

Running DiskWarrior

Compatibility

Make sure DiskWarrior is compatible with your Mac. For the most current requirements, please visit our web site: <http://www.alsoft.com/DiskWarrior/>

Rebuilding Your Mac Disks

You will find DiskWarrior extremely easy to use. You start by selecting a disk, clicking Rebuild, and then waiting a few moments for the DiskWarrior Report. Then you view the Report, making note of the problems that were found and repaired and anything that DiskWarrior recommends to you. At this point, you should preview the rebuilt disk by checking if any files or folders you may have lost have been recovered. You can even examine your files by opening documents on the preview disk. Once you are satisfied with the Preview disk, you click Replace to replace the directory on the original disk with the new, optimized replacement directory that you just previewed.

Alsoft recommends, however, that you thoroughly read the remainder of this document so that you understand how DiskWarrior works, and what you should look for in each step. Follow these steps to rebuild your disks with DiskWarrior:

Launching DiskWarrior while started up from the DiskWarrior Flash Drive

DiskWarrior will launch automatically when starting up from the DiskWarrior flash drive. The DiskWarrior flash drive ships with the ability to start up any Intel Mac that originally came with OS X 10.4, 10.5 or 10.6 installed. If the disk you want to repair is a core storage volume or encrypted with FileVault 2 or if you have a newer Mac that originally came with OS X 10.7 or later then see the section “**Launching DiskWarrior while started up from your Mac’s built-in OS X Recovery**” below. After your startup disk is repaired, you can use the included DiskWarrior Recovery Maker to update the DiskWarrior flash drive to start up your newer Mac.

1) Insert the DiskWarrior flash drive directly into a USB port on your Mac.

Do not use a USB port on a hub, external monitor or keyboard.

2) Turn on or restart your Mac and immediately press and hold down the Option (alt) key.

After a few seconds, the Startup Manager should appear as shown below. If you see the Apple logo, it’s possible that you didn’t hold Option early enough. Restart and try again.



3) Use the left and right arrow keys on the keyboard to select the DiskWarrior Recovery disk and then press the Return key.

Then see the section “**Using DiskWarrior**” below.

Launching DiskWarrior while started from your Mac’s built-in OS X Recovery

If the DiskWarrior flash drive is unable to start up your Mac, you can update the flash drive with DiskWarrior Recovery Maker or you can simply start up in your Mac's built-in OS X Recovery.

1) Insert the DiskWarrior flash drive directly into a USB port on your Mac.

Do not use a USB port on a hub, external monitor or keyboard.

2) Turn on or restart your Mac and immediately press and hold down the Command key and the R key (Command-R).

Press and hold these keys until the Apple logo appears. After the Recovery System finishes starting up, you should see a desktop with an OS X menu bar and an “OS X Utilities” window. Note: If you see a login window or your own desktop and icons, it’s possible that you didn’t hold Command-R early enough. Restart and try again.

3) Choose Terminal from the Utilities menu.



4) When the Terminal window is displayed, type /Volumes/DW/go and press the Return key.



Launching an installed copy of DiskWarrior

Refer to the “Installing DiskWarrior” document located on the DiskWarrior flash drive or in the disk image you received via download purchase. Then simply double-click the installed DiskWarrior.

Using DiskWarrior

1) Launch DiskWarrior using one of the methods above.

You will then be presented with the DiskWarrior main window from which you can rebuild disk directories.



2) Select the disk to be rebuilt from the pop-up menu.

If you started up from the DiskWarrior flash drive and the disk you want to rebuild is not present in the pop-up menu then it may be encrypted with FileVault 2 or it may be some other type of core storage disk that is not supported by the copy of OS X on the DiskWarrior flash drive. If necessary, update the copy of OS X on the DiskWarrior flash with the DiskWarrior Recovery Maker or follow the instructions in the section **“Launching DiskWarrior while started up from your Mac’s built-in OS X Recovery.”**

3) The lower portion of the main window will indicate whether the directory is ready to be rebuilt.

If for some reason DiskWarrior cannot rebuild the disk’s directory, it will indicate the reasons the directory cannot be rebuilt. If the disk is encrypted with FileVault 2, you'll need to unlock the disk. When a disk is encrypted, the Mount/Unmount tool changes to an Unlock tool. Click the Unlock tool and you'll be prompted to enter the password to unlock the disk.

4) Click the Rebuild button.

DiskWarrior will begin building the replacement directory on the disk to be rebuilt. It will first analyze the disk. This analysis can take anywhere from several seconds to several minutes or longer, depending on the number of files on the disk. When DiskWarrior is finished, it will display a dialog informing you of the results of the rebuild. For further information on what DiskWarrior reports, refer to “What to Look for in the DiskWarrior Report” later in this document.

5) Test the replacement directory.

At this point, the original directory information on your disk has not been replaced, and it will not be until you click “Replace”. The DiskWarrior Report gives you an option to preview how your disk will appear after the original directory is replaced. For further information, refer to **“What to Look for**

During Preview” later in this document.

6) Make sure that you quit any applications you have tested in the previous step before proceeding.

You do not need to stop the Preview before proceeding, but you may if you wish. DiskWarrior cannot replace the directory if applications and documents are left open.

Note: If the disk you have selected is locked, you will be able to preview the replacement directory but you will not be able to write the new directory to the disk

7) Click “Replace” to use the replacement directory, or “Cancel” to leave the directory untouched.

If you click “Replace,” DiskWarrior will install the replacement directory on your disk. This will result in your disk being “replaced” by the Preview disk described in step 5 above. If you click “Cancel,” your disk will be untouched and you will be returned to step 2 above. The Replace button is disabled when the disk is locked, there is a malfunction, or the disk is too severely damaged to be repaired.

Note: In the event that critical items that you wish to recover remain missing during the preview, it is recommended that you do not proceed with the rebuild (refer to “What to Look for During Preview” later in this document).

8) DiskWarrior will write the rebuilt directory and keep you updated with its progress.

DiskWarrior uses a fail-safe method of replacing the directory whenever possible, which will be most cases. To use the fail-safe method, there merely needs to be enough free space on the disk to write the new directory. There is redundancy designed into the fail-safe method, assuring there is never any risk of ending up with an unusable disk if the process is interrupted. You can go back to step 2 for any disk for which the process was interrupted.

9) Quit DiskWarrior by selecting "Quit DiskWarrior" from the DiskWarrior menu.

What to Look for During Preview

When DiskWarrior presents the “preview disk,” you have the opportunity to check and test the disk as it will appear after it is rebuilt. You can run applications, open documents, and see if files and folders that you lost have been recovered.

If the original disk was mounted before you ran DiskWarrior, DiskWarrior will display both the original disk and the preview disk in the DiskWarrior Preview Window. Both of these disks will be locked during the preview, so you will not be able to make any changes to either of them. Both the original disk and the preview disk will appear within the panes of the DiskWarrior Preview Window.

DiskWarrior may create special folders at the root level of the disk. You should pay particular attention to the files and folders that DiskWarrior places in these folders. The folder called “Rescued Items” contains files and folders whose enclosing folder could not be found. If any of these files or folders are part of a software package you will need to reinstall the software package.

If DiskWarrior creates a folder titled “Damaged Items,” then this folder contains files that were recovered but may have problems. For instance, these files may have been truncated because

blocks were missing from the file, or the existing directory information may have indicated that two files occupied the same area of the disk. The DiskWarrior Report created after the rebuild is completed will tell you if two files own the same area of the disk (refer to “What to Look for in the DiskWarrior Report” later in this document). If this is the case, then DiskWarrior will separate the two files for you after the directory is replaced. Once the rebuild is complete, you will need to determine which of these files can be salvaged and which has damaged data.

At this point in the process, if you discover that there are items missing from the preview disk, use the Find feature of the Preview Window to search for invisible items. Make sure the preview disk is the disk selected in the left pane.

In the event that critical items that you wish to recover remain missing during the preview, it is recommended that you **do not proceed with the rebuild**. Since the directory information for the items that are missing was overwritten or deleted at some point previously, DiskWarrior could not recover these items. You will need to send your disk to a professional recovery service to recover your lost files. While in preview, you should copy as many items from your disk as possible to another hard disk, FireWire disk, USB disk, Thunderbolt disk, etc., using the copy feature of the Preview Window. You may need to copy the original files to several disks, depending upon the amount and size of the files on the source and the size of the disks to which you are copying the files. Another option is to copy only the files that you absolutely need, such as those that have changed since your last backup, or only your data files if you are planning to reinstall your system and applications. In either case, it is possible that the Preview Window will not be able to copy all of the files you select. If the Preview Window displays such an error, select “Continue” to continue copying the remainder of the files you selected. When the copy operation is complete, you may want to attempt to copy the skipped files again in case the error is intermittent and the copy operation can be performed for those files. This will minimize the number of items that the recovery service will need to recover for you.

What to Look for in the DiskWarrior Report

After the rebuild has been completed, DiskWarrior will show you a DiskWarrior Report. When DiskWarrior displays the DiskWarrior Report, it shows you a summary of all the problems found and repaired and DiskWarrior’s recommendation to you. However, if you wish to see more detail regarding the problems found and repaired, you can view the details section in the lower portion of the DiskWarrior Report for this information. When previewing, you might consider testing any files mentioned in the report.