# LYNCH THIRTY

**AAX NATIVE | APPLE SILICON | VERSION 0.6.0**

Radio preamp, amplifier, pedals, cabinet microphones and recording effects.

## Read this first

These two AAX pages cover this installer. The complete colour control manual follows unchanged. Its AU-specific installation, Logic menu paths and format exclusions apply to the AU edition only; use these opening pages for AAX. The controls and sound engine are shared.

## Requirements and tested host

An Apple Silicon Mac and an AAX Native host running natively on Apple Silicon are required. The embedded engine requires macOS 12 or later; your Pro Tools version may require a newer macOS. Actual host testing used Pro Tools Intro 2026.11. Other host releases are not independently certified by these tests. No Intel, Windows, HDX DSP, AudioSuite or standalone application is included.

## 1. Install

Save your sessions and quit Pro Tools. Open the signed AAX installer and follow macOS Installer. Administrator authentication may be requested. It installs only the selected product AAX bundles under /Library/Application Support/Avid/Audio/Plug-Ins/LYNCH Audio Lab/. Your installed Audio Units, sessions, presets and activation data are not replaced.

## 2. Load the effect

Restart Pro Tools and open an audio track or bus insert. Use insert search with the public product name, or browse the Lynch Audio Lab manufacturer menu. Choose the appropriate mono or stereo format. Radio and Thirty also offer mono/stereo: one input channel and two output channels.

## 3. Activate or evaluate

Open Trial & Activation in the plugin. An existing purchase key works for this product in AU and AAX on the same Mac without a separate format purchase. Studio Classics uses one shared bundle entitlement for all eight effects. A full 14-day trial starts only when you choose Start trial; reinstalling or changing format does not reset it.

# Working in Pro Tools

## Licensing and offline work

Purchased licences are permanent for up to three activated computers. Activation requires an internet connection; paid activated use is available offline. The developer signing iLok is not an end-user licence requirement for these effects. Pro Tools itself has separate licensing requirements. After the trial ends, the effects use latency-aligned dry bypass and retain their settings.

## Presets, automation and session recall

Use the plugin user-preset controls or Pro Tools settings presets. Save the Pro Tools session to retain the plugin state. For host automation, enable the required parameters in the plugin automation window, then use the normal Pro Tools automation modes. The adapter updates automation at audio-buffer boundaries; it does not claim sample-accurate automation.

## Buffer and CPU guidance

Use the lowest hardware buffer that remains stable for your session. The test system completed ten stereo inserts at 48 kHz/64 samples and 96 kHz/512 samples. A heavier session with 13 loaded instances exceeded CPU capacity at 96 kHz/64 samples; three isolated mono instances completed that setting. These are measured examples, not universal capacity guarantees. If AAE -9173 appears, raise the buffer or deactivate unused processing. A muted track is not the same as a deactivated track.

## Delay compensation and monitoring

Enable Pro Tools delay compensation when mixing. The host receives the engine latency: 16 frames for Studio Classics and 256 for Radio/Thirty in the tested configurations. Hardware and host buffering add further monitoring delay. These products do not provide zero-latency hardware monitoring.

## Updates, duplicates and removal

Quit Pro Tools before updating. Keep a single active AAX copy of each product; contact support if a previous private test copy is also present. To remove AAX, quit Pro Tools and move only that product .aaxplugin bundle out of the LYNCH Audio Lab scan folder to a backup folder or Trash. Retain presets, projects, licences and any AU copies you still use. Documentation is installed under /Library/Application Support/Lynch Audio Lab/Documentation/AAX/.

## Support and scope

Support: info@lynchaudiolab.com. Include your product version, macOS, Pro Tools version, channel format, sample rate and buffer setting. Avid and Pro Tools are trademarks of Avid Technology, Inc. No Avid endorsement or certification is claimed.

THE COMPLETE USER GUIDE

# LYNCH THIRTY

A lived-in amplifier.
A complete recording path.




*Mac Audio Unit edition | English | Manual revision 1.2 | 29 October 2026*

## Edition covered

Thirty 0.6.0. Apple Silicon Mac, macOS 12 or later, and an AU-compatible host. This guide covers the released plug-in. Audio devices, transport and audio-file recording are managed by your host.

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Read First sound for a fast start. The later chapters explain every module; the Control reference gives the current control ranges. Screenshots illustrate the interface family; small layout and version-label differences may be visible.

# Install and connect

LYNCH THIRTY is an Audio Unit audio effect. Load it on an audio track carrying a guitar DI recording or a live instrument input. It does not create guitar notes by itself.

**01.** Save your host project and close the audio host before installation. Open the signed .pkg installer supplied with your purchase and complete the macOS installation steps.

**02.** Reopen your AU-compatible host and allow its plug-in scan to finish. The installed component is in **/Library/Audio/Plug-Ins/Components/**.

**03.** In Logic Pro, open an **Audio FX** insert and choose **Audio Units > Lynch Audio Lab > Lynch Thirty**. Select the layout you need.

**04.** Select the correct input and output devices in your host. Assign your guitar input to the audio track. Enable software input monitoring when you want to hear the plug-in while playing.

**05.** Start with a comfortable headphone or monitor level, then play. Use your interface gain to obtain a healthy unclipped DI signal before adjusting the plug-in Input.

| Track and instance | What it does |
|---|---|
| Mono input / Mono output | A centred single-channel rig. Stereo returns are folded to mono. |
| Mono input / Stereo output | The practical choice for one guitar with stereo echoes or ambience. |
| Stereo input / Stereo output | Processes both incoming channels. Use for a genuinely stereo source. |

## Recording versus monitoring

A normal DAW audio track often records the incoming DI while the insert processes monitoring and playback. To commit the processed sound, route or bounce it using your host. The Recording panel inside the plug-in is a sound-processing rack, not a multitrack recorder or a record button.

### If the plug-in is missing

Confirm the Mac is Apple Silicon and the host runs natively. Rescan the AU in the host plug-in manager. Older private ThirtyTest/RadioTest components can share the AU identity; with the host closed, move an old test component out of its Components folder and retain a backup. Keep your projects and presets.

# 14-day trial and activation

The trial uses the same installer as the purchased product. Every sound and control is available for 14 calendar days. There is no payment card, automatic charge, subscription or periodic noise interruption.

**01.** Open the Trial & Activation status button near the bottom of the editor.

**02.** Press Start trial when you are ready. A plug-in scan or opening a project does not start the trial. Thirty and Radio have separate trial periods.

**03.** To buy, use Buy license to open the official Lemon Squeezy checkout. Your receipt provides your permanent product license key.

**04.** Paste the key into the secure License key field and press Activate. Internet is required for activation. An activated license then works offline.

| State | What you hear |
|---|---|
| Ready / not started | Dry bypass until you start the trial or activate a purchase. |
| Trial active | The complete processed sound. The status shows remaining time. |
| Trial ended | Dry input with the normal plug-in latency; saved sound settings remain intact. |
| Licensed | The complete processed sound, including offline use. |

## Three computers, permanent use

Each purchased product key permits up to three computer activations. Reusing the same key on the same Mac reuses its activation. To move to another computer, open Trial & Activation and choose Deactivate this Mac while online. This releases that activation without restarting the trial.

## Projects and presets stay yours

License keys and trial dates are stored in the login Keychain. They are not saved in AU presets or DAW project state. Expiry does not erase a preset or any control setting. Reinstalling, rescanning or restoring an AU preset does not restart a trial.

## If activation needs attention

Unlock the login Keychain and choose Refresh if storage is unavailable. Keep the Mac clock correct. An initial activation needs a working internet connection. A temporary network outage does not erase an already activated purchase. If all three activations are occupied, deactivate an old computer or contact support.

### Bought before keys were introduced?

Do not buy again. Contact info@lynchaudiolab.com with your original order number so we can arrange the correct product key. Never put your license key in a public screenshot or support forum.

# First sound

**01.** For one guitar, load a Mono-to-Stereo instance if you want stereo effects. Choose **RIG: Original** and press **Init**.

**02.** Select **Top**. Begin around Top Boost Volume 4, Bass 5, Treble 5 and Tone Cut 5. These values are a neutral learning position, not a promise of equal sound with every guitar.

**03.** Leave Radio, Pedalboard, Tape Echo, Noise and Recording off while you learn the amplifier. Keep Cabinet on, choose Blue Alnico 2x12 and a close microphone.

**04.** Set Input around 0 dB, play hard and check that the host input is not clipping. Raise Input for more drive or lower it for more room to breathe.

**05.** Use final Output for a comfortable level. Lower the guitar's volume and lighten your picking to hear how the amplifier cleans up.

**06.** Add one module at a time. Save the finished sound and the host project.

### Input is part of the instrument

Input changes the signal entering the amplifier and its nonlinear stages. Final Output changes the listening level after the sound-producing chain. Raising Output does not create the same sound as raising Input.

## What makes the rig useful

You can stay with a straightforward clean or driven amplifier, add an unruly broken-valve character, move the cabinet into a virtual room, and finish the result through a studio chain inside the same insert. Each part can be bypassed independently.

# Front panel and navigation




*Top: sounds, Init, tuner, saving and RIG. Centre: amplifier. Below: module drawers, Input/Output, CPU and meters.*

| Area | How to use it |
|---|---|
| Top bar | RIG chooses the mode; PRESETS chooses that mode's starting sounds. Arrows browse the bank. Init loads the current mode starting point. |
| Copper amp panel | Choose channel, sensitivity, volumes, Bass/Treble, Tone Cut, modulation and amplifier spring Reverb. Inactive controls are faded. |
| Module row | Lynch Radio, Amp Detail, Cabinet, Pedalboard, Noise, Tape Echo, Rig Detail, Recording. Opening a page does not enable it. |
| Lower panel | Input drives the rig; Output trims the result. Full/Eco selects CPU quality. IN/OUT show RMS levels. |
| Footer | Match is a one-shot output adjustment; UI Size fits the display; Bypass returns delayed dry audio. |

# Operate and save

| Action | Result |
|---|---|
| Drag a knob | Adjusts its value. Read the numerical value beneath it. |
| Shift + drag | Makes a finer adjustment. |
| Double-click a knob | Returns that control to its default value. |
| Arrow keys | Make small value changes when a control has keyboard focus. |
| Click a module title | Opens its editor; opening does not enable the sound. |
| Click a pedal footswitch / rack ON area | Toggles that device. The board/rack master must also be on. |
| Close a drawer / Escape | Closes the editor without changing the sound. |
| Guide / tooltips | Use the in-product help when you want a reminder while playing. |

## Whole sounds and local sounds

Thirty has mode-specific factory Starting Points, a full Save/My Presets library, Tape Echo local presets and Recording local presets. A local echo preset changes only echo settings; a Recording preset changes only the Recording rack and Tube Limiter.

**01.** Choose a starting sound, then edit it. Custom means the current settings differ from the selected starting sound.

**02.** Use Save to write a complete **.aupreset** sound in the default Audio Unit preset folder. My Presets also lists older .lynchthirty files and subfolders. Show Preset Folder opens the library in Finder.

**03.** Save the host project as well: AU settings are stored with the session. Keep the source audio and any external plug-in presets with your project.

The default folder is **~/Library/Audio/Presets/Lynch Audio Lab/Lynch Thirty/**. Logic uses this product folder for its Settings menu. Reopen that menu after saving; if it has not refreshed, choose Load and select the file. To convert an older Thirty sound, open it through My Presets and Save a new AU copy; keep the original.

The readable lower-panel version row identifies the loaded plug-in. Its tooltip includes the build number.

Factory selection normally retains your Input calibration; Init can reset it. Check Input and Output after a reset, sound load or mode change. Full sound files and AU sessions recall saved output levels. A factory starting point is not a volume guarantee for every guitar.

## Automation and controllers

Automate sound controls in the AU host. For a physical expression pedal, map its MIDI controller to Wah Position through the host controller-assignment system. The plug-in is an audio effect; it does not have its own instrument-style MIDI input.

The small tuning-fork symbol beside Init opens the clean-input tuner. Choose Chromatic, Guitar, Drop D, DADGAD, Open G, Bass or Bass 5, and an A reference (430-450 Hz). Tune/Mute silences the final rig, including tails. Close the tuner to restore sound. Tuner mute and cabinet hits are temporary actions, not saved sound settings.

# Channels, tone and spring

| Control/path | What you hear |
| --- | --- |
| Normal | Normal Volume and Tone Cut shape this path. Bass and Treble are inactive. |
| Top Boost | Top Boost Volume, Bass, Treble and Tone Cut shape this path. Bass and Treble interact as a passive network. |
| Linked | Blends both paths using both volumes. Their relative polarity is preserved; some combinations can reduce certain frequencies. |
| Low Sens | Reduces the input sensitivity by approximately 6 dB. Useful when you want more clean headroom. |
| Tone Cut | Higher values remove more high-frequency energy late in the amplifier. It is different from the Top Boost Treble control. |
| Vib / Trem | Off, amplitude Tremolo or phase-modulated Vibrato. Speed spans 1-10 Hz; Amp Detail exposes Depth. |
| Amplifier Reverb | Algorithmic spring return in the amp path. Front Reverb spans 0-10; Amp Detail exposes Spring Tone. |

## Build a tone deliberately

Set channel and gain first, then Bass/Treble where available, then Tone Cut. A high Bass setting into a driven amplifier can change the distortion, whereas cutting low frequencies later in the recording EQ shapes the already-distorted result. The volume controls alter drive as well as level.

### Two different spring/space paths

The amplifier spring Reverb is part of Thirty's amplifier sound. Recording Studio Reverb is a later parallel studio effect. The cabinet microphone room is another independent space. Start with one to keep adjustments easy to understand.

# Six rig approaches

| RIG | Starting approach |
|---|---|
| Original | Normal / Top Boost / Linked amplifier and optional effects; 20 factory Starting Points. |
| Brian | Treble-focused boost plus dry centre and two delayed sides. Init starts at 100/200 ms and 20% Side Amps, with no regeneration. |
| Rory | Treble-boosted amplifier without Brian's delayed side returns. |
| Edge | Single-head echo starting points; the machine and placement remain editable. |
| Shadows | Multi-head echo starting points; the machine and placement remain editable. |
| Sixties | Clean, crunch, linked, tremolo, vibrato and period-inspired effect combinations. |

Brian, Rory, Edge, Shadows and Sixties each have 10 starting sounds. Selecting a mode retains sound-control settings while choosing a calibrated Output trim and the matching preset bank. Press Init to hear that mode's actual starting point. Artist names describe musical inspiration, not endorsement or measured copies of particular recordings.

## Brian and Rory: Rig Detail

Treble Boost (0-30 dB) drives the ordinary amplifier. Rig Gain (0-10) scales the boost, with 10 passing its full level. Extra Cut adds to the front Tone Cut, capped at 10. Normal channel selection, pedals, cabinet, mic, modulation and spring controls remain available.

Brian adds Twin Delay Time (1-1,200 ms for the first side; the other is twice that), Side Amps (0-100%) and Three Amp Width (0-100%). The delayed sides reuse the processed amplifier/cabinet output: they do not run three separate independent amplifier circuits. Lower Side Amps for a drier rig; lower Time for close doubling. Rory omits the delayed sides.

# Broken Tube and cabinet strikes




*Amp Detail contains Broken Tube and the temporary TAP / KNOCK / POW! gestures.*

| Selection | Behaviour |
|---|---|
| Off | The normal circuit-informed amplifier path. Cabinet strikes are disabled. |
| One Broken Tube | Cracked asymmetric breakup, signal-driven crackle and uneven response at the gentler original fault intensity. |
| Several Broken Tubes | A second faulty stage and deeper instability. More forceful texture for damaged or struggling tones. |

**01.** Enable One Broken Tube, then play softly and strongly. Increase to Several only after hearing the first level.

**02.** Turn up the front-panel amplifier Reverb, not just Recording Studio Reverb.

**03.** Press TAP, KNOCK or POW! in Amp Detail. Alternatively click the carrying handle: normal click gives Knock, Shift gives a hard hit and Option gives a soft tap.

**04.** Use final Output to set the hit level. Return Broken Tube to Off for ordinary operation.

Each hit has a distinct attack, pitch and strength. A dry microphonic thump can remain with amplifier Reverb at zero; the spring crash grows with amplifier Reverb. Hits join after the compressing valve path, pass through the microphone capture and finishing stages, and are not governed by guitar Input or channel Volume. Preset/reset clears waiting strikes. Hits are temporary gestures, not stored in a preset.

# Lynch Radio before Thirty




*The optional Radio preamp is the first module button; its audio stage follows the pedalboard.*

**01.** Open Lynch Radio and enable Radio Preamp. Begin at Radio Input 0 dB, Radio Drive 4, Radio Tone 5 and Radio Output -6 dB.

**02.** Raise Radio Drive to develop asymmetric radio overdrive. Set Tone for darker or more open treble loss.

**03.** Adjust Radio Output to change how hard the preamp pushes Thirty. Reduce the final Output separately to compare at a similar listening level.

**04.** Try lower guitar volume and softer picking. Save the full sound when the two gain stages work together.

The four controls are Radio Input (-24 to +24 dB), Radio Drive (0-11), Radio Tone (0-10) and Radio Output (-24 to +12 dB). The station pointer follows Drive, including automation and recall. Leifjord glows on the approach; Sandnessjøen is the homecoming at 11. This is a personal decorative scale rather than an accurate transmitter map.

### Included preamp versus the separate product

Thirty includes the Radio preamplifier only. It excludes Radio's output stage, speaker voicings, Broken Speaker and independent full rig. You do not need to insert the separate Radio plug-in to use the built-in preamp. Init leaves it off.

# Cabinet, microphones and room




*Cabinet lets you choose speaker response, microphone arrangement, position, distance and mic level.*

| Choice/control | Operation |
|---|---|
| Cabinet | Blue Alnico 2x12 or British Ceramic 2x12. Off also removes microphone and room processing. |
| Microphone | Dynamic D57, Ribbon R121, Condenser C67, SDC184 Pair X/Y or SDC184 Pair ORTF. |
| Position | 0-100%, from speaker centre toward edge. |
| Distance | 2 cm-10 m. Moving back adds acoustic travel, early arrivals and a diffuse room tail while reducing direct dominance. |
| Mic Level | -18 to +12 dB after the complete cabinet/mic capture, before post-cabinet effects. |

X/Y is a coincident 90-degree interpretation; ORTF uses a near-coincident 17 cm / 110-degree interpretation. These are two arrangements of the SDC184 pencil-condenser pair, not two separately blended simultaneous pairs. Choose stereo output to retain the image; mono folds the result.

Distance is level-compensated rather than a literal inverse-square volume reduction. At long distance the room dominates and acoustic travel time becomes audible. Start close when tracking; move back for room-rich parts. These are original microphone and room voicings, not commercial-microphone captures or measured room IRs.

# The pedalboard




*Open controls with the pedal name; use its footswitch to change the sound.*

Turn on the Pedalboard master / BOARD POWER, then the pedals you want. Individual ON settings survive board bypass. Turning the board back on restores those selections. In Radio, amber indicates a stored ON state while the board or global bypass prevents processing; green indicates a powered active path.

| Device | Main controls and use |
|---|---|
| Wah | Position sweeps the resonant filter. Auto Wah adds tempo movement; Division sets its cycle and Depth its travel around Position. Position 50% with Depth 100% gives the broadest sweep. |
| Compressor | Sensitivity increases compression; Output sets the level into the next stage. This pedal changes the way the amplifier is driven. |
| Fuzz | Fuzz controls drive, Volume sets output, and Bias alters sustain/decay, including gated textures. It is an original two-transistor-inspired effect. |
| Drive / Boost | Overdrive adds clipping, Tone shapes the result, and Level changes drive into the amplifier. More Level can matter as much as more Overdrive. |
| Phaser | Speed sets motion and Depth its extent. |
| Chorus / Vibrato | Chorus uses Intensity; Vibrato uses Rate and Depth. Mix sets the blend. A disabled mode-specific control keeps its stored setting. |

## Placement and timing

Modulation Placement moves Phaser and Chorus/Vibrato before the amplifier or Studio After Cabinet. The Wah/Compressor/Fuzz/Drive chain remains ahead of the amplifier stages. Before Amp effects are mono for a mono guitar; use After Cabinet and a stereo output for width. Auto Wah follows host beats when valid, otherwise free-runs at the last valid tempo, initially 120 BPM.

# Input noise control

Noise Gate and six-band Noise Reduction sit after Input calibration and ahead of the amplifier/effects that create the finished tail. Use them to reduce incoming background between notes, while leaving downstream echoes and reverbs free to decay.

| Control | Range / operation |
| --- | --- |
| Gate | Independent enable switch. |
| Threshold | -90 to -10 dB. Closing threshold is 6 dB below opening to reduce chatter. |
| Hold | 0-300 ms before closing. |
| Release | 20-1,500 ms to fade closed. Opening is fixed at about 0.5 ms. |
| Range | 0-80 dB maximum attenuation. Zero is effectively transparent. |
| Noise Reduction | Independent enable; Amount 0-100%, up to 24 dB weak-band attenuation. |
| Noise Floor | -90 to -25 dB estimated incoming noise floor after calibration. |

**01.** Listen to the guitar input while you are not playing. Enable the Gate and raise Threshold just enough to close on that background.

**02.** Play a quiet sustained note. Increase Release or lower Threshold if its end is cut off.

**03.** Add a little Noise Reduction only if required. Raise its estimated Noise Floor gradually; back off if quiet harmonics become dull.

Noise Reduction is not a learned spectral-denoising system. Input noise control also cannot remove noise intentionally generated later in Recording or fully preserve the character of a deliberately faulty tube while removing every crackle. Use each texture/noise control at its own stage.

# Tape Echo




*Machine, stereo mode and placement are separate decisions.*

Enable Tape Echo and choose Single Head or Three Head. With Sync off, Time spans 50-1,500 ms; with Sync on, Division follows the host tempo. Heads and Echo Spring belong to Three Head. Host tempo falls back to 120 BPM when no valid tempo is available.

| Controls | Operation |
|---|---|
| Feedback / Mix | Feedback 0-200% sets regeneration. Mix 0-100% sets dry/echo balance; 100% is a wet-only echo output. |
| Bass / Treble | -12 to +12 dB return colour. |
| Wow / Drive / Age / Duck | 0-100% each: transport variation, tape saturation, wear, and wet-return ducking. |
| Low Cut / High Cut | 20 Hz-20 kHz, 12 dB/oct in wet return and feedback. 20 Hz low-cut and 20 kHz high-cut endpoints read Off. Dry guitar is unchanged. |
| Placement | Before Amp pushes the amplifier with the repeats; Studio After Cabinet keeps repeats after the amp/capture. |

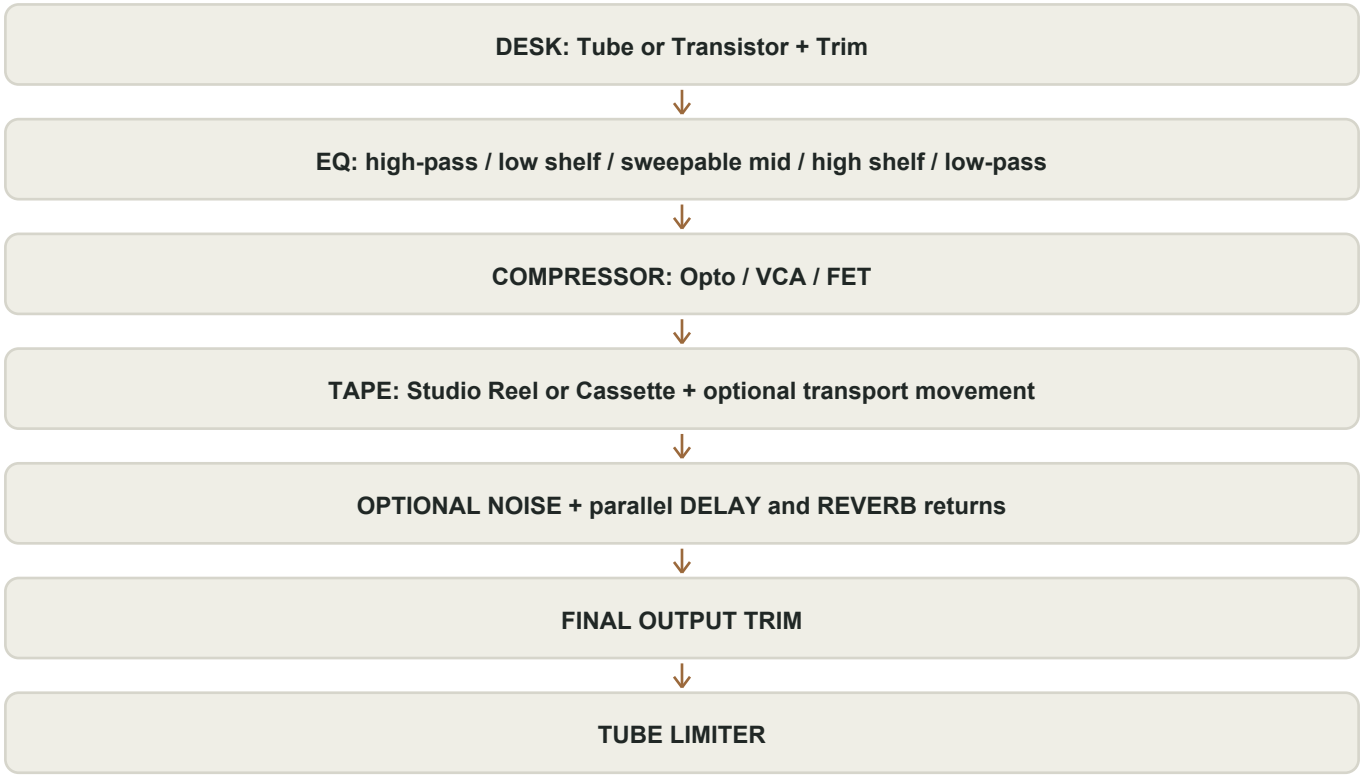
Tape Mode offers Classic, Ping Pong, Wide Tape, Dual Rhythm 3:2 and Multi Tap. Use Studio After Cabinet plus stereo output for a mono guitar's stereo pattern. Fifteen local Echo presets change echo settings only. They do not change the amplifier, Radio, pedals, Recording or final Output.

### Deliberate runaway

Feedback above 100% intentionally regenerates. Play a note to seed it. Saturation bounds the signal but the loop may not decay. Lower Feedback or turn Echo off to clear it. Strong or crossed cuts can suppress regeneration. Increase it gradually at a sensible listening level.

# Recording: the complete chain

The Recording rack is the finishing stage of the rig. Turn on its master and the individual devices you want. Click a module face/title to edit it; click the LED/ON area to toggle it. Master bypass retains the device settings. Init leaves the rack master off.




The audible order is fixed. The main compressor precedes tape, so it can control transients entering the tape stage. Delay and reverb are parallel sends from the finished rack signal, and their returns are added alongside the dry path. The final limiter follows the output trim. The module order shown above is not a freely reorderable patch bay.

### Four different kinds of level

Input drives the whole instrument. Desk Trim changes the level entering recording EQ/compression/tape. Compressor Makeup restores or changes level after compression. Final Output changes listening level and drives the optional last limiter. These controls have different jobs.

# Desk and recording EQ

## Desk: console colour

Tube and Transistor select different analogue-inspired coloration. Drive increases saturation in this desk stage, while Desk Trim sets its output before the EQ and compressor. Start with a modest Drive value, compare at similar levels, then reduce Trim if the extra colour is simply louder.

| Desk control | Range / operation |
|---|---|
| Type | Tube / Transistor |
| Drive | 0-100% |
| Trim | -18 to +18 dB |

## EQ: shape the finished guitar

The recording EQ acts after the amp/cabinet rather than changing the amplifier tone stack. Use high-pass to reduce unwanted low energy, the low shelf for body, the mid bell for focus and the high shelf/low-pass for brightness. Higher mid Q makes a narrower bell. Broad small changes are often easier to place in a mix than large boosts.

| Control | Range |
|---|---|
| High Pass / Low Pass | 20-2,000 Hz / 2,000-20,000 Hz |
| Low shelf frequency / gain | 30-400 Hz / -12 to +12 dB |
| Mid frequency / gain / Q | 150-8,000 Hz / -12 to +12 dB / 0.3-4 |
| High shelf frequency / gain | 1,500-16,000 Hz / -12 to +12 dB |

## A useful starting exercise

Enable only Desk and EQ. Try a small low-mid reduction around 250-400 Hz if the guitar is cloudy, or a broad mid lift if it disappears in a busy mix. Move the frequency while listening, then reduce the amount. Bypass EQ at a similar final level to judge whether it helps.

The rack reuses the Lynch analogue-colour and equalizer engines through a focused guitar-rig control set. The amplifier Bass/Treble controls and the recording EQ have different positions and behaviours; one does not replace the other.

# Recording compression

| Style | Behaviour and starting use |
|---|---|
| Opto | Program-dependent recovery for a gentler, breathing response. Start here for sustained clean guitar. |
| VCA | Feed-forward RMS-style level control. Useful when you want steady rhythm-guitar dynamics. |
| FET | Peak-sensitive, partly feedback-style behaviour. Useful when you want a more assertive response to transients. |

| Control | What to do |
|---|---|
| Threshold (-48 to 0 dB) | Lower until the gain-reduction meter responds on the notes you want to control. |
| Ratio (1:1-20:1) | Sets how strongly levels above threshold are restrained. Start around 2:1 for gentle control. |
| Attack (0.1-100 ms) | Shorter settings catch more pick attack; longer settings let more transient through. |
| Release (20-2,000 ms) | Sets recovery. Adjust until the level returns naturally between phrases. Opto recovery also responds to the signal. |
| Makeup (-18 to +18 dB) | Manual gain after compression. Match the bypassed loudness before judging. |
| Mix (0-100%) | Blends dry and compressed signals for parallel compression. |

## Set it by ear

Begin with Ratio 2:1, Attack about 20-30 ms and Release about 180-300 ms. Lower Threshold for a few dB of gain reduction on stronger notes, then adjust Makeup for a fair comparison. These are suggestions, not a universal preset. If pick attack disappears, lengthen Attack or reduce compression. If the level pumps, adjust Release and reduce the amount.

The gain-reduction meter shows attenuation, not output level. It is independent of the pedal compressor and final limiter meters. The three styles adapt the Lynch dynamics engine; they are not claimed component-for-component replicas of named commercial compressors.

# Tape and analogue noise

Recording Tape is a separate colour stage from Tape Echo. It processes the guitar passing through the rack; it does not create repeats. Studio Reel and Cassette change the tape profile. Drive changes saturation, Tone adjusts balance, Wear changes loss, Bias shifts the operating character, and Wow adds transport movement.

| Control | Range / use |
|---|---|
| Type | Studio Reel / Cassette |
| Drive / Tone | 0-100% each. Tone 50% is the nominal balance. |
| Wow / Wear | 0-100% each. Use small Wow for subtle movement. |
| Bias | -100 to +100% around nominal bias. |
| Speed | Slow / Normal / Fast |
| Reel speeds | 7.5 / 15 / 30 ips |
| Cassette speeds | 0.9375 / 1.875 / 3.75 ips |
| Noise switch / floor | Independent optional noise; -90 to -35 dBFS nominal floor. |

## Use tape without burying the performance

Start near nominal Bias, Tone 50% and a small Drive amount. Listen for the way transients round and sustained notes become denser. Raise Wear or slow the tape for a more restricted, aged sound. Adjust final Output for comparison rather than compensating by driving an earlier stage harder.

### Wear and noise are independent

You can use tape colour and wear with Noise off. Turning Noise off removes the deliberately generated noise bed. It does not remove noise already recorded in a DI or the crackle deliberately produced by Thirty's Broken Tube effect. Tape does not repair clipped input recordings.

# Studio delay and reverb

Studio Delay is the rack delay, separate from Tape Echo. Enable the delay, set Send above zero and bring up Return. Both must pass signal for the effect to be audible. The dry path remains present: a 100% Send is not a wet-only output setting.

| Delay control | Range / effect |
|---|---|
| Mode | Classic, Stereo, Ping Pong, Dual Rhythm 3:2, Multi Tap |
| Time / Sync / Division | 50-2,000 ms in free time; Sync uses host tempo and the selected musical division. |
| Feedback | 0-95%; higher values give more repeats. |
| Send / Return | 0-100% sent to delay; -60 to +6 dB wet return. |
| High Pass / Low Pass | 20-2,000 Hz / 2,000-20,000 Hz on the delayed sound. |
| Width / Ducking | 0-100% each. Width 0 centres the return; Ducking reduces it while playing. |

## Studio Reverb

Plate offers a shaped studio tail, Spring a resonant spring-inspired colour, and Room a room-style field. Decay is 0.2-12 seconds. Send (0-100%), Return (-60 to +6 dB), High Pass (20-2,000 Hz), Low Pass (2,000-20,000 Hz) and Ducking (0-100%) shape the wet path.

For clarity, use modest sends and darken the returns. Increase ducking when echoes or reverb obscure the picked phrase; the wet sound becomes more prominent in the gaps. Use a stereo-output instance to hear left/right modes. A mono-output instance cannot reproduce stereo width.

Three different spaces can coexist: amplifier spring Reverb, cabinet/microphone room, and Recording Studio Reverb. Their controls are independent. Add them one at a time so you can hear which space is doing the work.

# Final limiter and meters

Tube Limiter is an optional final tube-inspired colour and sample-peak-control stage. Enable Recording and this module. Amount (0-100%) increases drive and limiting; Ceiling (-18 to 0 dBFS) sets the fully active processed-path sample ceiling. It follows Output, so more Output can drive it harder.

Its meter shows actual linked gain reduction. It has no automatic makeup gain or loudness matching. Switching and ceiling edits are smoothed, so a newly enabled fade is not an instantaneous brick wall. Global bypass passes the latency-aligned dry signal rather than forcing that signal through the limiter.

### Sample peaks and true peaks

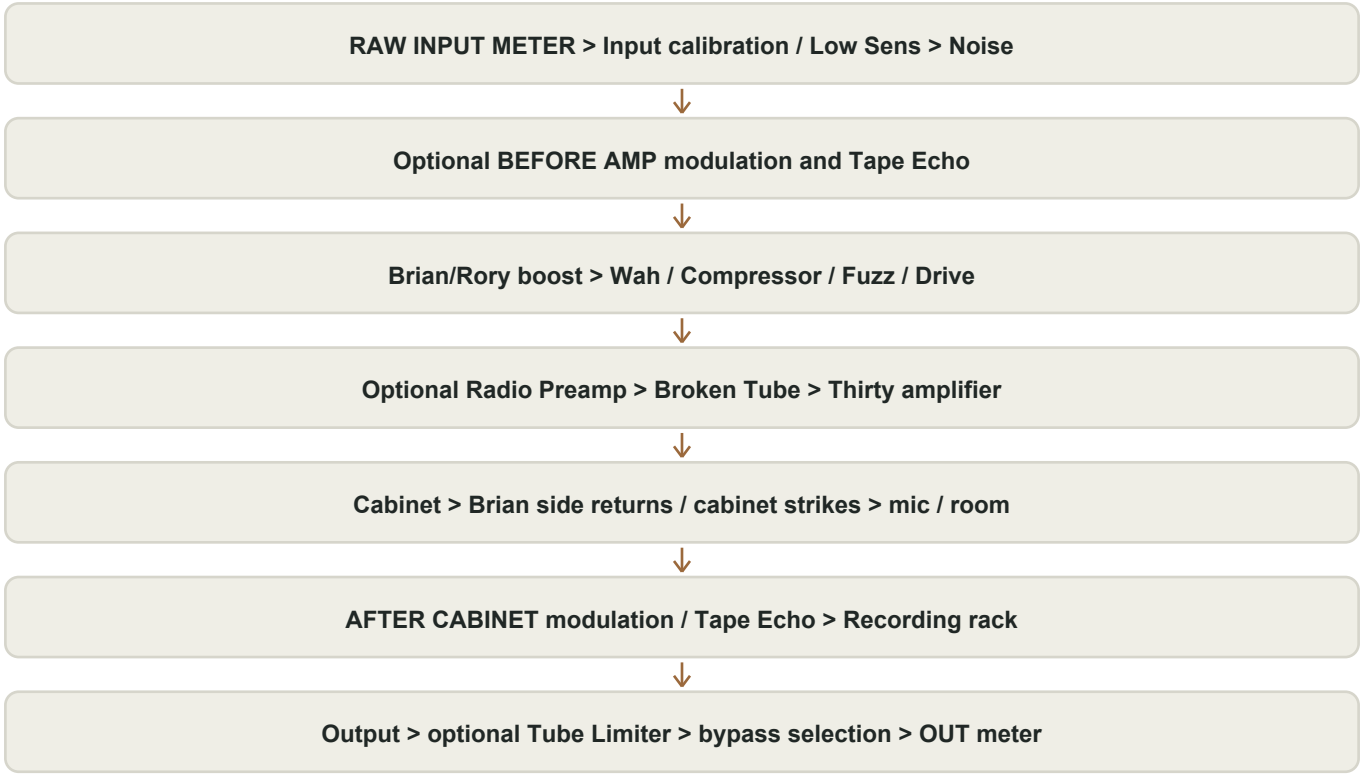
This is a sample-peak limiter, not a true-peak mastering limiter. It does not guarantee an intersample peak limit or a streaming loudness target. Use the host peak meters and a dedicated final mastering stage when those requirements matter.

## Read the VU meters correctly

IN and OUT are aggregate input and output RMS readings, not separate left/right meters. The warm VU reference is 0 VU = -18 dBFS RMS. Digital full scale is 0 dBFS, so a VU near its centre does not mean digital clipping. Fast peaks can exceed the average reading; check the host peak meters too.

| Meter | Where it measures |
|---|---|
| IN | Raw incoming audio before plug-in Input calibration. Turning plug-in Input does not change this raw input reading. |
| OUT | The finished signal after output trim, optional limiting and the active/bypass selection. |
| Compressor GR | Gain removed by the recording compressor. |
| Limiter GR | Gain removed by the optional final limiter. |

# Signal flow and level matching




The main module-button order is navigation, not a complete serial routing diagram. Modulation and Tape Echo placement switches select their actual route. Noise and effects switched off retain their settings. The amplifier spring is part of the amp path; cabinet strikes and microphone capture follow it.

## Match is one shot

Click Match and play roughly five seconds of representative audio. It measures the audible chain and adjusts Output once, with up to +/-12 dB correction per click. It does not keep following your playing. Cancel stops it; edits, reset, bypass or closing the editor cancel the measurement. Insufficient input times out after 20 seconds.

Mode changes and factory sounds use fixed calibrated Output trims, not continuous automatic gain riding. A saved user sound recalls its own level. RMS matching helps comparison but does not guarantee identical perceived loudness or prevent digital peaks. Final peak control is a separate job.

# Practical starting recipes

| Goal | Build it in this order |
|---|---|
| Touch-sensitive edge | Original / Top Boost, moderate channel volume, close D57 or Ribbon, no pedals initially. Bring the guitar volume down for clean phrases; set Output for the mix. |
| Old amplifier struggling | Original, One Broken Tube, modest spring Reverb. Compare soft/hard picking. Move to Several for more instability; use Tap/Knock/Pow as a performed accent. |
| Radio into Thirty | Enable built-in Radio; start 0 dB / 4 / 5 / -6 dB. Use Radio Output to push Thirty, and final Output to match listening level. |
| Brian with less delay | Choose Brian then Init. Keep Side Amps near or below its 20% start. Try 25-70 ms first-side time for tighter doubling; the second side follows at twice that. |
| Wide rhythmic echo | Mono-to-Stereo output, Tape Echo after cabinet, Sync and 1/8 Dotted, moderate feedback and mix. Try Ping Pong; add ducking if the phrase loses clarity. |
| Room-forward guitar | Choose SDC184 ORTF, increase Distance from close to a few metres, and keep extra Studio Reverb off while deciding how much cabinet room you want. |
| Finished warm clean | Recording on: mild Tube Desk, broad EQ, gentle Opto compression and modest Studio Reel Drive. Add a small Studio Reverb return last. Compare with the rack bypassed at similar volume. |

These are listening exercises, not fixed factory presets. Start quietly, change one stage at a time, and save the combination that works with your guitar and song. When using a wet/dry send in the host, avoid accidentally doubling the dry guitar with a full dry-plus-wet rig return.

# Inside the sound

Thirty uses a circuit-informed amplifier model. Nonlinear triode and pentode current relationships, coupling capacitors, input sensitivity, the interacting passive tone stack, the phase inverter and a reduced cathode-biased power stage influence the response. Supply and bias states move with the signal, which helps explain why pick strength, note density and guitar volume change more than just level.

The model follows nominal Normal and Top Boost circuit ideas rather than a measured capture of Robin's individual amplifier. Linked retains the relative polarity of those paths, so some settings can cancel frequencies as well as increase drive. The output-transformer and speaker-load behaviour are reduced models, not a complete physical simulation of every part.

| Host sample rate | Amplifier oversampling |
|---|---|
| 44.1 / 48 kHz | 8x |
| 88.2 / 96 kHz | 4x |
| 192 kHz | 2x |

Oversampling moves nonlinear processing above the host rate before filtering it back down. Stateful antialiasing is also used in parts of the nonlinear model. These methods reduce unwanted folding products; they do not imply alias-free processing at every possible setting. Full/Eco changes solver precision, not the oversampling factors.

## The studio engines

The rack shares the Lynch analogue-colour, equalizer, dynamics, tape and reverb engines through a selected set of controls. Its console/EQ/compressor/tape core uses 4x processing at 44.1/48 kHz, 2x at 88.2/96 kHz and 1x at 192 kHz. Noise, transport movement and spatial returns complete the path. The limiter uses a tube-inspired antiderivative-antialiasing transfer, DC removal and linked peak control.

## Latency and performance

The complete plug-in reports 256 host samples of fixed processing latency, including its aligned bypass. At 48 kHz this is about 5.33 ms; at 44.1 kHz about 5.80 ms. Your live round-trip delay also includes hardware input/output, buffers, host routing and other plug-ins. The reported plug-in number is not total monitoring latency.

Cabinet, microphone, room and fault behaviours are original algorithmic interpretations. They do not use measured commercial speaker/microphone impulse responses. Numerical checks, host validation and musical listening answer different questions; they do not establish a universal ranking against other products.

# CPU, monitoring and recall

Full is the default precision. Eco relaxes convergence criteria for stronger signals and returns toward Full precision as the input becomes quiet. Oversampling and effects remain available. Savings depend on signal, rig, pedals and format; quiet material can cost as much as Full. Eco is an approximation and is not promised bit-identical.

The chosen quality is saved in presets and sessions and used for both playback and export. There is no hidden automatic switch to Full on bounce. Switching keeps circuit/effect tails alive and retains 256-sample latency. Original Init resets quality to Full; other factory sounds retain the chosen quality.

## Reduce workload without changing the arrangement

Use Mono-to-Stereo rather than stereo input for one guitar where appropriate. Bypass modules you do not need. Freeze or bounce finished parts in your host when a project becomes busy. Increase the buffer for mixing; use a lower stable buffer for live monitoring.

## Maintain reliable projects

Save both the host project and useful full presets. Keep a backup before updating. Older sound files and AU sessions retain compatibility paths; legacy Old Version/Old Output are for recall, not current RIG choices. Selecting a current mode returns to the current processing path.

The personal Jon Iver scratch appears below Channel in Original; other modes use their own hand-scratched names. The carrying handle is the cabinet-hit control when Broken Tube is active. Click the raised LYNCH grille badge to read the story; close an open module first to reveal it.

# Solve a problem

| Symptom | Check in this order |
| --- | --- |
| No sound | Host input and output, track input assignment, track monitoring and transport; then global Bypass, channel volumes and final Output. Close the tuner if Tune/Mute is active. |
| Effect editor opens but nothing changes | Enable the board/rack master and the individual device. A selected page is not proof that processing is on. |
| A control is greyed out | Its path or required mode is inactive. Examples: Time with Sync on, head patterns with Single Head, Bass/Treble on Normal, or hits with Broken Tube off. |
| Stereo sounds mono | Check the host instance has stereo output, then use After Cabinet placement and non-zero width/mix. Cabinet X/Y or ORTF also needs stereo output. |
| Sound is too distorted or low | First inspect interface/host input clipping. Then reduce Input, pedal output and Radio Output / amplifier volumes. Final Output cannot undo earlier clipping or saturation. |
| Crackle or uneven decay | Separate intentional Broken Tube character from host overload. Bypass damage, pedals and the rack individually, then check buffer size and CPU. |
| Monitoring feels late | Use wired headphones, reduce the host buffer while keeping playback stable, and check other latency-heavy plug-ins. Bring Mic Distance close to separate deliberate room travel time from engine delay. |
| Delay/reverb seems missing | Check both Send and Return, the module/master switches, placement and output format. Strong ducking can intentionally hide the return while you play. |

## Ask for support

Use the Contact / Support link at lynchaudiolab.com. Include product/version, macOS, Mac model, host/version, input/output format, the smallest repeatable steps and a screenshot. A saved preset and a short dry audio example can help reproduce a sound issue. Keep a copy of your original project.

# Control reference

This reference lists the current sound-control ranges. Controls can be unavailable when their parent module or required mode is off. Retired compatibility-only controls are omitted; old sessions can retain them internally. Current interface labels take precedence over generic host parameter names. Use current rig and module controls for new sounds. Thirty and Radio full sound files are not interchangeable.

| Control | Range | Operation |
|---|---|---|
| Channel | 0 to 2 | Normal / Top Boost / Linked. |
| Input calibration | -24 to 24 dB | Level into the full rig; not final listening volume. |
| Normal volume | 0 to 10 | Gain and level of the Normal path. |
| Top Boost volume | 0 to 10 | Gain and level of the Top Boost path. |
| Bass | 0 to 10 | Interacting passive bass control on Top Boost / Linked. |
| Treble | 0 to 10 | Interacting passive treble control on Top Boost / Linked. |
| Tone cut | 0 to 10 | Higher values soften treble late in the amp. |
| Low sensitivity input | Off / On | Approximately 6 dB lower input sensitivity. |
| Speaker | 0 to 1 | Blue Alnico 2x12 / British Ceramic 2x12. |
| Microphone position | 0 to 100 % | Moves from speaker centre toward edge. |
| Cabinet enabled | Off / On | Turns the cabinet, mic voicing and room path on or off. |
| Output trim | -48 to 12 dB | Final level before optional final Tube Limiter. |
| Bypass | Off / On | Latency-aligned dry signal. |
| Vib / Trem | 0 to 2 | Off, amplitude Tremolo or phase-modulated Vibrato. The original dry amplifier circuit is retained with this off. |
| Vib / Trem Speed | 1 to 10 Hz | Separate modulation speed. Continuous range is a Lynch extension, not a claim about the exact original switch. |
| Amplifier Reverb | 0 to 10 | Amount of the dispersive spring return before the phase inverter. Zero removes the complete return. The tank is algorithmic, not a measured impulse response. |
| Vib / Trem Depth | 0 to 100 % | Advanced modulation depth. Tremolo varies amplitude; Vibrato varies the balanced RC phase path. |
| Amplifier Reverb Tone | 0 to 100 % | Advanced tone of the spring recovery path, separate from the dry amplifier controls. |
| Pedalboard Enabled | Off / On | Enable the complete pedalboard. Individual pedal settings are retained when the board is bypassed. |
| Wah Enabled | Off / On | Enable the classic wah circuit. |

| Control | Range | Operation |
|---|---|---|
| Wah Position | 0 to 100 % | Wah pedal position. Assign this parameter to a controller in Logic for foot-pedal control. |
| Compressor Enabled | Off / On | Enable the classic pedal compressor. |
| Compressor Sensitivity | 0 to 100 % | Amount of compression from the pedal's sensitivity control. |
| Compressor Output | -24 to 18 dB | Level after the compressor pedal. |
| Fuzz Enabled | Off / On | Enable the classic two-transistor fuzz model. |
| Fuzz | 0 to 100 % | Fuzz circuit drive. |
| Fuzz Volume | -36 to 12 dB | Output volume of the fuzz pedal. |
| Fuzz Bias | 0 to 100 % | Lynch addition: adjusts transistor bias from smoother sustain toward gated, broken decay. |
| Drive Enabled | Off / On | Enable the mid-focused overdrive pedal. |
| Overdrive | 0 to 100 % | Drive in the pedal clipping stage. |
| Drive Tone | 0 to 100 % | Tone after the overdrive circuit. |
| Drive Level | -24 to 18 dB | Output level of the overdrive pedal. |
| Phaser Enabled | Off / On | Enable the classic phaser. |
| Phaser Speed | 0.05 to 12 Hz | Rate of the phaser sweep. |
| Phaser Depth | 0 to 100 % | Lynch addition: reduces sweep depth while retaining the classic phase stages. |
| Chorus Enabled | Off / On | Enable the classic chorus/vibrato circuit. |
| Chorus Intensity | 0 to 100 % | Original-style combined chorus intensity control. |
| Vibrato Rate | 0.05 to 12 Hz | Vibrato modulation rate, available in Vibrato mode. |
| Vibrato Depth | 0 to 100 % | Vibrato modulation depth, available in Vibrato mode. |
| Chorus Mode | 0 to 1 | Chorus uses its Intensity control; Vibrato exposes separate Rate and Depth. |
| Chorus Mix | 0 to 100 % | Lynch addition: dry/effect balance for the chorus/vibrato pedal. |
| Modulation Placement | 0 to 1 | Place phaser and chorus before the amplifier or in the studio path after its cabinet. |
| Tape Echo Enabled | Off / On | Enable the tape echo. Settings are retained when bypassed. |
| Tape Echo Machine | 0 to 1 | Single Head and Three Head have distinct tape-machine voicings and feedback behavior. Single Head / Three Head. |
| Echo Time | 50 to 1500 ms | Base tape echo time. Tempo synchronization overrides this time while Sync is enabled. |

| Control | Range | Operation |
|---|---|---|
| Echo Sync | Off / On | Synchronize echo time to the DAW tempo. A 120 BPM fallback is used if the host supplies no tempo. |
| Echo Division | 0 to 7 | Musical division of the host tempo. |
| Echo Feedback | 0 to 200 % | Repeat regeneration. Above 100%, regeneration rises into tape self-oscillation; 200% is Runaway, building from a played note into progressively saturated repeats. Extreme cuts can stop regeneration. Lower Feedback to let it decay, or switch Echo off to clear the tail. Mix controls the audible return. |
| Echo Mix | 0 to 100 % | Dry/echo balance. Use 100% for a fully wet send effect. |
| Echo Heads | 0 to 6 | Choose active playback heads in the Three Head machine. Single Head has no head-pattern control. |
| Echo Bass | -12 to 12 dB | Low-frequency tone shaping in the echo voice. |
| Echo Treble | -12 to 12 dB | High-frequency tone shaping in the echo voice. |
| Wow / Flutter | 0 to 100 % | Tape transport pitch variation. |
| Tape Drive | 0 to 100 % | Drive the modeled tape/preamp stages harder. |
| Tape Age | 0 to 100 % | Progressive tape wear and loss of high-frequency detail. |
| Echo Duck | 0 to 100 % | Reduce the echo while the input plays, allowing the tail to emerge afterward. |
| Echo Placement | 0 to 1 | Before Amp or Studio After Cabinet. This does not imply a physical amp effects loop. |
| Echo Spring | 0 to 100 % | Three Head machine's spring ambience. Hidden on Single Head. |
| Recording Rack Enabled | Off / On | Enable the optional recording chain after the cabinet and microphones. Init leaves this complete rack bypassed. |
| Desk Enabled | Off / On | Enable the tube or transistor desk stage. The rack master must also be enabled. |
| Desk Type | 0 to 1 | Tube or transistor-inspired recording desk coloration. |
| Desk Drive | 0 to 100 % | Drive the desk input stage for recording-console coloration. |
| Desk Trim | -18 to 18 dB | Level leaving the desk stage, before the recording EQ and compressor. |
| Recording EQ Enabled | Off / On | Enable the recording equalizer, separate from the original amplifier tone controls. |
| Recording High Pass | 20 to 2000 Hz | Low-frequency cut in this recording module. |
| Recording Low Pass | 2000 to 20000 Hz | High-frequency cut in this recording module. |
| Recording Low Frequency | 30 to 400 Hz | Frequency of the low shelf in the recording equalizer. |
| Recording Low Gain | -12 to 12 dB | Low-shelf boost or cut in the recording equalizer. |

| Control | Range | Operation |
|---|---|---|
| Recording Mid Frequency | 150 to 8000 Hz | Center frequency of the recording EQ's bell band. |
| Recording Mid Gain | -12 to 12 dB | Midrange bell boost or cut in the recording equalizer. |
| Recording Mid Q | 0.3 to 4 | Width of the midrange bell. Higher Q is narrower. |
| Recording High Frequency | 1500 to 16000 Hz | Frequency of the high shelf in the recording equalizer. |
| Recording High Gain | -12 to 12 dB | High-shelf boost or cut in the recording equalizer. |
| Recording Compressor Enabled | Off / On | Enable the recording compressor. Its gain-reduction meter shows actual attenuation. |
| Recording Compressor Type | 0 to 2 | Opto, VCA or FET-inspired recording dynamics. The model changes the response, not only its name. |
| Recording Threshold | -48 to 0 dB | Level above which the recording compressor reduces gain. |
| Recording Ratio | 1 to 20 :1 | Compression ratio above threshold. |
| Recording Attack | 0.1 to 100 ms | Compressor attack. Shorter settings catch transients sooner. |
| Recording Release | 20 to 2000 ms | Compressor recovery. The Opto model uses adaptive recovery informed by this setting. |
| Recording Makeup | -18 to 18 dB | Manual gain after recording compression; no hidden automatic loudness matching. |
| Recording Compression Mix | 0 to 100 % | Blend dry and compressed signal for parallel compression. |
| Recording Tape Enabled | Off / On | Enable the recording tape stage. Noise has its own independent switch. |
| Recording Tape Type | 0 to 1 | Studio reel or cassette-inspired tape response. |
| Recording Tape Drive | 0 to 100 % | Drive the tape stage from subtle color toward stronger saturation. |
| Recording Tape Tone | 0 to 100 % | Recording tape tone balance; center is the nominal setting. |
| Recording Tape Wow | 0 to 100 % | Tape transport pitch variation. |
| Recording Tape Wear | 0 to 100 % | Tape wear and frequency loss, independently of the noise switch. |
| Recording Tape Bias | -100 to 100 % | Bias offset around the nominal tape setting. |
| Recording Tape Speed | 0 to 2 | Slow, Normal or Fast. Reel: 7.5/15/30 ips. Cassette: 0.9375/1.875/3.75 ips. |
| Analog Noise Enabled | Off / On | Add optional recording noise independently of tape wear. The complete rack must be enabled. |
| Analog Noise Floor | -90 to -35 dBFS | Nominal analog-noise level. Noise is absent with its switch off. |

| Control | Range | Operation |
|---|---|---|
| Studio Delay Enabled | Off / On | Enable the parallel recording delay. Send and Return are separate from the dry path. |
| Studio Delay Time | 50 to 2000 ms | Recording delay duration with Sync off. |
| Studio Delay Sync | Off / On | Follow the host tempo with the chosen musical division. |
| Studio Delay Division | 0 to 7 | Musical duration of the recording delay when tempo sync is on. |
| Studio Delay Feedback | 0 to 95 % | Amount returned to the recording delay input for more repeats. |
| Studio Delay Send | 0 to 100 % | Amount sent from the recorded dry signal to the parallel delay. |
| Studio Delay Return | -60 to 6 dB | Level of the delay returning alongside the unchanged dry path. |
| Studio Delay High Pass | 20 to 2000 Hz | Low-frequency cut in this recording module. |
| Studio Delay Low Pass | 2000 to 20000 Hz | High-frequency cut in this recording module. |
| Recording Reverb Enabled | Off / On | Enable the parallel recording reverb. Send and Return are separate from the dry path. |
| Recording Reverb Type | 0 to 2 | Plate, Spring or Room recording ambience. |
| Recording Reverb Decay | 0.2 to 12 s | Approximate decay time of the selected recording reverb model. |
| Recording Reverb Send | 0 to 100 % | Amount sent from the recorded dry signal to the parallel reverb. |
| Recording Reverb Return | -60 to 6 dB | Level of the reverb returning alongside the unchanged dry path. |
| Reverb High Pass | 20 to 2000 Hz | Low-frequency cut in this recording module. |
| Reverb Low Pass | 2000 to 20000 Hz | High-frequency cut in this recording module. |
| Auto Wah | Off / On | Tempo-synced wah motion. Enable Pedalboard and Wah first. Off preserves the manual Position. Follows Logic beats when playing; free-runs at the last valid tempo, initially 120 BPM, when stopped. |
| Wah Division | 0 to 7 | Duration of one complete wah sweep in musical beats. 1 Bar means four quarter-note beats. Triplet and dotted rates are available. |
| Wah Depth | 0 to 100 % | Sweep amount around manual Wah Position. Set Position to 50% for the full heel-to-toe sweep at 100% Depth. Zero leaves Position unchanged. |
| Noise Gate | 0 to 1 | Stereo-linked input gate before the pedalboard and amplifier. Hysteresis and hold avoid chatter. Reverb and echo tails remain downstream. |
| Gate Threshold | -90 to -10 dB | Opening threshold after Input calibration. Closing uses a 6 dB lower threshold to protect decaying notes. |
| Gate Hold | 0 to 300 ms | Wait after the signal drops before closing the gate. |
| Gate Release | 20 to 1500 ms | Soft closing time. Increase for sustained guitar notes. Opening is fixed at 0.5 ms. |

| Control | Range | Operation |
|---|---|---|
| Gate Range | 0 to 80 dB | Maximum attenuation when closed. Zero leaves the gate transparent. |
| Noise Reduction | 0 to 1 | Six-band noise reduction before the amplifier, independent of the gate. Reduces weak frequency bands against the adjustable noise floor. |
| Noise Reduction Amount | 0 to 100 % | Strength of six-band noise attenuation, up to 24 dB at maximum. Start gently to retain quiet harmonics. |
| Noise Floor | -90 to -25 dB | Estimated input noise floor after Input calibration. Raise until background hiss reduces, then back off if quiet notes become dull. |
| Twin Delay Time | 1 to 1200 ms | First side delay; the other is twice this time. Init starts at 100/200 ms; 1 ms is available for close doubling and 800/1600 ms for long solo echoes. Side returns reuse the fully processed amp/cab sound; no regeneration. |
| Side Amps | 0 to 100 % | Level of the two delayed amplifiers. Zero gives a dry treble-boosted Normal-channel voice. |
| Treble Boost | 0 to 30 dB | Gain of the mid/treble-focused booster voicing before the amplifier and reused delayed side returns. This is an original tonal approximation, not a measured Fryer pedal model. |
| Rig Gain | 0 to 10 | Extra rig input gain scale: 10 is full booster level, lower values reduce it. All ordinary amplifier and pedal controls remain active. |
| Three Amp Width | 0 to 100 % | Spread the two delayed amp returns left/right around the dry centre. Mono instances fold the rig down to mono. |
| Extra Cut | 0 to 10 | Additional tone cut on top of the front-panel Cut. Zero adds none. The combined setting is capped at 10. |
| Amp / Rig Mode | 0 to 5 | Original, Brian, Rory, Edge, Shadows or Sixties. Each mode has its own preset bank. Rig changes retain sound controls; use Init for the selected mode starting point. The mode is saved and automatable. |
| Recording Tube Limiter | 0 to 1 | Optional final tube-inspired limiter. Enable Recording as well. After Output Trim, before global bypass. Zero extra latency; sample-peak control, not true-peak mastering. |
| Tube Amount | 0 to 100 % | Drive into the tube-inspired ADAA stage and linked soft-knee sample limiter. From gentle rounding to driven, dense limiting; no automatic output matching. |
| Tube Ceiling | -18 to 0 dBFS | Maximum sample level of the fully active processed path after Output Trim. Ceiling edits and enable changes are smoothed. Bypass remains unaltered input. |
| Echo Low Cut | 20 to 20000 Hz | 12 dB/oct high-pass in the echo return and repeat loop. 20 Hz is Off. Removes low-end buildup without filtering the dry guitar. |
| Echo High Cut | 20 to 20000 Hz | 12 dB/oct low-pass in the echo return and repeat loop. 20 kHz is Off. Darkens repeats and runaway feedback without filtering the dry guitar. |
| CPU Quality | 0 to 1 | Full uses the original solver precision. Eco uses adaptive solver precision, retaining Full precision for very quiet inputs. Oversampling and stereo effects stay unchanged. Saved per instance and used unchanged for playback and export. |

| Control | Range | Operation |
|---|---|---|
| Studio Delay Mode | 0 to 4 | Classic, Stereo, Ping Pong, Dual Rhythm or Multi Tap. |
| Studio Delay Width | 0 to 100 % | Stereo width of the delay return. |
| Studio Delay Ducking | 0 to 100 % | Ducks the delay return while playing. |
| Recording Reverb Ducking | 0 to 100 % | Ducks only the recording reverb return while playing. |
| Broken Tube | 0 to 2 | Off, One Broken Tube or Several Broken Tubes. Cracked asymmetric breakup, crackle and uneven level. Several adds a second faulty stage and deeper instability. Off preserves the normal circuit. Tap/Knock/Pow excites the amplifier spring reverb. |
| Microphone | 0 to 4 | Dynamic D57, Ribbon R121, Condenser C67 or a pencil SDC184 stereo pair in XY/ORTF: original relative microphone voicings, not measured commercial-mic IRs. Default Dynamic preserves the existing cabinet response. |
| Mic distance | 2 to 1000 cm | Microphone-to-speaker distance, 2cm to10m. Moving back adds acoustic travel time, early reflections and a diffuse studio-room tail while reducing the direct sound. Level-compensated, not an inverse-square volume drop. XY/ORTF stereo pairs need stereo output; mono folds both microphones. |
| Mic level | -18 to 12 dB | Microphone output after cabinet and mic voicing, before post-cabinet effects. Zero is unity; disabled when Cabinet is off. |
| Radio Preamp | Off / On | Route the Lynch Radio tube preamplifier into Thirty, after the pedalboard and before the amplifier. No radio speaker or duplicate power amp. |
| Radio Input | -24 to 24 dB | Level entering the radio preamplifier. |
| Radio Drive | 0 to 11 | Touch-sensitive asymmetric two-stage radio overdrive. Eleven recalls the homecoming spirit of Lynch Radio. |
| Radio Tone | 0 to 10 | Radio preamplifier tone before the second valve stage. |
| Radio Output | -24 to 12 dB | Level from Radio into Thirty. This changes amplifier drive; final Output Trim remains independent. |
| Tape Echo Mode | 0 to 4 | Classic, Ping Pong, Wide Tape, Dual Rhythm or Multi Tap. Stereo modes need stereo output and After Cabinet placement. Before Amp remains mono for mono input; each tape path is limited to eight seconds. |