LYNCH RADIO

Character. Control. A quieter input.

Version 0.3.0 / build 14 | Mac AU and AAX Native



New: Pickup Hum - learn the interference, then keep the performance.

A complete operating reference, including the original amplifier, effects, recording chain, presets and every stored parameter.

INSTALLATION AND COMPATIBILITY

Native Apple Silicon Mac, macOS 12 or later. AU requires an AU-compatible host such as Logic Pro. AAX Native requires a compatible native Apple Silicon Pro Tools host; your Pro Tools version can require newer macOS. Download the format your host uses. These installers contain no Windows, Intel, VST3, standalone app, AudioSuite or HDX DSP edition.

Save your project and quit audio hosts before installing. Open the matching signed and Apple-notarised .pkg and approve macOS Installer if requested. Restart your host and check the visible plug-in version: 0.3.0. AU installs to /Library/Audio/Plug-Ins/Components/RadioTest.component; AAX installs to /Library/Application Support/Avid/Audio/Plug-Ins/LYNCH Audio Lab/LYNCH RADIO.aaxplugin.

A private component in ~/Library/Audio/Plug-Ins/Components can override a system installation. If your host still shows an older version, back up and move only this product's old private AU out of the scan folder, with hosts closed. Keep projects, presets and licensing data. Contact info@lynchaudiolab.com if uncertain.

TRIAL AND PURCHASE

The complete 14-day trial starts only when you choose Start trial inside the plug-in. No card or automatic charge. One permanent product purchase activates AU and AAX on the same Mac, with up to three computers per key. Installing another format or an update does not restart the trial. Existing customers download this update from their original order and keep their current key; no repurchase. Online activation is required; an activated licence works offline. The developer's PACE signing iLok is not required to use the effects. Pro Tools licensing is separate.

HOST WORKFLOW

Your host controls input selection, record arming, monitoring, recording and transport. These effects do not record or route a physical sound card by themselves. Start quietly with clean DI input and output headroom. For hum learning, keep input monitoring or playback running so the host supplies audio. Your guitar's pickup position and orientation can change the interference, so learn in the position in which you will play.

SAVING AND AUTOMATION

Save the whole instance in the DAW project. Save a complete User sound from the plug-in for reuse; AU uses .aupreset and also reads supported legacy product files. In Pro Tools, use project recall or the host's plug-in settings workflow; the same controls and learned profile are restored. Parameter identities are retained: new profile controls are appended, not substituted for old controls. The twelve Hum Frequency slots are stored profile data, not twelve additional front-panel knobs. LEARN is a temporary capture command; its resulting frequencies, ON state, Reduction and Width are saved. Learned profile data contains no recorded audio.

PICKUP HUM - QUICK START

Open Noise. Mute every string, keep the guitar still and click LEARN HUM. Wait about two seconds while live input or a noise-only recording plays. Do not play music during learning. The panel shows progress and then the number of stored frequencies. If there is no audio callback, it waits for input. A clear profile enables Pickup Hum; an unsuccessful learn leaves it Off and retains the prior frequencies.

Start with Hum Reduction at 12 dB and Width at 3 Hz. Increase Reduction only as needed, and compare on/off at the same output setting. Up to 12 prominent narrow frequencies are learned between 40 Hz and 4 kHz, with a smaller usable band at low sample rates. A fixed learned curve does not chase guitar notes. It can reduce stable hum or tonal interference, not all hiss, clicks, radio audio or changing noise. Deep or wide cuts can alter musical partials near the learned lines. Muted strings are essential: a sustained quiet note can be mistaken for interference.

The processor is before pedals and valve distortion, so the unwanted hum is reduced before nonlinear stages amplify it. It adds no new buffer delay; the effect's existing latency remains 256 samples (5.33 ms at 48 kHz). Interface and host buffers add their own delay. Profile controls default Off in new and older sounds, keeping prior audio unchanged. Factory sound changes retain this input calibration; Init clears it. Complete User/project recall restores that sound's own profile. This input reducer does not remove intentionally generated faults, Broken Tube/Speaker character or recording noise downstream.

FULL CONTROL GUIDE
RADIO 0.3.0 / BUILD 14 - PICKUP HUM

Open Noise. Pickup Hum is a separate narrow-band interference reducer before pedals and the Radio preamplifier, in both RADIO and PREAMP modes.
Mute every string with your hands and keep the guitar in its playing position.
Click LEARN HUM while live input is running. Hold still and do not play for about two seconds (up to two seconds at the supported sample rates). Learning switches Pickup Hum off, then enables it only if a clear quiet profile is found.
If the host stops rendering, the panel says Waiting for audio input.

LEARN finds up to 12 prominent, narrow input frequencies between 40 Hz and 4 kHz (limited at low sample rates). Analysis runs in the editor, never in the audio callback. It is not AI, a noise gate, broadband hiss removal, automatic mains diagnosis or a guarantee of complete noise removal. Do not learn music. Strong input is rejected; soft notes can still be mistaken for interference.

Hum Reduction: 0-30 dB maximum cut at each stored frequency; start at 12 dB.
Hum Width: 1-12 Hz; start at 3 Hz. Use narrow cuts first to retain guitar tone.
Higher reduction or wider filters can affect notes near a learned frequency.
The curve remains fixed while playing; LEARN again if guitar position or the noise changes. The button shows learning progress and the number of slots.
A failed learn keeps the old frequencies stored, but leaves Pickup Hum off.
Loading a different sound or closing the editor cancels a pending learn.

The curve and controls save with .aupreset, legacy User files and the DAW project. Factory sound changes retain the input hum settings, like input calibration. Init resets them; full User or project recall restores its own profile. All older sounds and new instances start with Pickup Hum OFF.
At OFF or Reduction 0 the input hum stage is exactly transparent. No new buffering delay is added: Radio's existing latency remains 256 samples.
There is no new effect on intentional Broken Speaker noise or recording noise, which are generated downstream. Other installed products are unchanged.

TRIAL AND PURCHASE ACTIVATION

Press the Trial & Activation status button to open licensing. Start trial enables every sound and control for 14 calendar days from that click. No card, subscription or automatic charge. Each product has its own trial. After expiry the effect passes dry audio with its normal latency; your presets and all project sound settings remain intact.

Buy license opens the official Lemon Squeezy checkout. Your permanent purchase key activates up to three Macs. Paste it into the secure field and press Activate. Internet is needed for activation; an activated license works offline. Deactivate this Mac releases its activation online without resetting the original trial.

The key and trial dates stay in the login Keychain, outside presets and project state. Scanning or loading the plug-in does not start a trial. If Keychain access fails, unlock the login Keychain and press Refresh. Bought before keys were introduced? Contact info@lynchaudiolab.com with your order number; do not buy again.

RADIO 0.3.0 - PRESETS IN LOGIC
Save creates standard .aupreset files in:
~/Library/Audio/Presets/Lynch Audio Lab/Lynch Radio/
Open starts in the same folder. Earlier .aupreset files in other locations remain valid and can be opened or resaved here. The saved file's name is stored as its AU preset name. Reopen Logic's Settings menu to see new files.
A readable lower-panel version row identifies the loaded Radio version,

with its build number in the tooltip. The sound engine is unchanged.

LYNCH RADIO - USER GUIDE 0.3.0

A RADIO BEFORE THE AMPLIFIER
At fourteen, Robin Lynch played guitar in a cover band at public dances in northern Norway with experienced musicians roughly ten years older. He experimented with modifying an old valve radio, using its distortion as a preamplifier into another amplifier. The radio also had its own speaker. LYNCH RADIO grows from that memory, with an old Luxor as the chosen visual inspiration. The particular model and circuit are unknown. This is an original Lynch design, not a measured recreation of a specific radio.

PLAY
Insert Lynch Radio on a guitar audio track. Mono, Mono → Stereo and Stereo instances are supported. Start with Init - Radio, calibrate INPUT for your interface, set DRIVE and TONE, then adjust OUTPUT for a comfortable level. The signal is dynamic: lighter picking and reducing the guitar's own volume reduce valve overdrive. Four-times oversampling runs the pedal and valve path, with a fixed total latency of 256 samples.

RADIO / PREAMP
RADIO includes a valve-inspired output stage with supply sag and a small speaker response. PREAMP bypasses this power stage and speaker, while retaining the distorting preamplifier and optional effects. Insert another amplifier after LYNCH RADIO for the original radio-into-amp idea. Levels remain your responsibility; Preamp is not a physical speaker-output adapter. No hardware modification or wiring is needed to use this software.

CONTROLS
INPUT: -24 to +24 dB before the pedals and valves.
DRIVE: preamplifier gain from clean edge to compressed distortion.
TONE: treble loss between valve stages, dark to open.
OUTPUT: -48 to +12 dB after studio processing, before the optional final limiter.
Radio Detail: supply Sag, Valve Bias and Tremolo speed/depth. Sag belongs to the Radio output stage; it is bypassed in Preamp. Bias changes the preamplifier asymmetry in both modes. Tremolo Depth zero disables modulation.
Speaker: Paper Cone, Oval Midrange and Warm Cloth are three original algorithmic voicings. These are not measured speaker IRs. Speaker Enabled can bypass the speaker in Radio mode; Preamp always bypasses it.

PEDALBOARD
The existing Lynch platform provides Wah with tempo Auto-Wah, Compressor, Fuzz, Boost/Drive, Phaser and Chorus/Vibrato. Use Board / Routing to enable the master and choose Before Amp or After Cabinet for modulation. Each pedal also has its own enable switch. Pre-amplifier modulation is mono for mono guitar input. Host tempo is used when available; otherwise time-synced effects use 120 BPM. These are original reduced implementations, not manufacturer-certified pedal circuits.

TAPE ECHO
Single-head and three-head tape-inspired paths, free milliseconds or tempo sync, feedback, mix, tone, drive, motion, age, ducking and before/after placement. Mix adds a wet return. This is separate from the Recording delay. A preset may enable either; listen at sensible levels when raising feedback.

RECORDING
Last main module. Select Desk / Rack Master, EQ, Compressor, Tape, Noise, Stereo Delay, Studio Reverb or Warm Limiter. The Rack master and the individual module must both be enabled. Init leaves the rack master off. EQ has HP/LP plus low/mid/high bands. Compression offers Opto/VCA/FET styles. Tape provides reel/cassette coloration. Noise is optional and initially off. Delay includes Classic, Stereo, Ping Pong, Dual Rhythm and Multi Tap, width and ducking. Reverb offers Plate, Spring or Room with wet-return ducking. Stereo ambience requires a stereo or mono-to-stereo instance. The final Warm Limiter follows OUTPUT and has an adjustable sample-peak ceiling; it is not a true-peak mastering limiter. Bypass is latency-aligned dry input.

USING THE PANEL
Click and drag a knob; Shift gives fine adjustment. Scroll and arrow keys also work. Double-click resets a knob. Knob lighting stays fixed; only its index moves. Switch lamps show enabled state. Radio Detail, Speaker, Pedalboard, Tape Echo and Recording open a drawer over the speaker cloth; click the active tab or press Escape to close. Opening a page never enables its effect. Click the LYNCH RADIO badge for the story.

PRESETS AND SAVING
Init plus 32 starting sounds, grouped by radio guitar, preamp use and studio space. Factory selection retains INPUT calibration except Init. Save and Open use complete .aupreset sound files, including every module setting. Logic also saves the complete AU state in a project. UI size is 75%, 100% or 125%. The preset arrows browse the factory bank.

METERS
IN measures raw incoming RMS before INPUT. OUT measures final processed RMS after OUTPUT and limiting. The warm VU scale uses 0 VU = -18 dBFS RMS, and the numerical reading is dBFS RMS. A VU is not a digital peak meter. The eye on the chassis is visual artwork, not a pitch tuner.

STATUS
This is a private development build. Technical DSP, native AU, UI and AU validation are separate from Robin's musical listening and real-interface performance tests. No exact Luxor hardware equivalence, public release or App Store approval is claimed. Studio beta testing remains paused; this product has its own focused development checks.

LYNCH AUDIO LAB - MUSIC RECORDS A BRIGHTER TOMORROW

LIVE STATION SCALE
The tuning pointer follows the main Drive control, including preset recall and automation. LEIFJORD lies between Narvik and Sandnessjøen and glows softly as the pointer passes near Drive9.6. SANDNESSJØEN is the far-right maximum-drive endpoint and glows fully at Drive11. The cities are a personal decorative scale; Drive now extends from0 to11. Values0-10 retain their previous sound;11 adds2.8dB of gain into the first valve stage using the same saturation circuit. No separate mode or automatic output boost.

THE WAY HOME
Robin Lynch was born in Sandnessjøen, where it all began. Leifjord was the place he passed before arriving home, where the butterflies would already begin. The station lights tell that personal story: Leifjord glows softly on the approach; Sandnessjøen lights fully at11. Click the radio badge to read Robin’s story.

HARDWARE PEDALBOARD
Open Pedalboard to see six physical pedals: Wah, Compressor, Fuzz, Boost, Phaser and Chorus. Switch BOARD POWER on to hear the board. Click a chrome footswitch, or the wah treadle switch, to turn that pedal on or off. A green lamp means the pedal is on and its path is powered; amber means its ON setting is stored while the board or plugin is bypassed. Opening the board or clicking a pedal name does not enable an effect.
Turn the knobs directly on each pedal for its main controls. Click its name for all settings, including wah tempo sync, chorus/vibrato mode and the remaining controls. Choose Full pedalboard in the module menu to return. MOD placement affects Phaser and Chorus: Before Amp or After Cabinet. Wah, Compressor, Fuzz and Boost remain before the radio stages. Existing sound files and automation use the same111 parameters.

RECORDING RACK OVERVIEW
Recording opens a complete rack with eight clickable modules: Desk, EQ, Compressor, Tape, Noise, Stereo Delay, Studio Reverb and Warm Limiter. Click a module face to edit it, and choose Full rack to return. Each physical switch changes only that module’s existing On setting. RACK POWER must be on for processing. Green means on and powered; amber means stored on while Rack or global bypass prevents processing. Opening or editing never enables a module.

LOCAL ECHO PRESETS
The ECHO PRESETS menu contains24 starting points in Short / Slap, Leads / Phrases, Tempo / Sync, Three Head, Worn / Texture and Space / Send. These change only the16 Tape Echo settings and enable Tape Echo. Input, radio

gain, pedals, Recording and output remain untouched. Manual edits show Custom echo. Tempo presets follow host tempo (fallback120 BPM); Wet Studio Send uses100% wet return. Heads and Spring apply to Three Head mode. Time is editable when Sync is off; the Division menu is editable when Sync is on. Global sound-file save/open still stores the complete sound.

BROKEN SPEAKER

Select Speaker → Broken Speaker I or II for an original damaged-paper-cone sound. Soft playing stays relatively clean; harder attacks compress the cone and excite asymmetric cone breakup and a midrange coil-rub rattle. Input and Drive determine how hard it is excited. It adds no random silence or independent crackle noise. The damage stage runs inside the existing4x oversampled radio path; total latency remains256 samples.

It belongs to RADIO with Speaker Enabled. PREAMP and Speaker Off exclude the damaged speaker. The three existing speaker selections retain their prior sound, and existing sound files retain the same speaker numbers. Both damage selections are stored in complete sound files and Collection rig state. This is an original algorithmic effect, not a measured damaged Luxor speaker.

BROKEN SPEAKER INTENSITY

Speaker offers Broken Speaker I and Broken Speaker II. I has stronger torn-cone buzz and coil rub; II adds more severe asymmetric breakup and loose-contact collision. These are two damage intensities of the radio speaker, not a claim of two physical drivers. They require RADIO and Speaker Enabled; PREAMP excludes both. Input and Drive govern excitation.

MODE-AWARE CONTROLS

Recording Delay Time is active in free time; Division is active in Sync. Chorus Intensity belongs to Chorus; Rate and Depth belong to Vibrato. Wah Division and Depth require Auto Wah. Inactive controls keep their stored values.

PARAMETER REFERENCE

126 stable host addresses. Existing addresses keep their meaning. The final twelve frequency addresses store the learned profile. Values below are the plug-in defaults; factory presets can choose different values.

ID / control	Range / default	Purpose
0 Signal mode	0 to 1 Initial: 0	Radio includes a small radio output stage and speaker. Preamp bypasses both; place another amplifier after this plugin.
1 Input	-24 to 24 dB Initial: 0	Input calibration before the pedalboard and valve preamplifier.
2 Drive	0 to 11 Initial: 4	Gain into two asymmetric valve-inspired stages, up to11 at Sandnessjoen MAX. Lower the guitar volume to clean up.
3 Tone	0 to 10 Initial: 5	Passive-style treble loss between valve stages: dark to open.
4 Output	-48 to 12 dB Initial: -6	Final trim after studio processing, before the optional final limiter. Zero is unity.
5 Bypass	0 to 1 Initial: 0	Latency-aligned dry input. Preserves all sound settings.
6 Supply sag	0 to 100 % Initial: 35	Dynamic supply compression in the Radio power stage. Preamp leaves this stage out.
7 Valve bias	-100 to 100 % Initial: 0	Changes asymmetry around the preamp operating point, with DC removal.
8 Radio speaker	0 to 4 Initial: 0	Paper, oval and warm radio speakers plus Broken Speaker I and II: strong cone breakup and coil rub, with a second more shredded damage level. Original algorithmic voicings, no captured impulse responses.
9 Radio speaker enabled	0 to 1 Initial: 1	Bypass only the small speaker in Radio mode. Preamp always bypasses the power stage and speaker.
10 Tremolo rate	0.2 to 12 Hz Initial: 4.5	Post-valve tremolo speed.
11 Tremolo depth	0 to 100 % Initial: 0	Zero disables tremolo; full depth gives complete amplitude movement.
12 Pedalboard Enabled	0 to 1 Initial: 1	Enable the complete pedalboard. Individual pedal settings are retained when the board is bypassed.
13 Wah Enabled	0 to 1 Initial: 0	Enable the classic wah circuit.
14 Wah Position	0 to 100 % Initial: 50	Wah pedal position. Assign this parameter to a controller in Logic for foot-pedal control.
15 Compressor Enabled	0 to 1 Initial: 0	Enable the classic pedal compressor.
16 Compressor Sensitivity	0 to 100 % Initial: 40	Amount of compression from the pedal's sensitivity control.
17 Compressor Output	-24 to 18 dB Initial: 0	Level after the compressor pedal.
18 Fuzz Enabled	0 to 1 Initial: 0	Enable the classic two-transistor fuzz model.
19 Fuzz	0 to 100 % Initial: 50	Fuzz circuit drive.
20 Fuzz Volume	-36 to 12 dB Initial: -6	Output volume of the fuzz pedal.

ID / control	Range / default	Purpose
21 Fuzz Bias	0 to 100 % Initial: 50	Lynch addition: adjusts transistor bias from smoother sustain toward gated, broken decay.
22 Drive Enabled	0 to 1 Initial: 0	Enable the mid-focused overdrive pedal.
23 Overdrive	0 to 100 % Initial: 35	Drive in the pedal clipping stage.
24 Drive Tone	0 to 100 % Initial: 50	Tone after the overdrive circuit.
25 Drive Level	-24 to 18 dB Initial: 0	Output level of the overdrive pedal.
26 Phaser Enabled	0 to 1 Initial: 0	Enable the classic phaser.
27 Phaser Speed	0.05 to 12 Hz Initial: 0.5	Rate of the phaser sweep.
28 Phaser Depth	0 to 100 % Initial: 100	Lynch addition: reduces sweep depth while retaining the classic phase stages.
29 Chorus Enabled	0 to 1 Initial: 0	Enable the classic chorus/vibrato circuit.
30 Chorus Intensity	0 to 100 % Initial: 35	Original-style combined chorus intensity control.
31 Vibrato Rate	0.05 to 12 Hz Initial: 2	Vibrato modulation rate, available in Vibrato mode.
32 Vibrato Depth	0 to 100 % Initial: 25	Vibrato modulation depth, available in Vibrato mode.
33 Chorus Mode	0 to 1 Initial: 0	Chorus uses its Intensity control; Vibrato exposes separate Rate and Depth.
34 Chorus Mix	0 to 100 % Initial: 50	Lynch addition: dry/effect balance for the chorus/vibrato pedal.
35 Modulation Placement	0 to 1 Initial: 1	Place phaser and chorus before the amplifier or in the studio path after its cabinet.
36 Tape Echo Enabled	0 to 1 Initial: 0	Enable the tape echo. Settings are retained when bypassed.
37 Tape Echo Machine	0 to 1 Initial: 0	Single Head and Three Head have distinct tape-machine voicings and feedback behavior.
38 Echo Time	50 to 1500 ms Initial: 330	Base tape echo time. Tempo synchronization overrides this time while Sync is enabled.
39 Echo Sync	0 to 1 Initial: 0	Synchronize echo time to the DAW tempo. A 120 BPM fallback is used if the host supplies no tempo.
40 Echo Division	0 to 7 Initial: 2	Musical division of the host tempo.
41 Echo Repeats	0 to 95 % Initial: 35	Tape feedback. High settings can sustain or build a dense echo tail.
42 Echo Mix	0 to 100 % Initial: 22	Dry/echo balance. Use 100% for a fully wet send effect.
43 Echo Heads	0 to 6 Initial: 6	Choose active playback heads in the Three Head machine. Single Head has no head-pattern control.

ID / control	Range / default	Purpose
44 Echo Bass	-12 to 12 dB Initial: 0	Low-frequency tone shaping in the echo voice.
45 Echo Treble	-12 to 12 dB Initial: 0	High-frequency tone shaping in the echo voice.
46 Wow / Flutter	0 to 100 % Initial: 10	Tape transport pitch variation.
47 Tape Drive	0 to 100 % Initial: 10	Drive the modeled tape/preamp stages harder.
48 Tape Age	0 to 100 % Initial: 15	Progressive tape wear and loss of high-frequency detail.
49 Echo Duck	0 to 100 % Initial: 0	Reduce the echo while the input plays, allowing the tail to emerge afterward.
50 Echo Placement	0 to 1 Initial: 1	Before Amp or Studio After Cabinet. This does not imply a physical amp effects loop.
51 Echo Spring	0 to 100 % Initial: 0	Three Head machine's spring ambience. Hidden on Single Head.
52 Recording Rack Enabled	0 to 1 Initial: 0	Enable the optional recording chain after the cabinet and microphones. Init leaves this complete rack bypassed.
53 Desk Enabled	0 to 1 Initial: 1	Enable the tube or transistor desk stage. The rack master must also be enabled.
54 Desk Type	0 to 1 Initial: 0	Tube or transistor-inspired recording desk coloration.
55 Desk Drive	0 to 100 % Initial: 12	Drive the desk input stage for recording-console coloration.
56 Desk Trim	-18 to 18 dB Initial: 0	Level leaving the desk stage, before the recording EQ and compressor.
57 Recording EQ Enabled	0 to 1 Initial: 1	Enable the recording equalizer, separate from the original amplifier tone controls.
58 Recording High Pass	20 to 2000 Hz Initial: 20	Low-frequency cut in this recording module.
59 Recording Low Pass	2000 to 20000 Hz Initial: 20000	High-frequency cut in this recording module.
60 Recording Low Frequency	30 to 400 Hz Initial: 120	Frequency of the low shelf in the recording equalizer.
61 Recording Low Gain	-12 to 12 dB Initial: 0	Low-shelf boost or cut in the recording equalizer.
62 Recording Mid Frequency	150 to 8000 Hz Initial: 900	Center frequency of the recording EQ's bell band.
63 Recording Mid Gain	-12 to 12 dB Initial: 0	Midrange bell boost or cut in the recording equalizer.
64 Recording Mid Q	0.3 to 4 Initial: 0.7	Width of the midrange bell. Higher Q is narrower.
65 Recording High Frequency	1500 to 16000 Hz Initial: 6000	Frequency of the high shelf in the recording equalizer.
66 Recording High Gain	-12 to 12 dB Initial: 0	High-shelf boost or cut in the recording equalizer.

ID / control	Range / default	Purpose
67 Recording Compressor Enabled	0 to 1 Initial: 1	Enable the recording compressor. Its gain-reduction meter shows actual attenuation.
68 Recording Compressor Type	0 to 2 Initial: 0	Opto, VCA or FET-inspired recording dynamics. The model changes the response, not only its name.
69 Recording Threshold	-48 to 0 dB Initial: -18	Level above which the recording compressor reduces gain.
70 Recording Ratio	1 to 20 :1 Initial: 2	Compression ratio above threshold.
71 Recording Attack	0.1 to 100 ms Initial: 25	Compressor attack. Shorter settings catch transients sooner.
72 Recording Release	20 to 2000 ms Initial: 250	Compressor recovery. The Opto model uses adaptive recovery informed by this setting.
73 Recording Makeup	-18 to 18 dB Initial: 0	Manual gain after recording compression; no hidden automatic loudness matching.
74 Recording Compression Mix	0 to 100 % Initial: 100	Blend dry and compressed signal for parallel compression.
75 Recording Tape Enabled	0 to 1 Initial: 1	Enable the recording tape stage. Noise has its own independent switch.
76 Recording Tape Type	0 to 1 Initial: 0	Studio reel or cassette-inspired tape response.
77 Recording Tape Drive	0 to 100 % Initial: 12	Drive the tape stage from subtle color toward stronger saturation.
78 Recording Tape Tone	0 to 100 % Initial: 50	Recording tape tone balance; center is the nominal setting.
79 Recording Tape Wow	0 to 100 % Initial: 5	Tape transport pitch variation.
80 Recording Tape Wear	0 to 100 % Initial: 10	Tape wear and frequency loss, independently of the noise switch.
81 Recording Tape Bias	-100 to 100 % Initial: 0	Bias offset around the nominal tape setting.
82 Recording Tape Speed	0 to 2 Initial: 1	Slow, Normal or Fast. Reel: 7.5/15/30 ips. Cassette: 0.9375/1.875/3.75 ips.
83 Analog Noise Enabled	0 to 1 Initial: 0	Add optional recording noise independently of tape wear. The complete rack must be enabled.
84 Analog Noise Floor	-90 to -35 dBFS Initial: -70	Nominal analog-noise level. Noise is absent with its switch off.
85 Recording Delay Enabled	0 to 1 Initial: 0	Enable the parallel recording delay. Send and Return are separate from the dry path.
86 Recording Delay Time	50 to 2000 ms Initial: 330	Recording delay duration with Sync off.
87 Recording Delay Sync	0 to 1 Initial: 0	Follow the host tempo with the chosen musical division.
88 Recording Delay Division	0 to 7 Initial: 2	Musical duration of the recording delay when tempo sync is on.
89 Recording Delay Feedback	0 to 95 % Initial: 30	Amount returned to the recording delay input for more repeats.

ID / control	Range / default	Purpose
90 Recording Delay Send	0 to 100 % Initial: 15	Amount sent from the recorded dry signal to the parallel delay.
91 Recording Delay Return	-60 to 6 dB Initial: 0	Level of the delay returning alongside the unchanged dry path.
92 Delay High Pass	20 to 2000 Hz Initial: 120	Low-frequency cut in this recording module.
93 Delay Low Pass	2000 to 20000 Hz Initial: 9000	High-frequency cut in this recording module.
94 Recording Reverb Enabled	0 to 1 Initial: 0	Enable the parallel recording reverb. Send and Return are separate from the dry path.
95 Recording Reverb Type	0 to 2 Initial: 0	Plate, Spring or Room recording ambience.
96 Recording Reverb Decay	0.2 to 12 s Initial: 1.8	Approximate decay time of the selected recording reverb model.
97 Recording Reverb Send	0 to 100 % Initial: 15	Amount sent from the recorded dry signal to the parallel reverb.
98 Recording Reverb Return	-60 to 6 dB Initial: 0	Level of the reverb returning alongside the unchanged dry path.
99 Reverb High Pass	20 to 2000 Hz Initial: 120	Low-frequency cut in this recording module.
100 Reverb Low Pass	2000 to 20000 Hz Initial: 9000	High-frequency cut in this recording module.
101 Auto Wah	0 to 1 Initial: 0	Tempo-synced wah motion. Enable Pedalboard and Wah first. Off preserves manual Position. Follows DAW beats during playback; free-runs at the last valid tempo, initially 120 BPM, when stopped.
102 Wah Division	0 to 7 Initial: 4	Duration of one complete sweep in musical beats. 1 Bar means four quarter-note beats. Triplet and dotted rates are available.
103 Wah Depth	0 to 100 % Initial: 100	Sweep amount around manual Wah Position. Position 50% gives the full heel-to-toe range at 100% Depth. Zero leaves Position unchanged.
104 Recording Delay Mode	0 to 4 Initial: 1	Classic preserves the original delay. Stereo separates the repeats; Ping Pong alternates sides; Dual Rhythm uses left:right 2:3 times; Multi Tap adds four rhythmic taps.
105 Recording Delay Width	0 to 100 % Initial: 100	Stereo width of the wet delay return. Zero is mono; 100 is full width. The dry path and feedback level stay unchanged.
106 Warm Limiter Enabled	0 to 1 Initial: 0	Final stereo-linked tube limiter after all recording effects and output trim. Off preserves the original signal.
107 Warm Limiter Amount	0 to 100 % Initial: 35	Tube drive and peak control; no automatic loudness matching.
108 Warm Limiter Ceiling	-18 to 0 dB Initial: -1	Sample-peak ceiling after output trim; no true-peak or intersample guarantee.
109 Delay Ducking	0 to 100 % Initial: 0	Attenuate only the delay return while playing; it recovers between phrases.
110 Reverb Ducking	0 to 100 % Initial: 0	Attenuate only the reverb return while playing; it recovers between phrases.
111 Pickup Hum	0 to 1 Initial: 0	Learned fixed-frequency hum reduction before pedals and the Radio preamp, in both Radio and Preamp modes. Mute strings and LEARN first. Off preserves the original sound.

ID / control	Range / default	Purpose
112 Hum Reduction	0 to 30 dB Initial: 12	Maximum cut at each learned interference frequency. Start at 12 dB. Deep cuts can affect notes near a learned frequency.
113 Hum Width	1 to 12 Hz Initial: 3	Width of the narrow noise filters. Start at 3 Hz; wider filters tolerate drift but remove more guitar tone.
114 Hum Frequency 1	0 to 4000 Hz Initial: 0	Stored fixed interference frequency. Zero disables this slot. Turn Pickup Hum off before manually editing.
115 Hum Frequency 2	0 to 4000 Hz Initial: 0	Stored fixed interference frequency. Zero disables this slot. Turn Pickup Hum off before manually editing.
116 Hum Frequency 3	0 to 4000 Hz Initial: 0	Stored fixed interference frequency. Zero disables this slot. Turn Pickup Hum off before manually editing.
117 Hum Frequency 4	0 to 4000 Hz Initial: 0	Stored fixed interference frequency. Zero disables this slot. Turn Pickup Hum off before manually editing.
118 Hum Frequency 5	0 to 4000 Hz Initial: 0	Stored fixed interference frequency. Zero disables this slot. Turn Pickup Hum off before manually editing.
119 Hum Frequency 6	0 to 4000 Hz Initial: 0	Stored fixed interference frequency. Zero disables this slot. Turn Pickup Hum off before manually editing.
120 Hum Frequency 7	0 to 4000 Hz Initial: 0	Stored fixed interference frequency. Zero disables this slot. Turn Pickup Hum off before manually editing.
121 Hum Frequency 8	0 to 4000 Hz Initial: 0	Stored fixed interference frequency. Zero disables this slot. Turn Pickup Hum off before manually editing.
122 Hum Frequency 9	0 to 4000 Hz Initial: 0	Stored fixed interference frequency. Zero disables this slot. Turn Pickup Hum off before manually editing.
123 Hum Frequency 10	0 to 4000 Hz Initial: 0	Stored fixed interference frequency. Zero disables this slot. Turn Pickup Hum off before manually editing.
124 Hum Frequency 11	0 to 4000 Hz Initial: 0	Stored fixed interference frequency. Zero disables this slot. Turn Pickup Hum off before manually editing.
125 Hum Frequency 12	0 to 4000 Hz Initial: 0	Stored fixed interference frequency. Zero disables this slot. Turn Pickup Hum off before manually editing.