Pikoloops Eurorack Module

Pikoloops is Manecolabs' take on the Pkocore, developed by InfiniteDigits ,
https://infinitedigits.co/wares/pikocore/

Main features:

- a **lo-fi music mangler based on the Raspberry Pi Pico** .
- capable of holding **8 minutes of 8-bit 33 kHz monophonic samples**.
- tempo-synced with a selectable BPM between 60 and 300, with samples mangled by **beat-synced effects** (stutter, retrig, gate, tunneling).
- loaded with **real-time effect**s like a resonant filter, timestretching, volume, and wavefolding.
- sequenced with a **128-step sequencer** with recording/playback
- saved and loaded via EEPROM for **instant patch recall**.
- able to **load custom firmware, new samples**, all through USB-C.
- **sync-compatible** with eurorack devices.

Controls :

Sample select slider , Knob A : see controls table below

Value potentiometer , Knob B , idem

Page potentiometer : can choose between eight different positions. Each position changes a different pair of parameters, which can be changed using the two controls, **knob A** and **knob B**.

Lvl potentiometer : output volume .

Controls table :

selector pos	knob a	knob b
1	sample	break
2	filter	stretch
3	gate	gate prob.
4	jump prob.	retrig prob.
5	tunnel prob.	reverse prob.

6	sequencer rec.	sequencer on
7	save	load
8	volume/fold	tempo

- **sample** changes the sample being played (holds >100 samples totaling ~8 minutes).
- **break** modifies all probabilities simultaneously using varied easing functions.
- **filter** is a resonant low-pass filter that attenuates higher frequencies.
- **stretch** performs a lofi timestretch effect.
- **gate** controls the amount of gating on the sample.
- **gate prob.** controls the probability of gating.
- **jump prob.** controls the likelihood of jumping to a different step in the current sample.
- **retrig prob.** controls the likehood of retriggering.
- **tunnel prob.** controls the likelihood of jumping to a different sample.
- **reverse prob.** controls the probability of reversing direction.
- **sequencer rec** will record sequences, up to 128 steps (cw = record, ccw = erase).
- **sequencer on** turns on the sequencer (cw = on, ccw = off).
- **save** saves probabilities, sample, volume, and tempo (cw = save).
- **load** recalls the last save (cw = load).
- **volume/fold** changes the volume and adds a wavefolding effect.
- **tempo** controls the tempo in steps of 5 bpm (50-305), encoded in binary.

Jacks :

CKin : clock input jack , 3.3v and up , inputs clock to drive the looping

CKout : clock output jack 5v level , for driving other eurorack or external devices

TRIG : quarter note trigger output indicated by the blue led , used to trigger percussion elements or any module capable of accepting trigger input

OUT : main audio output

Buttons :

The buttons on the device can be used to jump to samples and retrigger audio in real time.

jumping: Press any of the eight buttons to jump to that relative position in the sample.

retriggers: Press and hold a button and press another button to create a retrigger effect. The retrigger speed is based on the position of the second button press. Random effects add added to the retriggers, such as changes in speed, pitch, filter envelopes, or volume envelopes.

stop/play: press the two leftmost buttons and the two rightmost buttons simultaneously to stop/play.

Specs :

width : 12HP

power requirements :

+12v 200 milliamps -12v 15 milliamps