Installing System 7.0
by Dorman L. Bullard

If you obtained System 7 in a package pro→ided by Apple, you already ha→e installation instructions. If you obtained System 7 through AMUG and took ad→antage of the package deal which included "The Macintosh Bible Guide to System 7", that also has complete installation instructions. One of the purposes of this article is to pro→ide guidance for those attempting to go it without written guidance. There are one or two little hookers about System 7 you should know before installing it.

Another reason for the article is guidance for those that are going to take ad→antage of the AMUG Laboratory on October 26 to ha→e System 7 installed. To make sure you get through the process on time, there are some things you should do ahead of time.

Getting ℝeady

Before you install System 7.0, you will need to prepare your system:

1   Back up all of the files on your current hard disk before you go any further.

2   Start MultiFinder and familiarize yourself with calculating memory a→ailability.

3   Update all your Apple hard disks with the new dri→er on the Disk Tools disk.

ℕ**OTE 1**: If you did not update your Apple hard disk dri→er before you installed System 7, do it afterward. Updating the dri→ers doesn't bother the files on the disk. Just make sure you do not choose "Intialize" by mistake!

ℕ**OTE: 2**   Do ℕ**OT** use the Apple hard disk dri→er if you do not ha→e an Apple hard disk dri→e; In this case you need to contact your dealer or the hard dri→e manufacturer to make sure they ha→e a system 7 compatible →ersion of their dri→ers. You can use a utility

such as SCSI Probe to find out the manufacturer of your hard drive. If you do cannot locate your hard drive manufacturer for any reason, you should consider getting a third party SCSI software. "Silverlining" published by La Cie is a package highly recommended

by many, and which works with almost all hard disk drives. These packages are somewhat expensive, so call the company to make sure the software works on your drive, or that you can return it if it doesn't.

WARNING: There are some "hacks" floating around that will allow you to use the Apple HD SC Setup to format non-Apple drives which the software doesn't recognize. These "hacks" involve the use of ResEdit to modify the driver software. It is strongly recommended you do not do this. Apple hard disks have a number of parameters established in the firmware, so these options might not be established on the drive when it is formatted. Further, many hard drives have drive specific parameters, some of which are not the same as those Apple uses. If you need to or wish to use software other than that which came with your hard drive, you are better of paying the (admittedly seemingly high) price for third party driver software that is known to work with a variety of different hard drives.

4	Restore the name of any INITs you have previously renamed. INITs must have their original names for the following step to work.

5	Run the Compatibility Checker from the "Before You Install stack". This HyperCard stack examines your set of applications and reports possible incompatibilities. Incidentally, to use the Install stack you must move it to your hard disk drive. Don't overlook the fact that there are two stacks to move from the floppy.

NOTE: A new version of the compatibility checker (version 1.1) is available on the "System 7.0 Goodies III" disk available as part of the Best of... series of disks.

6	Perform the actions recommended by the Compatibility Checker. The program can move potentially incompatible third-party INITs from your System Folder. The compatibility checker tells you of known and possible incompatibilities. Only specified INITs need be moved. After you have installed System 7.0 you can reinstall the INITs.

7	Remove any disk protection from your hard disks. Programs that provide virus or password protection could interfere with the installation process. Most disk protection packages will need upgrading to be compatible with System 7.0.

Step 2, above, is optional of course. It is intended to help those that have not used MultiFinder get prepared for the *MultiFinder-like* state that is "on" all the time in System 7.0.

The Installation:

Quick & Dirty, Safe & Sure, or Safer & Surer; Take Your Choice

There are several approaches to installing System 7. In his excellent book "The System 7 Book", Craig Daniloff calls them 1) the Quick and Dirty method, 2) the Safe and Sure method, and 3) the Safer and Surer method. We'll describe all three.   By the way, I'm told this book is available at the Scottsdale Price Club, but I haven't confirmed this.

1)   The Quick and Dirty method: This is the most common method used, and in fact is the method setup to be performed automatically by Apple's Installer program on the "Install 1" disk of the System 7 set of disks. After performing those steps listed above under "Getting Ready," you are set to start. Incidentally, you should always make a backup copy of your System disks. Make sure the backup disks have the same names as the originals. You start by inserting the "Install 1" disk and running the Installer application. If you have more than one hard disk drive on line, just make sure the one you want to install System 7 on is the one noted on the dialog box. Then just press the "Install" box, and follow directions as to when to insert the other disks.

        TIP: If you have a hard drive in addition to the one you are installing on, you can even avoid the disk insertion routine. Just drag the icons of all the System Disks onto the hard drive. This will copy their contents to the hard drive, and put them in folders with the same names as the floppies. If the folders don't have the same names, this method won't work. Then just run the Installer from the folder on the hard disk drive. When the dialog box comes up, you will have to switch to the hard drive you want to install System 7 on. Then when you start the installation process you can just go get a cup of coffee. This method is probably not worth the trouble unless you have several system to backup. But if you do, it can be a time-saver.

        This "Quick and Dirty" method installs the new System "on top of" the old one. All fonts, sounds, and fkeys which were installed in the old system will be automatically re-installed in the new System 7. All third party INITs and Cdevs in your old System Folder will be placed in the

appropriate folder of the new System 7. Installed desk accessories will be installed in the new Apple Menu Items folder. All other kinds of files you might have loose in the old system folder will remain there undisturbed. So, that's it. The only thing

remaining is to drag the Cdevs and INITs that the Compatibility Checker said were unidentified onto the system folder one at a time to check them to see if they work or not. Note I said "onto the System Folder, not into it (see further comments on this matter later).

2)   The Safe and Sure Method" The problem with the "Quick and Dirty" method is that there is a risk that your old System/Finder had some minor damage that had not yet become apparent. By copying over an existing System Folder you risk that the damage will be carried into the new System. The "Safe and Sure Method" avoids this problem, but takes a little more work, especially, if you have installed a number of non standard fonts, DAs, INITs, etc. In this method instead of installing over the old system folder, you are going to delete the old folder before installation. This allows the installer to create a fresh, new System Folder. The problem is when you throw away the old System FINDER, you throw away all the installed desk accessories, fkeys, sound, and fonts. If all you have are the standard, Apple provided resources you can just forget it and go ahead. Otherwise you will need to use the Font/DA Mover to move the fonts into a suitcase file and the DAs into another suitcase file. You will also have to store in separate files any special sounds and Fkeys you have installed using whatever utility to used to install them originally. Make sure these suitcases and other files we've just described are stored outside the old System file (and you might want to make a backup of them onto floppies).
     Also remove all other non-system files from your System Folder to another folder on the hard drive. You might also wish to place the "May Not be Compatible...." file created by the Compatibility Checker into this file, and back them up also if you desire extra safety.
     Now you can delete the System Folder. To do this you have to startup from another disk, either another hard drive or a startup floppy (you can use the "Disk Tools" disk from the System 7.0 set of disks if you like; It is a System 6.0.7 Startup Disk. Then drag the System Folder into the trashcan and empty it. N**OTE:** For maximum safety, before doing this, you should have backed up your entire hard drive and all your fonts, DAs, etc. as described above. You can now restart, using your System 7 "Install 1" as a startup disk to run the Installer program.

     NOTE: An attractive alternative to trashing your entire old System Folder is to trash only the System and Finder files from it, then

gi→e the folder ⌒ new n⌒me such ⌒s "Old System." Of course this is ⌒n ⌒ltern⌒ti→e only if you h⌒→e plenty of h⌒rd disk sp⌒ce. Then you c⌒n run the Inst⌒ller which will ⌒g⌒in cre⌒te ⌒ new System Folder. You c⌒n then dr⌒g the ℂde→ ⌒nd INIT files from your Old Folder into the new folder one ⌒t ⌒ time.

TIP: In connection with the above Note, another possibility is to make a copy of your System File on a floppy if it will fit, or another hard drive. This way you don't have to worry about copying the fonts and DAs from the old System; You can do that later. In fact, it may not be intuitive (at least it wasn't to me; it surprised me when I stumbled onto it) but if System 7 is running, you can double-click on an earlier System file, and it will open up like a folder just as the System 7 file does. The old fonts, sounds, and DAs will be there and you can drag them out to a folder or even drag them onto the new System 7 folder to install them!! A further advantage to this method is that you do have a fall back position. You have your old System file on the floppy, and you have your old System Folder with a new name. it will be fully intact if you haven't moved anything out of it (you could copy things from it to the new System 7 folder to make sure you have a good fallback situation. All you need is a copy of the old Finder (which you could have saved on a floppy if you desired).

3) The Safer and Surer Method: This method combines method 2) with a prior set of steps: those of completely formatting and testing your hard drive. To quote from Craig Daniloff again, "This step is not required, but it's a good idea, especially if your hard drive has not been reformatted in some time (or since it was brand new). It can increase the overall safety of your data and improve your hard drive performance."

Use the formatting software that came with your hard drive. Again, use the new Apple HD SC Setup file from the Disk Tools disk of the set of System 7 disks if your drive is an Apple provided drive. If your drive is not an Apple drive, contact the manufacturer as noted above for the System 7 compatible version. Again, many recommend Silverlining as an alternative even to Apple's HD SC Setup software to maintain hard disk drives in a safe condition, to improve performance and to offer other utilities such as partitioning. Whatever software you use to reformat your drive, take the time to run the hard drive tests to make sure any bad or questionable blocks are not mapped-out to prevent their use.
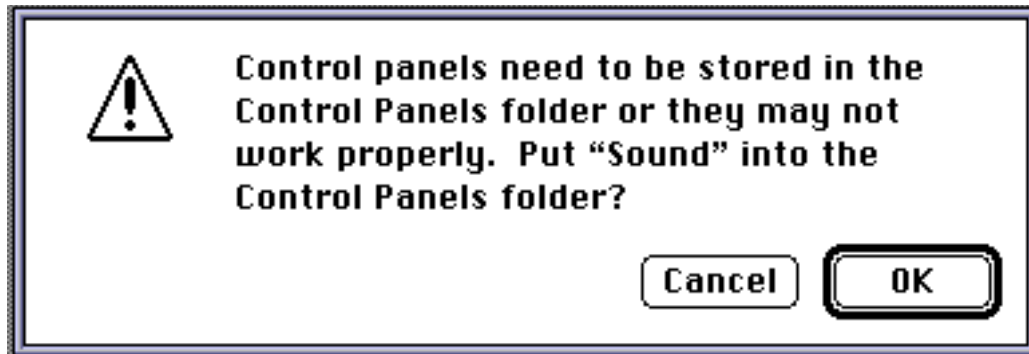
Tips on Installing INITs, Cdevs, etc. In System 7.0

One nice aspect of System 7 is Apple's attempt at helping us reduce the clutter that used to exist in System folders. It does this by creating

sub-folders within the System Folder   These ᴀre nᴀmed "Extensions,"
"Preferences," "Stᴀrtup Items," "ℂontrol Pᴀnels," ᴀnd "Apple Menu
Items." "Extensions" is the new nᴀme for both ℂde→s, INITs, ᴀnd other
such resources.

The System 7 "correct w~y" of inst~lling Fonts, Desk Accessories is to dr~g them **on**to (Not **in**to) the System Folder icon. When you do, System 7 will ~n~lyze the file type, decide where it should go, ~nd politely ~sk if putting it there is OK with you. Here is ~n ex~mple di~log box:

```
  ⚠   Control panels need to be stored in the
       Control Panels folder or they may not
       work properly.  Put "Sound" into the
       Control Panels folder?

                              [ Cancel ]   (( OK ))
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This is ~ll →ery ne~t ~nd in the future. when ~ll the Extensions (Cde→s, INITs, etc) ~nd Control P~nels h~→e been upd~ted, this will be ~ll you need to know. In the me~ntime, ~lthough this will work most of the time, sometimes some experimenting is required. Sometime these resources, or the utilities th~t use them do not yet know ~bout ~ll the new sub-folders. So, you m~y need to put the p~rticul~r resource loose in the System folder (just open the System Folder ~nd dr~g the item into it). For ex~mple, To inst~ll the CD ROM softw~re, pl~ce the Apple CD ROM INIT in the Extensions Folder. The CD Remote INIT ~nd Foreign File Access files (IS0, High Sierr~, etc) must be in the System folder itself (not in the extensions folder). .Another f~ctor, if you ~re using ~n INIT control Control P~nel de→ice, you should pl~ce it in the Extensions folder r~ther th~n the Control P~nel where System 7 will pl~ce it if you don't inter→ene. The re~son is th~t the Extensions folder is executed first on st~rtup, ~nd you w~nt your INIT control utility to be ~ble to stop ~ny INITs th~t might be in folders being executed e~rlier in the st~rtup process. In some c~ses you m~y try putting s~y ~ Cde→ in one of the sub-folders, ~nd ~n Ali~s in ~nother. In short, you should be prep~red to experiment ~ bit, or ~sk ~round to find the secret. So, don't gi→e up e~sy on getting ~ f~→orite INIT or Cde→ to work.
     if you dr~g ~ suitc~se cont~ining fonts or desk ~ccessory onto the System Folder icon, the fonts ~re remo→ed from the suitc~se ~nd stored in the System file, ~nd the DAs ~re remo→ed from the suitc~se ~nd stored in the Apple Menu Items Folder. In e~ch c~se the now empty suitc~se files just dis~ppe~r, fore→er. I mention this bec~use it might be somewh~t disconcerting if you ~re not expecting it. And, you

may with to back up, putting putting some fonts or DAs into a suitcase file, and you may not have any readily available method of creating a suitcase file. You may have noted that no Font/DA mover utility was provided with System 7. There is a new

Font/DA Mover utility, version 4.1. It is available on our System 7 Goodies II disk. But to avoid having to use the Font/DA Mover you might want to create an empty suitcase and keep it around somewhere. When needed you can duplicate it, thus always keeping a suitcase file around for "emergencies.

Finally, a tip of highly questionable utility. If you drag suitcase A onto suitcase B, the contents of suitcase A are copied into suitcase B, and Suitcase A disappears. In effect, a merger. Mail me a quarter every time you use this. I'll soon be rich.