Macintosh®

FAQ

Frequently Asked Questions And Answers

by David Lerner & Aaron Freimark

WE'LL *FIX IT* at
TEKSERVE ®

THE OLD RELIABLE MAC SHOP

 Apple Specialist

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Design and layout by Eugene James Daly.

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Command Key Combinations

I got the Mac because I like menus and hate using command keys. But some Mac actions require command keys. What are the common ones?

Commands for Mac OS 9.x and below:

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Open Extensions Manager at startup:	Spacebar while booting
Close all open windows:	Option while Finder loads (can fix weirdness)
Rebuild Desktop:	⌘-option while booting (but read the question about this)
Zap PRAM—System 6:	⌘-option-shift while opening Control panel
Reset Applevision Display (v1.52 or later):	⌘-option-a-v while booting

Commands for Mac OS 9.x and below and for Mac OS X:

Startup Manager (most recent Macs):	Option while booting, allows you to choose which volume to boot from if you have more than one startup volume or CD
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Commands for Mac OS X only:

Safe boot	shift key while booting, 10.1.3 and later, only loads essential extensions at boot and disables login (startup) items, try this if you just installed a new extension or driver and get a kernel panic
Verbose Startup Mode	⌘-v (shows what's going on during startup)
Single User Startup Mode	⌘-s (brings you to Unix style text prompt)

For many more keyboard shortcuts, check out Dave Polaschek's "Magical Macintosh Key Sequences" page at davespicks.com/writing/programming/mackeys.html

Tekserve, New York's Old Reliable Mac Shop

What's Tekserve?

We are electronic engineers who used Macs to design products such as robust public access audio/video equipment, industrial controls and product simulators. When our Macs started breaking, we were shocked by the repair costs, so we learned how to fix them.

Tekserve focuses on Macintosh service, repair and upgrade, both in and out of warranty. We always give free estimates. Although we have a special emphasis on fast turnaround PowerBook repair and upgrade (sometimes while you wait), we work on all Macintosh models. We have a high success rate and reasonable prices for data recovery, and we only charge if we succeed. We stock memory, drives and parts for nearly all Macs, and we are also happy to install upgrades that you buy elsewhere.

Although we started out offering service only, we have slowly expanded sales, and have become one of the larger Macintosh dealers in New York. We stock the full Apple product line and thousands of related products, usually at mail order prices, but often with same day configuration and delivery.

In early 2001, the folks from Smart Machines joined us, bringing along their knowledge and skill in configuring more complex video, graphics, networking and storage solutions. Along the way, we have added authorizations for Sony Broadcast & Professional products, Creo-Scitex scanners, Discreet, Maya, DigiDesign, Pinnacle Cinewave, Avid, and other important Macintosh related items.

We are open 9 to 7 weekdays and 10 to 5 on Saturdays, with free validated parking (at 101 West 23rd Street or at 170 West 23rd Street). No appointment is needed, just come on by.

Isn't one service place as good as another?

Every service shop is only as good as their last repair. What we think sets Tekserve apart is that service is our business—our prime focus is on repair, upgrade and custom configuration. We think that's reflected in our shop—no receptionist, no hidden service areas, just a bunch of well-equipped workbenches and technicians (and a huge inventory of parts).

We do sell lots of Macs and accessories too, and in fact we can frequently configure a system (or ten systems) and deliver the same day. Our approach to sales is based on service; not just trying to move boxes, but actually meeting the customer's needs. For instance, we offer turnkey Final Cut Pro video editing systems with everything you need to plug in and start editing. For corporate purchasers we can configure and ship computers to multiple locations, with your standard software install already loaded and asset tags in place.

Our motto, copied from an old Walker Evans photo from the Library of Congress that we made into a postcard, is "Honest Weights, Square Dealings." And we mean it. If you are ever dissatisfied in any way with our service, please let us know and we'll try to make it right.

Do you really fix things, or just swap parts?

We've been humbled on this one. We started with the premise that we would always fix the broken part, not just swap it. But too many things came back with further problems and what seemed like a good policy backfired. People want their repair right now, but careful repair and testing takes time. So now we insist on swapping a bad part for a new or refurbished one.

So, yes, we actually fix things, but to complete the service quickly we swap parts. We think it's the best of both worlds, because it allows us to stand behind our work with a one-year warranty, and it reduces the need for people to use that warranty. (Note: our Apple warranty and AppleCare repairs are always performed with Apple Service Parts and carry a 90-day Apple warranty. Flat panel LCD repairs and any repairs paid for by third parties also carry a 90-day warranty.)

Don't most other dealers swap brand new parts?

No. Service swap parts are guaranteed (although usually only for three months) to work the same as new ones, but Apple prohibits dealers from claiming that service parts are new. The parts are usually repaired and refurbished at Apple's depot.

Do you provide a messenger service to pick-up and deliver stuff?

We prefer that you use your own messenger service, but in many cases we can arrange to pick up and deliver (for an additional fee). If you send us stuff by messenger, please attach a note telling us who, what, when, where, and why. You'd be surprised at the mystery parcels we receive. We also deliver new systems, cables and accessories by messenger, UPS and Fedex.

What is Smart Machines?

The SMART MACHINES Solutions Group at Tekserve offers complete solutions including design, implementation, and support for specialized systems that are used in video, film, audio, print and interactive production environments. Together with our technology partners we are able to provide production tested solutions that our customers can count on. Smart Machines is an Apple Value-Added Reseller and an Apple Professional Film Reseller.

Do you offer corporate accounts?

Our low cost structure is geared toward payment by cash, check or credit card when the service or purchase is completed. We are happy to accept corporate credit cards. We accept written purchase orders from Fortune 1000 companies, governmental entities, and most educational institutions. If your company's structure requires that you be billed and you have an excellent D&B rating, ask to talk to David and we'll send you a credit application.

Do you offer financing on new computers?

Yes, for individuals purchasing up to $10,000 of equipment we offer the Apple Instant Loan program. For corporate purchases from $2,500 up to millions of dollars, we offer leasing plans from Apple Commercial Credit and others. All financing is subject to credit approval (and lots of other fine print).

How to Avoid Coming to Tekserve in a Panic [9 & X]

1. Save multiple copies of critical files on multiple drives, disks or tapes. In short, backup constantly and religiously, especially when you are under deadline pressure. Save early and often. When you are working on important documents, you may want to periodically save a new version (append a letter to the name, like "important work a", "important work b").

2. Don't save the only version of an important file on a floppy, Zip or CD (in fact, you should never have only one copy of an important file). Make multiple copies. Don't erase your last backup to make a new one— you may be backing up a corrupted file and will need the previous backup.

3. At least one of your recent backups should be in a different location (i.e. off-site). When working on critical stuff, you can email a copy to a co-worker or another email

account once in a while. An iDisk on Apple's web site is one place to stick an extra off-site backup of a few important files.

4. Install and use the latest version of your preferred anti-viral software. You should be sure to install the monthly anti-virus updates.

5. Run the latest Apple Disk First Aid (in Mac OS X, part of Disk Utility) on your drives once a month or so (always backup first). After a full backup, you can also safely use DiskWarrior, TechTool, Norton or Drive 10.

6. If you own a current version of Norton Utilities (7.0 was current as of June 2002), enable FileSaver (but in our opinion, avoid Crashguard). Techtool has a similar file saving feature, but at this writing doesn't support OS X.

7. Own the software you use, read the manuals, keep the original program CDs in a safe place.

Being Prepared

Spend a little time getting ready to cope with a problem before you have one. All recent Macs come with a bootable CD-ROM with System software—keep it handy. If you own a copy of Norton Disk Doctor or DiskWarrior, keep it up to date and be sure that it will boot your CPU. It's also helpful in many recovery situations to have an external storage device like a FireWire hard drive. Even better if you install a bootable system on that drive.

My hard drive has trouble getting going, but it always starts after a few tries. Should I bother backing it up?

No, your data is of no importance and you can probably recreate it within a few months. After all, you have lots of paper printouts to recopy from and you're a fast typist. Sorry to be facetious, but we've had people come into Tekserve for urgent data recoveries with this story! If your computer or hard drive is doing anything unusual—squeaking, chirping, having trouble getting going, read/write

errors, missing or damaged files—take it as a reminder to do a complete backup. Please!

Crisis Situations

I turned on my computer and just see a little blinking picture of a floppy disk or a question mark. [9 & X]

Try starting from the System Install CD-ROM that came with your computer. If the CD or disk is ejected, you may have a stuck button on your mouse or trackball (or it isn't really a startup disk and is lacking the software needed to boot your computer). Turn off the Mac, unplug the mouse or trackball and then see if it starts okay from the CD or your hard disk. If so, the mouse or trackball is the culprit.

What you do next depends on your system version. Warning: In some instances repair programs will make things worse. This is why we say to always backup everything; so that, if a repair fails, you have another recourse. If you have any doubts or cannot afford to lose the files on your hard drive, you may want to bring your computer to Tekserve before running any repair programs. We have ways of doing repairs without taking chances.

If you have OS 9 or earlier:

1. If it starts up okay from your System CD and you see your hard disk icon below the CD icon, the System on your hard drive may have become damaged. If so, backup your important files, run Disk First Aid to repair any directory damage, and then reinstall the System. If that doesn't solve the problem, try a "clean System install" described later in this FAQ.

2. If your hard disk drive icon doesn't show up under the CD or floppy icon, you can try running Disk First Aid. If Disk First Aid sees your hard drive, it may be able to fix problems in the directory. If it finds things to fix, run it again to be sure that everything is really fixed. If it keeps saying it fixed the same thing each time you run it, it's lying to you.

3. If you own Norton Utilities or Tech Tool Pro or DiskWarrior, you can try them now (but please read the next question first).

If you have Mac OS X:

1. Insert your Mac OS X Install disk, and wait until the Installer finishes loading.

2. At the first Installer screen, look under the "Installer" menu, and choose "Open Disk Utility..."

3. If you see your disk(s) on the left side of the Disk Utility window, you can try to repair it using Disk Utility. Open the triangles to see the name of each volume on your Mac. Choose your startup volume, click the "First Aid" tab, and click "Repair." When finished, quit Disk Utility, quit the Installer WITHOUT installing, and restart. If get a blinking system folder, you may need to reinstall your system.

4. If your hard disk or volume didn't show up in the Disk Utility, you can try using Norton Utilities or Tech Tool Pro or DiskWarrior, even if your version is not OS X native. However, make sure it is no more than a year old, and please read the next question first.

Can I make things worse by doing repairs with Norton Disk Doctor, Tech Tool, DiskWarrior, or Disk First Aid? [9 & X]

Unfortunately, yes. In most instances these programs are good tools that help solve problems. But "repairing" certain problems can leave you worse off than before—in some cases, even take a disk from which a professional could easily recover data to a complete loss situation. Basically, when your drive's directory is scrambled, anything that writes to the disk has the potential to do harm. Running Norton Disk Doctor or Tech Tool Pro actually writes to the directory that it's fixing, so occasionally it does damage. However, running a data recovery utility such as Data Rescue, Norton's Volume Recover or Unerase should be fine, if you copy the recovered files to a different drive. If you recover the files onto the damaged drive, you

will be overwriting other data you wish to recover, compounding existing directory damage, and making things worse. The latest Norton Utilities offers to save an "undo" file so that you can go backwards, but I've had Norton crash in the middle of a repair, and the Undo file itself was corrupted or incomplete.

You can also use DiskWarrior to recreate a disk directory, but don't rush to write the new directory to the disk. Instead, mount the volume using the new directory and backup your files to another drive. Check the files thoroughly before you write the new directory or reformat the old drive.

If you are well backed up you can use any repair utility with confidence. If you are not backed up and your data is essential to you, consider getting professional help. We're not trying to scare you into always hiring us— we're trying to scare you into always making lots of backups!

Word just crashed, and I hadn't saved, can I get back my work? [9 & X]

OS 9 and earlier: Before you restart the computer, search for "Word Temp" or "Word Work" files and move them to the desktop. They may contain some saved work. Also, Chowhound Jim Leff says: "Search & Rescue is a program that floats under most Mac-users' radar, but it's absolutely invaluable. It recovers UNSAVED text. If a word processor, email app, etc., crashes and you'd neglected to save the text you were working on, Search & Rescue recovers all your work. Rarely fails, works like magic for any application, even recovers unsaved text after a restart(!). It has saved my ass many, many, many times. Just $15 shareware. I'm a fan and beta tester (and the author quotes me on his site), but I have no financial interest and don't know the guy personally." Get it at www.kagi.com/tjriley

Mac OS X: Word X is a little smarter, it will usually show your last unsaved work when you launch the program after a crash, but it

may not be complete, which is why you want to save regularly.

My keyboard doesn't work, and I get little beeps when I press a key. [9 & X]

You have probably accidentally enabled Easy Access, a special Apple control panel to help disabled people use the Mac keyboard. OS 9 and earlier: Open the Easy Access control panel and turn off each of its features. X: Open Universal Access in System Preferences and turn off sticky keys.

I turn on my computer and hear a series of musical notes (or what sounds like a car crash or broken glass), or I get a picture of an unhappy Mac on the screen with some numbers under it. [9 & X]

This can happen if you have certain older CD-ROMs in your drive when you boot, so first try removing any CD-ROMs. If that doesn't cure it, read on:

Every time you start your Mac it does some diagnostics on itself. With these symptoms, the Mac is telling you that those diagnostics failed.

1. Turn everything off, and disconnect all external SCSI, USB and FireWire devices (except your mouse and keyboard). These are things such as scanners, hard drives, Zip, printers and so on. Now that your external stuff is disconnected, start the Mac and see if the problem was caused by the external devices. If so, reconnect them one at a time to see when the problem returns (with SCSI you must turn everything off before connecting or disconnecting devices).

2. Zap the PRAM. This is special parameter memory that stores crucial settings for your Mac and can become corrupted. Zapping it means resetting it to the original defaults. On newer Macs, hold down ⌘-option-P-R while turning on the Mac. Keep holding those keys down until you hear the startup bong two or three times. (On the PowerBook 190, 1400, 2300, 2400, 3400 and 5300, when you have

successfully zapped the PRAM the screen may be blank and the green sleep LED may be steadily lit, and you will need to then press the reset button on the rear of the computer.) If this didn't help or didn't work, continue with the next step.

3. On recent Macs, restart holding down the option key to bring up the startup manager. On older Macs, restart holding down ⌘-shift-option-delete. You have to hold down all four buttons together, and then, while keeping those buttons down, turn on the computer. This tells the computer to ignore the normal startup drive. If instead of getting the sad tones or sad Mac you now get a blinking picture of a disk or folder, then your disk driver (or the System file) is probably corrupted. The disk driver is special information on your hard drive that tells the Mac how to talk to the hard drive.

We're getting into dangerous territory if you aren't backed up. If you are backed up, or not concerned about anything on your hard drive, try restarting from a System CD-ROM or Disk Tools floppy while holding down those four buttons (or with the option key). If that works, under OS 9.x or earlier run Apple Drive Setup and select "Update driver" from the Functions selection. Warning: Don't click "Initialize"—that will wipe out everything on your drive. If you have used a driver-level compression program such as eDisk, Times Two or Stacker, even updating the driver can wipe out your data.

Under Mac OS X, boot from your system CD, launch Disk Utility, click the First Aid tab, click the reveal triangle on your hard drive (if it shows up), highlight your volume name, and click the Repair button.

4. If you recently added RAM to the computer, you may want to try removing it (if you are comfortable doing this and have the right anti-static equipment).

5. If you still get the sad Mac tones, your problems are more serious—either memory, the motherboard, the hard drive, or an add-on

such as an accelerator, nuBus or PCI card. At this point if you still have trouble, you should probably bring the computer in for service.

My trackpad is jumping around.

Brushing a second finger against the trackpad can cause this, but trackpads respond to the capacitance of your finger and are affected by moisture. Try washing and drying your hands.

My mouse and keyboard stopped working.

Try unplugging and replugging the mouse. If that doesn't help, turn off the computer, and try plugging only the mouse into the back of the computer and restarting. If it works, your computer itself is okay, but there is probably a bad connection in the jack in your keyboard. Try a replacement keyboard.

Note: Recent Macs and iMacs have USB, and it is fine to plug in USB devices (and FireWire devices) when the computer is on. USB devices have square or rectangular plugs and sockets. Older Macs use ADB ports with a round four-pin plug and socket, and those can be damaged by hot-plugging devices.

My Mac froze up. Now what? [9 & X]

First check for simple stuff, like the mouse connector came loose from the keyboard. Sometimes just unplugging and replugging the mouse will cause the Mac to "wake up."

If you have unsaved work, there is a very slim chance of rescuing it. ⌘-option-escape will let you force-quit the current program (the one that froze).

In OS 9 and earlier you might be able to get to any other programs and save your work in them before quitting and restarting. But you will lose what you've done in the current program. When you restart, move the "rescued items" folder out of the trash (if there is one). It might contain temporary files used by your crashed program, and your unsaved work might be partly there.

In OS X, force-quitting a native program will not affect other programs, and you won't need to restart. Force-quitting a Classic program may or may not bring down other Classic programs, and you should follow the guidelines for OS 9.

If the above didn't work, you've probably lost all your work since you last saved. If that's okay with you, restart with the power switch or the reset button or press these three buttons together: ⌘-control-Power on (on Macs without a reset button). After restarting you can try to recover lost text with the shareware Search & Rescue, mentioned earlier.

A disk is stuck in my Mac.

Don't pull it out with pliers, that may destroy the drive. Try launching iTunes and clicking the eject button in the lower right corner. If that doesn't work, try restarting the computer while holding down the mouse button. If that doesn't work, try ejecting the disk by pushing a straightened paper clip into the little hole alongside the drive. If that doesn't work, the Mac probably needs to be disassembled to get the disk out, and the drive might even be damaged. If your Mac has a slot-loading CD or DVD drive, you should only insert regular round 5.25" discs. Minidiscs and novelty CDs (like business card shaped discs) will get stuck (and may even void your warranty).

I just spilled beer/tea/cough syrup on my keyboard (well, my cat threw up on it).

Shut down, unplug the keyboard from the computer, and turn it upside down. Wait a day or few for it to dry. It may all be okay now. If not, bring it for service. (Former Byte columnist Jerry Pournelle says just take it in the shower with you and rinse it thoroughly and then dry it for a few days, but he also believes in Star Wars missile defenses.) If it's an iBook or a PowerBook, remove the battery and the power cord and bring it in for service

immediately. Don't turn it on! The internal backup battery can cause electrolytic corrosion and lead to an expensive logic board repair. Damage caused by spills is NOT covered by warranty or AppleCare (but may be covered by some insurance policies).

Every five to thirty minutes my computer slows down to a crawl and there is a lot of disk activity. What's wrong? [9]

It could be the Autostart worm virus. See "Viruses" later in this FAQ. With Mac OS 8.6 it could also be a problem with DHCP (involved in TCP/IP networking and used to access some networks or DSL/cable modems), updating to Mac OS 9.0 or higher should solve the problem.

My computer takes several minutes to boot. [9]

Your computer may be looking for a server that is no longer available. Try moving the "Servers" folder from your System Folder to the desktop and restarting. If that fixed it, you can throw away the Servers folder, if not, put it back.

Bombs and Crashes

My computer bombs whenever I launch my MajorSoft WordMangler program. [9]

If your problems only occur with one particular program or action, and are fairly repeatable, they should be easy to fix.

1. Try giving the program more memory. Be sure the program is not running, then, click once on the icon of the program and press ⌘-I (Get Info). On newer systems then choose "Show: Memory" from the pop-up list. Increase the "preferred" memory size by 25-100% and try the program again.

2. Check the vendor's web site or versiontracker.com for updates or patches to the program, and try installing them. You may have a known problem that has already been solved.

3. Try starting without extensions. The vendor will tell you to do this, so try it first. Hold down the shift key while the Mac starts up. It should say "Welcome to Macintosh (or Mac OS), Extensions disabled." If the problem is gone, see the next major question below.

4. Quit the program, and then delete any preferences files used by the program (if they are complicated preferences, copy them to another folder or a disk in case they prove not to be the problem and you want to restore them). The preferences file is usually in the Preferences folder in the System Folder, but it could be somewhere else, such as in the folder with the program (or in the "Claris" or "Aldus" or "your software brand name here" folder). Then reinstall the program from the original disk or CD and run any updaters.

5. Some problems can be traced to corrupted, damaged or compressed fonts. Try removing the Fonts folder from your System Folder (if you are using Suitcase, ATM Deluxe or MasterJuggler, also use it to close all your fonts), restart the computer, and see if the problem is solved. If so, you need to work your way through your fonts and see which one is the culprit. A corrupted ATM cache file or ATM database can also cause grief, you can safely delete them.

6. If it's Office 98 (Word, Excel or PowerPoint) that's giving grief or complaining about DLLs or Visual Basic, delete the "Office Registration Cache" and "PPC Registration Database" preference files.

7. If these steps don't solve the problem, contact the company that publishes the program. Many vendors offer good free tech support, and sometimes you will have a standard problem that they can quickly identify and tell you how to fix. Many vendors also have support forums online. This is especially useful for those vendors that charge for telephone tech support, as their online support is still free. You also get the benefit of the input from other users, who may have encountered the same problems and have

workarounds you can use until the vendor fixes the bug. Some companies also have decent support on their web site.

Every time I restart my Mac, I get a bomb just after the Finder loads. What now? [9]

You may have a corrupted print file. Restart with the shift key down to disable extensions. Then open the desktop printer icon (it will have a big X through it) and trash whatever files you find inside it.

All my icons are generic with folded corners. Where are the regular icons? [9]

Your hidden "Desktop" files are damaged or corrupted. See the next question.

I double-clicked on a file and the computer said, "the application that created it cannot be found." Will rebuilding the desktop help? [9]

The invisible "Desktop" file(s) keep track of the icon for each file and which applications are used to open that file. If the desktop file gets corrupted, these problems occur, and the answer is to rebuild the desktop. Restart your computer and press ⌘-option. When you see a message saying "Are you sure you want to rebuild the desktop," click yes.

Of course, some files aren't meant to be opened directly and should give that error message. And sometimes you really don't have the required application. The shareware GraphicConverter program is a gem—it can open, edit, print, and save graphics files in any of more than a dozen formats and only costs $35. MacLink Plus is the top general-purpose translator program and supports many text, word-processing, spreadsheet and database file types.

My computer bombs when I turn it on. [9]

Many bombs can be traced to extensions and control panels that modify system behavior (and sometimes each other's behavior). Under System 7 and up, holding down the shift key while booting will disable all of them. If that solves the problem, use Extensions Manager to disable specific control panels and extensions. The usual suggestion is to try turning off half your extensions, and if the problem doesn't go away try the other half. When you find the half that cause the problem, disable half of those, and so on until you isolate the problem.

There are commercial programs like Conflict Catcher that automate extension troubleshooting.

If disabling extensions doesn't solve the problem, it may be a hardware or System problem. Try booting from a System install or Restore CD. If that solves things, try a clean System install.

The System (OS 9.x and earlier)

What's the big deal about the System Folder? [9]

System software is what makes your Mac smile when you turn it on, allows it to run, read and write hard drives, copy files, run other programs, and all sorts of other goodies. The Finder is part of the System software and is usually the program that runs first when the computer starts up. The System software lives in a folder that is usually named "System Folder" and which contains the critical files "System" and "Finder" as well as many related files. In System 7 and above, these related files are mostly in folders in the System Folder, such as "Extensions," "Control Panels," "Preferences" and in 7.1 & up, "Fonts."

If everyone just used the System Folder the way it comes from Apple, there would be many fewer crashes, bombs and conflicts. But many programs add files or even folders to the System Folder, and most of us have added various system enhancements (anti-virus programs, security programs, font management programs such as Suitcase, FileSaver and so on).

When your system is operating flawlessly, make a backup of your System Folder. It's easiest to do this with a backup program like Retrospect. Or you can boot from a CD or another drive, and then copy your System Folder to another disk or removable media, or use Apple Disk Copy to save a "disk image" of the entire System Folder. Then if you later have trouble, you can restore that backup and get back to work. If you do this, save the messed up System Folder by renaming it and throwing away its Finder, so you can later reclaim any items you may have added since your backup.

What's a clean System install and how do I do it? [9]

As a System Folder grows top heavy with extra stuff, your System can become less stable. Sometimes parts of the System files get damaged or corrupted and you don't know exactly which ones are damaged. Many times Apple, software vendors, or Tekserve will insist that any problem you are having with your computer is due to all the junk in your System Folder, and will suggest that you do "a clean System install." That means making a brand new System Folder just like Apple would put on a new computer. This new folder will be lacking all your added fonts, custom doodads and preferences, including your Internet access setup, so after you solve your problem you'll need to "dirty" the new System Folder again and hope that your problem stays gone (which is why some people first try a much simpler dirty install, which basically means deleting only your Finder, System and Finder Prefs file and then running the System installer).

With recent G3s and G4s, you can boot from your Apple System Restore CD and either replace just the System Folder, "restore in place" which will leave most of your Applications and user files and documents alone, or restore the drive to the condition it shipped from Apple, erasing all of your files

and everything. (Multi-disc installers can only restore the entire drive, wiping everything on it.) Note that as with a clean install, all of these options will delete your Internet access settings and some or all of your program and other preferences.

For System 7.6 and up, use the "options" button in the main installer window to bring up the choice of a clean install. Your old System Folder will be renamed "Previous System Folder" and the new one will be called just "System Folder." (For Systems below 7.6, download an older version of this FAQ from Tekserve.com.)

Now restart to see if your problem is solved: If everything is okay, you can start "dirtying" your new System with all your old fonts, preferences, control panels and extensions. It is always better to reinstall stuff like fax software from the original disks rather than using the old versions. However, you will want to move over any fax folders and preferences, which contain your address books, old faxes and so on. You'll also want to move folders such as "Claris" and "Aldus" that various programs may have placed in your System Folder.

We suggest doing this very slowly—move a few items, restart and see if things are okay, move a few more, and so on. This is a great time to do housecleaning—anything you don't need or don't recognize can be moved into a holding folder until you are sure you don't need it. The point is that anything that was freshly installed by the System install should not be replaced—only move unique stuff that you know you need from the old System Folder to the new one. Remember that less is more. More speed, more reliability, more peace of mind.

You can automate the clean install process with Conflict Catcher if you like.

What System should I use on older Macs? [9 & X]

If you have a PowerPC with a 233 MHz or faster processor and at least 64 MBs of RAM, we suggest that you use Mac OS 8.6 (with less RAM or a slower processor, use System 8.1). With any G3 or any G4, use Mac OS 9.2 or Mac OS X. Both of these Systems are more stable and reliable than previous systems. Remember, this is current as of June 2002.

On even older Macs, if your system is stable and happy and you don't need any new features, stick with it.

Any problems upgrading to OS 9.x? [9]

Mac OS 9 does have a few compatibility issues, but the good news is that most applications that work with Mac OS 9 will work with Mac OS X as well (not true for extensions and some control panels, which may not be compatible with OS X). Note that working with Mac OS X doesn't mean optimized for OS X—you will have lots of opportunity to buy updates.

OS 9 does require an update to Adobe Type Manager (in June 2002 ATM 4.62 was available free on Adobe's web site). You will also need to update software for Global Village PC Card modems, and updates for Virex and Norton Utilities are required. Other things that need updates are Suitcase, Visioneer PaperPort, Office, Word and Excel 98, many HP inkjets, Tech Tool Pro, Conflict Catcher, SoftRaid, and AppleWorks. Sadly, LaserWriters with built-in PostScript fax modems are no longer supported.

Mac OS X

What's different about Mac OS X?

Mac OS X offers improved stability and reliability (but frankly, OS 9.2 is pretty stable, too). Behind the scenes it is a more "modern" operating system with some of the buzzwords (features) people have asked for, like protected memory and preemptive multitasking.

Among other things, that means that if one program should crash, you won't have to restart the computer. Also, a program will not hog your entire system (while starting up or performing a complex calculation, for example). OS X also has numerous changes to the user interface, making it easier to do certain tasks.

Almost all your old programs will run fine in "Classic" in Mac OS X. However, you may need to update the software to take advantage of OS X's new features and to run "natively". Check with the software publisher or with www.versiontracker.com to see if there is a free or paid update available.

Should I upgrade to Mac OS X today?

If you are a cautious person and your computer is doing everything you want it to, perhaps not. If you enjoy new things and like the new interface, or just want to be "au courant", then go for it. There are also some great applications such as iPhoto and iDVD that require Mac OS X. If you have an older, slower computer, like a beige G3 or early PowerBook G3, or any older PowerBook, you may be happier sticking with OS 9 (or buying a new Mac). Even if you have a faster computer, you may want or need to add some RAM (memory). If you are doing specific demanding tasks with your computer, like intense audio or video editing, your decision will be made based on your exact configuration of software and hardware. For instance, Final Cut Pro 3 runs great in X. But if you have an analog capture card, check if the X drivers have been released and if people are happy with them. Most graphics programs have been upgraded for Mac OS X and work better than in 9 (or at least as well), but as of June 2002, QuarkXpress is still a holdout and ATM Deluxe has not been updated, but Suitcase and Font Reserve have.

Just before a system upgrade is a perfect time to backup your whole computer, or at least your important files. And don't forget,

any major system upgrade will require some time to make everything right and to get comfortable with new interfaces and commands, so don't upgrade in the middle of a big project or if you are already stressed out.

If you buy a new Macintosh, it will initially boot into Mac OS X, and you should leave it there unless you have a specific reason to switch to 9 (Apple is currently installing both Mac OS 9.x and Mac OS X on new Macs).

Can I switch between OS 9 and OS X?

Yes, use the Startup Disk control panel or system preference (works even if both OS are on the same disk). If the two OSes are on different disks, you can choose a startup disk (or CD) by holding down option at startup until you see the startup manager. Click the appropriate icon and then the right arrow icon.

How do I know if my application is "native" for Mac OS X? [X]

While you are running Mac OS X, you can tell if you application is native by looking at the Apple Menu. If it is a solid color, it it native, and can take advantage of all the new features in Mac OS X. If it is rainbow-colored, it's running in Classic.

What's with all these folders? Can I get rid of them? [X]

To start up, Mac OS X requires several folders to be in special places. (This isn't anything too new. In Mac OS 9 and before, the "Control Panels" folder needed to be inside your System Folder, for example, and wouldn't work if you put it anywhere else.)

In the default 10.1.5 installation (current as of June, 2002), OS X expects the "Applications", "Library", "System", and "Users" folders to be at the root of your hard disk. Under normal circumstances, OS X won't let you rename or move these folders.

However, if you restart your Mac into OS 9 for some reason, you must be careful not to

move or rename these folders. (You'll also see a folder called "automount" and several files: "etc", "mach", "mach.sym", "mach_kernel", and "var". Don't move or rename them, either.)

If you do change these files accidentally, you'll probably need to reinstall OS X to get it working again.

Where are my documents? [X]

If you started from a brand-new Mac OS X system, they are in the "Users" folder, in the folder with your name. From there, look in either the "Documents" or "Desktop" folder.

If you upgraded to OS X, then your old documents are just where you left them.

(More complicated explanation: Mac OS X can easily handle more than one user per computer, so it puts each user's documents in his or her own folder.)

Where are my preferences? [X]

User preferences live in "/Users/username/Library/Preferences/". That is shorthand for the "Preferences" folder, in the "Library" folder, in your username's folder, in the "Users" folder. Note that every user has different preferences.

Why are there so many folders in the "Library" directory? [X]

Mac OS X's "Library" folder takes the place of OS 9's "Extensions", "Control Panels", "Fonts", "Preferences", "Startup Items", etc. Some of these folders still exist inside the Library folder, others have been renamed (Control Panels is now known as "PreferencePanes"). Also, the Library has consolidated several folders that never had a place before, such as "Internet Plug-Ins".

You may have noticed that there are FOUR (or more) Library folders on each Mac OS X system. Each user has his or her own in the "Users" folder. There is a Library folder in the root of the hard disk which is shared for all users. This can only be changed by users

marked as administrators. There is a third Library in "/System/Library" for Apple's use. Apple's installers and updaters expect certain files to be there, and you should not change them. Finally, you may have a Library folder inside the "Network" icon, which (on specially-configured networks) may store network-wide settings such as shared printers and fonts.

I put something on my Desktop, but another user can't find it. [X]

Mac OS X is a multiple-user system, so it organizes folders on the disk somewhat differently than in Mac OS 9. Every user of a computer has his or her own "Home Folder," so all desktops, document folders, and preferences are kept separated. Mac OS X is pretty conservative about security, too, and prohibits you from seeing other users' files. See the question below about sharing documents with other users.

I saved a document on the desktop in a Classic application. Where did it go? [X]

The desktop is a folder, just like any other folder. In OS 9 and earlier, the "Desktop Folder" was located at the root of every volume. It was normally invisible (but showed up sometimes while browsing servers, for example).

In Mac OS X, the desktop is a visible folder in every user's home folder. That is the desktop you see from every OS X application.

While using an older application in Classic, however, something odd happens. When you browse the desktop in an Open dialog, you see a combination of both desktop folders. But when you save a document, it saves into the old, OS 9 desktop folder. This can be confusing for many users.

OS X puts an alias to the startup disk's Mac OS 9 Desktop Folder on the OS X desktop for you. However, if you have more than one partition, you'll need to create aliases to see all the files that Classic thinks are on the desktop.

To do this, open a Finder window, and click on the "Computer" icon. Then open each volume, and drag the "Desktop Folder" to your own desktop while pressing ⌘-Option.

How can I get my windows to behave like they did in OS 9? [X]

Say you have two Finder windows open at the same time: Folder 1 and Folder 2. While typing in your favorite word processor you click on Folder 1. Folder 1's window comes to the front. In Mac OS 9, Folder 2's window also jumps forward. But in Mac OS X, it does not.

You can get "Classic Window Mode" in OS X with the free utility "ASM" available from www.asm.vercruesse.de.

I can't mount any disk images / I can't move programs in the Applications folder / I am getting "-192" or "-108" errors... [X]

Your hard disk privileges need to be restored. Apple has a "Repair Privileges Utility" for this: look at docs.info.apple.com/ article.html?artnum=106900.

My system keeps telling me "There is no application to open the document..." [X]

There are two likely reasons why this is happening. First, you may not actually have an application that can read that program. If someone sent you a PowerPoint slide show, but you never installed PowerPoint on your computer, then you won't be able to open the application.

The other situation is that you do have the application, but your computer hasn't figured out that document XYZ can be opened by it. Mac OS X figures out document associations in part by their filename extensions, which is the part of their name after the last period. For example, the file "readme.txt" has an extension of "txt". You can show extensions on your system by choosing "Preferences" from the Finder menu and checking "Always show file extensions."

If you have a missing or incorrect extension on one of your documents, your Mac may have trouble with it. You can then try to fix or add the extension. (Likewise, if you change the extension of a working document, it may stop working.) Extensions are important not only on Mac OS X, they are also important if you send documents to Windows users.

Here are some common extensions: dmg = Disk Image, doc = Word, jpg = JPEG photo, mp3 = MP3 music, pdf = Acrobat PDF, ppd & pps = PowerPoint, psd = Photoshop, qxd = Quark, rtf = Rich Text Formatted, tif & tiff = TIFF photo, txt = Text, xls = Excel spreadsheet.

When I double-click on my document, it opens in the wrong application. How can I change this? [X]

Click once on the document, and choose Get Info from the File menu. Choose "Open with Application" from the popup menu. Then you can choose your favorite application from the icons listed. If you would like to associate all similar documents with this application, click the "Change All…" button.

How come in Mac OS X my scanner doesn't work/RealAudio doesn't play/images don't import/plug-in doesn't plug? [X]

You probably knew that applications had to be rewritten to take advantage of all the latest features of Mac OS X. Unfortunately, a rewritten, Mac OS X-native application will ignore a plug-in that has not also been rewritten for Mac OS X. You should search www.versiontracker.com/macosx to see if the plug-in has been updated.

As of June 2002, many plug-ins have not yet been updated, including RealPlayer, and many scanners. What can you do? To scan, you can continue to use your older version of Photoshop for scanning, and use Photoshop 7 for everything else. For much RealPlayer

content, you can download the ".RAM" file to your desktop and double-click on it to launch the Classic version of RealPlayer.

How can I check the RAM in an OS X Mac without booting or logging in? [X]

Boot into single user mode (Command-S), and then use system profiler (type "applesystemprofiler | less" at the text prompt). The space bar will page through the screens. When done, type "shutdown -h now".

Mac OS X Passwords

How can I change my password? [X]

Use the "Users" pane in System Preferences.

How can I change someone else's password? [X]

Log on as a user with administrative privileges, and use the "Users" pane of System Preferences. If you are not an administrative user, then you shouldn't change someone else's password.

What if I forgot my password? [X]

You can ask your computer's administrator to change it for you.

If you ARE the administrator, it's a bit more difficult. Insert the Mac OS X installer CD. Reboot your Mac, while holding down the "C" key. This starts from the CD. At the installer screen, look in the "Installer" menu, and choose "Reset Password." Choose your hard disk, and create a new password for yourself. Then click "Save", close the window, and restart (don't reinstall Mac OS X).

How do I log in as "root"? [X]

Mac OS X systems ship with a root user, but with the user disabled. On Unix systems, the "root" user is the all-powerful account that can read, change, and delete every file on a system. Unfortunately, that power also removes all the protections built into Mac OS

X to keep you from making catastrophic mistakes.

Here's an example. From the "Terminal" program, the command "rm <file>" removes (i.e., deletes) a file or an empty folder. So "rm fish.txt" deletes the file named "fish.txt". "rm fish.txt cow.rtf" deletes two files. The "rm" program deletes the files immediately — there is no trash in Unix. "rm -r <folder>" recursively deletes all files from a folder, and then deletes the (now empty) folder. So "rm -r animals/" deletes the folder named "animals" and all its contents.

But what if you made a typo, and put a space before the slash? "rm -r animals /" will remove the folder named animals, and ALSO try to recursively delete every file and folder inside "/". That single slash is shorthand for "this computer, and all disks." If you are a normal user, or even an administrator user, you won't have privileges for "/", and the command will fail. But if you are root, your Mac will happily carry out your command, without even asking "are you sure?" You are destined for a major recovery effort.

So instead of logging in as root, here are other possibilities:

1. Try to do the action as an administrative user. You may not initially have privileges to do something, but you may be permitted to CHANGE privileges on a particular file or folder. Choose "Get Info" and look at the "Privileges" section to find out.

2. Download the program "Pseudo." This will allow you to temporarily make a single program run with root privileges. For example, it will allow BBEdit to open and write to any file on your system. Since it only changes the program you specify for the time that program is running, it is much safer than logging into the entire system as root.

3. On the command line, use the command "sudo" (superuser do). This will ask for your user password, and run one command with root privileges. For example "sudo rm -r /Users/olduser" will delete an old user's home

folder and all his or her files. All the cautions listed above still apply, so be careful!

If you still feel the need to activate the root user on your system, you can do the following: Open the Applications folder, then the Utilities folder. Launch NetInfo Manager. Click the padlock in the lower-left corner, and type your username password to authenticate. In the menus, choose "Domain->Security->Enable Root User". Make up a (nontrivial) password for the root user, and click "OK." Quit NetInfo Manager.

To log in as root you must first change the Login Window options. Open System Preferences, and choose "Login". Then click the "Login Window" tab. Finally, turn on the option to show "Other User" in the login window.

You may now log out, and log back in with the username "root" and the password you just chose. Remember that you should use this account only when nothing else works. For your everyday (and everyweek and everymonth) work, use your normal account.

Mac OS X Multiple Users

When I try to save a file someplace outside my Documents folder, I get a file error and can't save. What gives? [X]

Remember that Mac OS X is a multi-user operating system and you may not have permission to write files outside of your Documents folder. Some applications don't report permission errors properly and you may get a file error instead. If you are the only user of your computer but didn't unbox it, someone who set up the Mac before you may have added a non-administrative users with limited permissions as the default user.

So how can I share a file with another user on the same Mac? [X]

To share a file, you can put it in one of two places. If you want others to read the file but not change it, move it to the "Public" folder

inside your home folder. If you want others to be able to read and change the file, move it to "/Users/Shared" (meaning the folder named "Shared" inside the folder named "Users" at the top of your hard disk).

How do I get rid of inactive users? [X]

First, you should delete the user from the system. You can do this in System Preferences, using the "Users" tab. When you delete the account, you'll be asked if you want to reassign the user's privileges to an administrator. You should probably choose yourself. Then you'll be able to manually remove (or archive) the old user's documents and home folder.

But what if there is no longer a user to delete but there are still incorrect privileges? You could log in as the root user, or use one of several utilities to change the permissions of those files. Sandee Cohen suggests an easier way: boot into OS 9 and then open the files and resave them. This also works for files that you try to trash but don't have permission to. Take them out of the trash, reboot in OS 9, and then trash them there.

Printers

I chose my printer in the Chooser, and it forgot my choice. [9]

The Chooser is counterintuitive, because you can use it to make several simultaneous choices (printer, network drives, etc.). As a result, it doesn't display what's chosen. Once you select a specific printer, it will remain chosen until you select a different printer (unless your backup battery is dead, see below). To confirm what printer is chosen, select "Page Setup" from the file menu—at the top of the window that's displayed you'll see the name of your printer.

Early Epson Stylus printer software can cause the printer choice to be forgotten— update to a more recent version.

To choose a different Laser printer (or other AppleTalk printer) click on the appropriate driver icon on the left side (such as "LaserWriter" or "LaserWriter 8"). Sometimes you have to scroll down to see the correct icon. The specific LaserWriter you have chosen will show up on the right side highlighted. If it's not highlighted, you need to click on the printer name on the right side to choose it. If you are using LaserWriter 8 or newer, there will be a little printer icon in front of the printer's name to show that you have already "Setup" for that printer. If not, after highlighting the printer click the "Setup" or "Create" button to select options for that printer. Then close the Chooser with the close box in the upper left corner.

If you have an HP LaserJet or other non-Apple networked laser printer, you will want to pick "LaserWriter 8" on the left side and then highlight your printer on the right side.

How do I connect my LocalTalk printer to my USB Mac? Printers like the LaserWriter IINT, NTX, F, Personal LaserWriter NT, NTR, 320, LaserWriter Pro 600, 4/600 PS, Select 360, Color StyleWriter 6500 or an HP LaserJet with "M" or "MP" in its name? [9 & X]

To connect these printers to a new Mac, you must use an Ethernet to LocalTalk Bridge:

1. The AsanteTalk Ethernet to LocalTalk Bridge includes everything you need to connect a LocalTalk printer to a new Mac. It works with existing drivers.

2. If the printer is already connected to a LocalTalk network, you can use Farallon's iPrint LT. The iPrint LT is similar to the AsanteTalk, except that it has a PhoneNet jack instead of a LocalTalk Din 8 jack. If your existing LocalTalk network has more than eight LocalTalk devices on it, you will need a much more expensive bridge, and you will be better off upgrading to Ethernet all around.

When I try to print to my Epson printer, I get an error message that the printer is not responding. What's wrong? [9 & X]

When you turn on your Epson inkjet printer, it performs a self-test before it enters normal operation mode. If one of the components fails the startup test, the printer enters an error mode in which it will not respond to any commands from the computer. Normally it will indicate the error with a flashing light or error light. The first things to check are that the paper is properly seated in the sheet feeder, and that there is ink in the ink cartridge. When the printer is ready you should see a steady green light.

I just upgraded to Mac OS 8.6 or 9.x and I can't find my printer's icon in the Chooser. Where did the driver go? [9]

If you own a LaserWriter Select 300, a Personal LaserWriter 300, or a Personal LaserWriter LS, don't sweat. Apple doesn't include the driver for these models with the OS because they have decided not to provide support for these machines. In other words, these printers do work with OS 8.6 and 9, but Apple doesn't guarantee that future versions of the OS will be compatible with the driver. You may download the driver for this printer from Apple's website. The driver is called "LaserWriter LS/300." But to use these printers with a new Mac that lacks a serial port, read the USB question that follows.

If you own a LaserWriter Select 310, a LaserWriter II SC, or a Personal LaserWriter SC, the driver for your printer is completely incompatible with recent Mac OS. You must either downgrade your OS or replace the printer. The SC models are incompatible with anything beyond Mac OS 7.6.1. The Select 310 is incompatible with anything beyond OS 8.1.

If you have a StyleWriter 2200 or 2400, use the StyleWriter 2500 icon. If you have a StyleWriter, StyleWriter II or 1200, use the StyleWriter 1500 icon.

For most PostScript USB printers, such as the LexMark E310 or E312, you must install the manufacturer supplied "Printer Description File" and then use Apple's Desktop Printer Utility to create a desktop printer icon. Then simply highlight the icon on the desktop and select "Set Default Printer" from the Printer menu.

Connecting Old Devices to New Macs

Where is the audio input jack on my new Mac? [9 & X]

Many recent Macs lack analog audio input jacks (but they just made a comeback on the eMac and PowerBook G4 DVI). If you need to feed analog audio into your Mac, you need a USB audio interface, like a Griffin iMic (which is not a microphone at all, but rather a line/mic level to USB adapter), or a more advanced interface like a Roland UA-30. If you are serious about audio on the Mac, you will be looking at even more sophisticated products like the Digidesign mBox, XP or 001, a VXPocket PCMCIA card, or a FireWire audio interface.

How do I connect my old ADB device to a new USB Mac? [9 & X]

A Griffin iMate adapter will work okay for most mice, keyboards and other ADB devices, including many copy protection dongles. But for more complex devices like a Wacom tablet with a pressure sensitive pen, we suggest buying a new USB version for best results.

SCSI, FireWire, & USB

Macs don't come with SCSI drives anymore, do I still have to worry about this stuff? [9 & X]

Ultra-ATA (also called EIDE or IDE) drives have improved dramatically in the last five years, and performance differences between ATA and SCSI are much smaller than they

used to be. But the price differences are still quite large. These days, we only recommend SCSI drives (or disk arrays) for certain audio, video and server applications with very high data rates. If you don't have any SCSI peripherals and don't do multimedia, you don't have to worry about SCSI. If you do have SCSI devices, we can help you decide how to connect them (or replace them) when you buy a new Mac. For lots more information on SCSI you can check older versions of this FAQ at tekserve.com.

If my computer has both USB and FireWire, which type of external drive or CD burner should I get? [9 & X]

FireWire is much faster and is the preferred interface for these devices. Some hard drives and CD burners come with both interfaces, so you can use them with older computers that may lack FireWire. There are new versions of FireWire and USB in the pipeline, USB2 seems to match some of the features of the current FireWire, but we still think that FireWire is a superior interface, even compared to USB2.

When I add a new device to my computer, like a USB Zip drive, should I install the software that came with it? [9 & X]

As Apple has upgraded the OS, they have included support for all sorts of devices. For instance, Mac OS 8.6 and 9.x and Mac OS X already include drivers for most Iomega Zip and Jaz drives. In fact, the software in the box with the drive is probably old and out of date and may even be incompatible with your OS. So we suggest trying the device first. If it works without installing new software, you are ahead of the game. And if you are on the Internet and plug in a new USB device that is not supported, the OS may offer to find the latest driver and download it for you.

Do I need special software or extensions to use FireWire devices? [9 & X]

Mac OS 9.1 and above, including Mac OS X, include basic FireWire device support and will work well with most FireWire hard drives and cameras with no third party software or extensions installed. Some drives may offer slightly improved performance if you use the manufacturer supplied "drivers". But usually less is more, so try without the special drivers first. For scanners and some other devices you usually need to install the drivers that came with the device (but check for updated drivers on the manufacturer's web site or versiontracker.com first).

Can I add FireWire or USB to an older Mac? [9 & X]

For desktop Macs that have PCI slots, you can add a FireWire or USB PCI card, or a single card that has both kinds of ports. For the PowerBook G3 Series, you can add a USB or FireWire PCMCIA card (or both). We recommend using Mac OS 9.1 or later if you install one of these cards.

If FireWire runs at 400 Mb/s, is it faster than Ultra160 SCSI running at 160 MB/s? [9 & X]

No. Did you notice that Ultra160 SCSI has a capital "B" (as in MB/s) and FireWire has a small "b" (as in Mb/s)? Ultra160 SCSI runs at 160 MegaBytes per second. A Byte is 8 bits. FireWire runs at 400 Megabits per second. To convert from bits to Bytes you divide by 8, so FireWire is only 50 MB/s. Still faster than any single hard drive can perform, and much simpler to configure. (Yes, you figured it out—12 Mb/s USB could also be called 1.5 MB/s USB.)

Why do people say that FireWire drives aren't "native" FireWire? [9 & X]

Hard drives have interface cards on them to talk to the outside world. Most drives have Ultra-ATA interfaces. Some drives have SCSI

or Fibre Channel interfaces. None of the drive manufacturers has shipped a drive with a FireWire interface yet. All the FireWire drives that are currently being sold are Ultra-ATA drives with a special ATA to FireWire adapter attached. In early 2001 "second generation" ATA-FireWire bridge chips started shipping, and they offer greatly improved performance. If they ever make native FireWire drives, performance may improve further.

Is a FireWire drive fast enough for Audio or Digital Video? [9 & X]

With the new "second generation" bridge chips that came out in 2001, the answer is usually yes. DigiDesign was always very picky about which hard drives they supported for audio, and they now offer their own FireWire hard drives. DV has a fixed data rate that should be easily accommodated by these drives. However, if you are capturing analog video through a CineWave, RTMac, Igniter, Diigtal Voodoo, AJA, or similar card, you will probably have to stripe several FireWire or SCSI drives to achieve the needed throughput. For serious analog video, you may need to stripe four or more Ultra160 SCSI drives. For HD Video, you might need to stripe as many as eight or twelve drives, with two channels of SCSI controllers. Ask us to configure an appropriate array for you.

Can I really have 63 hard drives on a FireWire bus? [9 & X]

Well, that's the theory, and maybe you can have 63 devices, but Apple's FireWire version 2.4 and below limited you to no more than eleven individual hard drives connected to a single CPU by FireWire. Apple's more recent FireWire implementation now supports up to 16 devices on a single chain (no more than 16 FireWire cables from your CPU to last device), and 63 total. To get beyond 16 devices, you will need a FireWire hub to divide up your FireWire chains.

What is FireWire Target Mode? [9 & X]

On most Macs with built-in FireWire, you can press the "T" key while starting up, and the computer should enter a special FireWire Target (or disk) mode, indicated by a FireWire icon floating around the screen. That computer will then act like an external FireWire hard drive, and if you connect it to another FireWire equipped Macintosh it should mount on the desktop like another drive. You can then copy data back and forth. In some cases you can even run data recovery or repair programs on a drive this way if a computer won't boot. However, on some Macs you can only start to FireWire target mode if there is a valid System Folder (8.6 or later) on the disk, so if the computer won't boot and the system is messed up, you might not be able to enter FireWire target mode.

Monitors / Displays

Every once in a while, the image on my monitor begins to vibrate or shake. After a few minutes it stops. Any idea what could be going on?

Check the position of your monitor—especially if it is near the wall of your kitchen. Author Sandee Cohen tells us that one of her staff had a monitor that would begin to vibrate every time she heated up her dinner in the microwave oven which was on the other side of a very thick wall. Microwave ovens can generate electro-magnetic disturbances that can cause your monitor screen to vibrate or shake. Similar disturbances can happen near large power transformers, and in basements that are over subway lines. In challenged locations, a flat panel LCD display (which is much less susceptible to electromagnetic interference) may be the best choice.

How do I connect my old Apple monitor to my new Mac? [9 & X]

For the first ten years, Apple used a DB-15 connector with two rows of pins to connect

external monitors. If you have one of these monitors, we have a cheap "Mac to VGA" adapter that converts to the industry standard "VGA" connector, which has three rows of pins. New Macs have had VGA connectors for several years now.

How do I connect my new non-Apple monitor to my old Mac? [9 & X]

Most industry standard monitors use the VGA connector with three rows of pins. That fits right into new Macs, but for older Macs we have an inexpensive "MacPNP" adapter.

How come my new non-Apple flat panel won't attach to my new Mac?

If the monitor has an analog connection, it's VGA plug should go right into your Mac. But if it has a DVI connector for more stable digital connection, you may need a $35 DVI to ADC adapter.

### Why won't my new Apple brand monitor attach to my old Mac? [9 & X]

In 2000, Apple introduced the unique "Apple Display Connector" (ADC), to connect any recent Apple brand monitor to most recent Macs with a single plug and cable that includes power, video and USB signals. At first, these new Apple monitors would only work with new Apple CPUs. But now there are products like Apple's own DVI to ADC adapter and Dr. Bott DVIator ($150), which allow you to connect an Apple ADC display to an older computer. But there's a gotcha: the older computer must have a "Digital Video Interface" also called DVI. Some early G4s had this connector (before ADC). And you can add a PCI card with a DVI connector to any Beige or Minitower G3 or G4. Macs with ADC connectors also have VGA connectors for industry standard monitors to attach (or more recently, DVI connectors, but we have ADC to VGA and DVI to VGA adapters).

Even though I added a video card, I'm told that I can't connect two new Apple ADC monitors to one Mac. Can that be true?
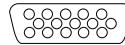
If your extra video card has a DVI connector, you can get a DVI to ADC adapter that allows you to connect a second ADC monitor. This also works to to connect a second ADC monitor to a 2002 Power Mac Tower with a dual channel video card (the one with one ADC port and one DVI port).

What are the different video connectors Apple has used?
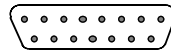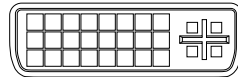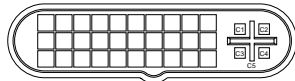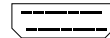
A different Mini-RGB was used on early PowerBooks. Always needs an adapter cable.

Can you run down all the choices of CPU video support?

Beige Macs: DB-15

Blue & White G3 Macs: VGA

First Graphite G4s: VGA

Next Graphite G4s: VGA & DVI

2001 Graphite G4s & Cube: VGA & ADC

2002 Graphite G4s: DVI & ADC (dual monitor support), VGA adapter available

PowerBook G3 & G4: VGA

PowerBook G4 DVI: DVI, comes with a DVI to VGA adapter cable

First iBooks: No Video output

iBook (Dual USB), flat panel iMac G4: Mini-RGB, comes with a VGA adapter. Some iBooks also have optional TV out adapter.

Can you run down all the choices Apple of display video support?

Beige Apple Displays: DB-15
Blue & White Apple Displays: VGA
Graphite Apple Displays: VGA
First Cinema Display: DVI
Current Apple Clear/Graphite Studio &
    Cinema Displays: ADC
Most non-Apple CRTs: VGA
Non-Apple Flat Panels: VGA and/or DVI
Barco and other high end displays: individual
    BNC connectors (Mac or VGA to BNC
    cables are available).

My CRT has two faint grey horizontal lines across it. How do I fix that? [9 & X]

We call that the "Trinitron mark of quality." Aperture Grill CRTs like the Sony Trinitron and NEC/Mitsubishi DiamondTron have those internal support wires as part of their design.

Memory

I get "out of memory" errors in a certain program, even though I just added more memory to my computer. How do I get the program to know about the extra memory? [9]

OS X eliminates this problem completely. But in OS 9.x and down, when you launch a program, it asks the system only for the amount of RAM set as its "Preferred Size." You need to set the program in question to ask for more RAM. To do this, quit the program, and highlight the program icon. Then select "Get Info" from the File menu or type ⌘-I. At the bottom of the Info window you should see a section called "Memory Requirements." (With OS 8.5 and up, select "Show: Memory" from the pop up first.) Then increase the "Preferred Size" by 50 or 100%. If it says 4096, try 8000 (or 8192 if you like base2).

Before increasing a program's preferred memory setting, it's a good idea to check "About this Mac" or "About this Computer" under the Apple menu in the Finder to check how much "built-in" memory you have. This will also show you how much memory is being used by the OS and other programs that are running. Don't set a single program to use more memory than is available. If you want to be able to run several programs at one time, be sure that the preferred memory of all the programs you will run simultaneously, plus the memory used by Mac OS, is less than the total built-in memory.

What speed memory do I need for my particular Mac, and how much can I add? Should I add it in pairs?

This has become so complicated that we suggest you call us or use one of the references online like MacTracker. Before calling us, please check your exact Macintosh model and also write down the memory information shown in "About this Macintosh" or "About this Computer" under the Apple menu. You can get more detailed information about the memory in your computer with Apple System Profiler.

Tekserve stocks first quality, lifetime warranty memory for all Macintosh models released in the last five or more years, and can install it while you wait.

I just installed an Apple Firmware update, and some of my RAM has disappeared, or my Mac won't boot at all. What do I do?

In early 2001 Apple released a Firmware update for many G3s and G4s that disabled certain non-Apple brand memory. We think that in most cases there was nothing really wrong with that memory, but Apple was being very cautious. Your memory supplier should swap or upgrade that memory at no charge, or you can use the free "DIMM First Aid" program to update the memory yourself. But there's a gotcha—if all your memory was disabled, you can't boot the computer at all. So please run DIMM First Aid BEFORE you run the Apple Firmware update. We don't

understand why Apple didn't include a test like DIMM First Aid in their Firmware updater itself.

Viruses

I think I have a virus. What should I do? [9 & X]

Buy the latest version of Virex or Norton AntiVirus for Macintosh (or your preferred anti-virus program). But don't stop there—the virus definitions that come with the product are probably already out of date. You must get the latest update for the program you bought (updates are released online every month, new shrink-wrapped boxes are usually many months old). Install the program, update it, and run it. We've always had a preference for Virex, but their Mac OS X version is currently only sold via licensing, not in easy-to-buy shrinkwrap boxes.

Powerbooks & iBooks

Does a battery drain when not in use? Are new batteries fully charged? [9 & X]

All batteries have some "self-discharge," usually 1% to 3% per day. That means that the battery will be dead in a month or two sitting on the shelf and will need a full charge. Brand new batteries are always shipped without much charge, and must be charged before use. The PowerBook 500 series uses "intelligent" batteries that can get dumb if left uncharged for more than a month. This means that even if you don't use your PowerBook at all, you should plug it in for at least 24 hours every week so the batteries can charge. It's okay to leave your PowerBook plugged in all the time.

Is it okay to run my PowerBook or iBook without a battery? [9 & X]

We don't recommend it. PowerBooks have an internal rechargeable backup battery that saves your PRAM settings (printer, AppleTalk, clock, etc.). If you leave a PowerBook

unplugged for a week or two without a regular battery installed, that internal battery will be depleted, your settings will be lost, and you may have trouble booting the computer. The regular battery also acts as like a ballast, maintaining smooth voltages to run your PowerBook. iBooks lack the internal backup battery and should always have a regular battery in place.

Should I get AppleCare for my portable?

PowerBooks & iBooks are manufactured to closer tolerances, get rougher handling than desktop computers and are expensive to fix. We think that Apple's own extended warranty program, called AppleCare, is usually a good investment for portables. Of course Apple is betting that you won't need it and that they'll come out ahead, but many of us would rather spend $249 or $349 on insurance to avoid the chance of a $500 or $1,000 repair. AppleCare doesn't cover broken plastic or physical damage from dropping or abuse, or service outside North America. AppleCare can only be purchased before your original warranty expires, and it cannot be renewed.

At Tekserve we sell AppleCare at a discount. As of this writing, Tekserve and many other Apple Authorized Service Providers throughout the USA can perform local (sometimes while you wait) warranty and AppleCare repairs on most portables. However, we can't guarantee that will always be true, and Apple has limited a few repairs (like iBook display replacement) to the the Apple mail-in depot.

What's resetting the Power Manager, when should I do it, and how? [9 & X]

The Power Manager is software in the PowerBook that works to maximize battery life. It stores some special information for itself in the PRAM, and if that information gets corrupted you may have trouble running on batteries. When you have battery problems it's frequently a real problem with the battery

or the computer, but sometimes it's just a software problem with the Power Manager. Here's how to reset the Power Manager on different PowerBooks:

PowerBook 100: Flip the battery switch on the back down, and then hold down both the reset and interrupt buttons (on the left side) for 15 seconds.

PowerBook 140-180c (except 150): Unplug the AC Adapter, take out the battery and leave it alone unplugged for 5 minutes. That's probably all you need for the 160-180c. On the 140, 145 and 170 (and just to be sure on the 160-180c), then use two paper clips (or one paper clip bent into a U shape) to hold in both the interrupt and reset buttons on the back for 10 seconds.

PowerBook 150: Disconnect AC adapter, remove battery, use a paper clip to press the recessed reset button on the back for 10 seconds. Then attach the AC adapter and press that recessed reset button momentarily—you will hear a small pop from the speaker. Now use the regular power button to turn on the unit. Insert the battery and charge it for at least 8 hours before trying to run on battery alone.

PowerBook Duo 200 Series: Remove power and battery, then press and hold the power/reset button on the back for 45 seconds.

PowerBook 500 Series: Press ⌘-Option-Control-Power On all at once. If the computer is on it will go off (losing all unsaved work). If the computer is off you won't notice anything, but you have still reset the Power Manager.

PowerBook 190, 1400, 2300, 2400, 3400, G3 and 5300: Shut down the PowerBook (Shut Down, not restart). Then turn on the PowerBook and immediately press ⌘-Option-P-R. The Mac should chime once, the screen will go dark, and the green sleep light will be on steady. Now press the reset button on the rear. You may then need to use the regular Power button to turn the machine on.

Original G3 Series PowerBooks: If the PowerBook is on, turn it off. Then use the key combo (shift-fn-ctrl-power-on) that is printed on the back of the machine. Wait at least five seconds, then press the power button to restart.

G3 Series PowerBooks with Bronze Keyboard: If the PowerBook is on, turn it off. Press the reset button on the rear of the computer (find it between the video and modem jacks). Wait at least five seconds, then reconnect the AC adapter and press the power button to restart.

Original iBook and iBook (FireWire) If the iBook is on, turn it off. Using a blunt object like a paperclip, press the reset button above the power button at the base of the display. Wait at least five seconds, then reconnect the AC adapter and press the power button to restart.

G4 PowerBook and iBook (Dual USB): If it's on, turn it off. Press the reset button next to the video port on the back or side of the computer. Wait at least five seconds, then press the power button to restart.

Note: on the iBooks and PowerBook FireWire and G4, resetting the PRAM will also change the date and time setting of the computer, so you should check that after any PRAM reset.

Communications, Internet & Airport

Can lightning really damage my modem or Ethernet port? [9 & X]

Yes, whenever there is a big thunderstorm we see a number of Macs with dead modems come in for service the following days. We've also seen lightning through cable modems destroy Ethernet ports, requiring an expensive logic board repair (one newspaper customer in the suburbs had the Ethernet destroyed on over 20 Macs during a storm, their insurance did cover it, but some policies exclude such damage). We suspect it's more

often people living in houses or brownstones with outside phone wiring rather than big apartment buildings, but we recommend unplugging from the phone line or cable modem during storms. Or you can try a surge protector with phone line or Ethernet port protection, but we haven't tested how well they work.

How do I save my Internet settings or switch among different service providers? [9 & X]

OS 9 & earlier: Apple's TCP/IP and PPP control panels both have a "Configurations..." item under the file menu. Once you have your Internet stuff set up, go to each of these control panels and export your current settings. You can also name and save configurations for several different Internet setups (one at home, one at the office, one on the road) and use the Configurations menu, control strip, or Apple's Location Manager to easily switch among them. Be sure to export all the configurations and save them on a backup.

X: Make new "locations" in the pop-up menu at the top of the Network preference panel. This will save all your network preferences, TCP/IP, PPP, Modem, etc. Note that Mac OS X has an "all ports active" design and will automatically switch to use an available connection (e.g. you unplug from Ethernet at work and go home, it detects your home Airport network and switches automatically). To disable this behavior, select "Active Network Ports" from the "Show" pop-up and uncheck the ports you want to be ignored.

How do I connect my Mac to DSL or a Cable Modem? [9 & X]

All recent Macs have a built-in RJ45 Ethernet port and will plug right in. The Ethernet port looks like a wider than normal telephone jack and may be labeled with a <--> symbol. Some older beige Macs have built-in Ethernet with both the RJ45 and an Apple "AAUI" connector. Use the RJ45. Even older Macs may only have the AAUI, in which case you need an AAUI to RJ45 adapter. And some Performa computers lack an Ethernet port, but one can be added in a PCI slot or "Comm Slot" (CS). You can also connect an Airport Base Station to your DSL or Cable Modem and then use Airport cards in any recent Mac. If you want to connect more than one Mac to a single DSL or Cable Modem without Airport, you may need a router. For DSL which uses "PPPoE" (Point to Point protocol over Ethernet), an Airport base station or router has the added advantage that it handles the PPPoE login and passwords, so your computer doesn't need special software to make the connection. When you have a router or Airport Base Station, you'll typically set your Mac to obtain its TCP/IP address using "DHCP."

Is DSL or a cable modem safe? [9 & X]

With DSL and cable modems, your computer is usually always connected to the net. Particularly if you have a "fixed IP address" it becomes easier to hack into your computer. And with cable modems, other users in your neighborhood may be able to access your shared files or networked printers. (Look in your Chooser and Network browser and check if you see anything that isn't in your own house.) You should turn off file sharing and web sharing or at least set complex passwords. Depending on the importance and secrecy of your files, you may want to get a hardware or software firewall. An Airport Base Station provides some firewall functions such as assigning random IP addresses, network address translation (NAT), etc. If you are not using Airport, a router will provide these services (and more) while allowing you to share a single cable or DSL connection among multiple computers.

Is AirPort really insecure? [9 & X]

Well, it's not the most secure network available. When your data is traveling on a wire, an intruder would have to tap it; definitely possible, but a bit of a hassle. With AirPort, your data is a radio transmission, still not totally in the clear, but a whole lot more available to the world. No encryption is really great encryption, and the 40-bit WEP encryption offered by AirPort is considerably less great than the 128-bit encryption in most web browsers. Recent studies have shown vulnerabilities in the security of IEEE 802.11b technologies like AirPort and its WEP encryption. Keep in mind that using other encryption like secure http (pages beginning with "https://") and Secure Shell (SSH) to transfer sensitive information (credit card numbers, etc.) will provide an extra layer of security, leaving pure gibberish in the hands of your friendly network intruder.

What about my AirPort base station? Can people steal my bandwidth? [9 & X]

First of all, you will want to set a decent network password. Don't use your dog's name. In addition, AirPort software v. 1.2 and higher will allow you to restrict access to your base station based on the MAC address (or "AirPort ID") of the AirPort cards you have in your machines. You can find the unique 12-character AirPort ID on the label of each AirPort card. Or, you may choose to share your broadband internet connection with friends and neighbors.

File Sharing

I want to transfer files from one Mac to another. How do I do that? [9 & X]

If you buy a new computer from Tekserve, we will transfer files from your old computer at no charge. However, we strongly recommend that you reinstall your applications rather than copying them over (in some cases you will need updated versions). And if you want to integrate your old bookmarks, email and so forth to work on your new computer, we would charge by the hour for getting all that working. (In fact you can hire us to do as much or as little as you need, but realize that this can be many hours of work, depending on your configuration.)

There are many ways to move files from one computer to another: you can email them to yourself, burn them on CD or DVD, or copy them via Zip disks or an external drive (USB, FireWire or SCSI, depending on your computers). In some cases you may want to use a backup program like Retrospect to make a precise backup to tape or other media. You can also put files on an Apple iDisk or other network server and then copy them back to the other computer. If both Macs have FireWire, you can use FireWire disk mode (press T while the computer is starting up) to make one computer act like an external FireWire drive that you then connect to the other computer.

Finally, you can network the two computers and then use File Sharing to move files back and forth. This may be the best approach if you will be moving large files back and forth regularly. There are three steps: network the computers with wires or Airport, share the files on one computer, access the files from the other computer.

How do I physically network two or more computers? [9 & X]

If you are using Airport or a DSL or Cable modem router, the computers are already networked.

If there are two computers and nothing else, plug an Ethernet cable between the two. All current Macs autosense what they are connected to, so you don't need a special crossover cable (but a crossover cable will work between ANY two Macs, even ones that don't autosense).

For more than two computers, use Airport, a Cable/DSL router with built-in Ethernet

switch, or an Ethernet switch, available in sizes from four-port to 48-port (and those can be stacked for larger networks). Plug the Ethernet port of each computer into the Ethernet switch (or Ethernet hub).

How do I turn on File Sharing? [9]

A shared computer is also sometimes called a personal file server. Although there are many steps, you only have to do them once.

1. In the Chooser (under the Apple menu), turn on AppleTalk.

2. Open the AppleTalk Control Panel (in control panels under the Apple menu) and select Airport or Ethernet as appropriate.

3. Open the File Sharing control panel. If you haven't entered an owner name, password, and Mac name, do so now. My owner name is David, my Mac's name is "David's G3." Let's say my password is "backupmoreoften." If you are on a corporate or school network or using a cable modem, be sure to use a serious password with a combination of letters and numbers, not "pass" or "please" or "chocolate." Passwords are case sensitive.

4. Under file sharing, press the Start button. If it says Stop, then file sharing is already on, so leave it alone. Close the File Sharing window by clicking in the close box. Don't worry about Program Linking — you can leave it off.

5. Now you have to decide who can access your Mac. If you are the only person to access this Mac, then you are done, and you can skip the rest of this question. If you never connect to a network outside your home, it's easiest to open the Users and Groups control panel, double-click on Guest and click on "Allow guests to connect." If you are on a public or corporate network, using Airport or a cable modem, or just paranoid, while in Users and Groups go to the File menu and select New User. Name the new user and give him or her

a password. When you are done, close the Users and Groups control panel.

6. Now you have to select what to share. If it's just you, or you and your loved ones, you probably want to share your entire hard drive. If you are on a network with many other Macs, you want to retain control, so you may want to make a new folder called "Shared" and only share that.

7. With OS 8.5 and up, click on the icon of your hard drive or the folder you want to share and highlight it. Select "Get Info" from the File Menu (or press ⌘-I), then in the Info window select "Show: Sharing" from the pop-up menu, and check the box "Share this item and its contents." You can then adjust privileges for any users you created.

With OS 8.1 and down, click on the icon of your hard drive or the folder you want to share and highlight it. Go to the File menu and select "Sharing...", then check the top box "Share this item and its contents." You can then adjust privileges for any users you created.

8. That was a lot of work, but you only had to do it once. In the future you only need to use the File Sharing control panel (or the control strip) to turn sharing on and off.

Now that you've shared a computer, you can access it from any other computer connected to the same network.

How do I turn on File Sharing? [X]

1. Open the "System Preferences" in the Apple Menu. Click on the "Network" icon.

2. In the "Show:" popup menu, select "Built-in Ethernet" or "Airport" as appropriate.

3. Click on the "AppleTalk" tab, and choose "Make AppleTalk Active". Note: Make sure you make AppleTalk active on only one interface at a time (Ethernet or Airport but not both).

4. Click on the "Show All" icon to see all the preference panes. Click on "Sharing".

5. Under file sharing, press the Start button. If it says Stop, then file sharing is

already on, so leave it alone. Close the File Sharing window by clicking in the close box. Don't worry about Program Linking — you can leave it off.

6. Make sure that "Computer Name" is set to something that makes sense.

Under OS X, you don't need to specifically set up sharing for folders. Guests can automatically access everything in the "Public" folder inside your user home folder. If you log in using your own name and password, you can access everything in your own home folder.

How do I access a shared computer over the network? [9]

1. In the Chooser (under the Apple menu), turn on AppleTalk.

2. Open the AppleTalk Control Panel (in control panels under the Apple menu) and select Airport or Ethernet as appropriate.

3. Open the Chooser under the Apple menu. On the left side should be a bunch of icons. Click on the one that says AppleShare.

4. On the right side you should see a window that says "Select a file server:", and if you have successfully shared and networked your computer, you'll see it listed there. Highlight the name of the shared computer and click OK.

5. If you took the trusting approach, click on Guest, otherwise enter the user name and password that you previously set on the other computer. Then click OK. Next you'll see a list of the shared drives or folders on the other computer (probably just one). Highlight the one you want and click OK. In a few seconds the icon of that drive or folder should appear on your desktop. You can copy files to and from it as though it was another drive on your computer (but it will be much slower).

To avoid ever having to repeat steps four to six, click on the icon of the shared volume and select Make Alias from the File menu. Next time you want to "mount" that shared volume on your Mac, just double-click on the alias.

How do I access a shared computer over the network? [X]

1. Open System Preferences from the Apple Menu, and click the Network icon.

2. Next to "Show:" click on the pop-up and select the appropriate port.

3. Click the AppleTalk tab and check "make AppleTalk Active." Leave the default to configure automatically.

4. Close the Network control panel, saving your settings, and return to the Finder (click the Mac face icon in the Dock).

5. Under the "Go" menu, select "Connect to Server."

6. In the left column click on "Local Network" and your shared computer should show up in the right column.

7. Click on the shared computer name to highlight it and press the "Connect" button. If the other Mac doesn't show up after a few seconds, try looking under "Appletalk".

8. Enter the name and password you previously created on the other computer.

9. You will now see a list of available hard drives (probably just one). Choose one and click "OK". The shared disk or folder will now show up on your own desktop.

What if I followed the instructions above, and I don't see the other computer when I try to connect? [9 & X]

We assumed that your TCP/IP settings were already correct. If you have never configured TCP/IP (that would usually mean you don't have internet access), then you may need to go to the TCP/IP control panel or Network preference pane and choose "Using DHCP Server" in the "Configure" pop-up menu. You may have to do this on one or both of the two computers. When connecting OS X Macs to OS 9 Macs, you may also need to enable File Sharing over TCP/IP in the OS 9 Mac's File Sharing control panel.

What if I tried to follow these instructions and didn't find the control panels or choices I expected? [9]

You may not have all the file sharing items installed in the System on your computer, or you may have used an Extensions Manager to get some of them out of the way because you didn't need them. Find your System installer disks or CD-ROM, open the installer, select "Custom Install" or "Add/Remove" and reinstall AppleShare, Open Transport and File Sharing, all found under the "Network &Connectivity" selection. On older Macs, reinstall AppleShare and File Sharing. Although you need System 7 or higher to enable file sharing, you can access a shared Mac from a computer running System 6—you just need to use the System 6 installer disk to install "AppleShare Client" software on the System 6 Mac.

File sharing works well, but now my Mac is very slow to start up and takes an awfully long time to shut down after I tell it to. [9]

If file sharing is turned on, your Mac goes through an elaborate private ritual every time it boots up, checking the sharing status of every folder on your drive. When you shut down, your computer carefully unshares every folder on your drive before it will shut down. So, when you aren't using file sharing, turn it off. If you have a control strip, there is an icon for disabling file sharing. There's also an icon for AppleTalk, and if you turn off AppleTalk, file sharing will go off too (unless you are using AppleTalk remote access). AppleTalk uses extra battery power, so leave it off when you are "on the road" with your PowerBook.

Other Questions

I just bought a new Mac. Where is the manual? [9 & X]

New Macs come with a very short setup guide. The "manual" is under the help menu on the computer. If you are new to computers (or to Macs) or just want more printed information, you can buy one of many books that are available. We like the O'Reilly Missing Manual series and PeachPit's Visual QuickStart Guides.

How do I clean my screen?

Never spray anything onto the screen. Apple says to wet a lint free cloth and use it to wipe the screen clean. Don't drip liquid down into the screen bezel. Don't use scratchy paper towels. My partner Dick thinks that "Kleer Screen" is the greatest, so we sell it. Apple and Sony both recommend it too.

The clock on my computer keeps going back to 1904, or 1956 or something. [9 & X]

This means that the backup battery on your computer's logic board needs replacement. We stock the batteries. In most flat-shaped Macs and recent towers it is pretty easy to do it yourself, in the Classic, IIci/cx, iMac and beige tower Macs you should let a professional do it. If we sell you a battery we install it for free. On a PowerBook, your internal PRAM battery may be dead, leave the PowerBook plugged in for two or three days to recharge it. After two or three years a PowerBook may need its internal PRAM battery replaced by a technician. On both the iBook and PowerBook FireWire, some serious crashes (or pressing the reset button) cause the clock to reset. The crashing may be a sign of a problem, but the clock changing is normal.

Why can't I rename this disk? [9]

If file sharing is enabled you won't be able to rename disks. Turn off file sharing. If that doesn't solve it, run Apple's Disk First Aid.

I got an error-XXX. What does it mean?

Frequently your Mac has gone through so many gyrations before it put up the error

message that it may not be helpful at all. But shareware programs like "System Errors" or "Apple Error Codes" or the Apple KnowledgeBase can help answer the question. For instance, -34 means your disk is full. Bus Error and Type 11 errors can be almost anything.

How do I save a file on a disk that a Windows computer can read, or read a Windows disk on the Mac? [9 & X]

Mac OS 8.5 and up have the File Exchange control panel (called PC Exchange in System 7.5 to 8.1). This allows the Finder to recognize and mount (and even format) DOS and Windows disks. For full compatibility, it's best to format interchange disks as PC disks on the Mac rather than on a PC. With System 7.1 and down, the Apple File Exchange program is included and will let you copy files to and from DOS floppy disks. Mac OS X inherently recognizes PC disks and has even adopted PC style file name extensions (that we thought we had escaped from).

To actually use Mac files on a PC, or PC files on a Mac, you need a compatible application (like similar Mac and PC versions of FileMaker Pro or Excel) or else a file translator. Many Claris and Microsoft programs come with limited built-in translators, but MacLink Plus is a good universal translator. Microsoft Office files created on the Mac or PC are usually interchangeable with the same programs on the other platform, usually going forward or back one or two generations. However, newer versions may have features that are not supported in older versions, so simpler files are more likely to exchange without hassle. There also several less expensive programs, such as ThinkFree Office, that can open Microsoft Office files.

I have a Wintel machine. What's Tekserve's equivalent on the dark side?

For the last ten years we've asked people to let us know when they find a good service shop for Windows machines. We haven't gotten any enthusiastic responses (well, one in Philadelphia). If you find a great place in New York to service Wintel stuff, please let us know.

Where can I donate my old computer?

Nearly any group accepting donations wants working computers, not junk. Many insist on fairly recent units that will get people smoothly onto the Internet. A few to try are www.cristina.org/dsf, www.thepencilbox.org, www.altschools.org/oace, www.sharetechnology.org, www.worldcomputerexchange.org, or do your own research via Google. There's also Materials for the Arts, 718 729-3001 in Long Island City, which is part of NYC's Dept. of Cultural Affairs.

Didn't the last Tekserve FAQ have more details on stuff like SCSI?

This FAQ changes every year, yet it stays nearly the same size. That means that we constantly remove content relating to older Macs and add newer content. You can download older versions of the FAQ at www.tekserve.com.

Why didn't you answer my most important question? [9 & X]

Sorry, we ran out of room. Please email help@tekserve.com and we'll try to help. If you notice any errors in this FAQ, please send us a note by mail or email. Thanks!

MACS FIXED _FAST__(SOMETIMES)._ Power supply, logic & drive repairs at _Fair Prices._ FULL-SPEC **MEMORY UPGRADES.** We stock and install memory for all Macs _While You Wait_ [**PowerBooks Too!**]. _DATA RECOVERY._ We recover data from _Crashed Hard Drives._ **SALES** & **SERVICE.** We sell, service & install drives, PowerBook drives and modems. _WE STOCK APPLE® MACINTOSH® COMPUTERS AND POWERBOOKS®_ cables, printers, _Final Cut Pro™ Video Editing Systems_, RAID Hard Disk Arrays, and other good _STUFF_

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