



Offload Wrangler

User Manual

Copy camera cards to up to three drives at once, verify every byte with checksums, and walk away with a report that proves it. For macOS.

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offloadwrangler.com

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1 What Offload Wrangler does

Offload Wrangler moves camera originals off a card and onto your drives — and then proves the copy is byte-for-byte identical before you erase anything.

It is built for the moment on a shoot day when the card is full, the next setup is waiting, and someone has to say out loud: *"Is it safe to format?"* The app is designed so the answer is a document, not a feeling.

The safety principle

Every file is hashed while it is being read from the card. With the default **Broadcast** verification the destination file is then read back *from the disk* and hashed again, and the two hashes are compared. Only if they match is the file counted as OK.

- The destination is re-read with the OS read cache bypassed, so what gets checked is what actually landed on the medium — not a copy still sitting in RAM.
- Every file is flushed and `fsync`'d before verification.
- A verification log listing every file and its checksum is written into the clone folder itself, so the proof travels with the footage.
- Verification is **never** weakened in the trial. Checksums, verify levels and reports are identical to the paid app.

ERASE NOTHING UNTIL IT IS GREEN

A source card should only be formatted after the copy has verified OK on every destination you care about — and, ideally, after a re-verify (chapter 8) has confirmed it a second time. The app never deletes or modifies a source.

What it does not do

- It never writes to, renames, or deletes anything on the source.
- It does not transcode, rename individual files, or build proxies. The clone is a structural copy: same folders, same filenames, empty folders included.
- macOS housekeeping files — `.DS_Store`, `._` resource forks, `.Spotlight-V100`, `.fseventsd`, `.Trashes` and similar — are skipped, on both the copy and the counting.

Requirements and installation

- 1 **macOS on Apple Silicon.** The app ships as a signed `.dmg` — `Offload_Wrangler_1.0.13_AppleSilicon.dmg`.
- 2 **Open the disk image and drag "Offload Wrangler" into Applications.**
- 3 **Launch it.** A splash screen appears; press any key or wait, and the main window opens behind it.

- 4 **Grant disk access when macOS asks.** The app needs to read removable volumes and write to your drives.

Trial and licence

A fresh install runs as a trial. The trial is **counted, not timed**: you get **5 offloads** to use within **182 days**. The window title always shows what is left, e.g. **TRIAL — 5 offloads left**.

Situation	Costs a trial offload?
One press of Start Copy & Verify , any number of cards, any number of destinations	Yes — one
A run you cancelled	No
A run that failed and delivered nothing	No
A run smaller than 1 GB (e.g. testing on a folder)	No
Verifying an existing copy — any amount, any time	No, ever

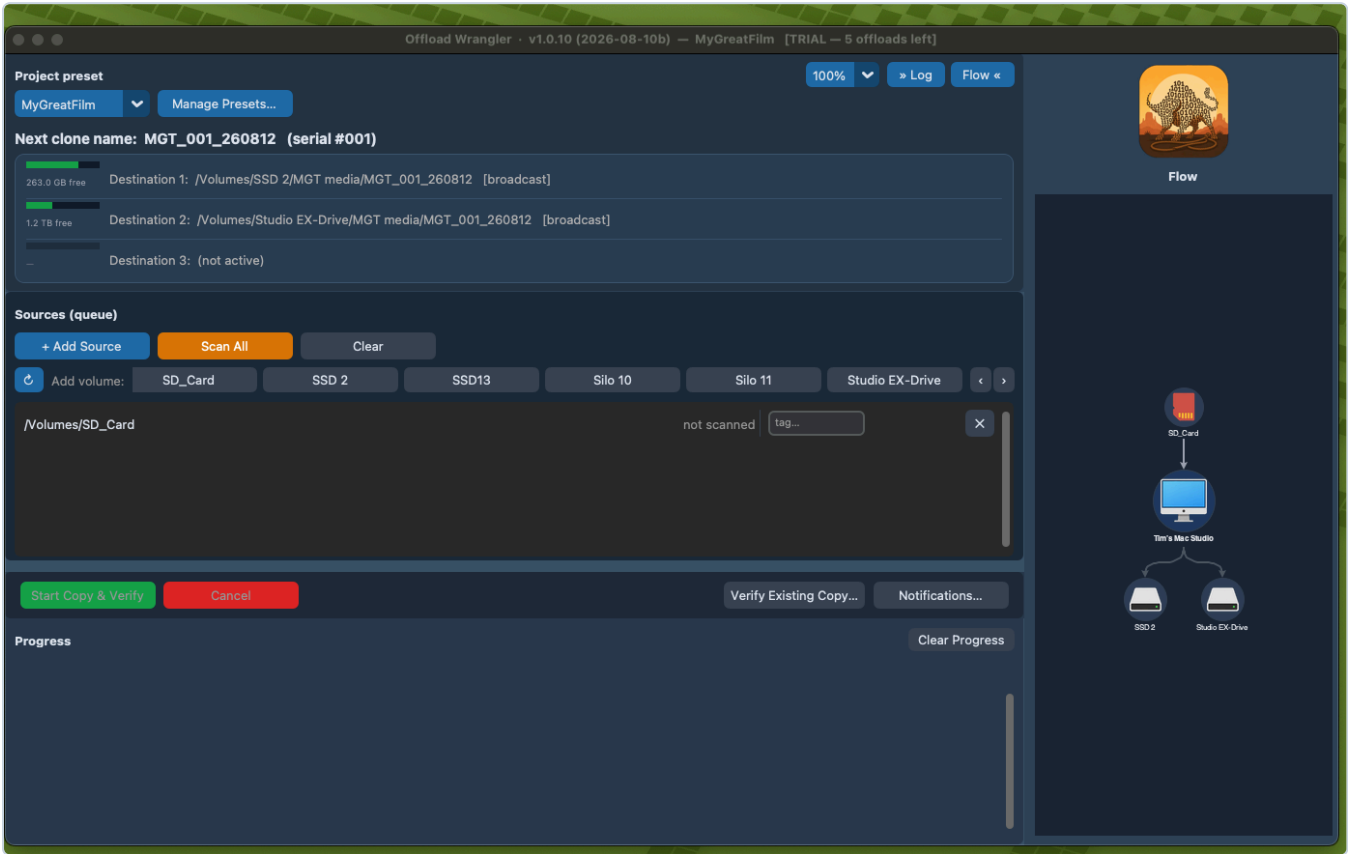
VERIFICATION STAYS FREE FOREVER

Even after the trial ends, **Verify Existing Copy** keeps working. Checking whether yesterday's cards are still intact should never meet a paywall — and your existing copies, checksums and reports stay exactly where they are.

To licence the app, choose **View ▶ License...**, paste your key (`0W-XXXX-XXXX-XXXX`) and click **Activate**. See chapter 13 for details, including moving a licence to another Mac.

2 The window at a glance

Everything happens in one window. It reads top to bottom in the order you work: what the copy will be called, where it goes, what goes into it, then go.



The main window with one card queued and two destinations active. The title bar always shows the version, the active preset, and — during a trial — how many offloads are left.

The five areas

Area	What it is for
Project preset top	The dropdown picks the active project. Underneath, Next clone name shows exactly what the next folder will be called, and Destination 1–3 show the full path each copy will take, with its verification level in brackets. A small capacity bar to the left of each destination shows free space at a glance.
Sources (queue)	The cards and folders to copy, in order. The grey Add volume strip lists every mounted volume as a one-click button.
Action bar	Start Copy & Verify , Cancel , and the two side doors: Verify Existing Copy... and Notifications...
Progress	One collapsible card per source, one bar per destination inside it. Finished jobs stay here as a scrollable history with their own re-verify buttons.

Flow / Log
right side

Two panels you can show or hide. Flow draws the job as a picture; Log is the running text record.

Flow and Log

The two buttons at the top right — » **Log** and **Flow** « — open and close the side panels. Both are draggable: grab the divider to resize. Flow is open by default and is covered in chapter 7; the Log sidebar in chapter 9.

Zoom

The **100%** dropdown at the top right scales the entire interface. Useful on a laptop screen in a hurry, or on a large monitor across the room from the camera cart.

EVERYTHING HAS A SHORTCUT

Every button in the window also lives in the menu bar with a keyboard shortcut — see chapter 11. On a shoot you often have one hand on the Mac and one on the cards.

3 Quick start — your first offload

Seven steps from a card on the desk to a verified clone with a checksum log. Each step is explained in full later; this is the path through.

- 1 **Create a preset for the production.** Click **Manage Presets...**, then **+ New Preset**. Give it a name (`MyGreatFilm`) and a short project code (`MGT`) — the code becomes the prefix of every folder name.
- 2 **Add your destinations.** Click **+ Add Destination** and either type a path or click **Browse** to pick a drive from the volume picker. Tick the checkbox on each destination you want written *this* run. Up to three run at once, in parallel.
- 3 **Leave the verification on Broadcast and the hash on MD5**, then click **Save**. Broadcast is the thorough setting recommended for camera originals.
- 4 **Mount the card and add it as a source.** New volumes appear automatically in the **Add volume** strip — click the card's button, or use **+ Add Source** to pick any folder.
- 5 **Click `Scan All`**. The row fills in with the file count, total size and the file types found, and the status turns green: `ready`. Optionally type a **tag** into the small field (e.g. `drohne`) to append it to the folder name.
- 6 **Click `Start Copy & Verify`**. A dialog lists every source, the exact folder each will become, every destination and the total size. Read it — this is the last checkpoint — then confirm.
- 7 **Wait for the green.** Each destination shows its own progress bar and ends at `✓ verified OK 100%`. A dialog, a macOS notification and (if configured) an email or iMessage tell you it is done.

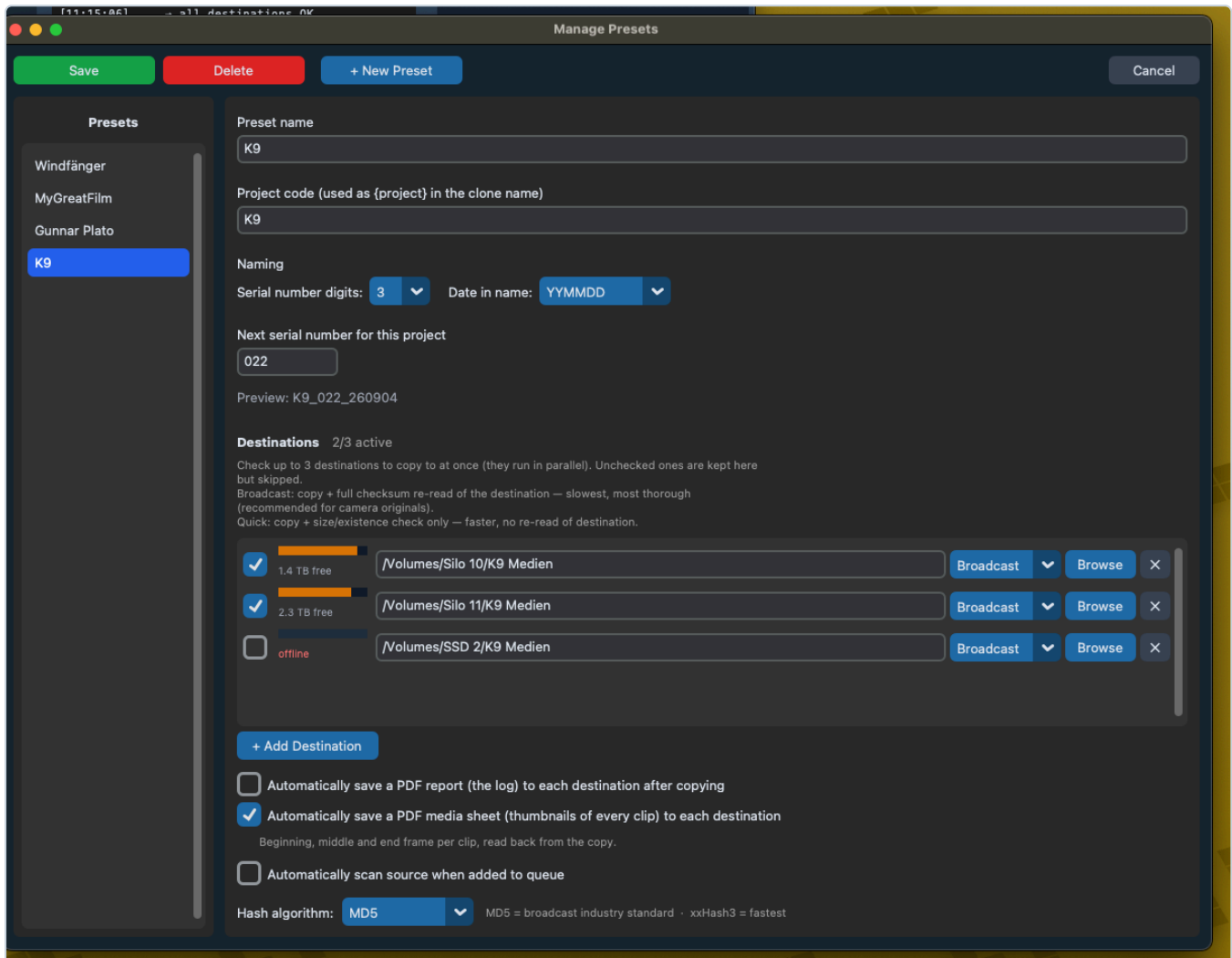
THEN, AND ONLY THEN

Before formatting the card, consider one more press of **Broadcast**  in the finished job's row. It re-reads both sides from scratch and is the cheapest insurance you will ever buy.

4 Project presets

A preset is one production: its folder-naming scheme, its running serial number, its destinations, its verification settings. Switch presets and the whole app switches job.

Open the editor with **Manage Presets...** or **⌘P**.



The preset editor. The list on the left holds every production you have set up; everything on the right belongs to the selected one. The third destination here is unticked *and* **offline** — the drive is not mounted.

4.1 Name, project code and naming

The **Preset name** is what you see in the dropdown. The **Project code** is what goes into the folder name as `{project}`.

Clone folders are built from three parts:

```
{project}_{serial}_{date} → MGT_001_260812
```

Setting

Effect

Serial number digits	How many digits the running number is padded to. 3 gives 001 , 4 gives 0001 .
Date in name	YYMMDD , YYYYMMDD , YYYY-MM-DD , or None to leave the date out entirely.
Next serial number	The number the next copy will use. It increments automatically after each source is copied — set it by hand if you are resuming a project mid-way or need to skip a range.

The **Preview** line under the fields shows the result live, and the main window repeats it as **Next clone name** so the naming is visible without opening the editor.

4.2 Destinations

Click **+ Add Destination** to add a row. Each row has a checkbox, a free-space bar, a path field, a verification dropdown, a **Browse** button and an **X** to remove it.

- **Checked destinations run this offload; unchecked ones are kept but skipped.** That is how you keep the LTO drive or the client shuttle in the preset without writing to it every day.
- **At most three may be checked at once.** They are written truly in parallel — one thread per destination — so three copies take roughly as long as the slowest one, not three times as long. The app refuses to save a preset with more than three ticked.

Clicking **Browse** opens the volume picker: every writable drive, sorted, with free space and a colour bar. Mounted disk images are deliberately left out.

Offline destinations

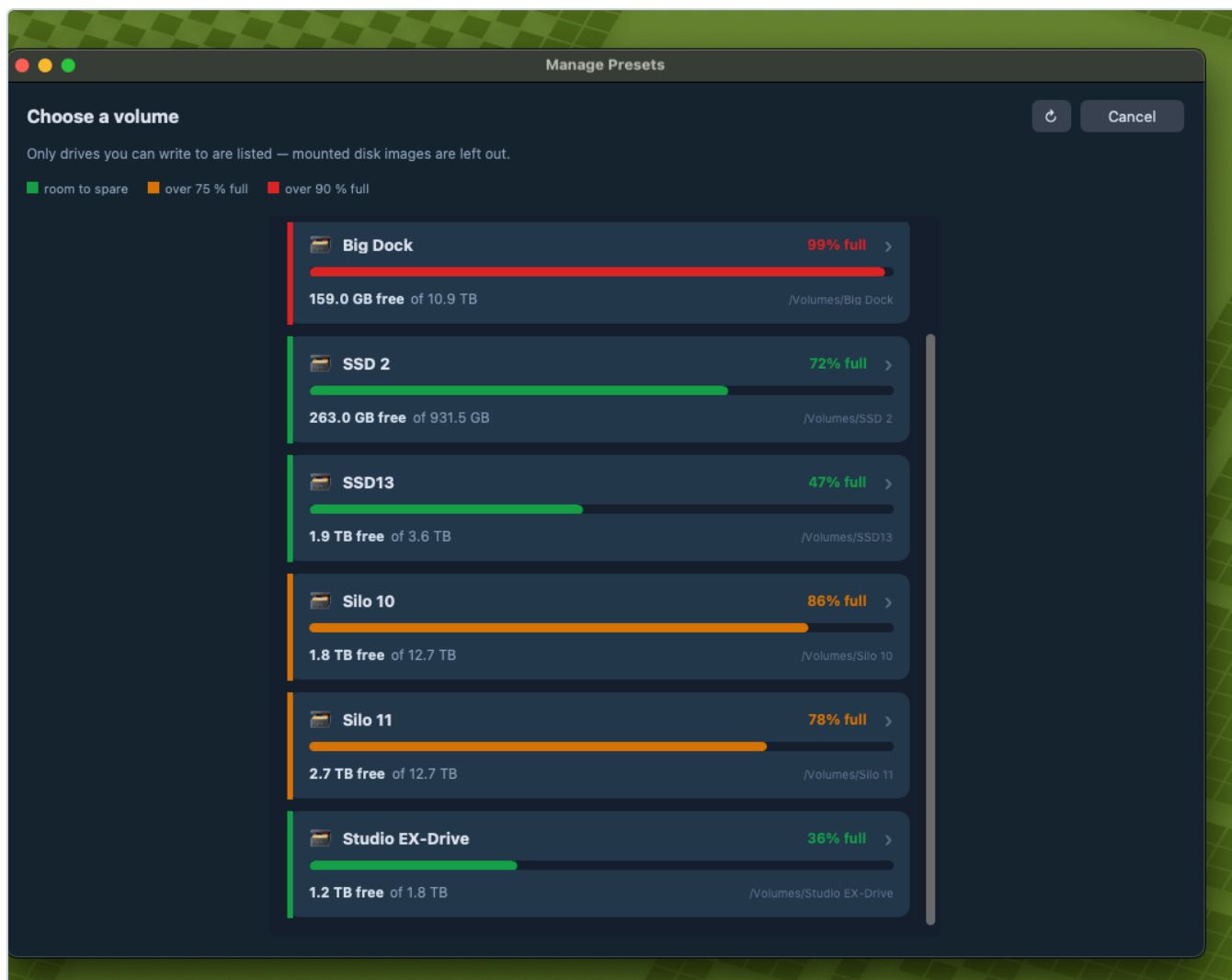
The app watches your destinations continuously. Unplug a drive and, within seconds, its capacity bar reads **offline** in the preset editor, and the matching line on the main window turns red:

```
Destination 2: /Volumes/Silo 11/K9 Medien/K9_022_260904  – OFFLINE, not mounted
```

Start Copy & Verify goes grey while any active destination is missing. The button is only green when the run can actually start — a green button is a promise.

YOU ARE TOLD THE MOMENT IT HAPPENS

Earlier builds only complained when you pressed Start. Now the warning appears in the second the drive goes away, and it names *which* destination is missing rather than putting it in a dialog.



The volume picker. **Green** = room to spare, **amber** = over 75 % full, **red** = over 90 % full. Click a drive's › to drill into its folders.

4.3 Verification level

Each destination has its own level. Mix them freely — for example Broadcast to the working SSD and Quick to a fast on-set shuttle you will verify properly later.

Level	What happens after the copy	Cost
Broadcast recommended	The destination file is read back off the disk and its checksum compared against the source checksum computed during the copy. Nothing else proves a copy this well.	Reads each file twice — roughly double the time of a plain copy.
Quick	The destination file is checked for existence and matching byte size. Catches missing and truncated files; cannot catch corruption.	Negligible.
None	Copy only. No destination check at all.	None.

THE SOURCE IS ALWAYS HASHED

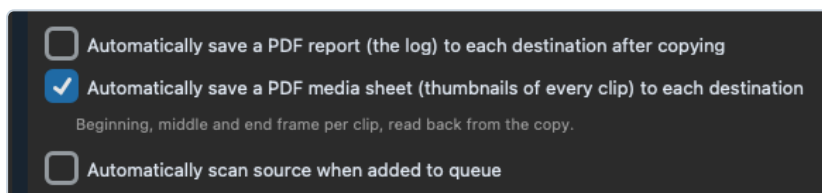
Whatever the level, the source is hashed while it is read, and those checksums are written into the verification log. Even a Quick or None destination therefore ships with a checksum manifest you can verify against later.

4.4 Hash algorithm

One choice per preset, used for everything that preset hashes.

Algorithm	When to choose it
MD5	The broadcast industry standard, and what most post houses and delivery specs expect. The default; leave it unless you have a reason.
SHA-256	When a deliverable spec or an archive demands a cryptographic hash. Slower than MD5.
xxHash3-64	By far the fastest. Excellent at detecting accidental corruption; not a cryptographic hash. Good for huge volumes of material on fast storage.
CRC-32	Fastest and weakest. Compatibility only.

4.5 The three automatic switches



The screenshot shows a dark-themed settings panel with three checkboxes. The first checkbox is unchecked, the second is checked, and the third is unchecked. The second checkbox has a grey line of text below it.

- ☐ Automatically save a PDF report (the log) to each destination after copying
- ☒ Automatically save a PDF media sheet (thumbnails of every clip) to each destination
Beginning, middle and end frame per clip, read back from the copy.
- ☐ Automatically scan source when added to queue

Checkbox	Effect
Automatically save a PDF report (the log) to each destination after copying	After every batch, the complete log is written as <code>OffloadWrangler_Report_<timestamp>.pdf</code> into each destination's clone folder. Off by default.
Automatically save a PDF media sheet (thumbnails of every clip) to each destination on by default	Builds the media report — a picture of every clip that landed, with its technical facts and its checksum. This is chapter 10, and it is the most useful thing you can attach to a delivery.
Automatically scan source when added to queue	Skips the manual Scan All press. Convenient with small cards; leave it off if you regularly queue very large volumes and want to control when the scan happens.

Both PDFs are written **in the background**, after the finish dialog, so a slow or sleeping destination can never freeze the app while it writes them.

The grey line under the media-sheet checkbox tells you what this machine can actually produce: "*Beginning, middle and end frame per clip, read back from the copy*" when `ffmpeg` is present, or a warning that each clip will get a single preview image if it is not. See 10.3.

4.6 Saving, switching and deleting

- **Save** stores the preset *and makes it the active one* — if you edit a preset, you meant to use it.
- Renaming a preset in the **Preset name** field and saving renames it in place.

- **Delete** removes the selected preset after a confirmation.
- **Cancel** closes without saving.

5 Building the source queue

The queue is the list of cards and folders to copy, worked through from top to bottom. You can queue as many as you like.

5.1 Adding sources

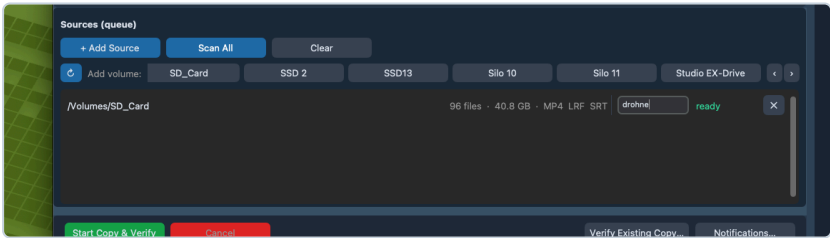
Way in	Use it for
Add volume strip the grey buttons	One click per mounted volume. New cards appear on their own within seconds of mounting — no refresh needed. The ⌵ ⌶ arrows scroll the strip when there are more volumes than fit; ⌵ forces a rescan.
+ Add Source 	Any folder — a subfolder of a card, a shuttle drive, a project directory. Multi-select is supported.

EJECT A CARD WITHOUT LEAVING THE APP

Control-click (or right-click) a volume button and choose **eject**. During a copy the menu item is deliberately greyed out — ejecting mid-write is the most expensive mistake this app could allow.

5.2 Scanning

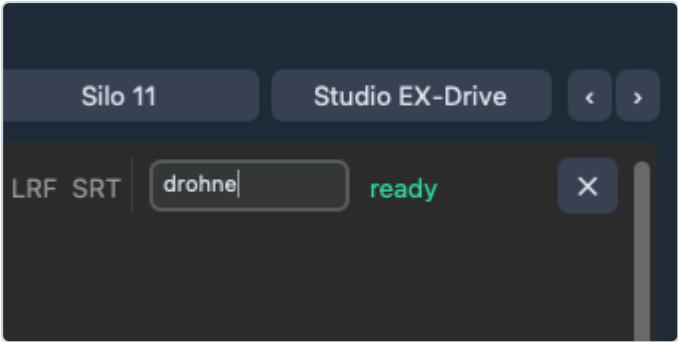
A freshly added row reads **not scanned**. Press **Scan All**  — the button pulses amber while anything is unscanned — and each row fills in:



A scanned source: 96 files, 40.8 GB, containing MP4, LRF and SRT files, tagged **drohne**, status **ready**.

The scan walks the whole tree, counts the files, adds up the bytes and notes the file extensions present. Empty folders are recorded too, so the clone reproduces the card's structure exactly. macOS metadata is skipped.

5.3 Tag and original name



The **tag** field appends a word to this source's folder name.

Control	Effect
tag...	Appended to the clone name with an underscore. <code>MGT_001_260812</code> with the tag <code>drohne</code> becomes <code>MGT_001_260812_drohne</code> . Per source, so each card in a batch can carry its own tag — <code>a-cam</code> , <code>b-cam</code> , <code>sound</code> .
original name	Keeps the source folder's own name instead of the preset's scheme, and does <i>not</i> consume a serial number — so the numbering stays gap-free. Off by default: the naming scheme is the point of a preset, and departing from it should be a deliberate, per-card decision.

ORIGINAL NAMES CAN COLLIDE

Two cards both called `NO NAME`, or a folder that already exists at the destination, would end up merged into one folder. The app checks for exactly this before starting and asks you to confirm, naming each conflict. With the serial-number scheme it cannot happen.

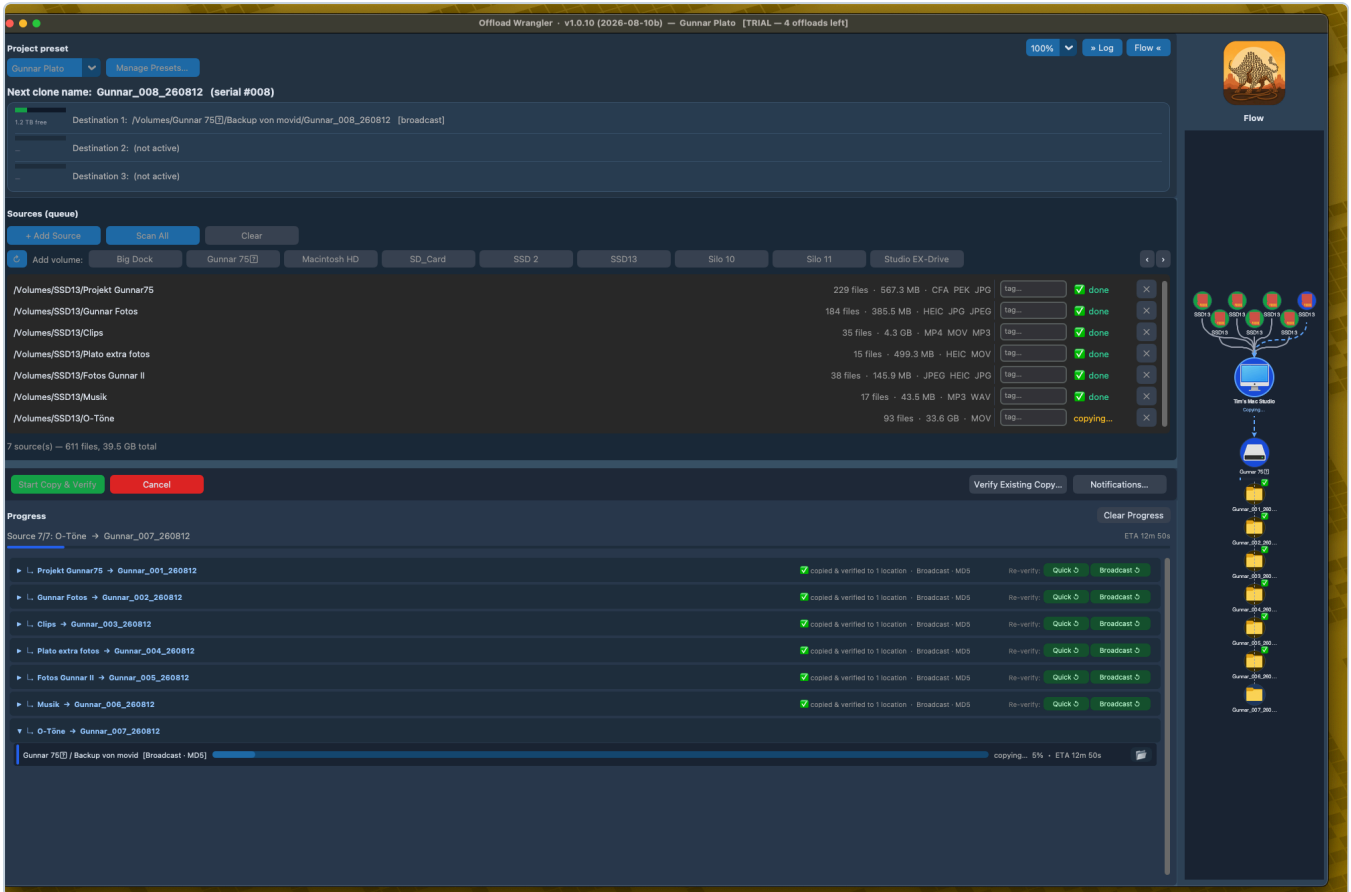
5.4 Capacity warnings

As soon as a scan finishes, the app adds up everything still to copy and compares it against the free space on every active destination. If it will not fit, the source row turns red — ⚠️ won't fit on Dest 2 — the shortfall is written into the log, and **Start Copy & Verify** stays disabled.

You learn this at scan time, when you can still swap a drive, rather than at the moment you press Start.

5.5 Removing sources

- **X** on a row removes that one source.
- **Clear** `⌘⌘K` empties the whole queue.
- After a batch finishes, the queue and its results deliberately stay on screen so you can read what happened. They are cleared automatically the moment you add the *next* source — that is when the next job begins.



A larger job: seven folders queued to a single destination. Each gets its own serial number and its own row in the progress history.

6 Running a copy

6.1 The confirmation dialog

Start Copy & Verify  is only green when every source is scanned, at least one destination is active and mounted, and everything fits. Pressing it runs the pre-flight checks and then shows the last checkpoint:

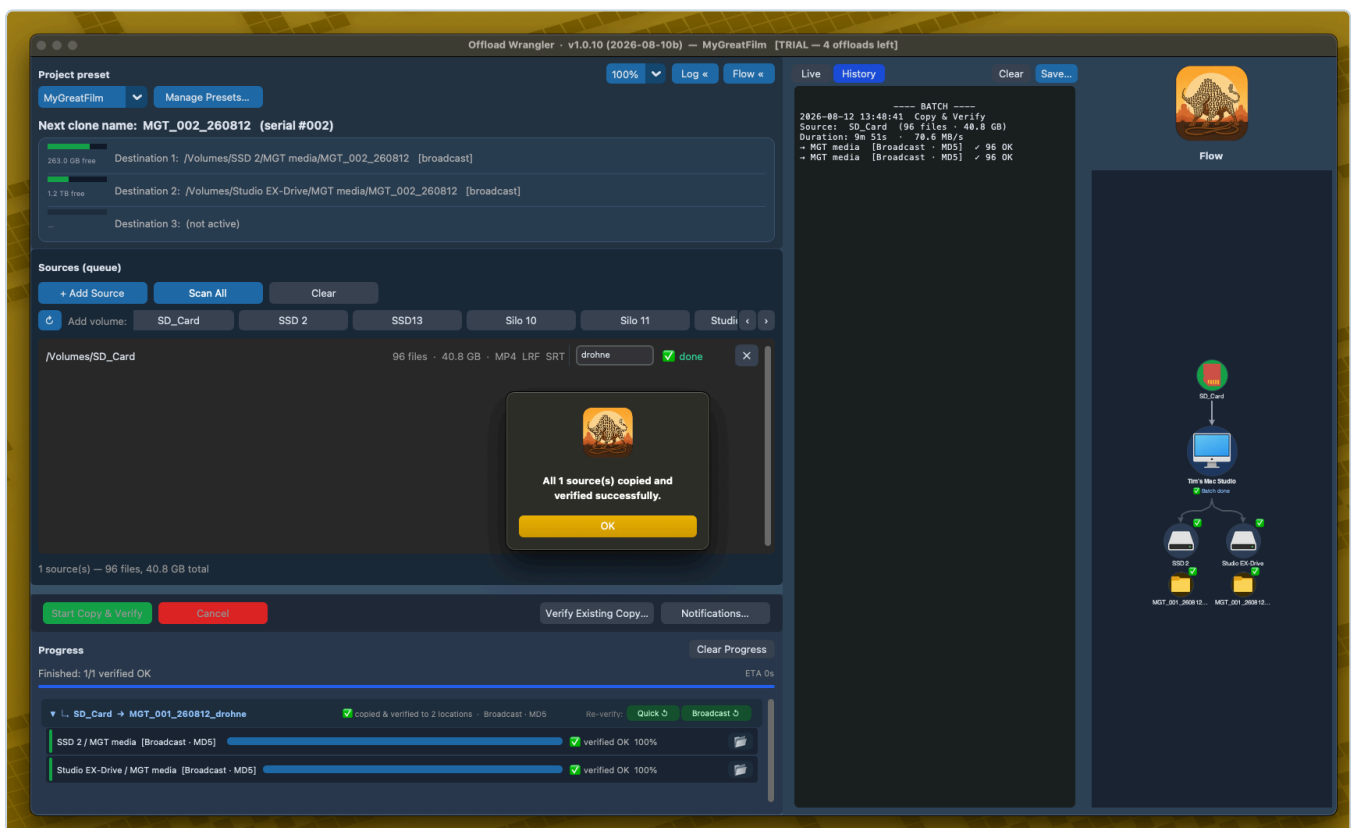
- Every source in the queue, and the exact folder name it will become, with its file count and size.
- Sources already copied this session, marked  **already copied — will skip**.
- Every destination, numbered, with its verification level.
- The total amount to be copied.

Read it. This is the one place where naming, destinations and volume are all visible at once, and it is computed from the same code that then does the work — so it cannot drift from what actually happens.

6.2 What happens during the run

Sources are copied **one after another**; destinations are written **simultaneously**. A serial number is consumed at the moment its source starts, and the preset is saved immediately — so the counter survives even a crash mid-batch.

For each source a card appears in **Progress** with one bar per destination:



A finished single-card batch. Left: the progress card with one verified bar per destination and its re-verify buttons. Middle: the History log. Right: the Flow diagram with green ticks all the way down.

Each destination bar shows its own status — **copying...**, **verifying...**, **✓ verified OK** — with a percentage and an ETA. Under Broadcast the bar covers *both* phases: the copy fills the first half, the read-back verification the second, so a bar at 50 % means the bytes are written and now being proven.

The label on each bar names the destination and its settings, e.g. `SSD 2 / MGT media [Broadcast · MD5]`. The small folder icon at the right of a bar opens that clone in the Finder.

6.3 Cancelling

Cancel ⓘ asks for confirmation, then stops after the file currently being written is finished — a half-written file on a destination would be worse than a few seconds of waiting. The button changes to **Stopping...** so you can see the wait is intentional.

Remaining sources are marked **cancelled** and skipped. Sources already completed keep their verified status. A cancelled run never costs a trial offload.

6.4 When it finishes

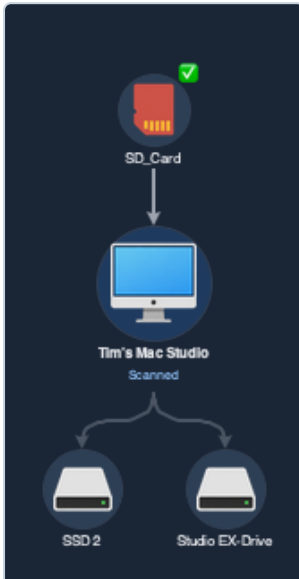
The status line reads **Finished: *n*/*n* verified OK**, followed by duration and average throughput. Then, all at once:

- A dialog — **All *n* source(s) copied and verified successfully**, or an error dialog naming how many failed.
- A macOS notification with a sound (*Glass* for success, *Basso* for problems), so a finished batch is noticed even when the app is in the background.
- An email and/or iMessage, if you have configured them (chapter 11).
- A PDF log report written into each clone folder, if the preset has auto-report on.
- A **media sheet** built in the background and written into each clone folder — on by default (chapter 10). Long jobs keep logging its progress after the dialog is gone.

Nothing is cleared. The sources, the destinations, the progress cards, the Flow diagram and the log all stay exactly as they are until you add the next source.

7 The Flow diagram

Flow draws the job as a picture: cards at the top, this Mac in the middle, destinations and the folders they received at the bottom. It is meant to be readable across the room.



Scanned — a green tick on the card; the queue is ready to start.



Copying... — animated arrows flow down to each destination, and the clone folders appear as they are created.



Batch done — green ticks on the card, on each drive, and on every folder that verified.



Problems — the failing drive and folder turn red while the healthy ones stay green.

Two details worth knowing:

- The diagram keeps **every** clone the batch produced on screen until the next job actually begins. It is the receipt of what happened, and a receipt that forgets its own lines while you are reading it would be worthless.
- A failed re-verification repaints the affected folder red. Without that, a broken copy would keep wearing the green tick it earned at copy time.

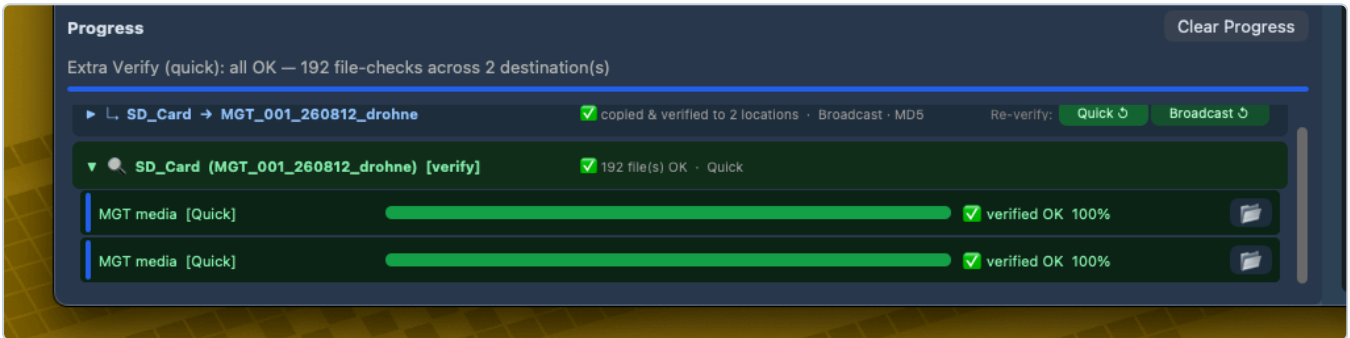
Toggle the panel with **Flow** « or .

8 Verifying

Verification is free, unlimited, and available at any time — during the trial, after the trial, days or months after the copy was made.

8.1 Re-verify a finished job

Every completed job in the **Progress** history carries buttons on the right: **Quick** and **Broadcast** re-check that job's clones on every destination it was written to, and add their result as a new card below. **Media PDF** beside them builds a media report for that job on demand (chapter 10).

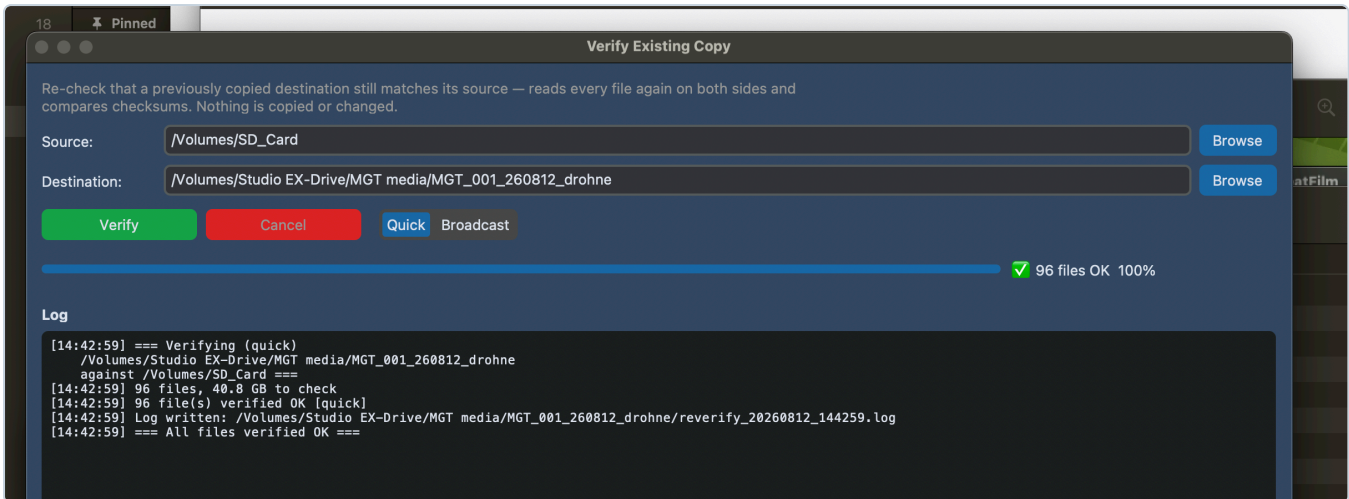


An **Extra Verify (quick)** across two destinations: 192 file-checks, all OK.

Button	What it does
Quick	Confirms every file still exists at the destination with the right size. Seconds, even for a full card. Catches missing and truncated files.
Broadcast	Re-reads every file on <i>both</i> sides and compares checksums. As thorough as the original copy verification, and completely independent of it. This is the one to run before formatting a card.

8.2 Verify Existing Copy

For a copy Offload Wrangler did not make, or one from weeks ago: **Verify Existing Copy...**

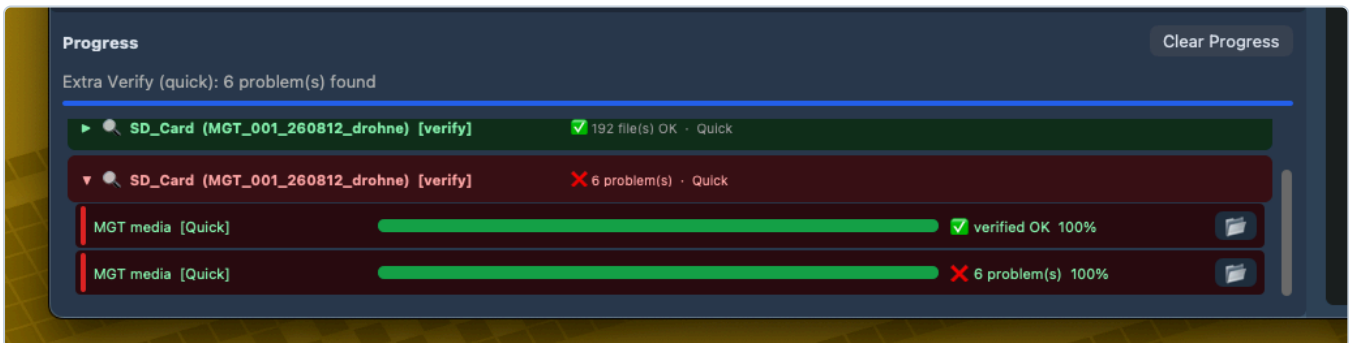


Point it at any source and any destination folder, pick **Quick** or **Broadcast**, and press **Verify**. Nothing is copied or changed.

- 1 **Choose the Source** — the original card or folder.
- 2 **Choose the Destination** — the clone to check, including its clone folder name.
- 3 **Pick the level** and press **Verify**. A dialog states in plain words what is about to happen and confirms nothing will be changed.
- 4 **Read the result.** The log ends with `=== All files verified OK ===` or a list of problems, and a `reverify_<timestamp>.log` is written into the destination folder either way.

8.3 Reading a failure

When something is wrong, the job card turns red and names the count:



The same clone, checked again later: destination 1 is fine, destination 2 reports **6 problems**.

The log says which files and why:

```

yGreatFilm [TRIAL — 4 offloads left]

Live History Clear Save...

----- BATCH -----
2026-08-12 13:48:41 Copy & Verify
Source: SD_Card (96 files · 40.8 GB)
Duration: 9m 51s · 70.6 MB/s
→ MGT media [Broadcast · MD5] ✓ 96 OK
→ MGT media [Broadcast · MD5] ✓ 96 OK

----- RE-VERIFY -----
2026-08-12 14:35:22 Extra Verify [Quick]
Duration: 0s
SD_Card → MGT_001_260812_drohne ✓ 192 OK

----- RE-VERIFY -----
2026-08-12 14:36:23 Extra Verify [Quick]
Duration: 0s
SD_Card → MGT_001_260812_drohne x 6 FAILED
→ destination 2: /Volumes/Studio EX-Drive/MGT media
x DCIM/DJI_001/DJI_20260608094815_0004_D.MP4 - missing in destination
x DCIM/DJI_001/DJI_20260608094815_0004_D.SRT - missing in destination
x DCIM/DJI_001/DJI_20260608095057_0005_D.MP4 - missing in destination
x DCIM/DJI_001/DJI_20260608095057_0005_D.LRF - missing in destination
x DCIM/DJI_001/DJI_20260608095057_0005_D.SRT - missing in destination
x DCIM/DJI_001/DJI_20260608095147_0006_D.LRF - missing in destination

```

The History log names the destination and every affected file.

Message	Meaning
missing in destination	The file is not there at all. Something deleted it, or the copy never completed. Copy that source again.
size mismatch (expected ..., got ...)	The file is truncated or was overwritten. Copy it again.
hash mismatch	Same size, different content — the serious one. The bytes on the destination no longer match the source. Suspect the destination drive or its cable, and re-copy to different storage.

A RED VERIFY MEANS: DO NOT FORMAT

As long as the source card still exists, a failed destination is an inconvenience. Once the card is gone it is a lost day. Re-copy first, verify green, then erase.

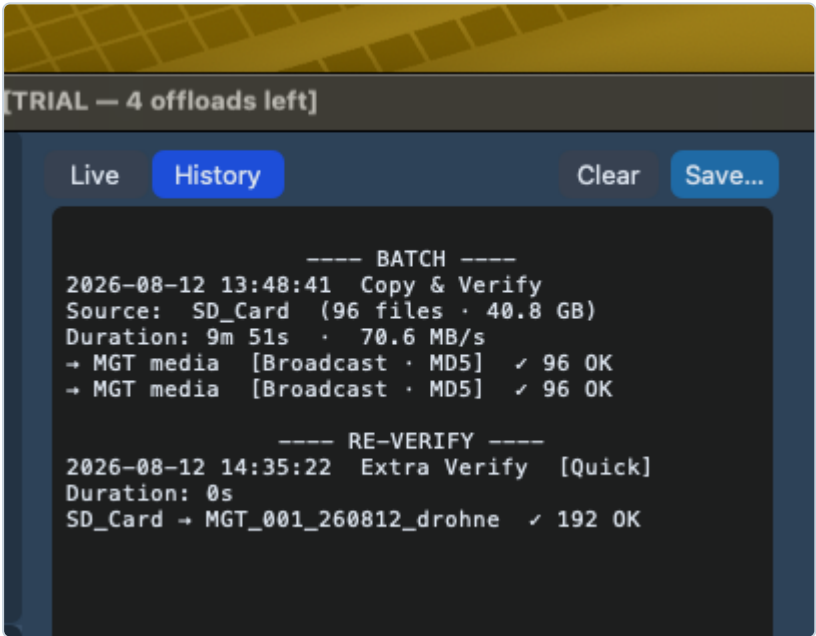
9 Logs and reports

Offload Wrangler writes three kinds of record: the on-screen log, the checksum manifests that live next to the footage, and PDF reports.

9.1 The log sidebar

Open it with » **Log** or . Two modes, remembered across restarts:

Mode	Shows
Live	The current run, line by line, timestamped. Cleared at the start of each batch. Sections are separated by rules so the structure is visible at a glance.
History	A permanent, condensed record of every batch and every re-verify this Mac has run — one block per operation, kept in a file that survives quitting.



History: a copy batch and the re-verify that followed it, with duration, throughput, destinations and file counts.

Clear empties the panel — and, in History mode, deletes the history file itself. **Save...** writes whatever is currently displayed to a  file. To save it as PDF instead, use the log panel's PDF export.

9.2 What is written next to the footage

These files land inside the clone folder, so the proof travels with the material:

File	Contents
------	----------

<code><clone>_verification.log</code>	Written after every copy. Names the app version, source, destination, verification level and algorithm, start and end times, the OK/failed counts, and then every file with its checksum . Failures are listed separately with their reason.
<code>reverify_<timestamp>.log</code>	Written by every re-verification. Same header, plus either <i>All files verified OK</i> or the list of problems.
<code>OffloadWrangler_Report_<timestamp>.pdf</code>	The complete batch log as a PDF, if auto report is on in the preset.
<code><clone>_MediaReport.pdf</code>	The media sheet — every clip with its frames, facts and checksum (chapter 10). On by default. This is the one to hand to production or attach to a delivery.

THE MANIFEST IS PORTABLE

The verification log is a plain checksum list — `hash` then path, one per line. Any standard tool can re-check a clone against it years from now, with or without Offload Wrangler.

9.3 Reading the log

```

---- BATCH ----
2026-08-12 13:48:41 Copy & Verify
Source: SD_Card (96 files · 40.8 GB)
Duration: 9m 51s · 70.6 MB/s
→ MGT media [Broadcast · MD5] ✓ 96 OK
→ MGT media [Broadcast · MD5] ✓ 96 OK

---- RE-VERIFY ----
2026-08-12 14:36:23 Extra Verify [Quick]
SD_Card → MGT_001_260812_drohne × 6 FAILED
→ destination 2: /Volumes/Studio EX-Drive/MGT media
    × DCIM/DJI_001/DJI_20260608094815_0004_D.MP4 — missing in destination

```

A `✓` line is a destination that passed with its file count. A `×` line names the destination and then each affected file.

10 The media report

The verification log proves that the bytes arrived. It does not prove that the *right* bytes arrived. The media report is the page a human can check in five seconds.

A card that read back wrong, a camera that wrote a corrupt clip, a mis-labelled roll — all three pass a checksum. A picture of the first, middle and last frame of every clip catches all three, and it is what a production office actually wants attached to a delivery.



MEDIA REPORT

A001_005_260904

Source: /Volumes/CAM_A_001 · Destination: /Volumes/SHUTTLE_01/A001_005...
Verify: Broadcast · MD5 · 04.09.2026 08:41 · M4-Boehme-2.fritz.box

8

FILES

6.2 GB

TOTAL

15:26

RUNTIME

1 BAD

VERIFY

01 A001_T001.wav

VERIFIED



WAVEFORM

01:33 · 17.0 MB · PCM_S16LE · 2 ch · 48 kHz · 16 bit
AUDIO/A001_T001.wav

99b0c1db666a432072c177c5a130d78f

02 A001_C001_260904.mp4

VERIFIED



BEGINNING 00:00

1/3 01:21

2/3 02:42

END 04:03

3840x2160 · HEVC Main 10 · 50 fps · 04:03 · 3.5 GB · 2025-03-21 21:47:31
CLIPS/A001_C001_260904.mp4

4ec8f51421ab5c9f7b28d7764b37bd86

03 A001_C002_260904.mp4

VERIFIED



BEGINNING 00:00

1/3 02:21

2/3 04:42

END 07:03 · BLACK FRAME

1920x1080 · H264 High · 25 fps · 07:03 · 805.6 MB · AAC · 2 ch · 48 kHz · 2025-04-09 05:33:30
CLIPS/A001_C002_260904.mp4

6433b3721c12d661de850ccf6c101d90

04 A001_C003_260904.mp4

CHECKSUM MISMATCH



BEGINNING 00:00

1/3 00:41

2/3 01:21

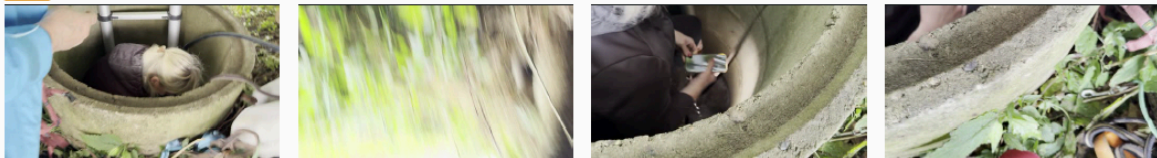
END 02:02

3840x2160 · HEVC Main 10 · 59.940 fps · 02:02 · 1.8 GB · 2025-03-21 22:02:47
CLIPS/A001_C003_260904.mp4

76088adb0c7ab981af1dafbe4de870

05 A001_C004_260904.mov

VERIFIED



BEGINNING 00:00

1/3 00:15

2/3 00:30

END 00:44

1920x1080 · HEVC Main 10 · 24.998 fps · 00:45 · 39.4 MB · AAC · 2 ch · 44.1 kHz · 2025-09-10 10:27:39
CLIPS/A001_C004_260904.mov

d04a66144bcdafa54ef1482de92449453

One page of a media report. Every clip gets four frames, its technical line and its checksum; the failed one is boxed in red.

10.1 Turning it on

It is **on by default**. The switch is in the preset — **Automatically save a PDF media sheet** (section 4.5) — and the sheet is written into each destination's clone folder as `<clone>_MediaReport.pdf` once the batch finishes.

You can also build one on demand: every finished job in the **Progress** history carries a **Media PDF** button next to its re-verify buttons.

READ FROM THE COPY, NEVER FROM THE CARD

The frames are extracted from the *destination*. The point of the sheet is to show what landed on the drive; reading the source again would prove nothing about the copy, and would keep the card spinning after it had already been released.

With several destinations, the frames are read from **one** of them and the finished PDF is copied to the others. The checksums already prove the drives hold identical bytes — re-reading every disk would multiply an already long job by the number of drives and produce identical sheets.

10.2 What the header tells you

The navy band at the top of page one carries the job on the left and the four numbers anyone checks first on the right:

Number	Meaning
FILES	How many media files are on the sheet
TOTAL	Their combined size
RUNTIME	The summed duration of the video
VERIFY	OK — or n BAD in red, if any clip failed its checksum

Underneath the title sits the clone name, then the source and destination paths, then the verification line — level, hash algorithm, when it finished, and which machine did it. Later pages carry a slim running head instead, and every page is footed with the app version, when the report was generated, and the page number.

10.3 Frames, waveforms and what needs ffmpeg

Each video clip gets **four frames**, labelled **BEGINNING**, **1/3**, **2/3** and **END**. The end frame is taken literally — a fraction of a second before the out point, not a percentage — because on a verification sheet the last frame is exactly the one worth seeing: that is where a truncated copy or a card that died mid-write shows itself.

Kind of file	What the sheet shows
Video	Four frames across the clip.
Audio	A waveform across the full width. A sound roll has no frames to show, and a black rectangle where the picture goes reads as a failure.

Stills	One frame.
BRAW, R3D and anything ffmpeg will not decode	The macOS Quick Look poster frame, labelled POSTER , with the note <i>"preview only (no frame extraction available)"</i> .

FFMPEG IS OPTIONAL, BUT IT IS WHAT GIVES YOU THE FRAMES

The report prefers a copy of `ffmpeg` shipped with the app, then one on your `PATH`, then the usual Homebrew locations. Without it the sheet still builds — using the Quick Look poster frame, one thumbnail per clip — and **says so on the clip** rather than quietly showing less.

10.4 Reading a clip card

On the card	What it is
The amber number	The clip's position on the sheet.
The status, top right	VERIFIED — checksummed and matched · COPIED — copied under a Quick or None destination, so not independently checked · CHECKSUM MISMATCH — and the whole card is boxed in red.
The technical line	In the order a DIT reads it: resolution, codec, frame rate, duration, size, embedded timecode, audio format, and the file's creation date.
The path, bottom left	Where the file sits inside the clone.
The hash, bottom right	The checksum it was verified with.
BLACK FRAME	Printed on a thumbnail that really is black. A clip that fades out ends on a black frame and an honest sheet shows it — but an unexplained black rectangle reads as a broken thumbnail, so the label says which it is. Quietly seeking to a prettier frame is the one thing a verification document must not do.

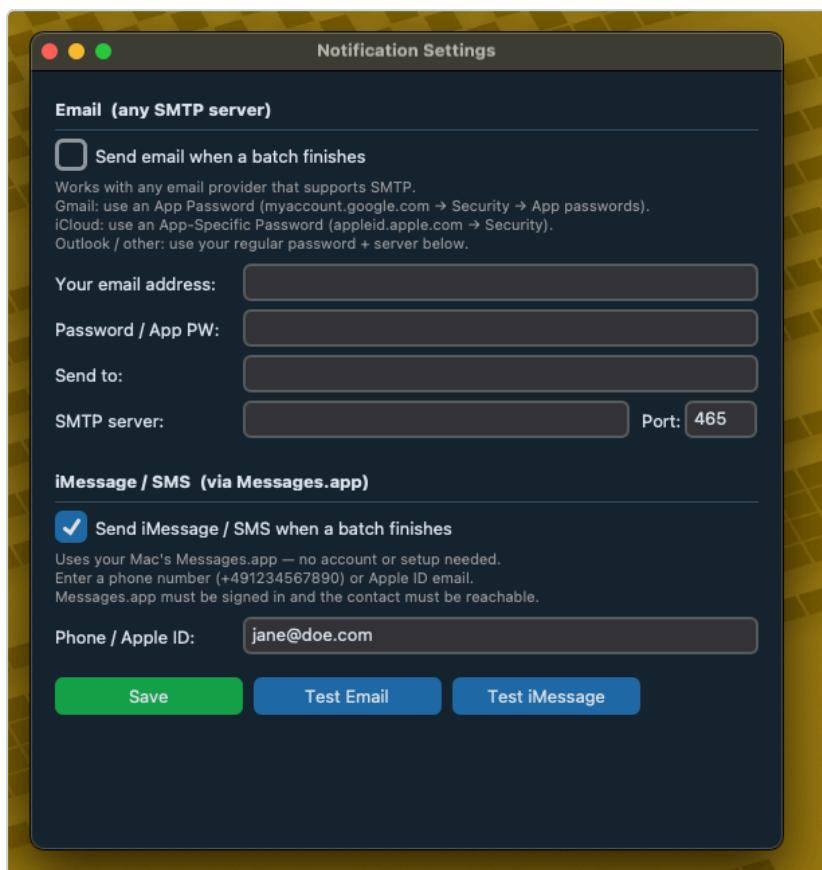
10.5 What goes on the sheet

Only media. Video, stills and audio in the usual professional formats — `.mxf`, `.braw`, `.r3d`, `.ari`, `.insv` and the camera raw stills among them — are listed; sidecars that travel *with* a clip (`.xml`, `.xmp`, `.thm`, `.cpf` and friends) are not. Listing them would double the length of the sheet and tell nobody anything.

When the app builds the sheet it lists exactly the files that the offload copied. Run `media_report.py` against a folder by hand and it walks the whole tree instead.

11 Notifications

A full card takes minutes to hours. Offload Wrangler can tell you when it is done without you watching the bar.



Open with **Notifications...** or  **N**.

10.1 macOS notification

Always on, nothing to configure. Every finished batch posts a Notification Centre banner with a sound — *Glass* when everything verified, *Basso* when something failed.

10.2 Email

Works with any provider that supports SMTP. Tick **Send email when a batch finishes** and fill in:

Field	Value
Your email address	The account the mail is sent <i>from</i> .
Password / App PW	For Gmail, an App Password (myaccount.google.com → Security → App passwords). For iCloud, an App-Specific Password (appleid.apple.com → Security). For Outlook and most others, your normal password.
Send to	Where the notification goes — your phone, the DIT, production.

SMTP server / Port

e.g. `smtp.gmail.com` and `465`. Port 465 (SSL) is the default.

Press **Test Email** before you rely on it — it sends immediately and reports the exact error if anything is wrong.

ON APP PASSWORDS

Google and Apple both block plain account passwords for SMTP. If a test fails with an authentication error, an app-specific password is almost always the fix.

10.3 iMessage / SMS

The simplest option: no account, no server, no setup. It uses the Messages app already signed in on your Mac. Tick the box and enter a phone number in international format (`+491234567890`) or an Apple ID email address, then press **Test iMessage**.

Messages must be signed in and the recipient reachable. Press **Save** to store the settings — they are kept locally on this Mac.

12 Menus and keyboard shortcuts

Everything the buttons can do, the menu bar can do too — and a menu item is never able to do more than its button. If a button is disabled, the shortcut does nothing.

File

Command	Shortcut	Notes
Add Source...	⌘O	Pick any folder or volume
Scan All	⌘R	Scan every unscanned source
Clear Sources	⇧⌘K	Empty the queue
Clear Progress	⇧⌘P	Remove the progress history

Run

Command	Shortcut	Notes
Start Copy & Verify	⌘↵	Runs the pre-flight checks first
Cancel	⌘.	Finishes the current file, then stops
Verify Existing Copy...	⇧⌘V	Always available, always free
Manage Presets...	⌘P	The preset editor
Notifications...	⇧⌘N	Email and iMessage settings

View

Command	Shortcut	Notes
Show/Hide Log	⌘L	The log sidebar
Show/Hide Flow	⌘D	The diagram panel
License...	—	Key entry and activation

Mouse

Action	Effect
Control-click / right-click a volume button	Eject that volume
Click the folder icon on a progress bar	Open that clone in the Finder

Click a batch card's header	Collapse or expand it
Drag a panel divider	Resize Flow, Log or Progress

13 Licensing

12.1 Activating

- 1 **Open the licence window** — **View ▶ License...**, the **Enter licence key...** button in the About box, or the dialog that appears when the trial ends.
- 2 **Paste your key** in the form `0W-XXXX-XXXX-XXXX` and press **Activate**. The app contacts the licence server; this takes a moment.
- 3 **Done**. The trial badge disappears from the window title.

No key yet? **Buy a license** in the same window opens the store.

12.2 Moving to another Mac

A licence is activated per machine. Before setting up a new Mac — or before selling or reformatting the old one — open the licence window and press **Deactivate this Mac**. That releases the seat so it can be used elsewhere.

12.3 Offline use

A licensed copy keeps working without an internet connection for a generous grace period. If it goes too long unchecked, the title shows **LICENCE NEEDS CHECKING** and offloads pause until the app can reach the server once. Verifying existing copies keeps working regardless.

A FAILED LICENCE CHECK NEVER BLOCKS A SHOOT NEEDLESSLY

If the licensing system itself cannot run — no network, an unreadable store, an internal error — the app allows the offload rather than refusing it. A dead offloader on a shoot day is not worth a licence check.

12.4 Trial states in the title bar

Badge	Meaning
TRIAL — n offloads left	Running on the trial, <i>n</i> counted offloads remaining
TRIAL ENDED	All five used, or 182 days elapsed. Verification still works.
LICENCE NEEDS CHECKING	Licensed, but offline too long — connect once
LICENCE PROBLEM	The licence was revoked; contact support
<i>no badge</i>	Licensed and healthy

14 Where the app keeps its settings

Everything Offload Wrangler remembers between launches lives in one folder:

```
~/Library/Application Support/OffloadWrangler/
```

File	Contents
presets.json	Every preset — names, project codes, serial numbers, destinations, verification levels, hash choice — plus which one is active and the log mode.
notify.json	Email and iMessage notification settings.
offload_history.log	The permanent History log shown in the sidebar.

MOVING A SETUP TO ANOTHER MAC

Copy `presets.json` to the same folder on the other machine and restart the app. Serial numbers, destinations and naming come across intact. Licences do not travel this way — deactivate and re-activate instead (chapter 13.2).

Presets are saved atomically — written to a temporary file and swapped into place — so a crash or a power loss mid-save cannot leave you with a corrupt preset file. Old preset formats from earlier versions are upgraded automatically on load.

15 Troubleshooting

Symptom	Cause and fix
Start Copy & Verify is greyed out	One of five things: the queue is empty; a source is still not scanned (press Scan All); no destination is ticked in the preset; the queue will not fit on a destination — look for a red won't fit on a source row; or an active destination is OFFLINE, not mounted , which the destination line says in red.
A destination says "OFFLINE, not mounted"	The drive was unplugged or the network share dropped. Remount it — the line clears itself within seconds — or untick that destination in the preset.
"Not enough disk space"	The total of all uncopied sources exceeds the free space on at least one active destination. Untick that destination, free space, or split the batch.
"Destination missing" or "not accessible"	The drive was unmounted or the path changed since the preset was saved. Re-select it in Manage Presets...
A card does not appear in the <i>Add volume</i> strip	The strip refreshes automatically within seconds. If it still does not show, press v , and check the card is mounted in the Finder. Mounted disk images are intentionally excluded.
"Zielnamen doppelt" / duplicate target names	Two sources would produce the same folder name, or the folder already exists at a destination. Nearly always caused by original name on two cards with the same label. Give one a tag , or turn original name off.
A volume will not eject	The log names the reason, usually a file still open in another app. Quit whatever is reading the card. Ejecting is blocked entirely during a copy — by design.
Verification reports <i>hash mismatch</i>	The bytes on the destination differ from the source. Treat the destination drive or cable as suspect: re-copy to different storage, and do not format the source until a copy verifies green.
Verification reports <i>missing in destination</i>	Files were deleted or never arrived. Re-copy that source.
The test email fails	Gmail and iCloud reject normal passwords for SMTP — generate an app-specific password. Otherwise check the server name and port (465 for SSL).
The PDF report was not written	Check that auto report is ticked in the preset, and that the destination is still mounted and writable. The log records the exact reason on failure.
The media sheet shows one preview per clip instead of four frames	<code>ffmpeg</code> was not found. The sheet falls back to the macOS Quick Look poster frame and labels each clip " <i>preview only</i> ". Install <code>ffmpeg</code> , or use a build that bundles it.
A clip on the media sheet has no preview at all	Neither <code>ffmpeg</code> nor Quick Look could read it — usually an exotic camera format. The clip still appears, with its facts, its checksum and a note saying why there is no picture.

A thumbnail is black	If it is labelled BLACK FRAME , the frame really is black — a fade-out, or a clip that starts on black. That is the sheet being honest, not a fault.
The media sheet took a long time	It reads every clip back off the destination to extract frames. It runs in the background after the finish dialog, and the log reports its progress; the app stays usable throughout.
Cancel seems to hang	It is finishing the file currently being written — deliberately. The button reads Stopping... while it waits. A very large file can take a while.
The interface is too small or too large	Use the zoom dropdown at the top right.

16 Reference tables

Verification levels

Level	Destination check	Reads per file	Detects
Broadcast	Full checksum re-read and compare	Source ×1, destination ×1	Missing, truncated, corrupted
Quick	Exists with matching size	Source ×1	Missing, truncated
None	None	Source ×1	Only outright copy errors

Hash algorithms

Algorithm	Speed	Use
MD5	Moderate	Broadcast industry standard — the default
SHA-256	Slowest	Cryptographic; when a delivery spec requires it
xxHash3-64	Fastest	Very large volumes on fast storage
CRC-32	Very fast	Compatibility only

Limits and behaviour

Item	Value
Destinations written simultaneously	3
Destinations stored per preset	Unlimited (at most 3 ticked at a time)
Sources per batch	Unlimited; copied one after another
Read/write block size	64 MB — tuned for large media files on NVMe and CFexpress
Empty folders	Recreated at the destination
Symbolic links	Not followed
Files skipped	<code>.DS_Store</code> , <code>._*</code> , <code>.Spotlight-V100</code> , <code>.fsevents</code> , <code>.Trashes</code> , <code>.DocumentRevisions-V100</code> , <code>.TemporaryItems</code> , <code>System Volume Information</code>
Trial allowance	5 offloads within 182 days; runs under 1 GB are free
Serial number	Incremented per copied source, saved immediately

Media sheet frames per clip	4 — beginning, 1/3, 2/3, end
Media sheet read from	One destination; the PDF is copied to the others

What the media sheet lists

Kind	Extensions
Video	mov · mp4 · m4v · mxf · avi · mts · m2ts · mkv · braw · r3d · ari · arx · insv · lrv · webm · mpg · mpeg · dv · wmv · 3gp
Stills	jpg · jpeg · png · tif · tiff · heic · heif · webp · dng · arw · cr2 · cr3 · nef · raf · orf · rw2 · srw · pef · gpr
Audio	wav · aif · aiff · mp3 · m4a · flac · bwf
Skipped as sidecars	xml · xmp · cpf · ppn · thm · bim · sub · idx

Clone name grammar

<code>{project}_{serial}_{date}[_{tag}]</code>	
MGT_001_260812	project MGT, serial 001, 12 Aug 2026
MGT_002_260812_drohne	the same, with the tag "drohne"
Gunnar_007_260812	a different preset's scheme
Projekt Gunnar75	"original name" – the source folder's own name

SUPPORT

Offload Wrangler · version 1.0.13 (build 2026-09-04a)
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