your computer by prefacing each command with its name: "Computer, empty the trash," for

example. The idea is to prevent the Mac from going wild, pulling down menus, and so on, when you're just talking on the phone.

Use this option to indicate what name you want to use and how strict you want to be about having to use it. The name must contain more than one syllable, and it has to be a pretty straightforward word or phrase. (Added fun: Try "Simon says.")

n Feedback. The name that you choose for your computer has nothing to do with the Character that you choose as your Feedback persona (see Figure 13-9).

This option allows you to control how the Mac talks to *you*, both visually and aurally. The Character pop-up menu lists the little cartoony guys shown in Figure 13-10. The image that you choose will float on your screen in a little window, acting perky, sleepy, or confused, depending on how the Mac is reading you.

Make your own movie stills

As "Roseanne" plays away **on your screen**, don't forget that you can take a snapshot at any time simply by choosing Copy from the Edit menu (or by pressing ⌘-C). **(This works in most video-showing programs, such as VideoMonitor and Apple Video Player.)** The Mac saves the frame that it grabbed from the screen as PICT 0, PICT 1, or whatever (unless you changed your Preferences). Feel free to edit the resulting picture in, for example, Color It, which comes with this book and is ideal for, say, editing your ex-spouse's head out of a captured frame of your Thanksgiving footage.

Why your movie is only .02 second long

If you use the VideoFusion program to record a QuickTime movie, your first experience is likely to be short and very disappointing. Sure, you can preview the incoming TV picture (provided that you switched down to 256 colors, as described earlier). But VideoFusion stops recording almost immediately!

The problem lies in VideoFusion's Record Preferences (in the Record menu). The default option is "Record to memory, then write to disk" — meaning that VideoFusion will record only as much movie as it can store in your Mac's current free RAM, which probably is only a second's worth (unless your computer is endowed with extra RAM).

If you choose "Record directly to disk" instead, you'll be able to record much longer movies. Unfortunately, you'll also get much *choppier* movies; recording straight to the

hard drive gives you the jerky low frame rates that you'd normally associate with less AV-savvy Macs.

The solution, of course, is to get a *lot* of memory and enjoy the higher frame rates — or to forgo VideoFusion altogether and buy a real QuickTime production product, like VideoSpigot or VideoVision. (Make sure that the product will work with your specific model. For example, a Power Macintosh 6100 with the AV card can't accept an additional NuBus card.)

The magic keystroke for TV as a monitor

You've traveled thousands of miles with your Quadra AV to give a demonstration. You've been counting on using a TV as a screen. You hook it up, turn on the Mac — and get a staticky mess. You remember that you were supposed to tell the Monitors control panel that you'd be using a TV *while you were still connected to a regular monitor!*

You'd be sunk if you didn't know this trick. Restart the Mac; as it starts, hold down the ⌘, Option, T, and V keys. Your Mac automatically switches to using the attached TV as its screen.

Fortunately, the Power Macs are smart enough to detect when no Mac monitor is attached and to switch to the TV automatically.

The 512-by-384 miracle

When you try putting your Mac's image on TV, you'll notice one problem: everything's tiny. Normal-size text is too small to read. Your menus are barely visible at the top of the screen. Worse, your QuickTime movies — which usually aren't full-screen to begin with — look positively puny, desolately stranded in the center of your yawningly big TV screen. But we know a great trick.

While the picture is displayed on your Mac monitor, open the Monitors control panel, click Options, and select the 512 x 384 monitor setting. When you click OK (Power Mac) or close the control panel (Quadra), you'll see a startling sight: your normally glorious full-screen picture now is a tiny, tunnel-vision, nine-inch picture in the center of your screen.

Terrible, you say? Not for our purposes. Go back to the Monitor control panel's Options window. Switch to displaying the picture on TV, as described earlier. Now the picture is bigger on the TV screen, making it truly easy to read text, restoring your menu bar to clarity, and making any centered QuickTime movie fill much more of the screen!

sidebar: Answer Man

A galaxy of extensions

Q: Good God — what on earth are all these extensions and control panels?
Can't I get rid of some of 'em?

A: If you really want to know exactly what they are, read Chapter 3.

We can tell you this much here: each AV feature requires its own phalanx of System Folder junk. Sure, you can throw some things out — a dozen at a time, in fact — if you don't need one feature or another. Here, for the record, is what you get for each AV aspect:

CD-ROM drive: Apple CD-ROM, Apple Photo Access, Audio CD Access, CD Remote Init (older systems only), Foreign File Access, AppleCD Audio Player, High Sierra File Access

GeoPort Telecom Adapter: Express Modem Tool, Fax Extension, Fax Sender, GeoPort™ Extension, GeoPort™ Telecom, Shared Library Manager, Express Modem control panel

Speech recognition: AppleScript, Apple® Event Manager, PlainTalk™ Speech Recognition, PlainTalk™ Text-To-Speech, QuickTime™, Serial Extension, SR Monitor, SR North American English, System Speech Rules, TTS Female Voice, TTS Male Voice, TTS Male Voice Compressed, Speech Setup control panel

4end sidebar

Why your old monitor doesn't work

The Quadra AV and Power Macintosh AV models have one common feature that we haven't yet mentioned — a feature that you'll probably wish these models had. Neither the Quadra AV nor the Power Mac AV works with many pre-AV monitor brands.

In the past, a controlling signal — known as the *sync signal* — was sent to your monitor on the same wire as the signal for the color green. But during the development of the Quadra AV, Apple changed the signal. Any older monitor that expects that sync-on-green signal won't work.

Sometimes, you can get your monitor to work by obtaining a new cable or NuBus card from the manufacturer. Otherwise, you'll simply have to sell your monitor and replace it with one that's AV-compatible.

The secret movie for Quadra AV owners

If your Quadra AV has a built in CD-ROM drive, try this.

Insert the CD InstallMe First disc into the drive; then launch the Simple Player (or another QuickTime playback program). Choose Open from the File menu. Open the CD's System Folder, and open its Preferences folder. Then find and play the file called Our Gang — a long, dull,

self-congratulatory movie of the AV Hardware design team toying with circuitry.

HyperCard

What a roller coaster ride! First Apple included HyperCard with every Mac. Then Apple handed it over to Claris, who began selling it for \$200, and Apple still gave it away with every Mac. Then Apple *stopped* giving it away with every Mac and created a stripped-down, playback-only version called HyperCard Player. Then Apple took HyperCard back from Claris, enhanced it with color, variable window sizes, and other goodies, and re-released it as HyperCard 2.3.

If you want to learn to program HyperCard, we merrily refer you back to your bookstore bookshelf for entire books devoted to the topic. Nonetheless, we've acquired a few tasty morsels to pass along.

The Magic password

As we mentioned, for a time there were two versions of HyperCard: the free one distributed by Apple and the \$200 one distributed by Claris.

As it turns out, there *was* no difference between the two versions! The free version was temporarily crippled when you first got it, but the following trick instantly changed it into the full, working, Claris programmable version:

Launch HyperCard. Go to the Home stack (⌘-H). Press the left arrow key to go to the Preferences card. Press ⌘-M to bring up the Message box. Type *magic* and press Return. Suddenly, the two final user levels, 4 and 5, spring into view! If you click level 5, you unlock your copy of HyperCard.

Of course, after sly Mac authors like us started spreading the Secret, Apple and/or Claris promptly took the secret out! The version that accompanies all current Macs, HyperCard Player, can't be turned into the full version. No way, no how. (We're not even sure why it's included at all,

because it doesn't come with *any* stacks to play with!)

More about the Message box

The Message box in the last Secret is a powerful channel directly into the heart of HyperCard. Here are some of the commands you can type into the Message box. Remember, press ⌘-M to bring the box onto the screen and press Return at the end of the command.

- s** Opens the Stack Info dialog box.
- b** Opens the Background Info dialog box.
- c** Opens the Card Info dialog box.
- nav** Opens the Navigator palette, containing shortcuts for the navigation commands in the Go menu.

Keyboard shortcuts

If you're in Button or Field-editing mode, press Tab to switch back to Browse mode.

Press ⌘-Option to make a dotted outline appear around every button on the current card. This is a great trick for making sure you're not missing some of the fun by failing to click something. (Hidden buttons, however, remain hidden; they're only outlined when you're in Button mode.)

⌘-Option-click a button to open its script instantaneously. Press ⌘-Option-Shift to display a dotted outline around every field *and* button.

Your name (and Mac) in lights

HyperCard 2.1 has one handy and one goofy feature in one: the About box. Press the Option key as you choose About HyperCard from the Apple menu. As you see in Figure 23-11, HyperCard credits *you* with having authored the program.

How does it find out your name? From the Sharing Setup control panel if you entered your name there. (If not, you see instead the name of one of the actual programmers.) If your name doesn't appear, try again; with each attempt you'll see somebody else's name — and, eventually, yours.

In the main part of the dialog box, you also see a number of interesting specs concerning your Mac.

Externals for a better world

One of the best parts of HyperCard is the *externals*, or

XCMDs, that serve as plug-in features for your stacks. They can make your stacks do things you could never program them to do yourself: control laser disc players, create pop-up menus, and so on. You can get externals from on-line services, by mail order, and from Mac user groups.

Be careful if you decide to distribute your stacks, however; some of the externals have strict licensing limitations. On the other hand, you

can often find freeware or shareware externals that do exactly the same thing as a commercial one.

What system software version?

Here's a handy little undocumented function that tells you the current Mac's version of the System. (You can use this in either the message box or in a script.) It's `systemVersion()`.

If you type this into the Message box, the version number appears as soon as you press Return.

Open a new window

You're probably used to thinking of HyperCard as a one-window show. As soon as you open one stack, the preceding one disappears.

Not so! Press Shift when you open a new stack (or use the Recent window to go to another stack). The new stack appears in its own separate window.

Unhide the menu bar (or keep it hidden!)

Some stacks that come your way may hide the menu bar! You can't use any of the normal HyperCard commands — unless you know the secret keystroke to bring it back into view (or unhide it): ⌘-space bar.

Of course, you, the HyperTalk whiz, can block those ungrateful users from showing your menu bar if you're really bent on keeping it hidden. Just use this script in your stack:

```
on show what
  if what ≠ "menubar" then pass show
end show
```

Hide and show the palettes from the keyboard

When any painting tool is selected, press Tab to show the Pattern palette (or hide it if it's already open). And no matter which tool is selected, you can hide and show the regular painting tools palette by pressing Option-Tab.

Fun with your built-in synthesizer

No wonder they call HyperCard a natural for multimedia. It can play recorded sounds. It can play movies. Now we'll show you how to play its built-in electronic keyboard.

It's a simple one, to be sure. You have to preprogram every single note, and that's all it can play — single notes. But it's fun. You can put this programming either into a button script or directly into the Message box.

You use the command Play. Follow it with the instrument name in quotes (turn off your curly-quotes feature!); the default HyperCard instruments are Boing and Flute, but of course you can record and insert your own instruments.

After that, you just specify which notes and rhythms you want. You can use the regular notes of the scale, A, B, C, and so on, or note numbers (middle C is 60, C-sharp is 61, and so on); following each note name, you can put a number representing which piano octave it's supposed to be in (the middle C octave is 4). You can use the first letter of each rhythmic value to specify note lengths: **q** is a quarter note, **w** is a whole note, and so on. To make a rest, put the value-letter followed by an **r** (a quarter-rest, then, is **qr**); to make a dotted note, type a period (a dotted-half note is **h.**), and to make a triplet type the rhythmic value followed by a 3 (so a triplet sixteenth-note rest is **s3r**).

Here, then, is how you'd listen to "Mary Had a Little Lamb" on the flute. Note the shorthand: if the octave or the note duration stays the same on two consecutive notes, you don't have to repeat that information in the next one.

```
play "flute" e4q d c d e e eh dq d dh eq g gh
```

Now you're a HyperCard soloist! Go to town.

Salvage a corrupted stack

Corrupted cards may make it impossible for you to page through a stack. If so, you can copy and paste the cards one by one into a new stack.

Then, when you get to the card just before the one causing the problem, type the following command into the Message box: *go card the number of this card + 2*. This lets you skip the card or cards that are corrupting the stack.

Editing Sounds with HyperCard

If you bought your Mac between 1990 and 1992, you probably got a copy of HyperCard. **Note:** This *doesn't* work with HyperCard Player, the program that comes with all Macs after September 1992.

Along with the full version of HyperCard (versions 2.1 and later) are two stacks that work wonderfully with sound: Appointments With Audio and Addresses With Audio. You can, of course, record new sounds directly into these stacks: "Lunch with Bill on Thursday," and so on. That's probably what these stacks were designed for.

But you can ignore the address and appointment features and still use HyperCard's powerful sound-editing window. Open any stack. Then choose Audio from the Edit menu. The floating palette shown in Figure 23-2 appears.

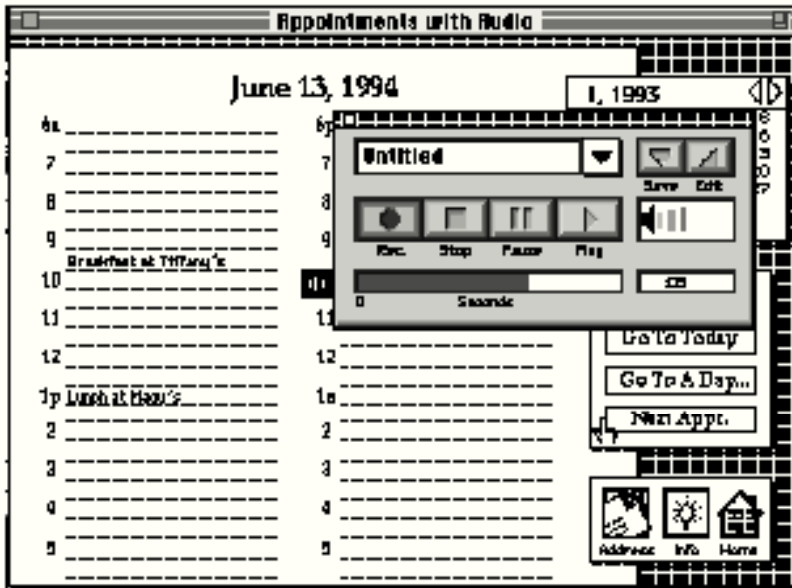


Figure 23-2: In the foreground, you see HyperCard's sound-recording palette.

The recording controls here work just as they do in the Sound control panel. However, here you have a choice of sound quality: Best (22KHz) or Good (11KHz). (For the record, the Sound control panel records at 22KHz.)

Into the cutting room

More importantly, you can click the Edit button in the upper-right corner. A terrific sound-wave-editing window appears (see Figure 23-3).



The blotch you see in this window is a graph of the sound wave over time. The taller the squiggle, the louder the sound. Drag across a portion of this graph and click Play, and you hear only that portion. Using this technique you can actually pick out specific words from the recording (see Figure 23-4). From a civil rights standpoint, this could actually be a dangerous feature!

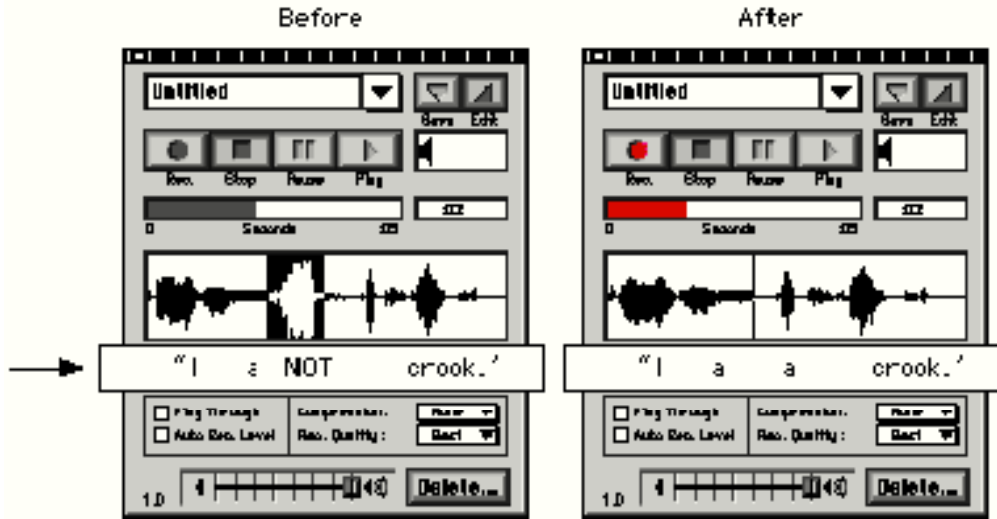
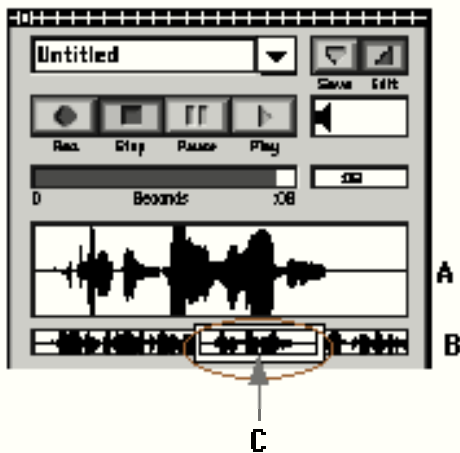


Figure 23-4: Editing sounds is like editing reality, if you're in that kind of mood.

Have a look at Figure 23-5 for a moment. You see that there are two graphs — one big, one small — and a strange kind of rectangle.

You can zoom in for more detail by making the view rectangle smaller (just drag it from one end). You can zoom out — all the way, if you want, so that both graphs actually show the same thing — by dragging the view rectangle boundaries outward.



Finally, to retain the same magnification but move elsewhere in the sound, click inside the view rectangle and drag to either side.

Saving and moving sounds

HyperCard's on-line help (choose About Audio from the Edit menu) gives plenty of tips on installing your newly recorded (or edited) sound into other HyperCard stacks. It's mum, however, on the topic of installing them elsewhere on your Mac.

The answer lies in ResEdit, included with this book. See Chapter 21 for basic instructions. See the "Six great things to do with sounds," next, for specific instructions on grabbing sounds out of HyperCard stacks and pasting them elsewhere.

Sound formats

FSSD sounds

This kind of sound, featuring the little RCA/Victor logo dog, isn't as convenient as a System 7 sound; fortunately, most of the new sounds created these days are in System 7 (snd) format. You can play an FSSD file using SoundMaster (shareware), Sound Edit (the program that comes with Mac Recorder — you can use it to convert the sound), or SoundMover (shareware).

SoundMover suitcases

If you have SoundMover, the shareware program, great. If not, you can use ResEdit, included with this book, to open this suitcase.

After it's open, highlight the name of a sound in the list. From the Edit menu and choose Copy. Paste it into the Scrapbook or the Sound control panel, and it behaves just like any other System 7 sound.

sidebar: Macintosh Secret

Save \$300 the easy way

No non-Apple microphone works on the Mac unless you install its *driver*: a small piece of software that goes into your System Folder (and into the Extensions folder on System 7). This driver comes with the device — or at least it does lately.

If you bought your Mac Recorder before, say, 1990, it didn't come with the driver. However, it's easy to get: the Mac Recorder driver is available from America Online and other on-line services. (You *don't* have to spring the \$300 for the Sound Edit Pro software, which is what you are told if you call up the company.)

It may be called *Mac Recorder Pro driver* or *Macromedia Sound System*

driver or *somesuch*, but you know what it is.

end sidebar

PowerBooks and MIDI

The PowerBook drove MIDI musicians absolutely crazy when it first appeared on the market. MIDI, it was said, no longer worked.

Actually, MIDI always *did* work if all you were doing was ordinary sequencing of the sort we're discussing. Only for specialized major data transfers — *system exclusive* data, as it's called — did the PowerBook 140 and 170 bog down and stop working with MIDI.

What few realized is that most of the “PowerBooks don't work with MIDI!” cries arose for a completely different reason. It turns out that these Macs (even the new models) don't work with MIDI *if AppleTalk is off!* Open your Chooser and make AppleTalk active; then restart. Only then does a PowerBook correctly handle MIDI information through its modem port.

We're told that the PowerBook Duos and recent full-sized PowerBooks have no problem with MIDI. Any PowerBook, even one that's having trouble, can be made to work with the addition of an extension called OMS (from Opcode Systems, 415-369-8131).

Finale 2.6.3 hidden movie

Finale, the music-notation program, has one of the best About boxes ever (version 2, not version 3). Choose About Finale from the Apple menu. The Finale logo — a conductor in the spotlight — appears. Don't do anything. After ten seconds, the conductor gets tired of standing there motionless. He drops his arm to his side and walks off the podium!

Chapter 24 (Fonts)

Font Troubleshooting

The classic “damaged” suitcase problem

One of the worst aspects of the System 7 font-suitcase scheme is the way your font suitcases suddenly become “damaged.” Actually, the Mac just *says* that the font suitcase is damaged when you double-click the font suitcase’s icon. In fact, almost always, the fonts inside are perfectly okay.

First, try dragging the suitcase file onto the System folder icon. The Mac may install them correctly, despite the fact that you can’t open the suitcase on its own. You can often have just as much success using Font/DA Mover 4.1 ([see Chapter 5](#)) if you copy the contents of the troublesome suitcase file into a good suitcase file.

Apple has identified a list of about 12 different circumstances that can lead to a damaged System 7 suitcase file. Prominent among them: putting more than eight styles of the same font into a suitcase.

The damaged-suitcase syndrome can also occur if 31 characters of two fonts' names, in the same suitcase, are the same. The problem is that, theoretically, a *font's* name within a System 6 suitcase can actually be longer than 31 letters. But a *file's* name in the Finder can't.

When you double-click a suitcase file, you're actually asking the Finder to open it up and turn it into a window, complete with icons and files (the individual fonts inside). Since no two files in a Finder window are allowed to have the same name, the Finder simply doesn't open the suitcase at all.

ATM's time lag

ATM imposes a slight penalty on almost any Mac when you use fonts for which it needs to perform its on-screen-smoothing trick. For example, you'll see the lag when you display that type for the first time, zoom in or out, or change views in a word processor.

When ATM draws type on the screen, it stores the characters in a chunk of memory it's set aside called the Font Cache. If that memory becomes full, ATM has to dump whichever characters aren't on the screen at that moment in order to display the ones that *are*. Then, when you change views or scroll to a new page of your document, ATM sits there and rebuilds the fonts it just dumped from memory. This cycle of purging and rebuilding characters from ATM's memory is what slows you down.

The solution is to increase ATM's font cache, using its control panel. If the font cache is large enough (we know people with 512K ATM caches), you shouldn't notice much slowdown at all, except for the first time you put a new size or font up on the screen.

When ATM stops working

Sometimes ATM simply seems to give up the ghost. You may see incredibly strange fonts on the screen for a moment, and after that nothing but chunky, jagged text, as though you didn't have ATM installed at all.

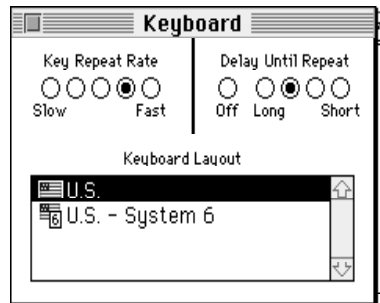
Once again, memory is the culprit. Once again, the solution is to increase ATM's memory allotment (use the ATM control panel).

Unfortunately, we've also heard much more disturbing rumors: that Microsoft has refused to adopt QuickDraw GX. Instead, Microsoft intends to develop still *another* new type format of its own, which it could then use on both Mac and Windows products. Microsoft has invited Apple to adopt this new *Microsoft* font format — but the subsequent ugliness, with what would then be *six* competing font formats, is too frightening to contemplate.

The scrambled System 7 keyset

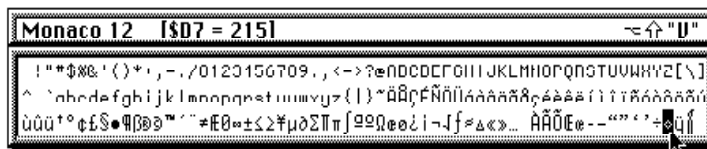
To the consternation of font nuts everywhere, Apple decided to scramble the locations of several dozen of these hidden Option-key characters in System 7. As a result, certain keystrokes don't work anymore to produce the symbols they did in System 6.

If you open your Keyboard control panel in System 7, you see something odd: you have *two* keyboard layouts! (See Figure 24-34.)



Finally, you know why there are *two* layouts. The only difference between them is the scrambling of these lesser-known characters. For example, Å is Option-Shift-R in System 6, but Option-Shift-M in System 7. If some symbol isn't where it used to be, try the other keyboard layout and see if it surfaces.

In fact, we considered devoting a 30-page section to illustrating the appropriate keystroke to produce every one of these hidden symbols in every font — but it dawned on us that you, as the owner of this book, will *never again* need to know which keystroke produces which symbol. You have PopChar, a shareware program. It pops up a palette (see Figure 24-33), from which you can choose any symbol in the font for instant insertion into your document.



(We illustrated a few of the best Option-key strokes in Chapter 9.)

Avoiding the All-Bold-Italic syndrome

Up until System 7.1, PostScript fonts in bold and italic worked as you'd expect. If you put Bookman type on the screen and used the Italic command, the Mac automatically displayed I Bookman Italic in its place. (See "Style variations for PostScript fonts," above.)

However, System 7.1 **and later** can zap you with an oddball style conflict if the *screen fonts* for each style are *loose* in the Fonts folder (instead of being

in a suitcase file). The symptom: bold Bookman, italic Bookman, and bold italic Bookman *all* appear on the screen in the bold italic face!

The solution, obviously, is to stuff all of these screen fonts into a single suitcase file.

ATM is out of memory

Adobe Type Manager is one memory-guzzling hound dog. If it's struggling to deal with too many fonts at once, or if its memory allotment is too low, it'll simply give up and stop working, without notice. Jagged text is the result.

You give ATM more memory by opening its control panel. Use the arrow buttons to increase the memory and then restart the Mac. A word of caution: When you upgrade to System 7.1 from an earlier version of System 7, the Mac doesn't always correctly transfer to the new Fonts folder whichever fonts you previously installed. Specifically, it *does* copy the fonts to the Fonts folder. But it sometimes *fails* to remove them from the System file, where they were stored.

After installation, it's a good idea to double-click your System *file* and make sure no fonts were left behind there. Simply drag their icons into the new Fonts folder (if they weren't copied there) or to the Trash (if they were).

Chapter 25 (Printing)

Printers with hard drives: Are they worth it?

If you've got a large font library or need to use lots of fonts in a single document, having a printer with a hard drive may be an easy way to increase printing speed. Rather than storing a font in RAM, the printer reads it off the disk. (You copy the *printer fonts*, not the screen fonts, onto this specially formatted hard drive.) The delay that's usually introduced by the Mac downloading the necessary font files from your Mac to the printer is eliminated.

Of course, only certain printer models accept a SCSI drive. Furthermore, only certain *hard drives* can be formatted, using the LaserWriter Utility, as a "Printer's Disk." (Ask before you buy!)

Here's yet another wrinkle: If you use Adobe Type Manager to clear up the jaggies on your screen (or even if you use TrueType fonts), you still have to keep a duplicate copy of each printer font on your Mac. That's because ATM (or System 7, with TrueType fonts) needs to have access to the printer font to provide clear screen display. Keeping the fonts on a hard drive attached to the printer does save you time, but unfortunately, it doesn't save you Mac disk space.

PowerBook delayed-printing Secret

Some PowerBooks, such as the 500 series, can do the time-consuming dirty work of printing (processing the document and converting it into instructions for the printer), even when it's not convenient to print. (We'd say that typing at 39,000 feet is one example of an inconvenient time.) That is, if you try to print when no laser printer is attached, you're offered a Print Later button. When you finally arrive at an available printer, all those stored printouts are automatically dumped onto paper.

If you own any other Mac model, however, or if you generally print to a non-laser printer, here's how you can use PrintMonitor to accomplish the same thing.

Make an alias of your Print Monitor icon (which lives in the Extensions folder of your System folder). Put the alias somewhere handy: on the desktop or in your Apple menu. (System 6: Just put PrintMonitor itself on the desktop.)

When you're on the plane and ready to print, launch Print Monitor, and choose Stop Printing from the File menu. Nonsensical though it may seem, now start printing your documents! Obviously, nothing actually prints, but Print Monitor preserves the printouts in disk form, in your PrintMonitor Documents folder.

When you finally *are* hooked up to a printer, launch PrintMonitor again. From the File menu, choose Resume Printing. Your suspended printouts will start spewing forth. (They'll also start printing automatically the next time you turn on the PowerBook.)

You can use this same technique on *non*-PowerBooks, of course — to prepare printouts while your printer is busy or turned off, for example. And you can use QuickDraw GX's Printing menu (the Stop Print Queue command) to accomplish the same thing.

LaserWriter Pro upgrades

Adding memory to the LaserWriter Pro is a tad complicated. These printers contain *one* double-sized, 80 ns, 72-pin, 8MB RAM chip.

Unfortunately, these printers have a little quirk. The LaserWriter Pro has two memory banks. But if there's a double-sided SIMM in one slot, as there is when you first buy the printer, *each side* of the chip is recognized as an individual bank. Therefore, you can't add another 8MB SIMM to the second bank to get a total of 16MB RAM — a rude surprise for a number of people we know.

The only way to get more memory in the LaserWriter Pro is to remove the existing 8MB SIMM from the first slot and *replace* it with a 16MB SIMM. To reach the maximum 32MB capacity of the Pros, you have to add two 16MB SIMMs (which is apt to leave a growing market of partly used 8MB chips out there).

Installing the Level 2 driver

Whether your copy of the Level 2 driver came from Adobe or Apple, you install it using the standard Apple Installer. The Adobe driver comes with over 200 PPDs, however. Our advice: Click Customize at the main Installer screen and install only the set of PPDs that includes your particular printer.

After you install the driver, the next step is to configure it to your printer. You customize it by opening the Chooser, selecting your printer, and clicking Setup. You get a window like the one shown in Figure 25-9.

The driver automatically looks through the installed set of PPDs to find one that matches your printer profile. It loads the correct file by itself.

What's my printer like?

The Level 2 driver gives you all kinds of insider information about your particular printer. In the Chooser, click the driver's icon. Then click Setup, then More Choices, and then Get Info.

Use the StyleWriter II driver for the StyleWriter I

The StyleWriter II printer comes with its own super-duper printer driver. This driver offers several advantages over the original StyleWriter driver: faster printing, better grays, and so on.

Apple has finally admitted that you *can* use the StyleWriter II software with the original StyleWriter. The only obstacle to your using it is *getting* it. Throw yourself upon the mercy of a StyleWriter II-owning friend or a friendly dealer. (Or get System 7.5, which includes the II driver but *not* the I

driver.)

(Ed. note: The same applies in later driver generations-- that is, you can use the StyleWriter 2400 driver for the StyleWriter II, and so on.)

Why didn't Apple originally encourage StyleWriter I owners to use the new driver? We have our theories. Among the most plausible: Remember that jet-clearing trick in the previous Secret? Because the StyleWriter I doesn't use the same mechanical components as the II, we've heard rumors that using that print head-cleaning option could actually damage your StyleWriter I. Our advice: Get the new driver, but just don't use the "Clean ink cartridge before printing" option.

StyleWriter II driver installation hazards

When you prepare a Mac for use with a StyleWriter II, you're supposed to use the original StyleWriter II installation disks. But suppose you already own a Mac that works with the SW II, and you want to set up a friend's Mac. You might be tempted simply to grab the StyleWriter II driver icon from your Extensions folder, stuff it onto a floppy disk, and be on your way.

Watch out, though. The SW II driver isn't the only component you need to make a Mac work with this printer; you also need a special version of the Chooser! Be sure, therefore, that you also copy the Chooser from the first Mac's Apple Menu Items folder; it needs to be installed on the new Mac, too.

Of course, using the original StyleWriter install disks — or System 7.5 — would obviate the need for this chicanery.

Creating PostScript files in System 6

On a System 6 Mac, creating a PostScript file is a little trickier. (This is *really* a Macintosh Secret.) First, turn off Background Printing (open the Chooser to do so). Then choose Print from the File menu and click OK. Just as the printing process begins, press ⌘-K. A new file, called PostScript0, appears on your hard drive.

Then again, maybe you should press ⌘-F. The first time you print something on a PostScript printer, the Mac has to *initialize* the printer by sending it a "prep file" filled with useful information (identifying the computer as a Mac, for example). Without being initialized, the printer won't work.

The difference between the ⌘-F and ⌘-K shortcuts for System 6 is that the former doesn't include this prep file as part of the resultant PostScript file, and the latter does. A PostScript file you create using ⌘-F takes up less space on the disk, but it can only be printed *after* the printer has already been initialized (by printing some other file normally, for example, also from System 6). A PostScript file you create with ⌘-K, on the other hand, takes up more disk space but automatically sends the Laser Prep info to the

printer, making it a safer bet. (The ⌘-K shortcut includes all the *fonts* into the PostScript file, too, making the file especially huge. See “On the Level About Level 2,” in this chapter, for the ramifications of embedding the fonts in a PostScript file.)

test page

The ImageWriter II prints self-test samples of all three printing modes. To do this, turn off the printer. Hold down the Form Feed button as you turn the printer back on. This starts the Draft mode-self test.

While the test page is printing, push the Line Feed button and then push the Print Quality button to select a new mode. Reselect the printer by pushing Line Feed again. When the print head begins a new line, it prints in standard-quality (Faster) mode. Repeat the Line Feed/Print Quality/Line Feed sequence to start printing the test page in Best mode.

circles print circular

The normal settings for an ImageWriter aren't so normal, actually, because a perfect circle on the screen gets printed as an oval. That is, the ImageWriter tends to stretch every graphic slightly.

To get around this problem, select the Tall Adjusted option in your Page Setup box. Tall Adjusted makes the number of dots the same both horizontally and vertically. Graphics print with their proper shapes — but now *text* is distorted because the width of the page increases by 11 percent. The only workaround: consider printing the graphics on a separate pass through the printer (or on separate pages).

Make Draft mode work for you

Draft mode usually looks horrible because the printer uses a built-in font and ignores the font you used on the screen. Yet it *does* pay attention to where each word on the screen *begins*, in terms of its horizontal placement on the page. The result: the printed words are incredibly far apart.

There's a great trick, however, for avoiding this weird word spacing: format your document on the screen in Monaco 10-point font. It's a decent match for the small monospaced font the ImageWriter uses for Draft printing. For the first time, you'll get reasonable Draft-mode word spacing.

sidebar: Answer Man

A keyboard jack on the LaserWriter?

Q: This must have been a design mistake. There's a keyboard/mouse jack on my Apple LaserWriter!

A: That ADB port, which comes on the original LaserWriter II series (the SC, NT, and NTX) was designed to handle "future expansion," as the press release put it. In other words, it was supposed to be able to control external devices such as cut-sheet feeders, output collators, and so forth.

Unfortunately, no such add-ons were ever made available. To further frustrate matters, even if the devices did exist for these printers, the printers' ROM is not equipped to read the port. Since these printers are no longer in production, this is one feature that will probably never be used.

end sidebar

Printing Q&A

Question: *I sent a six-page file to a LaserWriter. After about a minute, I noticed the menus took forever to drop down and the mouse seemed to be ignoring my clicks. Then, all of a sudden, things began working again. Then the cycle would repeat. I ran Norton Utilities and it said, "PrintMonitor was damaged..." so I replaced it. Weird.*

Answer: When something goes wrong in the printing process, the system software takes a few seconds to digest the message. During that time, you may think the system has crashed. Then, in a moment, things will start working fine again.

As for the PrintMonitor damage: there's a bug in System 7.0 and 7.0.1. It sometimes causes PrintMonitor to quit unexpectedly or to become corrupted. Fortunately, there's an easy workaround: *don't quit the program* you're printing from until the printing is over.

Fortunately again, there's a simple longer-term fix: install System 7 Tune-up, Version 1.1.1. (Get it from an Apple dealer, a friend, or an on-line service.) The PrintMonitor problem was fixed in System 7.1.

Question: *I've noticed a similar problem with all recent Apple printer drivers: When first printing, I get a dialog box asking if I want the memory size of PrintMonitor increased. After one or two times, everything is okay.*

Answer: This is normal. When you first install your System software, PrintMonitor comes with a memory allotment of only 80K. Often, that isn't enough to spool a document efficiently. Fortunately, the System software is smart enough to figure out what's going on, and it offers to boost PrintMonitor's memory

allotment to avoid the problem. (Apple's Level 2 driver comes with a version of PrintMonitor whose memory allotment is preset at *130K*.)

It's easy to give your current PrintMonitor more memory. Select its icon (in the Extensions folder under System 7); choose Get Info from the File menu; and type a larger number into the Current Size or Preferred Size box. That should eliminate the "increase the memory size" messages and give you faster printing in the bargain.

Question: *Whenever I try to print, I get an out-of-memory message. I've already followed your instructions in the previous trick and increased PrintMonitor's memory allotment. I'm using System 7. What am I doing wrong?*

Answer: When it's printing, PrintMonitor steals some memory from the Finder, so increasing PrintMonitor's memory may not be the end of your troubleshooting.

You can try increasing the application memory of the Finder, but that's not easily done; if you select Get Info after highlighting the Finder's icon, you won't see any way to change its memory allotment. Solution 1: Restart your Mac with System 6 (*if it works under System 6; the newer Macs won't*). Then you'll be able to change the System 7 Finder's memory just as you can do with any other application.

Solution 2: Make a copy of the Finder, open up ResEdit, open its Size resource, and increase the minimum memory allotment. (See Chapter 21 for the full particulars on using ResEdit, which is included with this book.) Restart the Mac with the edited Finder in place.

Question: *I've been getting out-of-memory problems with PrintMonitor on my IICI, which has 8MB of memory. An Apple technician finally solved the problem: it turns out the problem was insufficient free space on my hard drive. Why would that make a difference?*

Answer: When using Background Printing, the printer driver stores the printout on disk as a *spool file*, which PrintMonitor eventually gets around to sending to the printer. After it's printed, the Mac automatically deletes the spool file.

Depending on how big and how complex your document is, that spool file can be anywhere from 100K to a few dozen *megabytes*. If you don't have enough free space on your hard drive to accommodate this file, your choice is to free up the space or turn off Background Printing.

Question: *Why can't I use Background Printing with my Mac*

LC and StyleWriter in System 7? I could do it when I had System 6.0.7 installed.

Answer: You need to upgrade your StyleWriter driver. This problem was fixed in the StyleWriter driver version 1.1. This new StyleWriter driver came with the System 7 Tune-Up and System 7.1 (you can probably get it from an Apple dealer).

Question: *I just installed the System 7 Tune-Up extension, and now my Microtek PostScript printer doesn't work. What did Apple do to me?*

Answer: Ah, you mean the Microtek PostScript-clone printer. The Tune-Up kit includes new, more efficient printer drivers for PostScript printers.

Apple tested these new drivers with true Adobe PostScript printers but not with all the clones. Go back to the 7.0 printer driver, or contact the manufacturer of your printer and see if they have a custom driver you can use.

Question: *Every time we try to print a document from a networked Mac, the printer restarts, or we get messages about the printer being initialized.*

Answer: It sounds like you've got Macs on the network running both System 6 and System 7. These two systems have conflicting PostScript drivers; each time you switch from one to the other, the printer has to be reinitialized.

The solution is simple: install the System 7 LaserWriter driver (the icon called LaserWriter, in the Extensions folder) on the *System 6* Macs. You can even install the Level 2 drivers on any Mac running 6.0.7 or later.

Send in the clones

When you read the ads for PostScript printers, you sometimes see one advertised as being PostScript *compatible*. That's *not* the same thing as PostScript!

A PostScript compatible, or clone, is one that some company has designed to *imitate* the way a genuine PostScript interpreter (processor) works. Why would anyone bother? Because companies who make true PostScript printers have to pay a licensing fee to Adobe for every single printer they sell. A clone, therefore, costs less than a real PostScript printer.

Do not buy a printer that contains a clone interpreter until you've actually spoken to people who have that model. Find out if they've had problems. And try the printer out, if you can, before buying. Clone printers generally work smoothly until you try the fancy stuff: complicated FreeHand illustrations, say, or, more commonly, Adobe's Multiple Master Fonts. The new Apple laser printer driver may also cause these printers to fail (not surprising, really, since the driver was written by Adobe!).

Chapter 26 (Scanning)

Buying tips

When buying from a store, take along a sample of whatever kind of document, photograph, or artwork that you'll be scanning in your regular work. Try out the scanner. See how well the supplied software enables you to correct or manipulate the image. Copy the resulting image onto a disk so that you can review it on your own Mac to see how easy it is to work with in your own software.

Here's a perfect way to test a scanner's capabilities: Try scanning in a page of *agate type* — that's the super-tiny type (usually about 5.5 point) used in newspapers for listing sports statistics and financial data. Grab a page of baseball stats, run them through the scanner, and take a look at the results. You'll get a good idea of how clearly the scanner can read and reproduce fine print.

Also consider how long the scan takes. A three-pass color scanner naturally takes several times longer to process a color photograph than the single-pass model. Weigh the time it takes to do a scan against the quality of the finished result. If you intend to do lots of scanning, you may have to weigh the time against image quality if the best results are produced by the slowest scanner.

If you need to make any notations on an image to be scanned, use a *nonrepro-blue* pen or pencil. You can buy such a pen or pencil inexpensively from an art or office supply store.

These markings are invisible to most scanners. You won't have to do time-consuming editing work later on to clean off the garbage from your scanned image.

Before plugging into your scanning software and getting on with it, first study the image carefully and see what kind of image processing it requires. Most scanning software lets you make basic adjustments: to contrast between the lightest and darkest areas, and brightness. Even if you intend to do most of your picture touch-ups in an image-processing program, it's still a good idea to get the best quality scan first. Fixing a poor-quality image later may not always be an easy task. Don't forget the phrase "garbage in, garbage out."

Chapter 28 (Online Services)

As the world turns

When you're using CompuServe Information Manager 2.0.2

and you choose the About CIS command from the Apple menu, you see an animated spinning globe in the About window. If you Option-click the globe and keep holding down the mouse button, the earth will start spinning in the other direction, and additional windows will appear with the program's credits listed.

New-locality shortcut for America Online and eWorld

The software for America Online and eWorld software, if you hadn't noticed, is practically identical. No wonder, because Apple (eWorld's creator) licensed the program from the America Online people.

Anyway, both programs offer a handy feature on the startup screen: a Locality popup menu that lets you choose from among several dialing locations. If you often travel between New York and L.A., for example, you can simply use this popup menu to switch from one set dial settings (local access phone number, prefix codes, modem speed, and so on) to another with one mouse click.

To add a new city to this popup menu, you're supposed to choose Get Local # from it. Then you wait while the program dials an 800 number, shows you your choices, makes you choose one, and so on. But suppose you already know the number?

Suppose you don't want a whole new city at all, but simply want to choose between the 2400- and 9600-bps phone numbers for one

city?

Here's how to add or edit the Locality menu — without using the Get Local # function at all.

Return to the Finder. In the America Online (or eWorld) folder, open the Online Files (or eWorld Files) folder. There you find an icon for each of your Locality settings. Highlight one of them, choose Duplicate from the File menu, and rename the copy (e.g. New York 2400).

Now double-click the new icon. It opens to the usual Locality screen, where you type in the phone number and make your settings. Do so and then click Save. Your new settings file is now listed in the Locality popup menu.

Apple's secret Performa forum

Buying a Performa doesn't get you

merely free software and a free modem. If your model came with America Online software, you also get your own *secret Q & A forum* on America Online.

Your version of the America Online software is called something like 2.0.1a or 2.1a. Other versions don't permit access to the secret area, which is called Club Performa. It's literally the *only* America Online area officially staffed by Apple reps. (Club Performa is not to be confused with the generally available Performa Resource Center.) Visit your secret Club . . . but don't tell anybody!

Chapter 30 (SCSI)

The search for some sort of standard to regulate connecting extra devices to a computer began in the 1960s. IBM Corporation developed a standard called OEM Channel for its mainframe computers. OEM Channel was a fairly successful

system of transferring information. Too successful, actually, as far as IBM's competitors were concerned; the Federal

government adopted it as a standard. IBM's competitors went to court in an unsuccessful bid to prevent the standard from being adopted.

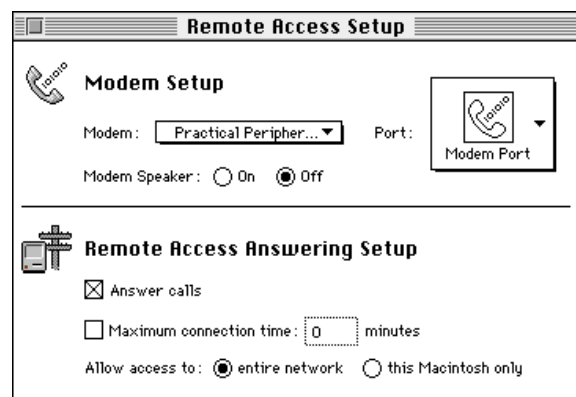
In the early 1980s, Shugart Associates, a disk drive manufacturer, and NCR Corporation, who makes the SCSI chips found in your Macintosh today, teamed up to develop a new standard based on IBM's OEM channel. They called it *SASI*, short for Shugart Associates System Interface. (Before the Mac came along, nobody ever named anything with words — only acronyms.) SASI became the forerunner of SCSI, which was adopted by the American National Standards Institute (ANSI) in June of 1986.

Chapter 31 (Networks)

How to set up Apple Remote Access

Step 1: Remote Access Setup

On the host Mac, open the Remote Access Setup control panel (see Figure 32-34). From the Modem pop-up menu, specify what particular brand of modem is attached to your machine.



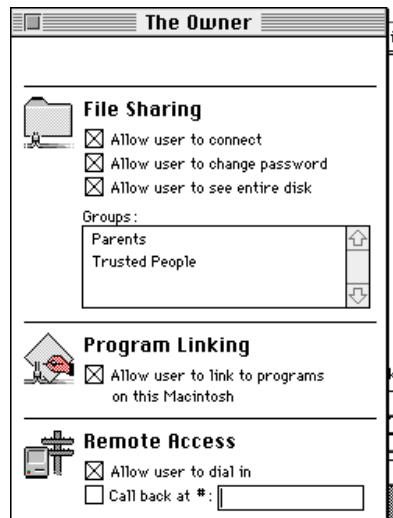
This is an important step. If your modem brand isn't listed in the pop-up menu, you have to call up the modem manufacturer to see if an *ARA script* is available for your modem. (This kind of script is also posted in the libraries of user groups and on-line services like America Online.) Unfortunately, if you can't locate a script for your modem, it won't work with ARA.

Once the modem type is selected, select the Answer Calls checkbox if you want this Macintosh to accept incoming calls. You can also set up the checkbox on the bottom of the control panel's window, which lets you set up a time limit for incoming ARA connections.

The last option, "Allow access to," lets you confine the caller to perusal of only the host Macintosh (instead of the entire network connected to it).

Step 2: Users & Groups

Next, on the Macintosh you'll be calling, open the Users & Groups control panel. Set it up with your name, if you haven't already, and turn on your remote dial-in features. (See Figure 32-35.)

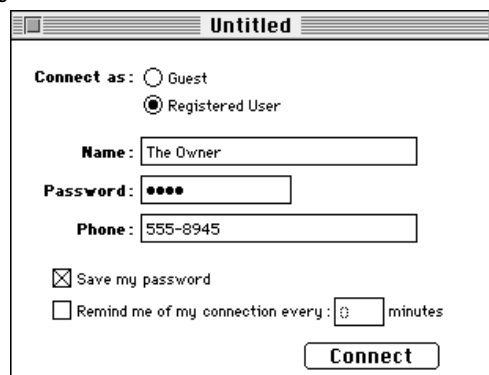


Setting up the PowerBook

Your host Macintosh is ready to accept calls. Now you have to set up the PowerBook.

Install ARA. Set up the PowerBook's Remote Access Setup control panel, just as you did for the host Mac, and specify the modem model you're using. Then launch the Remote Access application.

An untitled document window opens (see Figure 32-36). Enter your name as you entered it on the host machine. Then type in the host Mac's telephone number and enter the password you assigned to yourself.



If you want, click the bottom checkbox. ARA reminds you every so often that you're connected to a remote Mac. (If you

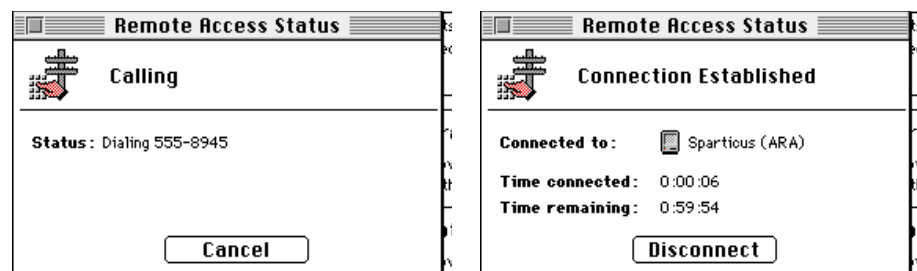
fail to acknowledge the reminder — if you had to run out, for example — ARA automatically hangs up to save you the long-distance charges.) Believe it or not, this is a useful option; connecting to a remote Mac by long distance is so effortless

it's actually fairly easy to forget you have a live connection to Australia (we've done just that — no kidding!).

Fortunately, you can *save* all this information you just entered. (Choose Save from the File menu.) Henceforth, this set of dialing information (name, password, phone number, and so on) is called a *connection document*. Such a document is hugely convenient because you can set one up for each remote computer you need to call. Thereafter, you don't need to reenter all that information.

How to connect

Once the finished connection document is on-screen, click Connect; the computer does the rest! During the time it takes to make a connection, you see a status window, as shown in Figure 32-37.



To hang up, click Disconnect.

The classic unremovable SyQuest problem

It may not surprise you that you can't rename or trash a folder or disk that you are sharing.

But you *also* can't rename or remove a disk that you *aren't* sharing! That's right: if you turn on the file-sharing feature using the Sharing Setup control panel, you're suddenly prevented from touching any disk (larger than 2MB — in other words, larger than a floppy) on your Mac, even if you aren't explicitly sharing any of them. *{Ed. note: This problem was solved in subsequent system versions.}*

As owners of SyQuest cartridge drives can attest, this feature has its irritating aspects. If the icon of a cartridge

(or a CD ROM disc, for that

matter) is on the desktop at the moment you turn on file sharing, the Mac doesn't let you eject it!

The explanation: the Mac is always prepared to offer *you*, the Owner, full access to all mounted disks from *any* Mac on the network. Therefore, it steadfastly hangs onto every disk or cartridge in anticipation of the moment when you might need to access it from elsewhere on the network.

You have to open the Sharing Setup control panel, *turn off* Sharing, eject the cartridge or disk, and then turn Sharing *back on*. (Or just get UnmountIt, part of the freeware package File Sharing Improvement Doohickeys, which does all that automatically.)

begin sidebar: Macintosh Secret

Apple knows a better idea when it sees one

If PhoneNet connectors are so superior to Apple's own LocalTalk wiring system, don't you wonder what they use at Apple Computer?

When we had occasion to visit Apple's offices in California, we were more than a little surprised to see @md guess what? @md *PhoneNet* connectors attached to Macs all over the building.

Of course, most of the LocalTalk wiring has been upgraded to Ethernet networks, but the little gray Farallon boxes can still be found hiding under many a desk. Only in May 1993 did Apple Computer finally acknowledge that the emperor had no clothes @md **and** begin to sell PhoneNet connectors on its own.

end sidebar

Chapter 31 (Slots)

NuBus and Power Macs

If you own a Power Macintosh, or are thinking of buying one, be aware that not every NuBus card is compatible with the PowerPC-based Macs. Video-card incompatibilities, apparently, are causing the biggest problems. If you're

shopping for a video card, or are planning to install a card from your old Mac into a Power Mac, check with the manufacturer of the video card to make sure the card will work in the newer machines.

What's up for NuBus90

First, there's speed. A feature called the IIX Block Transfer Protocol will double the speed of information flowing between the Mac and the card (to 20MHz from the current 10MHz).

Another feature of the NuBus90 spec is something referred to as a 5-volt trickle charge. This lets a NuBus90-capable board receive current when your Mac is turned off but still plugged into the wall socket. How this trickle charge feature will affect your Mac is only a matter of speculation, but here's one possibility. Imagine a NuBus90 fax/modem board. The trickle current lets it remain in standby mode. Then somebody sends you a fax. The modem receives the telephone signal, turns on your Macintosh, and receives the fax. When the fax is finished, your Mac shuts down again. When you sit down at your Macintosh later, you receive a message that a fax came in.

IIsi NuBus card into a PDS

The Macintosh IIsi has a special dual-purpose slot. Technically, it's a PDS. But if you buy a \$200 adapter card from Apple, you can install a NuBus card into it instead.

Some PDS boards are equipped with adapters that allow you to install a *second* card. But you may not want to attempt this piggybacked scheme in the IIsi. Unlike other Macs, this model's smallish power supply doesn't have enough juice for that sort of expansion.

Mac II NuBus glitch

If you've got a very early Mac II, you may have a problem with any NuBus board that has more than 1MB of memory built onto it (which probably includes many video display boards). If a NuBus board on a Mac II is giving you trouble that you can't solve, have your dealer run a little application called NuBus Tester on it (they can get it from AppleLink or from Apple). If your Mac II's motherboard fails the test, you're supposed to be eligible for an upgrade.

NuBus troubleshooting

Some NuBus cards are extremely slot-sensitive. That is, they may work perfectly in one of your Mac's NuBus slots and not work at all in another. (Evidently, some companies manufacture the circuitry in their cards to narrower tolerances than Apple does.)

Here's the point: If you install a card and it doesn't work, try installing it in another one of your available NuBus slots. If that doesn't work, try switching it with the cards installed in other slots. You may have to shuffle the cards a bit before arriving at a card and slot configuration that makes all the cards happy.

Chapter 33 (Troubleshooting)

Hunting down an extension conflict

Each extension is a miniprogram. Each, therefore, loads into your Mac's memory when you start up for the day. Sooner or later, a couple of these extensions will probably fight for the same piece of memory. The result, as Mac veterans well know, is either erratic Mac behavior or a system crash.

If you're the unlucky victim of an *extension conflict*, as such a mishap is known, there are a couple of things you can do about it. The first thing you should try is holding down the Shift key as the Mac starts up, thus turning off all nonessential extensions or control panels. You wind up with a Mac that's running a bare-bones System folder, exactly the way Apple intended. (Technically, you don't have to press the Shift key until you see the smiling Mac icon, and you can release it when you see the "Welcome to Macintosh" screen with the words "Extensions off.")

The Shift-key trick is well and good, but it leaves you with virtually *no* extensions running. At that point, you're no closer to figuring out *which* two extensions are conflicting. To solve that question, you must embark on an ordeal of trial-and-error well known to Mac veterans. First, turn off half your extensions and control panels. Then restart and see if the conflict is solved. If it is, then add a few more extensions and control panels back to the System folder and repeat the procedure. If it isn't solved, you've come halfway closer to isolating the two extensions that are quarreling.

This process of conflict-hunting can be made far easier if you own a little piece of software called an *extension manager*. As a matter of fact, you *do* have such a program; it's on one of the disks that come with this book. It's called Extensions Manager, and it lets you easily choose, at startup time, which extensions and control panels you want to load. The ones you choose to omit are put into a new folder called Extensions (Disabled). Even though this folder is within the System folder, it hides extensions from the Mac, which only looks in the three locations mentioned previously for extensions and control

panels to run. (See Chapter 33 for a description of Extensions Manager and instructions.)

Another good idea is Conflict Catcher, for which we've provided a discount coupon in the back of the book. This extension manager *automates* the trial-and-error process of tracking down which of your extensions is causing your problems.