



Backuplist+ 7.2

Please read the obligatory "Legal Notice" at bottom of this document before proceeding!

Backuplist+ is donate-ware. Let me know if it works for you, and if you like it. If you wish, you can make a **donation** to support further work on backuplist+, mainly so I can afford to upgrade my Mac to keep them current. I have spent many hours on this and other applications for my own enjoyment and hopefully for yours too, so I really appreciate feedback – don't hesitate to email your thoughts, problems, delights (**Help menu>email support**).

There is now an elegant **Donate** "Nag" box in the progress window just as a reminder. If you make a donation, you will receive a registration number that make the reminder go away. All previous donors, naturally will receive a "free upgrade" and can email me for a registration number.

To donate go to the Help menu > Donate, or go to [the donations page online](#).

Email thoughts, questions, support needs, at rdutoit@comcast.net

I created backuplist+ because I got tired of other more complicated backup software, though some are certainly efficient and offer complex archiving and other details. Backuplist+ is a "wrapper" application for the powerful unix tool **rsync**. Most of the settings and options you choose are supplied to rsync at launch time and processed by rsync. The rsync application is embedded inside backuplist+ and runs from there. Rsync 3.0.6 is an ongoing open source project in development and you can submit reports, ask questions, at the rsync website.

Backuplist+ is just a simple a list of source files you want copied to a certain destination, whether it is an external drive, flash drive or a network.

Backuplist+ is different in several ways!

It preserves all the critical file metadata used on OSX, including creation dates!
It creates copies instead of archives. No need to restore—just retrieve your files.
It can collect all your important system and application preference files for you.
It can back up your whole system – make a clone.
You can add your system and application preferences automatically.
It can run in background as a menu in the menu bar, or normally with Dock icon.
It is very simple to use but offers many options for advanced users too.
And much much more.

New in this version: (see change log at bottom for more...)

What's new?

Backuplist+ 7.2 is an important update. Several bugs have been fixed and rsync updated.

1. There was a bug possibly causing the core exclude items for a System clone to not be considered. This is fixed.
2. When dropping files on the exclude list for a mounted volume, the path shown for the exclude pattern was incorrect – this has been fixed.
3. There were incidents of files with hfs+ compression being damaged in transfer by rsync. This has been fixed. Now rsync copies those files preserving their data in the Resource fork and setting the proper compression flags. Thanks to Mike Bombich, creator of the excellent Carbon Copy Cloner for supplying this patch.
4. The latest build of rsync, 3.0.7, is included with this release. For older OS 10.5x or 10.4x, the build remains 3.0.6.

Important Note for previous backuplist+ users running Snow Leopard: If you made clones of your Hard drive using backuplist+ on Snow Leopard, it is advised to erase the old clone and make a fresh one using this version since there may have been several to many corrupted files in the /usr/bin directory. The bug that caused this has now been fixed. Also, if your main internal hard drive is restored from a backuplist+ clone on Snow Leopard, I advise that you reinstall 10.6 from the original install disks and use the migration assistant to install your personal files from a clone of your drive. Only do this if you have a clone or time machine backup of your files to restore from. Please email me if you need help with this.

Compatibility: Backuplist+ is compatible with OS 10.4X, 10.5X, 10.6X Snow Leopard on PPC and Intel Macs. It is a universal binary and also has 64 bit support.

Help is also available from the Help pages (go to Help menu > **backuplist+ Help**)

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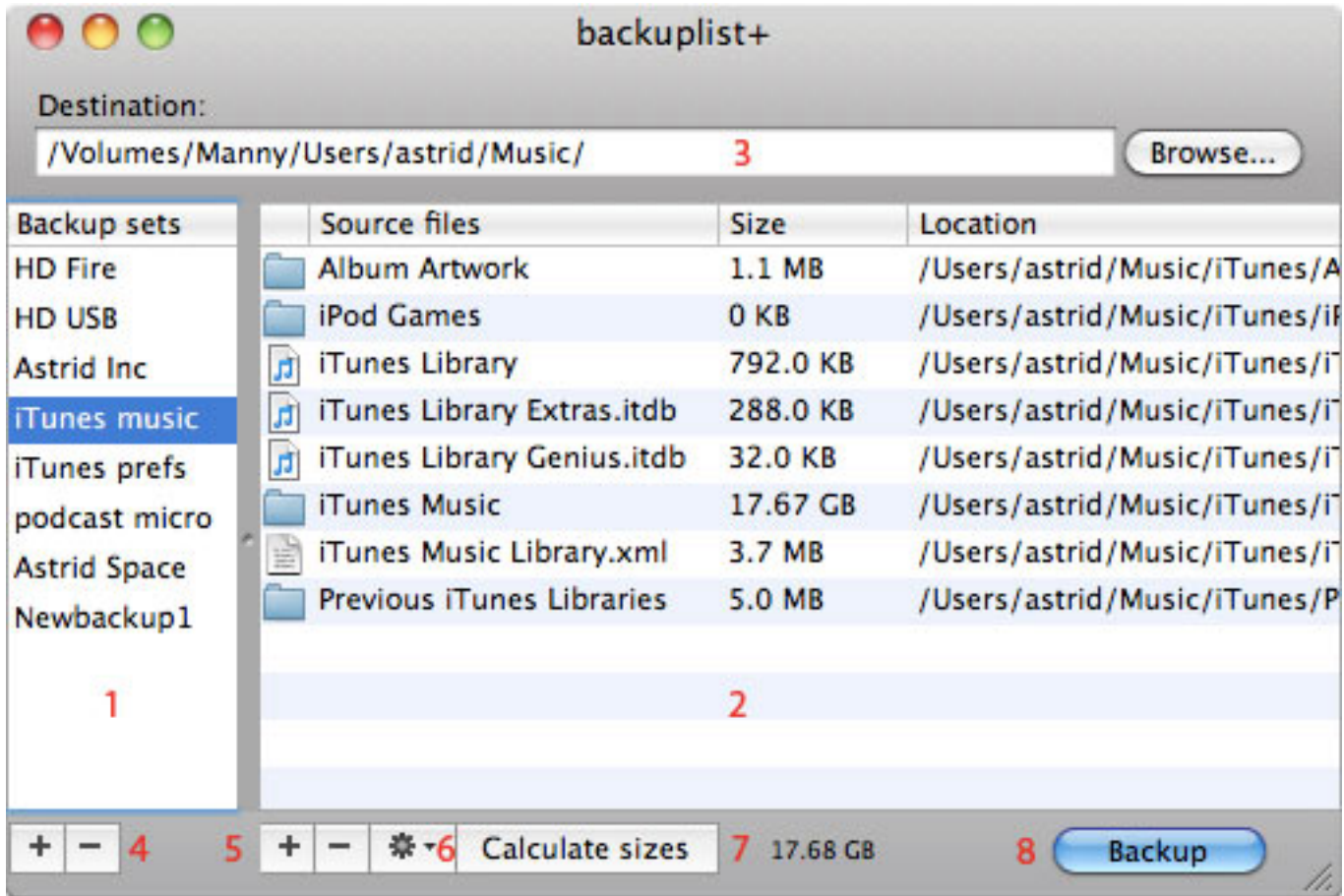
Restoring iTunes, iPhoto, Mail, Safari

Adding system or application preferences

Troubleshooting problems

Contact support

The backuplist+ window



1. Backup sets list window. Create sets for different backup scenarios. Use the + and - buttons.
2. Source files list. Add files and folders you want copied to this list via drag and drop or + and - buttons.
3. Destination text field. Drag and drop the destination folder or disk here, or use "browse" button.
4. The + and - buttons for adding and removing sets.
5. The + and - buttons for adding and removing source files.
6. The preferences.
7. Press calculate sizes to see the sizes of the files to be copied.
8. Press "Backup" to backup selected files in the list.

Backup basics

Note: If you are backing up to an external volume such as firewire drive, flash drive, zip disk or others, you **MUST** be sure "**Ignore ownership on this volume**" is left unchecked. Click on the icon for the drive and choose "Get Info" from File menu (command-I). At the bottom of the "Get Info" window you will see the "Ignore ownership on this volume" checkbox. Be sure it left unchecked or all your permissions will be changed to those of the external volume!

Note: It is advised to enter you administrator password in the "Globals" settings panel (click the "gear" button to access the settings panel.) Backuplist+ will backup your "own" files without entering a password but copying any system files or files with "bad" permissions will not work without it. Password is essential for making a clone of your system. See "Global Settings" below for more information.

1. Create a new backup set or just use the default one in the sets list on the left side of the main window. See below about creating new sets.
2. Create your list (see below for more details.) Press the **Calculate sizes** button to set the file sizes for your list. This is optional and for your own information.
3. Enter a destination in the **destination text field** (see below for more..) You can press the "**Browse**" button or just **drag and drop** your destination folder, or disk into the text field. You can enter or edit this destination but only if you know what you are doing!
4. Press the **Backup** button. The little progress bar will show the progress of copying and the total amount copied. This can take seconds or much longer depending on the size and number of the chosen files. If you are backing up to the same folder each time, backuplist+ will scan the folder for any changes and update files as needed.

The destination text field

Drag and drop or press "**Browse**" to select your backup destination. You must choose a destination for each backup set you create.

You can edit the destination path yourself if you know what you are doing. For local Network backups, you can usually use the above methods to enter the path.

For remote Network backups you will probably have to enter the particular Network path in the format that rsync uses to transfer files to remote destinations. You can read the rsync man page in terminal about using rsync remotely. Remote backups can also involve installing rsync at the destination and using identification "keys." This is beyond the scope of this manual and my knowledge of remote backups is minimal but I will try to help you if you need that.

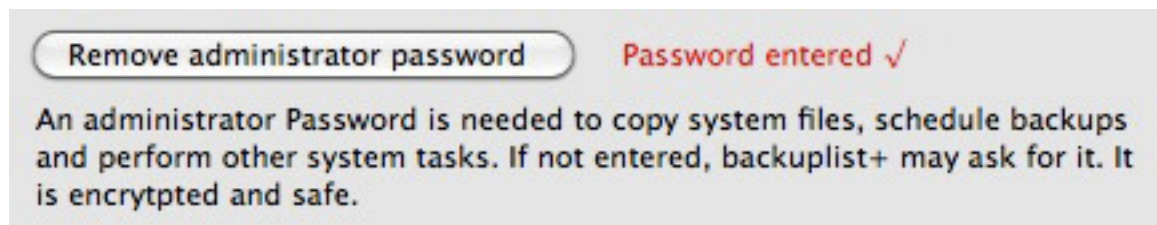
To create your source files list

1. Press the **"Add"** (+) button and use the dialog to choose files and folders. You can select as many as you want at once. The list is sortable by clicking on the column headers of the list window.
2. You can also just **drag and drop** folders and files into the window and they will appear in the list
3. To remove items, just select them in the list, singly or multiples, and press the **"Remove"** (–) button.

Just add the files and folders you want to protect. These can be anything from a single file/folder to your Home folder or even the entire Hard drive itself. Backing up your Home folder ensures all your own important data is safe.

Note: To add System and application preferences automatically to your source list see Appendix B

The Password

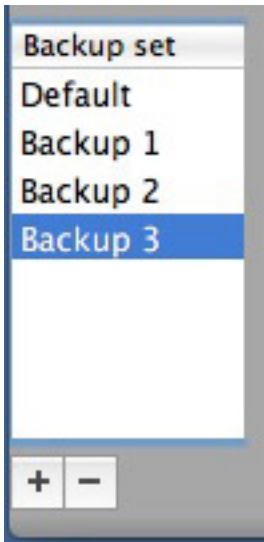


Password: Click the **"Enter administrator password"** button and type your user password to allow copying of files without correct permissions. Usually this is not a problem if you are copying files from your own home folder. Password also helps if you want to bail out of a backup session – it's easier to quit a running shell script if you have password permission already in place! The password is triple **encrypted**, stored, and only decrypted at runtime. You must enter your password to perform a system clone or copy any System files.

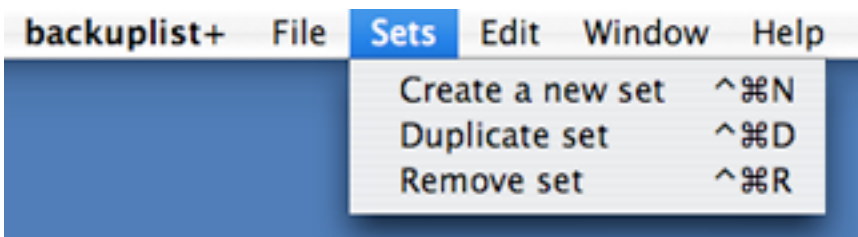
Note: You can choose not to enter your password and backuplist+ will ask for it at runtime, if it is needed. If you want to run unattended scheduled backups, you will need to enter the password here.

Backup Sets

Just click the "Add" (+) button under the sets list in the main window



...or use the File menu.



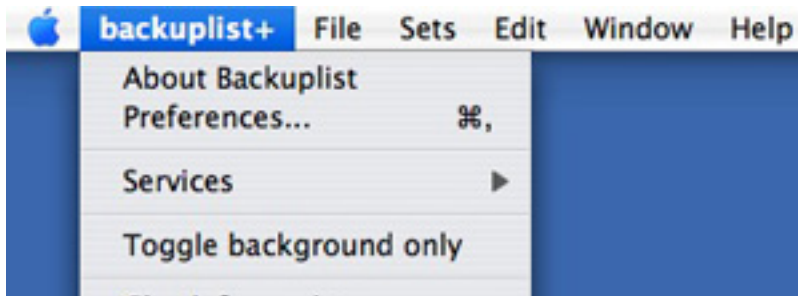
You can edit the sets name in the sets list.

Each set has:

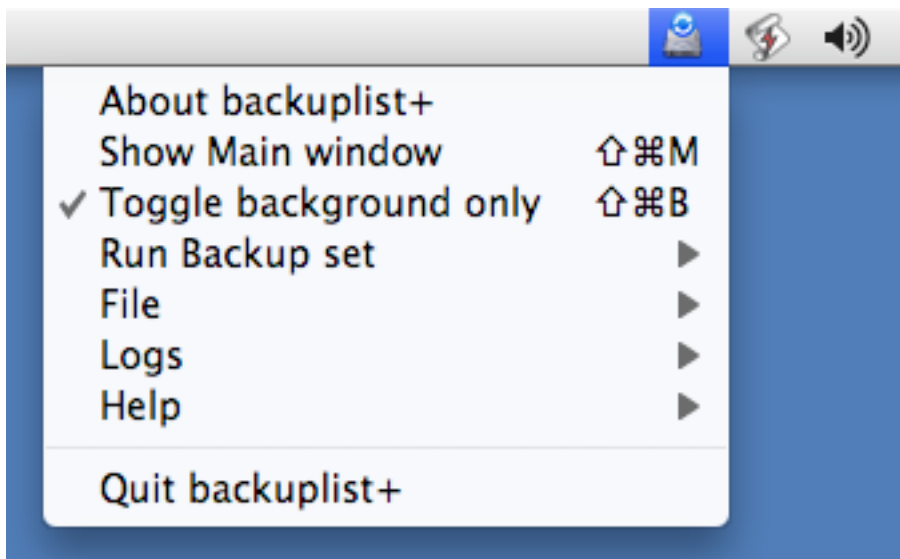
1. Its own set of source files in the source list.
2. A destination in the destination text field.
3. A set of preferences in the settings panel.

Switching between Background only and Normal modes

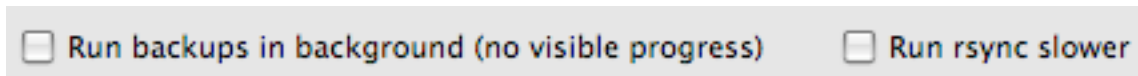
select "Toggle background only" then quit and re-launch backuplist+.



and... voila, a menu appears at the right side of the top menu bar! Backuplist+ will not appear in the Dock (unless you drag it's icon there) while running. You can access all the usual menus from the menu. Just select "Toggle background only" to return to normal mode.



In Background-only mode you can choose to run backups in background completely



which means there will be no visible window or progress bar, just a spinning blue icon in the menu bar to show a session is taking place.



To make a "boot-able" clone of your whole system

Backuplist+ makes system clones best to clean (empty) disks or partitions. You must leave the checkbox "Backup to folder", in the settings panel, unchecked. Backuplist+ will copy your Hard drive to the destination and make it bootable.

Prior to OS 10.5X Leopard, only Firewire external disks can be made bootable. With Leopard, USB disks work too!

Making a clone:

1. This involves copying the contents of your entire Hard drive to another drive that can then be used to start up from
2. **Repair permissions** on your internal Hard Drive or select "repair permissions" in the Pre-clone popup button in Preferences.
3. Erase and reformat the external drive (**HFS Standard, or journaled, format**). It is also good to create a partition on the external drive a bit bigger than your internal Drive (2Gb +-) and be sure it is formatted and clean. You can also select this in the Pre-clone popup button in Preferences.
4. Be sure **"Ignore Ownership..."** is unchecked on the destination disk. See the note below for more...
5. Drag your new clean external drive into the destination text field.
6. Drag your Hard drive into the backuplist+ source window and press **"Backup"**!
- 7.. Backuplist+ will make a full copy of your Hard drive preserving everything. A 100 Gb drive takes less than two hours on my 2.4 GHz intel core duo Macbook pro.
8. To test it: Go to System Preferences > **Startup Disk** and select the new backup system in the list and restart. It should boot up as normal (usually takes a few seconds more).

Note: If you are backing up to an external volume such as firewire drive, flash drive, zip disk or others, you **MUST** be sure **"Ignore ownership on this volume"** is left unchecked. Click on the icon for the drive and choose "Get Info" from File menu (command-I). At the bottom of the "Get Info" window you will see the "Ignore ownership on this volume" checkbox. Be sure it left unchecked or all your permissions will be changed to those of the external volume!

Backup strategies

Possible backup items might include **Any files you want to save or protect**

Your applications folder

Your Documents folder

Your Pictures folder

Your Music folder

Your Preferences folder (contains files needed by Itunes, iphoto, Mail, Safari, etc....)

or Your whole Home folder (which contains all of the above, except the Applications folder)

Generally you backup files that you don't want to lose in the event of a hard drive crash or other disaster. It is also good to have copies of data that changes often so if you accidentally delete something or make some mistake, you have an older copy to return to. Many times I have wished i had an older version of some file that I have "messed" up.

A good scenario could be to make a whole clone of your system once a month or more (if you know it is in good working order) and then daily or weekly copies of your home folder or personal files folders and preferences.

It is not absolutely necessary back up your operating system since you can always boot from your installation disks in case of a bad crash. The important files to have are the preference files that store your own settings for system appearance and other behaviors. Some people though, like me , make a complete copy of there system called a **Clone** from which you can restore everything perfectly if you do have a disk failure or other destructive act of nature. Backuplist does this too!

it may be wise to make some hard copies from time to time onto [CD or DVD](#). It is wise to make hard copy of all your data occasionally since even an external hard drive can crash. Lightning does strike!

Incremental versus "single folder" backups

- The new **rsync** is **excellent** for Incremental backups. Incremental backups, also called "**snapshots**," use multiple folders and are good for saving a series of backup copies in case you want to refer back to a file (that you have changed often) in a previous state.

- The new **rsync** is also excellent for backups to the same folder! Single folder backups (don't check "incremental backups") back up your files to the **same folder** each time, only copying those files that have been modified. This is good for one time backups or when you just want one current updated folder of some particular folder or item. If you back up to the

same folder it will only update the files that have changed (again rsync is very fast with this).

Note: To add system and application preferences automatically.... see **Appendix B** below

To restore files

Note: External drives are inexpensive now so the BEST policy is to always have a FULL SYSTEM CLONE on reserve in addition to your regular backup files. If anything ever happens to your hard drive, you can be up and running in minutes.

1. If you wish to replace a few files or folders within your home folder, just drag them from the backup folder to the original source folder on your Hard drive, replacing the originals.
2. If you wish to restore your entire Home Folder, you can drag the contents of the backup Home folder (not the folder itself) to the Home folder on your source drive. Sometimes it works better if you drag a few items at a time.... some files may not allow you to copy them due to permissions issues.
3. Alternately (and better), you can easily use backuplist+ to restore the backup Home folder. Just add the backup Home folder to the backuplist+ list window and select your original Users Folder as the destination – that will copy the whole backup version to your Users folder replacing the original Home folder inside it. Important note: you must uncheck the box named "Backup to folder" in the settings panel for this to work, otherwise backuplist+ creates a backup folder "mybackup" (or other name in the box) in the Users folder and puts your Home folder in there.... important!
4. In the event of a crash where you must re-install your whole system fresh– there are two ways to go.
 - a. If you have a "bootable" clone of your entire system you can copy that to your Hard drive. You must start up from the external clone drive and then reformat and erase your Hard Drive. To start from the external drive, startup while holding down the C key and choose the correct drive to boot from the dialog. Or you can select "Startup Drive" in System Preferences. Then you add the external clone drive, or partition, to the backuplist+ list window and select your Hard Drive as the destination. Press backup and, if all goes well, you have an exact copy of your original drive back in place and can reboot, this time choosing your internal Hard Drive to start up from (hold down the option key again or use System Preferences > Startup Disk.) If you have a copy that is not bootable, startup from your original system install disks and follow the same procedure as above.

b. If you don't have a complete copy of your system, you must reinstall your system from your install disks and go through the process of setting up your new accounts and name your accounts with the same short names (the names of the Home folders) as before. Once set up you can replace the contents of your new Home folder as above, with the contents of the backup home folder. Again the key here is not to replace the Home folder itself, just the contents. This method will of course create a brand new, fresh, System rather than a copy of your old one (with all its quirks...).

Note: With OS 10.6 Snow Leopard the installation process has become quite seamless. For a smooth transition, make a clone of your system (Even better – make two clones to separate drives!) and check it to be sure it is fully functional and perfect. Then install the new System. In the installer first restart to boot from the install CD. Then go to the installer Utilities menu and use disk utility to erase your internal Hard drive. Then return to the installer and install the new OS and at the end where it asks if you want to transfer your data from another drive ,click yes and select your backup clone drive which must be attached and mounted of course. Then you will have fresh clean new system installed with all your stuff exactly as you left it. If erasing your internal drive is too scary then skip the erase part and just use the archive and install feature of the Installer.

Note: To restore iPhoto, iTunes, Mail, Safari etc... see **Appendix A** below

Logs:

There are several logs that can be accessed to tell you more about a backup operation:

Window	Help
Minimize	⌘M
Show Main Window	⇧⌘M
Show backuplist+ log	⇧⌘L
Show rsync output log	⇧⌘R
Show rsync error log	⇧⌘E
Show debug log	⇧⌘D
Show scheduling	⇧⌘T
Open Volumes folder	⇧⌘V

Show backuplist+ Log Window

This is the backuplist+ log which shows the last several backups, their times, info etc..

Show rsync output Log

This is the rsync log which shows the sync progress. If you enter your password in the Globals Settings panel, this log will be found in your Home Folder > Library > Logs folder and is called rsynclog.log. It will show live updated progress of the file transfer and any sync errors that may occur. Many of these errors are not fatal or important to the outcome of transfer, though some are...

Show rsync error log

This new log is created when you check the Debug option in Global Preferences. It resides in your User > Library > Application Support > Backuplist folder and will receive any error output from an sync backup session. useful if problems arise.

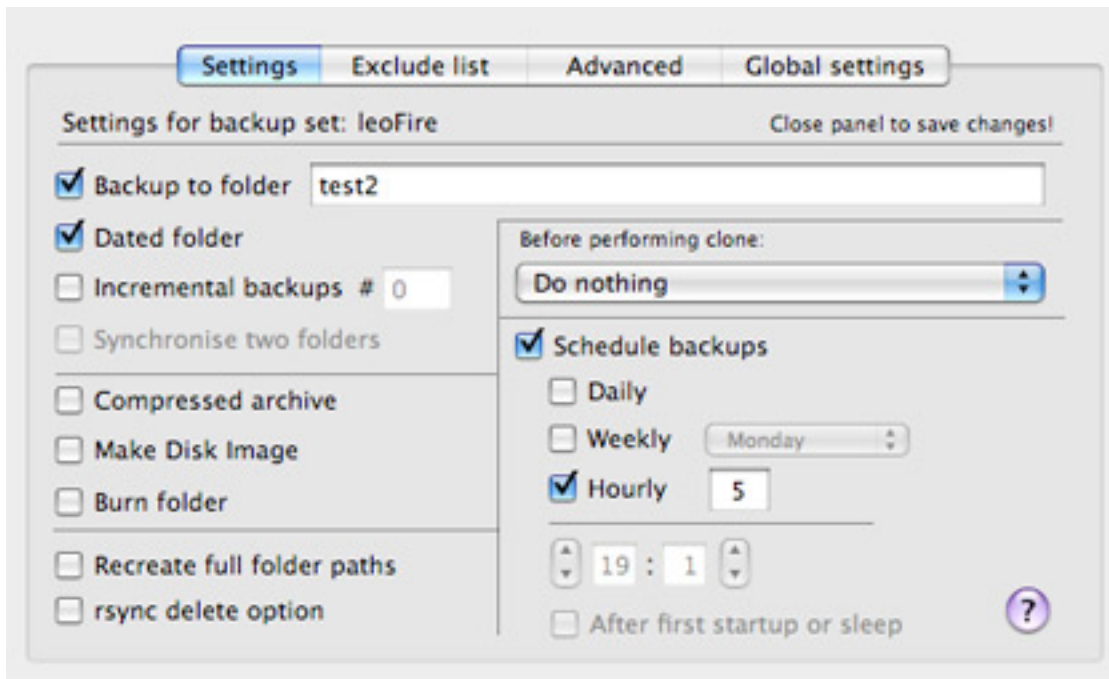
Show Debug Log

This is the debug log and is useful mostly to me if there is a problem with backuplist+ and we need to find it. This log will be found in your Home Folder > Library > Application Support/Backuplist folder and is called backuplist.log. You can send me this log if there is a problem and it will help me to pinpoint the bug.

Show scheduling

This shows a log of the current scheduled backups, their times etc...

Settings panel:



Preferences for the current backup set

These are different for each set.

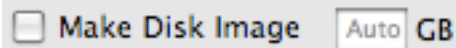
Backup to folder: This will create a new folder that will contain the backup, if one doesn't already exist, and name it accordingly.

Incremental backups: This will create multiple folders, up to the limit you choose, so you have incremental backups over a period of time. If you choose 3 folders, Backuplist+ will create a new folder at each session and delete the earliest folder always leaving 3 folders. After you reach the set limit, backuplist+ will delete the earliest backup and create the new one.

These are true incremental backups which means after the initial backup, each backup will be a mirror of the last one, copying only the files that have changed. This saves a tremendous amount of disk space and gives you exact snapshots of your files from each backup time period. Amazing! This works because rsync makes hard links to the files (kind of like aliases but different) You can check this by looking at the size of the disk after an incremental backup. It should only reflect a small change for the newly added files. You can not check the size of the backup folder itself – the **Finder** will give you the size of all the files disregarding that they are hard links. You can only tell by checking the disk size("Get info" on the disk icon.)

Dated folder: This will append the current date to the folder name, so you know when the backup was made. That will ensure that each backup is a new one in its own folder. If you want to backup to the same folder, don't check this box.

Compressed archive: This will compress your folders/files into one archive greatly reducing the size of them, in most cases up to 50% smaller. You can then store this somewhere for future use, if you need it. Clicking on the compressed archive simply decompresses it to its original size. It uses the zip command and you can also use the exclude list in the exclude panel to exclude any items from the archive.



Disk Image: Checking this box will cause Backuplist+ to create a disk image at the location you choose, open that image, copy files into it and close the image again. You can make sequential backups to the image as well and Backuplist+ will copy only the changed files into it each time! backuplist+ creates a sparse type disk image which will expand up to its designated size but only takes up disk space for the files in it. In other words – the size is not fixed

New: There is a check box for the size of the sparse image to create. You can enter a number or have backlist figure it for you – it should always be at least 20% bigger than the total size of your source files, in Gigabytes.

Burn Folder: This will place your backup files in a burn folder ready for creating a cd or dvd hard copy. Very useful! It will make aliases of your list items instead of actual copies so it is a fast way of making a backup (though you still have to burn the CD which takes time depending on size of files).

Recreate full folder paths: Check this box and your backup files will be placed in their folders representing the folder structure of your own system. This helps tell you where they came from as well as allowing for different files with the same name to be in their own locations. Normally Backuplist+ just copies all the files and folders into the one backup folder which some people prefer – otherwise you must burrow through folders to get to the files.

Rsync delete option: Check this box if you want **rsync** to delete files on the backup that aren't present on the source.

Before performing clone: Use this popup button to select one of several options to be performed automatically before backuplist copies your startup disk(makes a full system clone.) You can select to repair permissions of your startup disk or to erase the destination drive. It is recommended to erase any disk prior to making a new first-time bootable clone on an external partition or drive. Selecting "Perform clone update only" will cause Backuplist + to only update any files that have changed on the destination drive or, if the drive/partition is empty, it will make a complete new copy.

Synchronize two folders: Check this box if you want **rsync** to synchronize the contents of two folders. Usually backuplist copies the files or folders in the list window into the destination folder. In this case rsync will copy the **contents** of the folder in the list window

into the destination folder. It then copies the **contents** of the destination folder back into the source folder. It will not delete files missing in either folder and will not copy over any file that is newer. This preserves the latest states of the files exactly so each folder is identical. This is useful if you work on several different machines and want to keep a folder, such as your Home folder, identical on each.

You must have only one folder present in the main list window to sync with the destination folder. If you choose "Sync folders", you can not select other options such as "backup to folder", "Dated folder", "Rsync delete option", "Recreate full folder paths", "Incremental backups", "Disk image" or "Burn folder."

Scheduling

Note: You must check the "Make Backuplist+ a login item" check box to schedule automatic backups

Note: Backuplist+ will not wake up computer from sleep for a scheduled backup. See below for alternatives... you can set your mac to wake up at a certain time.

Scheduling backups: Check this to allow scheduled backups of the current backup set

Daily: Check this box to have a daily backup session.

Weekly: You guessed it! Check this for a once a week backup session. You can choose the day of the week in the popup list.

Hourly: Once per hour or whatever rate you set in the text box next to it.

Time clock: Select a time (remember it is a 24 hour clock) for the scheduled backup. Important: For backup to work at specified time you must set your computer to either never sleep (it can still put the screen display to sleep) in System preferences > Energy Saver Panel. Or you can set the computer to wake up a few minutes before the scheduled backup takes place (again in the Energy Saver Panel.) Alternately you can select to have backuplist+ perform a backup once a day when you login or computer wakes from sleep.

Once per day: check this to have backups performed once a day after startup or sleep, or on the selected weekday if you choose weekly backup.

Important Note: If you select "once per day" or "Hourly", backuplist+ will check for the presence of a backup disk and if it is not present continue to check until it is mounted. This way, the backup will continue once the disk is mounted and then the next backup will occur at the designated time.

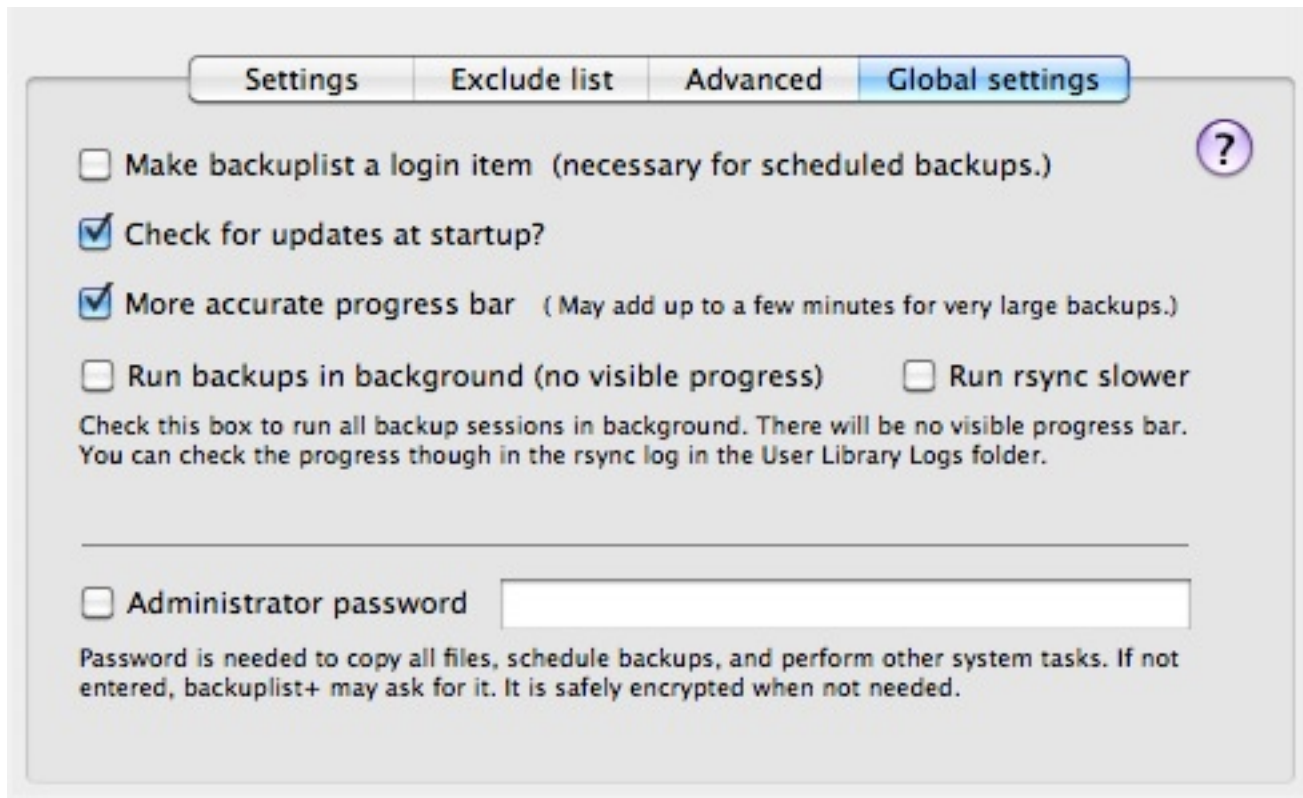
If a disk is not present for a scheduled backup time (via the time clock) you will see a dialog saying the disk is not present and you can then either mount the disk and try again or cancel the process.

options compatibility chart

This chart shows which options in the settings panel are compatible. It is confusing for new users to understand what all these options mean so I hope this will at least show what is possible. An X means the two options are compatible. you will notice that some options like "Synchronize two folders" are not to be combined with any others. System clones can be made into a sparse disk image and will work with the rsync delete option when updating an existing clone.

	Backup to folder	Dated Archive	Incremental	Sync two folders	Disk Image	Compressed archive	Full Paths	rsync delete	System clone
Backup to folder	X	X	X		X	X	X	X	
Dated Archive	X	X	X				X	X	
Incremental backups	X	X	X				X	X	
Sync two folders				X					
Disk Image	X	X					X	X	X
Compressed archive	X	X							
Full Paths	X	X	X		X		X	X	
rsync delete	X	X	X		X		X	X	X
System clone					X			X	X

Global preferences: these don't change with different backup sets.



Password: Check this box and type your user password to allow copying of files without correct permissions. Usually this is not a problem if you are copying files from your own home folder. Password also helps if you want to bail out of a backup session – it's easier to quit a running shell script if you have password permission already in place! The password is triple **encrypted**, stored, and only decrypted at runtime. You must enter your password to perform a system clone or copy any System files.

Note: You can choose not to enter your password and backuplist+ will ask for it at runtime, if it is needed. If you want to run unattended scheduled backups, you will need to enter the password here.

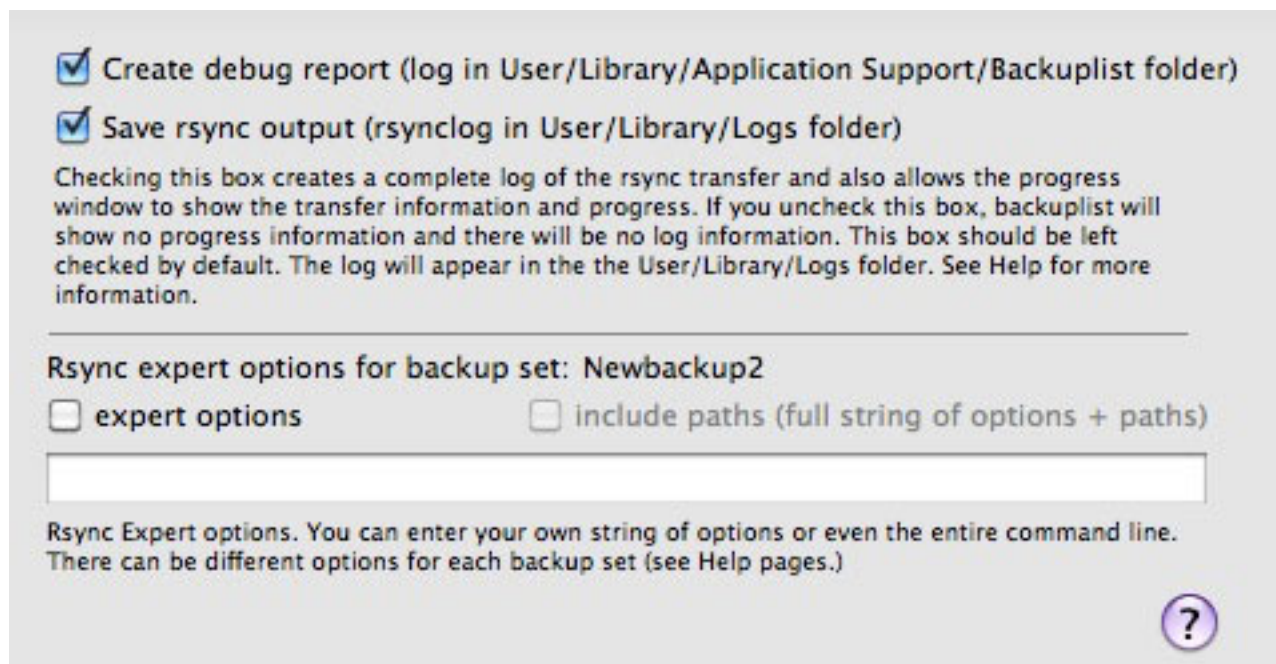
Make Backuplist+ a login item: This is **necessary** to schedule backups. They will not work automatically if you don't check this button.

More accurate progress bar. Check this box and backuplist+ will create a file list prior to launching rsync to copy files. This gives an actual total file count so the progress bar will reflect the correct percentage of files backed up. Rsync uses recursion so it is impossible to know at any one time how many files have been copied, of the total. Checking this box will add a few more seconds to the backup time for an average sized folder, or up to several minutes for a very large System clone. It will not create the file list for incremental backups or scheduled backups, or ones that are running in the background (no visible progress.)

Run backups in background: When you run backuplist+ in background-only mode, this option will allow backups to occur in the background without opening the backuplist+ window. The icon in the menu bar will turn into a spinning blue disk while backups are running but you will not have access to the main window or see progress. You can, however, watch the sync progress in the ssync log (see "Logs".)

Check for updates: This causes backuplist+ to check for updates when it launches. You must be online for it to check. You can also check manually anytime in the backuplist+ menu bar.

Advanced settings



The screenshot shows the 'Advanced settings' window of Backuplist+. It has a light gray background. At the top, there are two checked checkboxes: 'Create debug report (log in User/Library/Application Support/Backuplist folder)' and 'Save rsync output (rsynclog in User/Library/Logs folder)'. Below these is a paragraph of text explaining the 'Save rsync output' option. A horizontal line separates this from the 'Rsync expert options for backup set: Newbackup2' section. In this section, there are two unchecked checkboxes: 'expert options' and 'include paths (full string of options + paths)'. Below these is a text input field. At the bottom of the section is another paragraph of text. A help icon (a question mark in a circle) is located in the bottom right corner of the window.

☒ Create debug report (log in User/Library/Application Support/Backuplist folder)

☒ Save rsync output (rsynclog in User/Library/Logs folder)

Checking this box creates a complete log of the rsync transfer and also allows the progress window to show the transfer information and progress. If you uncheck this box, backuplist will show no progress information and there will be no log information. This box should be left checked by default. The log will appear in the the User/Library/Logs folder. See Help for more information.

Rsync expert options for backup set: Newbackup2

☐ expert options ☐ include paths (full string of options + paths)

Rsync Expert options. You can enter your own string of options or even the entire command line. There can be different options for each backup set (see Help pages.)

?

Run without progress. This will cause Backuplist+ to run rsync without an external output file which will give no progress information about the backup. There will be the timer though so you can see how long the backup is taking. This option makes the backup a bit faster and can also be used for debugging purposes.

Backuplist+ debug report. This will cause backuplist+ generate a report on it's functions as it moves through the code to before and after a backup session occurs. Useful mainly for me if there are problems we need to fix. The report shows up in the backuplist folder and is named backupreports.txt.

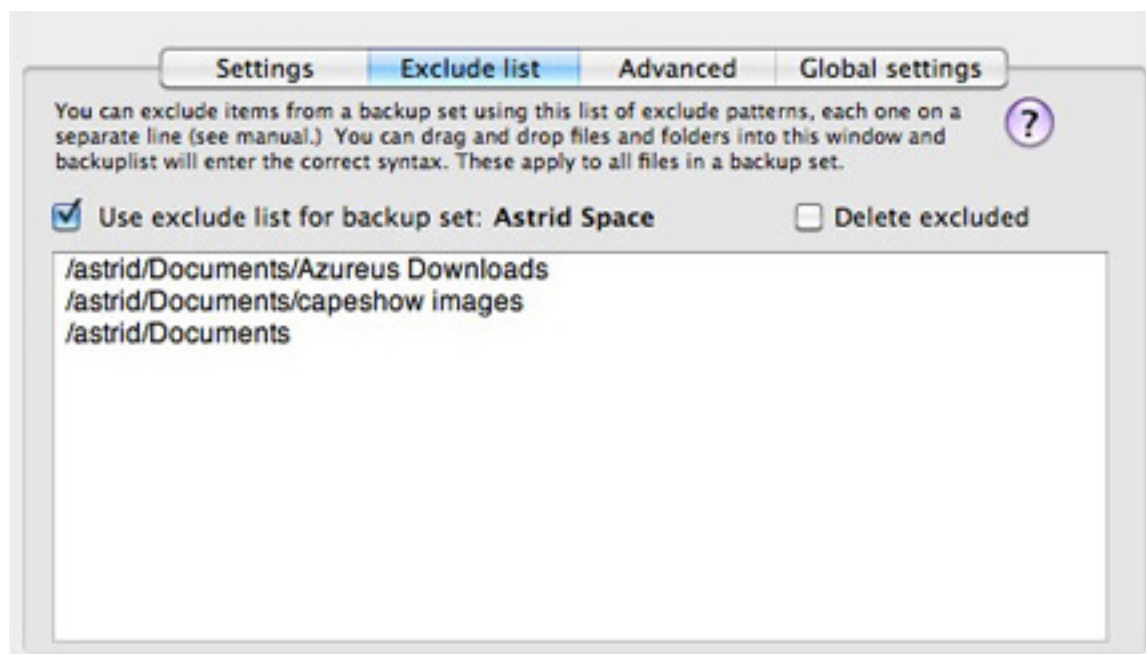
Save rsync output. This will cause Backuplist+ to generate a report on rsync's progress and any errors that occur. There is summary called "stats" at the end summing up the # of files transfered, speed etc.. The report shows up in the backuplist folder at the end of the copy session and is named backuplog.txt. It can be quite large—for a big transfer of 100GB, maybe 200MB or so.

Limit rsync bandwidth usage: This will cause Backuplist+ to put a limit on the bandwidth that rsync uses. setting the slider mid way will cut rsync's CPU usage more than half and allow more use of you computer during backups. The backup will of course also take longer!

Rsync 3 expert options: You can write your own command line options and they will be remembered for the particular backup set. You must be familiar with using rsync options or read the man page for this version of rsync for more details. "Delete" and "incremental backups" are available as check boxes so you don't need to include those options. See the "glossary of rsync terms" at bottom of this document. The rsync_options file is included with this application or you can download it here.....

http://homepage.mac.com/robdut/.Public/rsync_options.zip or see the options page here.....

Exclude lists



The exclude list is available for each backup set you use. You must check the "Use exclude list" checkbox to edit the list and enable the exclusions for the backups. The list items apply to a single folder or directory listed in the main backuplist+ window. It will work if there are more is one backup source item listed in the main window. **Note: The exclude list can be used for compressed archives too but the exclude paths will be different (Full path) so you must start over and create a fresh exclude list if you change from a regular to compressed archive type of backup. Do not use the exclude list from a previous backups set - always start fresh.**

Drag and Drop folders and files onto the list to add them

You can exclude certain folders and files from your backup session by adding them to the exclude list. They must be added as regular expressions. If you don't want to enter them yourself you can just **drag and drop** folders and files onto the list and backuplist+ will create the correct path expression

to use. You can drop one at a time or add a whole bunch at once. Each item needs to be on a separate line and you should avoid extra spaces between lines.

A note about disks, the hidden Volumes folder and other things

Backing up to an external disk or hard drive is fairly straight forward. You drag the disk icon (or a folder inside the disk) into the destination text field, add your source files to the source list and backup.

But what if the disk is **not connected**, or mounted, to your computer. In that case backuplist+ will wait one minute and check again to see if it is there and if not the session quits with a warning "no disk present..." This useful if you have the backup scheduled to occur once a day and the computer starts up but your connected disk has not finished mounting, or "spinning up." Backuplist+ gives it time to mount and then proceeds with the backup. And if the disk is not connected you will see the error dialog and do something about it.

If the destination folder has changed names or moved or no longer exists, then you will get an error saying "There is no destination present etc."

The Volumes folder

There is a hidden folder at root level on your hard drive called **Volumes**. You can't see it because it is hidden! This folder contains the aliases of all mounted disks or "volumes." This is used by the system to keep track of disks. There are know problems that can happen with the **Volumes** folder, often when a disk is unmounted incorrectly (pulling the plug) but often for no apparent reason. This can result in there being disk alias for a disk that is not actually mounted. The next time the real disk is mounted it gets a new alias with a "1" appended to its name. This can cause big problems when copying to the original disk name because the data will go into the folder for the "false" disk alias. For this reason backuplist+ checks several different scenarios to ensure that the disk you are copying to is real and it is mounted.

Disk health and safety:

1. Do not name disks the same name or, if you do do, do not mount both at the same time!
2. Be careful about pulling the plug on disks (drag to trash the proper way.)
3. If you get an error about the Volumes folder, unmount all disks, look in the volumes folder, and trash any aliases that do not represent mounted disks. To see the hidden volumes folder, select "Go to folder" in the finder Go Menu and enter `"/Volumes"` in the text field.

You can also use the **"Show Volumes folder"** menu item in backuplist+ Window menu (or the Logs menu in background mode.)

Appendix A:

To restore iPhoto, iTunes, Mail, Safari etc...

These operations can be tricky.

Warning! Always have backups before doing any of these things! You have been warned.

If you restore your whole system there is no need for these tactics but to restore individual applications like iTunes, you also need to restore the preferences files that they need.

iTunes:

You can use backuplist+ to restore your iTunes library, or even copy it to another computer.

Make a backup to an external drive of:

In your Home folder > Music folder

iTunes folder – backup the contents of the folder or the whole folder itself.

In your Home folder > Library > Preferences folder

com.apple.iTunes.eq.plist

com.apple.iTunes.plist

com.apple.iTunesHelper.plist

com.apple.iPod.plist (if you use ipod)

and any other .plist files with "itunes" in the name

To restore or move: Replace the iTunes folder in your new Music folder with the backup copy, or copy the contents into it. You can just drag these back and click "replace" or use backuplist+ to do it, carefully selecting the correct source and destinations. Remember, backuplist+ copies any folders in your source list (not just the contents) to the destination folder so if you want to copy the whole iTunes folder back into the Music folder, select the Music folder as the destination and the iTunes folder as source. Get it? This is a very important point.

Replace all the preference files in the new Home folder > Library > Preferences folder

iPhoto:

You can use backuplist+ to restore your iPhoto library, or even copy it to another computer.

Follow the same direction as for iTunes but copy the following items

In your Home folder > Pictures folder

iPhoto Library –

Note: This is actually a folder but you can not access the contents (unless you Control click and select "Show Package contents")

In your Home folder > Library > Preferences folder

com.apple.iPhoto.plist

com.apple.iPhoto.LSSharedFileList.plist

and any other .plist files with "iphoto" in the name

Mail:

You can use backuplist+ to restore your Mail email messages and settings, or even copy it to another computer.

Follow the same directiosn as for iTunes but copy the following items

In your Home folder > Library > Preferences folder

Mail Folder

com.apple.mail.plist

com.apple.Safari.RSS.plist

Replace all these preference files and the Mail folder in the new Home folder > Library > Preferences folder

Safari:

You can use backuplist+ to restore your Safari settings boomarks etc, or even copy it to another computer.

Follow the same directiosn as for iTunes but copy the following items

In your Home folder > Library > Preferences folder

Safari Folder

com.apple.safari.plist

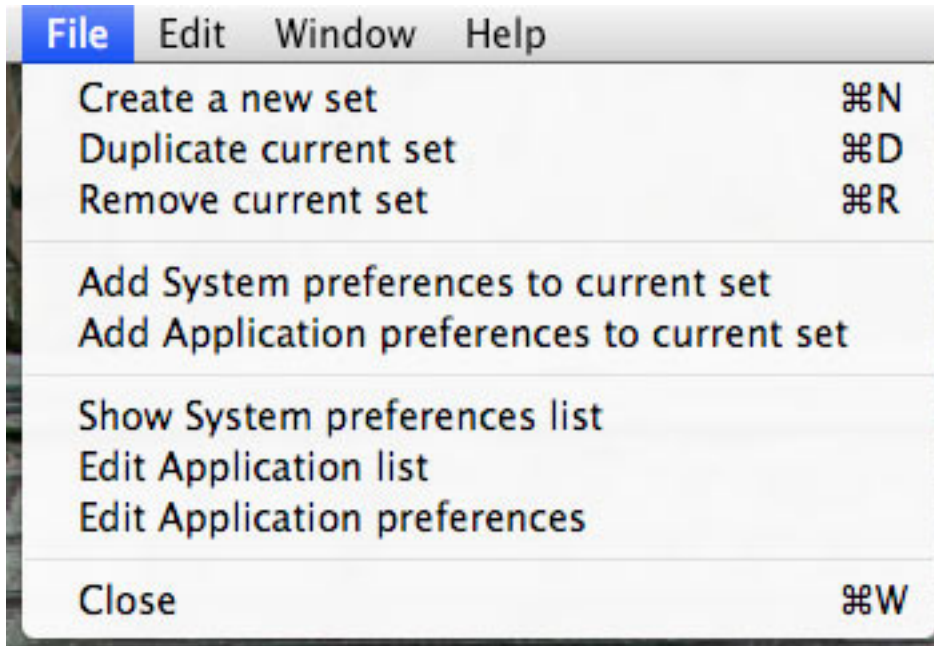
Replace all the preference files and the Safari folder in the new Home folder > Library > Preferences folder

Others:

follow the same procedure, replcaing all the relevent folders and preference files for any application.

Appendix B:

Adding System or Application preferences



This feature is useful if you don't have a lot of space on your storage device and want to save all your essential preference files. Selecting "Add System preferences" or "Add Application preferences" will automatically collect all the most important system and application preferences for you. **You don't need this feature** if you backup your whole Home folder, or Library/Preferences folder since they include all these files any ways. I have left this feature though for most people it isn't so useful any more since hard drive space is cheap and one can backup a whole drive or home folder easily.

Your personal System preferences reside in Home Folder/ Library/Preferences and include:

Mail (includes all your mail messages and settings)

Safari (bookmarks and settings)

Address Book (Addresses, settings etc.)

Fonts (fonts you installed yourself)

iChat

Widgets

Etc.

Many other individual system preference files that you would need to restore your settings will be backed up too. The two folders for **System preferences** and **Application preferences** appear in the list with an **asterisk** and represent all these numerous files. The files themselves don't appear in the list since there are too many of them (the folders with an asterisk are **symbolic** and just represent them.)

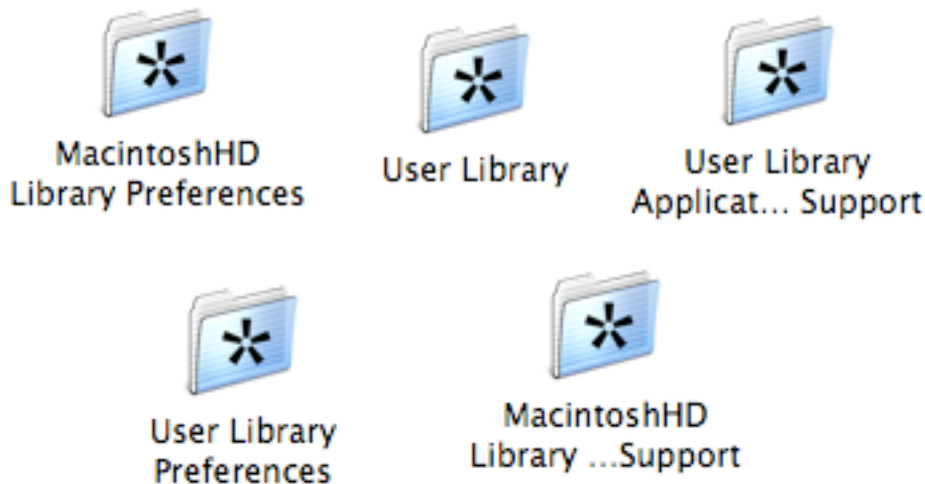
	Name	size	Location
Folder	*App Preferences	30.4 MB	Various
Folder	*System Preferences	4.6 MB	Various
Folder	AddressBook	8.1 MB	/Users/astrid/Library

When you back up these System and/or Application Preferences, a new folder called "User Preferences" will be created in your backup folder. It has an asterisk like this:



User Preferences

Inside you will find five other folders, marked with asterisks, named after the locations for these files, which are sorted into the appropriate folders. That way, you know exactly where they came from if you need to replace the originals. There is a text file with directions also.



Note: Any files you add to the backuplist that reside in any Library folder will end up in these special folders. If you backup your whole preferences folder, Library, or home folder, it will be backed up as a separate folder and the files within will not be copied to the special folders.

If you select "Recreate full folder paths" in the settings panel, the preference files will go into the regular folder structure of your Home folder (and not the above special folders that backuplist will create at the destination disk).

Pressing the **"A" button**: will add one folder to the list called "App Preferences**". This folder is also marked with an asterisk. When you add this folder, backuplist scans all your library folders for any preference files that are related to the application names in the Application List (see below). These files will be copied into the same special folders named above.

To edit the Application Preferences:

In the File menu you can select "**Edit Application list**" and add or delete the name of any applications you commonly use (third party applications only, such as **Adobe** or **Filemaker** etc, other than the Apple applications that come with your Mac.) You can then select "**Edit Application Preferences**" to edit that list which is a list of the actual file paths that have been scanned. Delete whole lines to remove them and don't add any extra punctuation.

You can also view the complete **System Preferences list**. Go to File menu > **System Preferences list**. This list cannot be edited but gives you an idea of what it contains. The combined size of these files is small so you can easily add this group to your list (Add System preferences by pressing the "A" button in the main window.)

Trouble Shooting:

If the destination folder appears empty:

1. Enter your administrator password in the Globals settings panel. If this solves it then you know you need to use your password with backuplist+
2. Be sure the destination drive has enough **free space** for the backup, otherwise the backup will possibly freeze midway. **Many people have said their backup folder was empty because of this!**
3. Be sure you have entered the correct destination paths in the destination text field and the "Backup to folder" text field in the settings panel.
4. If you are backing up to an external drive, check the **hidden Volumes folder**. This is a known problem when copying files to an external disk. Sometimes, if you pull the plug accidentally on a drive, or for no apparent reason, the Volumes folder will contain left over aliases of drives that are no longer present. This can result in data being copied into them instead of your desired disk, thus your hard drive mysteriously fills up with "hidden" backups! To check the folder go to the "GO" menu in the finder menu bar and select "Go to folder" and type `"/Volumes"` in the search field. This will bring up the hidden folder. I have included a menu item called "Show Volumes folder" in the Window menu, or the Help menu if you are in Background mode.

When a backing up with rsync 3, the **progress bar** may seem to progress very fast at first and then slow down towards the end and the run. You can tell where the backup is by the names of the files being transfered. This is due to incremental recursion which scan files in batches rather than upfront, saving much memory and time! You can change this to get more accurate bar readings but it will be much slower. I made this the default for obvious reasons!

If backuplist+ **freezes** and you can't cancel it, force quit (command -option- esc) or restart computer. Due to limitations of applescript the cancel feature can get stuck sometimes though we have gone a long way to prevent this. **If backuplist+ is in background-only mode, you must open activity monitor and quit rsync and backuplist+ from there, or restart.**

If Backuplist+ crashes or you get error messages, you can usually fix the problem by trashing the .plist file. It is a good idea to make a backup of this file anyways, when you have your list and preferences set up, so you can restore your settings if there is a crash. The .plist file is in your **Home Folder > Library > Preferences folder** and is called

"com.rdutoit.blist.plist". Just Quit Backuplist+ app, move this file to trash and restart Backuplist+ app. A new .plist file will be generated. You then need to set up your backup sets again.

If you are not the sole user of your Mac, or have not enabled permissions for Read/write of certain folders, you may not be able to back up or copy files in those locations. You can enter your password (OS10.4X and above) in the settings panel which will allow most files to be copied. See Mac help about enabling permissions. You should always, however, be able to access your Home Folder or any local disks you have mounted.

This application has been tested and should not cause any bad "side effects" other than not functioning properly due to unforeseen circumstances. Always be careful copying over important files!

Support

You can email me by selecting "email support" in the help menu. Don't hesitate to ask any questions or let me know how it is working, or not, for you.

Please email me Rob Dutoit email
rdutoit@comcast.net

Website:
[Rob DuToit OSX Software](#)

Donations:
[the donations page online.](#)

or send to:
Rob DuToit
PO Box 524
North Truro, MA, 02652

Change log backuplist+ 7.1

Fixed bug where backup to folder was not creating the folder on destination causing disk

image, compressed options to fail

Added support for hfs+ compression on OS 10.6. This is important since, without it, the destination drive will use more disk space than the Source.

Changed file size calculation for OS 10.6 which uses 1000 bytes/KB whereas the older OS used 1024 bytes/KB.

Added vertical scrolling to sets menu.

Security enhancements – triple encryption for password. If Users elect not to enter password, backuplist+ may ask for it at runtime

Added option for more accurate progress bar during backups – total file count is performed prior to launch of rsync.

Selecting the Debug option now adds an rsync error log to the Application Support/backuplist/rsyncError.log file

Compressed archives now work on 10.6, They allow use of the exclude list (different format for exclude paths from rsync!)

Progress now enabled for Compressed archives

Replaced the "repair permissions/erase drive" clone option with just "erase drive"

Improved the size calculation code.

Disk Image option now has a text box for entering the desired size in Gb. If no size is entered, backuplist+ will attempt to calculate and create image 20% bigger than the source files.

Changed the Password entry dialog, removing the text field and replacing with a button and text to indicate if password is entered.

Many other small code and cosmetic changes

Change log v 7.2

There was a bug possibly causing the core exclude items for a System clone to not be considered. This is fixed.

When dropping files on the exclude list for a mounted volume, the path shown for the exclude pattern was incorrect – this has been fixed.

There were incidents of files with hfs+ compression being damaged in transfer by rsync. This has been fixed. Now rsync copies those files preserving their data in the Resource fork

and setting the proper compression flags.

The latest build of rsync, 3.0.7, is included with this release. For older OS 10.5x or 10.4x, the build remains 3.0.6.

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