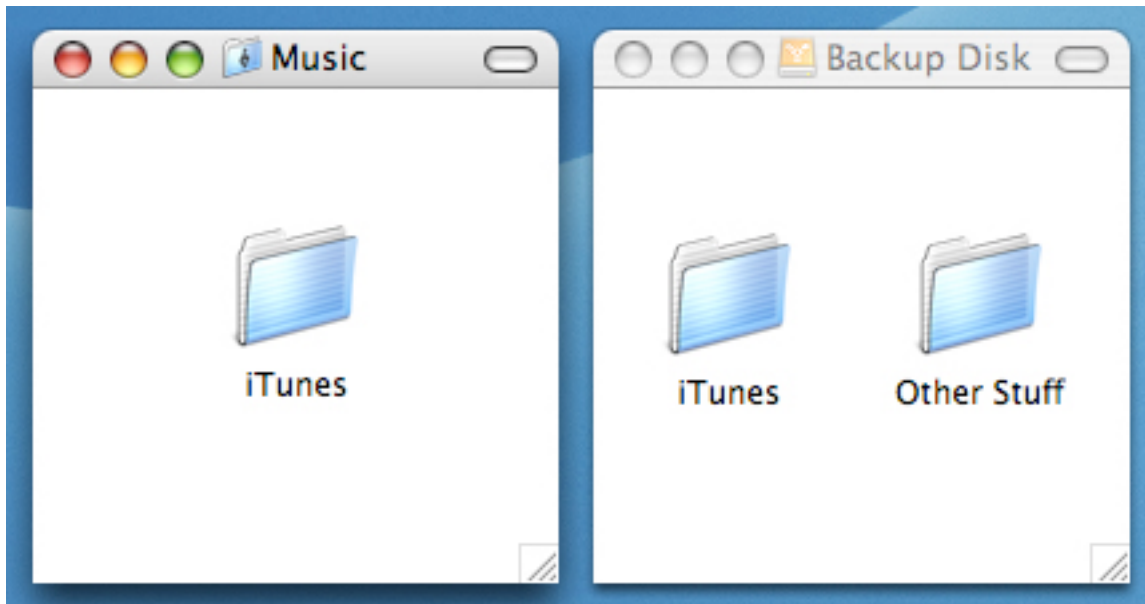


## CopyDrop © 2005-2015 Emmett Gray - Version 2.8 for Mac OS X (10.6.8 and later)

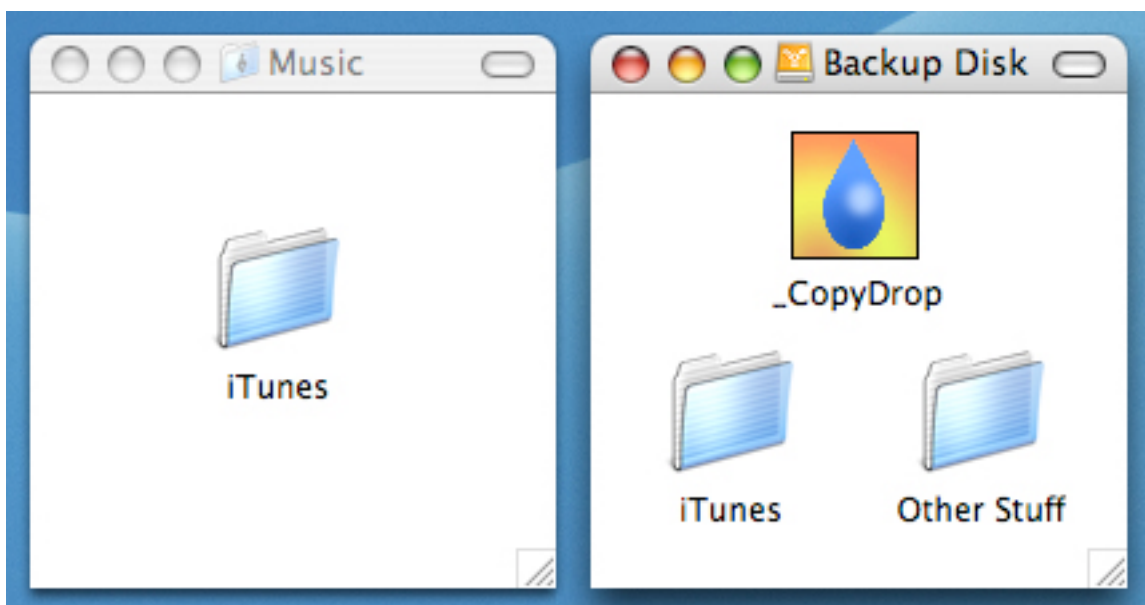
CopyDrop 2.8 runs on any Mac running OS X 10.6.8 or later, including OS 10.7 (Lion), 10.8 (Mountain Lion), 10.9 (Mavericks), 10.10 (Yosemite), and 10.11 (El Capitan). (CopyDrop 2.2 is still available for OS 10.5 and OS 10.4. CopyDrop 1.0.3 is still available for OS X versions 10.3.2 through 10.3.9).

### Quick Start

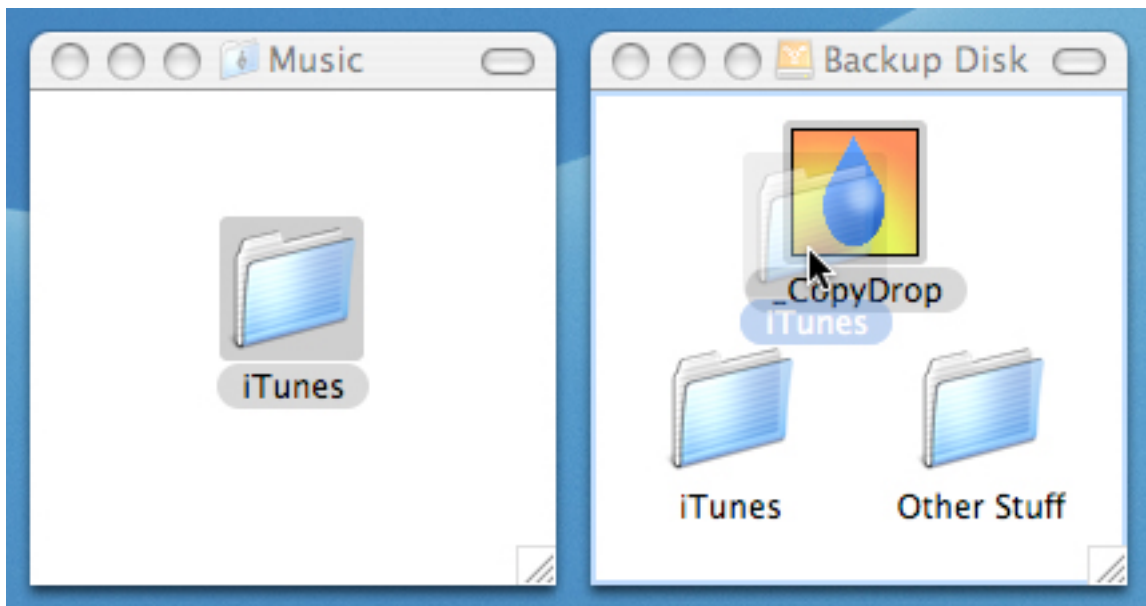
The purpose of CopyDrop is to make a "smart" backup of a folder or volume. A "smart" backup copies only those files which are new or changed. (The backup will be called the target in this guide. It must have the same name as the source. If this backup does not yet exist it will be created).



1. Drag CopyDrop "next to" the target (meaning in the same volume and at the same folder level as the target). CopyDrop must be the CopyDrop application itself, not an alias to it. It's small (2.6 MB) so it is copied almost instantaneously.



## 2. Drag and drop the source onto CopyDrop



3. 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 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 incorporated into the CopyDrop application.

## Installation

There is no installation; just copy the CopyDrop application to wherever you need it. Earlier versions of CopyDrop required an installer. If you have a previous version, there is no need to uninstall it, but an uninstaller is provided anyway to completely eradicate any prior version. If you run the uninstaller, you will need to re-enter your serial number if you have one. If you are upgrading from an earlier version of CopyDrop, remember that you must replace any older copies of the application which you may have scattered around. If you are not sure which version a given instance is, get info on it in the Finder. This newest version is 2.8, with a modification date in August 2015.

You must have an instance of CopyDrop at each location you want to use as a copy destination. Do not use aliases to the application. The application is small (2.6 MB) and will copy almost instantly.

## 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; any 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 free tools for that such as Apple's Disk Utility, which makes bootable clones using the "Restore" function, or Carbon Copy Cloner, or SuperDuper ).

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 settings. (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. The developer chose to use this method of progress report over a progress bar because any estimate of time to completion will not be accurate: there's no way to know how many files need to be copied until each item is compared to the source.

To cancel an operation under way, choose "Quit" from CopyDrop's File menu, or type Command-Q. If you quit during a run, you will get a warning that the operation was interrupted, and 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. To resume, just perform the drag-and-drop again and CopyDrop will pick up where it left off. This is a significant advantage to using CopyDrop over other commercial software with a similar function such as Synchronize! Pro X, which is impossible to interrupt.

There is no limit to the size of a source folder or volume, or to the number of simultaneously or subsequently dragged-and-dropped 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.

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. This particular exclusion is enabled as the default behavior. (".DS\_Store" - Desktop Services Store - files are used by the Mac Finder to reopen folders with their view set to the way it was the last time the folder was opened, and are generally not considered worth preserving by most backup software as they are regenerated if not present).

## **Preferences**

To set preferences, double-click the CopyDrop application. There are two buttons: "Advanced" and "Mode". There are two Mode settings: one is the default copy mode (smart replace or smart merge); the second 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.

The "Advanced" button has further options. One is to set the file exclusion options, as discussed above. (Exclusion of ".DS\_Store" files is the default behavior; see the last paragraph of the prior section for an explanation). Within the exclusion options dialog, another option is to ignore Finder info, which is sometimes necessary when copying to SMB volumes. Use this option if you are getting the following error: "rsync: get\_xattr\_data ... failed: Attribute not found". Finder info consists of things like color, folder view, folder screen coordinates, etc., and can safely be ignored.

The "OS X Folder Bug Fix" option is discussed below.

### **OS X 10.6 through 10.10 Folder Bug Fix**

The third "Advanced" option is to overcome a bug in Mac OS 10.6 and later which has not been addressed by Apple. The bug is that it is possible for a folder to be identified as a "Stationery pad" by having its Stationery pad property flag set. It's not clear how this can arise, but it does on occasion. This is a nonsensical situation, and getting info in the Finder will not reveal it because there's no Stationery pad checkbox for folders. The manifestation is that when such a folder is dropped on CopyDrop, before anything else happens the Finder will start making a copy of the folder at the original location with "Copy" appended to the name of the folder. When the CopyDrop dialog eventually appears, it will offer to process that copied folder, not the original. If this happens, cancel out of CopyDrop, stop the Finder copy if it's still under way, and delete the bogus copy of the source. Then double-click the CopyDrop application and click "Advanced" and then "OS X Folder Bug Fix". A file dialog will appear and you can then navigate to the problem folder and CopyDrop will set its Stationery pad flag correctly, and will then be able to properly process the folder.

### **Purchasing and Registering CopyDrop**

CopyDrop as downloaded is fully functional, but a delay will occur on every launch until a registration code is entered. This code will have to be re-entered on every computer on which you run CopyDrop. Your purchase of a registration code entitles you to run CopyDrop on any number of machines. Payment is handled through the Kagi shareware distribution service which can be accessed from the application.

## 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

It is never necessary, but 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 applications "rsyncCpDp" (installed by version 1.4.x) and "psync" (installed by earlier versions). There are no other items installed by any version of CopyDrop. You will need an administrator name and password to run the uninstaller. .

## User Guide

A copy of this guide is contained in the application and can be accessed by launching the application and selecting the "Help" button.

## 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" function 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, open the downloaded disk image again to get a fresh copy.

## Technical Information

When CopyDrop first runs it creates a preference file in ~/Library/Preferences, and creates a folder for logs in ~/Library/Logs. The CopyDrop application incorporates a build (3.0.7) of rsync as the copy engine, within the application.

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 subject. 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 (2005).
- 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
- 2.0 - Stand-alone, no installer application, rsync (3.0.7) incorporated, user guide incorporated; verified up to OS 10.7.2
- 2.1 - Added option to ignore Finder info when storing to SMB volumes.
- 2.2 - Added Mavericks compatibility. Removed "ignore Finder info" from the previous version which had failed to solve the SMB volume problems encountered by some users.
- 2.3 - Added Yosemite compatibility.
- 2.4 - Added Yosemite compatibility for 10.10.2 and later
- 2.5 - Fixed a timeout issue copying huge directories (i.e. Mail)
- 2.6 - Added El Capitan compatibility
- 2.7 - Removed free space check due to inconsistent results in Mavericks and later OS.
- 2.8 - Restored free space check with rewritten code.

## 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 your registration code.

The open-source application "rsync" is incorporated into the CopyDrop code and is covered by the GNU General Public License, a separate document.

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- the results that may be obtained from the use of the software will be effective, accurate or reliable
- the quality of the software will meet your expectations
- any errors in the software will be corrected.

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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 15-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)