INDEPENDENT AUDIO SOFTWARE

# LYNCH Ducker

## Make room without changing the tone.




Let a kick, voice or another external sidechain turn down the receiving track. Follow its level or choose timed transient and kick pulses. Detector filtering and separate listening modes help find the trigger before you tune the return.

Complete colour user guide · version 0.3.0 · Apple Silicon Mac AU · macOS 12+

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# Start with the part

Let a kick, voice or another external sidechain turn down the receiving track. Follow its level or choose timed transient and kick pulses. Detector filtering and separate listening modes help find the trigger before you tune the return.

01 / Insert Lynch Audio Lab: Ducker on the receiving audio or instrument channel.

02 / In the plug-in window's Side Chain selector, choose the trigger track or bus.

03 / Choose your kick to make a bass or synth turn down with the kick.

04 / Play the receiving and trigger tracks. The status should report CONNECTED /

05 / SIGNAL. CONNECTED / QUIET means a source is connected but the measured detector signal is currently at or below -80 dBFS.

06 / Raise Amount slowly. The graph shows the resulting gain reduction.

07 / Adjust Release to hear the receiving track return in time with the groove.

08 / Use Attack for the leading edge. Open Detector settings only if needed.

09 / The host owns sidechain routing. Presets do not choose another track for you. If the receiving track is audible but the status says NOT CONNECTED, check the host's Side Chain selector. If it says CONNECTED / QUIET, check that the chosen trigger actually sends audio during playback and that its detector filter is not rejecting the frequencies you expect it to follow.

# Inside the sound

### Quick Start In Logic Pro

Choose your kick to make a bass or synth turn down with the kick.

### What You See

GAIN REDUCTION is measured by the audio engine.

### Controls

Amount / 0-100% Sets the maximum strength of ducking.

### Q

Bypass Returns the receiving track unchanged and keeps your settings.

### Starting Points And Your Presets

The factory menu contains Init and six small starting points: House / Kick Dip, Techno / Deep Pulse, Bass / Tight Space, Voice / Make Room, Highs / Hat Trigger and Atmosphere / Gentle Bed.

### Help And Mouse Controls

Drag Amount upward to increase it and downward to decrease it.

# Quick Start In Logic Pro

1. Insert Lynch Audio Lab: Ducker on the receiving audio or instrument channel.

2. In the plug-in window's Side Chain selector, choose the trigger track or bus.

Choose your kick to make a bass or synth turn down with the kick.

3. Play the receiving and trigger tracks. The status should report CONNECTED /

SIGNAL. CONNECTED / QUIET means a source is connected but the measured detector signal is currently at or below -80 dBFS.

4. Raise Amount slowly. The graph shows the resulting gain reduction.

5. Adjust Release to hear the receiving track return in time with the groove.

Use Attack for the leading edge. Open Detector settings only if needed.

The host owns sidechain routing. Presets do not choose another track for you. If the receiving track is audible but the status says NOT CONNECTED, check the host's Side Chain selector. If it says CONNECTED / QUIET, check that the chosen trigger actually sends audio during playback and that its detector filter is not rejecting the frequencies you expect it to follow.

# Sound And Approach

Ducker turns down one audio track in response to another. Put it on the bass, pad, synth, effect return or other receiving track that should make room. Feed the kick, voice or other trigger to its external audio sidechain. The trigger controls the volume; it is not normally mixed into Ducker's output.

# What You See

Amount is the main control. Attack and Release stay visible beneath the main display. Detector settings opens the smaller Sensitivity, Hold, Detector filter, Cutoff and Q controls. It starts closed to keep the everyday workflow simple; opening or closing it does not change any setting.

GAIN REDUCTION is measured by the audio engine. The line runs from earlier on the left to now on the right. Zero is at the top; a deeper line means more volume reduction. Its 64 points update at 32 Hz, covering about two seconds. Each point records the greatest actual reduction in that interval. The vertical dB scale adjusts to the measured reduction. The large dB number is the current reduction. This is a live meter, not a drawn prediction, tempo sequence or editable ducking curve.

SIDECHAIN reports the actual external input connection and measured signal. NOT CONNECTED: the host has no external sidechain connection. CONNECTED / QUIET: connected, but no detector signal above -80 dBFS is measured. CONNECTED / SIGNAL: connected and detector signal is present above -80 dBFS. STATUS UNAVAILABLE: the editor could not read a valid meter snapshot.

Connected / Signal is not a promise of gain reduction: Amount can be zero, Bypass can be on, or the signal can remain below the detector threshold.

# Controls

Amount / 0-100% Sets the maximum strength of ducking. 100% allows up to 40 dB of reduction; 50% allows up to 20 dB. Zero is an unchanged receiving signal. The trigger's level and Sensitivity determine how far the envelope reaches toward the chosen Amount. Start with a modest amount and listen in context.

Attack / 0.1-50 ms Sets how quickly the receiving track turns down. A short attack makes room quickly for a kick transient. A longer attack gives a gentler leading edge. Attack is an exponential time constant: each chosen interval covers about 63% of the remaining change toward the target, rather than finishing the whole dip.

Release / 20-1500 ms Sets how quickly the receiving track comes back after Hold. Shorter settings can feel tight; longer settings create a more sustained dip. This is time in milliseconds, so it does not automatically follow the host tempo. Like Attack, Release is an exponential time constant: about 63% of the remaining return occurs during each chosen interval.

Sensitivity / 0-100% Higher values respond to quieter trigger audio. The detector threshold moves from -6 dBFS at 0% to -72 dBFS at 100%. The envelope reaches its full selected Amount when the detector is 12 dB above that threshold. This control changes detector sensitivity; it does not turn the trigger track up or down.

Hold / 0-100 ms Keeps louder detector peaks briefly, including when quieter trigger audio continues, before letting the envelope release toward the quieter target. The hold interval is finite; continuing quieter audio does not keep refreshing the previous louder peak. This helps uneven triggers produce a steady return.

Detector filter / Off, Low Pass, High Pass, Band Pass Filters only the external trigger feeding the detector. It never filters the audible receiving track. Ducker turns down the whole receiving signal when the filtered trigger activates it.

Off follows the full external sidechain. Low Pass follows frequencies below Cutoff: useful for a kick's low body. High Pass follows frequencies above Cutoff: useful for a hat or bright trigger. Band Pass follows a region around Cutoff: useful for a focused trigger.

Cutoff / 20 Hz-20 kHz Chooses the detector filter frequency. Cutoff is inactive when the filter is Off. The filter remains internally bounded for the current sample rate.

# Q

Sets detector filter resonance. Higher Q emphasizes a narrower region around the cutoff. Q is inactive when the filter is Off; its stored setting is kept.

Bypass Returns the receiving track unchanged and keeps your settings. The external trigger is heard only when SC Listen is enabled. When a sidechain disappears or fails, Ducker releases to exact unchanged audio over about 5 ms when Listen is off; it never switches to the receiving track as a substitute trigger. Amount 0 is also neutral.

# Scope

Ducker is a clean external-sidechain volume utility with no added audio latency and no generated tail. It is not a limiter, multiband processor, analog model, loudness normalizer or internal rhythm generator. It has no samples, paid models or third-party audio library.

Technical validation, host routing checks and musical listening are separate checks; listen on your own material before relying on a starting point in a finished mix.

# Sidechain Listen

The SC Listen button stays visible in both layouts. ON solos the external sidechain after Off / Low Pass / High Pass / Band Pass filtering, before the envelope detector. It replaces the receiving track; no extra gain or normalization is added. Q resonance can boost the monitored level. Amount, Sensitivity, Attack, Hold and Release do not alter this listening signal. The ducking detector continues running and the GR graph still shows ducking, not attenuation of the monitored audio. Turn SC Listen OFF to return to the ducked track. Switching crossfades over 5 ms. Bypass overrides Listen. A missing or failed sidechain is silence during Listen, never the main track. Mono sidechain duplicates to stereo; stereo remains stereo, or averages to mono for a mono instance. Opposite-polarity stereo may cancel in mono. Listen is automatable and saved with the project/User preset. Old nine-value presets load with Listen OFF; Init and factory presets also turn Listen OFF.

# Timed Ducking

Choose Follow, Transient Pulse or Kick Pulse above Amount. Follow is the previous level-following behavior. Transient Pulse responds to fresh attacks in the filtered sidechain. Kick Pulse further requires low-band dominance. It is a causal DSP detector, not AI separation or a guarantee of kick identity.

Pulse Length is the TOTAL duration (5–300 ms) from detection to full recovery. Attack is limited to a quarter of that window; Release fits in the remaining time. Shorter Release leaves a flat middle section. Long source tails do not keep ducking active. Amount sets a fixed peak reduction per accepted hit. The triggering hit snapshots Amount, Length, Attack and Release for a smooth, complete envelope; edits take

effect on the next hit. Bypass/Amount0 still fade processing out immediately. Hold is inactive in Pulse modes.

Min Gap ignores new triggers for at least30–400 ms, or Pulse Length if longer. This prevents flams/tails from retriggering. Lower it for faster repeated kicks. Kick Focus sets the upper cutoff of the analysis band, with a fixed25Hz HP. Kick Selectivity requires more low-band energy relative to the full filtered sidechain as it increases. Start at150Hz and50%; lower Selectivity for bright or masked kicks, raise it when snares trigger. Sensitivity still controls the minimum trigger level. The ordinary detector filters run BEFORE this analysis. Leaving them Off is a useful starting point for Kick Pulse.

SC Listen still hears the ordinary filtered sidechain before kick analysis. It does not play an isolated kick stem; GR shows accepted timed duck pulses. No lookahead/added audio latency. The detector needs incoming evidence and therefore cannot duck before the first samples of an unknown kick. Detection delay varies with sound and settings. Deep toms, bass notes and low-frequency bleed may be mistaken for kicks; cymbals can mask kicks. A separate kick send is the dependable option if the mix cannot be distinguished at these settings. Do not use Kick Pulse as a guaranteed drum separator.

New factory starts: Kick Pulse / Tight40ms, Deep80ms, Transient / Short20ms. All original parameter IDs0–9 remain. New mode/timing controls are IDs10–14. Older9/10-value User and AU states load in Follow, preserving the old sound.

# Trigger Solo

Open Detector settings. Trigger Solo is beside TRIGGER ANALYSIS. Kick Pulse monitors the actual signed 25 Hz to Kick Focus analysis band. Follow and Transient Pulse monitor the ordinary filtered sidechain. SC Listen remains the signal BEFORE additional kick analysis. Selectivity controls accepted attacks, not monitoring EQ. With Amount raised, the reduction graph shows accepted duck pulses while you listen. Low toms and bass can still be audible and trigger; this is not an isolated kick stem. Trigger Solo overrides SC Listen if both are on; turn both off to hear the ducked track. Bypass overrides both; a missing sidechain gives silence. There is no normalization or added gain. Changes fade over 5 ms. New parameter ID15; older 9/10/15-value presets load Trigger Solo off.

# Starting Points And Your Presets

The factory menu contains Init and six small starting points: House / Kick Dip, Techno / Deep Pulse, Bass / Tight Space, Voice / Make Room, Highs / Hat Trigger and Atmosphere / Gentle Bed. They are suggestions to adjust by ear, not promised settings for every mix. The arrows move through factory starting points. Init restores all defaults with Amount at 0%. The menu shows Custom when the current settings no longer match a factory starting point.

Save… writes all sixteen settings to an atomic .lynchducker preset file. User… lists your saved files and can open a file from another folder. The default folder is: ~/Library/Application Support/Lynch Audio Lab/Ducker/Presets

User presets contain settings, not audio, sidechain routing or a Logic project. A file is fully checked for the right product, version, parameter count, types and allowed values before any settings change. Invalid or unrelated files are rejected without applying a partial preset. Logic's saved plug-in state also stores the settings in its own project/preset system.

# Help And Mouse Controls

? Help turns tooltips on and off. It opens off. Guide opens this English guide inside the editor, above its controls. The guide text can be selected and scrolled. Close or Escape returns to the editor.

Drag Amount upward to increase it and downward to decrease it. Drag the thin sliders across their tracks. Shift gives fine adjustment on the main dial; scroll adjusts a dial or slider, with Shift for fine increments. Double-click a dial or slider to reset that control to its default. Right-click or Control-click a parameter to open Reset to Default or the guide.

Use the host's automation or controller-assignment system to automate these normal AU parameters. There is no built-in MIDI Learn or on-screen keyboard.

UI Size offers six scales and keeps the editor within the available display. The host controls the outer plug-in window. Detector settings expands the editor vertically; it preserves all sound settings.

# Install and choose the right host slot

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

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

# Trial and permanent licensing

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

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

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

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

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

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

# Save, recall and automate

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

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

# Troubleshooting and support

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

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

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

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

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

# About this guide

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

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