



# LOOPERATOR

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# About

Looperator is the ultimate slicing and processing plugin for all styles of electronic music.

The quick & intuitive interface makes designing subtle groove enhancements to spectacular rhythmic pyrotechnics easy and fun.

Build a 16-step looping effects sequence, with discrete per-step settings for each of Looperator's stunning effects modules, then bring everything to life using the comprehensive modulation system on a per-step basis.

**Rearrange your groove!** Chop the input signal into 16 slices and freely assign them to each sequence step on the Slice track, then rhythmically stutter selected steps on the Loop track.

**Flexible filters.** Looperator's Filter provides per-step frequency shaping of the left and right channels independently.

**Multi-effects galore.** Two User FX modules each deliver dynamic effects sequencing via a rich and varied line-up of high-quality processors.

**User steps.** Each sequencer track offers 20 ready-made step options. Much of the time, you won't need to go any further than that, but when you do, the four User-defined steps also available to each track give you full and precise control of five processor parameters per effect.

**Motion and modulation.** Every User step configuration features five adjustable parameters, each automated using a simple knob, a Randomizer, an Envelope Follower or one of 20 preset parameter modulation curves with adjustable start and end points. When it comes to animating your Looperator effects sequences, the possibilities are literally endless!

**Fast, focused workflow.** Like all Sugar Bytes software, Looperator has been developed with operational fluidity at the top of the agenda. Looperator's snappy workflow keeps up with even the fastest-moving producer.

**There's more...** The feature list just keeps on giving! Seven per-module and global Mix blending modes; intelligent randomization options throughout; super-smooth step transitions; deep MIDI integration and control; limitless undo/redo; standalone functionality and more. It all comes together to make Looperator nothing less than a state-of-the-art loop design powerhouse that no electronic musician should be without.

# Getting Started

## Set up an audio input

Looperator is an effect plugin, so it will need some audio source to work with.

In the stand-alone, there is a handy way to load and loop any audio into Looperator's input.

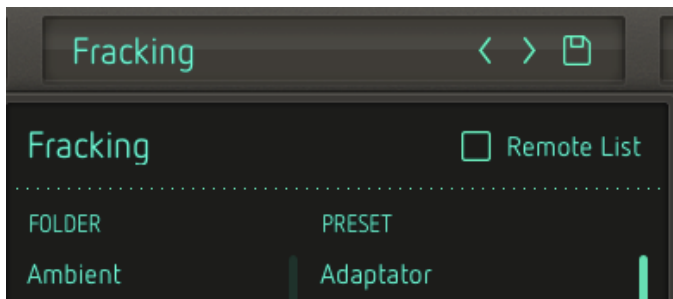


Click into the menu of the Audio Player to load another track.

Load files through File Import or Audioshare or select a file from your music library.

## Check out the factory presets

Looperator comes with over 300 presets made by the Sugar Bytes crew and our friends.



The middle of the Header houses the [Preset Browser](#). Tap the name of the current preset to open the preset library dialogue.

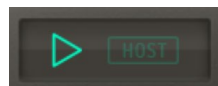
Step through the factory presets via the < > buttons.

You can pick any of the included factory presets from the preset library dialogue.

The left column contains the categories/folders.

## Host Integration

Set up Looperator as an effect in your mobile Host. There are two Clock Source options:



In Host mode, Looperator always runs in sync with the host clock.

If the Clock Source is set to the PLAY Button, Looperator will run when triggered via MIDI note input or automation.

See **Host Integration** for detailed instructions.

## Ready-made effects

All of Looperator's effect lanes offer ready-made effect options to quickly populate the sequencer.

Again, the options differ for each lane. In FX1 & FX2, there are different effect categories. In the Slicer track, you can choose any of the sixteen slices, in all other tracks, you can pick any of the **four User-designed effects**.

**Tie.** Extends an effect's duration across multiple contiguous steps.

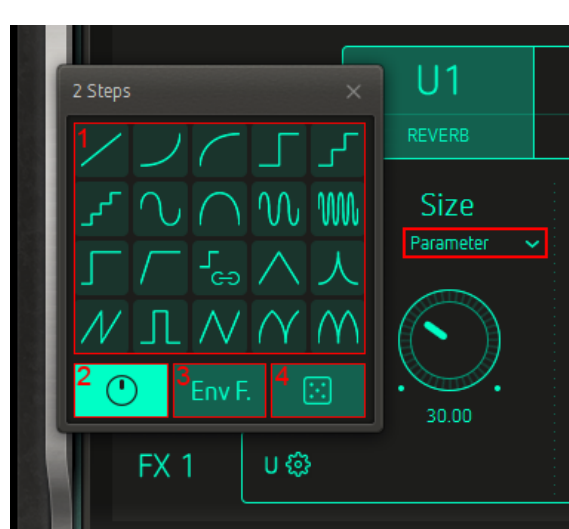
**Random.** Sets a step to play a randomly chosen effect with each cycle of the sequencer. The behavior of this random function can be adapted in the [Step Random](#) Settings.


**Delete.** Blanks the current step.



## User Effects

In addition to the ready-made effects, you can create up to four user configurations in each effect track.



Hit the  button to call up the User Settings page. The basic handling of the editor is same for all tracks:

Switch between the four tabs to access User effects U1-U4.

Right beside you have copy, paste, init and random functions.

All user effects have five parameter sections. There are four basic modulation sources:

1. Motions
2. Parameter (linear)
3. Envelope Follower
4. Random

See [User Effects](#) for more details.

## Have a look at some vital controls

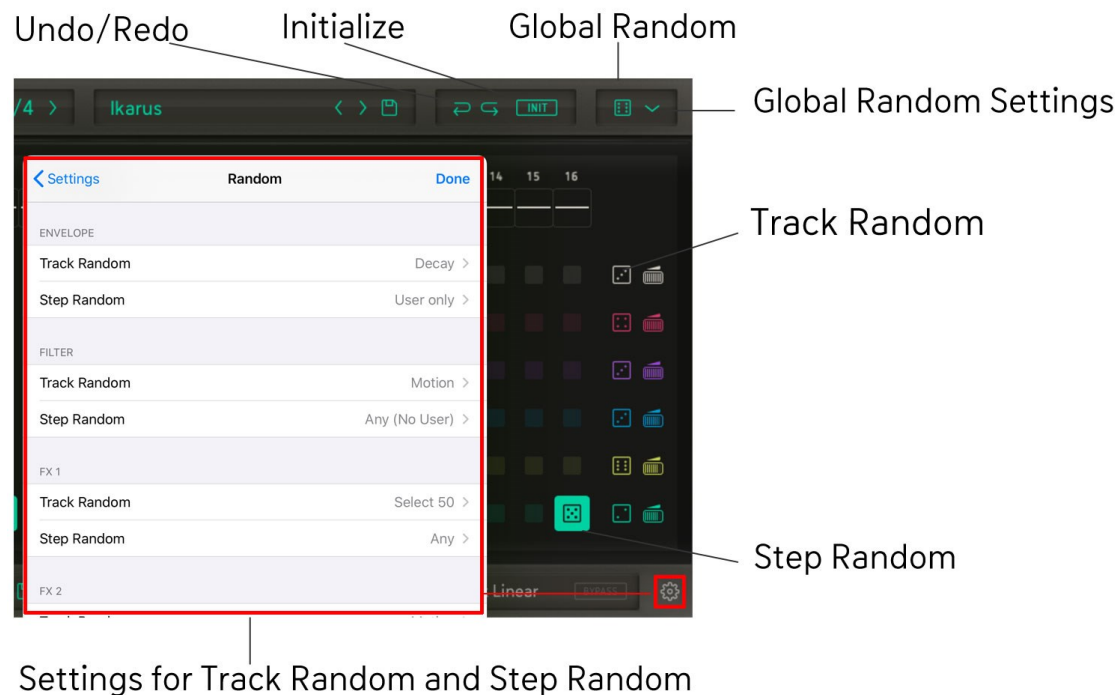
When designing Looperator, our focus was always on the user's creative flow.  
The abundance of intelligent and customizable random buttons all over Looperator is one aspect of this.

**Undo** and **Redo** recent actions with the curved arrows.

You can **initialize** the entire sequencer (Init All) or each of the six effect tracks individually.

**Global Random** randomizes all sequencer steps. Six different modes (dice sides 1-6) are available.

Each of Looperator's effect tracks has its own customizable random function and an individual dry/wet control.



The random button of the sequencer lanes uses the settings established with the **Track Random** settings.

Whereas the **Step Random** settings define how the random steps should behave.

The available random options are different for each track!

For more details have a look at [Global Random](#), [Track Random](#) and [Step Random](#).

# Reference Guide

## The Header

- Clock Source
- Tempo Control
- Preset Browser
- Undo/Redo
- Init
- Global Random

## The Effect Sequencer

- Input
- Slicer
- Looper
- Envelope
- FX1
- FX2
- Filter

## The User Effects

- Looper
- Envelope
- Filter
- FX1 + FX2

## The Footer

- Mix
- Bypass
- General Looperator Settings



# The Header

## Clock Source

The sequencer has two clock modes. It can run in sync with your DAW (**HOST**), or be started manually via the **PLAY** button. This button can also be triggered by MIDI or automation.

## Tempo Control

Sets the step resolution to 1/2, 1/4 or 1/8. This makes the duration of one step a half note, a quarter note or an eighth note.



## Preset Browser

The middle of the Header houses the **Preset Browser**. Tap the name of the current preset to open the preset library dialogue and step through the factory presets via the < > buttons.

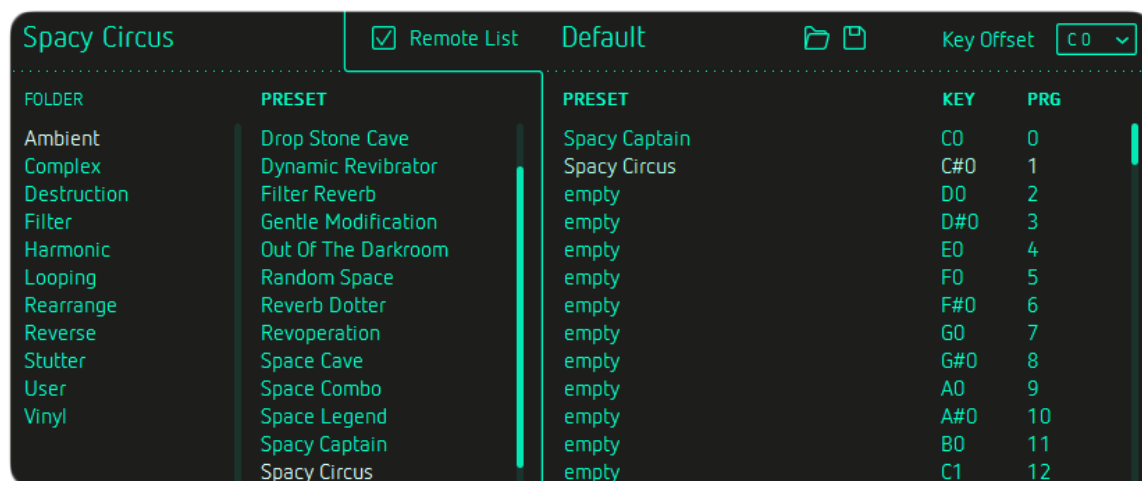
You can pick any of the included factory presets from the preset library dialogue . The left column contains the categories/folders.

Tap the “Disk” button to save your own presets in the “User” folder.

In default mode, MIDI assignments are saved along with the Preset. Activate “CC Recall Lock” to avoid presets from recalling CC assignments when loaded.



## The Remote List



The Remote List is a handy tool for recalling individual presets via MIDI notes inputs from your MIDI keyboard/controller. Both MIDI Program Changes and MIDI Note commands can be used.

Drag presets into the Remote List to assign them to MIDI Program Changes and MIDI Notes.

Use the **Load** and **Save** icons to store and recall your remote lists.

**Key Offset** sets the MIDI trigger note for the first row of remote presets (PRG 0). The triggers for the subsequent presets depend on this setting.

Once a preset is locked into the Remote List, you can't edit it any more.

**Undo** and **Redo** recent actions with the curved arrows.

You can **initialize** the entire sequencer (Init All) or each of the six effect tracks individually.

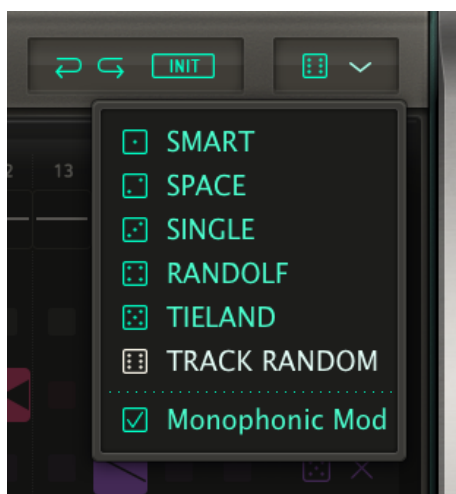


## Global Random

In the upper right-hand corner is a dice button and a drop-down menu.

Tap the dice to randomize the sequencer steps.

Six randomize modes are available via the drop-down menu:



**Smart:** Creates a balanced effect sequence.

**Space:** Creates Reverb & Delay effects only.

**Single:** Limits each track to a single effect setting.

**Randolf:** Fills the sequencer with random effect steps with each cycle.

**Tieland:** Creates random effects tied across multiple steps.

**Track Random:** Uses the settings established with the **Track Random** controls.

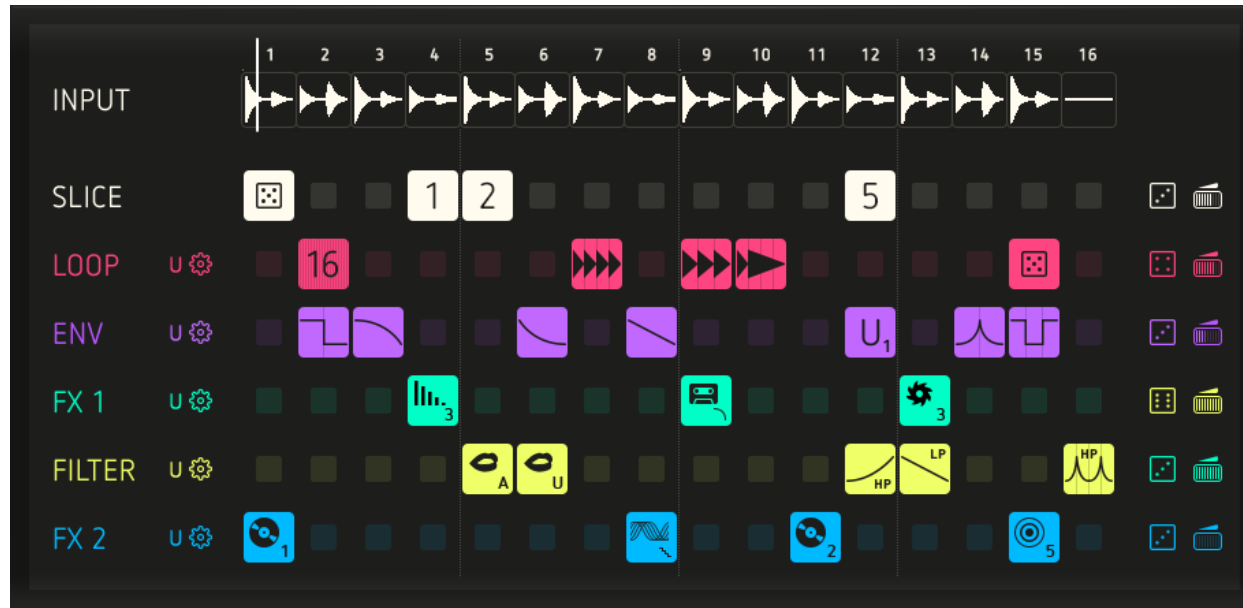
**Monophonic Mode:** Each vertical column can only contain one active step.

With the Global Random dialogue open, you can trigger the currently selected random mode by tapping it.

You can randomize individual sequencer tracks in the track settings.

The [Track Random settings](#) give you extensive control of the random functions. Look [here](#).

# The Effect Sequencer



Looperator's central section contains six sequencer lanes, each offering a choice of 20 **ready-made effects**.

You can create up to four **User effect** configurations for each sequencer track. Each track includes a **Randomizer**. This can be tweaked in the **Track Random** settings. Adjust the **Dry/Wet** mix of each track via the icon on the far right.

- Press any step in the sequencer to add an effect from the pop-up.
- Long-press a step to delete it.
- Drag from an active or empty step to copy it horizontally.
- Drag vertically to step/scroll through the effect configurations.

## Effect Routing

Change the effects routing by tapping on a track's name – FX 1, say – and dragging it vertically to another position in the signal chain.



## Input

The top-most lane of the Effect Sequencer visualizes the audio input into Looperator.

The input is recorded in real time and automatically sliced into 16 steps.

Use the Slicer to rearrange these slices.

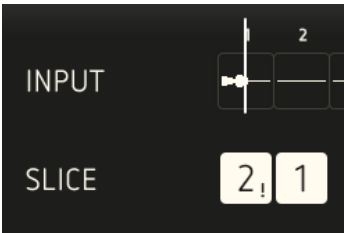
## Slicer



Assign audio slices to steps by tapping their assigned numbers in the Slicer pop-up menu, or set a step to play a randomly chosen slice with each cycle of the sequencer by tapping the dice icon.

**Delete** steps with the cross button.

**Attention!** Looperator cannot see into the future, so if you select a slice to be triggered before its audio signal is recorded, the result will be silence. An exclamation mark next to the slice number on the step alerts you to this.



Looper

The Looper algorithm repeats the audio signal in a variety of ways. Two parameters define each of the ready-made Looper effects: the duration of the loop and the direction in which it plays back. A right-pointing triangle indicates forward playback; a left-pointing triangle indicates reverse playback. Note that you can create up to four **user defined steps** for each sequencer track.

Set a step to play a **randomly** chosen Looper effect with each cycle of the sequencer by assigning the dice icon to it. Use the **Tie** Button to extend an effect's duration across multiple contiguous steps.

**Delete** a step with the cross button.

Here all different loop styles are explained:

Repeat after 1/2

Repeat after 1/3

Repeat after 2/3

Repeat after 1/4

Repeat after 3/4

Repeat after 1/3 + repeat after 2/3

Repeat after 1/4 + repeat after 2/4

Repeat after 2/4 + repeat after 3/4

Repeat after 1/4 + repeat after 3/4

Repeat after 1/4 + play in reverse after 1/2

4 repeats

6

6 repeats

8

8 repeats

12

12 repeats

16

16 repeats

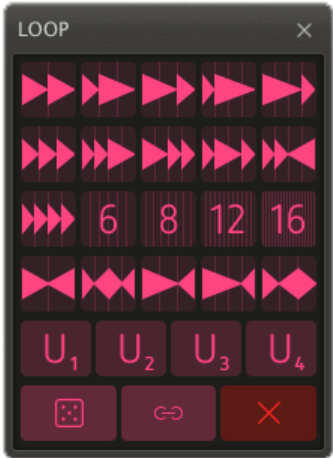
Play backwards after 1/2

Play backwards after 1/4 + repeat all after 1/2

Play backwards after 2/3

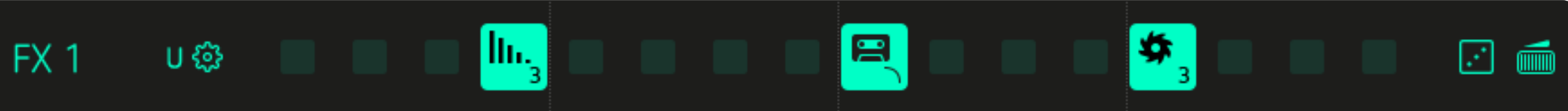
Play backwards after 3/4

Play backwards after 1/3 + forwards after 2/3



Select a **random** volume curve with every cycle of the sequencer using the dice icon in the Envelope pop-up menu. Tap the **Tie** Button to change the duration of the volume modulation curves by creating Tie steps. **Delete** a step with the cross button.

	Linear Attack		Linear Release		Linear Attack Release		Linear Release Attack		Linear Release Attack Release
	Sloped Attack Fast		Sloped Release Fast		Sloped Attack Slow		Sloped Release Slow		Sloped Release Attack Release
	Sloped Release Attack		Sloped Attack Release		Sloped Release Attack Release Slow		Sloped Attack Release Slow		Sloped Wobble
	Silence		Hard On Off		Hard Off On		Hard On Off On		Linear Release Release



# FX1

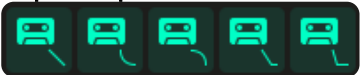
The first of Looperator's two multi-effects processors, FX1's default effects are Delay, Tapestop, Distortion and Tonal Delay.

## Delay



Five delay setups with different delay time and panorama settings.

## Tape stop



Tape Stop simulates the effect of turning off a tape recorder or turntable with its output still audible. Choose Linear, Sloped, Slow, Fast or Ultrafast stop speeds.

## Distortion



Choose from five flavours of roughness and dirt.

## Tonal Delay



This delay's delay times are converted to pitch modulation.

The modulation can be set to constant, upward, downward, up/down or down stepped.

Set a step to play a randomly chosen FX1 effect with each cycle of the sequencer by selecting the dice icon.

Use the **Tie** Button to lengthen a Step.

**Delete** a step with the cross button.





# FX2

FX2's factory effects are Reverb, Vinyl, Stretch and Phaser.

## Reverb



Give your sounds a sense of position and space.

## Vinyl



Authentically emulates the sound of scratching a vinyl record.

## Stretch



With that effect time and pitch are treated independently.

Select either Timefreeze, Half Speed, Pitched Up Stretch, Pitched Down Stretch, or Pitchshift Low (-2 octaves).

## Phaser



Adds some '70s swirl and otherworldly vibes with this warm, wide phaser.

A selection of five phasing styles is on offer: Up, Down, Electric, Wobble and Wobble2.



# Filter

The Filter sequencer features low-pass and high-pass filters for classic sweeps, as well as our acclaimed vowel filter.

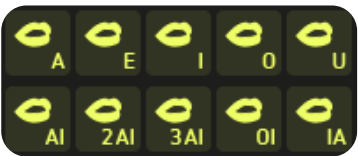
The various modulation curves enable quick and easy selection of a range of distinctive filter sweeps and movements.

## Low-Pass/High-Pass Filter



The top lane contains five low-pass filter curves, while the bottom lane hosts their five high-pass counterparts.

## Vowel Filter




Sugar Bytes' famous Vowel Mode delivers a powerful 'talkbox' sound, making the output signal sound like it's being spoken.

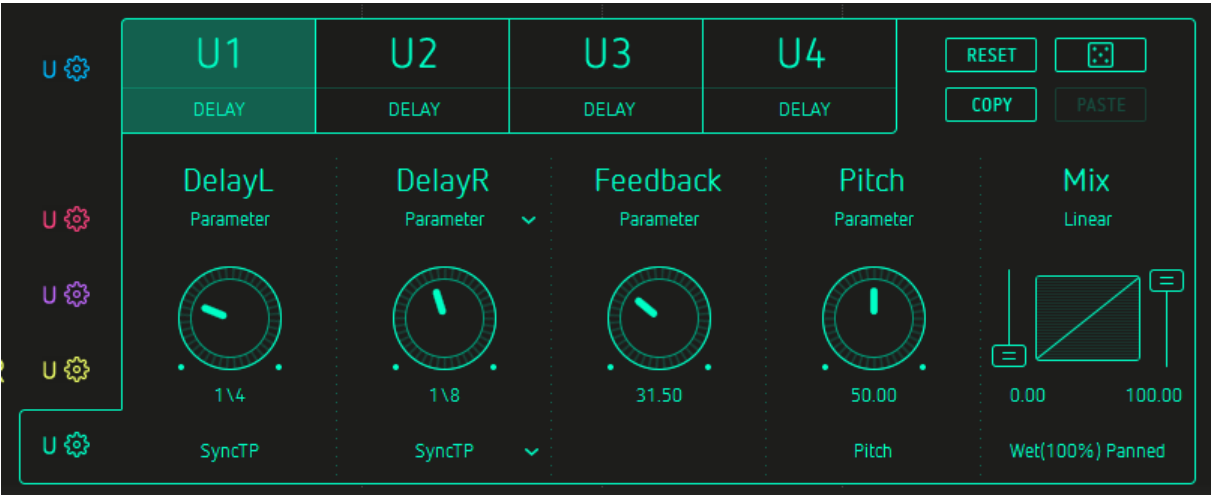
Alongside the vowels - A-E-I-O-U - we've also included five transitions: AI, AIAI, AIAIAI, OI and IA.

# The User Effects

In addition to the ready-made effects, you can create up to four user configurations in each effect track.

Hit the  button to call up the User Settings page. The basic handling of this editor is the same for all tracks:

Switch between the four tabs to access User effects U1-U4. Copy/paste settings between User effects, and initialize or randomize the settings using the Copy, Paste, Reset and dice buttons. All User effects have five parameters, the fifth of which is always Mix.



## Clipboard



You can transfer settings from one User effect to another.

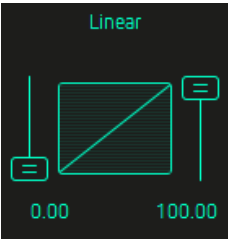
- Hit the **Reset** button Initialize the settings of the active User effect.
- Hit the **Copy** button, switch to another User effect and **Paste** the settings into it.
- Press the **Random** button to randomize all parameters of the active effect.

# Parameter Section





















Here's where things get interesting: each User effect can be modulated via the parameter settings.

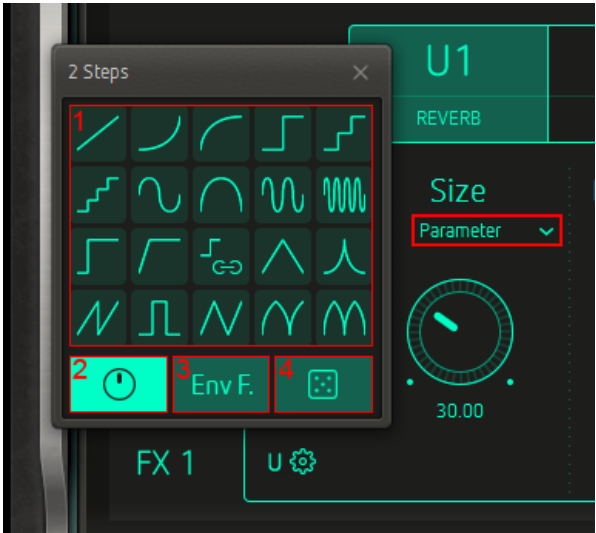
There are four basic modulation sources:

- 1. Motions
- 2. Parameter (linear)
- 3. Envelope Follower
- 4. Random



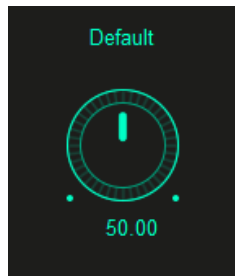
**1. Motion:** Choose from 20 preset modulation curves and define their start and end values.

 Linear	 Sloped	 Sloped Inverse	 2 Steps	 3 Steps
 4 Steps	 Sine	 Parabol	 Sine*2	 Sine*4
 2 Steps	 Short Attack	 Tie Value	 Triangular	 Slope Peak
 Saw Up*2	 Stepped Triplet	 Triangular + Saw Up	 Parabol 1.5	 Parabol*2



Set the start and end (or intensity) settings of the curve using the sliders on each side to customize the modulation of the target parameter.

**2. Parameter:** Static manual control of the parameter value.



**3. Envelope Follower:** Modulate the active effect with the amplitude envelope of Looperator's audio input.



**Base value**

Use the knob in the top-left corner to set the base value of the parameter being modulated.  
This will be the starting point of modulation.

**Direction**

Specifies the direction of the modulation (positive or negative).

**Attack**

Establishes the speed with which the envelope follower responds to the signal.

**Release**

Adjusts the the envelope follower release time.

**4. Random Mode:** The parameter value will be randomized.



**Min and Max control**

Defines the range of the randomizer.

**Rnd**

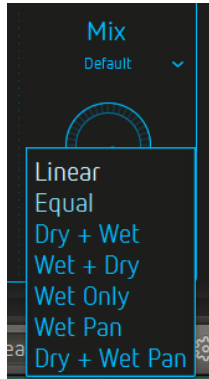
Defines the numbers of random values generated per step.

**Step/Glide**

Switch the transition from one random value to the next between instantly jumping and smoothly gliding.

## Mix

The Mix control set the blend ratio of dry and processed signal.



At the bottom of the Mix section, the **Mix Mode menu** establishes the mixing mode of the Mix control.

The mixing modes affect the prominence of the effect signal in the mix.

### Linear

With the Mix control at the center position, the mix comprises 50% dry and 50% processed signal.

### Equal

The crossfade is shaped according to the “Equal Power Law”, which leads to some signal attenuation at 50/50 mix.

### Dry + Wet

The wet signal is added to the dry signal.

### Wet Only

Only the effect signal is audible and the Mix parameter becomes a volume control.

### Wet Pan

Only the effect signal is audible and the Mix parameter becomes a pan control.

### Dry + Wet Pan

The wet signal is mixed with the dry signal and the Mix parameter becomes a pan control for it.

**DELAY** and **REVERB** use a slightly different mixing system:

### **Wet**

Mixing is linear: 50% dry and 50% processed signal in the center position.

### **Wet (100%) Panned**

The dry and wet signals are equally audible, and the Mix parameter becomes a pan controller for the effect signal.

### **Wet (75%) Panned**

The dry signal is mixed in at 100% and the wet signal is reduced to 75%. The Mix parameter becomes a pan controller for the wet signal.

### **Wet (50%) Panned**

The dry signal is mixed in at 100% and the wet signal is reduced to 50%. The Mix parameter becomes a pan controller for the wet signal.

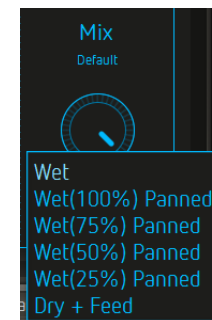
### **Wet (25%) Panned**

The dry signal is mixed in at 100% and the wet signal is reduced to 25%. The Mix parameter becomes a pan controller for the wet signal.

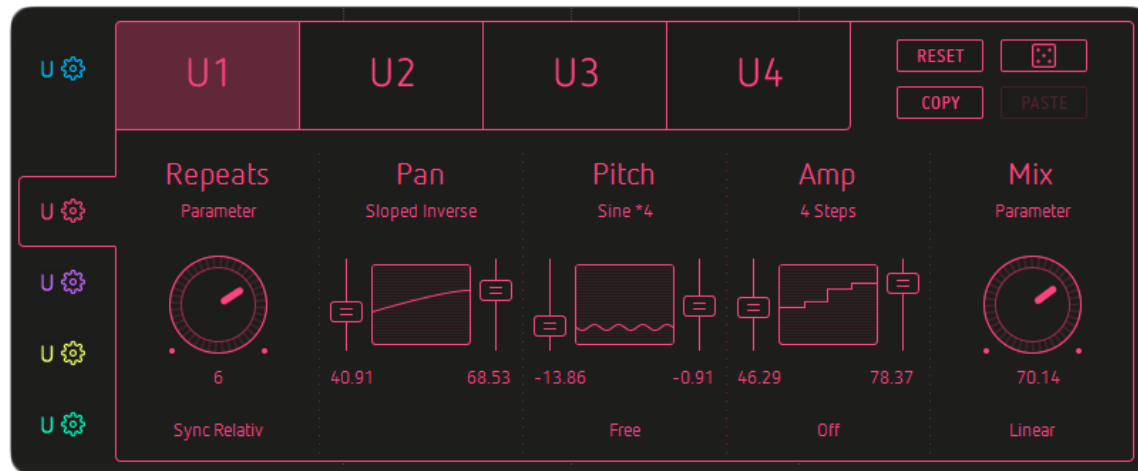
### **Dry + Feed**

The Mix Parameter controls the level of the dry signal and the input feed into the effect. This is especially useful for extracting pure reverb/delay tails.

For example, by choosing a modulation shape that starts at a high value and drops to zero, the signal is fed into the reverb such that when the Mix parameter reaches zero, the dry signal disappears, leaving just the tail of the reverb or delay audible.



## Looper



A looper effect that repeats the incoming audio material at a user-defined rate.

### Repeats

Sets the number of repetitions per step and features the following options:

#### *Sync Relative*

All repeats will be played **per step** regardless of Tie steps.

#### *Sync Absolute*

The number of repeats is fitted to the **total length** of the loop including Tie steps.

#### *Free*

Freely specify any number of repeats, including non-integers – 2.5 repeats, for example.

### Pan

Determines how the repeats will jump around the stereo panorama.



## Pitch

Sets the pitch of the repeated signal and features the following options:

### *Free*

Fine tune the pitch from -24 to +24 semitones.

### *Tone*

Adjusts the pitch in semitone steps from -24 to +24.

## Amp

Determines the output volume of the Looper and features the following options for altering the feel of the repeats:

### *Off*

Every repeat is played.

### *2<sup>nd</sup>*

Every other repeat is dropped (not played).

### *3<sup>d</sup> Off*

Every 3<sup>th</sup> repetition is left out.

(On , On, On, Off)

### *3<sup>d</sup> On*

Every third repeat is dropped.

(Source , On, On, Off)

### *Rhythm 1*

The length of the repeats is varied to create a rhythmic feel rather than evenly spaced repetition.

### *Shuffle*

The length of the repeats is varied to create a shuffle feel.

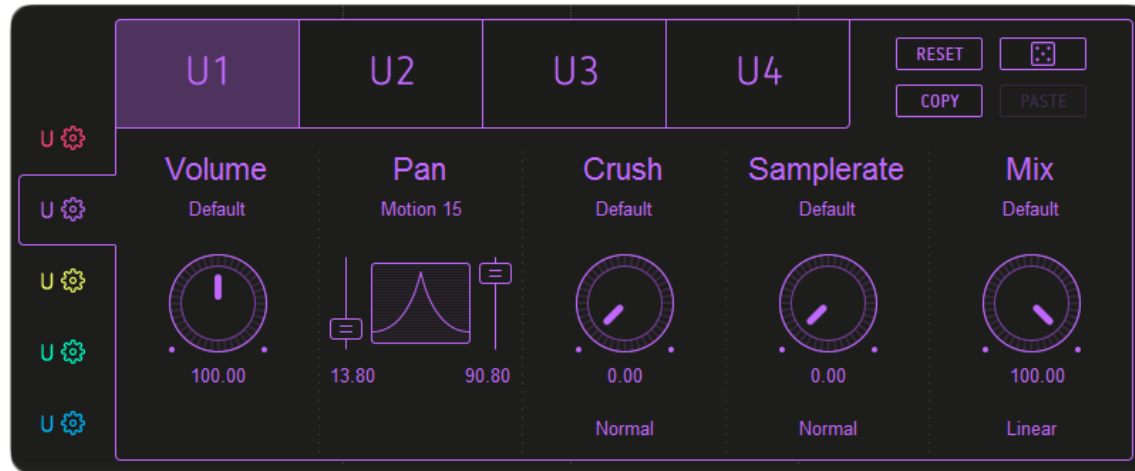
### *Swing Soft*

The length of the repeats is varied to create a soft swing feel.

### *Swing Hard*

The length of the repeats is varied to create a hard swing feel.

## Envelope



The Envelope track manipulates the amplitude/volume of the sound.

### Volume

Attenuate or boost the Amplitude of the audio signal (up to 200% /+ 6 dB).

### Pan

Determines the position of the signal in the stereo field.

### Crush

Adds quantization noise by reducing the bit depth. Depending on the amount of reduction applied, this will imbue the sound with a warm, digital or metallic character. There are four options:

#### *Normal*

Reduces the bit depth to generate classic bitcrushed sound.

#### *High*

Reduces the signal non-linearly, resulting in loud sounds being bitcrushed more than quiet ones.

### *Low*

Works the other way around, so that quiet sounds are bitcrushed more than loud ones.

### *Clip*

Boosts the signal so that it clips.

## **Samplerate**

Applies digital distortion by reducing the internal sample rate.

There are three Options:

### *Normal*

Creates classic sample rate reduction all the way to total sonic decimation.

### *Dynamic*

Reduces the sample rate dynamically according to the amplitude of the incoming signal. The louder the signal, the more sample rate reduction is applied.

### *Absurd*

While the sample rate is reduced the signal will be modulated creating harsh overtones.

## Filter



Looperator's Filter module houses an excellent stereo filter with 12 filter types, and a powerful vowel filter.

### Filter

A stereo filter that enables independent control of cutoff frequency and resonance.

The **Link** option under the Cutoff Right parameter synchronizes the Left and Right channels.

**Cutoff** adjusts the filter cutoff frequency, and Resonance sets the feedback level of the filter circuit.

Turning the **Resonance** control fully left produces a very smooth, non-resonant sound. Raising the Resonance exaggerates the frequencies immediately surrounding the cutoff point, making it more pronounced, until, ultimately, the filter self-resonates.

### Cutoff Left

Set both channels to any of the following filter types in the Cutoff Left submenu:

### *Highpass*

Frequencies above the cutoff are allowed through, while frequencies below it are attenuated. This filter can be used to reduce low frequency noise.

### *Bandpass*

Allows frequencies within the cutoff range through, and rejects (attenuates) frequencies outside that range.

### *Lowpass*

Frequencies below the cutoff are allowed through.

### *Comb*

Creates and adds a delayed version of the input signal.

### *12dB LP*

Low-pass filter with 12dB/octave slope.

### *12 dB HP*

High-pass filter with 12dB/octave slope.

### *12 dB BR*

Band-reject filter with 12dB/octave slope.

### *12 dB BP*

Band-pass filter with 12dB/octave slope.

### *24dB LP*

Low-pass filter with 24dB/octave slope.

### *24 dB HP*

High-pass filter with 24dB/octave slope.

### *24 dB BR*

Band-reject filter with 24dB/octave slope.

### *24 dB BP*

Band-pass filter with 24dB/octave slope.

**Reso Left**

Determines the filter resonance/sharpness of the left filter.

**Cutoff Right**

Controls the cutoff frequency of the right filter.

***Link***

Syncs the Cutoff Right parameter to the Cutoff Left parameter.

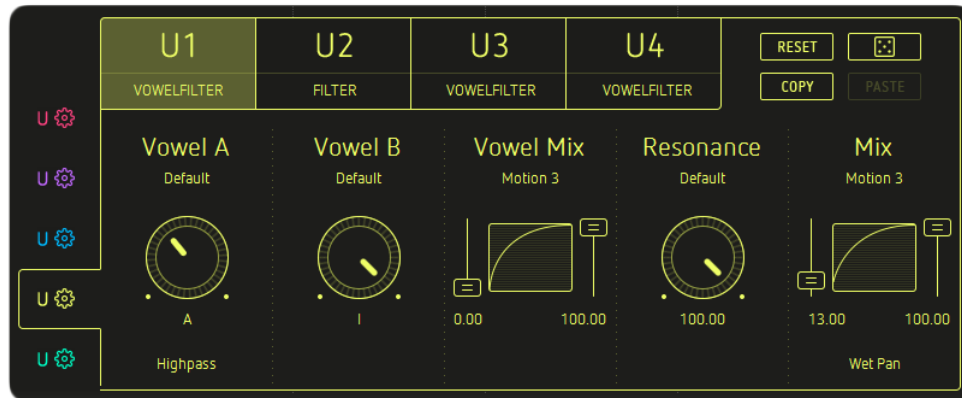
***Unlink***

Allows independent adjustment of the two Cutoff parameters.

**Reso Right**

Determines the filter resonance/sharpness of the right filter.

## Vowel Filter



The Vowel Filter can be used to produce an intense 'talkbox' sound. The **Vowel A** and **Vowel B** parameters define the two vowels between which the Mix Parameter crossfades. Choose one vowel shape for A and another for B. Choose the filter type under the Vowel A parameter: Highpass, Lowpass, Bandpass and Comb. Bandpass and Comb modes deliver the best results in vowel mode. To ensure a rich vowel sound, dial in a high **resonance setting**.

### *Highpass*

This filter type can be used to reduce low frequency noise.

### *Bandpass*

Perfect for use with the vowel mode.

### *Lowpass*

Frequencies below the cutoff frequency are allowed through.

### *Comb*

Creates and adds a delayed version of the input signal. Also great with vowel mode.

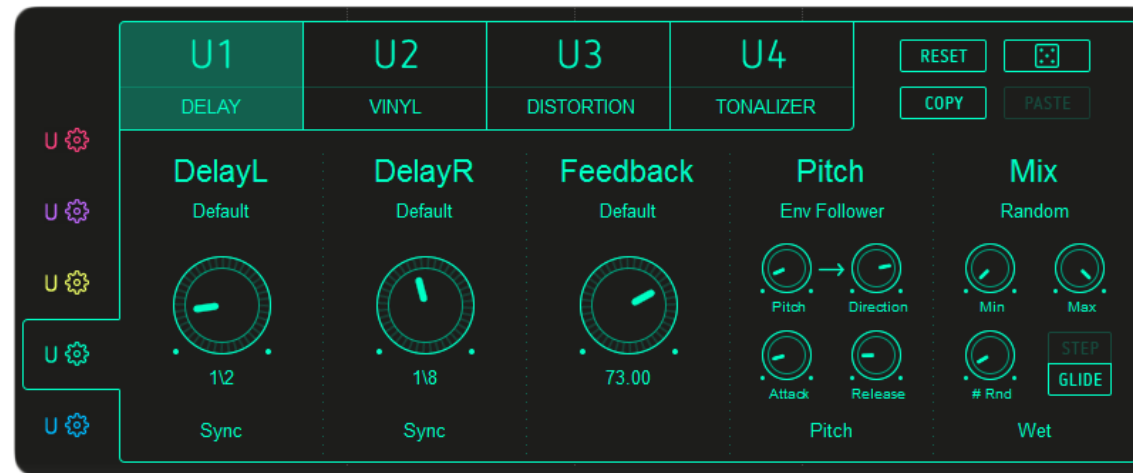
## Vowel Mix

Crossfades between the two vowel shapes (set by the Vowel A and Vowel B controls).

## Resonance

Controls the filter resonance.

## FX1 + FX2

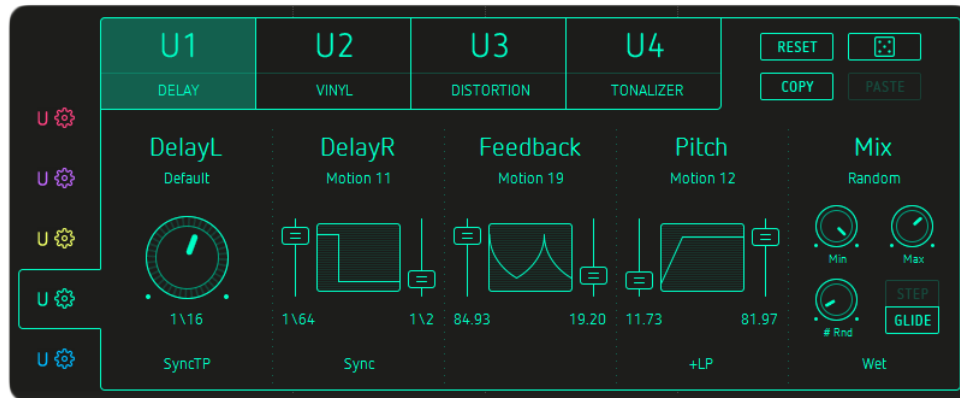


Although their ready-made effects differ, the FX1 and FX2 modules are identical in their User effect options.

DELAY  
REVERB  
Distortion  
GRAIN  
TONALIZER  
PHASER  
VINYL  
CHAOSSYNTH  
REVERB2  
RINGMODULATOR



## DELAY



### Delay L/Delay R

Set independent delay times for the left and right channels.

The synced delay time/note values available are: 1/1, 1/2, 1/4, 1/8, 1/16, 1/32 and 1/64.

#### *Sync*

The delay time is relative to the host tempo (bpm).

#### *Sync TP*

The delay time is relative to the host tempo and triplet and dotted values are available via the DelayL/DelayR controls.

#### *Free*

The delay time is unsynced and set in milliseconds.

### Feedback

Determines the decay of the delayed signal.

## Pitch

Applies pitch modulation to the delayed signal. The Pitch control submenu also gives access to a range of filters:

- LP, LP Q,                    +LP , +LP Q ,                    -LP, -LP Q,
- Comb, Comb Q,            +Comb , +Comb Q,           -Comb, -Comb Q,
- HP, HP Q,                    +HP, +HP Q,                    -HP, -HP Q

‘Q’ filters have a high resonance setting.

‘+’ filters include upward cutoff modulation from 0% to 100%.

‘-’ filters include downward cutoff modulation from 100% to 0%.

The rest of the filters (no +/- or Q) have no cutoff modulation or pitch functionality.

### *LP*

Low-pass: passes frequencies below the cutoff frequency.

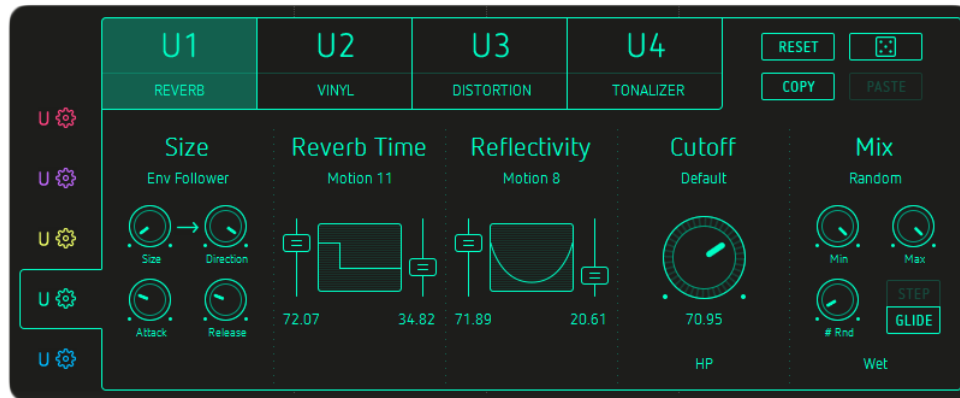
### *Comb*

Generates and adds a delayed version of the input signal.

### *HP*

High-pass: passes frequencies above the cutoff frequency. This filter type can be used to reduce low frequency noise.

## REVERB



### Size

Size of the main reverberation 'room'.

### Reverb Time

Sets the decay time of the reverb signal.

### Reflectivity

Determines the reflectivity of the room walls.

### Cutoff

Sets the filter cutoff frequency. The following filter types are available:

#### *HP*

High-pass: passes frequencies above the cutoff frequency. Can be used to reduce low frequency noise.

#### *BP*

Band-pass: attenuates low and high frequencies, and passes those around the cutoff frequency.

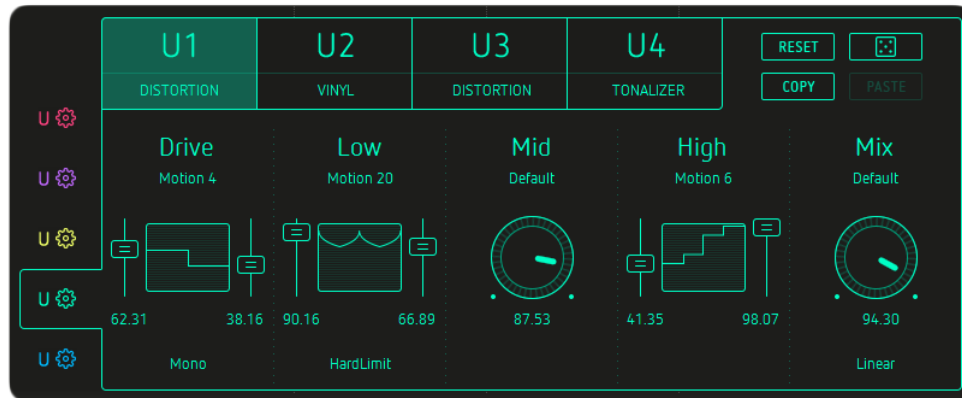
#### *LP*

Low-pass: passes frequencies below the cutoff frequency.

#### *Comb*

Generates and adds a delayed version of the input signal. '+' indicates a high resonance filter.

## DISTORTION



### Drive

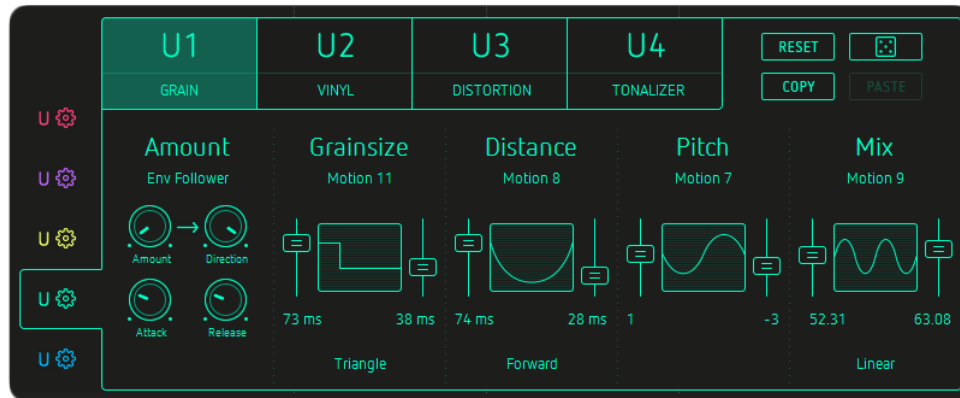
Sets the overdrive intensity – distortion occurs at higher settings.

You can also toggle between *Mono* and *Stereo* modes in the submenu.

The **Low**, **Mid** and **High** parameters define the frequency bands to be distorted.

You can choose one of three *limiter modes* in the Low parameter submenu.

## GRAIN



A Grain effect giving control over grain size, timing and pitch.

### Amount

Sets the tempo adjustment in relation to the incoming audio signal.

### Grainsize

Determines the grain length in milliseconds.

To avoid gaps in the audio signal, the Grainsize value should be higher than the Distance value.

There are also five grain crossfading modes, each defining a particular transformation window.

### Distance

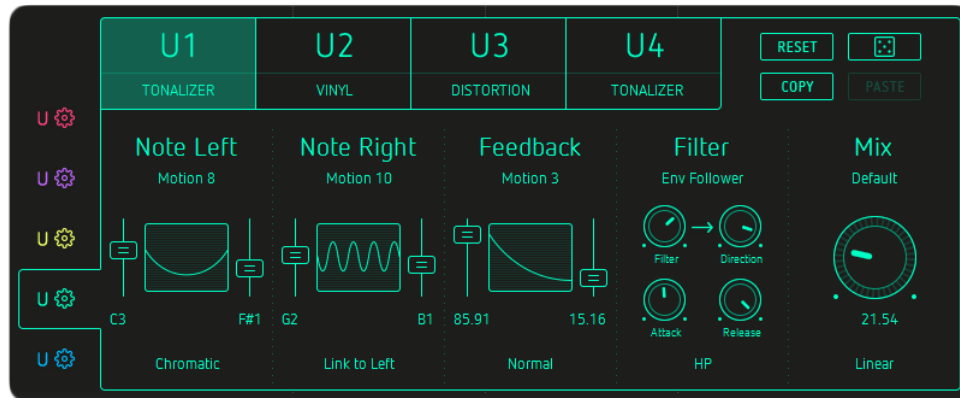
Determines the distance between the grains.

The Distance parameter has several options for controlling the play direction of the grains: *Forward*, *Backward* and *Ping Pong*.

### Pitch

Determines the pitch of the grains. If no timestretching is active and the pitch is shifted upwards a minimal delay is mixed into the audio signal which may not be audible.

## TONALIZER



The Tonalizer is a special delay that uses short delay times and high feedback to create tuned delay tails.

### Note Left/Note Right

Sets the pitch of the left and right channels.

The Note Left submenu enables you to choose between various tonal intervals, from semitones to octaves:

*Chromatic, Whole, 3<sup>d</sup>, 4<sup>th</sup>, 5<sup>th</sup>, 7<sup>th</sup>, Octave, Major, Harmonic Minor, Melodic Minor, Major Pentatonic, Minor Pentatonic, Blues, General Bebop, Neapolitan Major, Neapolitan Minor, Spanish 8 tone, JazzMinor, Japanese, Balinese, Arabian, Hindu, Gypsy, Jewish*

Tap [here](#) for a detailed explanation of the scales available.

The Note Right submenu lets you synchronize the left and right channels via the *Link to Left option*.

### Feedback

Widens and intensifies the tonal effect. In *Normal* mode, the Feedback parameter returns the signal back to the Tonalizer input, exaggerating the effect.

The Feedback parameter's *Inverse* option inverts the phase of the feedback.

## Filter

Emphasizes or suppresses frequencies in the processed signal.

The following filter types can be applied within the Tonalizer effect:

- *HP, BP, LP, Comb,*
- *HP+, BP+, LP+, Comb+,*
- *HP++, BP++, LP++, Comb++*

### *HP*

High-pass: passes frequencies above the cutoff frequency. Can be used to reduce low frequency noise.

### *BP*

Band-pass: attenuates low and high frequencies, and passes those around the cutoff frequency.

### *LP*

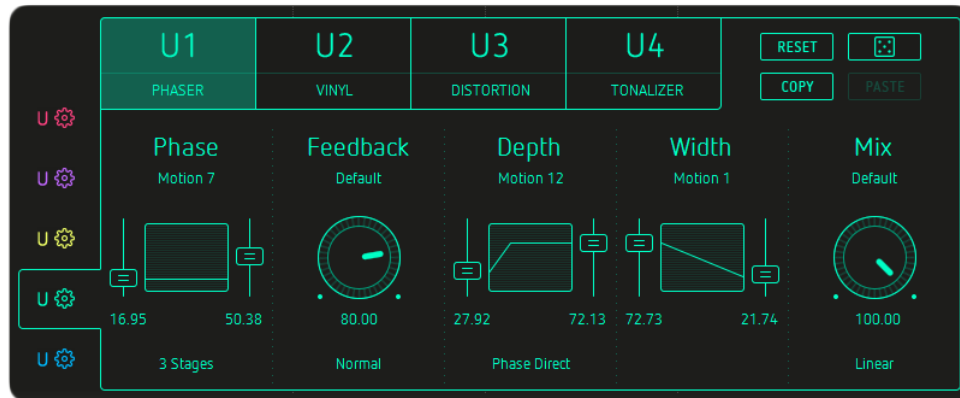
Low-pass: passes frequencies below the cutoff frequency.

### *Comb*

Generates and adds a delayed version of the input signal.

‘+’ indicates a high resonance filter.

## PHASER



### Phase

Depending on the value of the Depth parameter, this control sets the phase (Phase Direct) or the speed of the phase LFO.

Set the number of phaser stages running in series, from 3 to 8, in the Phase submenu.

### Feedback

Controls the intensity and width of the phasing effect.

Choose *Normal* or *Invert* from the submenu to set positive or negative feedback .

In Normal mode the Feedback parameter returns the signal back to the Phaser input to enhance the effect.

The Inverse option inverts the phase of the feedback.



## Depth

Controls the intensity of the Phaser effect.

### *Phase Direct*

The phase control directly sets the phase.

### *Phase LFO Sync*

The phase is modulated by an LFO, the rate of which is synced to the host tempo.

1/1, 1/2P, 1/1T,  
1/2, 1/4P, 1/2T,  
1/4, 1/8P, 1/4T, 1/8, 1/16P, etc.

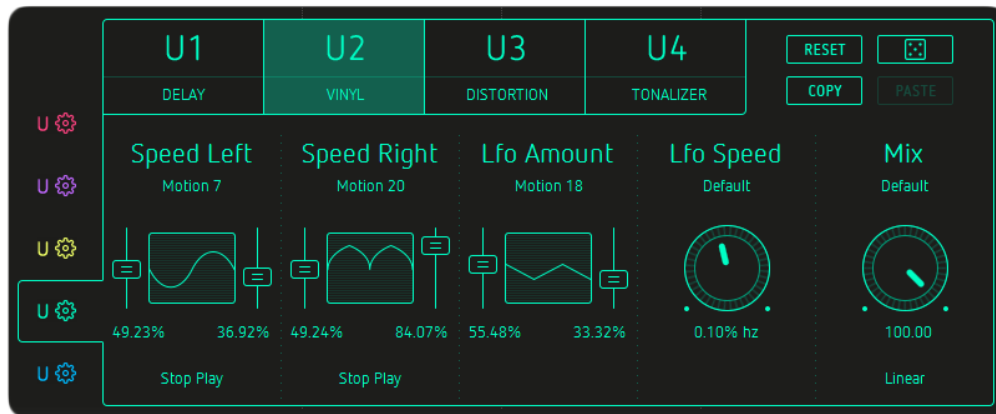
### *Phase LFO Free*

The LFO runs unsynced to the host tempo.

## Width

Shifts the phases of the left and right channels, creating stereo movement

## VINYL



The stereo Vinyl Effect emulates the stopping and scratching of a vinyl record.

### Attention!

As we're dealing with real-time audio and, sadly, can't see into the future, it's not possible to speed up the signal.

### Speed Left/Speed Left

Set the playspeed of the left and right channels. The submenu modes establish the parameter range.

#### *Stop Play*

0% to 100% speed.

#### *Stop Playx2*

0% to 200% speed.

#### *Reverse Play*

-100% to 100% speed.

#### *Reverse Playx2*

-100% to 200% speed.

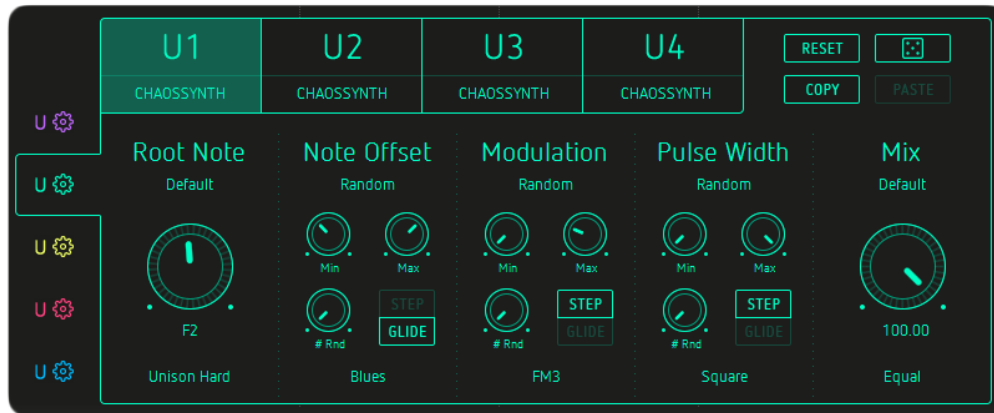
**Lfo Amount**

Applies an LFO to the playspeed.

**Lfo Speed**

Controls the speed of the LFO.

## CHAOSSYNTH



### Root Note

Specifies the note on which the scale is based. The submenu offers several play modes:

#### *Off*

The default mode, under which only a single voice is played.

#### *Unison Soft/Middle/Hard*

Multiple voices are played with a frequency offset (Soft, Middle or Hard).

#### *Cluster*

Voices at ascending pitches are played together.

#### *Chord 1-6*

A variety of chord modes differing in the number of voices played and their spread.

### Note Offset

Modifies the pitch of the synth relative to the selected scale and root note.

### *Scales:*

Chromatic, Whole, 3rd, 4th, 5th, 7th, Octave, Major, Harmonic Minor, Melodic Minor, Major Pentatonic, Minor Pentatonic, Blues, General Bebop, Neapolitan Major, Neapolitan Minor, Spanish 8 tone, JazzMinor, Japanese, Balinese, Arabian, Hindu, Gypsy, Jewish

Tap [here](#) for a detailed explanation of all available scales.

### **Modulation**

Controls the speed of the synth's in-built modulation LFO . The submenu offers a range of modulation modes:

#### *FM1*

Frequency modulation at low depth.

#### *FM2*

Frequency modulation at medium depth.

#### *FM3*

Frequency modulation at high depth.

#### *AM*

Amplitude modulation of the synth.

#### *Ring Mod*

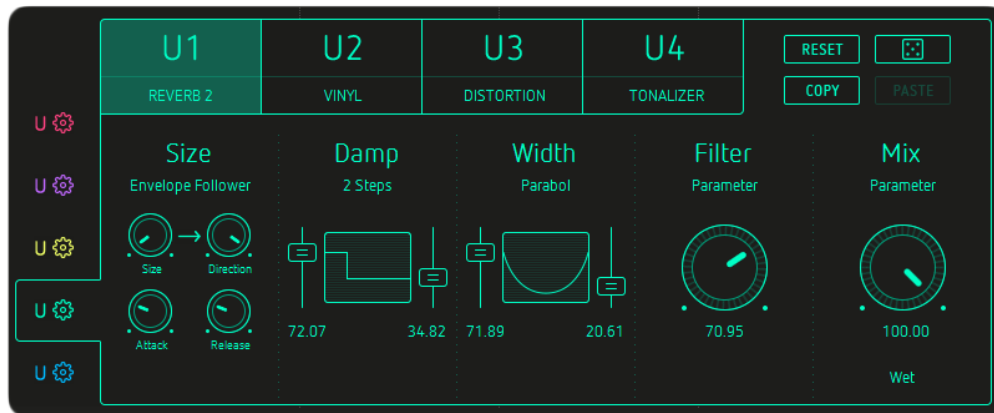
Uses the incoming audio signal as a modulation source.

### **Pulse Width**

Adjusts the pulse width of the oscillator.

There are four base oscillator waveforms: *Sawtooth*, *Triangle*, *Square* and *Sine*.

## REVERB 2



### Size

Sets the reverb 'room' size.

### Damp

Dampens the reverb reflections.

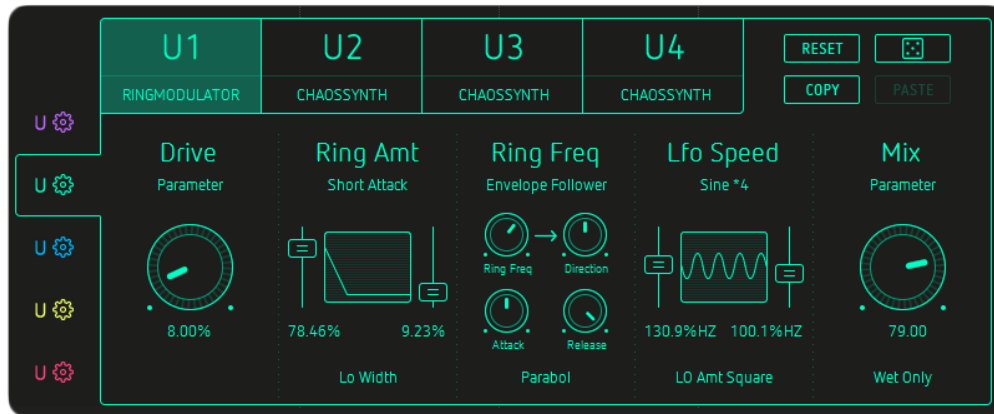
### Width

Creates a broader stereo image by slightly offsetting the left and right signals.

### Filter

A classic high-pass filter for reducing rumble at high reverb sizes.

## RINGMODULATOR



### Drive

Overdrive intensity; distortion occurs at higher settings.

### Ring Amount

Sets the modulation intensity.

#### *Off*

No effect on the stereo image.

#### *Lo Width*

Adds a little stereo width.

#### *Mid Width*

Adds stereo width.

#### *Hi Width*

Adds a lot of stereo width.

**Ring Freq**

Adjusts the central ring modulation frequency.

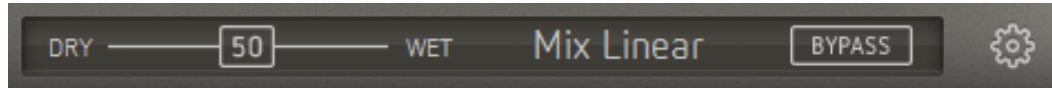
Sine, Triangular and Parabolic wave shapes are selected in the submenu.

**LFO Speed**

Set the LFO shape and speed, or turn the LFO off.



## The Footer



### MIX

Set the Dry/Wet Level, blending the incoming signal with Looperator's output.

### Master Mix

The Master Mix menu offers seven blending modes that determine how the Mix control blends the incoming dry signal with the Looperator output signal:

#### Linear

A linear mix – the center position provides 50% dry and 50% processed signal.

#### Equal

The crossfade is shaped according to the “Equal Power Law”, which leads to some signal attenuation at 50/50 mix.

#### Wet

The dry signal is mixed with the wet signal, and the Mix parameter becomes a volume control for the wet signal.

#### Dry

The dry signal is mixed with the effect signal, and the Mix parameter becomes a volume control for the dry signal.

#### Wet (Only)

Only the effect signal is audible and the Mix parameter becomes a volume control.

#### Wet Pan

Only the effect signal is audible and the Mix parameter becomes a pan control.

#### Wet Pan2

The dry signal is mixed with the wet signal and the Mix parameter becomes a pan control.

### Bypass

Deactivates Looperator’s output. This setting is saved with presets.

### General Looperator Settings

Tapping on the gearwheel icon opens the **Settings dialogue** where you find some global settings and functions.

# Looperator Settings

Here you can adjust the way Looperator operates in certain MIDI and Audio connections, enable or disable Ableton link as well as preset file sharing between Looperator iOS and other devices via iCloud synchronization.

Settings	Done
General	>
Random	>
Audio	>
Midi	>
Recording	>
iCloud Sync	>
Ableton Link	>
Manual	>
Sugar Bytes Apps	>
Looperator v1.0.0	

## General

### CC Recall Lock

MIDI Learn settings won't change when loading presets.

### MIDI PRG ignores Tempo

Incoming MIDI Program Changes won't change the tempo.

### MIDI PRG ignores Mix Setting

Incoming MIDI Program Changes won't change Mix settings.

### Solo Mode when User Edit

When editing a User effect, only the current step will be heard constantly.

### Force Clock Retrigger (Manual Clock Mode)

When Looperator is triggered by MIDI, this setting forces the clock to restart when each new note arrives, even if a previous note is still being held.

### Lock Matrix Popup Position

Activate this setting and the pop-up will open in a fixed position in the Looperator GUI.

Settings	General	Done
CC Recall Lock		<input checked="" type="checkbox"/>
MIDI PRG ignores Tempo		<input checked="" type="checkbox"/>
MIDI PRG ignores Mix Setting		<input checked="" type="checkbox"/>
Solo Mode when in User Edit		<input type="checkbox"/>
Force Clock Retrigger (Manual Clock Mode)		<input checked="" type="checkbox"/>
Lock Matrix Popup Position		<input type="checkbox"/>

# Random

## Track Random Settings

Select specific random modes for track random function and random steps.



Every sequencer lane has its own random button and each track has its own set of random modes.

### Slice

#### Select 100

Assigns the same slice number to every sequencer step.

#### Select 50

Assigns the same slice number to randomly selected steps.

#### Smart

An algorithm assigns balanced slice numbers to randomly selected steps.

#### Offbeat

Offbeat slices only.

#### Toggle

Fills the sequencer track with alternating slices.

### Looping

#### Select 100

Assigns the same loop style to every sequencer step..

#### Select 50

Assigns the same loop style to randomly selected steps.

### **Straight**

Every step is assigned a random loop style – User-defined steps aren't used.

### **On/Off**

Every other step is assigned a random loop style.

### **Reverse**

Fills the whole sequencer track with only backward loop styles.

### **Smart**

Assigns a balanced selection of random loop styles.

### **Tied User**

Assigns random User-defined steps (U1-U4) with Tie steps in between.

## **Envelope**

### **Select 100**

Assigns the same envelope curve to every sequencer step.

### **Select 50**

Assigns the same envelope curve to randomly selected steps.

### **Decay**

Assigns a random decay envelope curve to every step.

### **Attack**

Assigns a random attack envelope curve to every step.

### **Chaos**

Assigns random envelop curves to randomly selected steps.

### **Only User**

Fills the whole sequencer lane with randomly selected User steps (U1-U4).

## Filter

### Select 100

Assigns the same filter curve to every sequencer step.

### Select 50

Assigns the same filter curve to randomly selected steps.

### Talk

Assigns only random vowel filter curve types with Tie steps in between.

### Lowpass

Every step is assigned a random low-pass filter curve.

### Highpass

Every step is assigned a random high-pass filter curve.

### Motion

A random number of steps are each assigned a randomly selected filter curve, with Tie steps in between.

### Smart

Randomly assigns a balanced array of filter curves.

### Chaos

Assigns a random filter curve to each and every step.

## FX1 & FX2

### Select 100

Assigns the same effect to every sequencer step.

### Select 50

Assigns the same effect to randomly selected steps.

### Motion

A random number of steps are each assigned a randomly selected effect, with Tie steps in between.

### Smart

Randomly assigns a balanced array of effects.

### Tied User

Assigns random User-defined steps (U1-U4) with Tie steps in between.

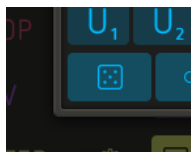
### Chaos

Assigns a random effect to each and every step.

## Step Random Settings

Define how the random steps should behave here.

### Slice



#### Any

Slice selection is totally random.

#### Smart

Uses only steps that are already recorded.

### Looping

#### Any

Loop style selection is totally random.

#### Any (No User)

Selects from all loop styles except User-defined (U1-U4).

#### User Only

Only selects User (U1-U4) loop styles.

#### Smart

Uses only loop motions that doesn't affect rhythmic perception.

## Envelope

### Any

Envelope curve type selection is totally random.

### Any (No User)

Selects from all envelope curve types except User-defined (U1-U4).

### User Only

Only selects User (U1-U4) envelope curves.

### Attack

Selects only attack envelope curve types.

### Decay

Selects only decay envelope curve types.

### Motion

Selects only steps with movement.

## Filter

### Any

Filter type selection is totally random.

### Any (No User)

Selects from all filter types except User-defined (U1-U4).

### User Only

Selects only User (U1-U4) filter types.

### Talk

Selects only vowel filter types.

### Lowpass

Selects only low-pass filter curve types.



### Highpass

Selects only high-pass filter curve types.

### Motion

Selects only steps with movement – not A I O U E, for example.

## FX1 & FX2

### Any

Effect selection is totally random.

### Any (No User)

Selects from all effects except User-defined (U1-U4).

### User Only

Selects only User (U1-U4) effects.

### Motion

Selects only steps with movement – not distortions, for example.

## Audio Settings

< Settings	Audio	Done
Mode	Internal player >	
Input / Output	Out 1+2 >	
Audiobuffer	256 samples >	
Run audio in background	<input type="checkbox"/>	

### Mode

Here you can select the audio input source. For audio input you can choose the internal audio player or the mic/line input of your iPad.

< Audio	Mode	Done
Internal player	✓	
External audio (Live)		

## Input / Output

If a multichannel sound card is connected, you can choose all available in- and out ports here.

< Audio

Input / Output

Done

NO INPUT, PLEASE SELECT EXTERNAL MODE

OUTPUT

Output 1+2

✓

Output 3+4

Output 5+6

## Audio Buffer

The Audio Buffer section allows you to change the audio latency. If you experience crackles in the audio signal, you should use a larger buffer size.

< Audio

Audiobuffer

Done

64 samples

128 samples

256 samples

✓

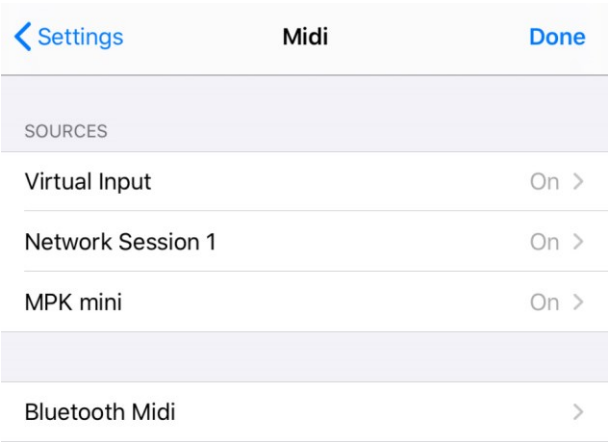
512 samples

1024 samples

## Run audio in background

Switch ON to keep Looperator playing when you're working in other apps.

# MIDI Settings



All connected MIDI devices are listed here. Supported MIDI Types:

- CoreMIDI virtual ports (to/from other apps)
- CoreMIDI network (as a session originator or receiver to/from Mac or PC)
- CoreMIDI physical devices (USB MIDI Controller)

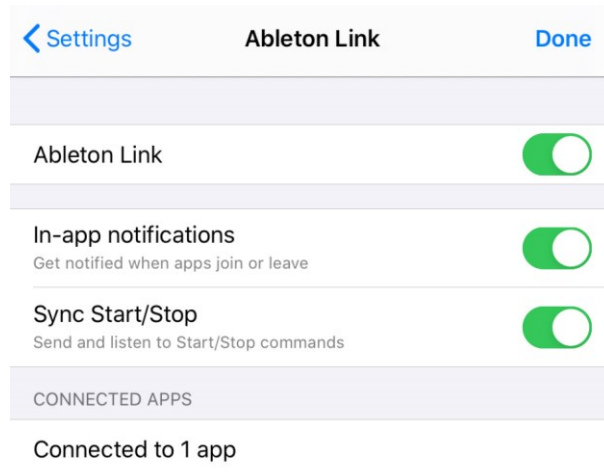
Looperator receives MIDI from other apps at its Virtual Input. Therefore Looperator has to be selected in the MIDI sending app.

The following MIDI input and output settings are available:



## Ableton Link

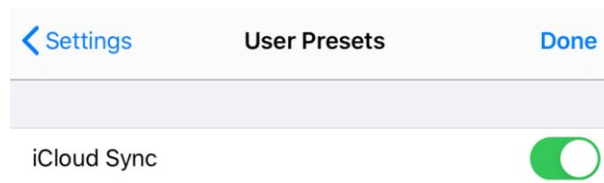
When activated, Link will sync tempo across apps.



Find out more about Link [here](#).

## iCloud Sync

Enable or disable preset file sharing between Looperator iOS and multiple devices via **iCloud synchronization**.



## Recording Settings

Here you find all settings related to recording audio. Determine how to start and stop the recording and create loops with the record length feature.

< Settings

Recording

Done

LENGTH

Manually

1 Bar

2 Bars

4 Bars

8 Bars

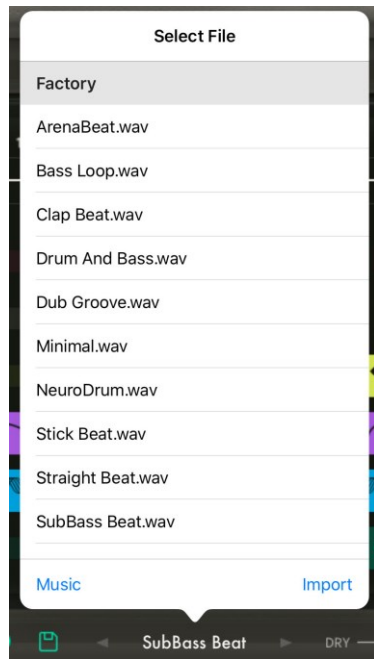
START / STOP

Manually ✓

Start with Play

Start & Stop with Play

## Select File



Load a track from the factory content, iTunes library, use AudioShare, or select a file from the Factory/Shared folder.

The recorded audio file will be automatically available in the Select File menu.

The “Music” button will take you to your iTunes library, “Import” to AudioCopy and AudioShare (requires installation of these apps on your iPad) and to File Import, which lets you browse right from inside the standard iOS Files app (requires iOS 11 and higher).

Supported File Formats are .wav, .aiff and .m4a.

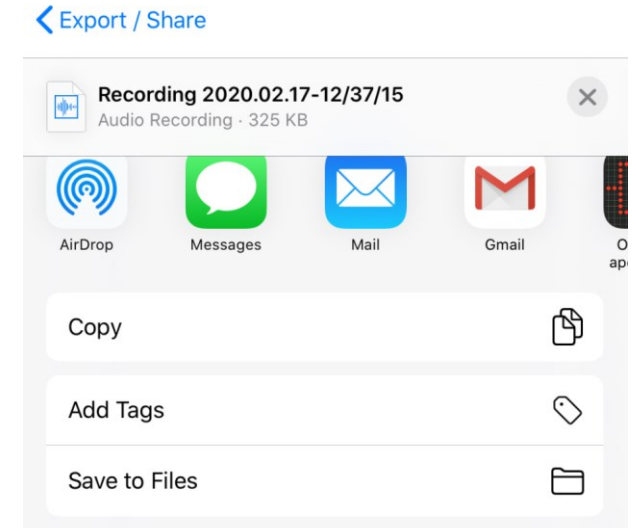
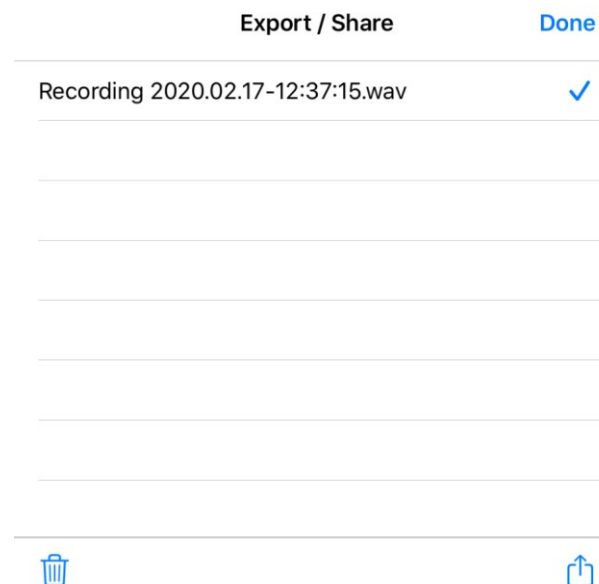
## Export File

Here you find the list of your recorded audio files.

Tap the Trash icon to get rid of unwanted data.

Tap the Action (Share) icon to put the recorded file into other apps.

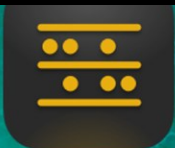
Here you'll find all compatible apps on your device which support the iOS share menu.







# Connectivity



BeatMaker 3



Cubasis



GarageBand



Effectrix



WOW



AUM



Auria Pro



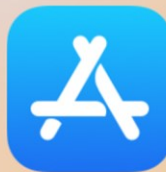
Audiobus 3



Unique



Turnado







# iCloud Synchronization

Through iCloud, you'll be able to share your saved presets across multiple devices including your desktop computer.

This feature is disabled by default.

To sync Looperator across your devices, launch the **Settings**.

There choose iCloud, tap iCloud and set iCloud to On.

Once activated, presets you save in the Looperator iOS version are synced automatically to your iCloudDrive.

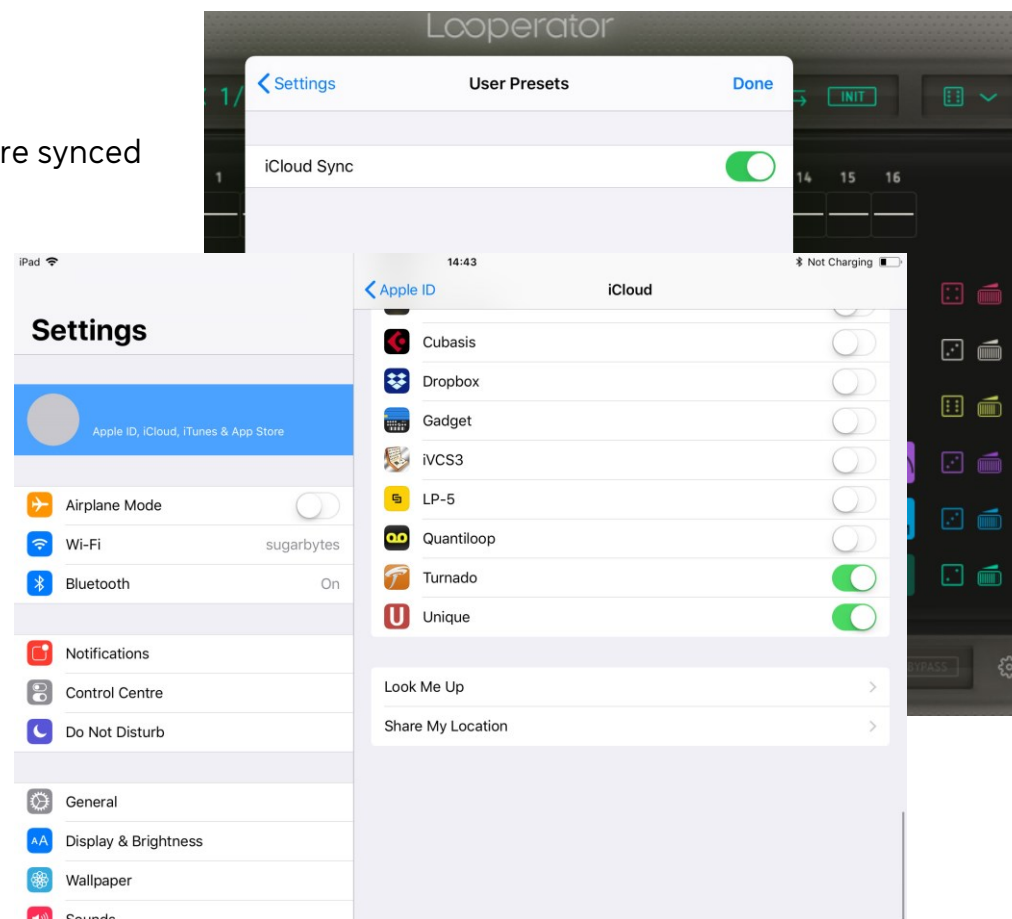
To share a preset from your **Looperator iOS version to your computer**,

you'll need to drag and drop or copy/paste the preset from **iCloudDrive/Looperator/Presets/User** into **~/Documents/Sugar Bytes/Looperator/Presets/User**

To share a preset from your **computer to your Looperator iOS version**, you'll need to drag and drop or copy/paste the preset from **~/Documents/SugarBytes/Looperator/Presets/User** into **iCloudDrive/Looperator/Presets/User**

The presets will then automatically appear in the User folder of Looperator's preset browser.

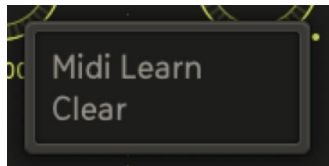
Please note that creating and then reading out a subfolder is technically not possible.



# MIDI CC Assignments

Looperator can receive MIDI from any source (incl. virtual MIDI).

## MIDI LEARN



Long-press any control and press MIDI Learn to assign incoming MIDI CCs.

Tap somewhere into the GUI area to close the popup window.

To erase the assignment, open up the popup window and press Clear.

Within a mobile DAW Looperator's MIDI Learn settings will be saved with the song.

When using the Standalone version of Looperator:

If CC Preset Isolate is enabled in the MIDI Settings of Looperator MIDI Learn settings won't change when loading presets.

If CC Preset Isolate is unchecked the CC Map will be recalled with the related preset.

# Looperator as a plugin inside your favorite portable DAW

Looperator supports the Audio Unit V3 standard making it possible to load multiple instances into any DAW that supports AUv3. It will be up to the host app on how it implements the AUs menu, but in most host apps you'll find the menu where other effects or editing tools can be applied. Here is how to add Looperator in...

## AUM:

Tap the Inserts & Effects slot of a Channel and load Looperator from the list of Audio Unit Extensions.

## Beatmaker:

Tap the “Add Effect” button from the FX panel, go to Audio Unit / IAA Effect and select Looperator from the list of Audio Units V3.

## Cubasis:

Select the track you wish to add Looperator to. Open the track Inspector and select the Insert or Send effects panel. In the effects menu tap one of the slots and select Looperator from the Audio Units category.

## GarageBand:

Select Plug-ins & EQ from the mixer panel on top left and tap the Edit button. Tap the plus button of a free FX slot to select Looperator from the list of Audio Unit Extensions.

## Auria:

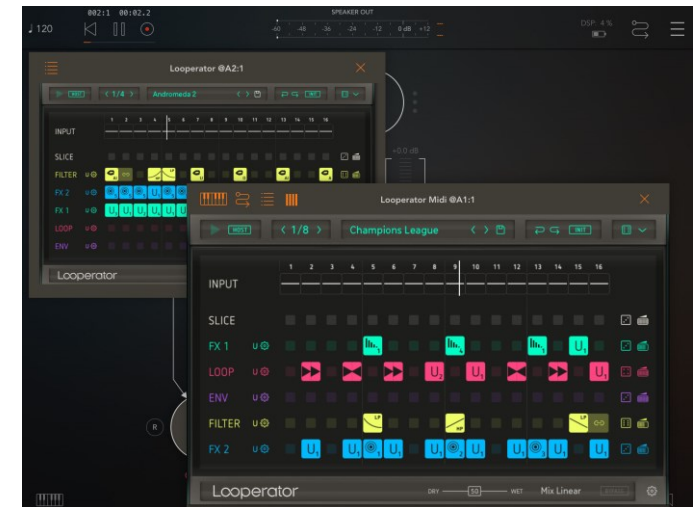
Press the "FX" button on a track to open the “ChannelStrip” window and load Looperator as an AU effect (green fond).

## Audiobus:

Press on the + button on an empty effect slot of Audiobus and select Looperator from the list of Audio Units

## Modstep:

Tap the “Browser” button, go to Effects and select Looperator from the list of AU effects.



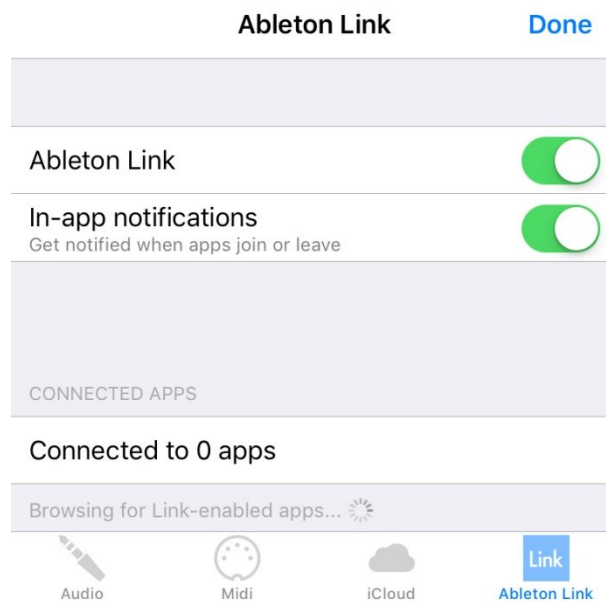
# Ableton Link

Hop on to the same network and jam with others using multiple devices running Ableton Link-enabled software. Anyone can start and stop their part while others keep playing. And anyone can adjust the tempo and the rest will follow.

You can activate Link via Looperator's **Settings**.

When activated, Ableton Link will sync tempo across apps.

Find out more about Ableton Link [here](#).



## Scales

All Scales with C as rootnote:

Chromatic:	C C# D D# E F F# G G# A A# B
Whole:	C D E F# G# A#
3 <sup>rd</sup> :	C D# F# A
4 <sup>th</sup> :	C E G#
5 <sup>th</sup> :	C F A# D# G#
7 <sup>th</sup> :	C G D A E B F# C# G#
Octave:	C G# E
Major:	C D E F G A B
Harmonic Minor:	C D D# F G G# B
Melodic Minor:	C D D# F G A B
Major Pentatonic:	C D E G A
Minor Pentatonic:	C D# F G A#
Blues:	C D# F F# G A#
General Bebop:	C D E F G G# A B
Neapolitan Major:	C C# D# F G A B
Neapolitan Minor:	C C# D# F G G# B
Spanish 8 Tone:	C C# D# E F F# G# A#
Jazz Minor:	C D D# F G A B
Japanese:	C C# F G G#
Balinese:	C C# D# G G#
Arabian:	C D E F F# G# A#
Hindu:	C D E F G G# A#
Gypsy:	C C# E F G A A#
Jewish:	C C# E F G G# A#

# Contact

**Sugar Bytes GmbH | Made of passion**

Greifswalder Str. 29 | 10405 Berlin, Germany  
phone: +493060920395

**Sugar Bytes are:**

Rico Bernhardt & Robert Fehse  
Vincent Miethe  
Nadine Purrmann

