

MD Mac CD RIP Pro — User Guide

Document status: PRE-RELEASE CANDIDATE. The exact installed Build 71 has passed identity, codesign, arm64, built/installed/Master parity and window-only exact-path UI smoke verification.

1. Purpose

MD Mac CD RIP Pro is designed to read Audio CDs accurately, save individual tracks or a disc image, preserve disc structure, and produce a reviewable set of audio, CUE, playlist, artwork and log files.

2. Main window

Toolbar

- Read Disc — refresh drive and TOC discovery.
- Test & Copy — independent test read followed by secure copy.
- Copy Image — single-image workflow.
- Create CUE — CUE variants for the current disc.
- Detect Gaps — gap/index analysis.
- Metadata — refresh and choose an exact release.
- Settings — extraction, drive, naming, codecs, providers and logs.
- Runtime Log — detailed session diagnostics.

Metadata header

Album, Album Artist, Composer, Comment, Year, Genre, Catalog Number and Disc Number can be corrected before ripping.

Track table

The table includes Track, Title, Artist, Start, Duration, Pregap, Test CRC, Copy CRC, AccurateRip, CTDB and Flags. The verified native table supports sorting and column resizing.

Inspector

- Inspector — extraction, output and verification summary.
- Drive — hardware and saved test profile.
- Metadata — providers, catalog, barcode and local database.
- Covers — Front Cover and manual/network artwork selection.

3. Drive accuracy

Drive Feature Test

Checks TOC consistency, IOKit CD features, Accurate Stream and cache behavior. When audio caching is detected, cache defeat is enabled so a repeated read does not simply return stale cached data.

Read offset

Offset is expressed in samples. Missing boundary samples can be filled deterministically with silence when physical overread has not been proven. Calibration applies only to an exact drive identity.

C2

`Transport available` means the drive returns an error-flag payload. It does not prove reliable pointers. Enabling C2 correction requires a known damaged disc and repeatable validation.

Cache

Cache defeat reads displacement data before a repeated secure block. This can be slower, but avoids false read agreement.

4. Metadata providers

Default priority:

- Local Database;
- CUETools DB;
- MusicBrainz;
- Discogs;
- CD-Text.

Providers can be enabled, disabled and reordered. Priority and options are stored in `UserDefaults` and `.mxr`.

CUETools DB

- Metadata Search: Fast / Default / Extensive.
- Cover Search: Extensive / Primary / None.
- Cover Size: Large / Small.

MusicBrainz

- independent identity cross-check;
- include or exclude Various Artists candidates.

Discogs

- Strict / Pressing / Extensive;
- require Catalog Number or Barcode;
- include or exclude unofficial releases.

CD-Text

Can be used as a local identity seed. Missing credits are never invented.

Local Database

Has first priority and can preserve corrected metadata and Front Cover for offline reuse.

5. Artwork

- Automatic artwork must use Front Cover, not a disc image.
- Original user scans should be preserved separately.
- Working artwork is normalized to sRGB JPEG.
- Maximum 1500 × 1500 px and 3 MB.
- Aspect ratio must be preserved.
- Additional scans belong in `images/`.

Upscaling does not restore real detail and must not replace the original.

6. Extraction modes

Test & Copy

- Independent Test read.
- Secure reread/consensus.
- Test CRC versus Copy CRC.
- Encoding.
- Decoded result verification.
- CUE and log generation.

Secure consensus

Each block is reread until the required number of matching results is reached. Mismatches receive bounded retries. Additional reads and errors are logged.

Separate Tracks + CUE

Creates one audio file per selected track plus CUE documents.

Single Image + CUE

Creates one audio image. Track boundaries are described by CUE and validated against local CRC data.

7. Formats

WAV

Uncompressed PCM for diagnostics, editing and reference comparison.

FLAC

- lossless;
- levels 1–8;
- encoder verification;
- mandatory decode after encoding;
- decoded length and PCM CRC must match the secure source.

MP3

- LAME;
- VBR V0–V9;
- CBR/ABR 32–320 kbps;
- lossy output cannot be bit-exact to source PCM;
- readability, duration and decoded sample count are checked.

AIFF and ALAC

- native Apple AudioToolbox output;
- AIFF uses big-endian PCM;
- ALAC uses Apple Lossless in M4A;
- each result is decoded and checked by PCM CRC round-trip.

Monkey's Audio APE

- official Monkey's Audio 13 . 20 arm64 Console Front End;
- Fast, Normal, High, Extra High and Insane modes;
- normal/full verify, decode and decoded PCM CRC;
- current Build 71 production output is verified for separate tracks;

single-image APE is not implemented yet.

WavPack, Ogg Vorbis and other additional formats must not be advertised until implementation and verification are complete.

8. Naming and output structure

Recommended folder:

Artist - Album Catalog (Year) (PR) [FORMAT (tracks + .cue)]

or:

Artist - Album Catalog (Year) (PR) [FORMAT (image + .cue)]

(PR) marks a user-created confirmed rip. Settings should preview naming, character replacements, Standard/Various Artists templates and destination.

Existing output is never silently overwritten. Data is written to .part before atomic publication.

9. CUE, playlist and logs

Expected documents:

- Original CD Layout CUE;
- Playback CUE;
- M3U;
- EAC-compatible extraction log;
- extended MD Mac CD RIP Pro log.

Complete parity for HTOA, all INDEX 00/01 cases, checksum and final EAC log layout remains pending.

10. AccurateRip and CTDB

AccurateRip

Local CRC v1/v2 values are calculated from extracted PCM. Verified status requires correct offset, official lookup, matching CRC and confidence.

Not checked before lookup is correct. Submitted must only appear after a real permitted submission.

CTDB

TOC found means the database recognizes the disc layout. It does not verify the extracted PCM. Local whole-disc and per-track PCM matching is implemented and accepts a result only when CRC values match an exact CTDB entry. CTDB correction/repair and submission remain pending.

11. .mxr settings profile

The complete profile includes:

- destinations;
- naming;
- codecs;
- verification;
- metadata priority and provider options;
- artwork policy;
- drive profiles and calibration.

When a saved destination does not exist on another Mac, the application should ask for a replacement or offer to create it without discarding other settings.

12. Runtime Log

The log records application identity, drive/media, TOC, metadata providers, network activity without secrets, secure reads, retries, CRC, encoder results, output publication, CUE/log generation, errors and cancellation.

Review local paths before sharing a log publicly.

13. Troubleshooting

Disc not detected

Check cable/power, close other CD software, use Read Disc, reinsert the disc, and restart only MD Mac CD RIP Pro.

Very slow reading

Cache defeat and secure rereads can reduce speed. Review retries and errors in Runtime Log before changing accuracy settings.

Test CRC and Copy CRC differ

Do not publish the result as accurate. Clean the disc, reduce speed, retry, test another drive and preserve Runtime Log.

Wrong artwork

Use the exact-release chooser or Covers panel, select Front Cover manually, then save metadata locally.

AccurateRip stays Not checked

Official online verification is not complete in the currently verified build. Local CRC is not database confidence.

14. Pre-release limitations

- The renamed MD Mac CD RIP Pro Build 71 is installed and verified.
- AccurateRip official lookup/confidence is incomplete.
- CTDB whole-disc and per-track PCM matching are implemented; correction, repair and submission remain incomplete.
- Full EAC-compatible gap/CUE/log parity is incomplete.
- C2 reliability needs a damaged reference disc.
- The full public screenshot set is incomplete; two Build 71 captures are verified.