

When you first brought your computer home, everything was simple. Most of the software was installed. Nothing was compressed. You could doubleclick on anything to open it. But when you start downloading new software to your computer, you have to rethink the way you do things. Doubleclicking a file may not open it. You may have to install fonts, sounds, and other software into your system. This chapter helps you sort out the confusion.

8.01 Where are the files I downloaded?

AOL normally downloads files to the Online Downloads folder, which is inside the America Online folder. However, you may have told AOL to put the files elsewhere. System 7 users can use the Find command under the Finder's File menu to search their hard disk for the file. System 6 users who have the Find File DA can use that to search for the file.

Have you forgotten the file name? If you can remember part of the name, search for that part. When using the Find command, you'll have more success if you search for fewer letters. The more specific you try to be, the more likely you are to make a mistake. When searching for files, don't search for the extension (such as ".sit" or ".sea"). If you had auto-unstuffing turned on, AOL unstuffed the file, which eliminated the extension.

If you can't remember the name of the file, there's a way to find out. Choose Download Manager from the File menu and click the "Show Completed Downloads" icon. You'll see a list of your fifty most recent downloads.

8.02 Why can't I just doubleclick files to open them?

Normally, opening a file on the Macintosh is as easy as doubleclicking it. Doubleclick a spreadsheet and it opens in your spreadsheet program. Easy as that. If you understand how this works, you'll be better able to understand why it sometimes doesn't work.

On the Mac, all files have a type and creator code. The Mac uses these codes to decide which applications can open which files. Here are some example type and creator codes:

FILE	TYPE	CREATOR
TeachText application	APPL	ttxt
TeachText text file	TEXT	ttxt
TeachText read-only file	ttro	ttxt

System 7 screenshot	PICT	ttxt
MacWrite II application	APPL	MWII
MacWrite II text file	TEXT	MWII
MacWrite II native file	MW2D	MWII

From looking at the above table, you might notice two things. First, one program can create documents with different type codes. Second, certain file types, such as files of type TEXT, can be opened by more than one program.

If you doubleclick a TeachText text file (TEXT/ttxt), the Mac looks for an application (type APPL) which has a creator code of ttxt. The Mac then launches TeachText (APPL/ttxt) and opens the file with TeachText.

What happens if you download a plain text file (type TEXT) that was created with MacWrite (APPL/MWII)? If you have MacWrite on your computer, you can just doubleclick the file to open it. If you don't have MacWrite, the computer will report that the application that created the document could not be found.

However, TeachText knows how to open files of type TEXT. Just launch TeachText and choose Open from the File menu. Navigate to the folder where the MacWrite document is stored, select it, and click Open. This is the standard way to open files that won't open when doubleclicked. The trick is knowing which applications open which file types.

System 7 made the process somewhat easier. First, TeachText was given the ability to open PICTs. Second, if the application which created a PICT or TEXT file can't be found, System 7 will offer to open the file in TeachText. Third, System 7 supports drag and drop: drag a file's icon over an application's icon. If the application can open the file, the application hilites. If you drop the file (release the mouse button) while the app is hilited, the file will open in that application. Note that drag and drop doesn't always work. If drag and drop fails, try using the application's Open command.

IBM PCs don't use type and creator codes. Instead, they use extensions. For example, the extension for Microsoft Word files is ".doc". The file name might look like "readme.doc". To open documents created on an IBM PC, you'll generally need to use your application's Open command. Some utilities (Apple's Macintosh PC Exchange, Insignia's AccessPC, etc.) can map DOS extensions to Macintosh type and creator codes. So for instance you could doubleclick ".doc" files and have them open automatically in Microsoft Word on your Macintosh.

You can learn more about type and creator codes by using File Buddy by Laurence Harris (LHarris). File Buddy allows you to change a file's type and creator codes, as well as other information that the Finder uses. VendorTC by Bill Baldrige (FourArts) lists the type and creator codes for many popular applications. Both programs are available on AOL.

8.03 How do I open files ending in .sit, .cpt or .sea?

The files you downloaded are archives created by a compression utility. Archives have two advantages over unaltered files. First, the files are compressed, so they take significantly less

time to download. Second, a single archive can contain multiple files, which simplifies downloading.

AOL's current policy is that Macintosh archives must be either in StuffIt format (indicated by the .sit extension) or in a self-extracting format (indicated by the .sea extension). Self-extracting files are applications that contain the archive and the code needed to decompress the archive. Some older files are in Compact Pro format (indicated by the .cpt extension).

You can set AOL to automatically unstuff .sit files after you finish the download and sign off. Choose Preferences from the Members menu, click Downloading Preferences, and put a check mark by the Auto-Expand Files option.

SIT. To open a StuffIt file with AOL 2.0 or 2.1, choose Open from AOL's File menu, set the Show menu to All Known Documents, and select the file. AOL will automatically unstuff the file. If you have an earlier version of AOL, download Aladdin System's free StuffIt Expander. Expander can open StuffIt, Compact Pro, BinHex 4.0, and AppleLink archives. (Note that StuffIt 1.5.1, StuffIt Classic, StuffIt Deluxe 2.0, and UnStuffIt Deluxe can't open files created with StuffIt 3.0.)

AOL can automatically unstuff .sit files. Choose Preferences from the Members menu, then click Downloading Preferences. If you put a check mark by the Auto-Expand Files option, AOL will decompress any .sit files after you sign off. This option is on by default.

SEA. To open a self-extracting file, doubleclick it. It will prompt you for a destination for the decompressed files. Choose a destination, then click the Extract or Save button. After you've extracted the files, the .sea file isn't needed any more. You can throw away the .sea to save disk space.

CPT. To open a Compact Pro file, you'll need either Compact Pro (shareware by Bill Goodman), CPTEExpand (freeware by Bill Goodman), StuffIt Expander (freeware by Aladdin Systems) or StuffIt Lite (shareware by Aladdin Systems). Compact Pro files aren't allowed any more, but some older files are in Compact Pro format.

8.04 How do I compress files with AOL 2.1?

At some point you'll probably need to compress files on your hard drive. Maybe you're running out of space, or you need to make a large file fit on a floppy disk. AOL 2.1 can compress files into StuffIt format.

Instructions

1. Launch AOL 2.1 and choose Compose Mail from the Mail menu.
2. Fill in the To field. Then click the Attach File button.
3. In the dialog box that appears, select the files you want to compress and click the Add button to move them into the right hand window.
4. When you've added all of the files to the archive, put a check mark in the Compress Files check box. Then click the Attach button. Note where the file is being saved.

5. Click the Detach File button. The compressed file will be stored on your hard drive exactly where you left it.

8.05 How do I open files ending in .zip or .arc?

Zip and arc files are the IBM PC equivalent of sit and cpt files. On AOL, you'll find these files in the PC forums, as well as in forums that are not exclusively for Macintosh users. Zipit, described in the software section of the FAQ, can compress and decompress files in zip format.

AOL 2.1 can expand zip and arc files automatically if auto-expanding is turned on in preferences. You can unzip and unarc any file by launching the AOL software, choosing Open from the File menu, and selecting the file.

America Online's zip translator appears to be broken. When unzipping a file, AOL reports that the file may be corrupted, and it usually is. When downloading zipped files, I recommend turning off the auto-expand option in preferences. After the download, unzip the file using ZipIt.

Once you've decompressed the zip file, you may or may not be able to use it. If it's a text file, you can probably open it in your word processor. If it's a graphic in a universal format (GIF, JPEG, etc.), you can probably open it with GIFConverter, GraphicConverter, and the like.

DOS games and other DOS applications won't work on a Macintosh. IBM applications won't run on a Mac unless you have the payware SoftPC or SoftWindows program, an Orange Micro expansion card (~\$600), a Centris 610 or Quadra 610 with a DOS card (~400), or a PowerMac running SoftWindows. You can spot DOS applications because they end in ".exe" or ".com".

8.06 How do I open Read Me files and docs?

In some cases, you can just doubleclick the file to open it. This won't always work, because you may not have the application that created the document. For instance, shareware documentation is often in MacWrite format. Few people use MacWrite anymore, but most word processors can open MacWrite files.

If doubleclicking the file produces an "application not found" error, launch your word processor and choose Open from the File menu. If your word processor can open the file, the file will become visible in the Open dialog. Select the file and click the Open button.

Some word processors have a popup menu in the Open dialog for selecting what kinds of files to open. If your word processor has such a menu, set it to something like "all known files" or "all readable files". In ClarisWorks, you'll see a popup menu called Documents. Set it to "Word Processing".

Microsoft Word has a setting to open "All Files". With this option, you can literally open any file, even an application! Naturally, applications aren't word processing files, so you'll just see a bunch of gibberish. It's kinda cool to look at, though.

If you're using System 7, you may be able to open the file via drag and drop. Drag the file's icon over your word processor's icon. If the word processor's icon turns black, drop the file's icon on it. The file will open in your word processor. This only works if your word processor knows how to read that kind of file. The Open command will open some files that won't open with drag and drop.

If you doubleclick a plain text file, the Mac may offer to open it in TeachText. In some cases you may get the message "This document is too large to be opened by TeachText", because TeachText can't open text files larger than 32K. If the text file is larger than 32K, try opening the file in your word processor, using the program's Open command. BBEEdit Lite and SaintEdit can open large text files, and are available on AOL.

8.07 How do I open QuickTime movies?

QuickTime is Apple's format for multimedia. QuickTime integrates pictures, animation, sound and text in a standard format. Compression is a standard part of the format, and is necessary to reduce sound and graphics information into a reasonably-sized file.

You'll need five things to view QuickTime movies:

1. **The right Macintosh** QuickTime requires a Macintosh with a 68020 processor or higher. Basically, that means any Macintosh except the 128K, 512K, Plus, SE, Classic, Performa 200, Portable, or PowerBook 100.
2. **System 7.0** QuickTime won't work with any version of the system software lower than System 7.0.
3. **Apple's QuickTime extension** The QuickTime extension is available in the Macintosh Operating Systems Forum (keyword "mos").
4. **A QuickTime movie** There are a variety of QuickTime movies on AOL. Do a file search for "quicktime movie" or search the file library in the Macintosh Graphics Forum (keyword "mgr").
5. **A movie player** Apple has a great program called MoviePlayer, but it's not available on AOL. The freeware MoviePlay by Ed Anuff is nearly as good. Other downloadable movie players include Popcorn, MacVCR, Easy Player, QT Player, and HyperMovie Player. (QT Player and HyperMovie Player require HyperCard 2.1 or higher. HyperCard is not available on AOL.)

A QuickTime player is built into the AOL FAQ. To open a QuickTime movie, click the button below:

lick here to open ---->
QuickTime movies --->

8.08 What are GIFs?

GIFs are pictures in the Graphic Interchange Format (GIF). The word is pronounced "jif", as in JIF peanut butter. GIFs have several advantages over other graphics formats:

1. GIF files have built-in compression, so they take less time to download than files in other graphic formats, and take up less space on your hard drive. You don't have to manually compress or decompress GIFs. GIF viewers perform the compression automatically.
2. GIFs never use more than 256 colors, so you don't need an expensive video card to view them. The 256 color limit also reduces the file size.
3. GIF is a cross platform format. GIF viewers exist for many computer types, including Macintosh, Apple][e, Apple][gs, DOS, and Windows.

Compu\$pend originally developed the Graphics Interchange Format so members could download color weather maps.

Today the most common use of GIFs is to transfer X-rated pictures through BBSes. There are no X-rated files on AOL, but the Macintosh Graphics Forum (keyword "mgr") does have R-rated GIFs.

8.09 How do I view GIFs, PICTs, JPEGs, and other pictures?

Graphics files are some of the most popular downloads. The most common graphics formats are GIF, PICT, Startup Screen, MacPaint, and JPEG. After you download the file, you'll need the correct software to view it.

Some shareware programs can open more graphics formats than the payware programs. For instance, GIF pictures are incredibly popular, but only a few payware programs can open them. Adobe PhotoShop (~\$500) is one of those programs. There are two shareware graphics viewers that I recommend: GIFConverter and GraphicConverter. Both are high quality programs that can open and save numerous graphics formats.

I've used GIFConverter in the past, but I've recently switched to GraphicConverter. GraphicConverter is faster, supports more file formats, and has more options. To get a feel for

GraphicConverter's depth, open the Tool palette or explore its preferences. When you save a file, GraphicConverter uses a miniature version of the picture for the picture's icon. That icon will also show up as a preview in GraphicConverter's Open dialog. GraphicConverter can also extract PICTs from many games and applications. Note that GraphicConverter requires System 7, and won't work with System 6.

There are several reasons you might want to use GIFConverter instead of GraphicConverter. Unlike some of the other graphics viewers, GIFConverter works with System 6 or System 7. GIFConverter's recommended RAM setting is only 1500K, as opposed to GraphicConverter's 3000K. If you don't have or can't use Apple's QuickTime extension, GIFConverter is your best bet for opening JPEGs. Author Kevin Mitchell (KevinM17) even has a company support area on AOL. Use keyword "gifconverter".

ClarisWorks is a great file opener you may already have. It opens files in PICT, TIFF, EPSF, MacPaint, and GIF formats. The GIF translator chokes on some GIFs; better to use one of the other GIF viewers. If you can't open graphics in ClarisWorks, make sure the Claris Translators are in the Claris folder, inside the System Folder.

I'll explain how to open graphics in GIFConverter.

GIFConverter Instructions

1. Doubleclick GIFConverter to launch it. You'll be greeted by a splash screen reminding you to pay for GIFConverter. When you send in the shareware fee you'll receive a code that disables the splash screen.
2. Choose Open from the File menu.
3. In the dialog box, navigate to the folder where you saved the GIFs. Normally, the pictures will be in the Online Downloads folder, which is inside the America Online folder.
4. If the pictures don't appear in the Open dialog, click the button labeled "Look inside all files". The pictures should appear in the list. Now click the large button labeled "Fix file types for shown files".
5. Click the picture you want to open, then click the Open button. You'll see your picture before you know it!

Now that you've fixed the file types, you can open the GIFs by doubleclicking them.

GIFWatcher and JPEGview are described in the software section of the FAQ. If you only download one viewer, get GraphicConverter or GIFConverter. There are some other graphics viewers like CyberGIF, Giffer, Imagery, Seer and Turbo View. They're not listed in the FAQ, either because they're old and incompatible with newer machines, or because they offer no advantage over the other programs.

8.10 How do I use startup screens?

A startup screen is a PICT graphic with ID=0. It replaces the normal Welcome to Macintosh message. If you have a picture that you know is in startup screen format, make sure that it's named "StartupScreen" (without the quotes) and place it in the root level of the System Folder.

That is, it should be inside the System Folder, but not inside any other folders.

To convert a picture into startup screen format, you can use a program like GIFConverter or GraphicConverter. Commercial programs that support the startup screen format include Aldus SuperPaint Adobe's PhotoShop, Delrina's ArtWorks, Deneba's Canvas. Some older programs can only make black and white startup screens. ResEdit can convert PICTs into startup screens, but it can't open any other graphics format, which limits its usefulness.

GIFConverter instructions

1. After you've opened the file you want to use, choose Save As from the File menu.
2. From the File Type menu, choose Startup Screen.
3. Click the Options button. From the Number of Colors menu, select the appropriate colors for your monitor: black and white, 256 greys, 256 colors, or millions of colors.
4. Name the file "StartupScreen" (without the quotes) and save it to the root level of your System Folder.

GraphicConverter instructions

1. After you've opened the file you want to use, choose Save As from the File menu.
2. From the Format menu, choose Startup Screen.
3. If you don't want GraphicConverter to fill in unused parts of the screen, select "No" from the Border menu.
4. Name the file "StartupScreen" (without the quotes) and save it to the root level of your System Folder.

If you get a kick out of startup screens, download Mark Pilgrim's Startup Screen Picker, which can randomly select startup screens from a folder full of startup screens. For more information send email to f8dy@netaxs.com.

StartupScreenManager by Herbert Putteneers (100143.2154@compuserve.com) promises to do even more. Unfortunately, I could never get it to work on my Quadra 605 running System 7.1. If it works on your computer, it does have some advantages. StartupScreenManager can randomly pick startup screens from a list of pictures in startup screen, PICT, or MacPaint formats, and can extract PICTs from applications. It also has a preview mode, and allows you to weight pictures so that some play more often than others. StartupScreenManager requires System 7.

8.11 How do I use disk images and Disk Copy?

When you download a file that ends in ".image", you'll need to copy it to a floppy disk using Apple's Disk Copy utility. Disk Copy is available online. Do a file search for "disk copy".

You're probably wondering why you have to use Disk Copy at all. You can just drag the disk image to a floppy disk to copy it, right? Well, no. You can't. Here's why: Most Apple software is distributed on floppy disks that include an installer program. The installer knows exactly where the files are on the disks. If you drag the image file to a floppy, the files won't be in exactly the right place, so the installer won't work. Disk Copy produces a bit-for-bit replica of the original floppy disk.

Instructions

1. Decompressed Disk Copy and launch it.
2. Click the Load Image File button and locate the image file. Disk Copy will read the file into memory.
3. Click the Make a Copy button and insert a floppy disk. The floppy disk must be the same size as the image. For an 800K image, use a double density 800K diskette. For a 1.4 Mb image, use a high density 1.4 Mb diskette.
4. After copying the disk image, Disk Copy will eject the floppy disk.
5. Quit Disk Copy and install the software from the floppy disk you created.

Disk Copy is sensitive to disk errors. In fact, I sometimes use it to check old floppies for bad sectors. If Disk Copy reports a media error, there was something wrong with the floppy disk you used. Try again using a good disk.

When working with high-density images, Disk Copy may report "There is not enough available memory to work with a disk that size." If that happens, quit Disk Copy, select its icon, and choose Get Info from the Finder's File menu. Increase the memory size to 1500K.

There's a control panel called MountImage which allows you to install software from the hard drive without copying the software to floppy disk with Disk Copy. Don't use it. MountImage is unreliable, and the program's author recommends using DiskCopy instead. MountImage hasn't been updated in four years.

8.12 How do I install sounds?

Q: What do you want the sounds for?

If you want the sounds for system beeps and chat room sounds, install them in the System file. If you want the sounds to play in the chat rooms or to replace the AOL sounds, install them in the Online Sounds file.

Q: What version of the system software are you using?

To find out what system software your Macintosh has, quit all programs and choose About This Macintosh from the Apple menu. (Under System 6, it will say "About The Finder".) The window that appears will report the version of the system software you're using.

Installing system sounds under System 6 Use keyword "file search" and search for "sound manager". Download the Sound Manager package and use the Sound Mover utility to install the sounds into your system file. Sound Mover can also remove sounds.

Installing system sounds under System 7 Quit all applications and desk accessories, then drag the sound's icon to the icon of the System Folder. (Do NOT drag the sound into the System Folder WINDOW!) When the System Folder is hilited, release the mouse. The system will ask if you want the sound placed in the system file. Click OK. If the system reports that not enough memory is available, restart the machine with extensions off. To do this, choose Restart from the Special menu, then press the shift key and keep it down until your hard drive icon and trash can icon appear.

To remove sounds under System 7, doubleclick the System file. When the window opens, locate the sound and drag it to the desktop.

Installing sounds in AOL's Online Sounds file

To install sounds for use only with AOL, you'll need Sound Mover. Sound Mover is part of the Sound Manager Package by Riccardo Ettore. The current version of Sound Mover is 1.9. To locate Sound Manager Package, do a file search for "sound manager". The instructions are the same for System 6 and System 7.

Instructions

1. Quit all other programs and launch SoundMover
2. The left window shows sounds in the system file. Unless you want to use those sounds, click the Close button.
3. Click the Open button. Navigate to the Online Sounds file, which is inside the Online Files folder. Open the Online Sounds file.
4. In the right window, click the Open button and navigate to the sounds you want to use.
5. Select the sound you want to move and click the Copy button. Bingo! Your new sounds are now in the Online Sounds file.

Replacing the standard AOL sounds

To replace the standard AOL sounds, move your new sounds into the Online Sounds file, using the instructions above. Then select the sounds you want to replace and choose Remove from the

Edit menu. Finally, select the sounds you added and choose Rename from the Edit menu. Be sure to give the new sound the same name as the old sound. Here are the names for the standard AOL sounds:

NAME	SOUND
252	Instant Message
258	You've got mail!
259	File's done!
Goodbye	Goodbye
Welcome	Welcome

8.13 How do I install DAs (Desk Accessories)?

System 6 instructions Locate Apple's Font/DA Mover utility. If it's not on your hard drive, look for it on your system disks. After using Font/DA Mover to install the DA, the DA will appear under the Apple menu. Font/DA Mover can also remove DAs.

System 7 instructions Quit all applications and desk accessories. Doubleclick the DA's suitcase. Now drag the DA from the suitcase onto the desktop. After moving the DA to the desktop, you can doubleclick it to launch it. If the system reports that not enough memory is available, restart the machine with extensions off and try again. To do this, choose Restart from the Special menu, then press the shift key and keep it down until your hard drive icon appears on the desktop.

As a System 7 shortcut, you can quit all applications and drag the suitcase to the icon of the System Folder. When the System Folder icon is hilited, release the mouse button. The computer will strip off the suitcase and place the DA in the Apple Menu Items folder. To remove DAs, move them out of the Apple Menu Items folder or wherever they were stored. You can trash DAs just like any other file.

8.14 How do I install fonts?

Again, the answer depends on the version of your Macintosh's system software.

System 6 instructions Locate Apple's Font/DA Mover utility. If it's not on your hard drive, look for it on your system disks. Font/DA Mover is used to install fonts into the System file. One exception: for PostScript fonts, the printer font should be in the System Folder.

System 7.0 instructions Quit all applications and desk accessories, then drag the font's icon to the icon of the System Folder. (Do not drag the sound into the System Folder window.) When the System Folder icon is hilited, release the mouse button. When asked if you want to install the fonts, click OK.

To remove bitmapped and TrueType fonts under System 7.0, doubleclick the System file. When

the window opens, locate the font and drag it to the desktop. To remove a PostScript font, remove it from the Extensions folder.

System 7.1+ instructions Drag the font's icon to the System Folder, as above. You can also drag the font directly to the Fonts folder, which is inside the System Folder. To remove the font, drag it out of the Fonts folder.

If the system reports that not enough memory is available, restart the machine with extensions off. To do this, choose Restart from the Special menu, then press the shift key and keep it down until your hard drive icon appears.

TrueType fonts work out of the box with System 7.
System 6 users will need Apple's TrueType extension to use TrueType fonts. The font's file description should state what format the font is in.

8.15 How do I install FKEYs?

FKEYs are little programs you can install in the system software or in individual applications. Macs come with several built-in FKEYs. Pressing Command-shift-1 activates the FKEY that ejects floppy disks. Command-shift-3 takes a picture of the screen.

If you own the payware programs SuitCase or MasterJuggler, use them to install FKEYs. Otherwise, download Adam Stein's shareware FKEYMaster or James Walker's CarpetBag. Installing an FKEY into the system file makes it available to all applications. Alternatively, you can install FKEYs into individual applications. FKEY installers can also remove FKEYs.

Many older FKEYs don't work with System 7. If an FKEY fails to work under System 7, throw it away. It's not worth worrying about.

8.16 What is "zero K needed, zero K available"?

Downloads occasionally become corrupted due to phone line noise, producing a bad download. One symptom of a bad download: doubleclicking the file produces a message saying "There is not enough memory to open "file name" (zero K needed, zero K available). Bad downloads don't always produce this message, of course.

If you see this message, use keyword "credit" to get a reimbursement for the time spent downloading the file. Then throw the file away and download it again.

.17 What does "not enough access privileges" mean?

That message comes from the Macintosh, not from AOL. It means that you tried to move or delete files from protected folders. This feature is unique to the Performas.

To turn off the protection, choose Control Panels from the Apple menu. Doubleclick the Performa control panel, then turn off "System Folder Protection" or "Applications Folder Protection", depending on where the files are that you want to delete. As a rule of thumb, don't put any software in the System Folder unless it has to be there.

8.18 What is error of type "so and so"?

Launching old, weird software may give you an error message. There's a file on AOL called Easy Errors by Dave Rubinic (DaveR9), which explains what the error numbers means. For instance, a type 15 is a segment loader error. In non-technical, jargon-free terms, I'm going to explain what a segment load error means:

There was a segment. See? And it was going to be loaded. Are you still with me? Alright. Well, see, just when this segment was about to load, there was an error. It was a type 15 error!

In other words, error numbers don't mean squat to most people. The error messages do have certain meanings, but the meanings are mostly useful to the program's author, who can rewrite the software.

The most common error message is a type 1 error. This usually means one of two things. The program may need more memory. Click the program's icon, choose Get Info from the File menu, and increase the memory size in the lower right corner of the window. This will occasionally fix the problem. Often, however, a type 1 error simply means the program is old and incompatible with newer computers or newer versions of the system software. There's nothing you can do except to throw away the program.

SOME ERROR CODES AND THEIR (NON) MEANINGS

1	bus error
2	address error
3	illegal instruction error
4	zero divide error
5	check trap error
6	overflow trap error
7	privilege violation error
8	trace mode error

9 line 1010 trap error
10 line 1111 trap error

You may occasionally encounter a "co-processor not installed" error. You would think this only occurs on Macs which lack math co-processors (fpus). In fact, it also occurs on fpu-equipped Macs, and it happens with programs that don't require an fpu.