

# HeadLoop v2.0

## User Manual

4-Head Looper + Tape Recorder for Norns

# INTRODUCTION

HeadLoop is a sophisticated 4-head looper with an integrated tape recorder for Norns. It features independent control over each playback head with extensive sound-shaping capabilities including pitch shifting, filtering, delay sends, and loop position control. The tape recorder allows you to capture the output of all heads for further manipulation.

## NORNS INTERFACE CONTROLS

### KEY 2 - Head Selection & Page Switching

- **Short Press:** Change active head (cycles through heads 1-4)
- **K2 + K3 Together:** Switch screen page (Main ↔ Tape)

### KEY 3 - Recording Control (Context-Dependent)

#### On Main Page:

- **Click:** Start/Stop recording
- **Double-Click:** Start/Stop overdub
- **Long Press:** Clear loop with fade

#### On Tape Page:

- **Click:** Start/Stop tape recording
- **Double-Click:** Start/Stop tape overdub
- **Long Press:** Clear tape (3-second fade)

### ENCODER 1 - Parameter Selection

- **Main Page:** Cycle through head parameters (volume, pitch, pan, filters, delay, start, end, filter Q)
- **Tape Page:** Select tape parameter (sends 1-4, volume, reverse, mute)

### ENCODER 2 - Coarse Adjustment

- Adjust the selected parameter value (coarse increments)

### ENCODER 3 - Fine Adjustment

- Adjust the selected parameter value (fine increments)

# SCREEN PAGES

HeadLoop has two screen pages that can be switched using K2+K3 (keep K2 pressed then press K3):

## Page 1: Main (Head Control)

The Main page provides control over the active head's parameters with visual feedback including position indicators for all heads and real-time value display.

## Page 2: Tape Recorder

The Tape page allows you to control the tape recorder including send levels from each head, tape volume, reverse playback, and mute functions.

# HEAD PARAMETERS

Each of the 4 heads has independent control over 9 parameters. Use E1 to select the parameter, and E2/E3 to adjust values:

Parameter	Range	Description
Volume	0.00 - 2.00	Head output level
Pitch	±24 semitones or ±2 octaves	Pitch shift (mode selectable in PARAMS)
Pan	L to R	Stereo position (-1 left, 0 center, +1 right)
Filter LP/HP	HP/Off/LP	Low-pass or high-pass filter (E2)
Filter BP	0.00 - 1.00	Band-pass filter amount (E3)
Q	0.00 - 1.00	Filter resonance (E1 only, not on grid)
Start	0.00 - 1.00	Loop start position (normalized)
End	0.00 - 1.00	Loop end position (normalized)

# TAPE RECORDER

The tape recorder captures the output of all four heads, allowing you to create layers and build complex compositions. Each head has an independent send level to the tape.

## Tape Parameters

Parameter	Range	Description
Send H1-H4	0.00 - 1.00	Send level from each head to tape
Volume	0.00 - 1.00	Tape playback volume
Reverse	On/Off	Reverse tape playback direction
Mute	On/Off	Mute tape output (with 1s fade)

## Tape Recording Workflow

1. **Initial Recording:** Switch to Tape page (K2+K3), press K3 to start recording. The tape captures the output of all enabled head sends.
2. **Stop Recording:** Press K3 again to stop and begin playback.
3. **Overdub:** Double-click K3 to layer additional material onto the existing tape.
4. **Clear Tape:** Long-press K3 to clear the tape with a 3-second fade.

# EFFECTS

## Reverb

HeadLoop uses the Norns system reverb. Configure reverb parameters in the SYSTEM > AUDIO menu. The reverb send can be enabled/disabled and the mix level adjusted in the PARAMS > Reverb section.

## Tape FX

The Tape FX simulate analog tape characteristics and can be enabled in the PARAMS menu:

- **Wobb:** Simulates wow and flutter (pitch instability)
- **Saturation:** Adds subtle harmonic distortion
- **Hiss:** Simulates tape noise
- **Age:** Simulates tape degradation with random volume dropouts

# LFOS

HeadLoop features 4 independent LFOs that can modulate various parameters. Each LFO is configured in the PARAMS menu:

Parameter	Options/Range	Description
Shape	Sine / Random	LFO waveform type
Speed	0.01 - 20 Hz	LFO frequency
Depth	0.00 - 1.00	Modulation amount
Destination	21 options	Target parameter to modulate

## LFO Destinations

Each LFO can target: None, Volume 1-4, Pan 1-4, Start 1-4, End 1-4, or Pitch 1-4. This allows for complex modulation routings and evolving soundscapes.

## MIDI CONTROL

HeadLoop supports extensive MIDI control via CC (Continuous Controller) and Note messages. All MIDI mappings are configurable. Please refer to the Midi documentation

# TIPS & WORKFLOW SUGGESTIONS

## Basic Recording Workflow

1. Press K3 to start recording your initial loop
2. Press K3 again to stop and begin playback across all 4 heads
3. Use K2 to select different heads and adjust their parameters independently
4. Double-click K3 to add overdub layers

## Creative Techniques

- **Polyrhythmic Patterns:** Set different start/end points for each head to create complex rhythmic relationships
- **Harmonic Layers:** Use pitch shifting to create chords from a single loop
- **Evolving Textures:** Assign LFOs to volume, pan, or start/end positions for slowly evolving soundscapes
- **Tape Layering:** Record multiple passes to the tape recorder to build dense, complex compositions
- **Reverse Glitches:** Toggle reverse on individual heads or the tape for instant backwards effects

## Tape FX Recommendations

Start with subtle settings (0.1-0.3) for tape character. Higher wobble values create extreme pitch warping. Age/dropout works best at low values (0.1-0.2) for occasional glitches.