Iota

User Manual
http://dillonbastan.com
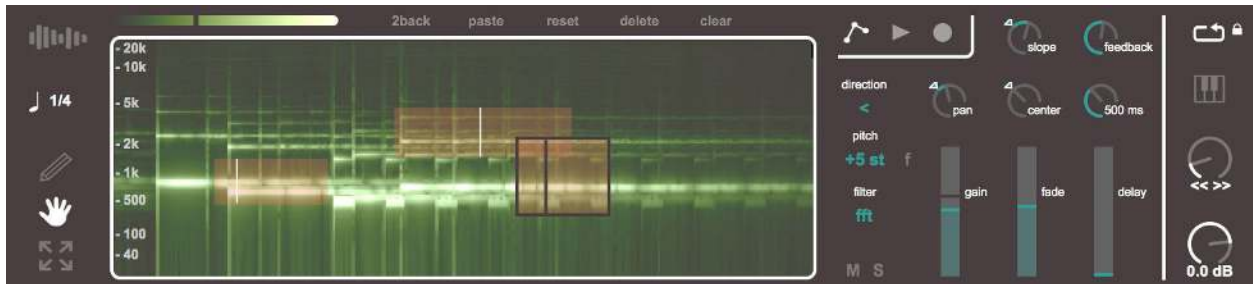

INTRODUCTION

Snapshot of Iota interface

Iota is a *Max for Live* Instrument to be used with *Ableton Live*. Iota uses granular synthesis to loop individual segments of a sample. Loops can be drawn as rectangles over a spectrogram, designating the region of the sample to be looped, as well as the frequency range that loop is filtered through. You have access to many parameters for each individual loop. Loops are played back either constantly, or by triggering loops with MIDI note messages.
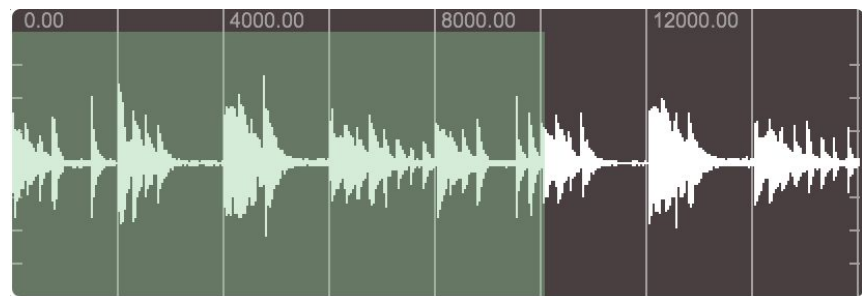

INTERFACE WALKTHROUGH

Primary Views

Clicking the sample display opens a window where new samples may be dropped for looping. After a sample is dropped, you may select a start and end point on the waveform. The selected region of the sample will be rendered as a spectrogram, and individual loops may be created in this region.

Individual loops may be created as rectangles on the spectrogram. The rectangle dimensions mark the start and end points of the loop, and the low and high frequencies of the filter. The filtering range is relational to the y axis of the spectrogram. Creating a new loop copies the parameters of the last selected loop, except for its automation values.
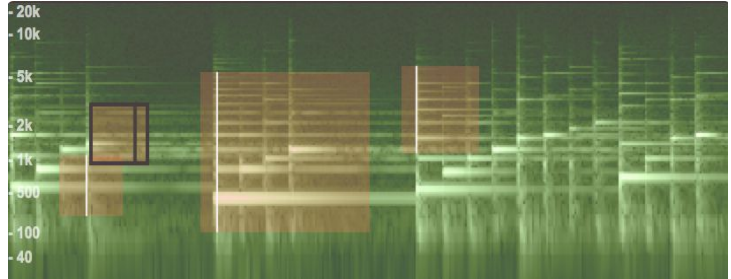
Loop Control

Choose to (Pencil) "draw" a new loop, (Hand) move a loop, or, (Arrows) resize a loop. Drawing, moving, or resizing a loop will designate it as the currently selected loop.


This value changes the magnitude (energy) of the spectrogram. Changing this value will cause the spectrogram to render again with more or less intensity (represented as color).

By enabling snap to grid, the length of each loop is restricted to the last point of the selected note division.

Functions for the selected loop, which is shown as having a highlight box around it. (2back) sends the selected loop to the back of the loops. (paste) makes a duplicate of the selected loop, this will duplicate parameter and automation values. (reset) sets the selected loop's parameters to their default values. (delete) deletes the selected loop. (clear) deletes all created loops.

Loop Parameters
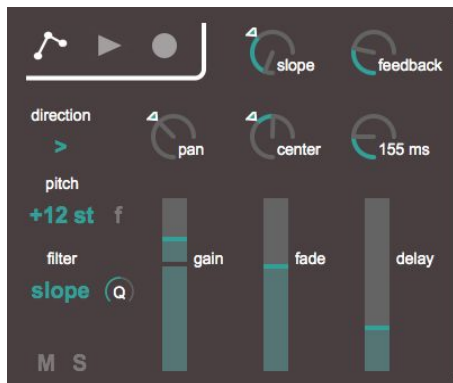
When a loop is selected, its individual parameters appear to the right of the spectrogram. Keep in mind that the spectral rendering of the sample is true to the original sample's pitch. Changing the pitch of a loop will cause the spectrogram to lose accuracy for that loop in terms of frequency filtering to the image.

The filter of the loop may be switched from "fft" (which only allows the selected frequency range to pass through; no slope) to a "slope" method using a highpass and lowpass biquadratic filter pair. "M" and "S" at the bottom left mute and solo loops.

The "fade-slope-center" values all make up the volume window for each loop. "fade" sets the amount, "slope" curves the window; if to the left (ramp) or right (bell), "center" sets the peak of the window.

Automations

These buttons record and playback parameter automations. When the record button is on, any changes in any loop parameters will be recorded until the record button is turned off. Recording starts at the first value change. Additionally, moving the loops while recording is on will record the movement of the loops.

Highlighted values indicate an automation exists. To delete the automation, simply press the highlighted control.

Unlike the other parameter automations, the automation for moving the loop itself is represented by these XY letters. Clicking these letters erases the loop movement automation.

Playback Settings

Enabling (standard) looping mode simultaneously runs all existing loops. When the lock button is enabled, playback of the loops and automations only run when Live's transport is on.

The keyboard toggle enables MIDI mode. This makes playback of loops and automations triggered by their associated MIDI note.. Each loop has a parameter for the MIDI note its playback is assigned to (only visible when MIDI mode is enabled). Multiple loops can have the same MIDI note assignment, so groups of loops may be triggered with one note.
The "L" button enables Legato mode. When enabled, if a MIDI Note On message is received

while that same note is in the middle of an envelope, the new envelope will start from the current volume instead of dropping to zero.
The arrow-like button enables Autoselect mode. When enabled, if a MIDI Note On message associated with a loop is received, that loop will become automatically selected. This will display its parameters and highlight the loop.

When MIDI mode is enabled, the volume envelope parameters appear. This is only available in MIDI mode, as the envelope is triggered when associated Note On messages are received. You are given parameters for attack, sustain, decay, and release.

Global FX

Spread (<< >>) implements a cheap "spread" effect, where the right signal is delayed slightly from the left. The lower knob controls the master volume of the device.

When no loops are selected, the Global Offsets menu appears. This menu contains 3 parameters that offset all existing loops' matching parameters.