

# MacWorks Plus



*Hard Disk  
Install Instructions*



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# Introduction

Ever since Sun Remarketing contracted with Apple Computer, Inc. to service and support Lisa and Macintosh XL customers, we've been developing products designed to enhance these computers. Developing hard disk drives, an 800K internal floppy drive solution, and HFS capabilities just weren't enough. We had to find a solution that would provide owners of the better-designed and better-built machines some advanced software features that their newer little sisters enjoy. From this desire, MacWorks Plus was born.

MacWorks Plus contains many enhancements found on a Macintosh Plus. Although it will not make your Lisa operate exactly like a Macintosh Plus, it will allow you to run many newer programs that earlier called for a Macintosh Plus. There are a few areas, such as sound and SCSI peripheral device interfacing, that are not a current option with MacWorks Plus. These features may be considered in future releases.

During our beta testing we put MacWorks Plus through many rigorous tests including comparisons against MacWorks Version 3.0. Each test was done on a Lisa with 1 megabyte of internal memory, (requires a min. 1 megabyte of internal memory), and a Sun 20 megabyte hard disk drive. All program loading was executed from the finder. Each system had the same amount of information on the hard disk. The results are as follows:

<b>TEST</b>	<b>MacWorks Plus</b>	<b>MacWorks Version 3.0/HFSAL</b>
Space Occupied on the Hard Disk	302.0K	800.0K
Boot Time to Finder	2.5 min.	3.0 min.
Sec. to Load Excel	12.0	14.0

In the following pages, you'll learn how to install MacWorks Plus. Some screen diagrams that you see in the original MacWorks manual will appear slightly different under MacWorks Plus using the current version of the finder (6.0 or greater). To gain further insight to MacWorks Plus, carefully read the sections that follow.

## **System Requirements**

MacWorks Plus only requirement is that you have at least one megabyte internal memory. Although it's recommended that you have an 800K floppy, it will work with a 400K floppy drive (refer to 400k installation sheet). A hard disk drive is extremely valuable to receive the full benefit from this product.

# Installation

MacWorks Plus now contains information that once called for extra patches and files on the hard disk for proper operation (ie. HFS, 800K floppy capabilities). Since these features are now incorporated in a single package, you may install MacWorks Plus on your hard disk using a simple installation procedure.

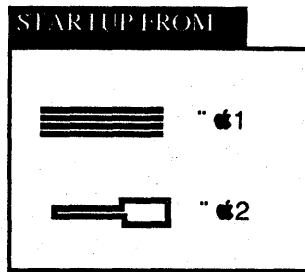
## Hard Disk Installation

Installing MacWorks Plus on a hard disk drive is a three step process. It requires that you 1) boot MacWorks Plus from a floppy, 2) run the installation program from the System Disk, and 3) copy a system folder to your hard disk.

**Be sure to backup your hard disk before beginning any of these procedures.** It's best to use HD Backup or simply drag your files to floppies. At this printing, HFS Backup doesn't perform satisfactorily. In the following section, we'll discuss in detail how to complete each of these tasks.

## Step One Boot MacWorks Plus from a floppy.

The easiest way to boot from a floppy is done in the following manner. When you turn your machine on, you'll hear a soft click noise as your computer begins to start the self-test procedure. Press the spacebar a few times when you



hear this noise. After the self-test procedure has finished (this may take a while if you have Apple's internal 10 megabyte hard drive), the representation of a hard disk and a floppy disk drive will appear in the upper left hand corner of the screen. The message "Startup From" will appear above these icons. This representation will vary according to your system configuration. Now you need to insert the **MacWorks Plus Boot** disk into the floppy drive. Next choose the Floppy disk option "Apple 2", or click on the floppy disk icon with the mouse. MacWorks Plus will load into

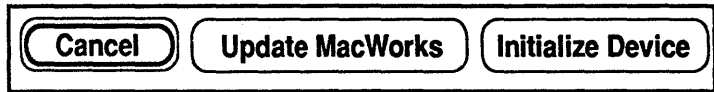


the memory of the computer and you'll see the hello message on the screen. The boot disk will eject leaving a blinking question mark on the screen which means a Macintosh disk can be inserted.

## **Step Two** **Run the installation** **program from the** **System Disk**

Insert the MacWorks Plus System disk into the floppy drive and it will boot to the desktop. Here you'll see the MacWorks Plus Icon in the MacWorks Plus System disk window. If not, open the MacWorks Plus System disk. Move the mouse pointer to the installation program icon and double click to open the installation application. After

installation program is loaded, a dialog box will appear explaining that MacWorks Plus can be installed onto any connected device. In most cases you will have one hard disk connected. You will be given the choice to install MacWorks Plus on your hard drive or cancel. If you choose to continue, you'll see a warning message saying that the data on your hard disk will be erased. Again, you may either cancel or continue.. If MacWorks Plus has previously been installed on your hard disk, there will be a



third option, update Macworks Plus. Installing MacWorks Plus will reformat your hard disk. You will lose everything on your hard disk. **Verify you've backed up your hard disk.** It's best to use HD Backup or simply drag your files to floppies. At this printing, HFS Backup doesn't perform satisfactorily.

### **Install MacWorks Plus Option.**

After installing MacWorks Plus, you'll have a blank hard disk. The installation will have completely erased your hard disk.

### **Update MacWorks Plus Option.**

If you've previously installed MacWorks Plus on your hard disk and for some reason you need to update your hard disk (i.e. installing new version), choosing the Update MacWorks option won't reformat your hard disk. Updating can only be done if your hard disk was previously formatted with MacWorks Plus. Otherwise the update option will not appear on your screen.

## **Step Three Copy the system folder to the hard disk**

Before turning your machine off, copy the system folder from the **MW+ System Disk** to your new **MW+ Hard Disk**. If you don't do this operation, your computer won't boot properly leaving you with an error message on the screen.



## **Floppy System Copy**

If you're copying a system folder from an 800K diskette, simply drag the system folder icon from the **MW+ System Disk** to the **MW+ Hard Disk**. After the files have been transferred correctly, you may restart your system.

## Special Cautions

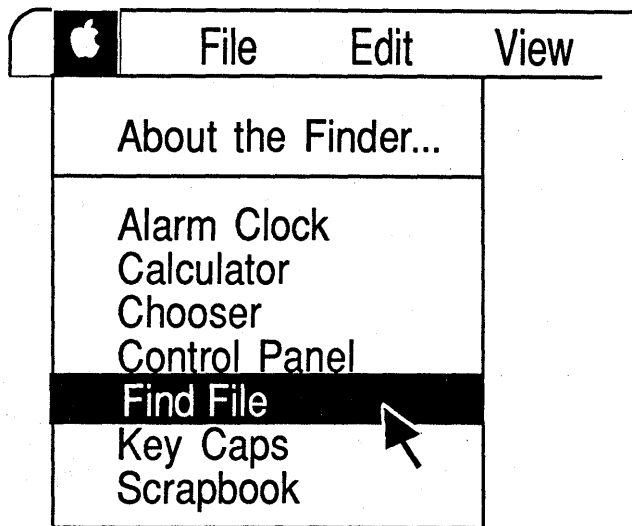
### A Word About Backup Programs


Under older versions of MacWorks (MacWorks 3.0, etc.) MacWorks was on a separate partition of the hard disk. With MacWorks Plus, it isn't in a separate partition. It's the boot program that resides at the root directory of the HFS hard disk. Using a program such as *HD Backup* will erase the hard disk before it restores files to the hard disk when you choose the 'restore entire volume' option. Everything is erased, including MacWorks Plus. If you try to re-boot your system, you'll get an error saying your hard disk is bad because MacWorks Plus is no longer on the hard disk. At this point, complete the installation procedure again, only this time choose the **Update MacWorks** option. **Do not choose the Initialize Device option.** If you do, you'll erase all the files you just restored from your backup program.

### System Folders

When restoring an HFS volume made under MacWork 3.0 to your newly initialized MacWorks Plus volume, you must remember to replace any newly restored system file with the system file and finder supplied on the MacWorks Plus System disk. System files used with HFS under MacWorks 3.0 were modified to operate correctly with HFS and won't work properly with MacWorks Plus.

When you think that you have installed MacWorks Plus correctly and restored your files, make one more check over your hard disk to and varify that you have only one system file.



The easiest way to accomplish this is by using the **Find File** desk accessory found under the  on the menu bar. Simply drag down the menu and select **Find File**. When the program comes up, type the word **System** in the **Search for** box and hit return. Find file will search through the HFS structure on your hard disk and find all occurrences of **System** on your hard disk. Each occurrences of **System** will be listed in the center section of the screen. By double clicking the mouse on the individual items listed, a complete list of the file information will be listed at the bottom of the screen. You should only see two occurrences of the word **System**; one representing the system folder, and one for the actual system file found inside the system folder. Any additional occurrences of an actual system file must be located and purged.

## An Easy Solution

1. Backup your hard disk.
2. Install MacWorks Plus on your hard disk.
3. Restore your files to your hard disk.
4. Turn off your machine and re-boot MacWorks Plus from a floppy holding down the option key while MacWorks is booting from the floppy.
5. Insert the MacWorks Plus System diskette, and open the run the installation program again.

6.



When prompted, choose Update MacWorks option. Do not choose Initialize Device or you will erase your hard disk.

7. When the update process is complete, remove the system folder from your hard disk and drag the system folder on the MacWorks System disk to your hard disk. Remember to save special files like fonts and special system folder files on a separate diskette so they can be added later. Turn off your machine and re-boot from scratch.