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PreRoll Post™
LTFS Archive Application
Users Guide

Version 2018.1, Released October 2018, Indianapolis, Indiana USA

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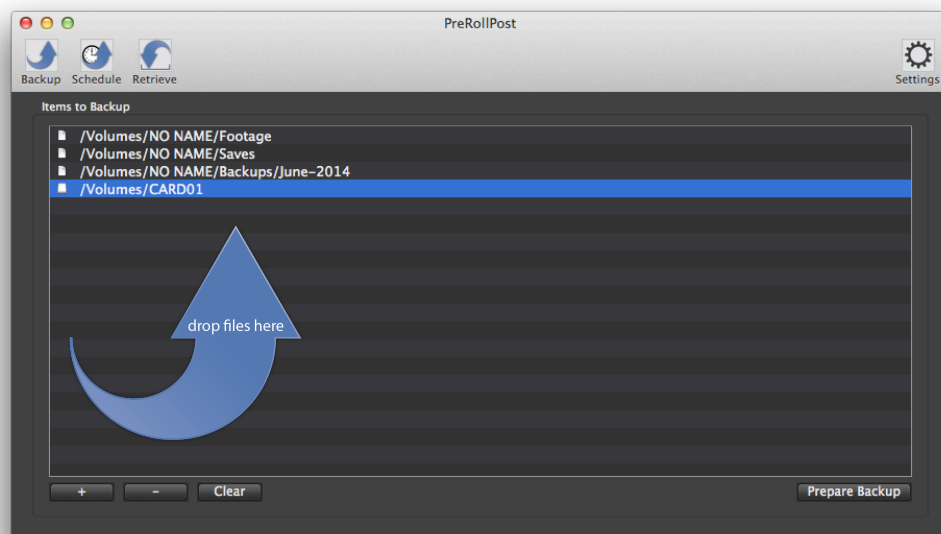
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Welcome

Overview

We're pleased that you've chosen **PreRollPost™** to archive your video assets. PreRollPost is an application that automates indexing your video projects and camera originals to long-term Linear Tape Open (LTO) tape, Optical Disc Archive (ODA) or a local server.

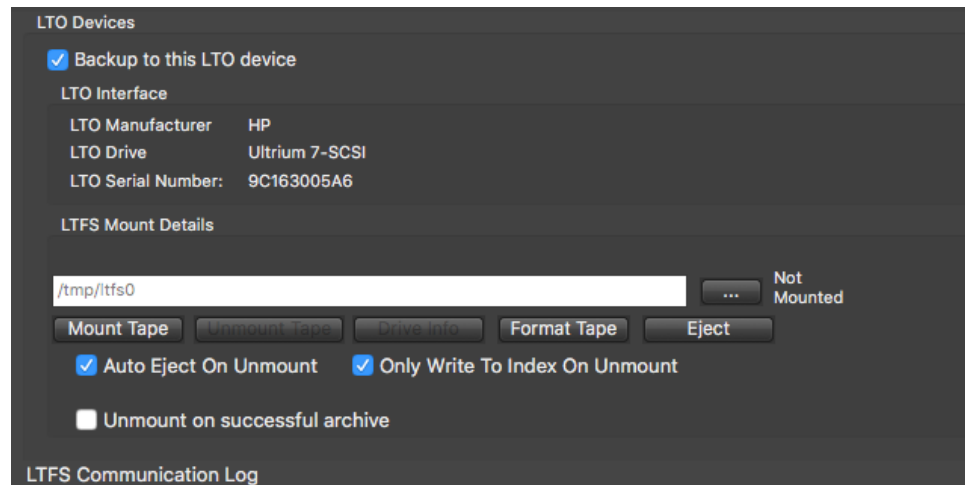


The software takes advantage of the Linear File Transfer System (LTFS), developed by IBM and supported by HP, Quantum, Tandberg and other tape drive manufacturers.

LTFS mounts a tape as a user defined read/write volume within the computer operating system. This makes it possible to write and read from the tape as if it were a disk and save files in their original format. It also makes PreRollPost hardware independent—you can use it with any Ultrium® LTFS compliant LTO tape drive.

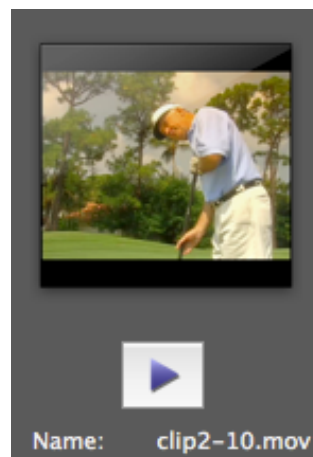
To save to tape, File and Folder names must comply with LTFS acceptable characters. These rules can be problematic for direct Finder users. But with PreRollPost, for your convenience non-compliant characters are automatically changed for tape storage then reinstated by PreRollPost's retrieval process.

PreRollPost controls deck functions and copy operations onto LTO tape with a simple, easy to use interface.



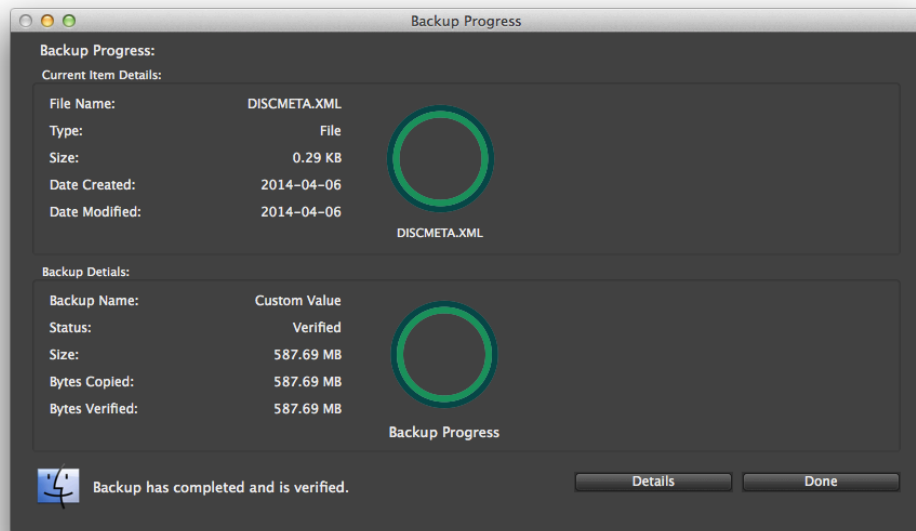
With the software you may choose to make an additional copy of your assets onto a LTO drive and local hard disk (server) at the same time. Copies may be verified using the '**LTO Built-in CRC**' checksum integrity algorithms, or other checksum comparisons in addition to the LTFS write verification process.

All PreRollPost indices are saved into a local database on your computer under Application Support. We recommend backing this up to the cloud, a server or external drive occasionally that can be accomplished on an automatic scheduled basis.



The backup process is not specific to HD video files; however it is optimized for that purpose. It can present proxies (using PrimeTranscoder™, sold separately).

Archiving to tape is easy. Simply format a tape then drag files to be copied into the queue. Click '**Prepare Backup**' and PreRollPost will index and analyze your files and begin writing them to tape.



When the write session is complete you'll see a '**Done**' button and have the opportunity to view '**Details**'. Use the '**Retrieve**' window to save or print reports.

PreRollPost for Macintosh can automatically span tapes if your data exceeds the capacity of one tape. When this happens, the software will attempt to divide the data in a manner that doesn't create a dependency between tapes. In other words, known video volumes or data folders will not be split between tapes if possible.



PreRollPost can also make scheduled incremental backups that can be full backups or just incremental ones. Select the Schedule button and set a watch folder (or more than one) and the start time, frequency and type of backing up (full or incremental). In incremental mode, each time the backup is invoked the watch folder(s) will be analyzed to determine which files are new or different from prior backups and only those will be copied.

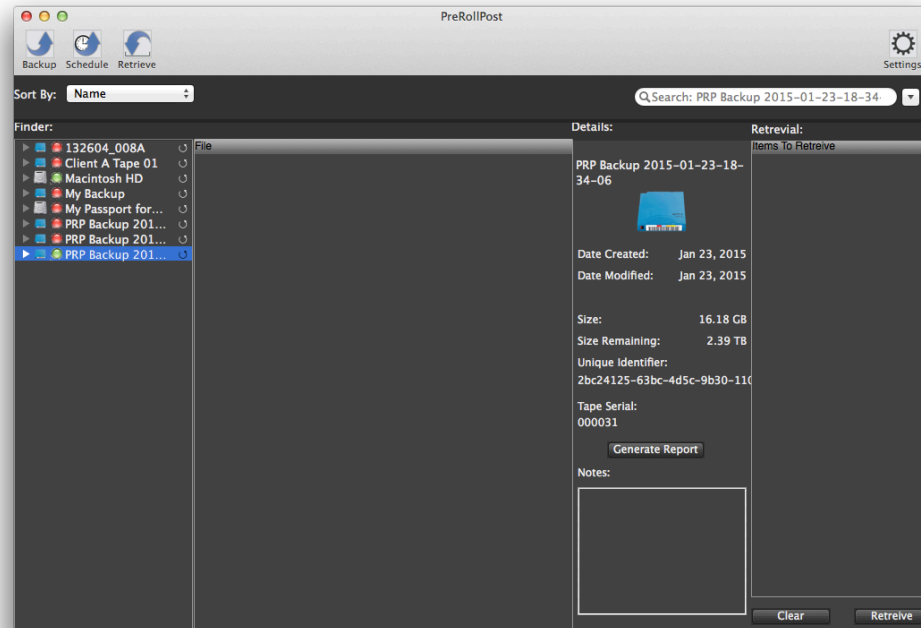
PreRollPost requires an Ultrium tape drive and matching LTFS drivers. LTO drives are typically connected via Thunderbolt directly or by a mini-SAS (Serial Attached SCSI*) port, depending upon the manufacturer.

NOTE: PrimeTranscoder™, ProVu™ and ShotPut Pro™ are optional applications sold separately.

*SCSI: Small Computer System Interface, an intelligent, peripheral, buffered, peer-to-peer interface.

To restore files from tape, click the **'Retrieve'** view. There you'll see archived tapes in the left column that may be sorted by names and dates, etc.

Browse or use the simple predictive search to locate desired files. There's also an advanced search to help narrow results.



Drag files or folders to retrieve into the far right column, and then click the **'Retrieve'** button below. You'll be prompted where to save the files, and to mount another tape should your selection not be available on the currently mounted one.

Settings



After installation, a few settings must be put in place. With the tape drive connected and **ON**, click the '**Settings**' button at the top right of the main window. Some **Settings** may not be accessible while a backup is in progress.

NOTE: Please make sure the tape deck is **ON** before starting PreRollPost. This will help ensure that the tape will show up.

Locations (LTO Tapes and Hard Disks)

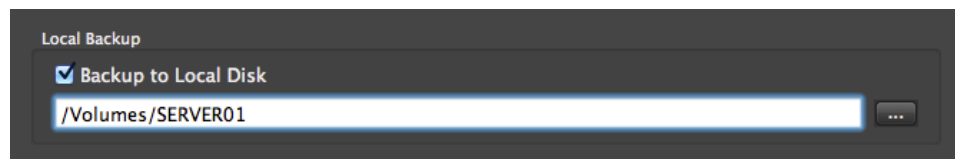


Click '**Settings**' then '**Locations**' button (far left). Then select the '**LTO**' button (center). Check the box beside the LTO tape drive to '**Backup to this LTO device**'.

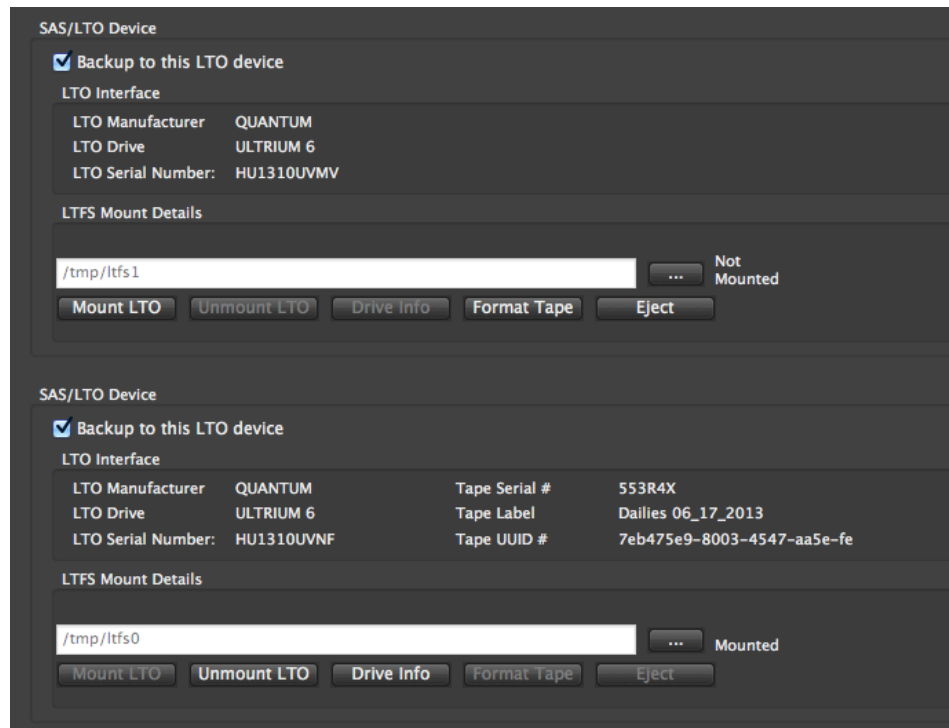
NOTE: PreRollPost can dual mount two tape drives as long as they are the same make and model (same LTFS version). When controlling more than one LTO drive, be sure to also enable '**Create Backup for Each Target**' under '**Advanced Settings**' for best performance.

The deck must be connected and **ON** in order to select it. You should be able to see the drive details in this dialog (if the LTO drive is not shown refer to Trouble Shooting—it's most likely a driver mismatch with your device and operating system).

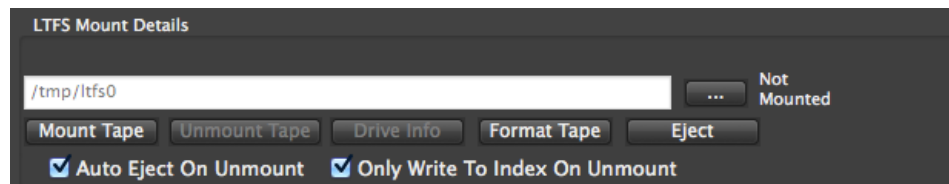
To simultaneously make copies to a local disk or server, check the box to '**Backup to Local Disk**' then click the browse [...] button to select the folder on the drive.



Formatting a new tape automatically mounts it in LTFS when finished. If you're using an already formatted tape, click '**Mount LTO**'.



NOTE: The LTFS Mount Path is inserted automatically by the system. The default path for a single drive is [**/tmp/lufs0**]. If you have more than one LTFS device connected to your computer (e.g. two tape drives), click the [...] button to browse to the other tape drive if needed.

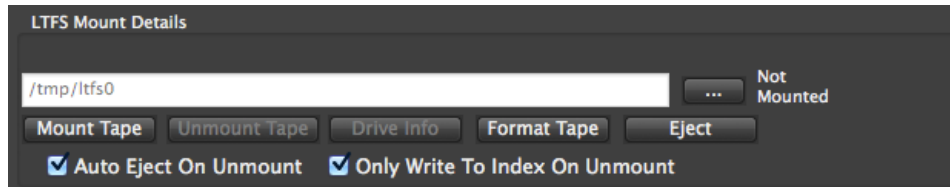


CAUTION! DO NOT attempt to change the LTFS mount path if your computer has only one tape drive or SAS connection attached.

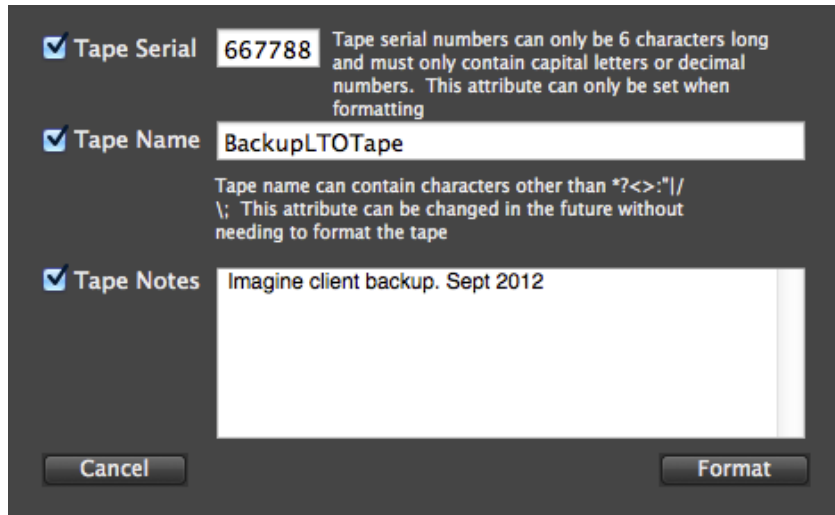
Format Tapes

Ultrium LTO tapes are supplied in an unformatted state. The first time you load a tape in the drive PreRollPost will detect whether the tape is properly formatted for LTFS use; and specifically for PreRollPost. If not, you'll be prompted whether to allow the formatting and to input a tape serial number and other information.

NOTE: You cannot mount a tape until it has been formatted.



Click '**Format Tape**'. The dialog will populate with suggestions based upon selections within the '**Settings/Naming**' area (see '**Backup Session & Tape Naming**').



User defined format information include **Tape Serial**, **Name** and **Notes**. Tape Serial numbers are limited to 6 (capital) alphanumeric characters.

CAUTION! Tape Names cannot contain any special characters (e.g. ~, #, \$, \, /, *, etc).

TIP: For best organization we recommend using a consistent simple serial number for your tapes. As your library of archives grows, this will facilitate sequential shelving and finding the correct tape when retrieving files. You can also purchase pre-printed LTO tape barcode labels.

A unique Tape UUID is assigned by the drive during formatting. This is an un-editable field.

Once formatted, the tape will mount automatically.

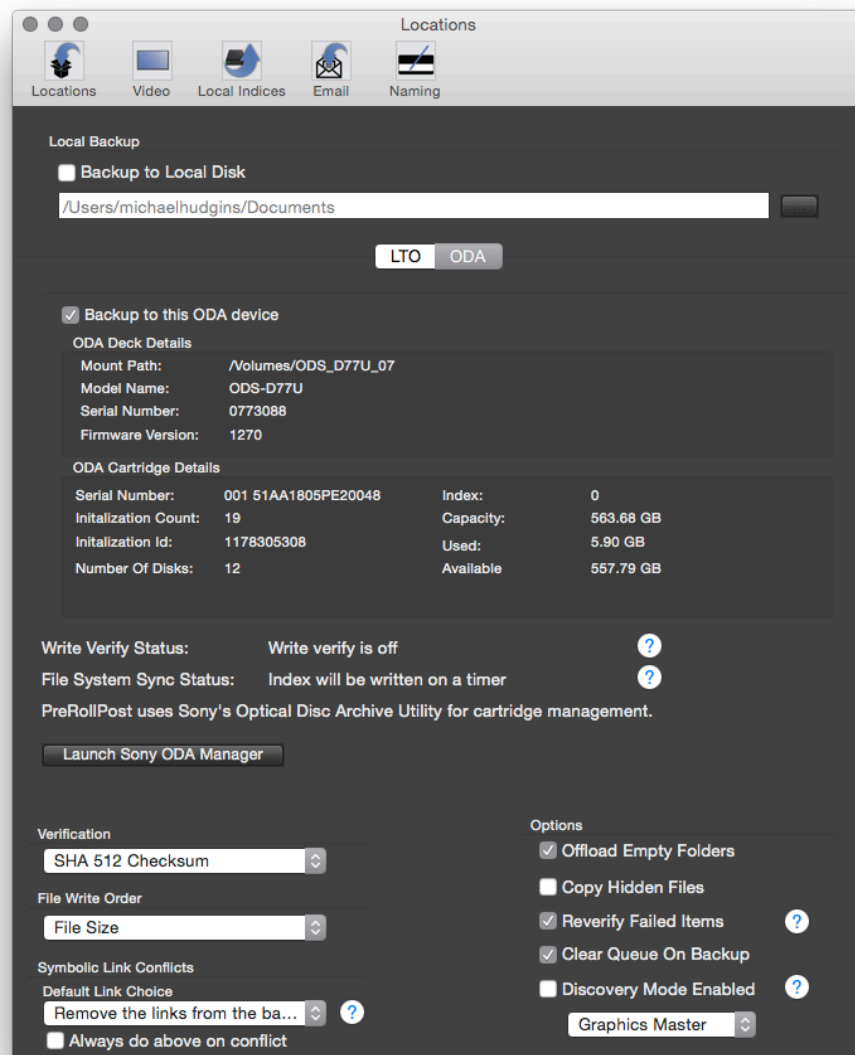
NOTE: While PreRollPost may use LTFS formatted tapes created by other means, Discovery mode will not automatically place the metadata.xml file into the tape's index track unless PreRollPost has formatted it.

Locations (Sony ODA-Optical Disc Archive)



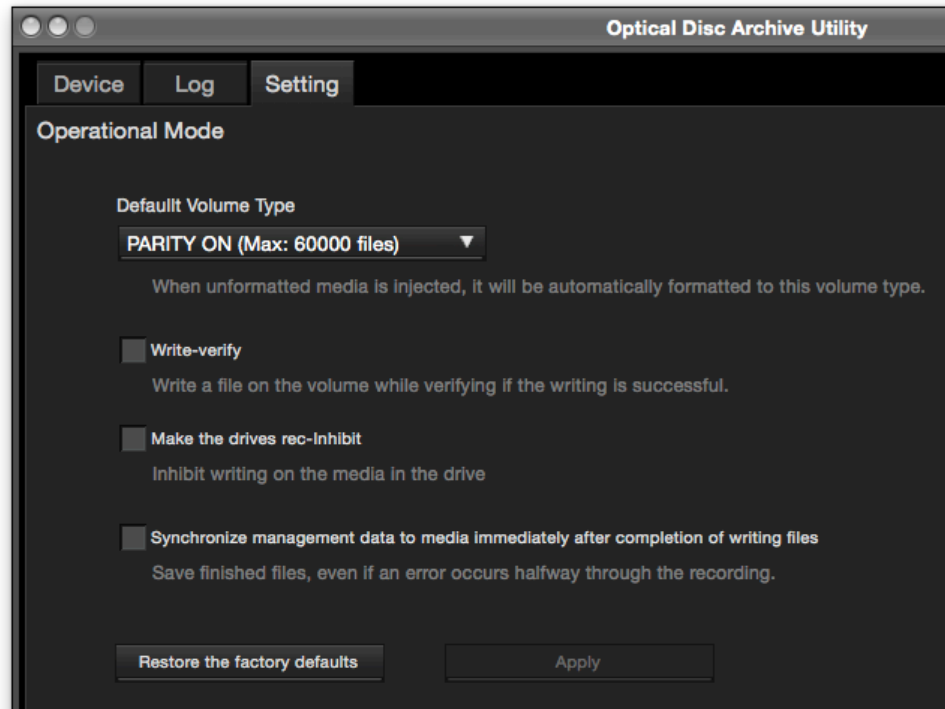
Click '**Settings**', then '**Locations**'.

To backup to Sony's Optical Disc Archive (ODA) Blu-Ray appliance, click the '**ODA**' button, then '**Launch Sony ODA Manager**' to configure it.



In the ODA Manager, click '**Settings**'. **Do not enable Write Verify**; instead enable one of the CheckSum verification options in PreRollPost for best performance.

Likewise, do not enable '**File System Synchronization**'. This option updates the drive's index after each file and makes archiving very slow—especially when backing up RAW files. With this option **OFF**, PreRollPost will automatically update the indices upon completion of the backup session.



NOTE: PreRollPost can be used with **Parity ON** or **OFF** modes. However, please be aware of the file limit restrictions for each. For example, with Parity ON, the file limit of 60,000 files per cartridge may cause spanning based on the number of files rather than overall capacity.

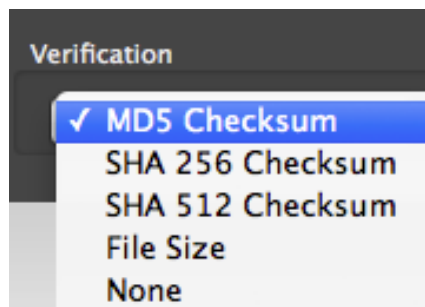
Copy Verification & File Copying



Click '**Settings**' then '**Locations**' to open the copy function options.

The screenshot shows the 'Verification' section with a dropdown menu set to 'LTO Built-in CRC'. Below it, the 'Symbolic Link Conflicts' section has a 'Default Link Choice' dropdown set to 'Copy the files the link points to' and a checked checkbox for 'Always do above on conflict'. The 'Options' section on the right includes checkboxes for 'Offload Empty Folders' (unchecked), 'Clear Queue On Backup' (checked), and 'Discovery Mode Enabled' (unchecked), along with a 'Footage Master' dropdown set to 'Footage Master'.

Choose from several file verification methods. The fastest and most secure type is '**LTO Built-in CRC**' as it relies upon the hardware to ensure each byte written to tape matches the source bytes.

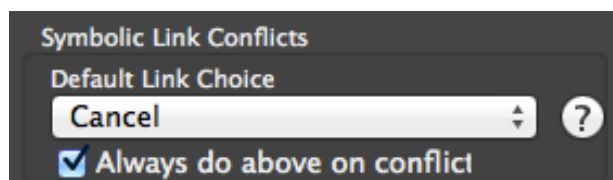


PreRollPost also offers various other checksum types that require a read back pass of the tape's contents to compare, so these types will take longer to process.

MD5s are required as part of the metadata within Discovery Channel LTO delivery specifications.

With the checksum options, each source file's value is calculated when read. After copying to tape is complete, the software will read back each file to ascertain it's details and calculate the copied file's checksum. Then PreRollPost compares the two values and stores the results in the database.

Alternatively, choose '**File Name**' for the write order if you're making tapes for use in other LTFS systems that require this formatting.



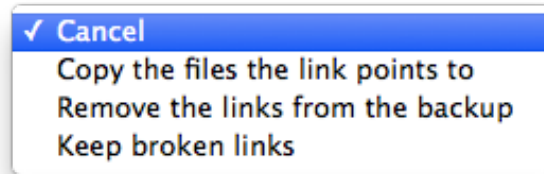
When archiving NLE project files (such as FCPX) media links often cause copy errors usually because the media is not included in the backup, or

the (symbolic) links inside the project are absolute paths rather than relative paths. Of course, symbolic links may be found in other data too.

One way to avoid symbolic link or reference file problems is to zip them prior to archiving, however this isn't always practical.

There are several choices as how to treat symbolic links in your data. Choose the action appropriate for your situation prior to archiving.

'Cancel' will report any conflicts as errors during the preparation phase, giving you an opportunity to resolve them manually.



'Copy the files the link points to' will include all linked files. This will increase your backup size substantially as you're adding all referenced media, but will ensure a complete project archive. Of course if you've already archived the media elsewhere choosing this option will be redundant and add a lot of time to the archive process.

'Remove the links from the backup' simply means symbolic links will be ignored and linked files or folders will not be copied. For NLE projects this means you'll need to relink media when the project is restored.

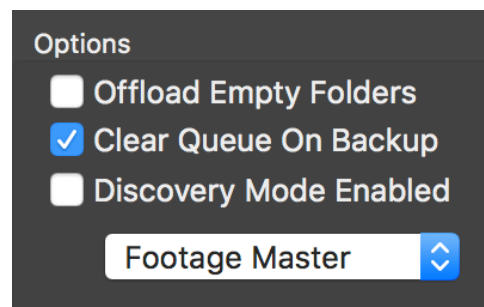
'Keep broken links' means the symbolic links will be included in your archive **"as is"** even though **they will likely NOT be valid** when the archive is restored. This option is not recommended unless you know how to manually re-establish symbolic links.

Check the box to **'Always do above on Conflict'** to enable the selected option without further prompting during backup preparation.

File Options

'Offload Empty Folders' should normally be unchecked for better performance, unless the file types you're backing up require empty folders to load correctly into edit systems, etc.

For example, a card volume (a copy of a card's contents) may require certain folders be present to be considered valid, even if those folders are empty. There is no harm in backing up empty folders, it just means the backup session will take a bit longer to complete.



NOTE: Generic LTFS file copying in Finder will not copy empty folders or hidden files.

The option to '**Clear Queue on Backup**' simply removes any files from the queue area once they've been copied to tape. With this unchecked everything will remain in the queue between sessions which can be handy in making duplicate tapes.



PreRollPost features a Discovery Channel Mode. Enabling this mode invokes automatic compliance with Discovery's HD footage delivery specifications **for LTO tapes**.

Because PreRollPost is 'video aware' it can assist in organizing media files and filling out information to automatically create the Metadata.xml file and move it to the index partition upon un-mount of the tape (see **Discovery Mode in Archiving** section of this guide for more details).

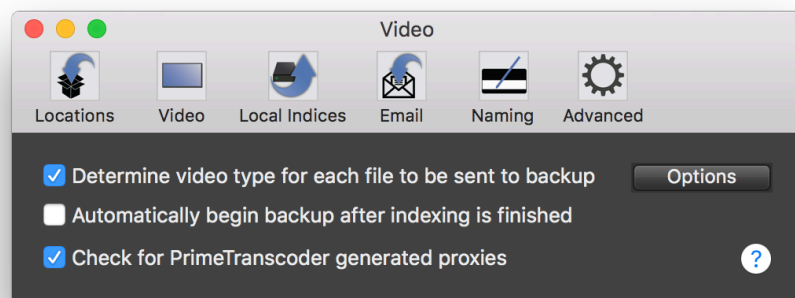
CAUTION! Do not enable Discovery Mode if you're not specifically creating tapes for delivery to Discovery Channel.

Video Index (Proxies)

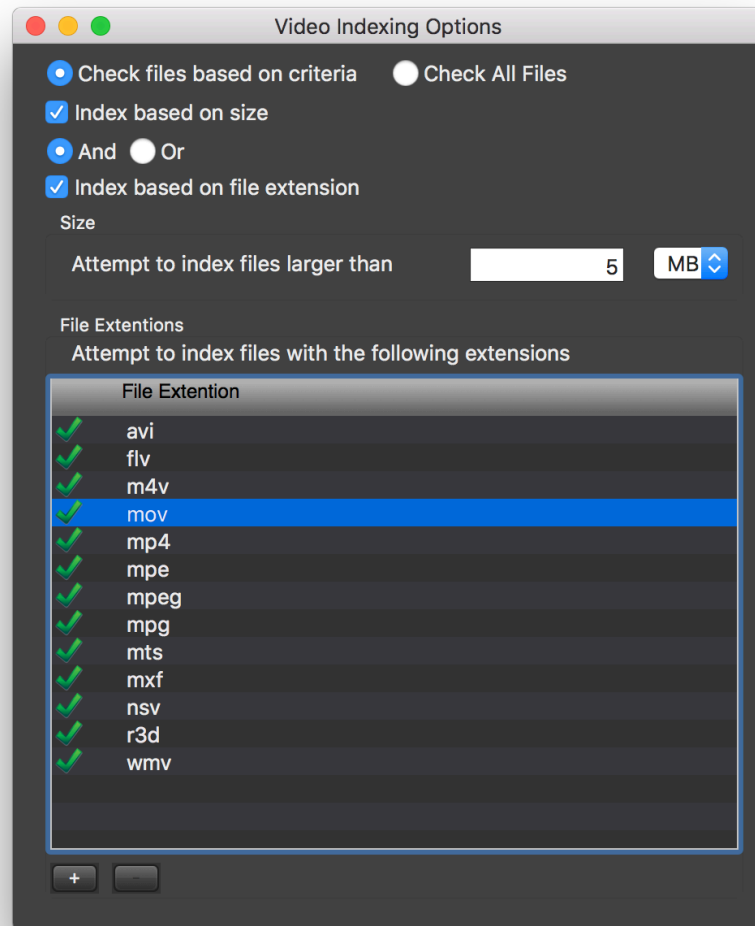


Use **PrimeTranscoder™** ahead of archiving to create full-length proxies with the built-in **PreRollPost Preset** provided.

To enable thumbnails for known video types, open '**Settings**' then '**Video**'. Select '**Determine video type for each file to be sent to backup**'.



Click '**Options**' to customize which type files to attempt to extract thumbs for and which to ignore.



To import proxies from PrimeTranscoder also select '**Check for PrimeTranscoder generated proxies**'. This option will search for and link previously made proxies for playback from the '**Retrieve**' search window.

TIP: If you are not backing up video files, or don't wish to create thumbs, turn off video indexing to significantly speed the backup process.

With video determination **ON**, you may choose to automatically begin backup once the proxy indexing is finished (which may take a long time if you have many video files!). With this option unselected, you'll be required to click to proceed in order to continue with the backup

PrimeTranscoder can process a wide variety of video file types, including converting camera originals, into low-resolution H.264 clips. It is therefore a handy way to create a visual index of the tape contents.

If proxies were previously made using the default **PreRollPost Preset** within **PrimeTranscoder**, these will be linked to source videos during the determination phase.

You may choose where to store the proxies associated with your PreRollPost database. The default is in the **...Library/Application Support/Imagine Products/PreRollPost/** area. However, you may change this to anywhere on your local computer if desired.

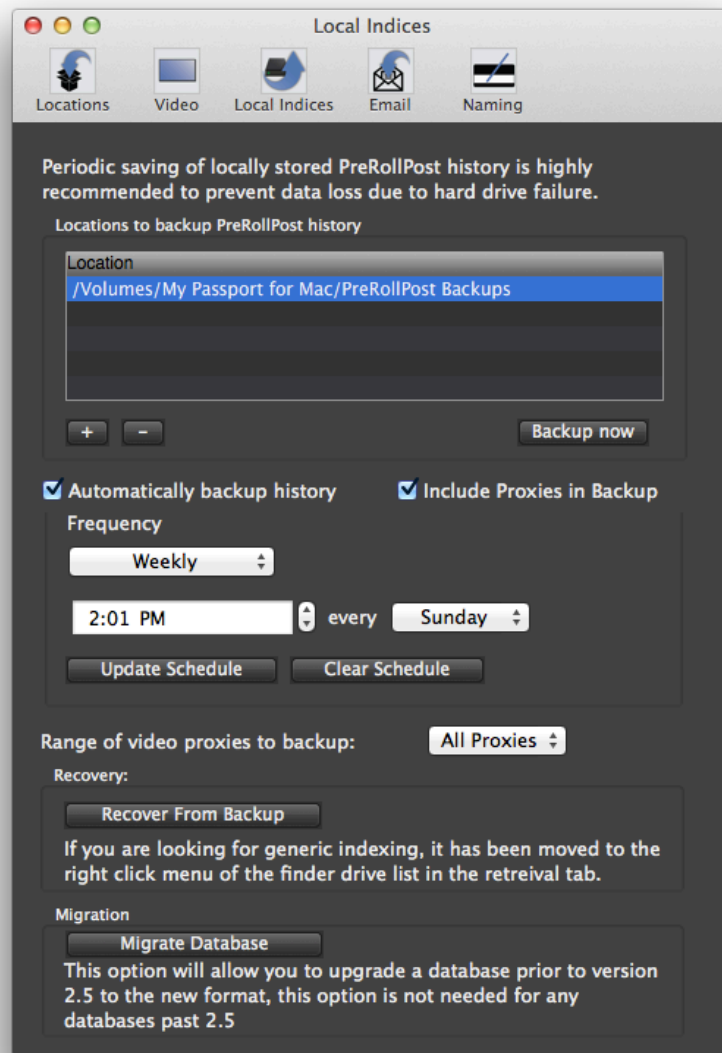
TIP: Regardless of whether a tape is in the drive, if you've created video proxies for all your tapes you'll be able to identify movie files and play the previews from any backup sessions within the **'Retrieve'** window.

Local Indices



Backup Session indices are automatically stored in the SQLite database within the Application Support folder on your computer. If you've created video indices the proxies will be in an accompanying folder (or other folder you've designated).

To prevent data loss in case of a hard disk failure, you'll also want to periodically copy this file to a remote location such as a server or backup disk.



Database files are relatively small compared to the full data files. PreRollPost allows you to save this file to multiple locations for redundancy.

To setup automated backups of the database, under '**Settings**' click '**Local Indices**'. Click the **Plus** [+] button to browse to a location where you'd like to create a copy of the database. You may add more than one if desired. To remove a location select it in the list and click the **Minus** [-] button.

You may backup the database at any time by clicking '**Backup Now**'. Alternatively, select '**Automatically backup history**' and choose the '**Frequency**'.

'**Include Proxies in Backup**' is optional (and may greatly increase the size and time to make the backup.) Therefore, if included, you may wish to further restrict the '**Range of video proxies backup**'.

Click '**Update Schedule**' to refresh the screen and invoke your choices.

Should you need to move PreRollPost to a different computer, use the '**Recover From Backup**' option to rebuild the database onto the new computer.

Alternatively, you can move the database by closing the application on each computer. Then copy the contents of the folder **.../Library/Application Support/Imagine Products/PreRollPost/** from one to the other.

Email or Text Notification



Because backing up large files or entire hard disks can take awhile, PreRollPost offers an Email and Text notification upon completion feature.

If your computer has **Apple Mail** already setup, enter the email to send to and '**Send Test Mail**' to ensure it's working properly.

To send SMS texts, choose the country and carrier and the number to send to. Send a test message to receive the '**Verification Code**'. You **MUST** verify before using this option.

NOTE: Some carriers do not allow texting services from remote applications. If your carrier is not listed, please setup e-mail notifications instead.

If the backup session fails or contains errors you'll receive notice of these as well as successful completion messages.

CAUTION! Turning the email/text option ON with improper settings may cause perceived processing delays when offloading, or error messages.

Naming Tapes & Backup Sessions



The **'Naming'** options under **'Settings'** dictate what is auto-filled when a new tape is formatted or a backup session is prepared. You may override these choices in the format dialog and backup preparation dialog.

PreRollPost offers several naming conventions for the session **'Backup Label Name'** including **'Default'** and automated formats, as well as a user defined **'Custom Volume Name'**, **'Consecutive Numbering'**, and **'Today's Date'**.

The screenshot shows the 'Naming' settings window in PreRollPost. It has a title bar with standard Mac OS X window controls and a toolbar with icons for Locations, Video, Local Indices, Email, Naming (selected), and Advanced. The window is divided into two main sections: 'Session Naming' and 'Tape Naming'.

Session Naming:

- Backup Label Name:** A dropdown menu is set to 'Consecutive Numbering'. Below it is a text field containing '005' and a 'Reset' button. To the right, a note states: 'Session label name can contain characters other than *?<>:"|/\; This attribute can be changed after the offload via the retrieval finder.'
- Prefix:** A checkbox is checked, and the text field contains 'Imagine_'.
- Suffix:** An unchecked checkbox and an empty text field.
- Preview:** The resulting name 'Imagine_005' is shown in a text field.

Tape Naming:

- Tape Name:** A dropdown menu is set to 'Default'. To the right, a note states: 'Tape name can contain characters other than *?<>:"|/\; This attribute can be changed in the future without needing to format the tape'.
- Preview:** The resulting name 'PRP_Tape_Index_2018-10-13-14-38-2' is shown in a text field.

Tape Serial:

- Auto Numbering:** A checkbox is checked.
- Starting At:** A text field contains '000109'. To the right, a note states: 'Tape serial numbers can only be 6 characters long and must only contain capital letters or decimal numbers. This attribute can only be set when formatting'.

To ensure uniqueness, automated methods are recommended. Defaults concatenate the date and GMT time of day (a preview is shown).

**Backup Label Names and Tape Names cannot contain special characters such as * ? < > : " | **

CAUTION! If a '**Custom Value**' is not changed between backup sessions two logs will be written with the same name and may cause confusion later on in the '**Retrieve**' (search) dialog.

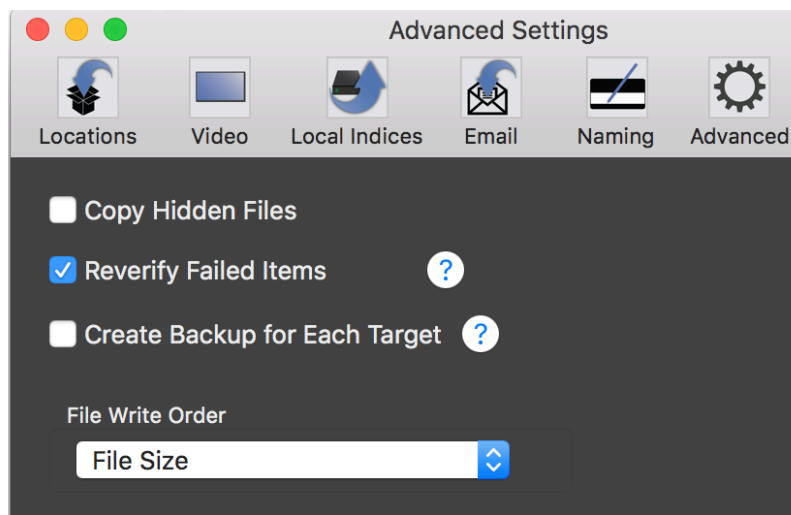
'**Tape Serial**' may be **Auto Numbered**, or you can type in the 6-character string. If alpha-numeric, use only **CAPITAL LETTERS**.

NOTE: You cannot change the '**Tape Serial**' without re-formatting the tape.

Advanced Settings



Options that are unlikely to change often are located in the '**Advanced Settings**' dialog.



By default, PreRollPost omits hidden files and folders from being copied. Many camera manufacturers and operating systems create hidden files to assist in file system regulation (e.g. file properties, Trash files, etc.). These files typically have no value in an archive, and often are file path related that would no longer be valid when copied to a new location or LTO tape.

Often times attempting to copy hidden files, especially those containing file path information, can create copy or verification errors and should not be included at all.

Therefore, it is advised to **NOT 'Copy Hidden Files'** unless you're very, very sure they are needed.

☒ **Reverify Failed Items**

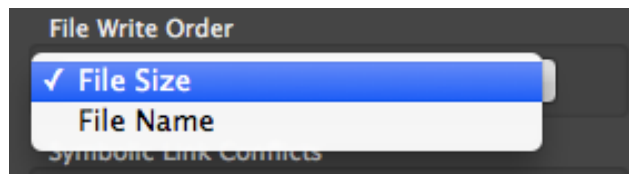
When archiving large data sets, especially containing many smaller files, it's possible for the drive to outpace the computer's GUI refresh rate. This can result in an occasional false checksum error.

To ensure any reported checksum errors are truly a mismatch (which are very rare) we recommend enabling the '**Reverify Failed Items**' option. This will cause any reported errors to be double-checked, by reading the file on the tape a second time, before the error is reported to the user.

☒ **Create Backup for Each Target**

Enable the option to '**Create Backup for Each Target**' when making copies simultaneously to multiple LTO drives. This feature causes independent copy threads for each tape so the activities of each are not required to synchronize, which can slow down copy and verification processes.

You may choose the '**File Write Order**' on the tape. The default is by '**File Size**', which is faster and optimized for the tape writing mechanism.



Creating Archives

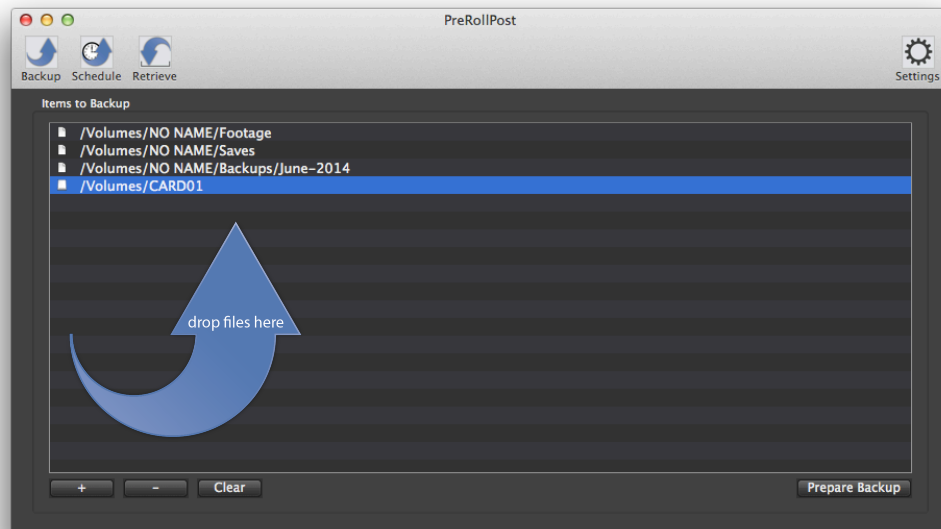
After configuring PreRoll Post's **'Settings'**, insert a tape in the drive (and format it if necessary).

Items to Backup



Click the **'Backup'** button on the toolbar to open the **'Drop Files Here'** queue. Drag items to backup into the queue. These may include full mounted volumes, folders or individual files.

Alternatively, click the **Plus [+]** button to browse to folders/files.



Items in the queue will constitute a backup session. To remove items, select (highlight) them in the queue and click the **Minus [-]** button, or press **'Clear'** to **remove all items**.

From time to time you may add as many backup sessions (groups of files) to a tape until it's full. It's not necessary to fill the entire tape at one time.

Files saved onto tape need not be unique, however if you're copying to disk they should not be duplicated. For this reason, PreRollPost will allow same name files to be copied onto tape, but if you're also copying onto disk it will add a "-1, -2" as needed.

LTFS is a little more restrictive than OSX about "illegal characters" in the file or path names. Therefore, PreRollPost will warn should your source material contain non-compliant names and offer to automatically substitute characters with "legal" ones. Any changes are stored into PreRollPost's database and automatically changed back to original names during **Retrieve** (restore) processes.

ILLEGAL LTFS FILE NAME CHARACTERS ARE: * ? < > : " | / \

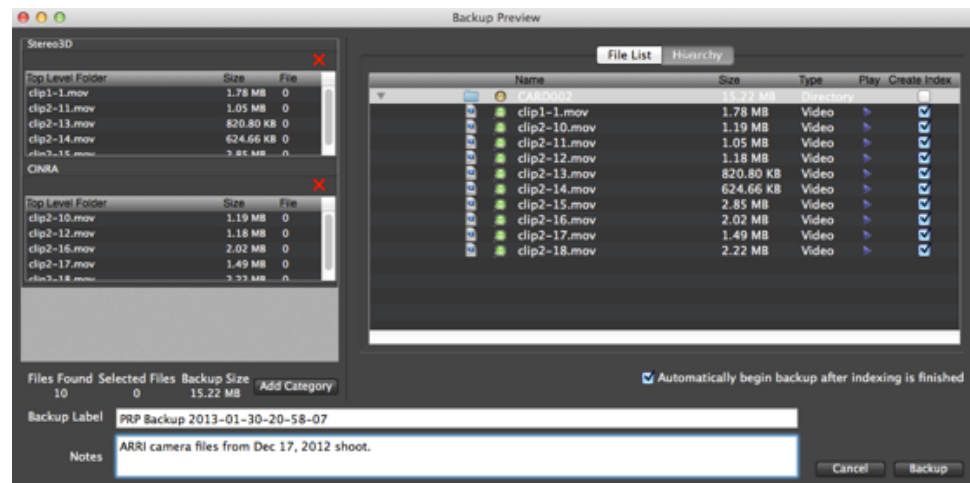
TIP: If you've used **ShotPut Pro™** to offload your camera material onto an external hard disk the card images will already be organized in uniquely named "legal" folder names.

NOTE: The LTFS format consists of two partitions—one for the indices and one for the actual data files. The index partition uses about 5% of the tape's capacity. To allow for potential bad sections of tape media, PreRollPost reserves an additional 5% of usable data partition area as a cushion during a given backup.

Backup Preview

Prepare Backup

Once you've added all the files you want to backup in this session, click '**Prepare Backup**' button. The window will present all of the files you've included and some information about them.



Here you may de-select files you don't wish to copy. PreRollPost presents only the file name for easier viewing (not the entire source path).

TIP: Files are presented in the order they appear in volumes dropped into the backup queue. Click the column header to sort the list for easier browsing.

Files Found	Selected Files	Backup Size	Add Category
10	0	15.22 MB	

The number and aggregate size of the selected files being copied are also presented.

Backup Label & Notes

You may edit the suggested '**Backup Label**' name (based on your '**Settings/Naming**' selections).

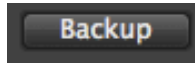
Backup Label	PRP Backup 2013-01-30-20-58-07
Notes	ARRI camera files from Dec 17, 2012 shoot.

'**Notes**' are not required, however they and the '**Label Name**' are searchable fields in the '**Retrieval**' dialog.

TIP: In the '**Retrieval**' dialog you also have an opportunity to edit the backup session '**Notes**' as well as add '**Notes**' for individual files and folders. (see '**Retrieval**')

Check the box to '**Automatically begin backup after indexing is finished**' if you're linking proxies during the backup process and want to begin processing as soon as possible without manual review of files.

Processing Backups



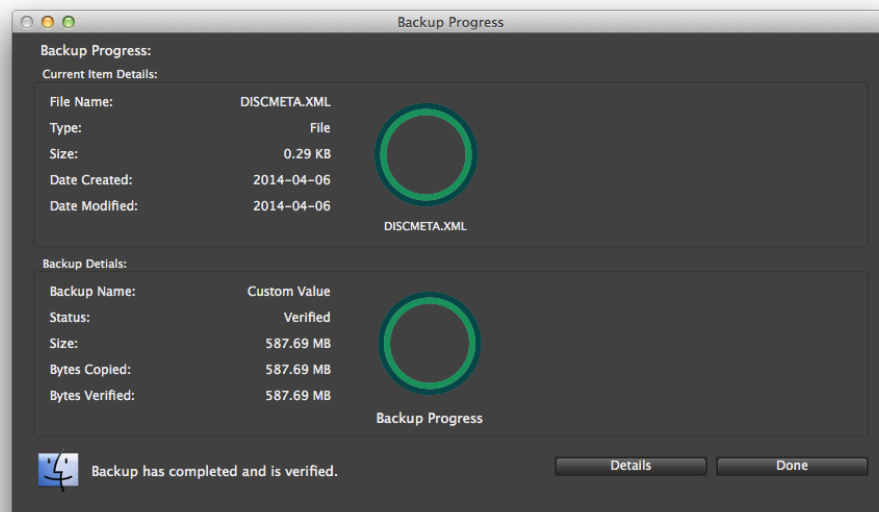
Once the preview has been edited as desired, click the Backup button to begin writing files to tape (disk, or ODA).

Selected output locations will at this point be checked for sufficient space, legal LTFS characters, and symbolic links, etc. PreRollPost will automatically offer to span tapes or ODA cartridges if the items to be backed up exceed the capacity of the mounted tape or cartridge.

TIP: Pre-format tapes ahead of your archive session if you expect it to need more than one tape.

NOTE: Deleting files from a LTO tape will not free up space without reformatting.

Refer to the progress dialog for details about the backup session. The software will automatically write files to the tape and verify them and update the database and the tape's index.



CAUTION! Do not Quit the application or eject the tape while a backup session is being processed. Doing so may create incomplete files or even damage your LTO tape. Click the '**Cancel**' button to terminate the backup.

NOTE: Files can fail verification if their size is zero (invalid) or they're simply a reference or symbolic link file. When this happens PreRollPost may follow the link and attempt to compare the linked file's attributes to that of the link itself, and consequently fail (see Symbolic Link options under the Locations section).

PreRollPost will also attempt to send a notification email or text if you've selected this option. (see **Settings/Email**).

TIP: Improperly configured email options may fail to send causing an error at the end of the backup process. Always test your email settings when setting up this option.

CAUTION! Canceling the backup before the DONE button is displayed will likely result in a tape without a valid index file. A tape without a complete index will be 'inconsistent' with its Data partition and may not mount upon next use (see '**Tape Recovery Utility**' under the '**Applications Menu**' to attempt to salvage a damaged tape).

Categories

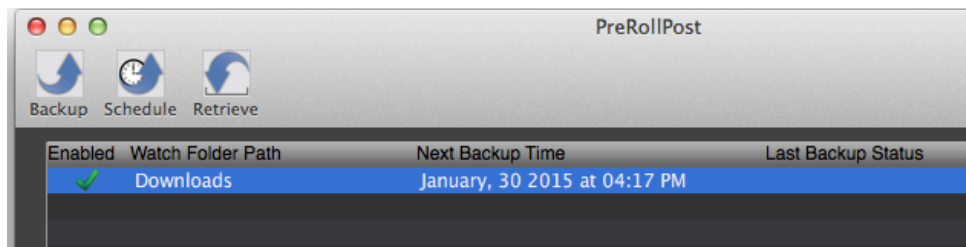
'**Add Categories**' is accessible only in '**Discovery Mode**' to choose from the list of default categories. Display a category then drag items from the '**File List**' into it to manually sort files.

Scheduled Backups



On the main dialog, click SCHEDULE.

You may instruct PreRollPost to automatically make Scheduled Backups of specified locations periodically or at a specified time.

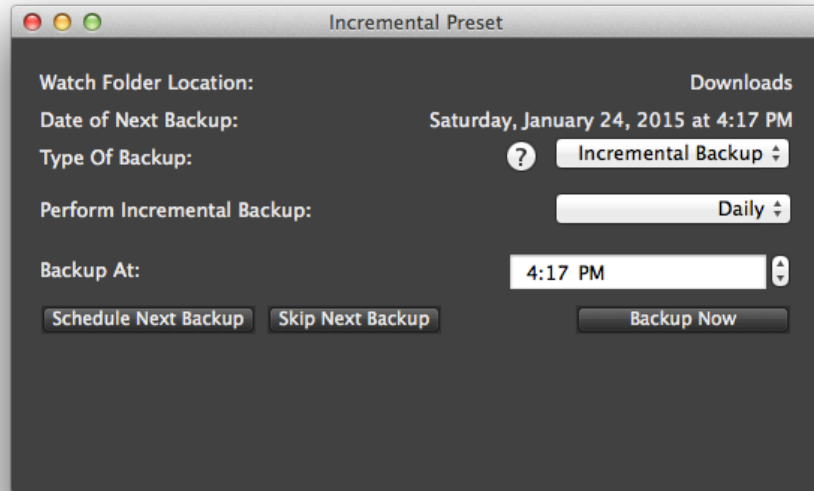


Click the blue edit pencil to the right to change a Scheduled Backup Preset, or click the **Plus [+]** button to add a new one.

Scheduled Backups **must begin at least 5 minutes in the future** and should be limited in scope to easily fit on a mounted tape. These backups are independent of manually initiated backups, and no further dialog responses are required.

CAUTION! Scheduled Backups are Automatic and require no further prompts. Be sure this option is engaged only when you really want unattended sessions to occur.

While the number of locations (presets) is unlimited, any watch folder must not change names or paths and of course must be accessible at the scheduled time.



In incremental mode, each time the backup is invoked the watch folder(s) will be analyzed to determine which files are new or different from prior backups and only those will be copied.

CAUTION! Changing the watch folder location(s) will cause a full backup to occur. Therefore it is not recommended to point to a NAS folder for incremental backups as the operating system path information may change.

Discovery Mode



PreRollPost features three Discovery Channel Modes plus the Discovery Metadata Editor and Discovery Tape Verifier utilities.

PreRollPost helps automatically fill in metadata and categories for you to create LTO tapes according to Discovery Channel specifications. So whether you're making '**Field Footage**', '**Program Master**' or a '**Graphics Master**' tape, the correct metadata fields are presented and automatically populated.



To make a Discovery tape, click '**Settings**', then '**Locations**'. On the lower right, select '**Discovery Mode Enabled**' and choose the tape type from the pull-down menu.

Enabling one of these modes changes PreRollPost functionality into compliance with Discovery's LTO tape delivery specifications. Upon completion of the tape a **Metadata.xml** file is automatically created and placed into the Index partition **upon un-mount of the tape**.

Options

- ☐ Offload Empty Folders
- ☒ Clear Queue On Backup
- ☒ Discovery Mode Enabled

Program Master

CAUTION! Do not enable 'Discovery Mode' if you're not specifically creating tapes for delivery to Discovery Channel. With this mode enabled certain files are required and if missing from a backup may cause the archive process to fail.

PreRollPost will attempt to place files into proper (authorized) categories on the tape. You'll have an opportunity to review these and adjust as necessary.

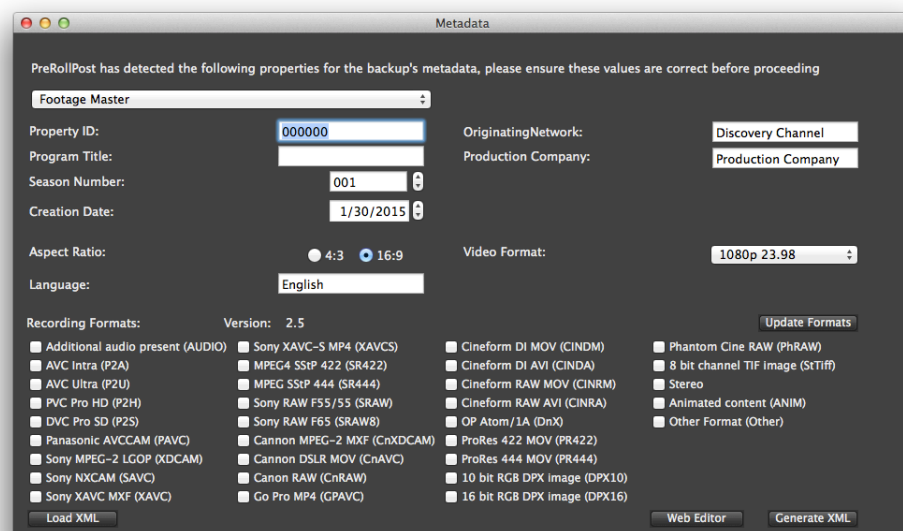
On the main backup screen, click the '**Prepare Backup**' button. Then drag files into appropriate categories if they've not been automatically matched. Click the '**Backup**' button to begin.

The required **Metadata.xml** will automatically be created at the end of the backup session. You'll have an opportunity to enter required information that's not extracted from the video files.

Alternatively you can manually create it using the '**Discovery Metadata Editor**' from the '**Applications Menu**'.



You can also create this file with '**Discovery Web Based Editor**'.



NOTE: Tapes MUST be formatted by PreRollPost for Discovery Channel metadata.xml to automatically be moved to the Index partition during un-mount.

PreRollPost also offers a '**Discovery Channel Verifier**' utility. Mount the tape then select the verifier option from the '**Applications Menu**' to test the tape's contents against Discovery Specifications.

IMPORTANT! You MUST remount any new tapes before using the verifier.

Search & Retrieve

One of the key advantages of LTFS is the ability to browse tape contents in Finder (or Explorer on Windows computers). However, Finder doesn't present much information nor create an intelligently sorted retrieval list for efficient tape cueing. Neither can you perform Spotlight or detailed searches.

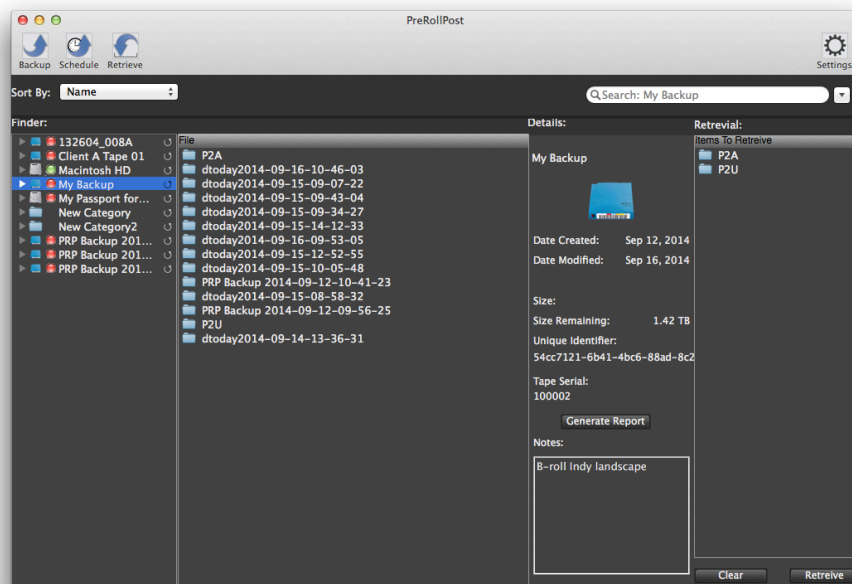
PreRollPost has a search and retrieval window to overcome these deficiencies with a simple, familiar interface.



Click the '**Retrieve**' button to open the search dialog.

Browse

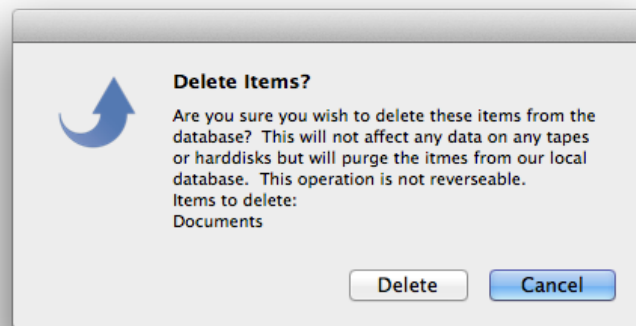
Files are organized by tape and backup sessions in the left column, then sequentially in the nested columns to the right.



Browse or search tapes, disks or ODA cartridges, whether mounted or offline. Likewise you may drill down to specific backup sessions, folders or files.

The **'Retrieve'** dialog is just a view to your database, not the mounted tape. If there are items you no longer have or wish to search upon, they can be deleted from this view. **Deleting items here doesn't affect a mounted tape's contents.**

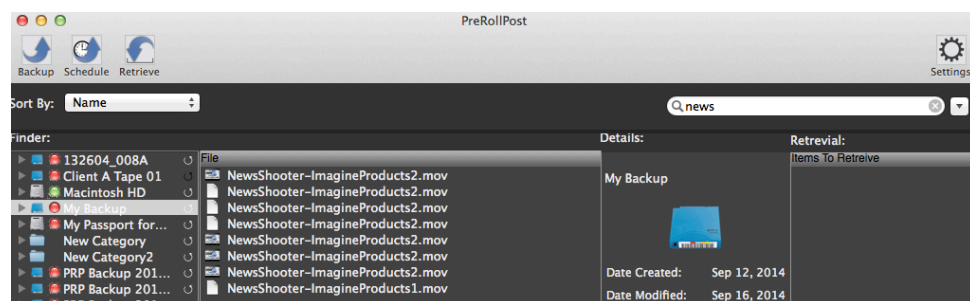
To remove entire tapes, sessions or individual files or folders from the **'Retrieve'** view, select the item in the far left column and press the **'Delete'** button on your keyboard, or **'Right-Click'** and choose **'Delete File'**.



TIP: To add a tape's contents back to the **'Retrieve'** view, mount the tape and **'Right-Click'** on it in the **'Retrieve'** view and choose **'Import Files'**. That re-imports the tape's index into your database. You may need to refresh the dialog for the tape to appear.

Simple Search

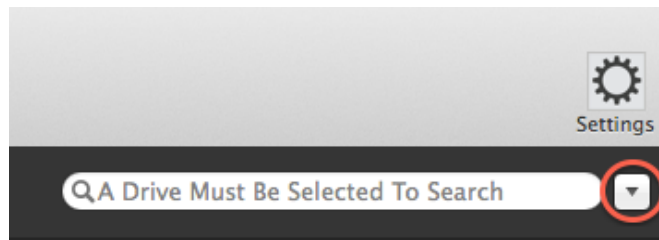
PreRoll Post features a quick predictive search. Select a tape or item in the left list, then type in the first few letters of desired file names or other metadata into the search text field to search within the selected item's contents.



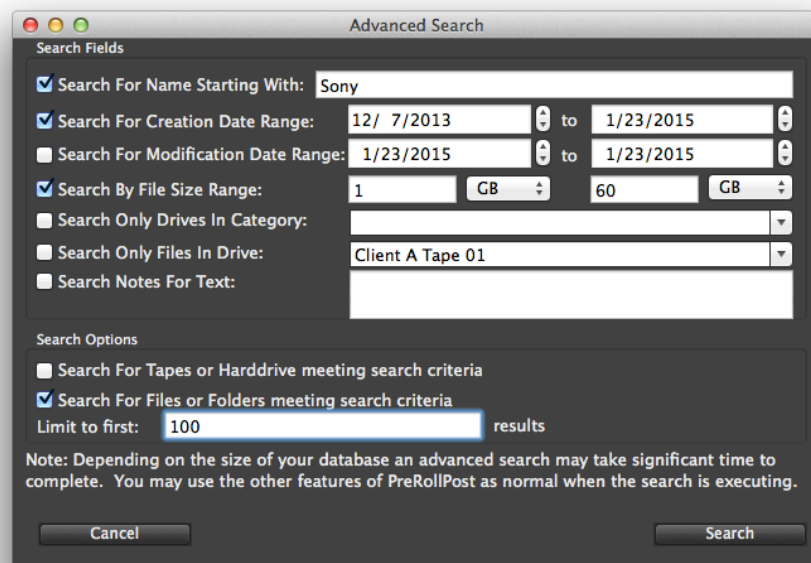
Select items from the list to get further information.

Advanced Query

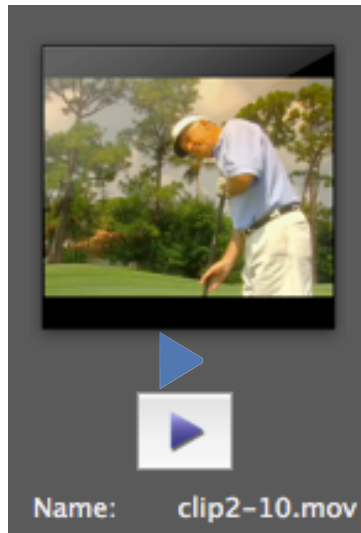
Click the down arrow just to the right of the simple search text box to build a complex '**Advanced Search**'. There you may narrow results by dates, sizes, tapes/drives, Notes, etc.



NOTE: The purpose of the '**Advanced Search**' is to help narrow results, so each criteria entered must be true of matched files.



Play Clips



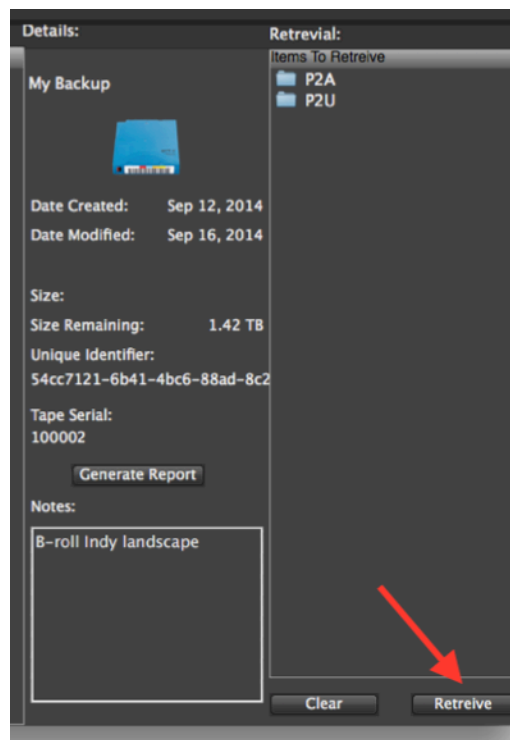
Thumbnail and a play button indicate video files if proxies were created for the backup. (see '**Video Settings**').

If **ProVu** is used to play clips, any file type it recognizes will be available to play. You may also play files that are stored locally in full resolution.

NOTE: While you may also play proxies from a tape because they're small enough and LTO is fast enough to do so, in general you'll not be able to play full HD files smoothly until they've been retrieved onto a local disk.

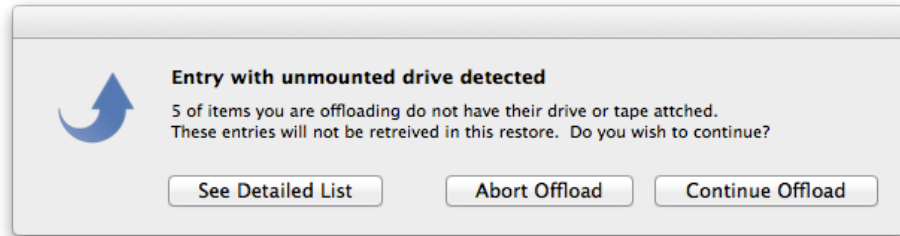
Restoring Files

Drag items to retrieve into the far right column. Once you've collected all the files you want to restore, click the '**Retrieve**' button, lower right.



PreRollPost will then sort the list and prompt where to save the files.

If some of the files you're attempting to restore are not currently mounted you'll be notified.

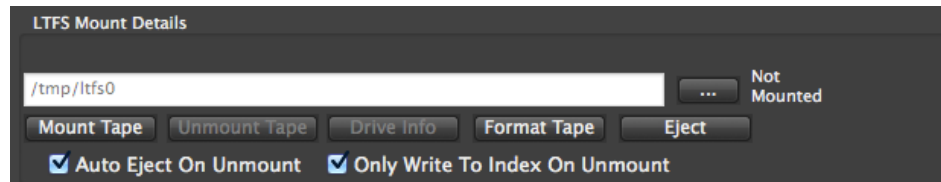


Click '**See Detailed List**' to determine the tape(s) needed to restore from. If some of the files are located on the currently mounted tape, you can click to '**Continue Offload**' to restore those.

Then **Mount** the next tape and return to the '**Retrieve**' dialog to retrieve files from it and so forth, until all selected files have been retrieved.

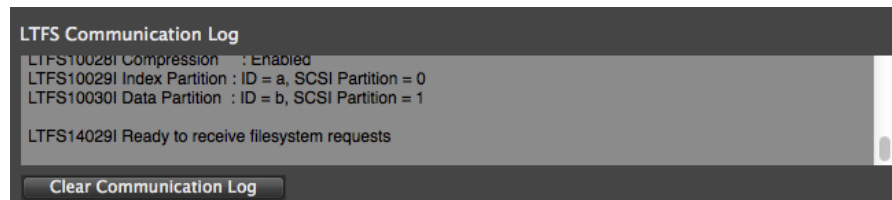
Tape Controls

Certain LTFS tape commands are available from within PreRollPost.



Mount LTO

Insert a formatted tape into the deck and click '**Mount**' to load the tape. Unformatted tapes, or ones with non-LTFS formatting, should prompt to reformat.



Format Tapes

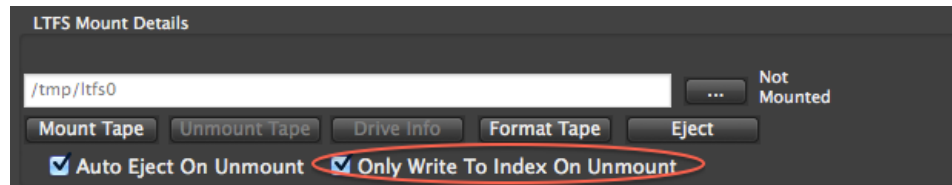
Ultrium LTO tapes are supplied in an unformatted state. The first time you load a tape in the deck PreRollPost will detect whether the tape is properly formatted for LTFS use; and specifically for PreRollPost use. If not, you'll be prompted whether to allow the formatting and to input a tape serial number and other information.

You may also choose to reformat a tape. Doing so erases all data and even resets the Tape UUID.

IMPORTANT! If the tape will be used for delivery to Discovery Channel, be sure to format it using PreRollPost (rather than a generic LTFS format). This sets up LTFS 'rules' embedded on the tape that, among other things, instructs the automatic placement of the 'metadata.xml' file into the Index Partition upon un-mount.

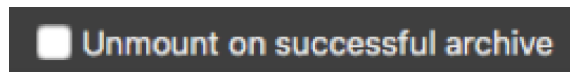
Un-Mount LTO

Un-mounting the LTO drive disconnects it from LTFS control. This command does not eject the tape. However it does includes final updates to the tape's index and PreRollPost database so please be patient.



TIP: Use the option to '**Only Write to Index on Unmount**' beneath the tape control buttons **for smaller backups only**. If this box is not checked, the drive may automatically update the tape index periodically (IBM defaults to every 10 minutes).

CAUTION! With the delay option enabled, PreRollPost will keep all updates until the end of the whole session; should anything interrupt the backup session before a normal unmounts your tape may be missing an index and not be usable.



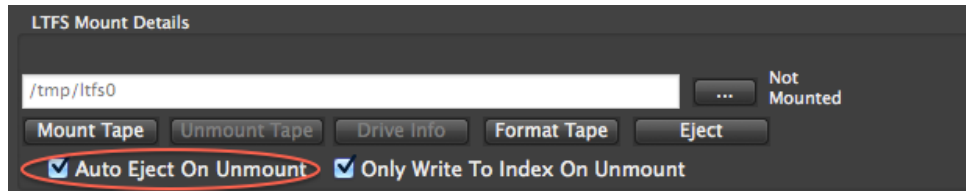
TIP: For large unattended backups, enable the feature to '**Unmount on successful archive**'. This helps avoid potential tape damage from things like power outages or automated operating system updates, etc. Also for safety on large backups, **do not** enable '**Only Write to Index on Unmount**'.

Eject Tape

While the tape is idle (not being written to or searched) you may eject the tape. PreRollPost will rewind to the beginning of the tape and expel it from the deck. This should take less than 2 minutes. Please be patient.

CAUTION! Do not eject the tape by simply pressing the button on the front of the deck until the tape has been un-mounted (via software command). Un-mounting includes final updates to the tape's index. If you remove the tape without this step it may become 'inconsistent' (data out of sync with the indices) and require repair. (see '**Tape Recovery Utility**')

NOTE: LTFS tape commands (e.g. '**Eject**', '**Mount**') will only work if the tape has previously been LTFS formatted.



TIP: Check the box to '**Auto Eject on Unmount**' beneath the tape control buttons for convenience. This feature will kick out the tape when you unmount it.

Appendix A - Installation

Installing the Software

Download the PreRoll Post installer to your computer and double click to run. All the resources you need to run LTFS and PreRollPost will be installed via this single process, just follow the prompts.

Since some of the components are subject to independent EULAs (end user license agreements), apart from Imagine Products' EULA, you'll be prompted to accept the terms of each.

This installer will add:

- PreRollPost application
- OSX FUSE (with support for MacFUSE LTFS versions)
- LTFS (select by manufacturer: HP, IBM, Quantum, Tandberg, etc. and type: LTO-6, LTO-7, LTO-8)
- ICU Framework

Once the components are installed you'll be prompted to **allow restarting of the computer to fully activate the OSX modifications.**

You may also need to install the SAS card and Thunderbolt adapter drivers from their respective manufacturers.

NOTE: You may be directed to get drivers and/or firmware updates directly from manufacturers. Be sure to correctly match your operating system and drive components with the available drivers.

Activation

PreRollPost activation requires web access to our server to register the software for use. When you purchased the application, a PreRollPost seat was added to your account on our website. Upon first launch, the software will attempt to connect to our server and prompt for you to activate.

TIP: Activation information is stored on the system level independent of user preferences, so multiple profiles on the same computer may access the application as long as you install under the ADMIN user profile for your computer.

Just enter your account email and password for fast, easy activation.

Larger organizations may wish to issue **single use keys**, which are subsets of the overall account wide serial. Either account wide or single use keys may be used to activate the application; but keep in mind a single use key 'consumes' one of the allotted seats of PreRollPost from the account wide key.

NOTE: If the application is activated using a single use key the account wide key may no longer work to activate PreRollPost until the single key is deactivated or revoked.

If you don't have an Internet connection on the target computer perform a manual activation. You may use a QR code reader app on your smart phone to quickly go to the appropriate page on our activation site to receive the manual activation code, or use the link provided to type in the computer ID.

PreRollPost is a single user license. If you're upgrading to a new computer, or need to transfer the software, be sure to '**Deactivate**' from the '**Application menu**', just above '**Quit**'.

System Requirements

The minimum **Macintosh** configuration is:

- Mac OS 10.14--10.11
- 4 GB RAM
- 16 GB free disk space

How to Register

If you've purchased from our webstore, you are already registered in our system. If you purchased from a reseller or other method, the reseller or Imagine can transfer ownership to you. We must have proof of purchase on file to give service and customer support.

Upgrades are released from time to time and the only way you'll get these is to register the application to your account.

We may also send you periodic electronic news. Generally we notify of new products and trade shows, commentary and stories of interest from other

users just like you. Let us know what you're up to (publishing your stories is an inexpensive way to network within the production community).

Follow us on Social Media for timely and helpful information.

On Twitter: @imagineproducts

Appendix B - Trouble Shooting

Throughout the program, reminders and error checks help to anticipate trouble spots in the program while preventing inadvertent data loss. If a message appears that is unclear, check the Help topics or refer to the appropriate section of this guide for further explanation.

Frequently Asked Questions

I Can't Activate!

PreRollPost activation requires web access to register the software for use. When you purchased the application, your software key was entered into our database. Upon first launch, the software will prompt to Activate via Internet. You'll need your key to enter.

PreRollPost activation doesn't use individual serial numbers, instead it is account based. You may simply enter your **account's email and password**, or enter your account wide key.

Larger organizations may wish to issue single use keys, which are subsets of the overall account wide key. Either account wide or single use keys will activate the application; but keep in mind a single use key 'consumes' one of the allotted seats of PreRollPost from the account wide key.

NOTE: If the application is activated using a single use key the account wide key may no longer work to activate PreRollPost until the single key is deactivated or revoked.

If you don't have an Internet connection on the target computer perform a manual activation. You may use a QR code reader app on your smart phone to quickly go to the appropriate page on our activation site to receive the manual activation code, or use the link provided to type in the computer ID.

PreRollPost is a single user license. If you're upgrading to a new computer, or need to transfer the software, be sure to **DEACTIVATE** the software for use elsewhere. Choose '**Deactivate**' under the '**HELP**' menu, or follow instructions on the website.

When moving the software, always download the most recent version of the software onto the new computer and activate it normally.

Note: Activation registration locks to your computer's hardware ID.

Not all my files are in the Retrieve section

'**Retrieve**' is a view to the database, not the tape itself. Make sure you archived with PreRollPost. Only files and folders used in archives will appear in the database. You can add a tape's index to your database. '**Right-Click**' on it and choose to '**Import Files**'.

LTFS Questions

LTO Drive Not Found. Check connections between the computer and tape drive and that the manufacturer's LTFS driver is up to date for the operating system you're using.

Can I use LTO-7 media in my LTO-8 drive? Yes, absolutely. An LTO-8 drive fully supports creating and reading LTO-7 tapes.

Does LTFS work with Write Once Read Many (WORM) media? No, WORM media cannot be partitioned therefore it is not usable with LTFS.

How long will it take to backup my media? LTO-8 drives are rated at a sustainable transfer rate around 300MB/sec.

Technical Support

This product was designed to be easy to use and we want you to feel at home as you navigate through it. This guide should address the most often asked questions along the way. However, should you need support the specialists at Imagine can provide answers quickly and in terminology that you can understand.

Contacting Imagine Products

Visit Imagine's Web site to fill out a problem report <http://www.imagineproducts.com/> for fast, free service.

Updated news and patches will be available on the page, as well as Frequently Asked Questions under the Support tab on our site.

Alternatively you may email support @ imagineproducts.com

Check for Updates

From the application's menu, select '**Check For Updates**' to manually check now for any updates, or to configure how often PreRollPost should check automatically whether a newer version of the software exists.

Diagnostic Logs

Should you experience crashes or other system problems you may be asked to supply us with the '**Diagnostic**' logs. You'll find them here, under the '**Help**' menu.

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