

Puremagnetik LAPS User Manual

Rev 1.0.2

Welcome to LAPS! A multitrack sampler for recording loops, exploring rich modulations, or layering sounds into evolving soundscapes. With stereo inputs and outputs, speed shifting, granular synthesis, and tape-style effects, LAPS is designed to inspire new ideas in your sound composition.

What is LAPS?

At its core, LAPS is an audio sketchpad with three tracks, each capable of holding up to 20 seconds of high-quality audio (24-bit/48kHz). It's a playground for sound design, offering tools to craft interweaving loops, manipulate speed, add texture, and shape audio into something unique. Whether you're in the studio or on stage, LAPS adapts to your workflow with its two powerful composition modes and versatile functions.

Power Requirements

LAPS requires a **center-negative 9-15V power supply** for operation. Ensure your power adapter meets these specifications to avoid damage or malfunction.

Physical Inputs and Outputs

LAPS offers flexible connectivity to suit your audio setup:

- **Mono Input (Left Jack Only):** When only a mono signal is plugged into the left input, LAPS sums the signal to both stereo output channels.
- **Stereo Inputs (Left and Right Jacks):** Plugging into both left and right inputs maintains discrete stereo channels, ensuring true stereo output.
- **Right Input Only:** When only the right input is used, LAPS outputs audio exclusively on the right channel.

This flexibility makes LAPS suitable for mono sources, stereo setups, or partial input configurations.

Modes

Replica Mode (Blue LED): Replica Mode mirrors your recording across each of the 3 Laps, creating overlapping patterns that can be adjusted with pitch or loop points. Use this mode to craft call-and-response effects, rhythmic counterpoints, or melodic echoes. It's perfect for adding depth and complexity to your compositions.

Multiply Mode (Purple LED): Multiply Mode lets you build and resample your loops layer by layer, seamlessly overdubbing new material without erasing the old. Each pass multiplies the complexity of your loop, making this mode ideal for creating dynamic, evolving performances.

To switch between these modes, double-click the SHIFT button. LAPS starts in Replica Mode by default. You can assign individual laps to either Replica or Multiply Mode. If two laps are set to Multiply Mode, the remaining lap will automatically switch to Multiply Mode as well, since no laps are available for replication.

Getting to Know the Controls

Each knob on LAPS has two functions, toggled by holding the **SHIFT** button:

Non-Shift Functions

1. **Loop Start:** Sets where the loop begins. Turn this knob to shift the starting point of the loop.
2. **Loop End:** Sets where the loop ends. Adjusting this changes the loop's length and timing.
3. **Modulation:** This knob shifts the loop's window dynamically, moving the start and end points for a continuously changing sound.
4. **Lap Level:** Control the volume of individual Laps. Turn all the way down to mute a Lap, or solo it by turning others down.
5. **Age Effect:** Add tape-style character to your sound. Turning left of noon adds analog age without noise; turning right introduces noise for a cassette-style vintage feel.
6. **Blend:** Balances the input and looped signals. Keep it at 12 o'clock to hear both equally. All the way right mutes the input, letting you focus entirely on your loops.

Shift Functions

1. **Bandpass Filter Frequency:** Controls the center frequency of the 1-pole bandpass filter. Turn fully left to bypass filtering.
 2. **Bandpass Filter Bandwidth:** Adjusts the width of the bandpass filter for sharper or broader filtering.
 3. **Pan:** Places the Lap's audio in the stereo field. Left for left, right for right.
 4. **Speed:** Adjusts speed and pitch in semitones, from -12 to +12. Perfect for harmonizing loops or creating dramatic shifts.
 5. **Grain Send:** Sends the Lap signal to the granulator.
 6. **Grain Density:** Controls the density (globally) of the granular effect, from sparse glitches to spatial clouds.
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Footswitch

- **Rec Button:**
 - Single press: Toggle record/playback.
 - **SHIFT + Single Click:** Erase the current Lap.
 - **SHIFT + Hold:** Clear all Laps and reset LAPS to its default state.
 - **Shift Button:**
 - Double-click: Switch between Replica and Multiply modes.
 - **Bypass Mode:**
 - **SHIFT + Double Click (Rec Button):** Enter true bypass. The blue LED blinks.
 - Single click while in bypass: Return to play mode.
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Recording Behavior

- LAPS records up to 20 seconds of audio per Lap. Once the limit is reached, the buffer stops recording.
- **Overdubbing:**
 - Available in Multiply Mode (purple LED).
 - Overdub parameters include Start, End, Speed, Mod, Blend, and Level.
 - The **Blend** knob determines what is overdubbed. At noon, input and loop signals are balanced; fully right records only the loop.

Knob Overtake Behavior

LAPS uses a "hard-overtake" system. When switching between laps, the current knob positions are stored for each lap individually. As a result, the knobs may not immediately reflect the settings of the selected lap. To update a parameter, simply move the knob to apply its current position.

Soft Overtake for Level Control

In live and recording settings, precise volume control is crucial—especially when blending multiple laps. By default, LAPS uses hard overtake: when you switch between laps, turning a knob immediately applies its new position, which can lead to abrupt jumps in sound.

To smoothly fade in a lap's volume, use soft overtake on the Level control:

Hold SHIFT while switching to a new lap to enable soft overtake for Level on that lap.. This means the Level knob won't affect the sound until you cross the lap's existing level—allowing you to fade in gradually without any sudden jumps.

Use case: You're performing with multiple laps. Lap 2 is up and sounding great. You want to bring in lap 1 slowly. Hold SHIFT while selecting lap 1, and now you can fade it in manually, with full control.

💡 Soft overtake applies only to the Level control. All other parameters use hard overtake.