MacDrive 6

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Introducing MacDrive

This section contains general information about MacDrive for all users.

See the **Introducing MacDrive** book to the left to explore all of the available topics.

About MacDrive 6

Many popular software packages exist in versions for both Windows and Mac OS, and are so similar in design and function that they are file-compatible.

For example, a file created by Microsoft Excel for Macintosh can also be understood by Microsoft Excel for Windows. Even when using such "cross-platform" compatible software, however, a major and long-standing problem has been the lack of a straightforward way to transfer files between computers of different types. Mac and PC disks cannot normally be shared between the two types of computers, as each stores the documents you create on disks in different and incompatible ways. Normally, a disk formatted on one platform will not be recognized by the other. Modern Mac systems do include software that allows them to understand PC disks, but the results are not always desirable, and this does nothing to address the problems experienced by Windows users needing files from Mac disks.

MacDrive addresses this problem in a very straightforward manner: it gives the Windows desktop, Explorer and any software running under Windows the ability to freely open and save files on Macintosh disks.

With MacDrive, when you wish to use a Mac disk, you don't need to run any software—to open

or save files on a Mac-formatted disk, you just put it in and use it like any other disk.

MacDrive can share *all* types of files between Macintosh and Windows, but it does not interpret or modify files. This means that you can share all types of files on Mac disks, but you need to have both Windows and Mac OS software that can understand the files you intend to share.

MacDrive provides user-modifiable behaviors so that files created under Mac OS appear with appropriate file name extensions under Windows, and files created on Mac disks under Windows appear with appropriate icons under Mac OS.

You can even format Mac disks, copy Mac disks, and both create and decode MacBinary files with convenient shortcut menu options.

MacDrive opens a world of data-sharing possibilities:

- Save your Windows spreadsheet to a colleague's Mac floppy in the middle of a cross-country flight.
- Mac-format a Zip disk and copy your publishing files to it before sending it off to the service bureau that is frequently confused or slowed-down by PC-formatted disks.
- Configure your 3D animation software to render directly to a Mac-formatted external FireWire or USB disk, then transfer gigabytes of data between Windows and Mac OS in only the time it takes to carry the disk from one computer to the other.
- Burn your newly-captured video clips to a Mac DVD for easy access on your Mac-based video editing workstation.
- Insert clip art from a Mac CD-ROM directly into Microsoft Word.

MacDrive is a powerful, fast, flexible, cost-effective and straightforward way to accommodate your Mac/PC file sharing needs. MacDrive is easy to install, works immediately, and quietly provides Windows with the power to access files on Mac disks from any software, at any time.

System Requirements

System requirements are modest. MacDrive requires Windows XP, 2000, Server 2003, 98SE or Me, and works with most types of disks. There are no special software or hardware requirements, although an appropriate interface adapter (USB, SCSI, FireWire, etc.) is required if you intend to share external drives between Windows and Mac OS by unplugging the drives from one computer and into the other.

MacDrive can access Mac-formatted high-density (1.44MB) floppies (but *not* low-density 800KB floppies) in a standard 3½" PC floppy drive. You can also share removable media such as Zip disks regardless of how the drive is interfaced with your Windows system (i.e. you can share a disk between a USB Zip drive on your Mac OS system and a built-in IDE Zip drive on your Windows system).

MacDrive should not be installed on PC emulators such as Virtual PC (see Appendix A for details).

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Registration

It is important that you register MacDrive. Having your registration information on file allows us to keep you up-to-date on MacDrive improvements and let you know about special offers from Mediafour. Your registration also entitles you to free technical support, should you have any difficulties getting MacDrive to perform as expected on your system.

You may register by mailing the registration card included in the MacDrive package, or by clicking **MacDrive 6** > **Register MacDrive** in the **Start** menu.

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Technical Support

If you are having trouble with MacDrive, the first place to look is the troubleshooting section of this User Guide.

If you don't find the answer you're looking for there, visit mediafour.com/support/macdrive for your other support options.

Because it is so immediate and covers so many topics, one of the very best and fastest ways to get assistance is online in the Mediafour Forums. The forums are so useful because the answer to your question may well already be there, and even if it isn't, there are typically hundreds of people participating, and someone is likely to be anxious to show off their knowledge by lending you a hand!

A free MacDrive update that will eliminate whatever problem you are experiencing may be available; be certain to use MacDrive Update to check online for a newer version of MacDrive.

If you don't find the answer to your question in any of those locations, you may need to contact Mediafour for assistance.

Technical support is available only to registered MacDrive users, so it is very important that you register before contacting Mediafour. Click here for details on getting Technical Support for this version of MacDrive.

When you contact Mediafour, please be prepared to provide the following information:

- The serial number and version of MacDrive installed (see both in the Support Information window)

- The model and operating system of the computer on which MacDrive is being used
- Expansion boards installed in the computer (SCSI adapter, USB, Ethernet, etc.)
- All hard drives and removable cartridge drives installed in or attached to the computer (such as IDE 160GB internal hard drive, external USB Zip, external SCSI 2G Jaz, external FireWire 120GB, etc.)
- The problem experienced, in as much detail as possible; essential details include the action being taken at the time the problem occurred, the expected results, the type of file being accessed, the software being used, the type of drive used, and the *exact text of any error messages that appear*.

Software Updates

Mediafour periodically releases minor free MacDrive updates, and also typically makes upgrades to the newest version of MacDrive available to registered MacDrive users at significant discount.

News of updates, upgrades and enhancements are available on the Web at mediafour.com/macdrive, or better yet, through **MacDrive Update**.

About This Guide

MacDrive does what it does without requiring much attention or direct interaction. For many users, this Guide will be entirely unnecessary, as MacDrive begins silently doing its job as soon as it is installed. There are, however, many examples of special situations and features in this guide that may benefit you in your particular application.

This guide is divided into four sections:

- **Introducing MacDrive 6**, the section you are reading now.
- **Getting Started** outlines the components of MacDrive and describes how MacDrive interacts with various hardware and software.
- **Reference** explains exactly how to achieve particular results with MacDrive.
- **Appendices** features valuable insights into the workings of MacDrive.

Throughout the guide, links prefixed with a small boxed arrow indicate that they will take you to a destination outside of this User Guide, such as in the case of links like check for MacDrive Updates.

Links followed by a small boxed question mark indicate that they will not take you anywhere, but will instead display a definition of the term, such as when cross-platform computing is

mentioned.

Sections or items labeled with XP/2000/2003 only or the larger version of this badge pertain to features that are only available under Windows XP, 2000 and Server 2003.

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Getting Started

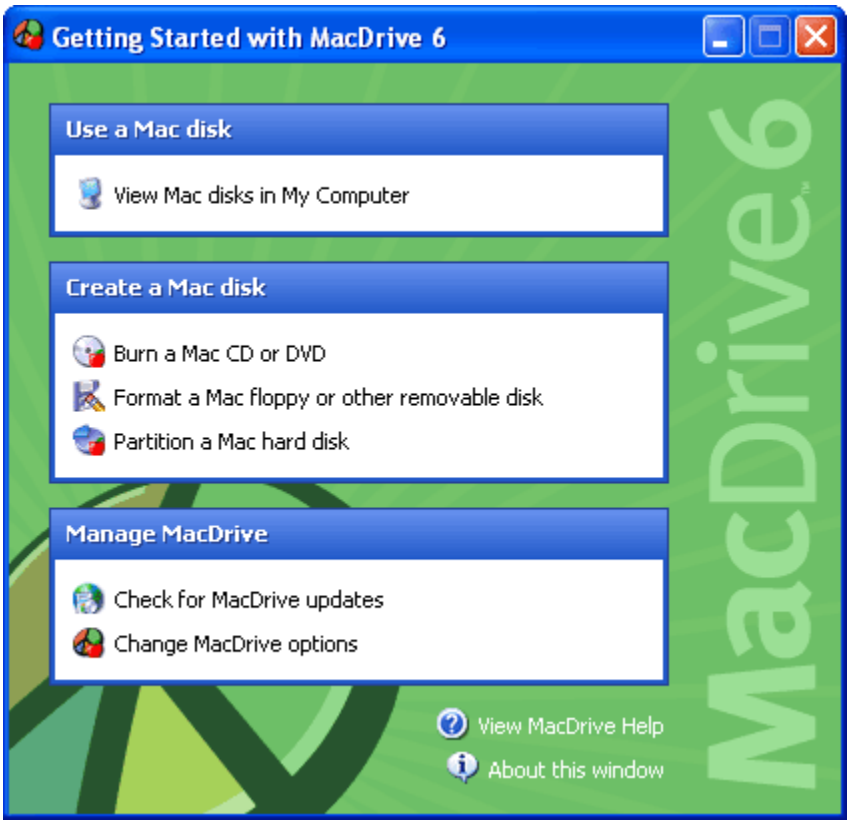
This section contains specific documentation for new MacDrive users.

See the **Getting Started** book to the left to explore all of the available topics.

MacDrive 6

Getting Started Window

The **Getting Started with MacDrive 6** window is a handy portal to many of MacDrive's most popular features.



You can get to **Getting Started** anytime by clicking **MacDrive 6** > **Get Started with MacDrive 6** in the **Start** menu.

You can also open the **Getting Started** window by clicking the MacDrive notification icon and selecting **Getting Started with MacDrive 6** from the pop-up menu, or by simply double-clicking the notification icon.

The **Burn a Mac CD or DVD** and **Partition a Mac hard disk** features are available only under Windows XP, 2000 and Server 2003. XP/2000/2003 only

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Using MacDrive 6 Immediately

To start using Mac disks right away, do this:

1. Put a Mac disk in any drive
2. Access the drive from the desktop, Explorer or your favorite software

You should have no problem accessing most types of disks right away. If you do experience problems, read on through the next three sections of the User Guide to learn more about MacDrive components and compatibility with various types of disks, drives and software.

The Getting Started window is an excellent way to get to various popular MacDrive features quickly.

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MacDrive 6 Components

Once installed, MacDrive is invisible and makes your Windows system ready to access Mac disks at any time. There are very few visible components of MacDrive, and those that exist are discreetly integrated into the Windows environment. The visible components of MacDrive include:

- **Getting Started with MacDrive 6** provides a friendly portal to the most popular MacDrive features.
- **MacDrive Disk Manager** enables you to Mac-partition hard drives. XP/2000/2003 only
- **MacDrive CD/DVD Creator** is a tool for creating Mac CDs and DVDs. XP/2000/2003 only

- General MacDrive behavior can be customized in **MacDrive Properties**.
- The MacDrive Notification Icon indicates when Mac disks are discovered, and proves a shortcut menu with links to several MacDrive features.
- Additional Mac-specific details about file and folders are found on the **MacDrive tabs** of the properties of files and folders on Mac disks, and also of the disks themselves.
- **Format Mac Disk** and **Copy Mac Disk** options are added to the shortcut menus of most disks, as appropriate.
- File-naming mode options are added to the shortcut menus of all Mac disks.
  

- **Show Mac Files** and **Show Windows Files** options are added to the shortcut menus of dual-format CD-ROMs, and volume choices are added for multisession CD-Rs.
- **Extract Original Mac File(s)** option is added to the shortcut menus of all files with ".bin" or ".hqx" file name extensions.
- **Create MacBinary File(s)** and **View Mac Resources** options are added to the shortcut menus of all files on Mac disks.
- Small red apple overlays are added to the icons of drives containing Mac disks.

Media Compatibility

MacDrive enables the Windows desktop, Explorer and other software running under Windows to access nearly any type of Mac disk. Windows, however, must be able to communicate with the drive to allow MacDrive to function.

If you are currently able to use your removable media drive with normal PC-formatted disks, you can be confident that Windows is successfully communicating with the drive, and that MacDrive will be able to recognize Mac disks when they are inserted.

If the disk device is new to your Windows system (as would be the case, for example, when plugging an external SCSI drive from a Mac OS system into your Windows PC FireWire adapter for the first time), it is *likely* that it will be recognized by Windows and work properly without requiring the installation of driver software from the drive or adapter manufacturer, but this is not guaranteed.

When attaching a removable media drive, if Windows presents no drive letter for the removable drive, the hardware may not be properly installed, or driver software may be necessary. When attaching a Mac external hard drive, Windows will not present a drive letter unless both the drive and MacDrive are properly installed. If using SCSI or Fibre Channel drives, you can likely watch for notification from the SCSI or Fibre Channel adapter during the boot process detailing detected drives. If a newly-attached SCSI drive is not detected, check for ID conflicts and proper termination. Regardless of the drive type, if it is not detected, look for faulty cables, check both drive and adapter configuration, and try PC-formatted disks in order to confirm whether the drive is fundamentally working.

MacDrive works with high-density floppies, Zip, CD-ROM, CD-R/RW, DVD±RW/±R, Jaz, iPod, hard drives, SyQuest, MO, ORB and nearly any other disk device that works with Windows.

High-density (1.44MB) Mac floppies can be accessed on any Windows system with a 3½" floppy drive. Low-density (400KB and 800KB) Mac floppies cannot be accessed due to physical differences between the floppy drives in Mac OS systems and Windows PCs.

Software Compatibility

MacDrive makes Mac disks appear and behave almost exactly like standard PC-formatted disks.

MacDrive works well with Microsoft (Word, Excel, FrontPage, PowerPoint, Access, Works), AppleWorks, Adobe (Photoshop, Elements, Illustrator, InDesign, GoLive, Acrobat), Corel Painter, Macromedia (Director, Flash, Fireworks, Dreamweaver, FreeHand), QuarkXpress, FileMaker Pro, Avid (Media Composer, Symphony, Xpress), Digidesign Pro Tools, TransType, LightWave 3D, and countless additional applications.

Classic Mac OS versions support file names up to 31 characters in length, and Mac OS X supports file names up to 255 characters in length. Because Windows supports file names of these lengths, there is rarely a need to *shorten* a Mac file name for compatibility's sake. MacDrive does occasionally have to present slightly altered filenames, however, as the Mac allows file names containing characters that are forbidden by Windows. In these cases, MacDrive substitutes characters as necessary to bring the displayed file name into compliance with Windows file naming rules.

Please note that any time this guide refers to the substitution of characters in file names, it is the file names as they are *presented* under Windows that are altered—the names of Mac files as they exist on disk are never altered for the sake of compatibility, except when a Mac file is created or renamed from Windows.

Reference

This section contains specific documentation on a wide variety of MacDrive-related topics.

See the **Reference** book to the left to explore all of the available topics.

MacDrive Properties

This section contains topics specific to the MacDrive Properties interface.

See the **MacDrive Properties** book to the left to explore all of the available topics.

MacDrive Properties, MacDrive Tab

To access MacDrive Properties, either click the MacDrive Notification Icon, if available, and choose MacDrive Properties, or alternately, click the Windows **Start** button, click **Settings**, and then click **Control Panel**. The Control Panel will be displayed—open **MacDrive**, and MacDrive Properties will be displayed.

MacDrive Properties is divided into three tabs, each of which is accessible by clicking the appropriate tab: **MacDrive**, **Options**, and **File Name Maps**.

To open MacDrive Properties to the MacDrive tab right now, click here.

The **MacDrive** tab in MacDrive Properties provides the version of MacDrive currently installed, and a link to **Getting Started with MacDrive 6**.

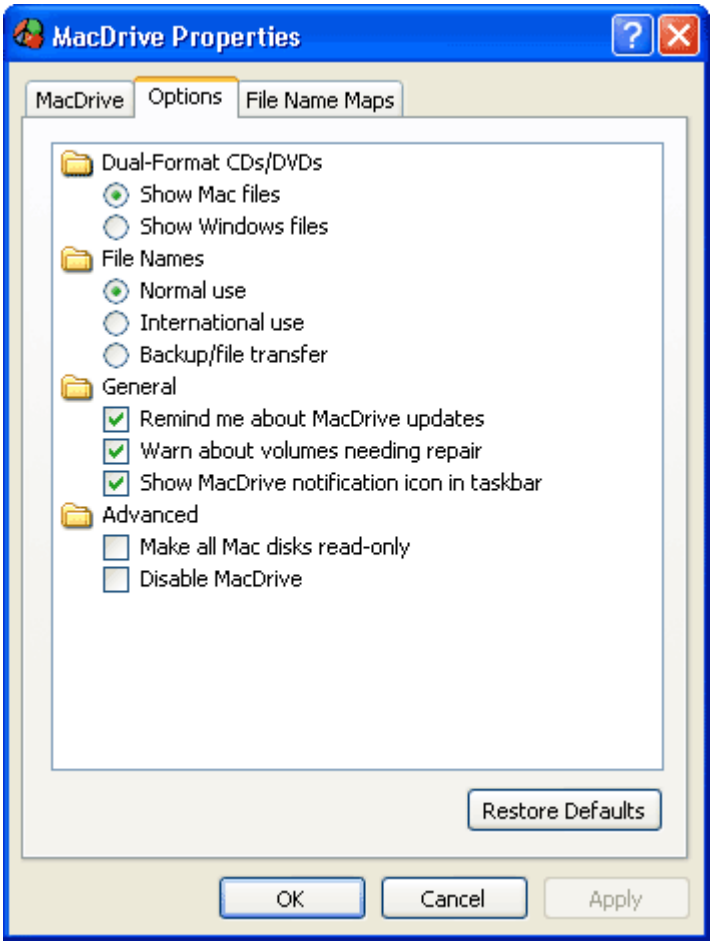
MacDrive Properties, Options Tab

To access MacDrive Properties, either click the MacDrive Notification Icon, if available, and choose MacDrive Properties, or alternately, click the Windows **Start** button, click **Settings**, and then click **Control Panel**. The Control Panel will be displayed—open **MacDrive**, and MacDrive Properties will be displayed.

MacDrive Properties is divided into three tabs, each of which is accessible by clicking the appropriate tab: **MacDrive**, **Options**, and **File Name Maps**.

To open MacDrive Properties to the Options tab right now, click here.

The **Options** tab provides options and settings that are not often needed by most MacDrive users, and should be changed with great care.



The options that appear here will vary based on a wide variety of factors, including the version of MacDrive you are using, the version of Windows you are using, and other software that you may or may not have installed on your computer. Don't be concerned if your Options tab differs somewhat from the illustration above.

Most advanced options are self-explanatory, especially given the tooltips that appear as your pointer hovers over each option, but some benefit from additional explanation, provided below.

Dual-Format CDs/DVDs

- This the global default for the setting discussed in the Multisession and Dual-Format Discs section.

File Names

- This the global default for the setting discussed in the File-Naming Modes section.

General

- The **Remind me about MacDrive updates** option controls whether or not MacDrive periodically offers to check for updates.
- The **Warn about volumes needing repair** option controls whether or not MacDrive displays Volume Check warnings.
- The **Show MacDrive notification icon in taskbar** option can be used to bring the

notification icon back if it has been hidden.

Advanced

- The **Make all Mac disks read-only** option prevents all modification of Mac disks, so it is good for computer forensics or other transfer of irreplaceable data.
- The **Disable MacDrive** option provides a way to temporarily deactivate most of MacDrive without uninstalling it.

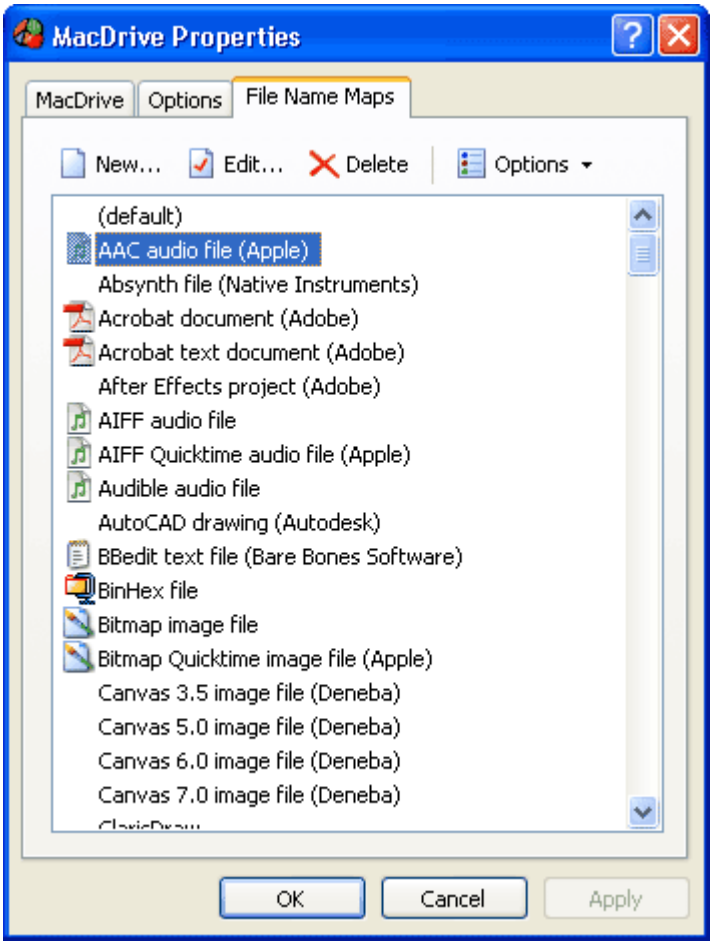
MacDrive Properties, File Name Maps Tab

To access MacDrive Properties, either click the MacDrive Notification Icon, if available, and choose MacDrive Properties, or alternately, click the Windows **Start** button, click **Settings**, and then click **Control Panel**. The Control Panel will be displayed—open **MacDrive**, and MacDrive Properties will be displayed.

MacDrive Properties is divided into three tabs, each of which is accessible by clicking the appropriate tab: **MacDrive**, **Options**, and **File Name Maps**.

To open MacDrive Properties to the File Name Maps tab right now, click here.

The **File Name Maps** tab in MacDrive Properties is used to review and customize File Name Maps, which are rules that control how MacDrive handles file types, creators and extensions.

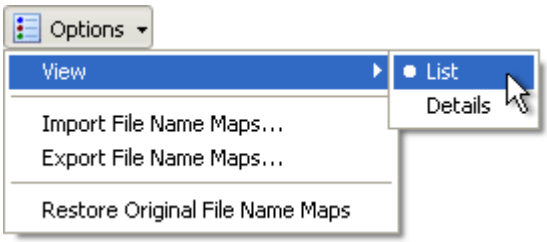


Adjustment of these settings is entirely optional, but there is quite a bit of power to be had here, and the settings are very easy to manage once you have familiarized yourself with them.

File Name Maps enable you to modify and create associations between the Windows and Macintosh methods of identifying file contents. Windows uses file name extensions, while Macintosh uses two four-character codes called type and creator (see Appendix B). File Name Maps enable you to control when and how MacDrive appends file name extensions to the Mac file names it presents (based on the Mac type and creator properties stored with the Mac file), and when and how it sets the type and creator properties for newly made Mac files (based on the Windows file name extension of the file).

Options Menu

This menu in the upper-right of the File Name Maps tab provides options for managing both the display and contents of the File Name Maps list.



The **View** submenu controls whether the File Name Maps are displayed in the default **List** mode, which shows only the Map names, or in the **Details** view, which displays additional details about the Extension Maps in four columns labeled **Name**, **Type**, **Creator** and **Ext**, which is short for Extension.

The **Export** and **Import File Name Maps** options can be used to transfer full sets of File Name Maps to and from files of your choosing, making it easy for one user to export a customized set of File Name Maps to be imported by other users.

Restore Original File Name Maps simply resets all File Name Maps as if MacDrive had just been installed for the first time. No customized Maps are preserved.

File Name Maps list

Any File Name Map in the list can be reviewed or edited by either double-clicking the Map or by selecting it and then clicking Edit in the toolbar above the list. To add a Map, click the New button. To remove a Map, select it and click Delete. When Delete is clicked, you will be asked to confirm the deletion. To skip this confirmation, hold the SHIFT key while clicking Delete.

To either determine which File Name Map affects the display of a given file's name, or to create a new Map for a given type of file if none already exists, simply drag and drop any file into the File Name Maps list.

The first entry in the list of File Name Maps is called **(default)** and cannot be deleted or renamed. Any type, creator and file name extension specified in this File Name Map are used by default whenever more appropriate selections do not exist. Typically, there are no defaults specified, as they are likely to affect unintended files, but the changing of these defaults may be desirable for particular purposes.

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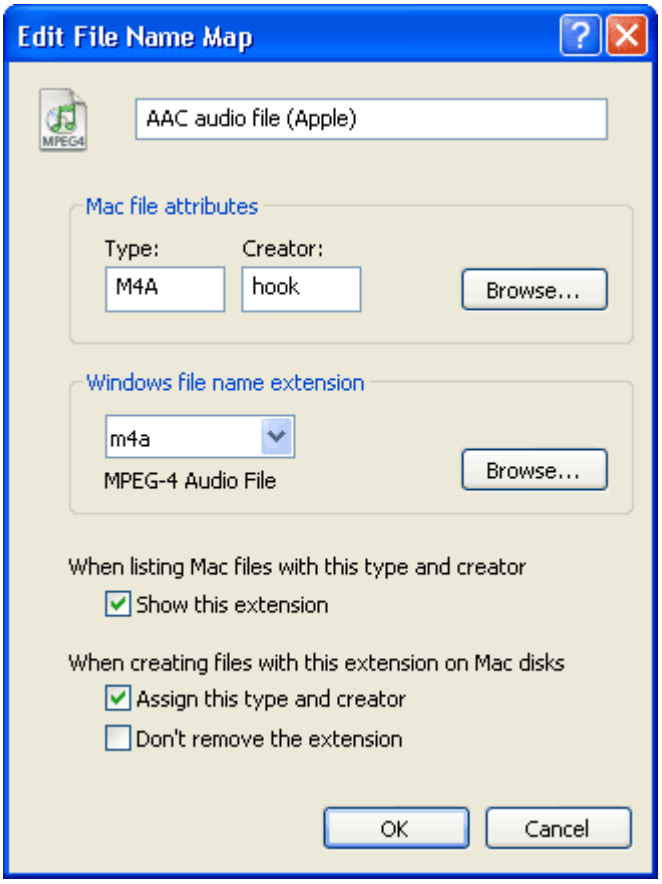
Edit File Name Map

This window allows you to modify each File Name Map's Name, File type, File creator and Windows file name extension. It also provides checkboxes to indicate how you want these fields to be interpreted. This window also allows drag-and-drop of files; dropping a file from a PC disk into this window will put that file's extension into the appropriate field, and dropping a file from a Mac disk into this window will put that file's type and creator into the appropriate fields. Or, you can also use either of the Browse buttons to select a sample file.



Show this extension

Selecting this option will cause MacDrive to append the file name extension that appears in this File Name Map whenever showing the name of a file that has this File Name Map's type and creator. For example, an Adobe Photoshop image created under Mac OS and saved to a Mac-formatted disk as North Lake would automatically appear under Windows as North Lake.psd, thereby allowing both Windows and the Windows version of Photoshop to recognize the file as a Photoshop document.

Assign this type and creator

Selecting this option will cause MacDrive to assign this File Name Map's type and creator whenever a file ending with the file name extension that appears here is created on a Mac disk, ensuring that the file will be displayed with the appropriate icon when the disk is used under Mac OS.

Don't remove the extension

Selecting this option will cause MacDrive to leave the file name extension as the file is created on a Mac disk. This will result in the file name extension being present when the disk is used on a Macintosh, which is useful for files such as HTML documents, which may require file name extensions in order to be usable, even on a Mac. For each File Name Map in which it is turn on, this option overrides the global Remove known extensions when creating Mac files option on the Advanced tab.

If you leave either the File type or File creator fields blank, it will act as a wildcard. This is valuable in situations in which you want all files of a certain type or all files created by a certain

program to get the same file extension. For example, a File Name Map with a type of TEXT, a blank creator and an extension of TXT will cause all Mac files with file types of TEXT to be displayed under Windows with file name extensions of .TXT, regardless of their file creators.

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MacDrive Warnings

Windows XP, 2000, 2003 Server only

This section contains topics about various warnings that MacDrive may display.

See the **MacDrive Warnings** book to the left to explore all of the available topics.

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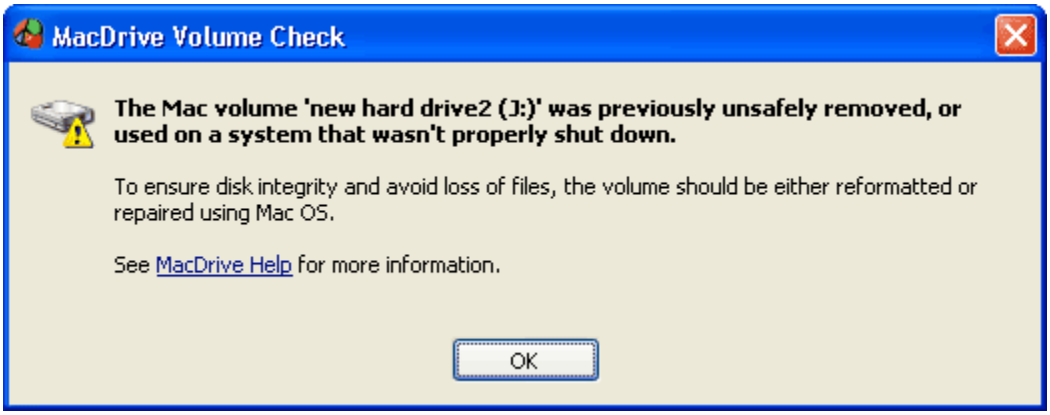
Volume Check

Windows XP, 2000, 2003 Server only

Whenever a disk is mounted, MacDrive checks the disk to see if it was properly and politely unmounted the last time it was used.

If there are signs that it wasn't, MacDrive displays a warning like the example below, so that you will know there is a risk that the disk was corrupted when it was improperly unmounted.



If MacDrive displays this warning, it does *not* mean that the disk has been judged to be corrupt; it merely means that there is a significant risk, and that the disk should either be repaired (using Mac OS tools) or reformatted in order to avoid future problems.

This warning is significant, but if you'd like for MacDrive to stop displaying it, you can turn it off in MacDrive Properties, Options Tab.

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Partition Conflict

Windows XP, 2000, 2003 Server only

Whenever a disk is mounted, MacDrive checks the disk to see if it is properly and clearly either Mac-partitioned or using the PC partitioning scheme.

In some cases where disks have been repartitioned from Mac to PC, or vice-versa, a situation arises where invalid remnants of the old partitioning is left on the disk. In many of these cases, it is impossible for MacDrive to tell whether it is the Mac partitions or the PC partitions that should be considered valid.

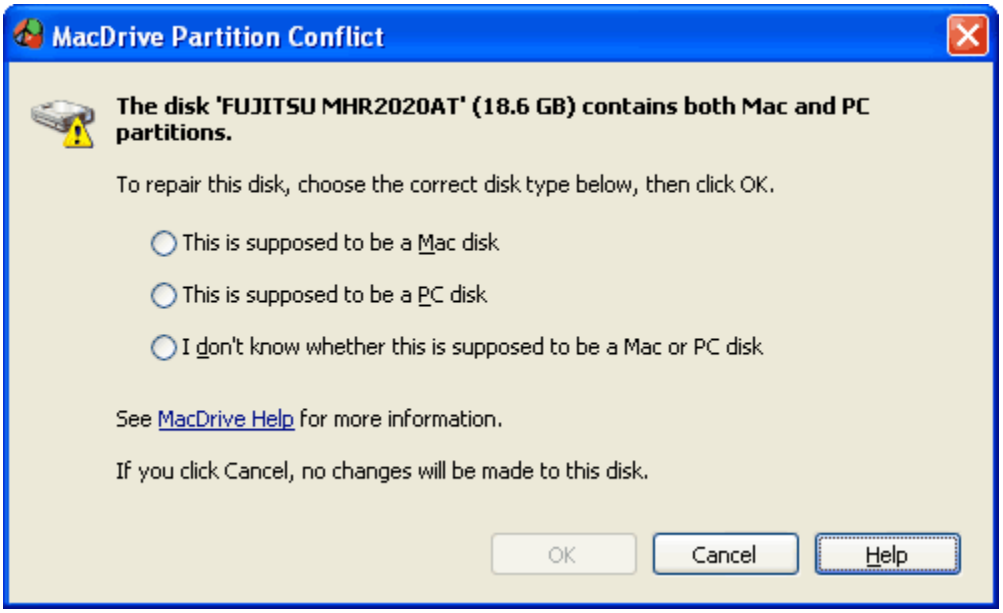
In such a case, MacDrive will display a warning like the sample below, and ask if you to choose if want to commit the disk to being Mac-partitioned or PC-partitioned, or if you don't know how to properly classify the disk.

Be sure you know if the disk was last Mac- or PC-partitioned before making your choice! If you are sure it was last Mac-partitioned, you should choose **This is supposed to be a Mac disk**. If you are sure it was last partitioned using Windows or other non-Mac software, you should choose **This is supposed to be a PC disk**. If you don't know which is correct, you can choose **I don't know...**, in which case you'll be asked again later.

If you choose improperly, there is a way you can attempt to change your decision, but it is only likely to work if the disk hasn't been modified in any other way since initially making your choice. In order to get this Window to appear again for *all* applicable disks, click **Start** > **Run**, and then type in the following (*including* the quotation marks):

```
"%SystemDrive%\Program Files\Mediafour\MacDrive\MDDiskProtect.exe"
/restore
```

Mediafour technical support cannot likely be of any assistance in the case that you improperly repair your disk.



Technical note: This tool judges a disk to contain PC partitioning if bytes 510-511 contain the hexadecimal signature 55aa, and judges a disk to contain Mac partitioning if bytes 512-513 contain the ASCII signature "PM" or if bytes 1024-1025 contain the ASCII signature "BD" or "H+". If a non-system disk is found to contain *both* PC and Mac signatures, the window above is displayed. If a decision to repair the disk is made, the high bit of the undesired signature is turned on in order to invalidate the signature. The disk is then remounted, and the invalidated signature is ignored by both Windows and MacDrive.

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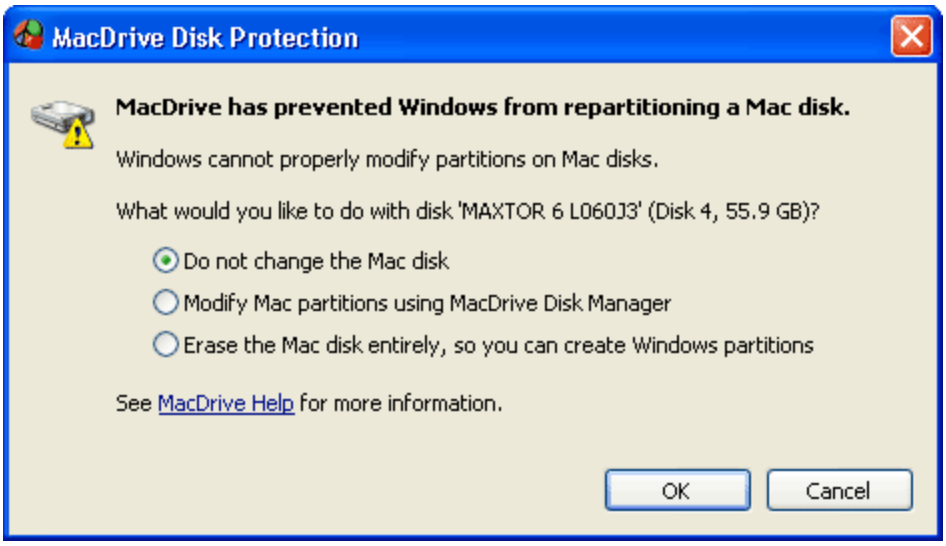
Mac Disk Protection

Windows XP, 2000, 2003 Server only

Whenever an attempt is made to change the partitioning on Mac disk by any Windows software other than the MacDrive Disk Manager, MacDrive steps in to mediate the situation.



This is done because if Windows software other than MacDrive Disk Manager makes changes to the partitioning on a Mac disk, the disk will no longer be Mac-partitioned or Mac-formatted, and all contents of the Mac disk will be lost.

Sometimes this is a desirable outcome, if a Mac disk is no longer needed, and you want to repartition and reformat it for use exclusively with Windows. In this case, you should select the **Erase the Mac disk entirely** option.

At other times, however, MacDrive steps in and protects a Mac disk from accidental damage. In that case, you should choose the **Do not change the Mac disk** option.

If you decide that you really do want to change partitions on the Mac disk, but want it to remain a Mac disk when you are done, you should choose the **Modify Mac partitions** option.

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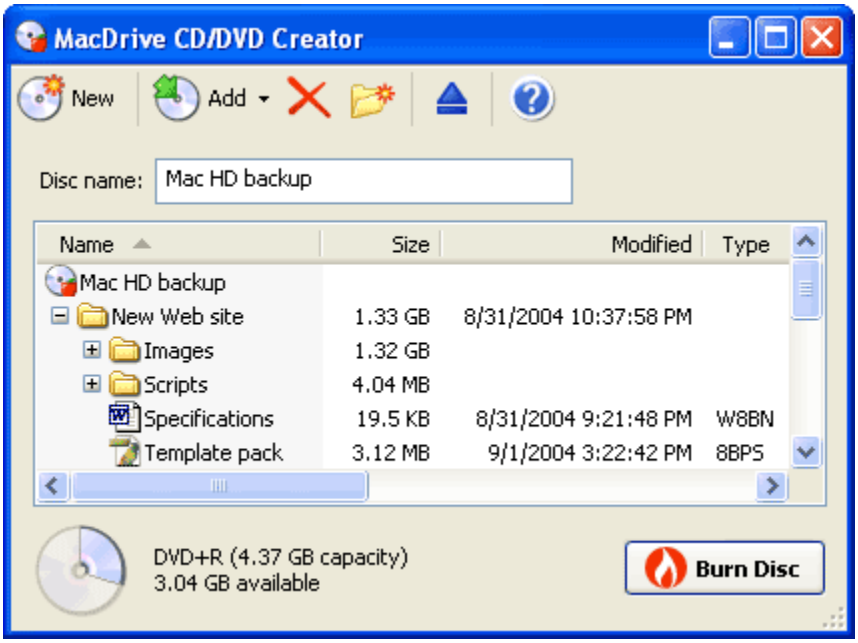
Creating Mac CDs and DVDs

Windows XP, 2000, 2003 Server only

MacDrive CD/DVD Creator is a simple but powerful disc authoring and burning application for the purpose of creating Mac-formatted CDs and DVDs.

MacDrive CD/DVD Creator can be started by clicking the link above, by clicking **MacDrive 6** > **Tools** > **Create a Mac CD or DVD** in the **Start** menu, or from the **Getting Started** window.



MacDrive CD/DVD Creator can burn CD-R/RW and DVD±RW/±R discs.

The various controls in the window are fairly self-explanatory, but worthy of a bit of additional explanation:

File list

This list in the center of the window displays details about all files and folders prepared to be burned to a disc. When you close and restart **MacDrive CD/DVD Creator**, the contents of this list will be remembered. If you want to start over with an empty list, use the **New** button.

New

This button clears the file list of all files and folders.

Add

This drop-down allows you to add either individual files or whole folders at a time. You can also drag-and-drop files and folders into the file list.

Delete

This button deletes whatever items are currently selected in the file list.

New Folder

This button creates an empty folder inside of whatever container is currently selected in the file list.

Drive list

This drop-down list appears only if you have more than one drive on your system capable of burning discs.

Eject

This button ejects any disc in the current burning drive.

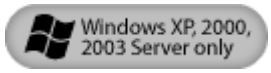
Help
This button takes you to this page.

Burn Disc
This button starts the disc writing process.

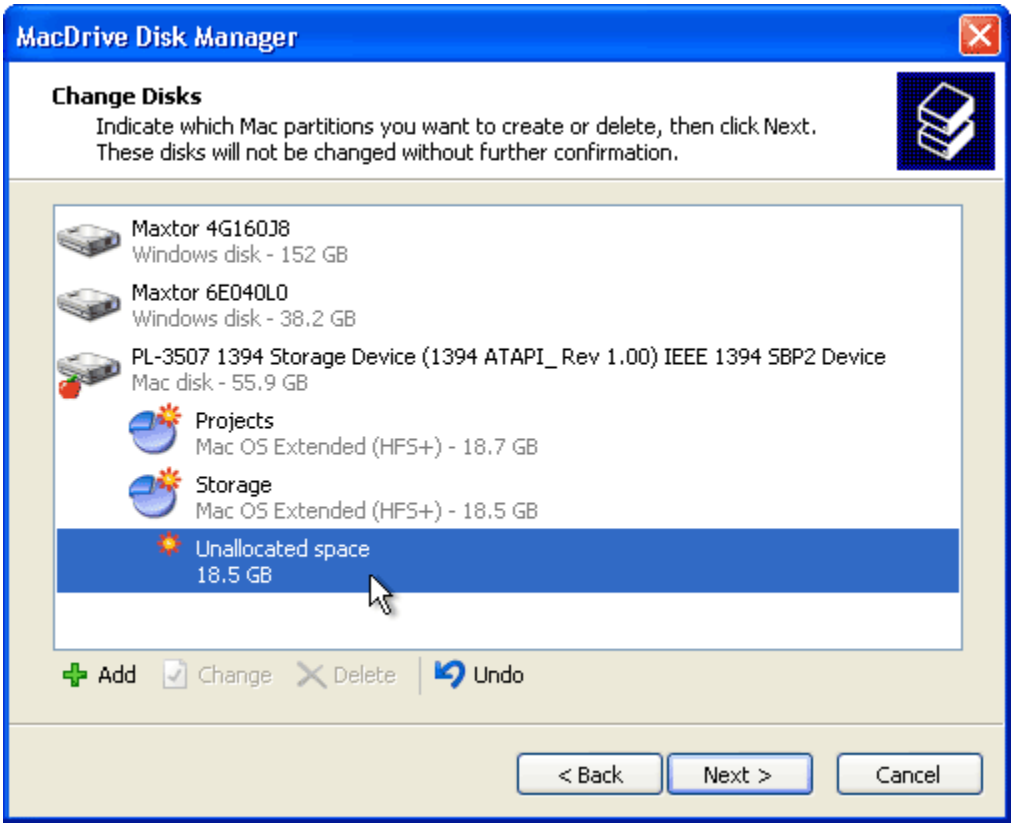
The graphic and text in the lower-left corner of the window show how full the current burnable disc would be if burned at any point, and details about the type and capacity of the current burnable disc. If no burnable disc is currently in the appropriate drive, then no useful information will be available here.

If you have a drive capable of burning CDs and/or DVDs that isn't recognized by MacDrive CD/DVD Creator, please let us know online.

Partitioning Mac Disks



MacDrive Disk Manager is a wizard that gives you the ability to create and delete partitions on Mac-formatted hard drives.



The wizard-based interface makes the process simple and straightforward, but you should keep the following in mind:

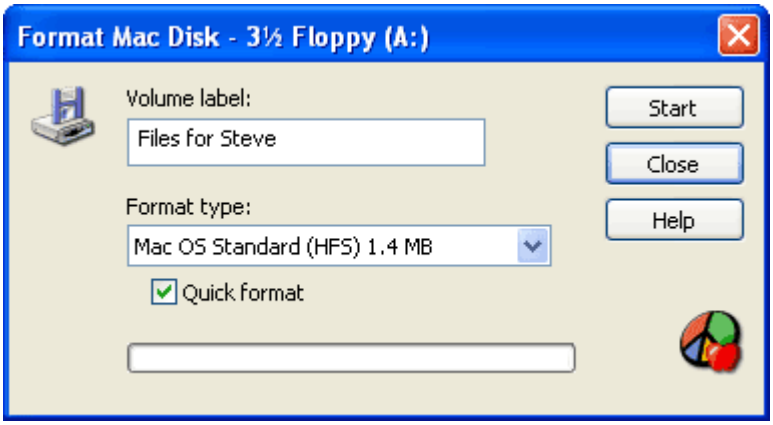
- While you *can* leave part of a disk unused (called **Unallocated space** by MacDrive Disk Manager), you will *not* then be able later make a PC partition or volume (FAT, FAT32, NTFS, or otherwise) in the unallocated space. The only thing you can do with unallocated space is to make additional Mac partitions in it in the future, or simply leave it unused.
- You cannot use MacDrive Disk Manager to add a Mac partition to a PC-partitioned disk. Using MacDrive Disk Manager on a PC-partitioned disk will destroy *all* PC partitions.
- You can't use MacDrive Disk Manager to resize a partition and retain the contents. The only way to resize a partition is to delete and recreate it at a different size, which *will* result in the loss of any files in the original partition.
- MacDrive Disk Manager works only with fixed hard drives; it cannot be used to partition removable disks.

MacDrive 6

Format Mac Disk...

The **Format Mac Disk** option appears under the **MacDrive** shortcut menu in the shortcut menus of most disk icons. The window that appears when this option is chosen is very simple,

and similar in function to the standard Windows **Format** window.



Be aware that while the **Format type** of **Mac OS Extended (HFS+)** is available for all disk types other than floppy disks, the resulting disk will only be compatible with MacDrive version 3.0 and later, and with Mac OS 8.1 and later. The **Mac OS Extended (HFS+)** option provides more efficient use of disk space, especially when dealing with large disks and large numbers of files, but at the expense of compatibility. To ensure compatibility, **Mac OS Standard (HFS)** is recommended.

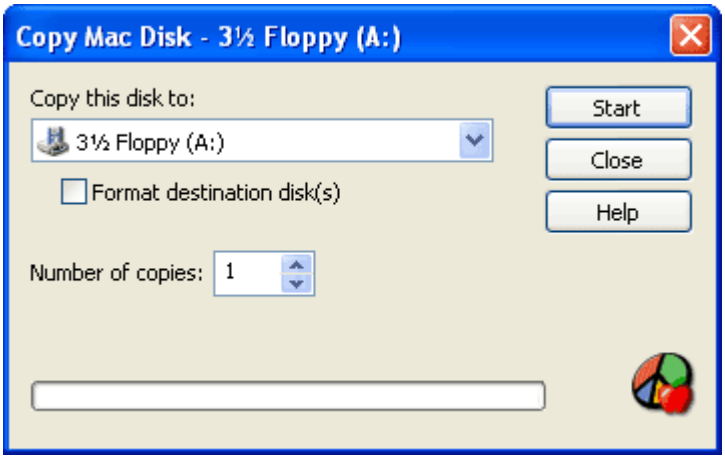
If you want to reformat a Mac disk other than a floppy disk as a PC disk, you should first "unformat" the disk by selecting **Unformat** from the **Format Type** list. If you confirm that you wish to proceed, the disk will be unformatted, meaning that it will then be neither PC nor Mac-formatted. The resulting disk can then reliably be reformatted as a PC disk using the standard Windows **Format** option.

When using floppy disks, be aware that MacDrive works only with high-density (1.44MB) floppies, as PC floppy drives are physically incapable of reading or writing low-density (800KB or 400KB) Mac-formatted disks.

MacDrive 6

Copy Mac Disk...

The **Copy Mac Disk** option appears under the **MacDrive** shortcut menu in the shortcut menus of floppy and removable disk icons. The interface that appears when this option is chosen is very simple and straightforward.



Copy Mac Disk creates a byte-for-byte exact copy of a given disk. A disk can be copied only to another disk of identical type and capacity.

Only one drive is required, as the full contents of the disk being copied are stored on your system hard drive before being written to the destination disk. This does mean, however, that your system hard drive must have enough free space to temporarily hold the contents of a given disk. MacDrive will alert you if there is not enough free space available.

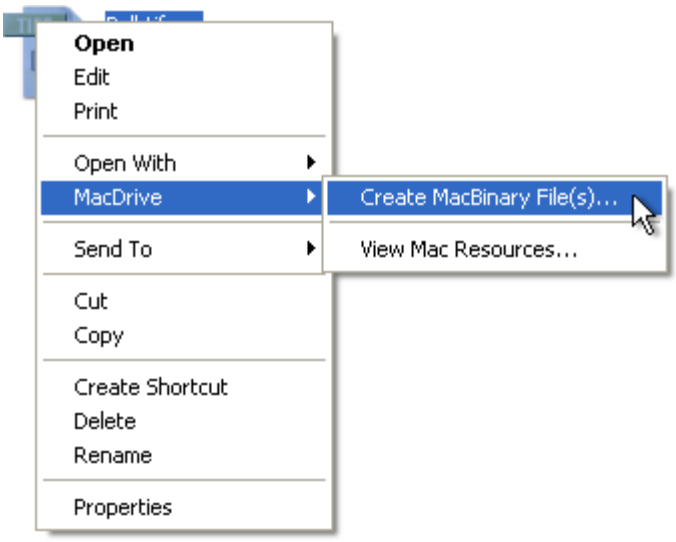
After the disk being copied has been read, you will be prompted to insert the destination disk. If **Number of copies** is greater than one, you will then be prompted to insert additional destination disks, until all desired copies have been made.

The **Format destination disk(s)** option is available only when copying floppy disks. If this option is selected, each destination floppy will be formatted before the disk is copied. This is typically necessary only when copying to new, unformatted floppy disks.

MacDrive 6

Create MacBinary File(s)...

A **Create MacBinary File(s)** option appears under the **MacDrive shortcut menu** in the in the shortcut menus of all types of files on Mac disks.



A MacBinary file is a single file that contains both the data and resource forks of a Mac file, along with the original file name, icon and other Mac-specific properties.

When **Create MacBinary File(s)** is clicked, you will be presented a folder browsing window so that you can select the folder into which the MacBinary files will be created. The MacBinary files are automatically named by appending a file name extension of **.bin** to each of the original Mac file names.

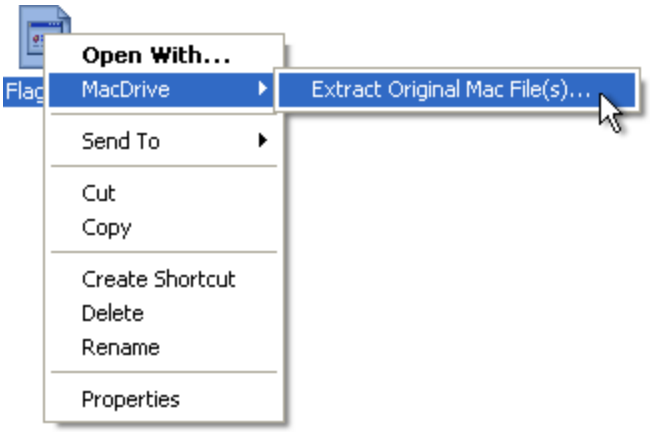
This option creates MacBinary III files, which are supported by older software designed for compatibility with MacBinary II files, as well as newer software specifically designed to take advantage of the additional information stored in MacBinary III files.

See also Extract Original Mac File(s).

MacDrive 6

Extract Original Mac File(s)...

An **Extract Original Mac File(s)** option appears under the **MacDrive shortcut menu** in the shortcut menus of files that are likely MacBinary or BinHex files. MacDrive makes this option available only for files with extensions of **.bin** or **.hqx**, so you will first need to rename a file if you are certain it is a MacBinary or BinHex file, but it does not have the appropriate extension.



When **Extract Original Mac File(s)** is clicked, you will be presented a folder browsing window so that you can select the folder into which the Mac files will be extracted. MacBinary and BinHex files contain the original Mac file names, so these names are used when extracting files.

If you extract a Mac file to a non-Mac disk, you will be warned that some data will not be extracted. If you proceed, the result will be extraction of the Mac file's data fork, but no resource fork, icon, or other Mac-specific properties. This is typically generally not a problem when extracting documents.

Extract Original Mac File(s) works with all BinHex files, and both MacBinary II and MacBinary III files.

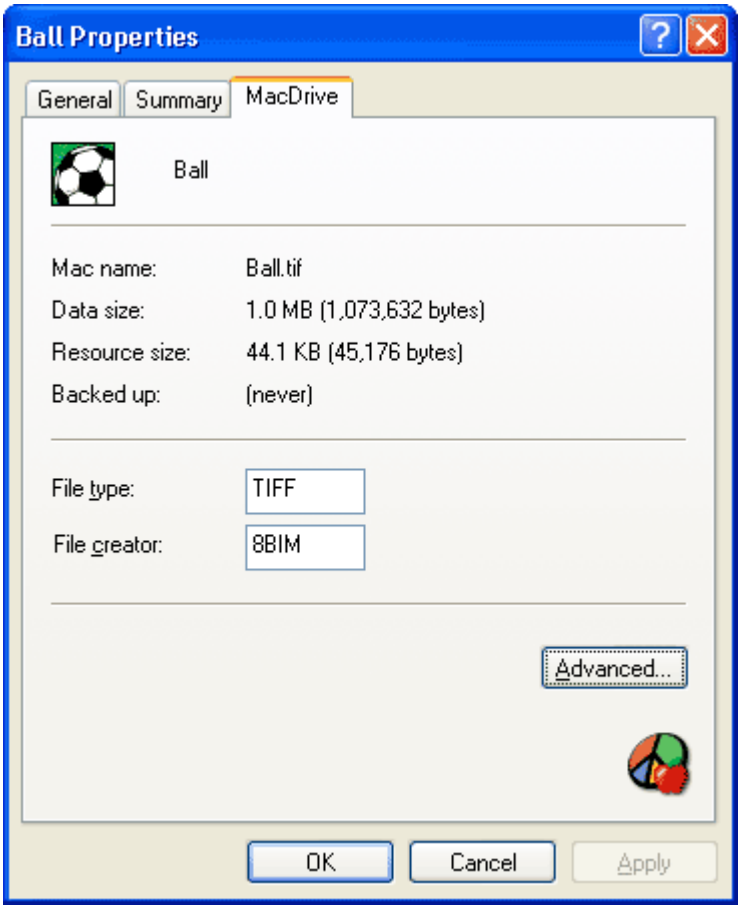
See also Create MacBinary File(s).

MacDrive 6

MacDrive File Properties Tab

When any disk, file or folder is selected, the Windows shortcut menu offers a **Properties** option, which opens a tabbed window that provides detailed information about the selected objects. When you view properties for a Mac disk or a file or folder on a Mac disk, MacDrive adds a **MacDrive** tab to the properties display. Clicking the **MacDrive** tab reveals properties that are exclusive to Mac disks, files and folders.

Below is an explanation of the properties that appear for files on Mac disks. The properties of disks and folders differ somewhat, but are generally similar.



Mac name

Displays the file's true Mac name as it exists on disk. This may be different than the name reported by Windows due to the application of Extensions Maps and the necessity of changing some Macintosh file names slightly so that they don't violate any Windows file-naming rules.

Data size

Displays the size of the file's data fork, where cross-platform data is usually stored.

Resource size

Displays the size of the file's resource fork, where additional data, usually Mac-specific, is stored.

Backed up

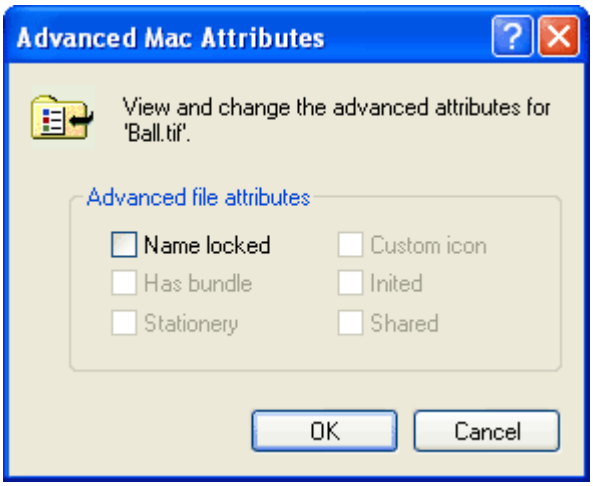
Displays the date that the file was last backed up, if ever.

File type and **File creator**

Displays the four-character codes stored by Mac OS that indicate the type of data contained in the file and the software that created the file. See both Appendix B and MacDrive Properties, File Name Maps Tab for details on how you can configure MacDrive to append extensions to the names of files on Mac disks based on type and creator attributes, as well as assign type and creator attributes based on the file name extensions of newly-made Mac files.

Advanced

Click to open a window with additional advanced attributes of the disk, folder or file. Only the Name Locked attribute can ever be changed using MacDrive; the other attributes are shown only for your reference.



Comments

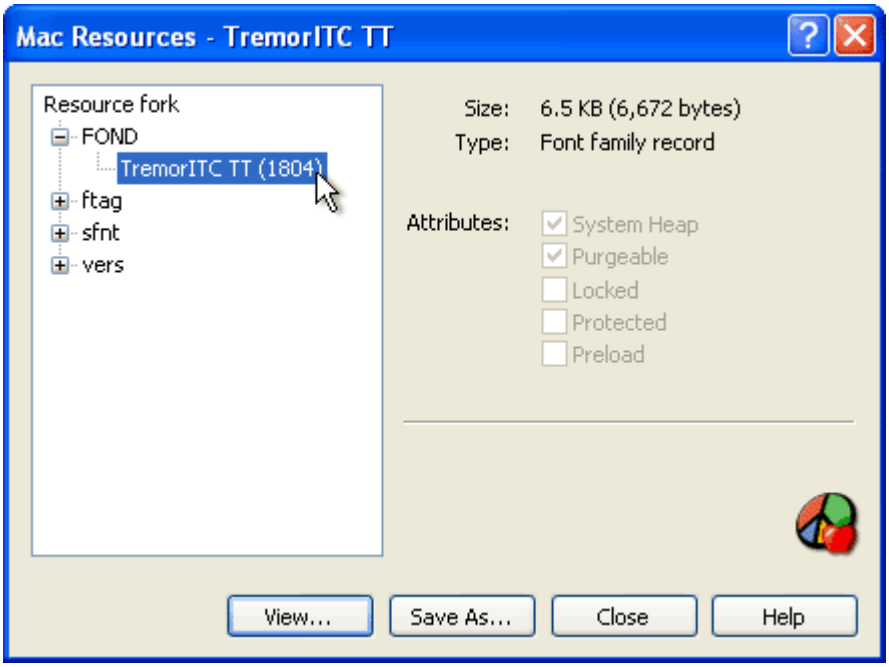
This field, which is not shown in the illustration of the main MacDrive properties tab, appears only when viewing properties of files and folders on Mac floppies, and only when the file or folder in question has comments associated with it.

MacDrive 6

View Mac Resources...

The **View Mac Resources** option appears under the **MacDrive** shortcut menu in the shortcut menus of Mac files. This option is only available for files that contain resource fork data.

The **View Mac Resources** option can be very valuable to developers and other users who are familiar with software such as ResEdit and have a need to extract Mac resource data under Windows.



View Mac Resources is very straightforward, and provides both a combination hexadecimal and ASCII display of the selected resource data and an option to save the selected resource data, whether an individual resource or the entire resource fork, as either a raw binary file or a hex/ASCII text file.

The type of the selected resource is displayed, if known, but the contents are not interpreted (i.e. no icon display or audio sample playback).

MacDrive 6

MacDrive in the Start Menu

You can get to a variety of MacDrive features, documentation and assistance from the **MacDrive 6** folder in the **Start** menu.

To get to the **MacDrive 6** folder, do the following:

- Click the **Start** button in the system taskbar (commonly at the bottom left of your screen)
- Click **Programs** (if using Windows 98SE, Me or 2000), or **All Programs** (if using Windows XP or 2003 Server)

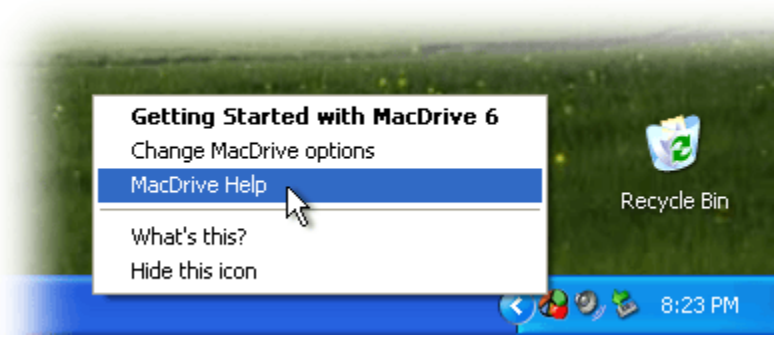
In the pop-up list that appears, you should see the **MacDrive 6** folder.

MacDrive 6

MacDrive Notification Icon

The MacDrive notification icon appears in the taskbar notification area (sometimes called the "system tray") in the corner of your screen, near where the Windows clock is typically displayed.

The MacDrive notification icon is entirely optional, so you may hide it at any time, but it does serve a couple of significant purposes, described below.



Mac disk notification

Whenever MacDrive discovers a new Mac disk, the notification icon flashes several times, alternating with an image of the icon of the drive in which the new Mac disk was discovered.

MacDrive cannot flash the icon until the new disk is discovered by Windows, so when using different types of disks, the flashing will occur at different times. For example, floppy disks are not discovered until the first attempt to access them. In the case of *most* CD-ROM and removable media drives such as Zip drives, disks are discovered just moments after being inserted. Hot-swappable USB and FireWire hard drives are typically discovered as soon as they are plugged into the appropriate port.

Shortcut menu

The MacDrive notification icon features a shortcut menu that appears when the icon is clicked. The menu provides shortcuts to Getting Started with MacDrive 6, **MacDrive Properties**, and this User Guide.

Getting Started with MacDrive 6 provides links to these items and more, and it is available in the **Start** menu at **MacDrive 6** > **Get Started with MacDrive 6**, so if you decide to **Hide this icon** from the shortcut menu, you won't be losing access to anything that you can't access another way. Hiding the notification icon does not otherwise change the behavior or capabilities of MacDrive.

MacDrive 6

MacDrive Shortcut Menus

MacDrive shortcut menus appear within the shortcut menus of some files and all disks. The options available in each MacDrive shortcut menu vary with the type of files and disks selected:

- The shortcut menus of files on Mac disks and all files with .bin or .hqx file name extensions contain MacBinary and BinHex options.
- The shortcut menus of certain types of CD-ROMs include options for handling multisession and dual-format discs.
- The shortcut menus of all Mac disks include options for adjusting the file naming mode.

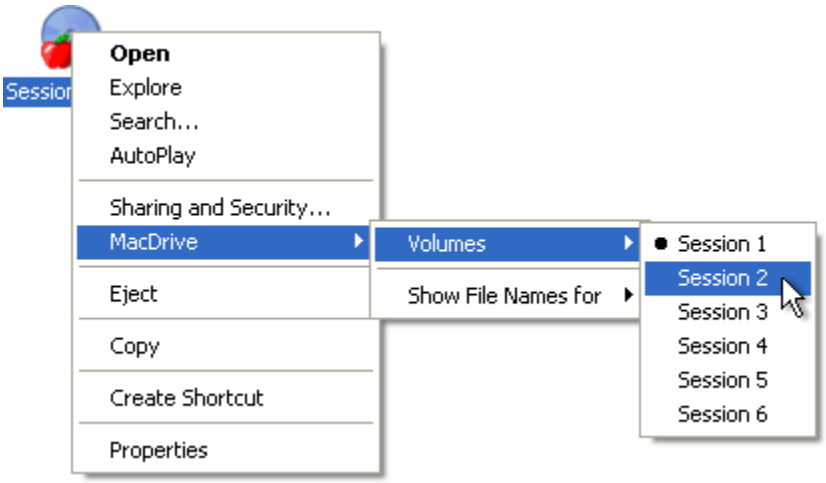
MacDrive 6

Multisession and Dual-Format Discs

MacDrive shortcut menus appear within the shortcut menus of some files and all disks. The options available in each MacDrive shortcut menu vary with the type of files and disks selected.

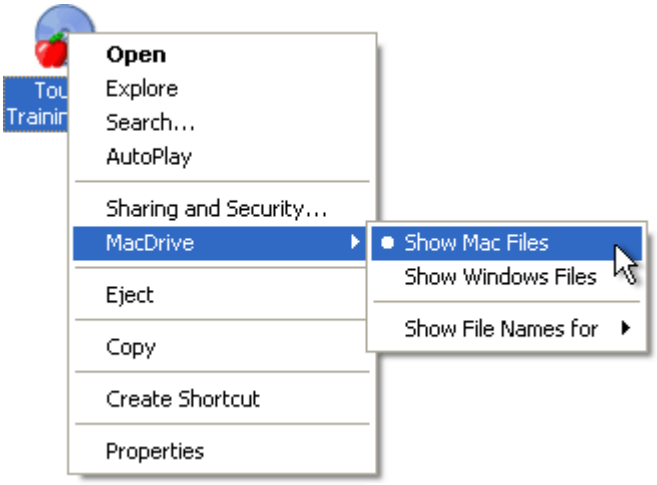
Multisession Mac CD-R shortcut menus

A list of the names of available volumes appears in the disc shortcut menus of multisession CD-Rs. Selecting a new volume causes the current volume to disappear, and the new volume to appear in its place. The effect is much like ejecting one disc and inserting another. MacDrive will remember which session you last used on a particular disc, and will return you to that session if that disc is used again.



Dual-format Mac CD-ROM shortcut menus

Some CD-ROMs have both Windows (ISO-9660) and Mac (HFS or HFS+) volumes on them. MacDrive enables you to easily choose which set of files you'd like to access from the disc shortcut menu. As with multisession discs above, the effect is much like ejecting one disc and inserting another. MacDrive will remember which volume, Windows or Mac, you last used on a particular disc, and will return you to that set if that disc is used again.



On some computers, after choosing a new volume on a multisession CD-R or a new file set on a dual-format CD-ROM, the name of the disk as it appears under Windows Explorer may not be properly updated. Therefore, if there is any doubt, you should look at the contents of the disk and the MacDrive shortcut menu, rather than the name of the disk, to assure that the desired volume is available.

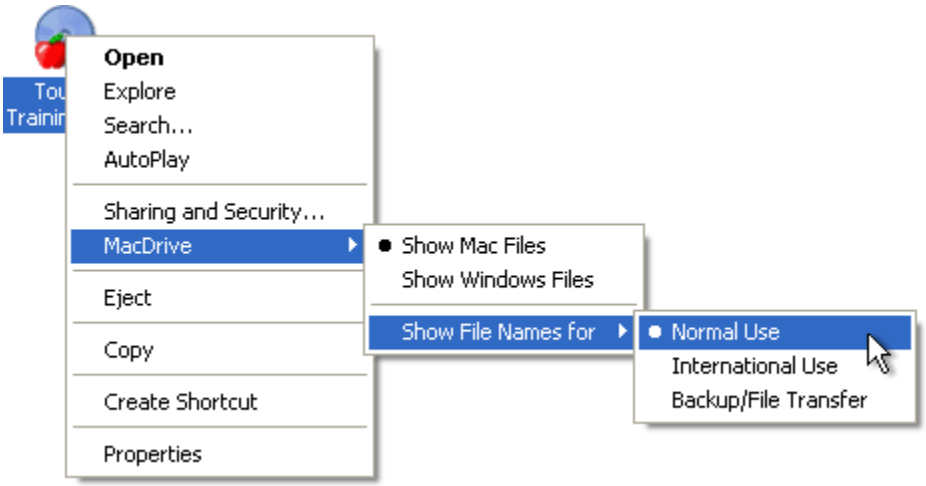
MacDrive 6

File-Naming Modes

Windows XP, 2000, 2003 Server only

MacDrive shortcut menus appear within the shortcut menus of some files and all disks. The options available in each MacDrive shortcut menu vary with the type of files and disks selected.

A Mac disk can be set to one of three file file-naming modes, each of which affects the display of the names of all files on that disk differently:



Normal Use

Appropriate for normal day-to-day usage; this mode maximizes compatibility with a wide range of software, and preserves international characters where possible. File name extensions are handled as generally represented by this User Guide. This is the default setting.

International Use

Appropriate for a disk containing files named using international Unicode characters, in cases where preservation of those characters is important, but compatibility with a wide range of software is less important. File name extensions are handled as generally represented by this User Guide.

Backup/File Transfer

Appropriate for tape backups of Mac disks, or transfers of files from one Mac disk to another, including between a true Mac disk and an NTFS volume storing a Services for Macintosh network share. This mode does an excellent job of preserving Unicode characters, but, unlike the other two modes above, does not append artificial file name extensions for software-compatibility purposes.

Individual Mac disks can be in different file-naming modes concurrently. MacDrive will remember what mode was last assigned to a particular disk, and will automatically maintain that mode whenever that disk is used again in the future.

Appendices

This section contains additional documentation on a few specific MacDrive-related topics.

See the **Appendices** book to the left to explore all of the available topics.

Appendix A: Troubleshooting

Why doesn't this floppy disk work?

A floppy disk may not be recognized by MacDrive because it is corrupted or damaged, because it is not actually a Macintosh-formatted disk, or because it is a low-density floppy. You can verify that a disk is high-density by ensuring that there is a rectangular hole in the upper-left corner of the disk, opposite the sliding write-protect tab in the upper-right. You can be certain that a disk is Mac-formatted and undamaged by attempting to use the disk under Mac OS. If the disk's behavior is unusual even on the Macintosh, Mediafour recommends Symantec Norton Utilities for Macintosh as an excellent tool for diagnosing Macintosh disk problems of all kinds.

Why can't I open my Macintosh files?

MacDrive is not a file translator. You must have software on your Windows system that is capable of understanding the Mac files that you intend to share. Many software packages (such as Microsoft Word) exist in versions for both Windows and Mac OS— documents and data files created by such software are easily shared. Audio and image files are often stored in formats that are not associated exclusively with a particular operating system (such as MP3, JPEG and GIF)— such files can generally be shared very readily. Your ability to share other data, such as databases, depends on the capabilities of the software that you have installed on both the Mac and PC.

Why can't I run my Macintosh game, word processor, or other software?

MacDrive is not a Mac OS emulator, so it can't make Windows run your Macintosh software. MacDrive is for sharing cross-platform documents and data files. If you intend to use data from one platform on the other, you must have software on both systems that can deal with the data in question— for example, MacDrive can share Adobe Photoshop documents between Macintosh and Windows systems, but you must have Photoshop or other compatible software on both systems in order to accomplish this.

Why don't I see the icons or file name extensions that I expect?

The Extension Maps tab of MacDrive Properties provides a simple interface for editing the rules that determine what icons Mac OS will display when Windows creates a file on a Mac-formatted disk and what file name extensions Windows will display for files on Mac-formatted disks. See both Appendix B and MacDrive Properties, File Name Maps Tab for details on the relationships between Windows file name extensions and Mac OS type and creator codes.

Why are there unexpected characters in some file names?

The Macintosh and Windows character sets are different— every provision has been made to properly translate international and symbol characters properly between the two operating systems, but both operating systems utilize characters that are unavailable on the other. This affects the appearance of some file names under Windows, but the files are accessible and will continue to look correct under Mac OS.

Why can't I delete certain folders, even though they are empty?

The folder most likely only *appears* to be empty. A folder may contain critical Macintosh system files that are intentionally inaccessible through MacDrive. Another possibility is that Windows may be configured not to show hidden files, and these unseen files may simply be hidden.

Why does my Windows disk maintenance software dislike my Mac disk?

Beware of this situation— if Windows disk defragmentation, maintenance or recovery software (such as Symantec Norton Utilities for Windows) accesses a Macintosh disk, it won't know what to do with it, and will likely want to "fix" it by trying to coerce it into being a PC disk.

This will not work, and will definitely cause loss of some or all of the data on the disk. It must *never* be attempted.

Why does Norton Utilities for the Macintosh complain about bad file dates?

Symantec Norton Utilities for the Macintosh is very thorough and reliable. It is so thorough, in fact, that if the PC clock is set significantly later than the Mac OS clock, and you use MacDrive to write to a Mac format disk, Norton Utilities for the Macintosh will see files on that disk that appear to have been made in the "future", and warn you that something has gone wrong. You needn't worry about this warning— the "future" file dates will not cause any problem, but you are welcome to allow Norton Utilities to correct them, if you like.

I thought that this was a Mac CD-ROM—why am I seeing short file names?

Some CD-ROMs have *both* Macintosh and PC volumes. Normally, when presented with such a dual-format CD-ROM, MacDrive will ignore the Macintosh (HFS or HFS+) volume, and allow the PC (ISO-9660) volume to be made accessible. You can choose to access the Mac volume, instead, by selecting it in the disc's MacDrive shortcut menu.

I made some changes in MacDrive Properties—where did my files go?

To update file listings on the desktop or in Windows Explorer, you may need to select **Refresh** from the **View** menu or press the **F5** key. The methods for refreshing file listings in other software vary, but choosing a different folder and then returning to the original folder will usually accomplish this.

Why am I having problems using MacDrive with a PC emulator on my Mac?

Use MacDrive with a Mac-based PC emulator (such as Virtual PC or RealPC) only at your own risk.

This is not a supported or approved way to use MacDrive, as both MacDrive and Mac OS will be unaware of one another, and will battle for control of Macintosh disks. This can result in corrupted files and disks, and should generally be avoided.

The dangers are minimized if you are only reading files, and never writing, but even then your data is at risk.

Why am I seeing a 'Mac disks are not accessible because critical MacDrive components are not available' message?

If any of the file or settings associated with MacDrive become corrupted for any reason, you may see this message. If you do, it is recommended that you reinstall MacDrive, *after making sure that you have your original MacDrive installation disc or know the location of your downloaded installation file.* To uninstall MacDrive, click **Start** > **Control Panel** > **Add or Remove Programs**, then select MacDrive from the list and click the Remove button. After MacDrive has been uninstalled, restart your system and reinstall MacDrive. If, after then restarting one last time, MacDrive hasn't been restored to working order, you should seek technical support.

Appendix B: Extensions, Types and Creators

Under Windows, long file names typically end with a period followed by a "file name extension" of one or more characters (typically three, and rarely more than six) that indicates both to Windows and to the user the type of data that is stored in a given file. Windows uses this extension to decide what type of icon to display for a file and how to handle user input such as the double-clicking of a file icon. This extension is very significant, as Windows generally considers it the sole indicator of a file's contents.

Classic Mac OS versions handle identification of a file's content very differently. With each file, the Macintosh stores two four-character fields called the "type" and "creator" fields. These fields are not part of the file name, and are typically invisible to the user. The contents of these fields indicate to Mac OS the type of data in the file and the software that created the file, respectively. The Macintosh decides how to handle user input such as the double-clicking of a file solely by interpreting the type and creator for the file, and therefore has no need for file name extensions,

so they are not frequently used in Mac filenames.

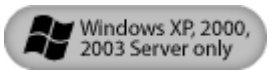
Mac OS X complicates the issue somewhat, as Mac OS X supports both file name extensions *and* type/creator pairs, so you may see files from Mac OS X systems with file name extensions, but no type and creator, or vice-versa, or with both type/creator pairs *and* file name extensions.

MacDrive provides a powerful mechanism for making these two very different file identification methods work together. File Name Maps are user-modifiable rules that tell MacDrive when and how to append a file name extension based on a file's type and creator pair, and conversely, when to assign type and creator codes based on the file name extension of a newly-made or newly-renamed file.

This means, for example, that a Microsoft Word for Macintosh document named **Letter to Steve** can automatically appear as **Letter to Steve.doc** under Windows, and a Windows bitmap image saved to a Mac disk as **Logo.jpg** could automatically be assigned an appropriate type and creator so that the file will be recognized as a JPEG image called simply **Logo** under Mac OS.

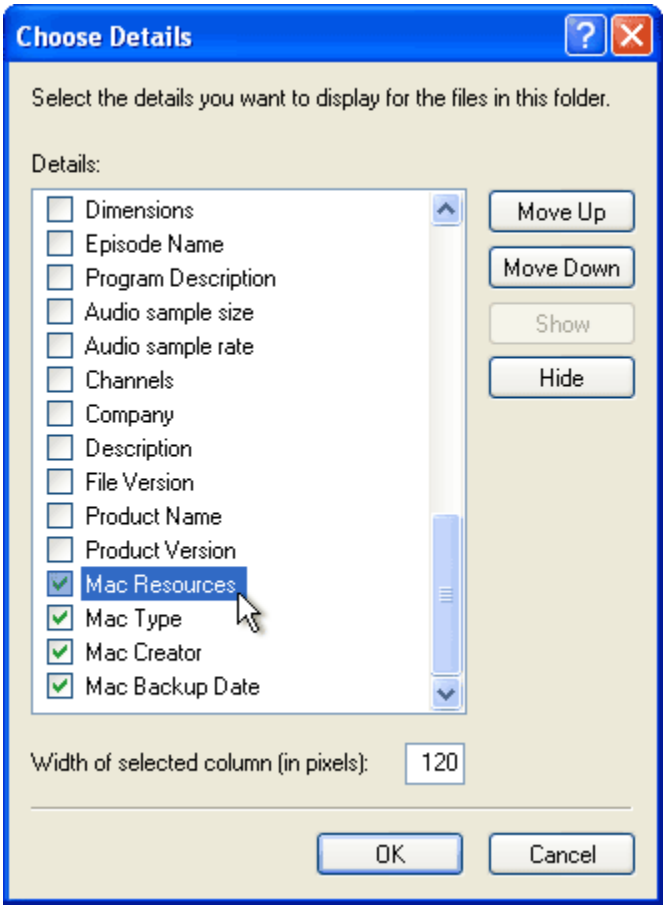
File Name Maps are arguably the most powerful feature of MacDrive— depending on your specific use for MacDrive, you may not need to customize them, but it is valuable to be familiar with the possibilities that they offer.

Appendix C: Additional Features



Additional Explorer Column Settings

This feature expands the options for display of columns in Windows Explorer, and is available only under Windows XP and 2000. The additional options are available from Explorer's **Choose Details** or **Column Settings** window, which is available by selecting **Choose Details** in the **View** menu under Windows XP, or by selecting **Choose Columns** in the **View** menu under Windows 2000.



The four options are **Mac Resources**, **Mac Type**, **Mac Creator** and **Mac Backup Date**. Each adds the selected information in a separate column in Windows Explorer. This allows you to see Mac-specific information without viewing the properties of each file individually.

Glossary

BinHex
BinHex is a file format used to store and transfer Mac files on non-Mac disks and computers. BinHex is a very popular format for Mac files available on the Internet. A BinHex file contains the original Mac file's name, icon, system bits, dates, file type, file creator, data fork and resource fork. MacDrive does not create BinHex files, but it will extract Mac files from existing BinHex files.

Burn
In the case of creation of CD-R/RW or DVD±RW/±R discs, to *burn* a disc is to write data to the disc. Burning refers to the act of a laser modifying the surface of the disc to represent the data being written.

Cross-platform
Anything that is intended for use with multiple operating systems. Many popular types of data files are regularly used with multiple operating systems, such as MP3 audio files and JPEG image files. Some software packages are also considered to be cross-platform, meaning that functionally equivalent implementations of the same software package are available for multiple operating systems, and that the various implementations can use the same data files. MacDrive does an excellent job of helping these types of software packages share their documents and data files between Mac OS and Windows.

Data fork
Each Macintosh file has two components called "forks" (see also **Resource fork**, below). The data fork is the primary fork— data that is useful when shared between Macintosh and Windows is usually stored here. When MacDrive shows a listing of files on a Mac disk, it always displays the data forks.

File Creator
A property of a Mac file that consists of a four character code indicating the software that created the file. This information is not normally available when using a Mac, but MacDrive makes the information available from the **MacDrive tab** of a file's properties window.

File name extension
Under Windows, file names frequently end with a period and a two- or three-character "file name extension" that indicates both to Windows and to the user the type of data that is stored in a given file. Windows uses this extension to decide what type of icon to display for a file and how to handle user input such as double-click. This extension is very significant, as it is Windows' primary indicator of a file's contents.

File Type
A property of a Mac file that consists of a four character code indicating the nature of the data stored in the file. This information is not normally available when using a Mac, but MacDrive makes the information available from the **MacDrive tab** of a file's properties window.

Long file name
This is any name that violates the limitations of a short name. Windows Desktop, Explorer and most Windows software packages display long names when displaying file listings.

MacBinary
MacBinary is a file format used to store and transfer Mac files on non-Mac disks and computers. A MacBinary file contains the original Mac file's name, icon, system bits, dates, file type, file creator, data fork and resource fork. MacDrive will both extract Mac files from MacBinary files and create MacBinary files from files on Mac-formatted disks.

Mount
To make a volume (see **Volume** below) accessible. When a removable disk is inserted in a drive, or a hot-swappable drive is plugged in, Windows will scan the disk for partitions (see **Partition** below) containing volumes. Each volume found is then *mounted*, meaning that it will be given a drive letter and made accessible to the user.

Multisession CD-R
A multisession CD-R is a disc which has not been created all at once, but instead has had files added during two or more "sessions." Effectively, such a disc contains multiple distinct volumes.

Partition
An area of a disk designated to remain isolated from other partitions on the same disk, and typically intended to contain a volume (see **Volume** below).

Removable media
Any type of storage device which allows removal of the physical storage medium (the "disk" or "cartridge"). Examples of this type of device include Zip, Jaz, SyQuest, optical, and ORB.

Resource fork
This is the secondary component of a Macintosh file (see also **Data fork**, above). Information about a file's Resource Fork is available in the MacDrive File Properties tab.

Short file name
A short name is also known as a DOS-style or eight-dot-three (8.3) file name. Older 16-bit (Windows 3.x) software will most likely support only short names, which are limited to a maximum of eight characters followed by a period and three more characters. Furthermore, the characters must be uppercase and are limited to letters, digits, and a few select punctuation symbols— even spaces are forbidden.

Shortcut menu
Windows software frequently makes functions and options available via pop-up menus that appear when the alternate (usually right) mouse button is pressed. The menus are also sometimes called "context menus" because they are context-sensitive— the contents of the menu depend on what the mouse pointer is pointing at when the alternate mouse button is pressed. For example, the shortcut menu of an item in a scrolling list might provide options that affect only the selected item, while the shortcut menu of the list itself (not pointing at any particular item) might provide options that affect the appearance or behavior of the list itself.

Services for Macintosh
Services for Macintosh is standard Microsoft software on Windows XP-, 2000- and NT-based servers which enables Windows to act as a file server for Mac OS-based network clients.

On such a Windows system, when the **Show Windows-compatible file names** advanced option is turned off, Mac OS file names are made acceptable to Windows by substituting legal Unicode characters for illegal Mac characters, much as is done by Services for Macintosh in order to preserve the exact names of files saved to NTFS disks by Mac clients. Because

MacDrive does this and also represents resource forks and file headers as file streams, while this advanced setting is turned off, every file copied between an actual Mac disk and an NTFS volume hosting a virtual Macintosh network volume will retain its exact name, Finder flags, custom icon and resource fork.

It should be noted, however, that a great deal of Windows software does not deal well with file names containing these Unicode characters. In addition, this setting overrides all file name extension appending and removal, so this setting should be off only when your goal is to transfer files between disks, and not when you are opening and saving documents and data files.

Unmount
To politely eliminate all access to a volume (see **Volume** below) that was previously accessible.

Volume
An organizational and storage system for files that either occupies a whole disk, or occupies a partition, in the case that a disk is partitioned (see **Partition** above). When a set of files is accessed through a drive letter, it is a *volume* that is being accessed.