INDEPENDENT AUDIO SOFTWARE

LYNCH Analog Tape

Nine machines. One part worth keeping.



Give drums open-reel weight, let keys drift or narrow a voice into cassette character. Nine virtual tape machines bring drive, headroom, bias, transport movement and wear into one insert, with the complete processing controls close at hand.

Complete colour user guide · version 0.3.1 · Apple Silicon Mac AU · macOS 12+

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Start with the part

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Inside the sound

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Presets And Controls

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Using The Editor

The concept materials are now used in the real native editor.

Controls And Signal Routing

Knobs have stable centered hardware geometry and fixed outer rings.

Sound And Approach

Apple Silicon Audio Unit · macOS 12 or later

Current Release

This version is Developer ID signed and notarized by Apple. A full 14-day trial begins only when Start trial is pressed. A paid license is permanent for up to three computers. The newly generated chassis and reel artwork are controlled by native AU parameters; no controls are baked into the image.

Sound And Approach

Nine virtual machines: Studio 800, Master 102, Valve 350, Porta, Cassette, Microcassette, Master 820, Four Track 37 and MTR 90. Magnetics, bias, head bump, speed/formula, wow/flutter, stereo drift, wear, crosstalk, dropouts and optional noise.

Model profiles alter spectral response, flux/compression, hysteresis and transport behavior. Magnetic memory uses a bounded play model plus ADAA; it is not a measured Jiles–Atherton model. Speed choices are virtual tonal recipes across machines. This effect does not record files, provide transport Record/Play buttons or tape echo. Tape compression, transport, dropout and speed meters report the actual engine. Oversampling is 16x at 44.1/48 kHz, 8x at 88.2/96 kHz and 4x at 192 kHz.

Host latency: 608 samples. 52 factory entries including Init; 30 host parameters.

Levels And Safety

Input, Output and Mix are manual controls. No continuously riding automatic level matching is added. Init is neutral with latency-aligned dry audio. Sample Protect is optional sample protection, not a true-peak limiter. Output can exceed full scale with protection off; observe the meters.

Implementation And Limits

These are original Lynch algorithms informed by historical tape behavior. They are not measured or calibrated replicas of individual hardware machines. No vendor DSP code, branded hardware artwork or third-party sample packs are included. Engineering tests do not establish physical-hardware fidelity or subjective musical preference.

Controls And Signal Routing

Knobs have stable centered hardware geometry and fixed outer rings. Their pointers turn without moving the body or rotating a cropped background. Model, ratio and enable buttons use real LED indicators, without orange selection frames. LEDs dim when the corresponding control is unavailable.

Global Wet Mix at0% and Bypass reproduce the exact original input, delayed by the reported plugin latency. Input, Output, coloration, noise and protection act on the wet branch. At50% the global blend is an

aligned linear mix of the original input and the full processed signal. This is not an automatic leveler.

Model Panels And Transport

The Audio Unit product name begins with Lynch under Lynch Audio Lab. Component identity and parameter IDs remain unchanged. Model changes from the main buttons, host automation, factory presets and saved state all select the corresponding panel. Details / User keeps the complete parameter set available. The original concept textures and engraved slogan remain part of the interface. These are original hardware-inspired designs and algorithms, not certified replicas of physical units. Each tape machine has its own finish and name. Cassette, Porta and Micro use a generated photoreal cassette transport. Open reels retain the original photographic guides, rollers and heads. Moving reels and cassette hubs follow tape speed and actual Audio Unit rendering while Tape In is enabled and Bypass is off. Animation pauses without rendering and when the editor closes. Transport graphics are visual; this remains an insert effect, not a file recorder. The existing Tape Alignment / Details drawer controls record drive, filters and advanced tape parameters.

Model Decks And Calibration

Model changes the visible machine deck, finish, reel geometry, knob material and control grouping. Open-reel, mastering, valve and compact-cassette families use distinct panels made from our own artwork and native hardware controls. They are historical design interpretations, not exact photographic replicas. All nine models remain stereo insert effects; Porta is not a four-track DAW.

Record Drive and Tape Headroom now have dedicated front-panel knobs. Mouse edits to band parameters enable Tape In; HP/LP cutoff edits enable the corresponding filter; Noise Level edits enable Noise. Host automation remains explicit: automate the module enable along with its parameters when needed. Input (Record) and Output (Repro) trims also work with Tape In off. They do not change fully Dry or Bypass. Output 0 dB is at twelve o'clock despite the asymmetric -36/+24 range. HP/LP positions use the same logarithmic mapping as exact values. HP 20 Hz and LP 20 kHz are open endpoints. LP 0 Hz closes the filtered wet path; separately generated noise is added after the filters and Dry remains audible.

The VU needles are now fully native, not painted into the background: 0 VU is -18 dBFS RMS; +3 VU is -15 dBFS RMS. VU is not a digital clipping meter. Animation follows actual audio rendering and selected tape speed. It pauses when rendering stops, Tape In is off, or Bypass is on. Live monitoring in a DAW may keep rendering while its transport is stopped. Closing the editor stops its animation timer. Reel speed is illustrative; this is not a physical spool length simulation. Animation changes no audio samples.

Context For Auditioning

Drive adds level and saturation; Headroom changes magnetic saturation margin. Stereo Drift needs Wow/Flutter to be audible; crosstalk needs unequal L/R audio. Wow/Flutter rates need nonzero depths. Bass/Treble and wear need Tape In. Noise is input-armed, holds six seconds and fades for two; a fresh silent instance has no noise until audio arrives. Default Noise -72 dBFS is subtle. Enable Noise and raise it for an obvious test. Noise calibration was measured near -50 dBFS at five sample rates using the -50 dB setting. No automatic level riding has been added.

Sound And Approach

Thirty parameter paths, nine models, five sample rates, mono/stereo layouts, latency-aligned Dry/Bypass, automation, preset/state roundtrip, no audio-thread heap allocation, finite extreme inputs, reference aliasing tests and actual native editor/transport tests. Physical-machine measurement and musical approval in Logic remain separate from these engineering checks.

Noise uses a physical two-position OFF/ON slide switch with a live LED. Click to toggle. Noise Level remains the independent amount control. DSP and parameter identities are unchanged.

Presets And Controls

PRESETS opens Instrument > Use > Sound. Factory selection loads the model and complete sound. Init restores a neutral starting point. Save writes an original user patch; User loads a compatible patch file. Arrows browse factory sounds. User patches include the complete parameter state and model. Audio controls are exposed to host automation; right-click exposes host parameter information. Drag to adjust; Shift gives fine movement; double-click resets a dial. There are no hover-only parameter changes. ? enables contextual help. Guide opens an integrated frontmost reading panel; Close/Escape returns to editing. UI Size has six available scales. ON/OFF text and illumination identify active modules.

Using The Editor

The concept materials are now used in the real native editor. Knobs and faders are live controls. Drag vertically; hold Shift for fine adjustments. Scroll over a control to adjust it, double-click to reset, or right-click for reset and host automation guidance. Hover alone never changes a parameter.

Click PRESETS to open Instrument > Use > Sound folders. Save stores a User sound. DETAILS / USER exposes every parameter with its exact current value, including processing enables, routing and controls not engraved on the panel. The tiny size selector at top right provides six editor sizes. ? enables explanatory tooltips. Guide opens in front inside this editor; Escape closes the guide or the details drawer.

The original artwork's engraved scales and fixed curve symbols are visual references; actual ranges and the current values are shown while adjusting and in DETAILS. Native VU movement is based on real audio

measurements. These are original inspired DSP models, not measured hardware replicas.

The illustrated reel-to-reel body is an insert effect. It does not record audio files. TAPE ALIGNMENT / DETAILS opens the full processing controls.

Install and choose the right host slot

Apple Silicon Mac, macOS 12 or later. Audio Unit only; no Intel Mac, Windows, VST3 or standalone application is included. Use an AU-compatible host and insert on an audio track, instrument audio output or bus.

Save your session before installation. Use the verified current installer and follow its installation prompts, then restart the host if the newly installed AU is not listed. Select the product under Lynch Audio Lab in the appropriate slot.

Trial and permanent licensing

Download the trial installer shown on the product page; the same installer is used for trial and purchase. No card is needed for the trial.

Open the plug-in, click Trial & Activation at the bottom and press Start trial to begin its full 14 days. Installing, opening a preset or downloading a guide does not start a new trial. Each product has its own trial. There is no subscription, automatic charge or periodic noise burst.

For a permanent purchase, use the exact Buy link on the product page. Lemon Squeezy supplies a license key in the receipt. Connect this Mac to the internet, click Trial & Activation at the bottom, paste the receipt key for this exact product and choose Activate. A permanent license allows a maximum of three computers. After successful activation, work offline.

To free a Mac’s activation, connect it to the internet, open Trial & Activation and choose Deactivate this Mac. This releases that computer without renewing or resetting trial dates. Presets, project settings and updates do not renew the trial and retain settings.

The login Keychain stores trial and license-key records separately from presets. If it is locked, unlock it normally and press Refresh in Trial & Activation. Keep the system date correct.

At expiry, audio effects return latency-aligned dry audio with normal reported latency; instruments are silent; MIDI tools stop output and release held notes. Presets and project settings remain. Purchase activation restores licensed processing rather than a new trial.

Save, recall and automate

Save the host project to retain the AU instance. Use the product-specific preset operations described in the control chapters for reusable sounds. Preset files, complete project state and controller assignments can have different scopes; do not treat them as interchangeable.

When using host automation, choose an exposed sound parameter, record a short test pass and replay from before the first change. Check module enables, routing and output level. Only use product-local MIDI Learn when this manual explicitly documents it; otherwise use the host's controller-assignment workflow.

Troubleshooting and support

If the AU is missing, save your session, install the current package and restart the AU-compatible host. Check the required macOS version and Apple Silicon architecture, then review the host's plug-in manager. Do not delete a working production project to troubleshoot an insert.

For no sound or no processing, first check the correct slot, track input/output, incoming audio or MIDI, bypass/mute, module enables, mix/return amounts and trial or activation status. Test a simple documented starting point before adding a complex chain.

If the sound is too loud or distorted, reduce drive or output and inspect later inserts and the host master. Sample-peak protection does not guarantee intersample peaks. Source clipping cannot be repaired simply by lowering a later trim.

For dropouts, reduce active polyphony, unison, long returns or dense processing where applicable, or use the host's freeze/bounce workflow. A larger buffer can help scheduling; it cannot cure sustained processing overload.

For activation trouble, check the internet connection and use the key for this exact product from the Lemon Squeezy receipt. For help, contact info@lynchaudiolab.com with product version, macOS version, AU host and a short description. Never send your private license key publicly.

About this guide

Lynch Audio Lab · Music records a brighter tomorrow. This guide describes the released Audio Unit package. The control chapters preserve the supplied public operating documentation, with current-operation addenda integrated and obsolete private-test release labels removed. Images show the real product interface; some original panel lettering may predate the current package version. Original TXT documentation remains available separately.

Original Lynch designs are not measured hardware replicas or equipment-maker endorsements. Listen in context, maintain headroom and check the final deliverable after downstream processing. Support: info@lynchaudiolab.com.