# HY-RPE2



VST is a trademark of Steinberg Media Technologies GmbH

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## Table of Contents

# Plugin Format

VST2, VST3 and AUv3 for Windows and macOS

*AUv3 is only for Logic user

*Mac version is 64bit only

## System Requirements
Win : Windows7 or higher
Mac : OSX 10.9 or higher

# Registration

There are 2 ways to register the HY-RPE2.
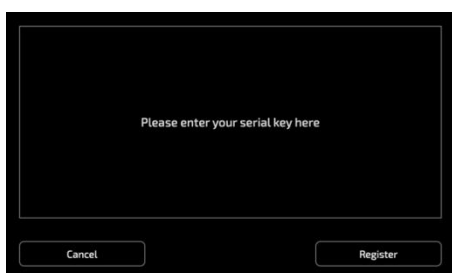
## 1, Drag and drop
Drag and drop your **keyfile** onto the plugin window directly.

## 2, Copy&Paste
1. Open your **keyfile** with a text editor and copy all strings

2. Click "**Demo**" button   > select "**Register**" > paste it > press "**Register**"



Once the plugin is registered, the "**Demo**" text will be replaced with the text "**Registered**".

# Sequencer Setup

AUv3 version is only for Logic user.

*Propellerhead Reason doesn't support VST MIDI out. So you can't use this plugin in it.

## Ableton Live
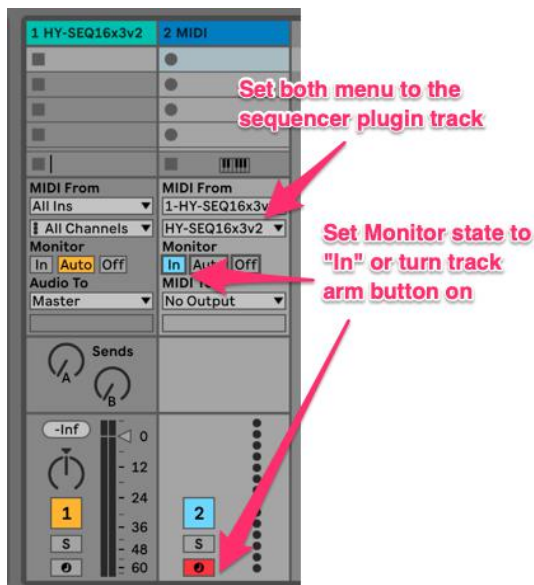


1. Load the HY Sequencer plugin

2. Create a new midi track and load the target instrument

3. Set both "**Midi From**" menus on the target track to the sequencer plugin

4. Set the "**Monitor**" state of the target track to "**In**" and arm the record button.

## Bitwig Studio
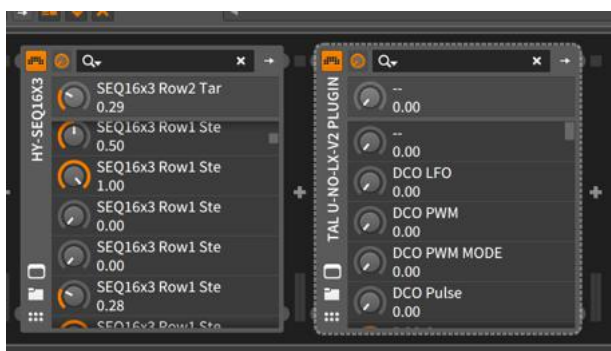


1. Load the Hy Sequencer as an instrument
2. Load the target instrument plugin after it in the chain

## Reaper



1. Load the HY Sequencer plugin as an instrument
2. Insert the target instrument after it in the chain

## Studio One



1. Add an instrument track and load the HY Sequencer
2. Add another instrument track and load the target instrument
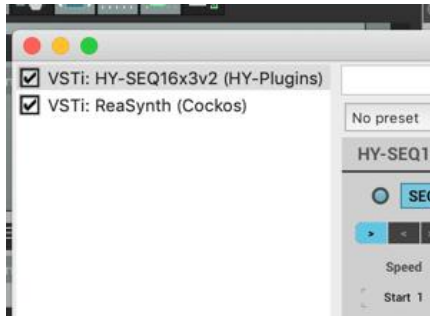3. Open the target plugin's editor panel and set it to mirror the settings in the above image

## Tracktion



1. Load the HY Sequencer plugin
2. Insert the target instrument plugin after it in the chain

## Cubase



1. Add an instrument track and load the plugin

2. Add another instrument track and load the target plugin

3. Set the midi input menu of the target plugin to the HY Sequencer output

4. Turn on **monitor button** or **speaker button**

*If you use **Asio-Guard,** and its level is high, please lower the level to normal or lower.

## Sonar
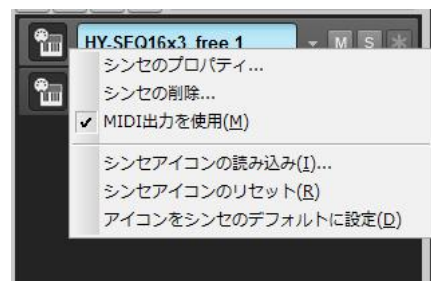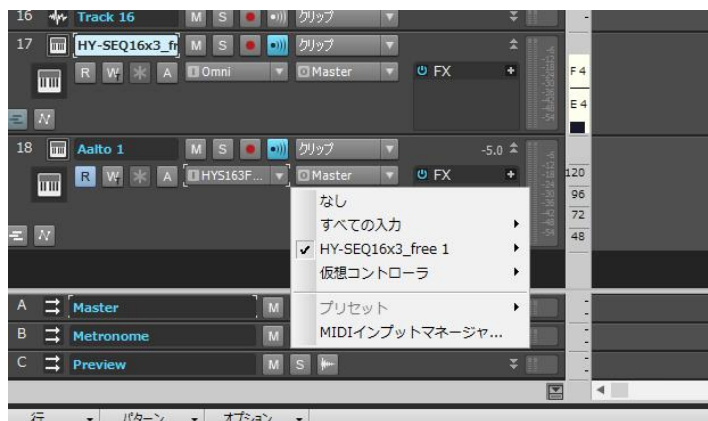


1. Add an instrument track and load the HY Sequencer plugin

2. Check "**Enable Midi Output**" option

3. Add another instrument track and load the target plugin

4. Set the midi input menu of the target plugin track to the HY Sequencer output

# Fruity Studio
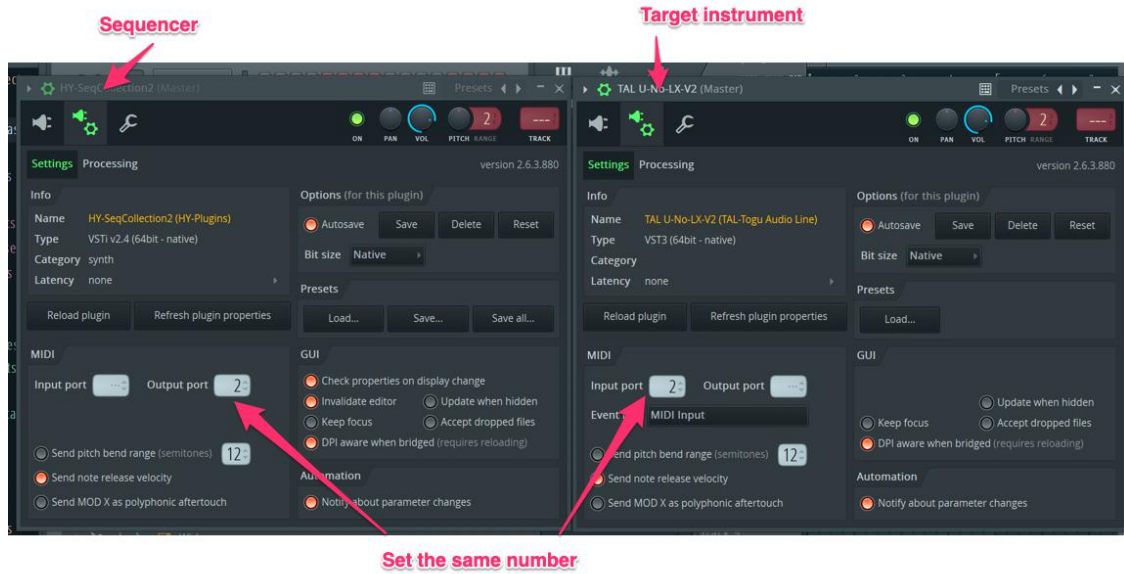


1. Load the HY Sequencer plugin as an instrument

2. Load a target instrument

3. Set **Midi Output Port** of the HY Sequencer plugin and **MIDI Input Port** of the target plugin to the **same number**

# Logic Pro



1, Load the HY Sequencer plugin as a Midi FX

# Plugin Menu
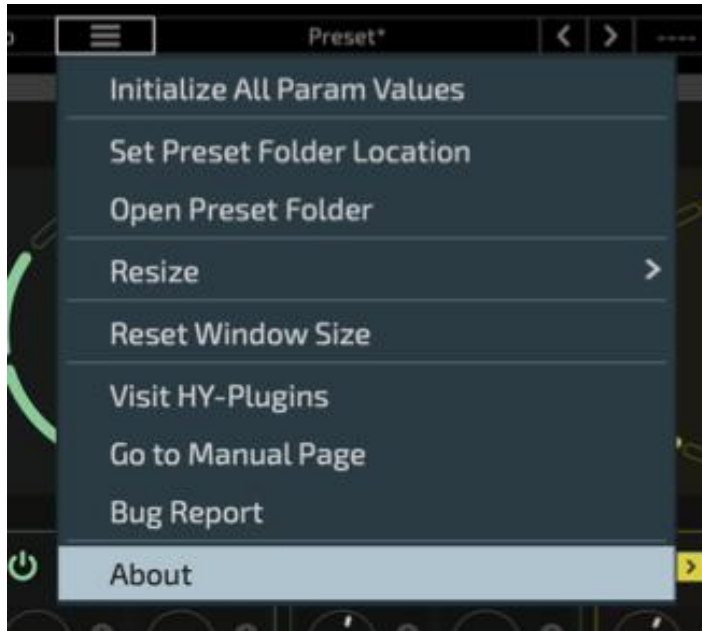


**Initialize All Param Values:** Initializes all parameter values

**Set Preset Folder**:

If you want to change the plugin preset folder location, you need to set the new location with this function

**Open Preset Folder**: Opens the preset folder

**Use Corner Resizer**: Turn on/off the corner resizer

**Resize**: You can resize the plugin window with this menu instead of using the corner resizer

**Reset Window Size**: Resets the window size

**Visit HY-Plugins**: Jumps to the HY Plugins homepage

**Go to Manual Page** : Jumps to the manual page

# Resizing Plugin Window



You can change the plugin size with this corner resizer.

# Preset



You can load a stored preset file by clicking the preset button or by clicking the arrow buttons using your mouse.

**Save**: Overwrites the currently active preset
**Save as**: Save the current settings as a new preset

**Default Preset Folder Location:**
Mac : *Library/Audio/Presets/HY-Plugins/HY-RPE2 Preset*
Win : *C:\Users\user name\Documents\HY-Plugins\HY-RPE2 Preset*

# MIDI Learn
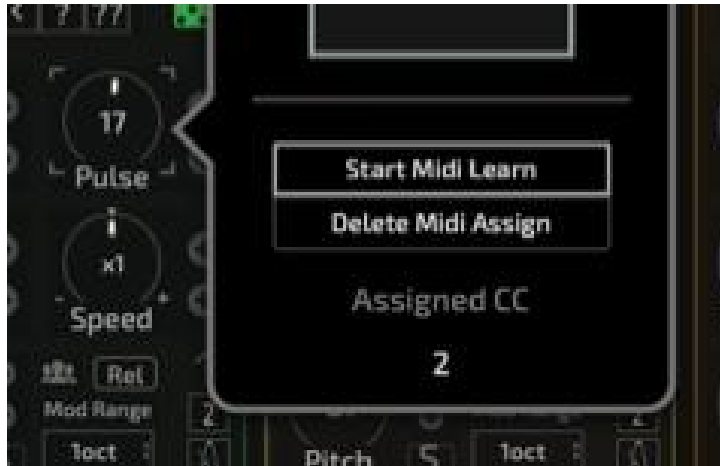


Right-click the parameter you want to control via MIDI cc.

Then click "**Start MIDI Learn**" and move the controller.

If you want to remove a MIDI assignment, right-click the target parameter and clicks "**Delete MIDI Assign**" button.

# Sequencer Engine

RPE2 has 2 different sequencer engines, Grid and Euclidean.

# Grid Sequencer
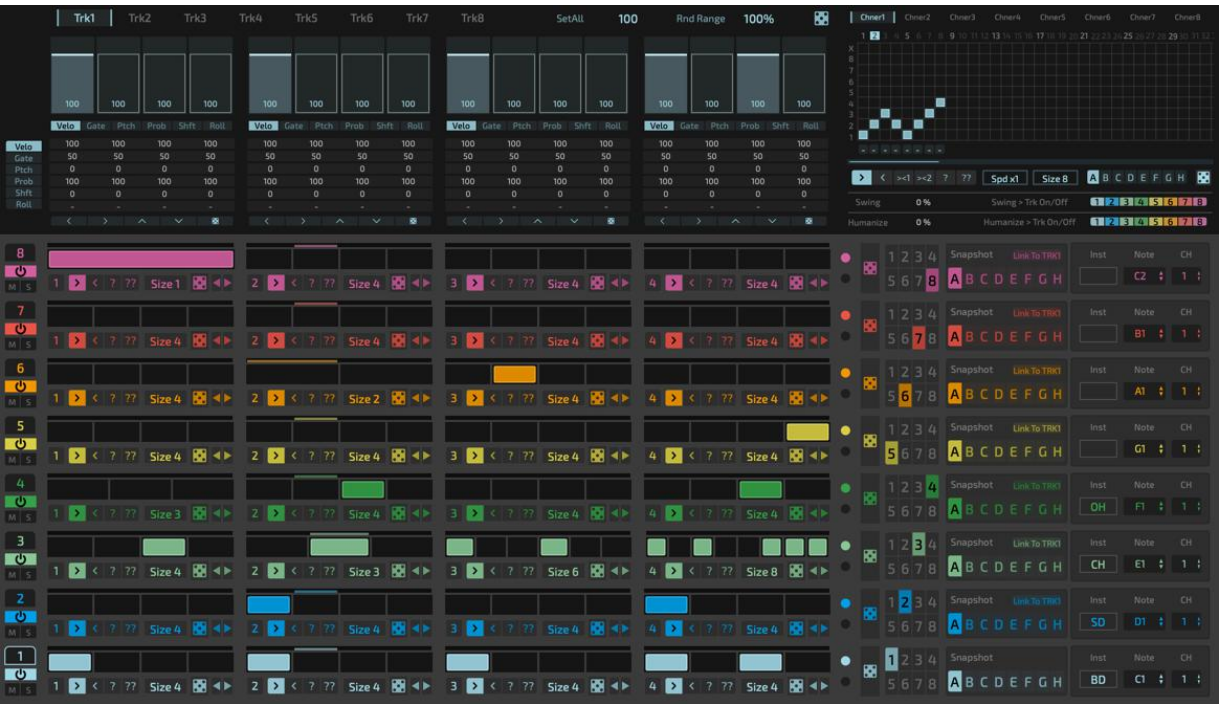


This is an 8 track Grid Sequencer. Each track contains 8 grid blocks.

Playback order of the grid blocks will be controlled by the block chainer unit.

## Signal Path
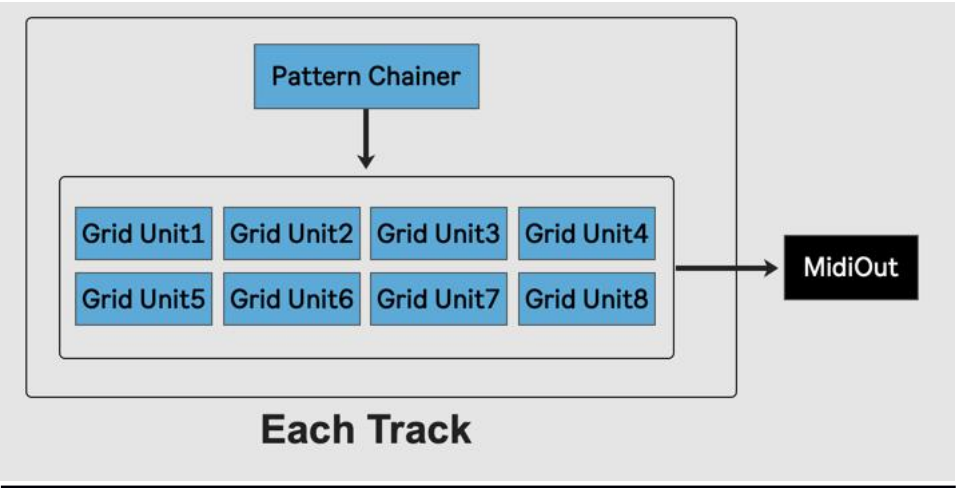
# Track Section



Each track consists of 8 grid block units.


## Track On/Off

If Track is off, MIDI note outputed of this track will be muted.


## Playback Direction

- \>: Forward,   e.g. 1 > 2 > 3 > 4...

- <: Backward,   e.g. 4 > 3 > 2 > 1....

- ?: Random, e.g. 2 > 1 > 1 > 3... (same step can be triggered multiple times)

- ??: Random2, e.g. 3 > 1 > 2 > 4... (every step will be triggered once in random order)


## Step Size

Sets the step size of each grid block (1~8)


## Dice Button

Left click = Randomizes the step onoff states, Right click = initializes the step states


## Arrow Button

Shifts the grid states left/right

## Page Button

Changes the page (grid block 1-4 / 5-8)

## Master Chainer

Selects the master chainer unit for this track

## Pattern Snapshot

You can create 8 pattern snapshots per track.

You can copy a snapshot via drag and drop to another snapshot button as illustrated below.



## Track MIDI Note

Output MIDI notes of this track

## Track MIDI Channel

Output MIDI channel for this track

# Block Chainer
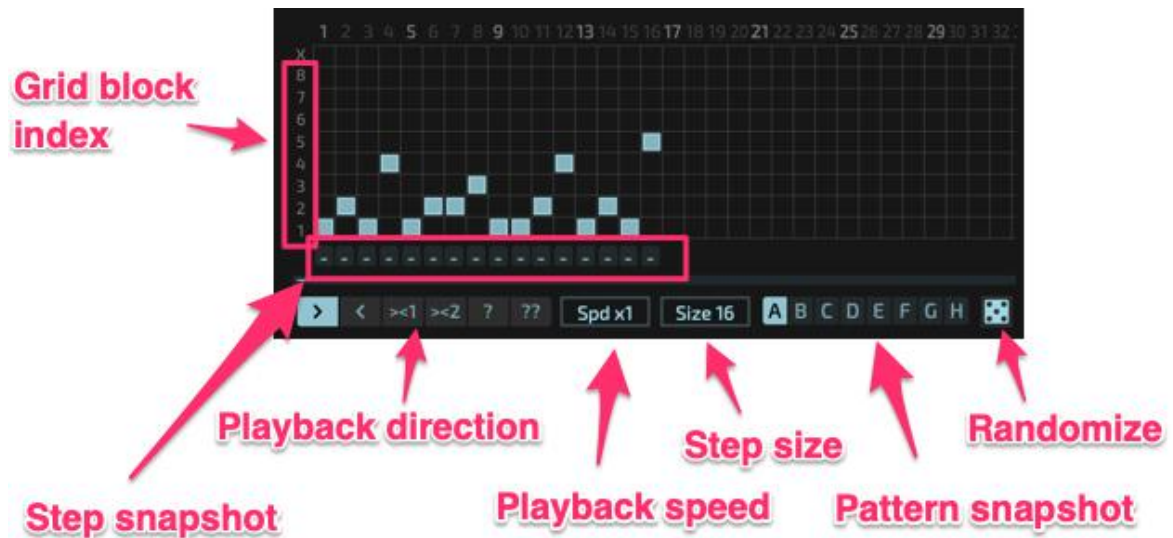


Block chainer is a sequencer for controlling the playback chain order of grid blocks.

There are 8 block chainer units available.

**Playback Direction**

- >: Forward,    e.g. 1 > 2 > 3 > 4...
- <: Backward,    e.g. 4 > 3 > 2 > 1....
- ><1: For/Back1,    e.g. 1 > 2 > 3 > 4 > 3 > 2 > 1 > 2...
- ><2: For/Back2,    e.g. 1 > 2 > 3 > 4 > 4 > 3 > 2 > 1 > 1 > 2...
- ?: Random, e.g. 2 > 1 > 1 > 3... (same step can be triggered multiple times)
- ??: Random2, e.g. 3 > 1 > 2 > 4... (every step will be triggered once in random order)

**Playback Speed**

/4 ~ x4

**Step Size**

Sets the step size of the chainer unit (2~128)

## Pattern Snapshot

You can create 8 pattern snapshots per track.

## Randomize Step states

You can create 8 pattern snapshots per track.

## Step Snapshot

You can set a different track snapshot per step.

E.g.
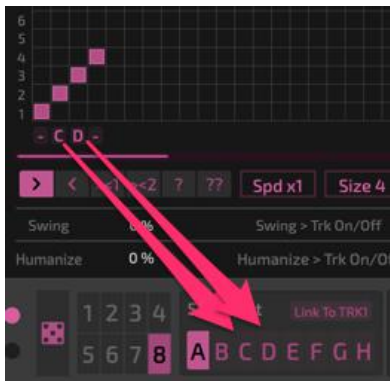


If you set the chainer as illustrated above, the grid blocks will be triggered as such:

**Block1(snapshot A) > Block2(snapshot C) > Block3(snapshot D) > Block4(snapshot A)**

If a step snapshot is not specified for a certain block, the current active step will be triggered for that step, in this case, the step snapshot of step 1 and 4 are not specified, thus snapshot A will be triggered for steps 1 and 4. The step snapshot for step 3 and 4 are specified, so the corresponding snapshot will be triggered for that step.

# Step Slider
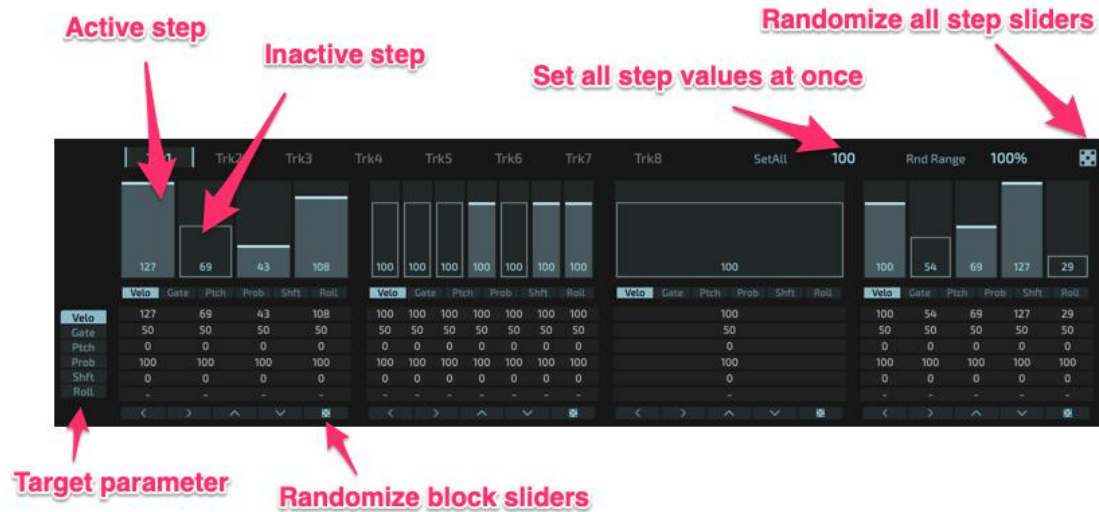


You can set velocity, gate, probability, timing shift and roll count per step.

- Velocity: Velocity level (0 ~ 127)

- Gate: Gate factor (0 ~ 100%)

- Pitch: Pitch shift (+/- 24st)

- Probability: Trigger probability (0 ~ 100%)

- Shift: Timing shift

- Roll: Step roll count (0 ~ 8)

You can toggle grid on/off by right clicking each slider.

# Euclidean Sequencer



This an 8 track Euclidean Sequencer. You can set the step size, pulse, rotation, running speed, velocity, gate and probability per sequencer unit. And you also can modulate these parameters by LFO/Sample&Hold and Macro controllers.

# Unit Panel
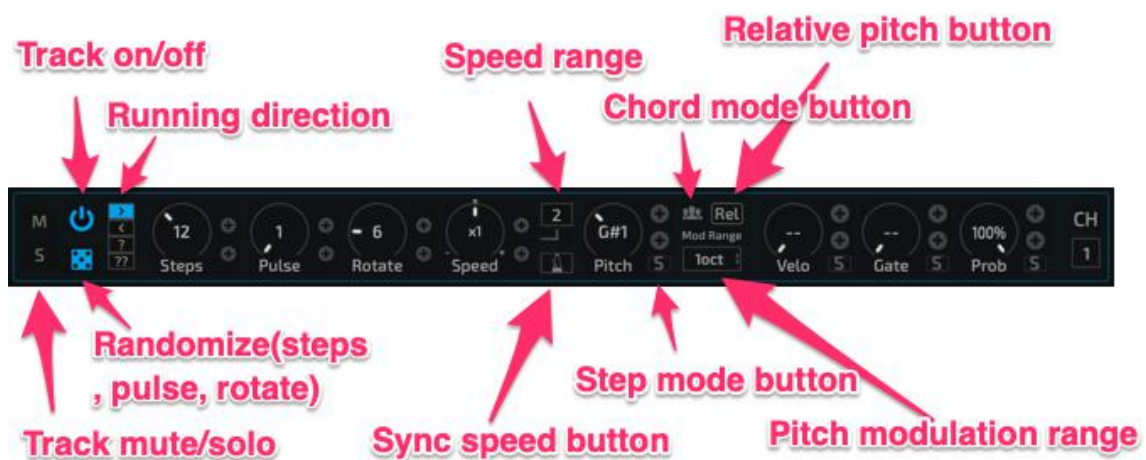
**Steps, Pulse and Rotate**

In the case to the left picture, step size is 4, pulse count is 1 and rotation is 0.

**Steps**: total number of steps in the circle

**Pulse**: number of active step in the circle

**Rotate**: rotates the euclidean pattern

E.g.

In this case trigger pattern is like this

ON > OFF > OFF > OFF

If we set the Rotate parameter to 1, the pattern be as follows:

OFF > ON > OFF > OFF

## Chord Mode

When turning on the Chord Mode button for a specific track, the track will enter Chord Mode. In this mode, you can trigger a max of 5 notes at one time.

# Chord Edit Panel
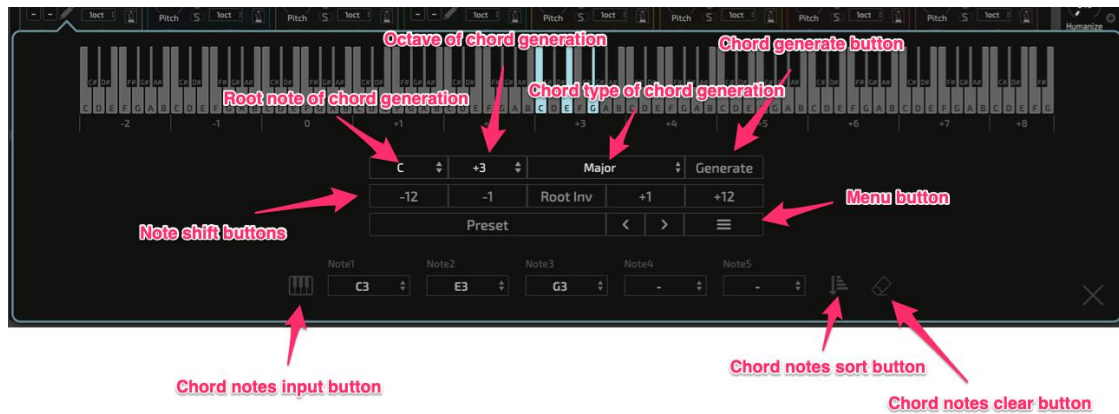


You can edit chord notes using the Chord Edit Panel.

## Chord Generator
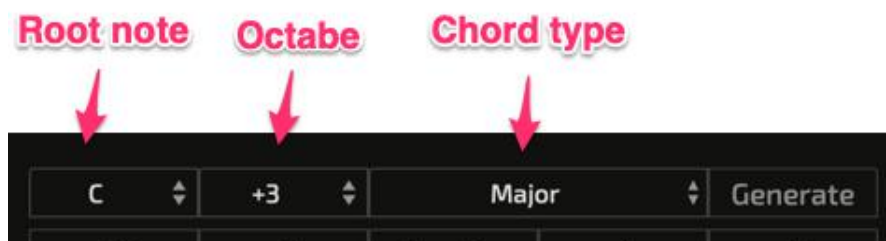


You can also generate chord notes by pressing "Generate" button.

## Chord Note Shift Buttons
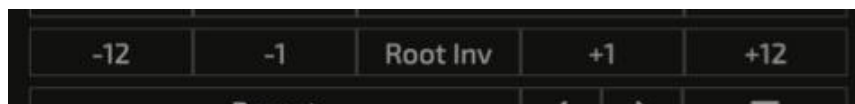


- -12: Shifts the current chord notes minus one octave

- -1: Shifts the current chord notes minus one semitone

- Root Inv: Makes the current root note one octave higher

- +1: Shifts the current chord notes up one semitone

- +12: Shifts the current chord notes up one octave

**Chord Notes Input**
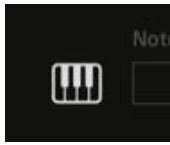


You can set chord notes using a MIDI keyboard.

When turning the keyboard button ON as picture above,you can then press your MIDI keyboard keys to generate notes.

## Step Mode



The Pitch, Velocity, Gate, Probability parameters also have "**S**" function button. When this is set to ON, these parameters will enter Step Mode. With this mode, you can set parameter values for each step.

**Edit Panel**



When the Step Mode is engaged, you can also click the Step Mode icon as pictured to the left. The Step Edit panel will now appear at the bottom of the plugin window.
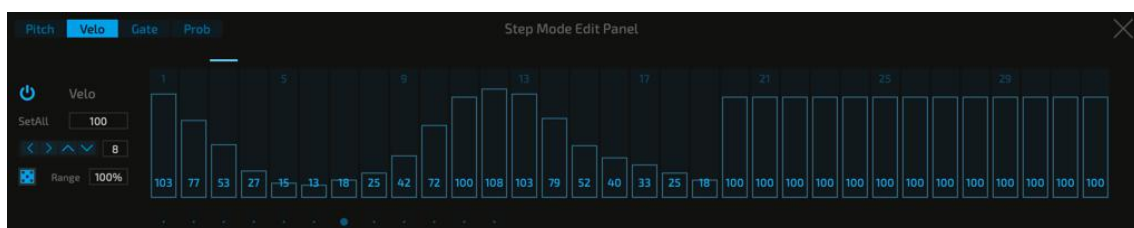
In Step Mode, you can set different parameter values for step. Thus you can create a melody pattern like the one below.



# Control Section
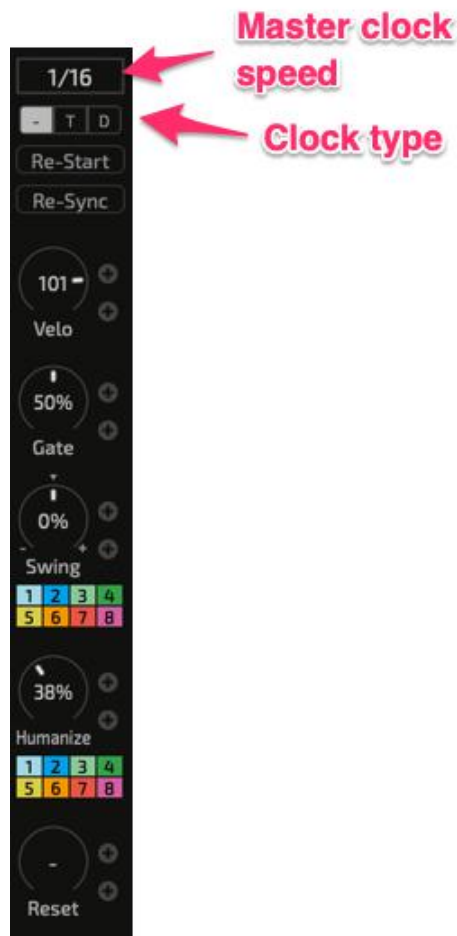
### Master Clock

Sets the Master Clock speed. Each euclidean sequencer unit has it's own clock generator, so they can run independent of the Master Clock or Local Clock.

### Clock Type

**- :** Normal note (1/4, 1/8, 1/16...)

**T :** Triplet note (1/4T, 1/8T, 1/16T...)

**D :** Dottedl note (1/4D, 1/8D, 1/16D...)

### Re-Start

Force re-starts the sequencer's clocks

### Re-Sync

Locks the sequencer's clocks to the Host's (DAW's) song position.

**Master Velocity and Gate**

Each euclidean unit has own velocity and gate controls, so they can use either the master value or local value

**Swing**

Swing amount (-100 ~ +100%)

You can set the Swing amount here. You also have control over which Euclidean units are influenced by the swing amount by toggling the small colored numbers representing each unit On/Off.

**Humanize**

Humanize amount (0 ~ 100%)

This adds a small randomness to the Velocity, Gate and Trigger timing values.

You also have control over which Euclidean units are influenced by the Humanize amount by toggling the small colored numbers representing each unit On/Off.

**Reset**

This sets the time before the sequencer restarts the sequence from the first step.

# Modulation Source



There are 4 LFO/Sample&Hold units, 4 Macro knobs and 4 Macro buttons are available.

These are used for the parameter modulation.

## Modulation Assign
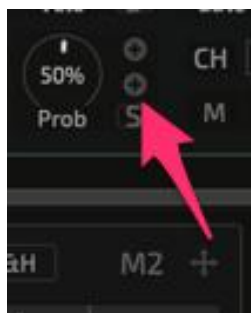


Modulatable parameters have small circle icons beside each parameter. Each modulation source has own cross icon which can be drag and dropped to a destination parameter as indicated by the small circle icons.

Once you make a modulation assignment, the small circle will appear as follows:



The number indicates the modulation source for this assignment. You can hold the left mouse button down and move the mouse to assign the modulation depth. This is indicated by the white line filling part of the circle. You can also create or clear a modulation assignment by right-clicking the small circle icon and selecting "Clear".

## LFO/Sample&Hold

**LFO**



**Sync Mode**

- Free: 0.01 to 20Hz

- Note: 16/1 to 1/64

- Triplet: 16/1T to 1/64

- Dotted: 16/1D to 1/64D

**Buttons**

**Bipolar:** When this button is active, the output value range will become -1 to +1

**Invert:** Inverts the LFO outputs

**Square:** Squares the LFO outputs

**Saturate:** Saturates the LFO outputs

**Knobs**

**Rate:** Sets the speed of the LFO unit

**Phase:** Sets the start phase position of the LFO unit

**Offset:** Sets the offset level

**Jitter:** Mixing white noise into LFO outputs

**Level:** Sets the output level

**Sample&Hold**

Sample&Hold unit has an internal noise generator.

It captures the noise value and outputs holding values.

The capturing interval is defined by the Rate knob.

**Mode1/Mode2**

- Mode1: No interpolation between the captured values
- Mode2: Linear interpolation between the captured values

**Smooth:** Sets the smoothness of the output signal

# Macro
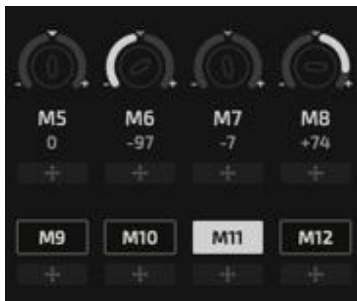
There are 4 macro knobs and macro buttons available.

The output signal of macro knob is -1 ~ +1.

The output signal of macro button is 0 or 1.

**Macro Button**

Macro buttons have two modes. You can change the mode by Right-Clicking their text.
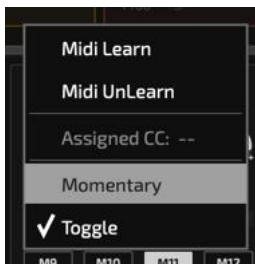
- Momentary: As long as this is pressed down, it will output signal value 1, otherwise 0.
- Toggle: Every time the button is pressed, its state changes.

# Scale FX, Global Octave and Transpose
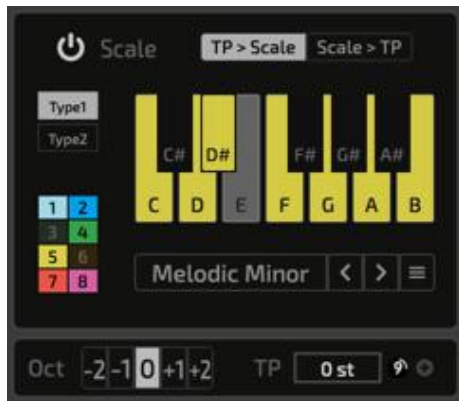


# Scale FX
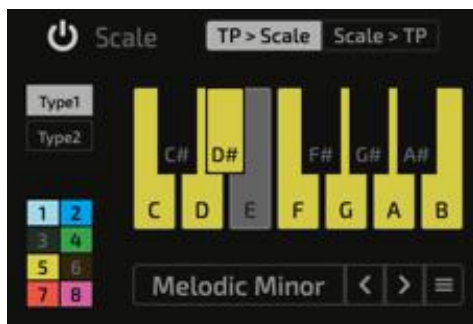


If the Scale FX is active, the incoming MIDI notes can be re-mapped based on the FX setting. There are 2 types of Scale FX available.

**Power Button**

Turns the Scale FX On/Off

"**TP > Scale**" / "**Scale > TP**"

Processes the order of Scale FX and Transpose function.

If the Transpose is set to precede the Scale FX, then the result will always be in scale.

On the other hand, If the transpose is set to follow the Scale FX, the result can be outside the scale notes.

**Scale FX Type1 / Type2**

You can change the Scale FX to Type1/Type2 with this button.

## Type1
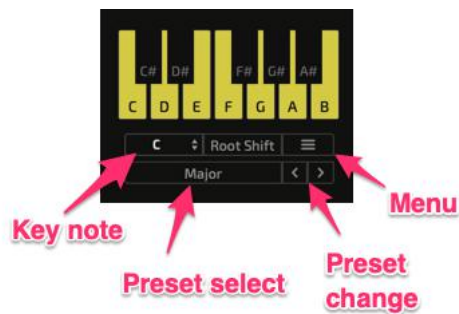


In Scale Type1, the incoming MIDI notes will be re-mapped to the nearest active note. For example in the case to the left, the MIDI note C# will be mapped to C, D will be mapped to D#, E will be mapped to F and so on...

**Key note:** You can change the scale key
**Root Shift:** When this button is active and the key note is other than "C",

Incoming Midi notes will be shifted by the key note value and then scaled based on the current scale setting.

For example, Key note = D, incoming notes = "C, F, G"

In this case, incoming notes will be shifted by 2 semitones, so C to D, F to G and G to A.

Then they will be scaled based on the scale setting.

## Type2



In Scale Type2, the incoming MIDI notes will be replaced based on the FX note setting. In the case to the left, MIDI note C will be replaced by G, C# will be muted, D will be replaced by F, E will be replaced with B and so on...

**Global Octave and Transpose**



**Oct**

Increases or decreases the octave of the MIDI notes +/- 2 octaves.

**TP**

Transpose the MIDI notes +/- 24 semitones

# MIDI Recorder



You can record the sequencer output and create MIDI files with the MIDI recorder.

After recording, you can drag & drop the resulting MIDI file to your host MIDI/instrument track.

This recorder captures multi-track recordings, so it captures both the master MIDI output(CH1) and each track output(CH2~9).

## Recording Preparation
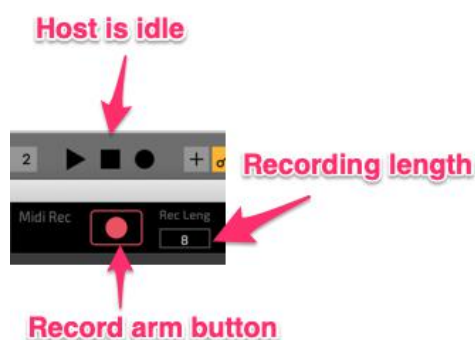


1, Make sure the host sequencer is idle

2, Sets the recording bar length

3, Activate the Arm Recording button

The recording will start as soon as the host clock is started.

## Recorded File
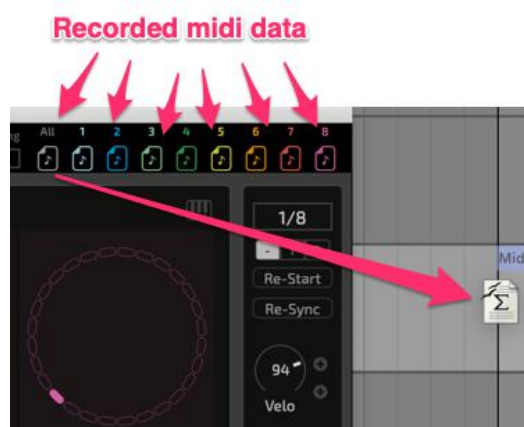


After the recording is complete, file icons will appear as pictured to the left. These icons represent recorded midi data.

You can drag & drop them to your host's MIDI/instrument track as individual MIDI files.

# MIDI Note Map
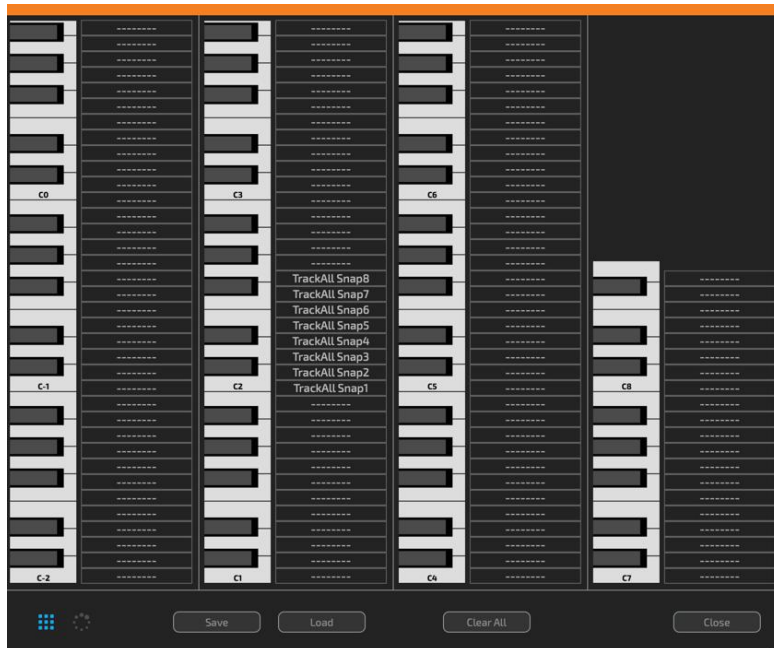


You can assign sequencer control commands to MIDI notes on your controller.

You can create note maps for each sequencer engine.

**Control Commands for Grid Sequencer**

- **Track Snapshot:** Changes the snapshot of corresponding track

- **Track Mute:** Mutes the track output

- **Track Solo:** Mutes all tracks except this track output

- **Track All Snapshot**: Changes snapshot of all tracks at once

<u>Example</u>
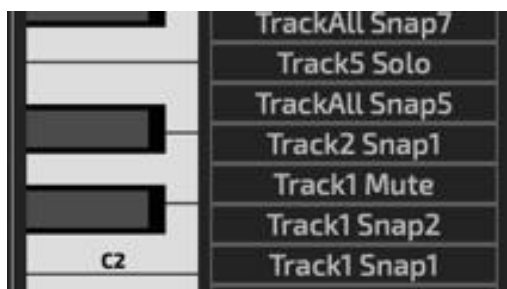


In this case, "**Track1 Snap1**" is assigned to MIDI note C2. So when the plugin receives a C2 note change, Track1's snapshot will be changed to 1. And when receives a C#2 note change, Track1's snapshot will be changed to 2.

**Control Commands for Euclidean Sequencer**

● **Track Mute:** Mutes the corresponding track output

● **Track Solo**: Mutes all track output except this track

# Global Mute and Thru



**Mute**

When turning the mute button On, the plugin's output will be muted

**MIDI Thru**

When turning this On, the incoming MIDI input will be mixed with the plugin's MIDI output.

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HY-RPE2

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