

REFRAIN

Live Looping Sampler

Quick Start Guide

Everything you need to record your first loop, play it back as an instrument, and get sound out of the ring delay. Ten minutes, start to finish. The Operation Manual covers every control in detail once you want to go further.



Rack Extension for Reason • Doodov Digital Design

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What Refrain does

Refrain is two instruments sharing one loop buffer.

- A **live looper**. Audio arriving at the inputs is recorded, wrapped to a bar length you choose, and played back seamlessly. You can overdub onto it, decay it away over repeats, and reshape which part of the loop plays.
- A **slice instrument**. That same recorded loop is playable from the keyboard or a sequencer track: pitched across the keys, or chopped into slices with one slice per key. Up to three voices sound at once, each with its own output.

Underneath both sits a **four-ring delay network** on the fold-out panel, fed from the input, the loop, the voices, or any blend of the three. It can be a clean tempo-synced echo or a self-feeding ambient engine, depending on how far you push it.

Before you start

Refrain is an instrument, so Reason creates a sequencer track for it automatically. To record audio into it, wire something to its audio inputs on the back — another device, or an input from the hardware interface.

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Record your first loop

The transport sits in the middle of the panel, under the round display. Five buttons: **CLEAR**, **RESET**, **REC**, **PLAY**, plus the **MUTE** and **BEND** toggles beside them.

1 Set the loop length.

Find **BARS** in the **LOOP SHAPE** panel, bottom left. It steps through 1/4, 1/2, 3/4, 1, 2, 3 and 4 bars. Start at 1 bar.

2 Arm and record.

Press **REC**. If Reason's transport is running the **ARMED** lamp lights and recording begins on the next bar line. If the transport is stopped, recording starts straight away. Play or feed your source.

3 Let it wrap.

At the end of the bar count, recording stops on its own and the loop begins playing. The **REC** lamp goes out, **PLAY** lights, and the wedge on the round display starts sweeping.

4 Overdub, or don't.

Press **REC** again to layer another pass on top. Press it once more to stop overdubbing. **PLAY** stops and restarts playback. **CLEAR** empties the buffer and starts you over.

Two switches that change how recording starts and stops

F-REC (free record) skips the arm phase. With it on, pressing **REC** starts recording immediately even when the transport is running, instead of waiting for the next bar line. It does *not* change the loop length — **BARS** still decides where recording stops.

E-STP (early stop) changes the other end. With it on, pressing **REC** during recording ends the take early and trims the loop to the quarter note you stopped on. With it off, that press does nothing and recording runs to the full bar count. Either way, if you never stop it early the **BARS** setting applies as normal.

The round display

The pinwheel is the loop. The bright wedge is the playhead. The four numbered rings around the outside are the delay rings, each showing its own position and colour. Slice markers appear around the rim once you are in Slice mode, and light up red as voices trigger them.

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The five controls to learn first

Refrain has a lot of surface area. These five do most of the work.

BARS	Loop Shape	Loop length in bars. Set it before you record — it decides where recording stops.
DECAY	Loop Shape	How much the loop fades on every pass. At zero the loop repeats forever. Turn it up and layers dissolve as you overdub, tape-style.
SIZE / OFFSET	Loop Shape	The playback window . SIZE sets how much of the loop plays, OFFSET moves that section through it. Shrink SIZE and you are stuttering a fragment instead of the whole bar.
DRY / VOLUME	Mix Output	DRY passes the live input through. VOLUME is the loop's own level. These are separate on purpose.
MIX	Output (fold-out)	Dry/wet for the whole delay ring network. At zero the rings are silent no matter what else is set.

A useful habit

DECAY and the window controls are what turn a looper into an instrument. Record one bar, then sweep OFFSET with SIZE at about a quarter — you are now scrubbing through your own recording in time.

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Playing the loop from the keyboard

Everything in the right-hand column is about turning the recorded loop into a playable instrument. Two modes, chosen with **PLAY** in the PLAY panel:

Pitch	The whole loop is mapped across the keyboard, transposed from the ROOT note. Play low for slow and deep, high for fast and thin — or set PITCH mode to Time or Pro to hold the length while the pitch moves.
Slice	The loop is divided into slices and one slice is assigned per key from ROOT upwards. SLICES sets how many; MODE chooses Auto (transient detection, with SENS setting the threshold) or Manual (even division).

Three voices

Up to three notes sound at once. **VOICE** sets how they behave: Poly, Mono, Legato or Retrigger. **ATAK** and **REL** in the ENVELOPE panel shape each one, and **V MIX / V SEND** in MIX OUTPUT set how much voice signal reaches the main output and the FX return. Each voice also has its own pair of outputs on the back panel if you want them on separate channels.

Try this

- Record a one-bar drum pass. Set PLAY to **Slice**, MODE to **Auto**, SLICES around 8. Play the keys upward from C3 — you are now playing your own drum loop as a kit.
- Set VOICE to **Mono** and turn **PORTA** up in the ENVELOPE panel. Slices now glide into each other.
- Turn on **V REV** in the LOOP panel to play every voice backwards.

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Opening the delay rings

Press **SHOW** in the FX panel, under the transport. A second panel drops down below the device with the whole ring network on it.

FEED	How much INPUT , LOOP and VOICES signal is sent into the rings. Loop is at full by default, the other two at zero.
RINGS	Four independent delay lines. Each has SYNC/FREE , a TIME (a note division when synced), SEND into the ring, REGEN feedback, and XFEED into the other rings.
CHARACTER	DIFFUSE smears the repeats into a reverb tail. SPIRAL pitch-shifts them, so each repeat climbs or falls; X and FB choose which part of the recirculation gets shifted.
OUTPUT	XFEED mode (all rings share a bus, or chain 1→2→3→4→1), the overall MIX , stereo WIDTH , and ROTATE to spin the rings around the stereo field.

A first ring sound

- Turn ring **1** on. Set **TIME** to 1/8, **SEND** around 40, **REGEN** around 45.
- Set **MIX** in the **OUTPUT** section to about 40. You should hear a tempo-synced echo of the loop.
- Turn **DIFFUSE** on with **SIZE** around 60 and **AMOUNT** around 60. The echoes smear into a tail rather than staying as discrete repeats.
- Turn **SPIRAL** on and move **PITCH** off centre. Each repeat now steps up or down in pitch.

On high feedback

REGEN above roughly 90 with cross-feed up is a deliberate runaway zone — the **FX GUARD** and **GOVERN** controls in the **FX RETURN** panel are what keep it musical rather than destructive. Reach for them before you reach for the master fader.

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Patches and the back panel

Refrain ships with a factory bank, browsable from the patch selector at the top right of the panel — or from the strip on the front when the device is folded. Categories are ordered so the plainest starting points come first:

01 Basics	Clean starting points — dry looper, loop plus a single echo, dry slicer, free-record.
02 Ambient	Long tails, heavy diffusion, slow envelopes.
03 Rhythmic	Tempo-locked ring patterns, gates and stutters.
04 Slice and Perform	Keyboard-playable slice kits, chops, formant and grain textures.
05 Pitch and Motion	Spiral shifts, octave ladders, tape wow.
06 Experimental	High feedback, rotation, deliberate instability.

Back panel

Audio and voice outputs run along the top. Everything below is CV, grouped by what it controls: gates and triggers, levels and modulation, CV outputs, and the loop/slice/speed inputs.



- **GATE & TRIGGER IN** — note and gate, plus remote control of REC, PLAY, CLEAR, RESET, MUTE, reverse, freeze and bend.
- **CV OUT** — record and play state, end of loop, playhead position, slice phase and slice count. Use EOL to trigger something else every time the loop wraps.
- **LOOP SLICE & SPEED IN** — the window and slice controls under CV, which is where the most interesting modulation lives.

For the full description of every control, the parameter reference, and the CV specification, see the **Refrain Operation Manual**.