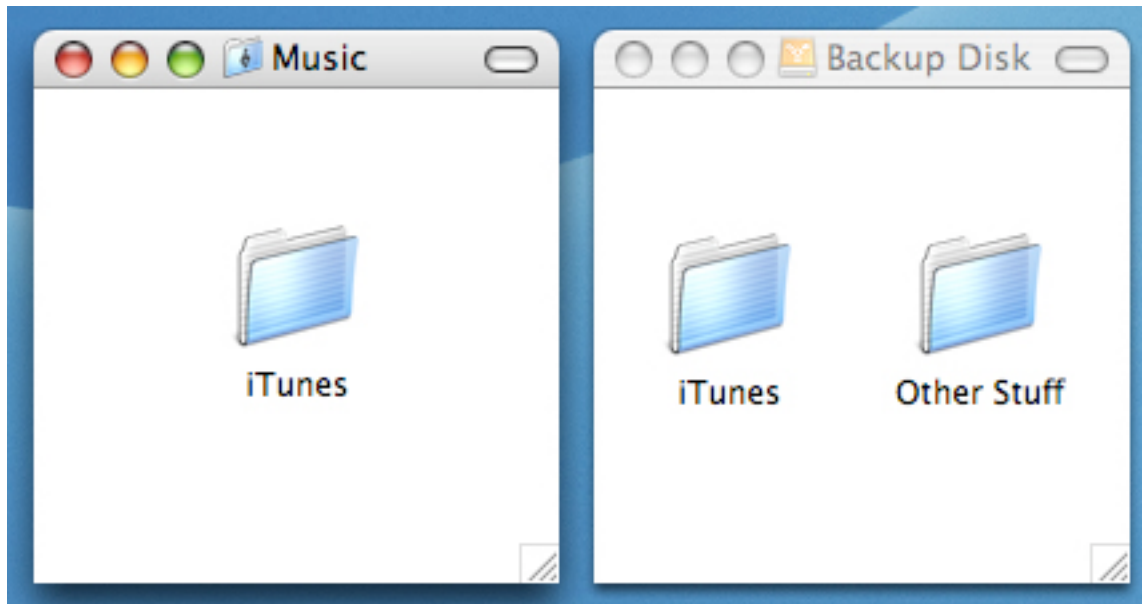


## CopyDrop © 2005-2009 Emmett Gray - Version 1.4.1 for Mac OS X (10.4 and later)

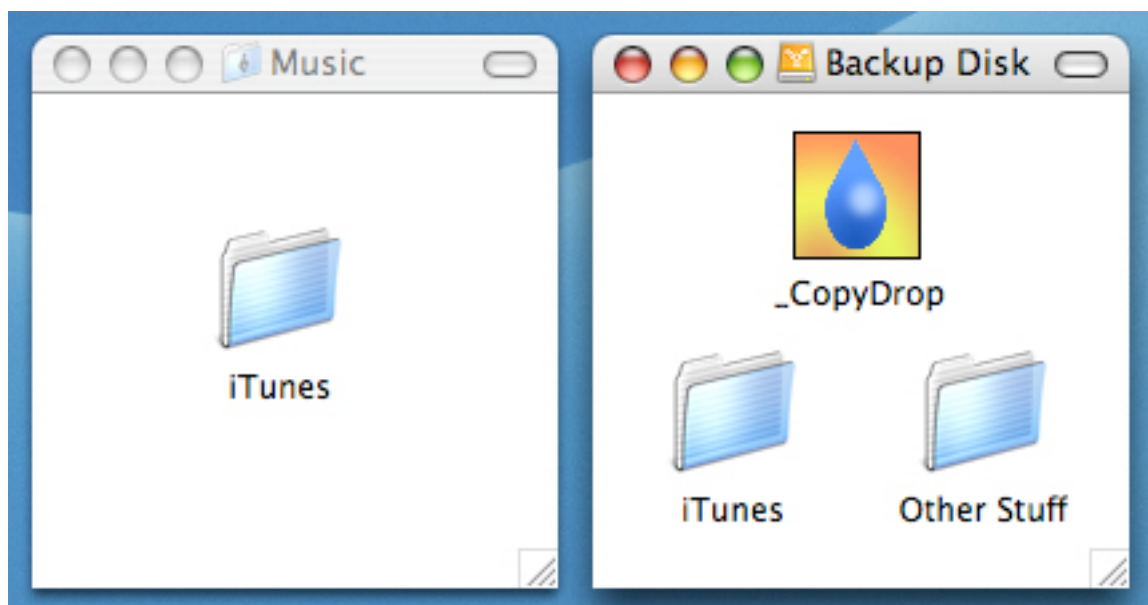
CopyDrop 1.4 requires OS X 10.4 or later, including 10.5 ("Leopard") and 10.6 ("Snow Leopard"), and runs on both PPC and Intel Macs. It will not work with earlier versions of OS X. (CopyDrop 1.0.3 is still available for OS X versions 10.3.2 through 10.3.9).

### Quick Start

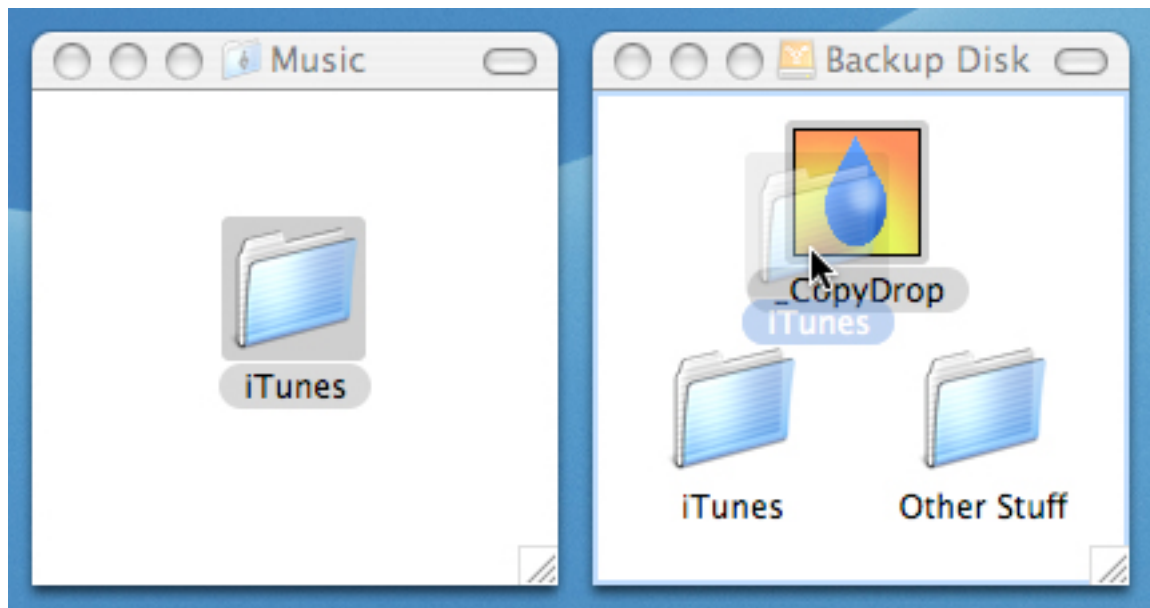
The purpose of CopyDrop is to make a "smart" backup of a folder or volume. A "smart" backup copies only those files which are new or changed. (The backup will be called the target in this guide. It must have the same name as the source. If this backup does not yet exist it will be created).



1. Run (double-click) the application "CopyDrop Install". It places a copy of the application at the root level of your home folder. (Earlier versions put the application on the desktop, but Leopard had some desktop bugs as of 10.5.2).
2. Place a copy (not an alias) of CopyDrop "next to" the target (meaning in the same volume and at the same folder level as the target).



### 3. Drag and drop the source onto CopyDrop



4. A dialog will appear to confirm. Click "OK" and the backup will begin. In this example, the result is that the folder "iTunes" on "Backup Disk" will contain everything that is in "iTunes" in "Music", and optionally either keep or discard items that are not in "iTunes" in "Music". The folder "Other Stuff" and anything else on "Backup Disk" will not be touched; the source also will not be touched. Existing files on the target that are identical with those in the source will not be overwritten.

### Concept

The concept of CopyDrop is to make it possible to use the Finder to drag and drop folders, volumes, and files in order to make "smart" copies of them, meaning that identical items already in the destination are not re-copied, saving time. There are two modes, "replace" and "merge". In "replace" mode, any items existing only in the destination will be removed such that the result will be a destination identical to the source. In "merge" mode, unique items in the destination are untouched such that the destination contains all files that were previously there (and not in the source) plus every file in the source.

For files, "identical" is defined as having the same name, location in the hierarchy, size, and modification date. If the name and the hierarchy are the same but the size and/or modification dates are different, the file in the destination will be overwritten by the file from the source. If the name, size, and modification dates are the same but the place in the hierarchy is different, the files will be considered as non-identical.

CopyDrop is a simple, no-frills backup utility intended to be used for user folders, media files, applications, and documents of any kind. Because it is Finder-based, it cannot be used for copying complete operating systems (other than Classic), and will refuse to copy a folder with the exact name "System", but it can be used for any other Finder-visible item. CopyDrop has no scheduling functions and does not do bidirectional synchronization. CopyDrop uses as its engine a modified version of the open-source "rsync" utility, which is installed by the CopyDrop Install application.

## Installation

Double-click the CopyDrop Installer application. You will be asked for your administrator password. This application installs the appropriate (PowerPC or Intel) version of rsync, and puts the CopyDrop application itself in your home folder. If you are upgrading from an earlier version of CopyDrop, you must replace any older copies of the application which you may have scattered around. If you are not sure which version a given copy is, get info on it in the Finder. This newest version is 1.3, It is not necessary to run the uninstaller before upgrading.

You must have a copy of CopyDrop at each location you want to use as a copy destination. Do not use aliases to the application. The application is tiny (less than 150 KB) and will copy over almost instantly. If you should accidentally trash your only copy of the application, just run the installer again.

## Using CopyDrop

To use, place a copy (not an alias) of CopyDrop in the volume or folder where you want to make the smart copy, and then drag and drop volumes, folders, or files onto that copy of CopyDrop. As an example, if you want to back up a disk or folder named "My Stuff" into an empty disk or folder named "Backup", put the copy of CopyDrop in "Backup" and drag "My Stuff" onto it, and the copy will appear adjacent to CopyDrop. (Of course, if the destination is empty, there's little reason to use CopyDrop rather than the Finder, other than to have a list of copied files). If the backup destination "My Stuff" already exists, CopyDrop should be placed at the same level in the volume hierarchy as the backup destination "My Stuff". Other existing files and folders on the destination volume will not be disturbed; the only change will be to the contents of the folder or file with the same name as the source. (The name of CopyDrop begins with an underscore character so that if you list the contents of a destination by name, CopyDrop will appear at the top above the target or targets).

Any group of disks, folders, files, or aliases which can be simultaneously selected in the Finder (such as items on the desktop) can be dragged and dropped together onto CopyDrop and get processed. *Selected* aliases will be resolved and the items they point to will be copied rather than the aliases themselves, but aliases *within* a selected folder will be copied as aliases.

You can drop additional items onto CopyDrop while it is busy. You can also run simultaneous copies to multiple destinations; a number of copies of CopyDrop in different locations can run concurrently.

If multiple items are dragged and dropped together, they will be processed sequentially, as if they had been dragged and dropped one-at-a-time. If additional items are dragged and dropped after a copy process has begun, they will be processed after all the pending copies are finished.

CopyDrop can merge into folders on the same disk as the source. For example, you can use it to merge the contents of two iTunes folders on an internal hard drive. CopyDrop always checks the file paths of the source and target and will not allow you to perform nonsensical copies, such as merging a folder into a subfolder of itself, or merging a folder into a file, etc.

The result of a CopyDrop copy of a volume (whole disk or partition) is a folder, not another volume. Thus (for this and other reasons) you cannot use CopyDrop to make a bootable clone of a disk. (Use other tools for that such as Apple's Disk Utility, which makes bootable clones using the "Restore" function, or Carbon Copy Cloner).

The starting default mode is "smart merge", copying new files, replacing updated files, and not disturbing other files. On each run, you have the option to change temporarily to "smart replace", which will delete unique files in the destination. You may change the default mode by double-clicking the CopyDrop application, which brings up usage instructions and the preference setting. (If the source item is a file, "merge" and "replace" mean the same thing: the target will be replaced if it is not identical).

"Smart replace" mode will *not* delete anything on the target which exists *at the same level* as the CopyDrop application. It will only delete items *within* target folders on the destination such that their contents match exactly the contents of the source items.

In either mode, after drag and drop, a confirmation dialog is presented showing the selection, destination, and mode option, and offering a cancel option.

To monitor progress, and show the end result, CopyDrop creates a logfile as it runs. The default behavior is to display this logfile during operation (using the Console application included with OS X). Each file copied will appear on a new line. You can suppress this display by setting preferences, discussed below. If you choose not to display the logfile during operation, it will still exist and on completion of a run you will be given the option to open it and examine the result.

To cancel an operation under way, choose "Quit" from CopyDrop's File menu, or type Command-Q. If you quit during a run, the logfile will still show the successfully copied files, although the last one listed may have been incomplete and therefore will not exist on the destination.

There is no limit to the size of a source folder or volume, or to the number of simultaneously or subsequently dragged items, other than the built-in limits of the operating system and disk space on the target volume.

CopyDrop has been tested on local area networks and over the Internet for Mac-to-Mac copies both to and from the local machine. It has not been tested in a situation where either the source or the destination is running a different operating system, but it should work as long as the volumes involved can be mounted in the Finder.

Copydrop can optionally exclude files from a copy operation based on extension. For example, you can back up a folder of digital camera images and keep only the raw files and not the jpg files by entering jpg in the exclude dialog. This dialog is accessed by setting preferences, discussed in the next section. If you exclude files, the folder structure will still be identical with the source, but the copy will not have any files with a specified extension. There is no limit to the number of excluded file types. It's not necessary to include the "dot" before the extension. Note that extensions are case-sensitive; ".jpg" and ".JPG" are not the same. Note also that excluded file types will be excluded from all operations, meaning that if you are running in "Replace" mode, no excluded types will be deleted in the destination. The exclusion feature can also be used to avoid copying ".DS\_Store" files by entering ".DS\_Store" as an extension type.

## Preferences

To set preferences, double-click the CopyDrop application. There are three preference settings: one is the default copy mode (smart replace or smart merge); the second is whether or not to exclude files by type, and which files to exclude if exclusion is enabled, and the third is whether or not to show progress in Console during a copy. You can also click a button to be taken to the Kagi website in order to purchase a registration code, and to enter a code once purchased.

## Reading Logfiles

A logfile is generated for each run of CopyDrop. These files are fairly self-explanatory. File paths are shown in UNIX format (with slashes instead of colons as path separators). All copied files, including invisible ones and contents of application bundles and other packages, are shown in the log.

The default behavior of CopyDrop is to automatically open the logfile after each run. If this preference is turned off, the logfiles can still be viewed from the Console application. If you launch Console, you can open them from there. You may also open them from the Finder as described below.

If there is insufficient space on the destination volume or some other problem, CopyDrop writes the error message(s) to the logfile and alerts you with an error dialog.

Since logfiles will accumulate indefinitely, CopyDrop will offer to delete them once in a while. If you want to delete or open them manually in the Finder, they can be found in your home directory in Library:Logs:CopyDrop. You may delete the entire folder; it will be recreated if it doesn't exist.

## Uninstalling CopyDrop

If you wish to entirely remove CopyDrop from your system, manually trash any copies of the application itself, and then run the CopyDrop Uninstall application. This will uninstall any version of CopyDrop. If you run the uninstaller and have licensed CopyDrop, you will need to enter your authorization code again when you next run CopyDrop.

The uninstaller application removes the folder "CopyDrop" from your home directory's "Library:Logs" folder, the file "com.copydrop.copydrop.plist" from the home "Library:Preferences" folder, and the application "rsyncCpDp" (and psync and its associated files which may have been installed by an earlier version of CopyDrop. If you use another application which uses psync you will have to reinstall it). There are no other items installed by any version of CopyDrop. You will need an administrator name and password to run the uninstaller.

## Frequently Asked Question

Q. Can't I make a bootable clone by dragging the *contents* of a bootable volume, rather than the volume itself, onto CopyDrop?

A. No, because you are using the Finder to do the drag and you will miss all the invisible items at the root level of the source disk. Even if you made them visible by changing the

behavior of the Finder, the copy would fail because you'd have to run it as root since you will be copying privileged files. If you logged in as root, and changed the name of the folder "System" to something else... Well, that wouldn't be a good idea at all. Use Apple's Disk Utility "Restore" mode or something else for this task.

### Known Issues

1. CopyDrop tries to determine whether or not there is sufficient space on the target volume for the copy. To do so, it compares the size of each selected source item with the size of each destination item, if it already exists, and then uses the difference as the estimate of the amount of data to copy. This is accurate if the destination is a prior target of the source and essentially similar, except for what has since been added or altered in the source. It is also accurate if the destination item does not yet exist. However, if the destination is an existing folder but has some or all of its content from a different source altogether, or has been reorganized so that its files will not be seen as identical, CopyDrop will not recognize this situation and its estimate of required space will be erroneous. In the worst case scenario, the target disk will fill up and files will be skipped. An error dialog will appear to alert you to the situation. Copied files before the error will be listed in the logfile.

2. Because it is a script application which stores resources within itself, it is possible for the CopyDrop application to become corrupt, in which case it will quit unexpectedly. If this occurs, run the installer again to get a fresh copy of the application.

3. All earlier versions of CopyDrop had an issue on Intel Macs (not PPC) with reversing creator/type codes. This problem also affected users of SuperDuper, Carbon Copy Cloner, and any other applications using psync as the engine. This is not a big problem if copied files have extensions, but is a nuisance if they do not (for example, Digital Performer files). The application "File Type" (<http://www.frederikseiffert.de/filetype>) can be used to batch-restore the correct codes. This issue is fixed in CopyDrop 1.3.

### Technical Information

CopyDrop Install creates a preference file and a logfile folder in ~/Library, and installs a custom version of rsync, renamed rsyncCpDp, in /usr/local/bin. The rsync application was renamed so as not to interfere with another installed rsync in that directory. Apple installs an outdated (and pretty useless) rsync version in /usr/bin as well. These rsyncs will not interfere with each other. The CopyDrop version is called explicitly by full pathname. The customization of rsync was solely to modify its output to the logfile. The source for rsyncCpDp is the latest available build (3.0.0). In the logfile, errors if any will be shown as generated by rsync, not rsyncCpDp,

Because CopyDrop is geared primarily towards the backup of media and document files, a decision was made by the developer to preserve only the essential aspects of what it copies: finder attributes and resource forks. This means that documents backed up by CopyDrop should not have permissions issues when accessed from machines other than the ones doing the backup. Specifically, ACLs and owner/group permissions are not rewritten. Hopefully this will not cause issues for any users. The developer is open to suggestion on this issue. It would be possible to have more options when files are copied, but the downside would be that the casual user would not know which one to choose, and this is exactly the kind of complexity CopyDrop would like to avoid.

## Version History

- 1.0 - First release.
- 1.0.1 - OS 10.4 compatibility.
- 1.0.2 - Fixed bug of logs not being shown during run.
- 1.0.3 - Added quit warnings if run was incomplete; assured dialog persistence.
- 1.1 - Intel compatibility (Universal Binary); new installer & uninstaller apps.
- 1.2 - OS 10.5 compatibility.
- 1.3 - Switched engine from psync to rsync, Development of psync has ceased, whereas rsync is under active development (version 3.0.0 was released March 1 2008).
- 1.3.1 - Worked around a Finder window update issue erroneously causing an error message with very long filenames.
- 1.3.2 - Fixed "directory /usr/local/bin does not exist" error in the Installer application.
- 1.3.3 - Added file exclusion by type.
- 1.4 - OS 10.6 compatibility.
- 1.4.1 - OS 10.6.2 compatibility

## License Agreement

As an unregistered user, you may install and use the unregistered "CopyDrop" application on any computer you use, and redistribute the original "CopyDrop" distribution disk image without alteration, including by publication on a Web site and/or CD-ROM or other media.

As a registered user, which you can become by purchasing a registration code from the Kagi distribution service, you may install and use this software on any computer you use. This registration code allows you to bypass the startup delay present in unregistered copies of the application. Although other persons may have access to and thus be able to use the registered software on these computers, you may not give away, sell, or distribute in any manner such registered copies of the software, or your registration code.

The open-source application "rsync", installed by the CopyDrop installer and renamed "rsyncCpDp", is covered by the GNU General Public License, a separate document.

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### **Registration and Distribution**

CopyDrop is being distributed as shareware. It may be posted on shareware websites and included on CD-ROM collections, provided that the original disk image file has not been modified in any way. CopyDrop is fully functional without registering and paying the shareware fee, but the unregistered version has a built-in 7-second delay on launch. Registration, which costs \$10.00 US, will provide a code to remove this annoyance. Registration and payment is handled by the Kagi shareware registration service, which accepts all major credit cards. To register, go to <http://order.kagi.com/?9A&lang=en>.

When you register, you will be automatically emailed a code, usually within a few minutes but certainly within a few hours. To enter the code you may either perform another copy operation or double-click CopyDrop. Registration entitles you to run CopyDrop on any number of computers which you use. You will however need to re-enter your registration code on each computer on which you run it, and for other accounts as well.

### **Bug Reports and Feedback**

Please feel free to send comments and report problems to the author, Emmett Gray: [egray@kagi.com](mailto:egray@kagi.com)