SUPPORT · USER MANUAL

TapeVault User Manual

How to prepare tapes, write and verify, restore, and deliver with TapeVault 1.2.9 on Windows and macOS.

1 Getting started

TapeVault records production footage to LTO tape (LTFS), verifies every file, and lets you find and restore it later. This manual covers **version 1.2.9** (Windows · macOS).

SYSTEM	WHAT YOU NEED
Windows	64-bit Windows 10/11 · IBM LTFS SDE (Spectrum/Storage Archive Single Drive Edition) · LTO drive and SAS HBA driver
macOS	Apple Silicon or Intel Mac · macOS 13 or later · LTFS · macFUSE · LTO drive and SAS HBA driver
Both	ffmpeg for video thumbnails (optional). Without a drive you can still try TapeVault with the **local archive**.

Follow the Install Guide for the install order and drivers. On Windows, the **TapeVault Install Assistant** can check the PC first.

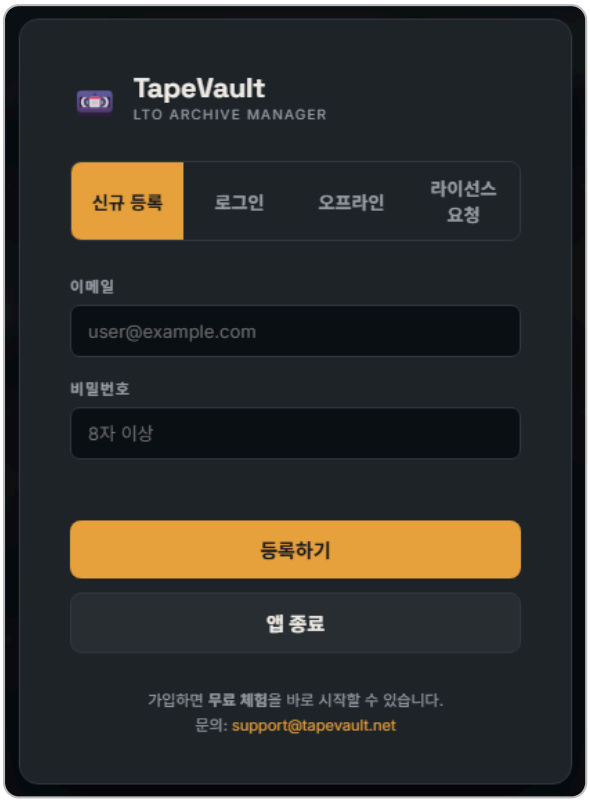
License activation

The license screen appears on first launch.

METHOD	STEPS
Sign up	Create an account with your email and a password (8+ characters); the free trial starts right away.
Sign in	Sign in with an account that already has a license. The number of PCs you can register depends on the license (Copies).
Offline	For PCs without internet: send the Machine ID from the **Offline** tab to support@tapevault.net and load the license file (.tvlic) you receive.
License request	Request a purchase, renewal or edition change. Without internet, save a request file (.tvreq) and send it.

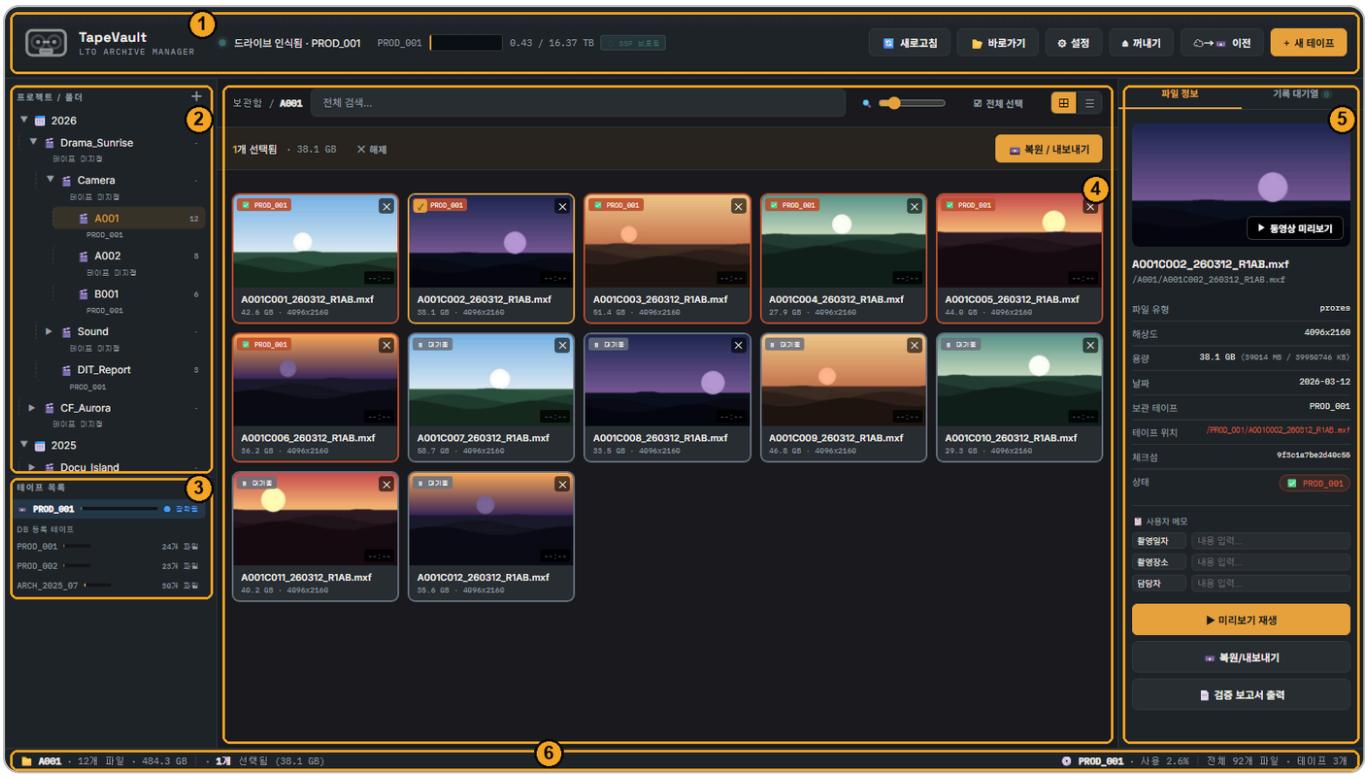
Editions: **Starter** supports up to 2 drives; **Autoloader** has no drive limit and, on Windows, adds tape library (autoloader) control.

> The license is tied to this PC using the network adapter (Ethernet / Wi-Fi) that was on when you activated. Activate with your usual network connection turned on.



The license screen on first launch, with Sign up · Sign in · Offline · License request tabs. (Korean interface shown; the layout is the same in English.)

2 The main window



The main window. ① Top bar (drive status, tape usage, buttons) ② Folder tree ③ Tape list ④ File cards ⑤ File info / write queue ⑥ Status bar (Korean interface shown; the layout is the same in English.)

AREA	WHAT IT SHOWS
Top bar	Drive status, tape name and usage, plus Refresh · 📂 Open · Settings · Eject · Migrate · New tape. With two drives each drive gets its own row; the row marked **Active** is the drive you are working with (click a row to switch).
Left: folder tree	The folder structure you archive into — it becomes the folder structure on tape. The tape list is below it.
Center: file cards	Files and subfolders of the selected folder. Status is shown by color and badge (Pending · Copying · Verifying · Done · Failed · Source missing).
Right	Details and actions for the selected file, and the **write queue** of files to be written to tape.
Bottom progress bar	Write/restore progress, size processed, speed and time remaining.

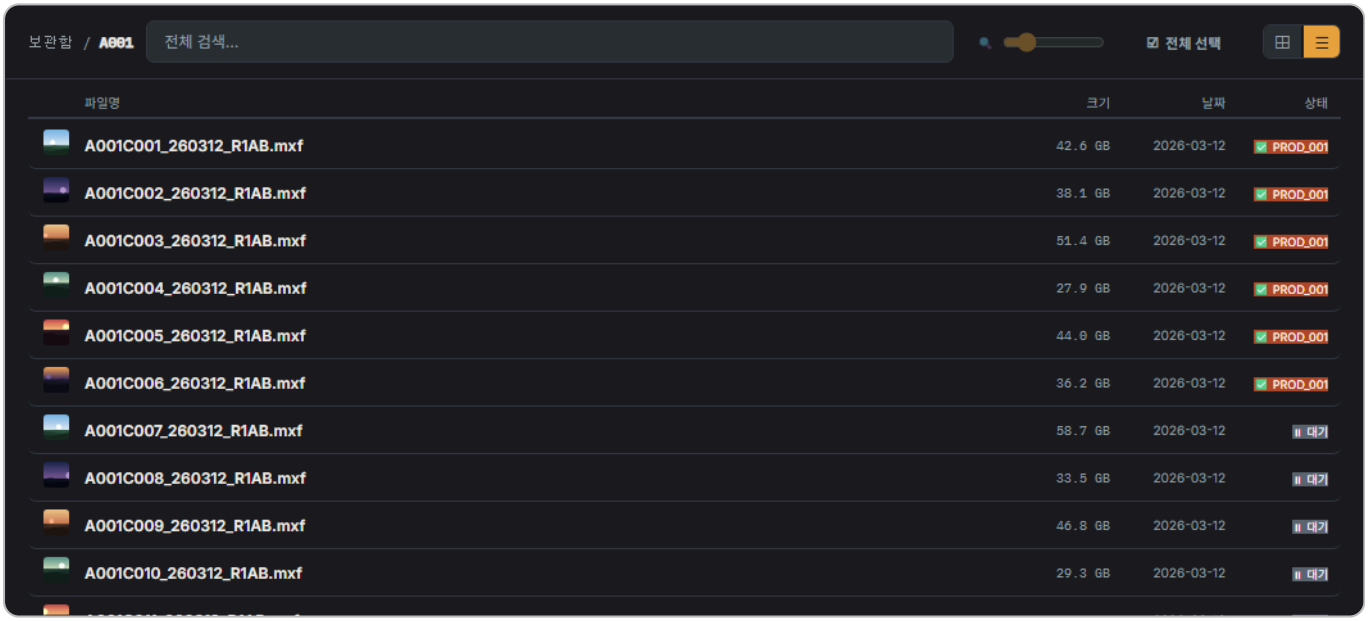
Folder tree tips

- Use the ▶ arrow to collapse/expand. Folders below the top level start collapsed; folders you expand stay expanded next time.
- At startup the last folder tree is shown first and refreshed a moment later.
- Drag the borders between panels to resize the left/right panes and the tree/tape list (double-click a border to reset).

- When you select a folder, its subfolders appear as shortcuts at the top.

Drive status messages

MESSAGE	MEANING / WHAT TO DO
Drive detected · (tape name)	The tape is ready to use.
Reading tape (1–3 min)	The tape is being read. Please wait.
Please insert a tape	The drive is connected but has no tape. If you just inserted one, click Refresh.
Unformatted tape	A new tape. Format it when asked.
LTFS letter not assigned (Windows)	IBM SDE lost the drive letter. TapeVault reassigns it automatically.
No drive	Check power, cable and HBA driver. Right after power-on the drive may show this for about a minute.



Use the view buttons at the top right to switch between cards and a list. An orange badge means the file is on tape; a gray "Pending" badge means it has not been written yet. (Korean interface shown; the layout is the same in English.)

3 Preparing tapes

Inserting a tape

Insert a tape and TapeVault detects it automatically (usually 1–3 minutes). On Windows, if IBM SDE loses the drive letter after a reboot, TapeVault restores the previous letter automatically.

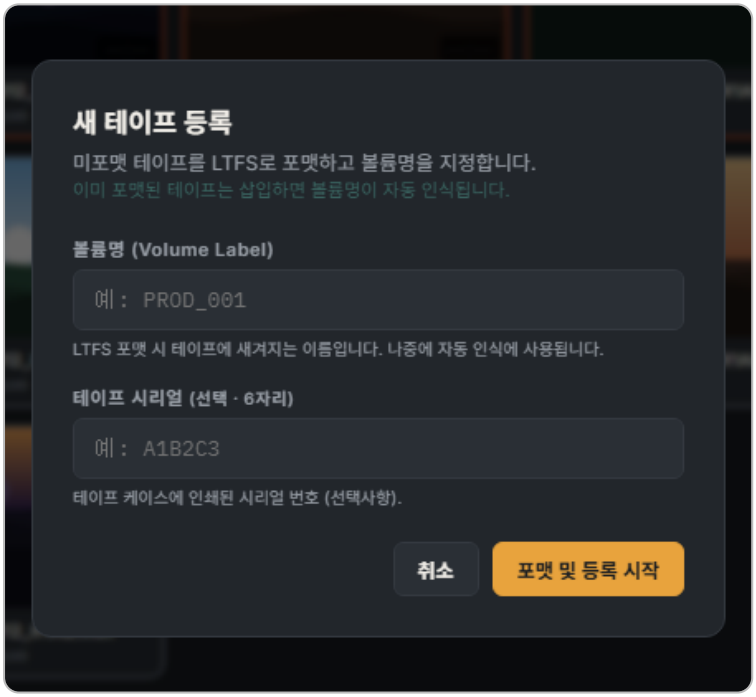
Formatting a new tape

- When you insert an unformatted tape, TapeVault asks whether to format it. You can also use **+ New tape** in the top bar and enter a volume name.
- Use only uppercase letters, digits, _ and - in volume names. Example: PROD_001
- Formatting takes a few minutes; the tape is detected automatically afterwards. With two drives, check the target drive number in the confirmation.

Re-formatting a used tape

Settings → 🖌️ **Format tape**. Type the tape name to confirm; the tape is formatted and its records are removed from the catalog.

> ⚠️ Formatting permanently erases everything on the tape. TapeVault warns you if another tape program is running.



The dialog opened by "+ New tape". Enter a volume name and start formatting. (Korean interface shown; the layout is the same in English.)

4 Adding folders and files

Creating folders

- Click ＋ above the tree, or right-click an empty area → **New major folder** for a top-level category (e.g. 2026).
- Right-click a folder → **New subfolder** — any depth is allowed. Rename and delete are in the same menu; deleting a folder keeps the file records.
- Drag a folder onto another folder to move it inside, or onto an empty area of the tree to make it top-level.

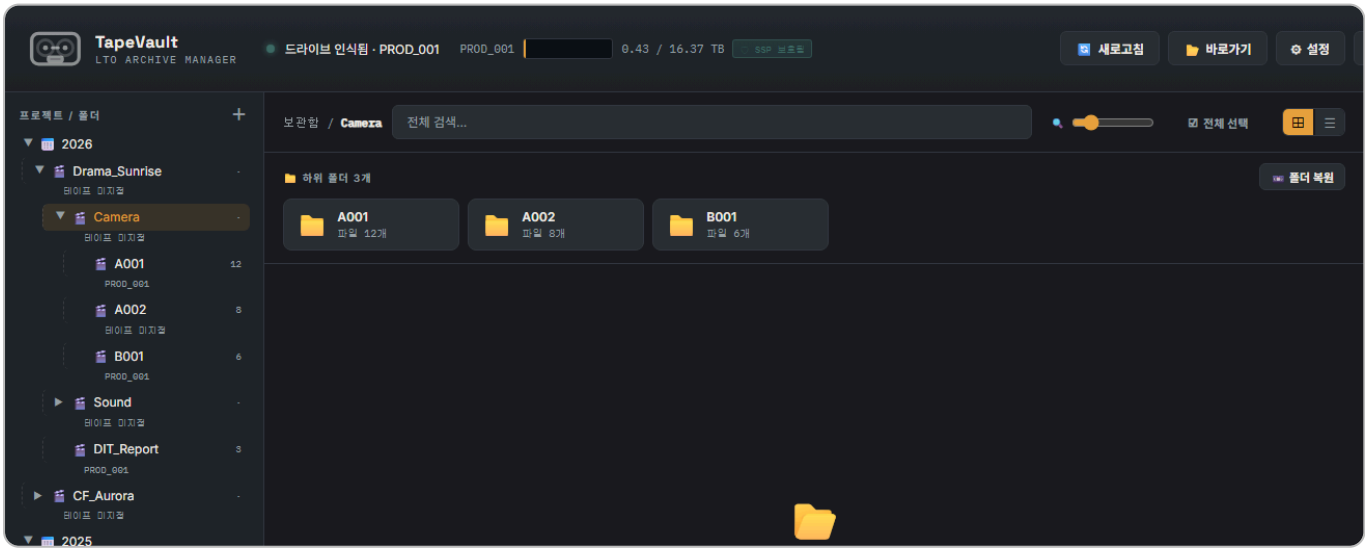
> Files already written to tape stay where they are on the tape even if you move the folder. Avoid moving delivery folders after writing.

Adding files

- Drag folders or files from Explorer (Finder) onto a folder in the tree or onto the card area. The subfolder structure is recreated in the tree.
- Or right-click a folder → **Add files** and choose a source folder (subfolders included).
- Hidden and zero-byte files are skipped automatically. New files are **Pending**; thumbnails are created for video and images.



Right-click a folder for: new subfolder, rename, add files, restore/export folder, export file list, create copy, delete. (Korean interface shown; the layout is the same in English.)



Selecting a folder that has subfolders shows them as shortcuts at the top. Click one to open it. (Korean interface shown; the layout is the same in English.)

5 Writing to tape

Adding to the write queue

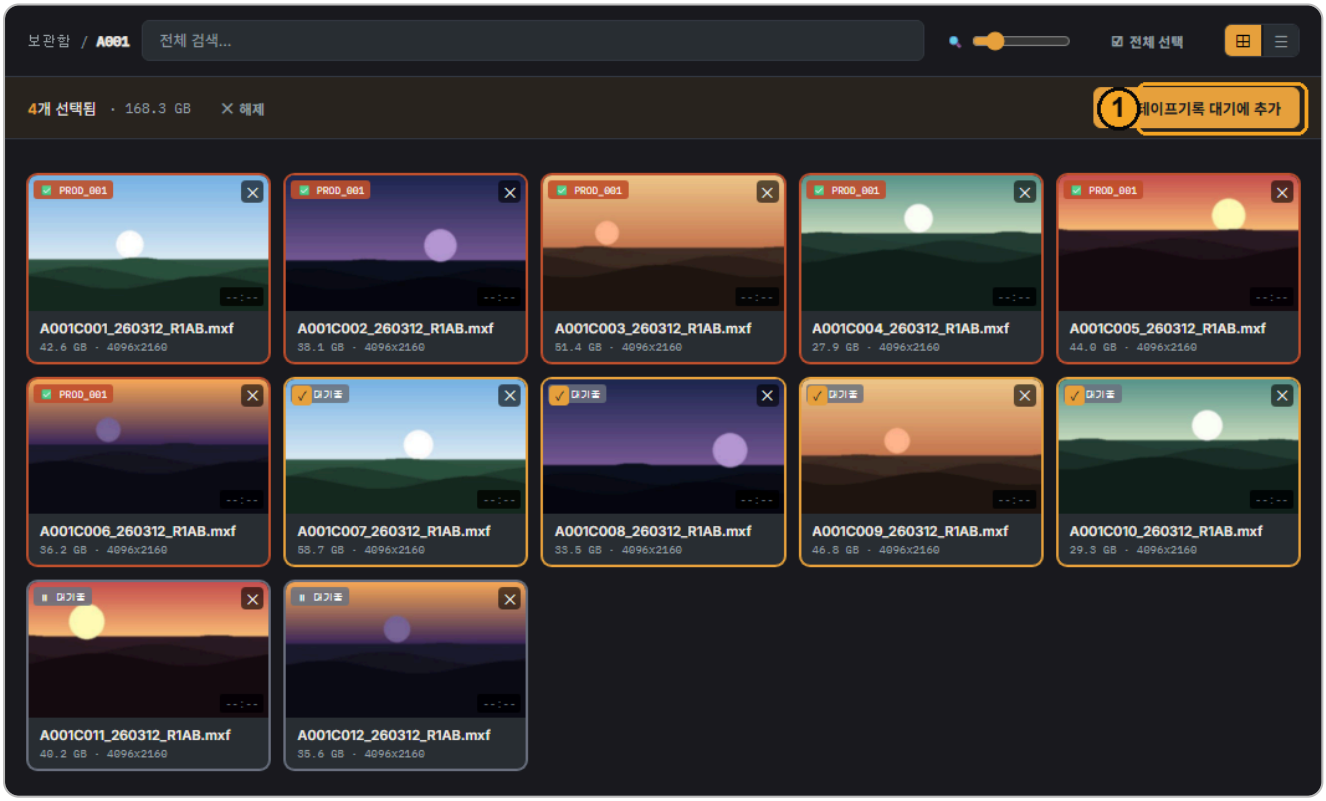
- Select cards (Shift/Ctrl·⌘-click or drag a box) and click 📋 **Add to tape write queue**.
- Drag cards or a tree folder onto the right panel — a folder adds the pending files of all its subfolders.
- Drag files from Explorer (Finder) onto the right panel — they are registered in the current folder and queued.

Starting the write

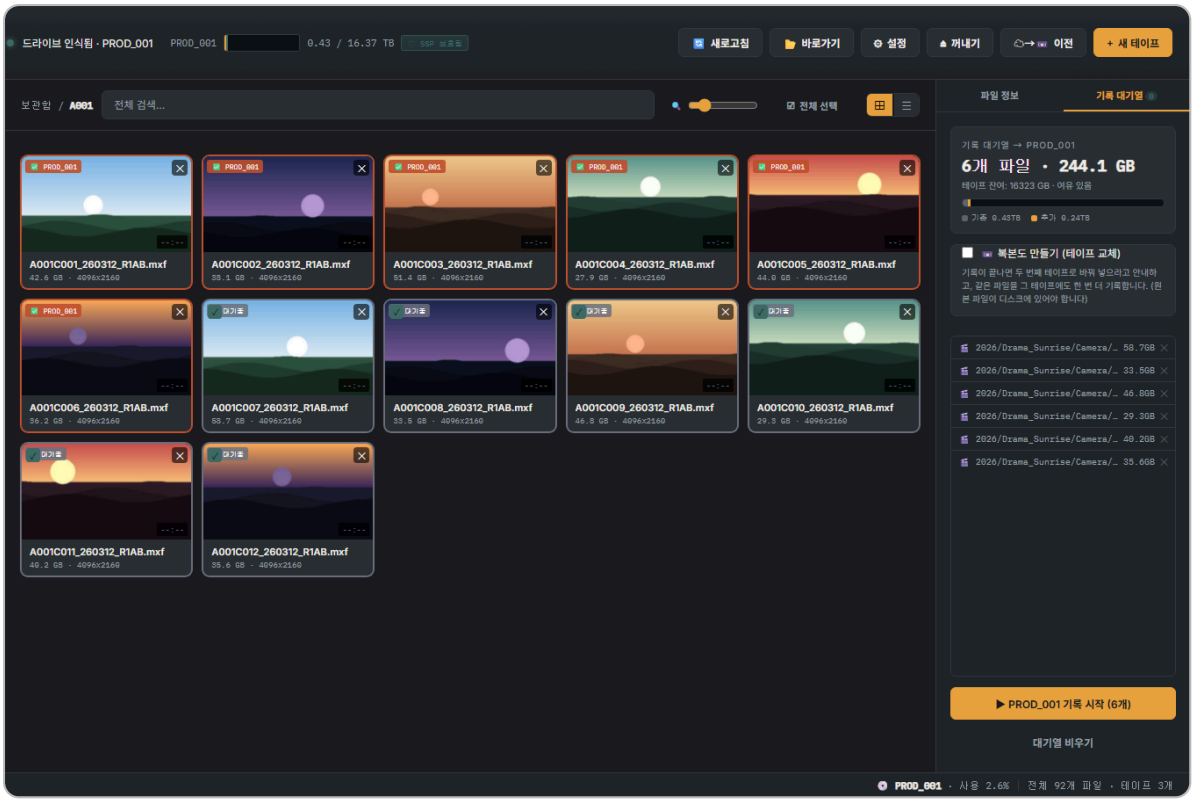
Check the list and size in the write queue and click ▶ **Start writing**. Each file is **written to tape, then read back and verified**. xxHash64 and MD5 of the source are calculated while copying and compared with the values read back from tape; only verified files keep their final name.

Good to know

- If no tape is loaded, TapeVault first asks whether to write to the local archive.
- If you close the app while writing, it finishes the current file and quits; the rest can be resumed next time.
- Re-queue failed files with **Retry transfer** on the card.
- The write may appear to pause for a few minutes while the drive retries. Wait — it continues on its own.



Select the files to write, then click ① "Add to tape write queue". Selected files get an orange outline. (Korean interface shown; the layout is the same in English.)



The "Write queue" tab on the right. Check the file count, size and free tape space, then click the start button at the bottom. Turn on "Also make a copy" to write a second tape. (Korean interface shown; the layout is the same in English.)

6 Restoring and exporting

Restoring files

1. Find and select files in the search box or the tree (multiple selection is fine).
2. Click **Restore / Export** and choose where to save.
3. The tape must be loaded; if it is not, TapeVault tells you which tape to insert. Restored files are verified against the original checksums.

Restoring a whole folder

Right-click a tree folder → **Restore / export folder from tape** (or Restore folder at the top of the folder view). Files of the folder and all its subfolders are restored with the original folder structure. If they span several tapes, files on the loaded tape are restored first; run it again for the rest.

Exporting a file list (CSV)

Right-click a tree folder → **Export file list**. Every file in the folder and its subfolders is saved to one CSV: folder path, file name, size, tape, copy tapes, status, duration, resolution, codec, fps, checksums and archive time. It opens cleanly in Excel.

ℹ ▶ **Preview** works only while the source file is still on the computer. Restore tape-only files first.



The restore dialog. Check the files and the destination folder, then click "Start restore". Verification after restore is on by default. (Korean interface shown; the layout is the same in English.)

7 Second copies and two drives

- **One drive**: turn on **Also make a copy (swap tape)** in the write queue. When the first tape is done, TapeVault asks you to insert a second tape and writes the same files again.
- **Folders already on tape**: right-click a tree folder → **Create copy**. Files already on the target tape are skipped; only missing files are written.
- Copies can be made while the source files are still on the computer.

Write modes with two drives

Turn on **Replication / Spanning** in Settings. When both drives have a tape, choose the mode in the write queue.

MODE	BEHAVIOR
Manual (default)	Writes to the drive selected in the top bar. While one drive is writing you can start a separate write on the other drive.
Replication	Writes the same files to both tapes at once. The source is read once and each tape is verified separately; speed follows the slower drive.

MODE	BEHAVIOR
Spanning	If the files do not fit on the selected tape, the overflow continues on the other drive's tape.

> ℹ️ If one tape fails during replication, the other tape is completed and you are told which files are missing. Give the two tapes different volume names.

8 Delivery modes (MD5 manifest · ASC MHL)

TapeVault creates manifests on tape automatically to match studio delivery specs. The two modes cannot be on at the same time.

MODE	WHAT IT DOES
Disney delivery mode	Turn it on in Settings. Files are written without the top-level (year) folder, and after each write a `FolderName.md5` (MD5 Manifest v1.1) is created or updated at the tape root for each category folder.
Netflix delivery mode	Turn it on in Settings. Files are written without the top-level folder and new tapes are formatted without hardware compression. After each write an ASC MHL v2.0 (xxHash64) is created, or a new generation added, in `ascmhl/` of each roll folder.

- Manifests are built from what is actually on the tape, and are also created for copies and migrations.
- You are warned before writing if file or folder names contain characters the spec does not allow.
- You can also create a manifest manually from the tree folder's right-click menu.

> ⚠️ Barcode and case labels and the delivery instructions (hash type, folder structure) are still up to you. Check with your post partner before delivery.

9 Local archive and migration

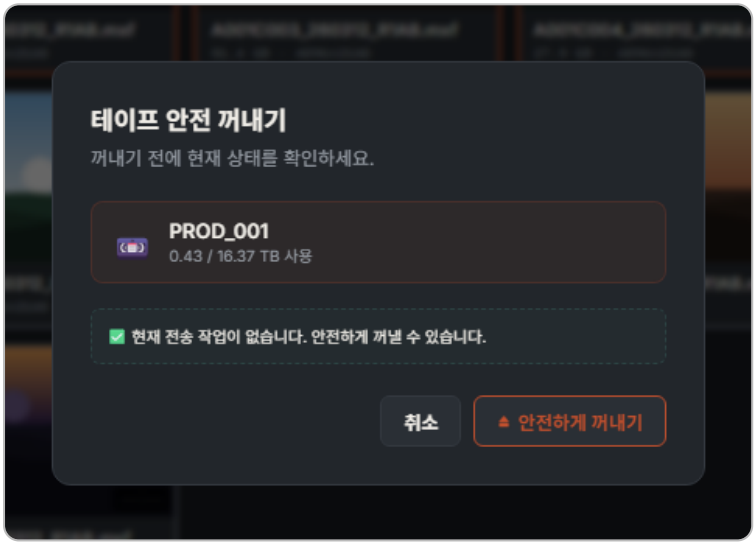
Writing without a tape stores files in the **local archive** on the computer (cards with a purple border). Later, insert a tape and click **Migrate** in the top bar, or queue the local files, to move them to tape. You can change the archive location in Settings (existing files are not moved automatically).

10 Ejecting tapes

1. When you are done, click ⏏ **Eject** → **Eject safely** in the top bar.
2. The tape index is saved and the cartridge is ejected (usually 30 seconds to 2 minutes). Do not pull the tape out during this time.
3. When **Tape ejected** appears, you can remove it from the drive.

- **When you quit**: if a tape is still in a drive, TapeVault asks whether to eject it before quitting. Ejecting reduces wear on the drive.
- **Unformatted or unrecognized tapes**: use **Eject unformatted tape** in the Eject dialog. If that fails, use the drive's front button.
- **Other tape programs** (IBM ITDT etc.): TapeVault tells you when one is running and asks again before formatting or ejecting. Sharing a drive can cause "device busy" errors, so close them first.
- Close any Explorer (Finder) window showing the tape first. If a program is using the tape, TapeVault tells you instead of ejecting.

> ⚠️ Do not eject a mounted tape with the drive's front button — the unsaved tape index can be lost.

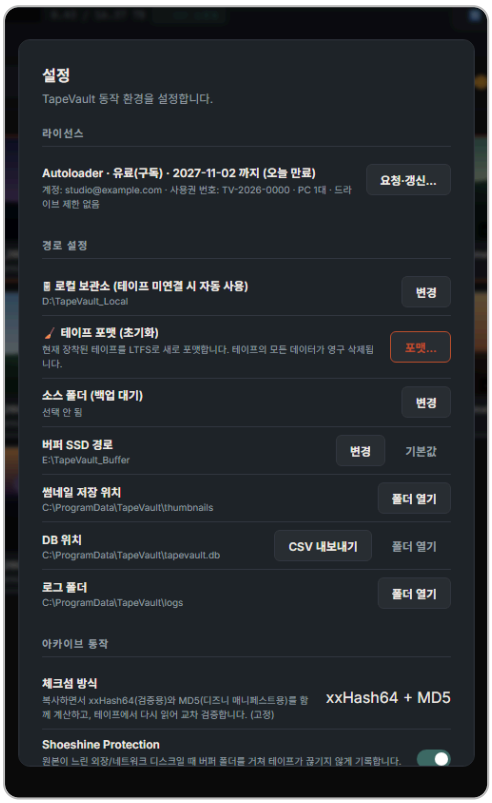


The dialog opened by "Eject". After it confirms no transfer is running, click "Eject safely". (Korean interface shown; the layout is the same in English.)

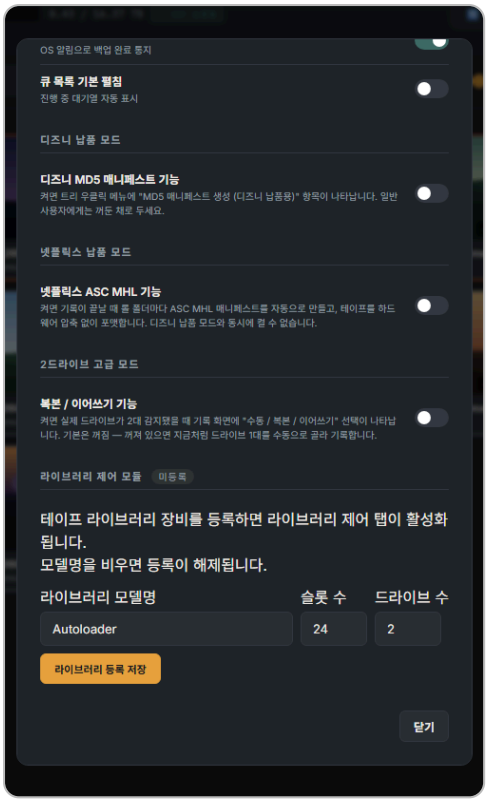
11 Settings

ITEM	DESCRIPTION
License	Edition, expiry and account; request or renew a license
Local archive	Folder used when writing without a tape
🧹 **Format tape**	Re-format the loaded tape
Buffer SSD path	Temporary folder used when the source is a slow external or network disk
Thumbnail / DB / log location	Shows the actual folders and opens them. The DB item can save a catalog report (CSV).
Checksum	xxHash64 (verification) + MD5 (delivery) calculated together
Shoeshine Protection	Uses the buffer when needed so the tape keeps streaming
Auto thumbnails · notifications	Automatic thumbnails and job-complete notifications

ITEM	DESCRIPTION
Language	Korean / English
Disney · Netflix delivery mode	See Delivery modes
Replication / Spanning	Choose the write mode with two drives
Library (Windows · Autoloader)	Register a tape library (autoloader) model and the Library tab appears.



Top of the Settings window: license, paths, checksum, Shoeshine Protection. (Korean interface shown; the layout is the same in English.)



Bottom of the Settings window: delivery modes, Replication / Spanning, library control module. (Korean interface shown; the layout is the same in English.)

12 Troubleshooting

SYMPTOM	SOLUTION
"No drive" keeps showing	Check drive power, cable and HBA driver. On Windows check the tape drive in Device Manager and the IBM SDE install; on macOS check `ltfs -o device_list` in Terminal.
Tape inserted but "Please insert a tape"	Wait 1–2 minutes and click Refresh. If it persists, re-insert the tape.
"LTFS letter not assigned" (Windows)	Wait a moment — TapeVault reassigns the letter automatically. If it persists, restart the app.
Eject failed — tape in use	Close the program named in the message (Explorer/Finder window, another tape program) and eject again.
Writing seems stuck for minutes	The drive may be retrying. If it happens often, clean the head with a cleaning cartridge and compare with another tape.
"This license is not registered to this PC"	Turn the network (Ethernet / Wi-Fi) that was on during activation back on and restart the app. If it persists, contact support.
No thumbnails	Make sure ffmpeg is installed. Zero-byte files and files without a source cannot have thumbnails.

SYMPTOM	SOLUTION
SmartScreen warning when running the Windows installer	The installer is signed by VETERAN IT. Check that the publisher is VETERAN IT, then click **More info** → **Run anyway**.

When reporting a problem, open Settings → Log location → **Open folder** and send the log file for that day (`tapevault_YYYY-MM-DD.log`) with a screenshot.

13 Support

For questions or problems, email support@tapevault.net. Including a screenshot and the log file helps us respond faster.

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