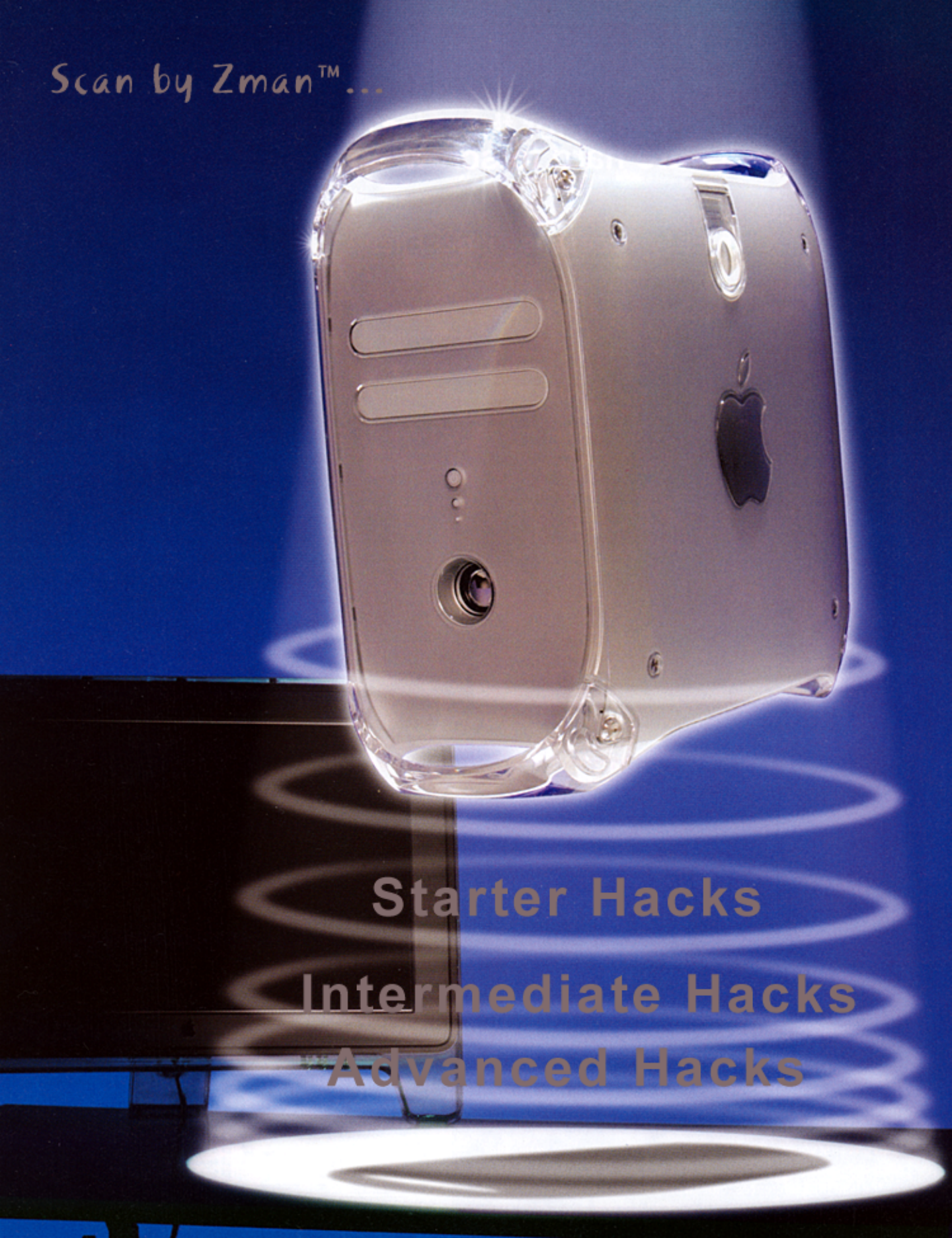


Starter Hacks

Intermediate Hacks

Advanced Hacks

Unleash Your Mac's Hidden Powers

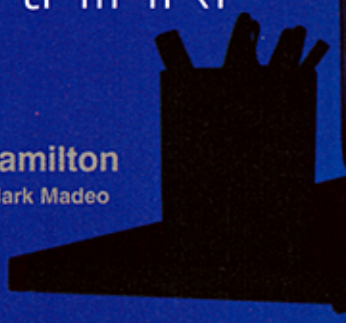
10 sneaky hacks to speed up, spice up, and soup up your Mac OS... and they're easier than you think!

See the word hacker and you probably think of some unshaven dude in a dimly lit room doing something horribly illegal. Right? While that may be one definition of hacker, another definition of the word describes you—the Mac addict who is willing to tweak your Mac in slightly unorthodox ways to unleash power, speed, and customization options you normally couldn't even touch.

The last time we ran an article about hacking was April 2000 (you'll find it on the Disc), but a lot has changed since then—namely, the release of Mac OS X and its wonderful Unix-based (aka hacker-friendly) underpinnings. Mac OS 9 offered much in the way of small customization tweaks, but little in the way of true power hacks. Mac OS X changes everything. From giving your Mac a performance boost to changing your Trash icon to adding convenient ease-of-use options, hacking can now be much more than a geeky pastime—it can be useful, too. And for those of you who have never hacked your OS, or are intimidated by the concept of digging around in places Apple doesn't want you to go, don't worry. Hacking doesn't have to be difficult or even dangerous. In fact, we've included a number of beginner- and intermediate-level hacks for both Mac OS 9 and Mac OS X that any semiproficient Mac user should be able to perform (contrary to belief, hacking is not brain surgery). And we haven't forgotten you hard-core hackers, either—check out the "Advanced Hacks" section.

One final, comforting note: We left each of these hacks on our test machines, and they're running beautifully. Surprised? You shouldn't be. You didn't really think we'd show you how to do something we weren't willing to perform on our own precious Macs, did you?

by Dave Hamilton
photograph by Mark Madeo



X Denotes a Mac OS X hack

9 Denotes a Mac OS 9 hack

Starter Hacks

Think hacking is just for the pros? Think again. These hacks are hard to screw up.

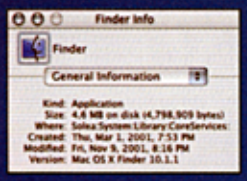
GEEK SPEAK: Run the Finder as root
ENGLISH: Gain Easy Access to Finder Files

Have a file or document that refuses to let you delete or move it? More than likely, the reason is that the process requires authentication, yet Mac OS X doesn't give you the ability to authenticate yourself in the Finder. The fix? Run the Finder in root mode.

Say what? In Mac OS X (as in all Unix-based operating systems), one superuser is always more powerful than the rest. This user is named *root* and is often the sole owner of many system-level files that determine key settings for the entire computer (for example, root owns the files that tell your Mac how to start up, and what services to enable each time it does). The ability to run your Finder as root allows you to copy, move, and delete root-owned files, like those that control your system icons or contain your window settings. Now you *could* take a trip to the Terminal's command line to log in as root (see "Terminal Trouble," p26), but then you lose the benefit of operating within a GUI. By running your Finder as root, you can move all those previously untouchable files from the comfort of the familiar Mac OS interface.

How to Do It

STEP 1: Grab a copy of the shareware Pseudo ($15, http://personalpages.tds.net/~brian_hill/pseudo.html) and launch it. Pseudo, like its command-line counterpart *sudo* (get it?), allows you to run just about any program as root—a very handy utility, as you'll soon see. Open up a Finder window. From your hard drive, navigate through the following folders: System › Library › Core Services. In the Core Services folder you will find two copies of the Finder. Locate the one that is of type Application (not type Classic Application). You can find this information by highlighting the file and choosing Show Info from the File menu.



Make sure you choose the Finder of the kind Application, not Classic Application—otherwise this hack won't work.

STEP 2: Drag that copy of the Finder onto the Pseudo window. Pseudo will likely ask you to enter your password. This is so the system knows it's kosher to run your program as root. Note: You need Administrator access to use Pseudo.

Pseudo allows you to run programs as root right from the GUI in Mac OS X.

STEP 3: Once you've authenticated yourself, the Finder icon will bounce in the Dock, the desktop will change to the default background, and a new window will open after the Finder has relaunched. That new window (and any windows you open subsequently) will have full root privileges associated with them. This is very handy when you get one of those mysterious files in Mac OS X that refuses to let you delete it (strangely enough, we've seen this happen with Microsoft Word documents even). By acting as the root user, you can go in and delete these pesky files. Just make sure you delete items you know are safe to delete and to empty the Trash before quitting the root-enabled Finder, or else you'll be stuck with a file permanently in the root Trash.

When you're finished with root, hold down Command-Option-Escape and then choose to force-quit the Finder. This will quit the root-enabled Finder, close all associated windows, and restore your desktop to its normal background.

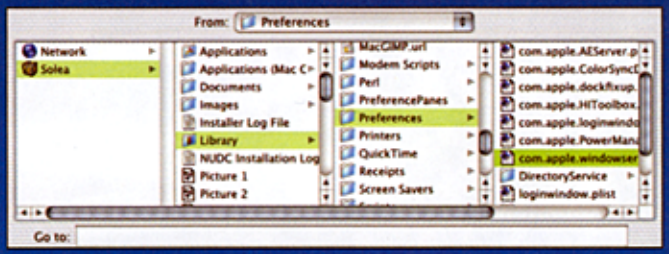
GEEK SPEAK: Enable Window Buffer Compression
ENGLISH: Give Mac OS X a Speed Boost

Mac OS X saves the contents of each window in a portion of memory called a *window buffer*. The OS uses this buffer when it needs to update windows or perform cool Aqua transparency effects. However, saving the entire contents of each window in RAM takes up gobs and gobs of memory. Depending on how many windows you have open and how much RAM your system has, this process can slow you down. Thank goodness Apple included a way of compressing the data in this buffer, which can help speed up your Mac by freeing up RAM. Inexplicably, Apple chose not to *enable* this feature. But that's OK—you can hack your Mac to do it!

How to Do It

STEP 1: First you must make changes to a Mac OS X preference file called *com.apple.windowserver.plist*, which only root users can edit. This file is in the Preferences folder within the Library folder at the root level of your hard drive (not the Library folder in your home directory). Before you do anything, duplicate this file (so you have a backup) by holding down Option and dragging it to the desktop. Then, using your new friend Pseudo (see "Gain Easy Access to Finder Files," above), launch a copy of TextEdit as root to edit this file. To do so, go to your Applications folder, and drag TextEdit on top of your Pseudo icon.

STEP 2: Once TextEdit opens, choose Open from the File menu, and navigate to the original com.apple.windowserver.plist file.



Navigate to the systemwide Preferences folder to find the right file.

9

GEEK SPEAK: Use ResEdit to Hack IE's PICT Resources
ENGLISH: **Customize Internet Explorer's Startup**

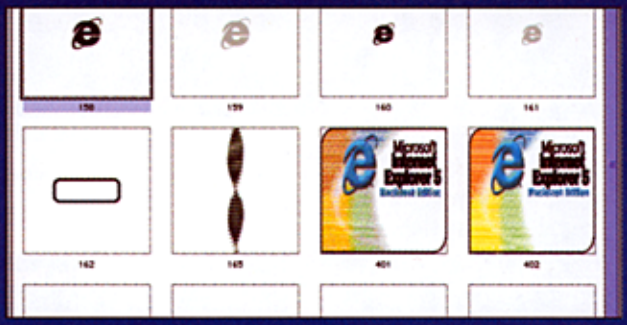
Sure, you can change your Mac's startup screen, but it's even cooler to change Internet Explorer's startup logo and replace it with something a little more eye pleasing.

How to Do It

STEP 1: Make a copy of your Internet Explorer application. Just in case you mess up, you can go back to the unmodified copy of your app. Find the picture you want to use in the startup screen. Using a graphics app like Photoshop or GraphicConverter, size the picture to be 404 pixels wide by 245 pixels high, and copy it to the system's Clipboard.

STEP 2: Open up a copy of ResEdit (free, http://download.info.apple.com/Apple_Support_Area/Apple_Software_Updates/English-North_American/Macintosh/Utilities). From there, open up your original Internet Explorer app. Double-click the PICT resource, and you'll see two copies of your Explorer startup screen in there, with IDs 401 and 402.

Opening up Internet Explorer in ResEdit results in a window containing all of Explorer's resources. You want the PICT resource.



Double-clicking the PICT resource reveals all the pictures stored within Explorer. Just replace 401 and 402 with your own image.

STEP 3: Open up ID 401 by double-clicking its icon, and then choose Paste from the Edit menu. Close that window and repeat for ID 402. If you experience problems pasting in a picture, try increasing ResEdit's memory allocation. Quit ResEdit, allowing it to save the file. You're done! Now Internet Explorer will have a personal touch every time you start it up.

Make Internet Explorer more personal by pasting in your own precious pictures.

STEP 3: You see a file that looks like gibberish (it's just XML, but unless you know how to read that, it might as well be Swahili). Find the first ‹dict› tag, put the cursor underneath, press Return and type:

```
<key>BackingCompression</key>
<dict>
    <key>compressionScanTime</key>
    <real>5.000000000000000e+00</real>
    <key>minCompressableSize</key>
    <integer>8193</integer>
    <key>minCompressionRatio</key>
    <real>1.100000023841858e+00</real>
</dict>
```

Insert this text into your com.apple.windowserver.plist file to enable Window Buffer Compression.

STEP 4: Save this file. Go to the Apple menu, choose Log Out, log back in again, and you'll be running with Window Buffer Compression enabled! If you're lucky, your system will feel snappier (it even sped up our G3 system). This hack should make a difference to those of you who litter your desktops with open windows (you know who you are).

Understanding the OS

To truly appreciate the art of hacking, you should first understand how the operating system works.

Mac OS 9 splits most files, including documents and applications, into two distinct parts—the data fork, which houses raw data (like word processing text or the bits necessary to reconstruct a JPEG image), and the resource fork, the portion of the file that stores the info needed to make an app work properly. Resources typically hold icons, menus, error messages, and the like. In OS 9, you typically hack the resource fork of individual files using programs like ResEdit, which allows you to modify the individual resources to your liking.

With **Mac OS X**, things are a bit different. Unix is at the core of everything, and it stores all settings in text files. But that's of no concern to most users, thanks to Apple's use of *wizards*—menus, checkboxes, and other graphical interface elements that allow you to easily edit the settings in these text files. Many more options are available than you'll find in Apple's graphical wizards—for instance, window minimizing effects beyond Scale and Genie. But there's a way around that, natch. The Terminal application provides you access to raw Unix code and settings, allowing you to make tweaks you otherwise couldn't.

Achtung Hackers!

While most of the hacks here are fairly safe and harmless, you should only make modifications to your system if you're OK with the worst-case scenario: losing all the data on your machine. Of course, that happens rarely; you're more likely to screw up the file or app you're hacking. Here are some precautions and words of warning:

1. Back up before you try anything.
2. Keep a bootable CD by your side in case something should go wrong.
3. Whenever you can, make a copy of a file you are going to hack. This way you'll have a duplicate for restoring your system.
4. Remember that each system is different. What works on our Macs may not work on yours.
5. Follow our instructions! Don't stray or you could end up in a bind.

Intermediate Hacks

A little more complex, but nothing too difficult.

GEEK SPEAK: Use the Terminal to Tweak Your Mouse Scaling Defaults
ENGLISH: Speed Up Your Mouse

Many Mac users like their mice so twitchy that a small gust from the heater kicking on sends their cursor to the other side of the screen. Some third-party mice come with software that allows you to adjust this setting beyond the norm, but if you're stuck with either an Apple-branded mouse or a third-party mouse that doesn't yet have Mac OS X drivers available (cough, Microsoft!), you're out of luck if you want to increase your mouse-tracking speed beyond what the System Preferences allow. Or are you?

How to Do It

STEP 1: Open the Terminal program (inside the Utilities Folder). You will see a window with a flashing cursor at a command prompt. This window is a shell for Mac OS X's underlying Unix environment (for more info on the Terminal, see "Terminal Trouble," p26). At this prompt, type the following and press Return:

```
defaults write --globalDomain
com.apple.mouse.scaling -float 3.0
```

STEP 2: Now close that Terminal window by typing `logout` and pressing Return, or if you really want to be Mr. or Ms. Joe Cool Unix Hacker, you can simply press Control-D to accomplish the same task. That's it! You're done.

Too fast for you? Change mouse tracking back to the default setting by issuing the command below in the Terminal (or try different float values between 1.7 and 3.0 for various options).

```
defaults write --globalDomain
com.apple.mouse.scaling -float 1.7
```

By typing the right command into the Terminal window, you can speed up your mouse instantly!

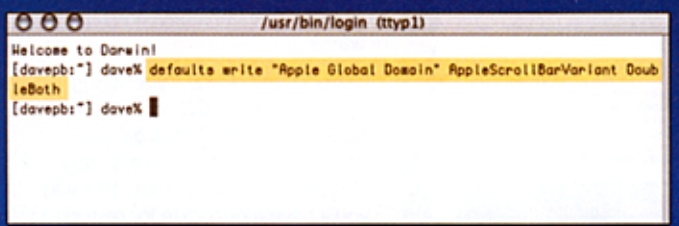
GEEK SPEAK: Hit the Command Line to Unlock Hidden Scroll Options
ENGLISH: Customize Your Scroll Bars

Mac OS 10.1 gives you two choices when it comes to window scrolling. You can either have single scroll arrows at either end of the scroll bar (one at the top and one at the bottom), or both arrows at the bottom of the scroll bar (access these options in the General System Preferences pane). There is one more option, though—having both arrows at *both* ends of the scroll bar. Apple didn't openly give users the ability to enable this feature, but why should that stop you?

How to Do It

STEP 1: Open up the friendly Terminal application. At the prompt, type:

```
defaults write "Apple Global Domain"
AppleScrollBarVariant DoubleBoth
```



Don't worry if the command doesn't fit on one line. Just keep typing—the system won't process what you've typed until you press Return.

STEP 2: Now you must either log out completely and log back in, or quit and relaunch all your applications (including the Finder) to make the change take effect systemwide.

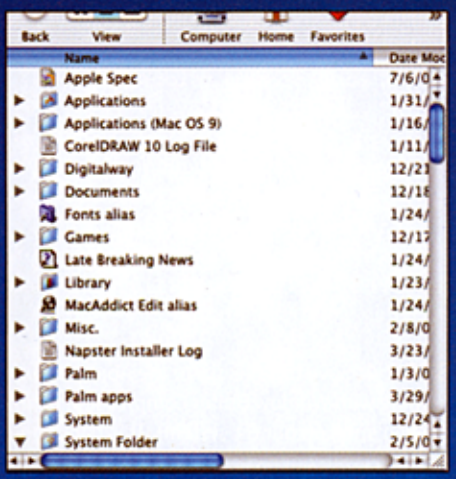
STEP 3: To set your scroll bars back to normal (with the up arrow at the top of the scroll bar and the down arrow at the bottom), type:

```
defaults write "Apple Global Domain"
AppleScrollBarVariant Single
```

And to set your scroll bars so that both arrows are at the bottom, type:

```
defaults write "Apple Global Domain"
AppleScrollBarVariant DoubleMax
```

If you don't like living on the Unix edge, just go to the General System Preferences and change your scroll options. But you're a hacker now—why do things the easy way?



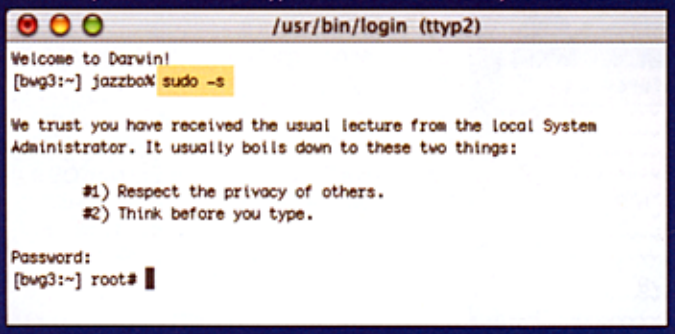
See what a little Unix can do? Now we have a complete set of scroll arrows—top, bottom, right, and left.

GEEK SPEAK: Modify Your TCP/IP RWINS and Others to Maximize Network Performance
ENGLISH: Make Your Broadband Soar

Despite Apple's contention that Mac OS X will automatically tweak itself for optimal performance, this isn't entirely true. By making a few surgical strikes to the system's network-configuration settings, you may be able to speed up your broadband connection (which typically has some extra bandwidth available that it could use more efficiently). Those of you who have direct DSL or cable connections (and are not going through a router) will most likely have the most luck with this hack.

How to Do It

STEP 1: Open the Terminal. Type `sudo -s`, press Return, and enter your password when prompted. This command will put you in root mode so you won't have to type `sudo` in front of every command.



The sudo command lets Admin-specified users become the root user, or system administrator, without logging out.

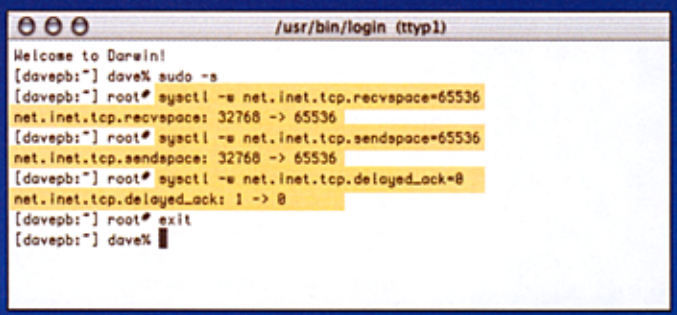
STEP 2: Type the three commands below, following each with a Return:

```
sysctl -w net.inet.tcp.recvspace=65536
```

This line increases the receive buffer, which allows the computer to receive larger packets of data before stopping the flow and responding to the appropriate host. Ideally, the fewer times your Mac has to acknowledge the receipt of a package, the faster the overall transfer (since the sending computer doesn't have to wait for a response as many times before sending more information). The default recvspace value is 32768—here you're changing this value to its maximum.

```
sysctl -w net.inet.tcp.sendspace=65536
```

This is the send buffer, which functions in the same way as the receive buffer except that it affects uploads, whereas the receive buffer affects downloads. For most folks, this setting won't matter as much, but if you tend to send large email attachments or upload pictures to your Web site, you may notice a difference if you play with this setting.



By entering the proper commands, you can potentially speed up your broadband connection.

```
sysctl -w net.inet.tcp.delayed_ack=0
```

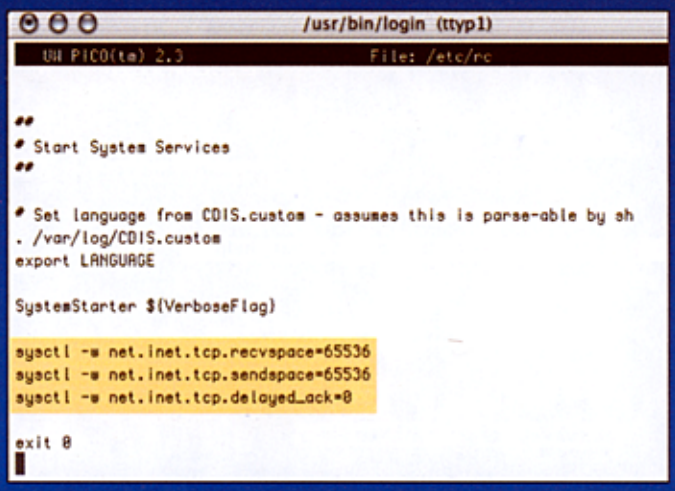
As we said, the system responds to the information sent by hosts, letting them know that the data made it through intact. However, by default the system waits to send this response until it has something else (like a request for another piece of data) to send, and then piggybacks the response on top of that second request. While this practice appears silly, it actually makes sense over slower connections, where you don't want to waste bandwidth. But you've got broadband, baby, and the default setting can slow you down since the host computer will wait longer than necessary to send you the next packet. By setting this option to 0 (1 is the default), you're telling the computer to send its response immediately, which can dramatically increase the perceived speed of large downloads.

STEP 3: Type `logout` to log out of root mode, then type it again to log out of the Terminal (or just press Control-D twice). The best way to test whether your tweaks are in working order is to head to one of the various bandwidth-testing sites on the Internet (we like DSLReports, www.dslreports.com) and use those tools to see what kind of results you're getting. If you are on a network at your place of work, oftentimes the internal routers do their own routing translation, so you may not notice a speed difference.

STEP 4: This hack only works for the current session. If you reboot your machine, the settings you just tweaked revert to their defaults. However, if you test them and like the results, you can modify one of the startup files to make these settings change automatically every time you start up your machine. To do that, type the following into the Terminal:

```
sudo pico /etc/rc
```

With the arrow keys, scroll all the way down to the bottom. The last line should read `exit 0`. Position the cursor right above that line and type the three commands from step 2 again, one per line. Press Control-X to exit, press Y when the Terminal asks if you want to save, and you're all set. Now the system will change your broadband settings each time you boot up.



By adding these commands to your /etc/rc file, you can set them to change automatically at startup.

9

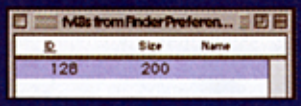
GEEK SPEAK: Modify Your Finder Preferences and Change the Format of Aliases
ENGLISH: Change Your Finder's Alias Font Style

File aliases are a wonderful thing. But depending on what size monitor you use, the italic font they appear in isn't always the most legible type. Wouldn't it be great if you could ditch that icky look? Read on, bleary-eyed stranger.

How to Do It

STEP 1: Make a duplicate of your Finder Preferences file. This file resides in the Preferences folder within your System Folder. Open up ResEdit and navigate to the copy you made. Find the fvl8 resource, open it, and choose resource ID 128.

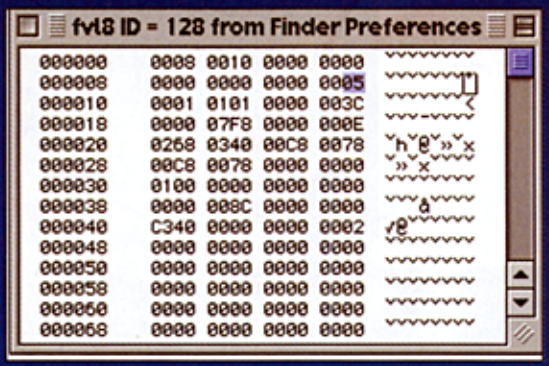
There are a few resources in the Finder Preferences file. Open fvl8.



There is typically only one fvl8 resource.

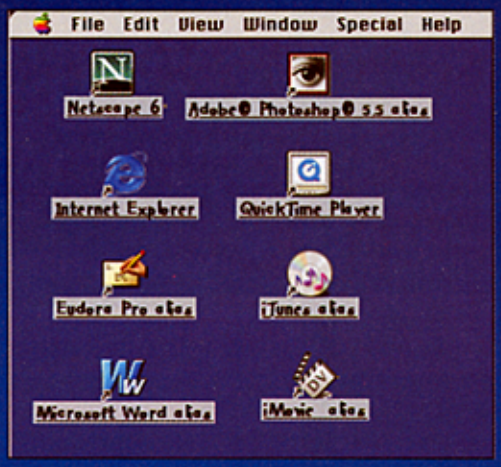
STEP 2: You'll see a bunch of numbers that mean nothing to you. No worries—the end of the second line is all that matters. That number ends with 0002. Change the last two digits to 05 and your alias font will appear in **bold** and underlined (but not *italic*). The combinations here are endless (and we urge you to experiment!); here are some other alternatives for tweaking the last two digits:

- 10—Shadowed font
- 01—Bold font
- 03—Bold, italic font
- 08—Outline font



Make sure you edit the last two numbers of line 2 (ignore the gibberish to their right).

STEP 3: Quit ResEdit, agree to save the changes, and you're almost set. Just move your original Finder Preferences file to the desktop or Trash (but don't empty it yet), put the hacked Finder Preferences file in the Preferences folder, and delete the word *copy*. Restart your computer, and you're good to go.



Once you reboot, your aliases should look different. You can also change the font of your aliases via the Control Panels for a radically different look.

You can also go for the incredibly hard-to-read outlined look.

Hacking Resources

Can't get enough? Check out these resources for more hacks.

Mac OS X Hints (www.macosxhints.com)
These folks have done a great job of compiling hacks and obscure information about Mac OS X. We're sure their test machines are quite accustomed to regular reformatting and reinstallation, since they do test most, if not all, of the hacks they publish. The reader comments generally advise you of any pitfalls you may encounter.

ResExcellence (www.resexcellence.com)
This site has been around for a good long time, and its archive of Classic and Mac OS 9 hacks (along with updates) testifies to that. Recently ResExcellence has begun to cover Mac OS X hacks as well, making this site a definite must-visit for all hackers.

Terminal Trouble

Because it has a variation of Unix at its core, Mac OS X includes the Terminal application, a program that allows you to talk directly to OS X's command line. Every panel in System Preferences is really just a GUI interface for command-line functions. As you can see from the hacks here, the wealth of options goes way beyond what Apple's programmers have selected to include in their check boxes and menus. Along with this newfound freedom comes the possibility that you'll pay dearly for your mistakes. For instance, if you enter the wrong command in Terminal, you can get yourself stuck without access to the command line to fix anything. Here's what you need to know to bail out of Terminal.

If you enter a command in Terminal and the system just sits there without returning you to the command prompt, you can usually get back in control by pressing Control-C (yes, that's Control, not Command—this is Unix, remember?). That will stop whatever process you started, and it should return you to the prompt. If that measure doesn't work, close the Terminal window. However, just because you close the window doesn't mean all the processes have stopped running. If you get stuck and all you can do is close the window, it's probably best to restart your machine ASAP to ensure no errant process is causing undue harm to your system.

Advanced Hacks

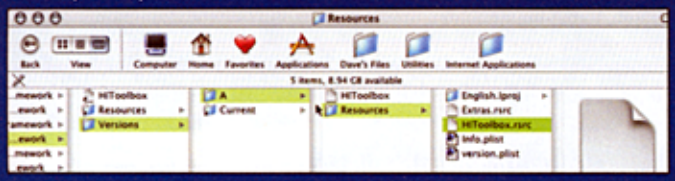
Stepping up the level of trickery—and treachery.

GEEK SPEAK: Modify the HIToolbox.rsrc to Customize Your Icons
ENGLISH: Change Your Trash Icons

Mac OS X introduces a beautiful new icon architecture that allows you to pepper your desktop with resizable, full-resolution icons. But what if you want to change one of them? You can change folders and hard drive icons the old-fashioned way (as long as you're an Admin) using good ol' copy and paste. But if you want to change, say, the default icon for CDs or the Trash, the process is not that straightforward. Follow these steps and you'll be well on your way to making your Mac truly *your* Mac.

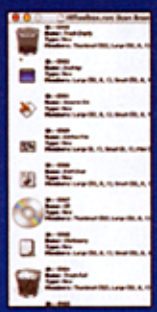
How to Do It

STEP 1: Locate the file HIToolbox.rsrc. You'll find it in the following hierarchy of folders: System › Library › Frameworks › Carbon.framework › Versions › A › Frameworks › HIToolbox.framework › Versions › A › Resources (ever get the feeling that someone doesn't want you to find something?). Hold down the Option key and drag this file to the desktop to make a duplicate. This step is imperative—the hack won't work if you skip it.



The HIToolbox.rsrc file, buried deep within the System Folder, is where you'll find all of the System's default icons.

STEP 2: Grab a copy of Mscape Software's Iconographer X ($15) off the Disc or from www.mscape.com/products/iconographer.html, making sure you get version 2.2 or later, as this includes support for what you're about to do. Launch Iconographer. From the File menu, choose Open Icon. Navigate to your desktop and select HIToolbox.rsrc. You should now see a *long* list of icons.



The HIToolbox.rsrc file contains hundreds of icons for your system resources, including the two Trash icons.

STEP 3: Go online and choose a replacement Trash icon or make your own (see "Make a Mac OS X Icon," p66). For our purposes, we chose one of Mikkel Madsen's creations called Purple II, available at www.mmicons.com. Just remember that you need two icons: an empty trash can and a full one.

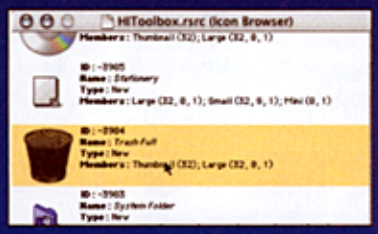
STEP 4: Open the empty Trash icon within Iconographer, the same way you opened HIToolbox.rsrc. From the Edit menu, choose Copy, and then Icon Family from the submenu.

Make sure to choose Icon Family when copying your icons within Iconographer—otherwise the backgrounds won't come with them.

STEP 5: In HIToolbox.rsrc, scroll down to Icon ID –3993 (which correlates to the empty trash can) and double-click to open that family. From the Edit menu, choose Paste, and then Icon Family from the submenu. Close the window and agree to save the changes.

Icon number –3993 is the one you want to replace.

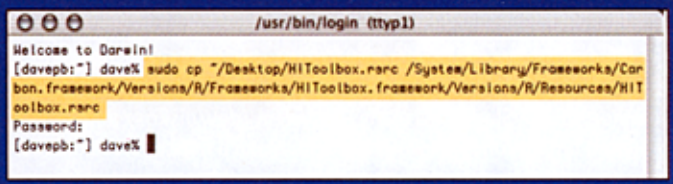
STEP 6: You're done with the first half! Now just repeat steps 4 and 5 with the full-trash icon (ID –3984). Quit Iconographer once you're finished making changes to the icons.



Another page or two down from Trash Empty, you'll find Trash Full.

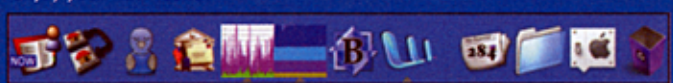
STEP 7: Now you need to put the modified copy of HIToolbox.rsrc in the proper place so the system will use it. Unfortunately, only root users can modify the Resources folder—just dragging this file back into that folder will result in an error. At this point, you have two options. The first is to use your previous hack of making a version of Finder that runs as root (see "Gain Easy Access to Finder Files," p22) using the program Pseudo, which will allow you to drag and drop your file into the Resources folder. The other option is to open Terminal and type the following command:

```
sudo cp ~/Desktop/HIToolbox.rsrc /System/Library
/Frameworks/Carbon.framework/Versions/A
/Frameworks/HIToolbox.framework/Versions/A
/Resources/HIToolbox.rsrc
```



You need to be a root user to replace the HIToolbox.rsrc file. These are the commands you enter in Terminal.

STEP 8: When you're done, log out of your Mac, log back in, and enjoy your new icons!



Enjoy your new Trash. You deserve it.

GEEK SPEAK: Move Your Virtual Memory Swap File to Another Drive or Partition
ENGLISH: Free Up Hard Drive Space

You all know Mac OS X is based on Unix, and you all know (or at least can pretend to know) that Unix has an awesome virtual-memory system built in. What you don't know is that Apple chose to implement Mac OS X's virtual memory in a somewhat unorthodox fashion. Most Unix systems designate a completely separate partition for its *swap files* (files the operating system uses to store disk info that won't fit in RAM). However, Apple has set Mac OS X to put the swap files on the same volume as all of your other data—but for good reason. Imagine telling users they need to repartition their drives just to run Mac OS X.

Unfortunately, Apple's method can cause a few problems. Number one is that the swap files are fixed at about 80MB in size (76.2MB, to be nitpicky). These files are normal files, and they suffer from the same fragmentation issues that plague the rest of the stuff on our hard drives. Having a fragmented swap file isn't good, especially if you're low on RAM because that's when your system is most likely going to use a swap file. To solve this problem, you can tell Mac OS X to put its swap file(s) on another drive or partition, which can greatly improve your system's performance, depending on how fragmented and full your drive was to start with. The reasoning is that if your swap partition starts out completely empty, and the only files the system creates there are 80MB swap files, then you'll only have 80MB chunks of space on the drive. This eliminates the fragmentation that would happen if you were also saving (and deleting) applications, documents, and other files of different sizes on the same partition. **Beware: This is a potentially dangerous hack. Proceed with caution!**

For this hack, you'll first have to reformat your drive (or install another drive) and set aside a small HFS+ partition (250MB to 750MB is more than enough). You can also use an external drive—but be careful when you disconnect it (see "Warning!", p29). Since this hack is for truly hard-core users, we're going to assume you know how to reformat a drive. Once you're done, read on.

How to Do It

STEP 1: Choose a name for the drive or partition you wish to use as a swap device. Name it anything you want, but don't use spaces. StellaByStarlight is the name of our partition.

Create a new partition, making sure it doesn't have spaces in its name.

STEP 2: Most of what you're about to do requires that you be in root mode. Get thee to a Terminal window, and set yourself up as root by typing `sudo -s` and pressing Return. Type `df -k` and look at the list to determine your partition's Filesystem location—the first column in the listing, this information typically starts with */dev*. Filesystem describes the specific disk and partition your Mac is using for a given volume. StellaByStarlight is using Filesystem /dev/diskos7 and is mounted on /Volumes/StellaByStarlight. Make a note of these details.

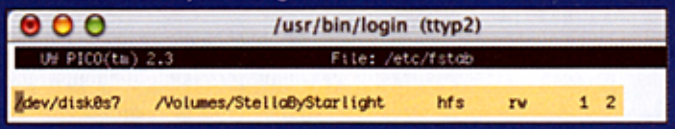
```
Password:
[bwg3:~] root# df -k
Filesystem                1K-blocks      Used    Avail Capacity  Mounted on
/dev/disk0s6               18758992   1271372  9479628    11%    /
devfs                            38        38        0   100%   /dev
/dev/disk0s7               3361748     88496  3273252     2%    /Volumes/StellaBy
tarlight
fdesc                            1         1        0   100%   /dev
<volfs>                        512       512        0   100%   /.vol
automount -fstab [255]           0         0        0   100%   /Network/Servers
automount -static [255]          0         0        0   100%   /automount
```

If we type `df -k`, we see that our StellaByStarlight drive is located at /dev/disk0s7—your info will likely be different.

STEP 3: Since the system initializes the swap file at the beginning of the system startup sequence to refresh it with the current data, you need to tell the system to bring this new partition online earlier than it normally would. (Mac OS X typically brings only the boot volume online at the beginning of the startup process.) Create an entry in the /etc/fstab file (located in /Hard Drive/etc/fstab). This file contains a list of the drives (and their respective Filesystems) that the system will mount at startup. From the command line, type `pico /etc/fstab` and press Return. You'll end up in a text-based editor window. Type the following, all on one line with spaces between each block (but make sure you replace our Filesystem info with your own):

```
/dev/disk0s7 /Volumes/StellaByStarlight hfs rw 1 2
```

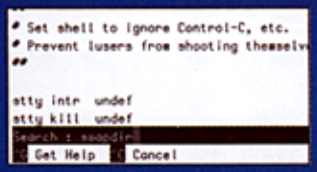
Once you've typed these commands, press Control-X (aka exit), Y, and Return to save your changes to this file.



Add the proper syntax to the /etc/fstab file to tell your Mac to mount your swap drive early in the startup process.

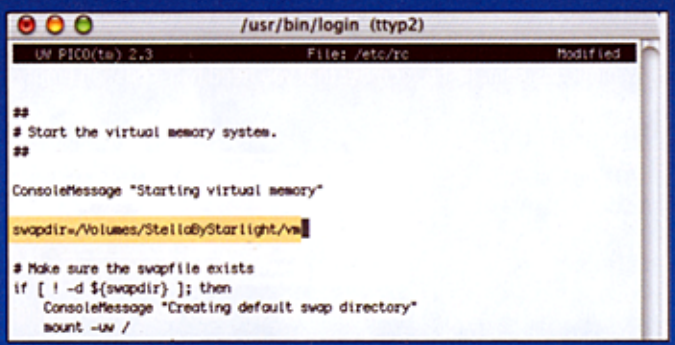
STEP 4: Now that you've created the new swap partition and told the system to mount it early enough in the startup process, you need to tell the system to use this partition as your new swap-file storage location. From the command line, type `pico /etc/rc` and press Return. This opens up another text-editor window, this time with a file full of shell-script commands that tell your Mac how to start up. From here, be sure to follow our directions exactly, otherwise your Mac may never boot properly again (and that would suck).

Find the right location to edit. Press Control-W, type `swapdir`, and press Return. Terminal should bring you to a line that says `swapdir=/private/var/vm`.



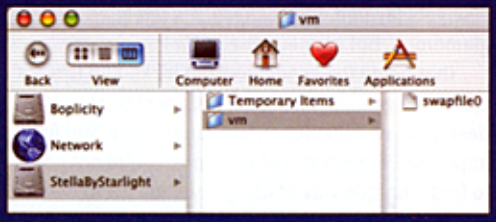
Pressing Control-W, then typing the word `swapdir` and pressing Return tells pico to search the entire document for a specific bit of text.

STEP 5: Using only the keyboard, you must position your cursor at the end of this line, and completely delete the `/private/var/vm` portion. Replace this with `/Volumes/StellaByStarlight/vm` (using your own info, of course). Our final line reads: `swapdir=/Volumes/StellaByStarlight/vm`. Now press Control-X, type Y for yes, and press Return to save the file to disk.



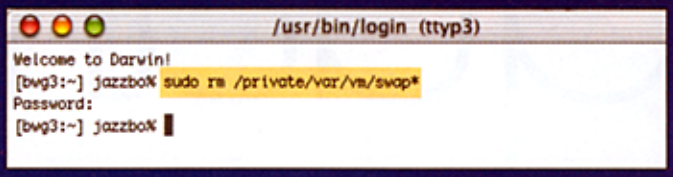
Replace `/private/var/vm` with the proper path to your partition.

STEP 6: Restart your Mac. Assuming you've done everything correctly, you should see a folder on your new disk titled *vm* (short for virtual memory, presumably), and within it a file named *swapfileo*, where your system will now store any data it needs to hand out from RAM to the disk. If this file exists, give yourself a big pat on the back!



After you restart, you should see a folder titled vm on your new disk. If you do, congratulations!

STEP 7: Hold your horses! Chances are your Mac still has an old 76.2MB swap file it no longer needs. In Terminal, type `sudo rm /private/var/vm/swap*`. This command deletes the old swap file(s) and frees up space. To revert your system to the way it was (and store your swap files in their original location), change the /etc/rc file to read `swapdir=/private/var/vm`. You can also remove the swap partition, and OS X puts the files back on your original drive, albeit in the Volumes folder—this method is a bit unorthodox, but it won't break anything. And that's what's important.



Removing the old, unused swap file from your main hard drive will free up at least 75MB of space—maybe more.

WARNING! This hack involves telling your system specifically which drive to look for when creating swap files. If your drive configuration remains the same, you won't have any problems. However, if you remove or change the drive containing your new swap files, Mac OS X will either put the swap files back on your main drive (in the Volumes folder) or put them on another drive (to restore your swap files to their original location, see step 7). Bottom line: Be über-aware of the way you configure your drives, and make the appropriate changes should you choose to rearrange them after performing this hack.

9 GEEK SPEAK: Hack MENU Resources to Create a New Keyboard Command
ENGLISH: Create a Shortcut for Hide Others

Have you ever been working in an application and wanted to purge your desktop of everything except what you're working on? Sure, you can slide your cursor all the way up to the right corner of your screen and choose Hide Others—but that's a lot of mousing for a busy person like yourself. Enter this hack, which allows you to add a keyboard shortcut for your Hide Others menu.

How to Do It

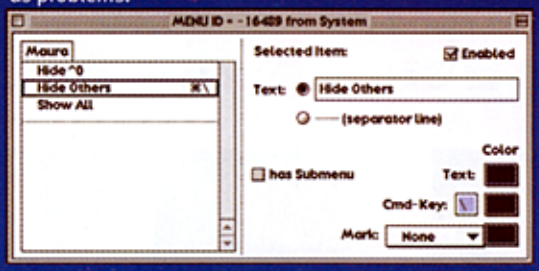
STEP 1: Make a copy of your System file. In ResEdit, open the System copy that now exists in your Mac's System Folder (you want to work on the copy—you *never* want to work on a live System file unless you don't value your Mac). Double-click the MENU resources—the System file contains lots of resources, but thankfully ResEdit organizes them alphabetically.

Scroll down to find the MENU resource bundle, then double-click it.

STEP 2: You'll see a handful of resources, but you want one named Maura. (Incidentally, there's another one here called rANdy—who says the Mac OS doesn't have any more Easter eggs?) When you find Maura, double-click it.

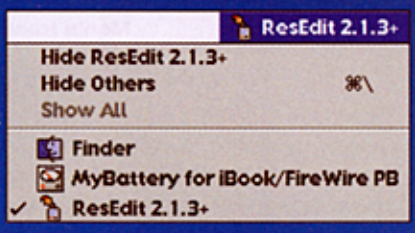
Double-click the Maura resource (but not if she's sitting right next to you...that would be rude).

STEP 3: You'll see a list of menu options—click Hide Others once. Now you'll see a list of options you can set. Look for the box next to Cmd-Key and type whatever keystroke you want to use in combination with the Command key to enact this menu item. Bear in mind that it shouldn't be anything your other apps use, lest the system get confused. We used the backslash key, and thus far it hasn't given us problems.



By putting a backslash into the Cmd-Key option, we can set a keyboard shortcut for hiding other applications.

STEP 4: Quit ResEdit and agree to save changes to the System copy. Now throw your existing System file in the Trash (but don't empty it yet). Rename *System copy* as *System* (or to play it really safe, just move the System file to your desktop). Restart your Mac. Assuming everything worked correctly, you should now be able to press Command-backslash to hide applications. If all is working properly, go ahead and empty the Trash.



Once you restart, check your Applications menu to see if the new shortcut appears.

Dave Hamilton, president of the Mac Observer (www.macobserver.com), spent many of his formative years tweaking Unix systems before moving to the Mac. The fact that Mac OS X is based on Unix still brings a tear of joy to his eye.