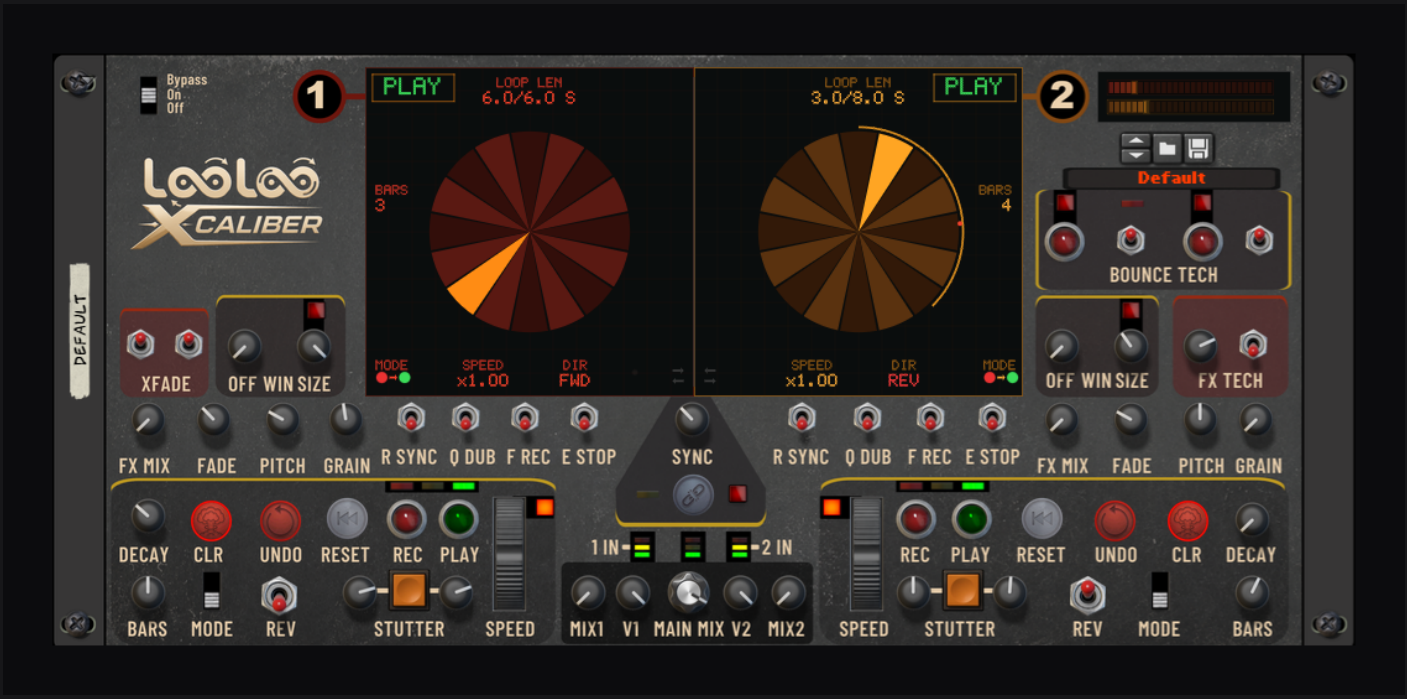
DOODOV DIGITAL DESIGN

LooLoo X-Caliber

Dual-Track Stereo Looper • Rack Extension for Reason

Operation Manual

A section-by-section overview of every function for the experienced user. For exhaustive detail see the Complete Manual.



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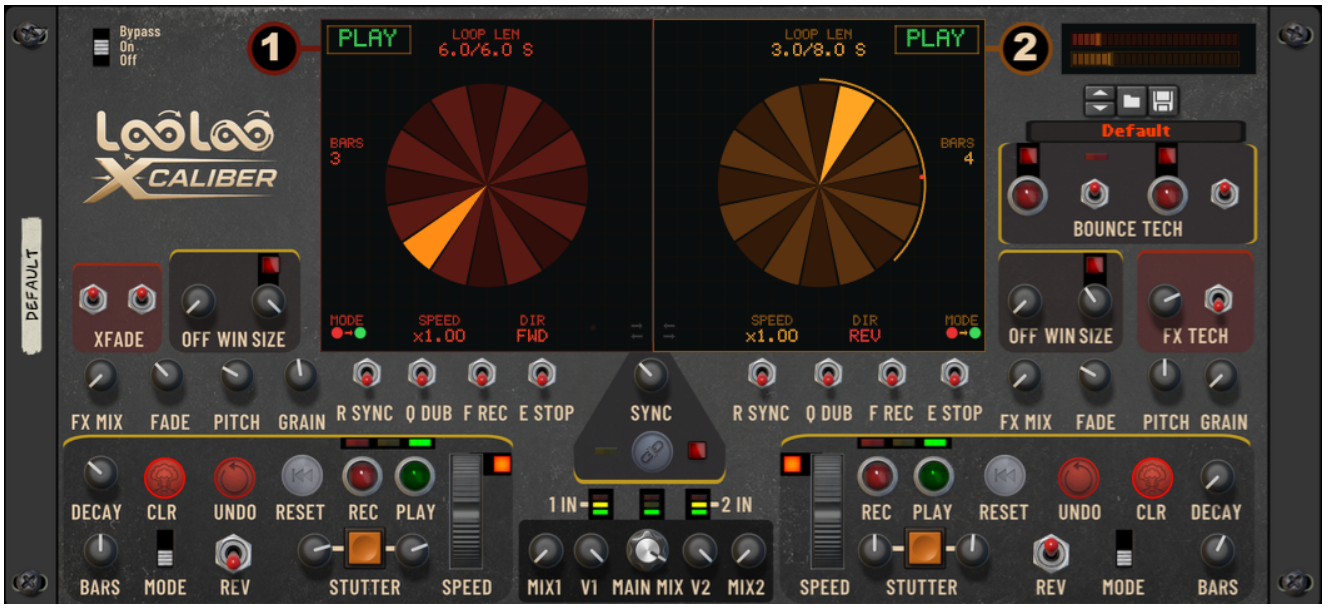
Architecture & signal flow

LooLoo X-Caliber is two independent stereo loopers side by side, joined by a shared mixer, a cross-track sync engine, and a creative bounce section. Track 1 occupies the left half of the panel and Track 2 the right, mirrored around the central display, mixer and SYNC cluster. Each track has its own audio input, main output, and an effects send/return loop; a summed **Mix** bus carries both tracks together.

Inside a track the signal path is: **input** → **record buffer** → **looped playback**, with the playback stage shaped by speed-bend, reverse, the windowed trimmer, the granular pitch shifter, per-cycle decay, and stutter. The looped signal is then blended with its effects return by the **FX Mix** control before reaching the track output and the mix bus.



The two halves are functionally identical and mirrored. Shared controls (display, mixer, SYNC) sit down the centre; Bounce and the FX/Window "tech" blocks sit at the outer edges.

Reading the panel

Top band: bypass, the loop displays, and the patch browser. Middle band: per-track tone knobs (FX Mix, Fade, Pitch, Grain) and the four record-behaviour switches. Bottom band: the transport cluster (Rec/Play/Clear/Undo/Reset/Stutter/Speed) plus Bars, Mode and Reverse. The centre holds the input/mix section and the SYNC controls.

TRANSPORT

Recording, playback & loop length

Each track is a small state machine — idle, recording, playing, overdubbing — driven by two buttons and a handful of switches.

REC	Starts recording. With a loop already present, REC begins a new overdub/replace pass according to MODE.
PLAY	Starts and stops playback of the current loop.
BARS	Loop length in bars, from a quarter-bar up to 16 bars. This sets how long REC captures before the loop closes and playback begins.
MODE	Three-position post-record behaviour: **Play** (record once → play), **Overdub** (record → keep layering), **Solo** (record → play, and mute the live input so only the loop is heard).

Record-behaviour switches

F REC	**Free Rec.** Capture without a fixed bar count — you set the loop length by stopping, instead of recording an exact number of bars.
E STOP	**Early Stop.** Allows a recording to be ended before the full Bars length is reached; the loop closes cleanly at the next quarter-note marker.
Q DUB	**Quantise Overdub.** Holds a new overdub pass until the next bar boundary so layers start in time rather than the instant you press REC.
R SYNC	**Reset Sync.** When on, RESET is quantised to the next quarter-note; when off, RESET jumps the playhead immediately. Both use short fades for click-free jumps.

Clear, Undo, Reset

CLR wipes the track empty (length zero) and returns it to idle.
UNDO reverts the most recent overdub or bounce pass — one level, per track.
RESET re-triggers the playhead to the loop start; in synced mode a second press before the beat cancels the pending reset.

SHAPING

Speed, reverse, decay & the loop trimmer

SPEED	Speed-bend fader. Pushes playback faster or slower (and pitches with it). Returning toward centre crossfades smoothly back to the loop's canonical position so it never drifts out of time.
REV	Reverses playback direction. Works together with every other playback control, including the window trimmer and stutter.
DECAY	A gentle per-cycle fade: each time the loop wraps, its contents are attenuated slightly, giving a dub-style decay that thins the loop over repeats. At zero the loop sustains indefinitely.
FADE	Edge fade applied at the loop seam to keep wraps click-free and to soften the loop start/end.

The windowed loop trimmer

The **WIN SIZE** knob (with its **OFF** switch) plays only a slice of the recorded loop rather than the whole thing. Shrinking the window turns a long take into a short, repeating cell; combined with REVERSE and STUTTER it is the heart of the device's glitch textures. A window offset (from the back-panel CV) slides that slice through the loop. The display draws a tinted arc on the radar ring to show the active window.

Pitch & grain

PITCH	Granular pitch shift, independent of playback speed — transpose the loop without changing its timing, or stack it against SPEED for detuned doubling.
GRAIN	Grain size for the pitch shifter. Small grains give a fine, shimmery character; larger grains are smoother but looser in time.

> **Window + Reverse interaction**
> On very small windows in reverse the loop wraps many times per second. This is intended — it is how the device produces buzzy, pitched glitch tones — and the seam stays click-free thanks to the edge crossfades.

Stutter, the FX loop & the mixer

Stutter

The **STUTTER** button is momentary: while held, the track stops advancing through the loop and instead repeats a tiny captured slice. The two knobs set the slice **size** and its replay **speed**. Engaging and releasing are crossfaded so stutter drops in and out without clicks, and the stutter speed only affects playback while stutter is actually held — it is silent the rest of the time.

Effects send / return

Each track has a stereo **SEND** output and a **RTN** input on the back panel, forming an external effects loop. The front-panel **FX MIX** knob blends the returning, processed signal back into the loop — fully dry at minimum, fully wet at maximum — and because the return is folded into the loop during overdub, it regenerates for feedback-style textures.

FX MIX	Dry/return balance for the track's effects loop.
FX TECH	The FX utility block: an FX bypass switch that silences the send and ignores the return (taking the external effect out of the path), plus a headroom guard that tames hot returns.
SEND / RTN	Back-panel stereo jacks: patch SEND to an effect and its output back to RTN.

The central mixer

Between the two tracks sit the level controls. **MAIN MIX** is the master output level. Each track has its own level (V1 / V2) and contribution to the summed mix bus (MIX1 / MIX2), and the input routing switches set how the physical inputs feed the two tracks. **MUTE** silences the whole device.

Central input/mix section with the MAIN MIX master.

Locking tracks together & folding them

Sync lock & multiplier

The **SYNC** button (the infinity badge in the centre) engages a shared timekeeper between the two tracks. With sync on and one track already looping, the other track's recording is held to start exactly on the master loop's wrap, so layers line up instead of drifting. The **multiplier** (×0.25 up to ×3) sets the recorded loop length as a ratio of the master — capture a loop half, equal to, double or triple the length of the one already playing.

The Bounce section

Bounce folds one track's audio into the other — a way to free a looper for new material, or to pile layers into a single track. It is fully independent per direction (1→2 and 2→1).

- **Trigger** (per direction) — *arms* the bounce; it does not fire instantly. A quick double-tap cancels. Only one direction can be armed at a time.
- **Sync switch** (per direction) — when on, the armed bounce waits for the next quarter-note so it lands on the beat; when off it fires immediately. (If the transport is stopped, it fires right away.)
- **Clear toggle** (per direction, on by default) — wipes the source track after the fold, freeing it.

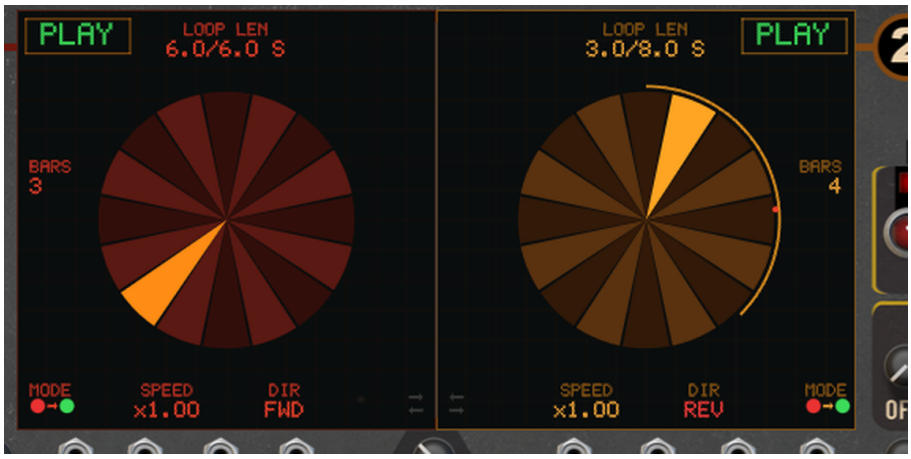
When it fires: if the destination is empty, the source is copied in wholesale. If the destination already has a loop, the source is mixed on top, anchored at the destination's current play position and ramped in and out at the edges so the seam is smooth. The bounce is undo-able, and the display draws a coloured arrow in the direction of the fold (red if the source will be cleared, amber if not).

The Bounce "tech" block (front, upper right).

DISPLAY

Reading the loop displays

The central screen shows both tracks at once — Track 1 on the left, Track 2 on the right — as radar-style rings surrounded by status read-outs.



Both tracks shown simultaneously: position rings with bar segments, plus state, loop length, bars, speed and direction.

Radar ring	Outer ring split into bar segments; the current bar lights brighter and a sweeping arc shows the play position. A tinted arc marks the active window when the trimmer is in use.
STATE box	IDLE / REC / PLAY / DUB / SOLO, colour-coded (red record, green play).
LOOP LEN / BARS	Recorded length in seconds and the bar count.
SPEED / DIR	Current speed multiplier (e.g. ×1.00) and FWD / REV direction.
MODE icon	A small record-to-outcome glyph: green Play, red Overdub, pink Solo.
Decay disc	A contracting “smoke” disc whose colour and size track the decay setting and loop phase.
FX arrows	Twin arrows whose brightness follows the FX Mix amount and playback phase.
Stutter pulse	A pulsing disc that appears only while stutter is engaged.

Centre & corner indicators

Sync dot	An orange disc, top-centre, lit only while sync lock is engaged.
Bounce arrow	A directional arrow between the rings during a bounce; colour shows whether the source is cleared.
Memory bars	Top-right: two horizontal bars showing how full each track’s memory is (see next page).
Mute speaker	A large red speaker icon in the centre whenever the master is muted.

Memory, mute & the back panel

Memory & the “M” indicator

Each track records into a fixed buffer of roughly 32 seconds. If the Bars setting at the current tempo would need a longer loop than that, the device falls back to the largest whole bar count that fits, and flags it: the bar count on the main display shows the reduced value with a red **M** next to it, and a red **M** appears at the end of that track’s memory bar. The two memory bars in the top-right refresh whenever a new recording is made.

Mute

The master **MUTE** silences all outputs with a short click-free ramp. It can be toggled from the panel or driven from the back-panel mute-gate CV — either source lights the central red speaker icon.

Back panel

The back panel carries the audio jacks and an extensive CV set. Per track you get stereo **IN**, **OUT**, **SEND** and **RTN**; the centre adds the summed **MIX** out and a mute gate. Every performance parameter has a CV input, and each track sends out position, end-of-loop, record and play signals for chaining devices together.

Back panel: per-track audio jacks and CV columns, the central Mix bus and mute gate, per-track CV outputs (EOL / POS / REC / PLAY), and the parameter CV inputs.

CV at a glance

Inputs include record/play/clear/undo/reset/stutter gates, both bounce triggers, the mute gate, and level CVs for speed, decay, FX mix, window size/offset, pitch, grain, volume and dry mix — per track.
Outputs: end-of-loop pulse, playhead position, and record/play status — per track. See the Complete Manual for the full jack-by-jack map.