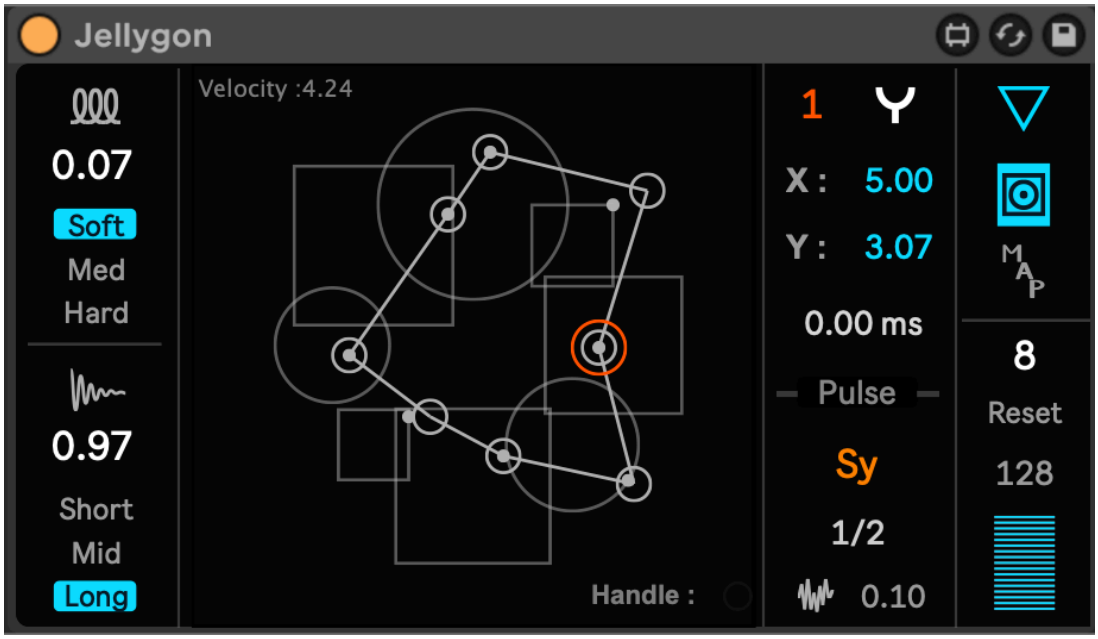
Jellygon



Overview

Use the spring physics simulations to modulate the mapped parameters.
This makes it possible to generate LFOs with more natural random behavior and decay for parameters.

1. Basic setting

2.Spring and Damp

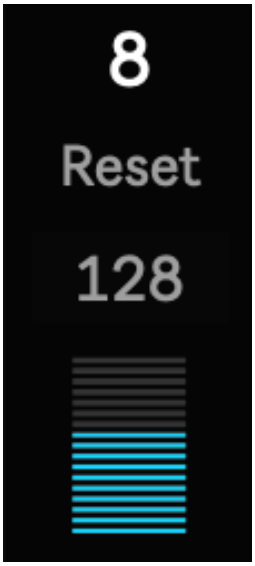
3. Main Display

4. Handle

5. Details and Map

6. Tips for runaway and too slow

1. Basic



Point Num (Maximum)

Reset

DownSample

Speed Scale

Point Num (Maximum)

Set the number of points to use. The shape will be a polygon with that numbers.
The positions of these points serve as the source of the modulation.

DownSample

Determines the frequency of physics calculations. If the value is 1, the update occurs every sample. This parameter determines the reference speed.

Reset

This is useful in a panic or when you want to revert to the initial state.

Tips
Since the initial state has a significant effect on modulation, resetting it first ensures that the modulation remains consistent when replay.

SpeedScale

You can adjust the speed by multiplying the actual speed by a factor between 0.001 and 1. If “DownSample” is 1, the speed is very fast, so this adjustment is necessary.

Tips for DownSample

The lower the setting, the more likely the system is to go into runaway. (This device design allows for runaway conditions.)

I recommend starting by trying out different settings with 1024.

If you want to prioritize real-time performance, you'll need to use a lower setting.

And I recommend SampleRate 48KHz or higher.

2. Spring and Damp

Spring value

Spring Type

Damp value

Damp Type

Spring value

0-1 soft-hard
A higher value makes it stiff and fast (The pulling force is strong), while a lower value makes it soft and slow (The pulling force is week).

Damp value

0-1 short-long
Set the decay time for the velocity. A higher value results in a longer decay time, while a lower value results in a shorter decay time.

SpringType

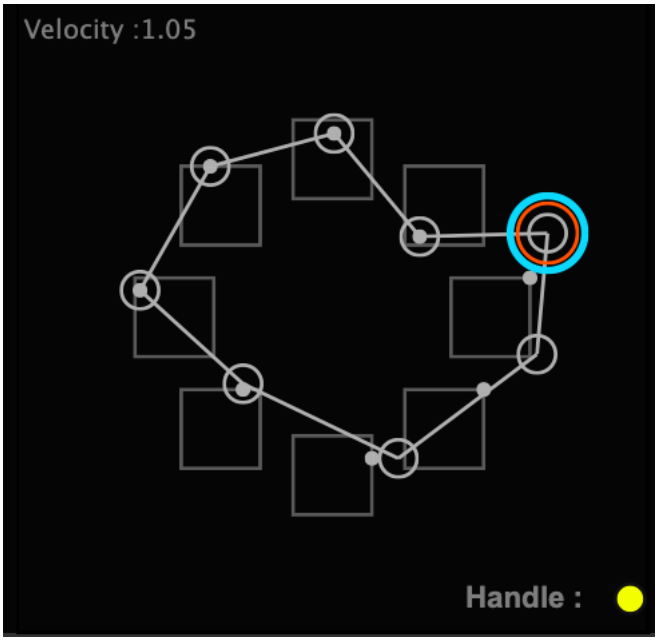
You can switch between three value ranges.
Hard : 0-1 Med : 0-0.1 Soft : 0-0.01

DampType

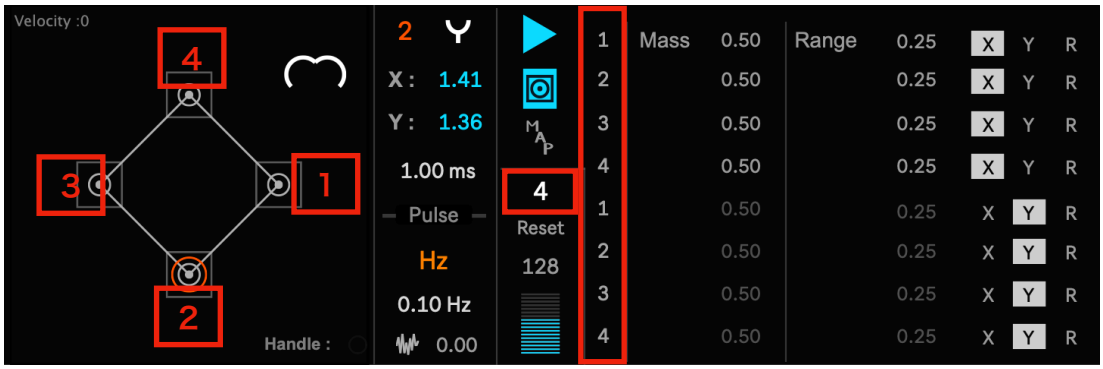
You can switch between three value ranges.
Long : 0.99-1 mid : 0.9-1 Short : 0-1

3. Main Display

Velocity Average



Handle(Pulse) Indicator



These dots are modulation sources.
Starting at the 3 o'clock position and moving clockwise,
the numbers 1 - num.
You can select values from x, y, and radius.
Dot positions are clipped and scaled based on individually set “Range”.
In detail, 5. Details and Map.

4.1 Handle

Handle Num

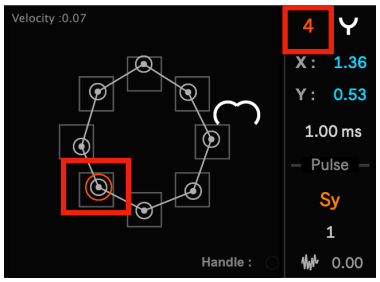
Grab On

Handle XY

Handle Attack

Handle Num

Select the point to be used as the handle

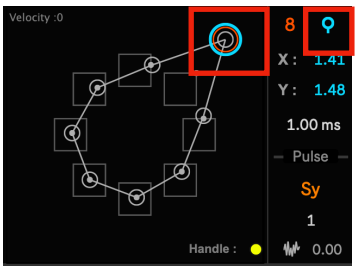


Handle XY

Set the handle's position.
Min-max : -5 - 5
Main Display : -2 - 2

Grab

If this is set to “on,” the system will perform a grabbing action.
(click on main display too)



Handle Attack

Set the time it takes to finish grabbing.

4.2 Pulse

Pulse On/Off

Sync/Hz

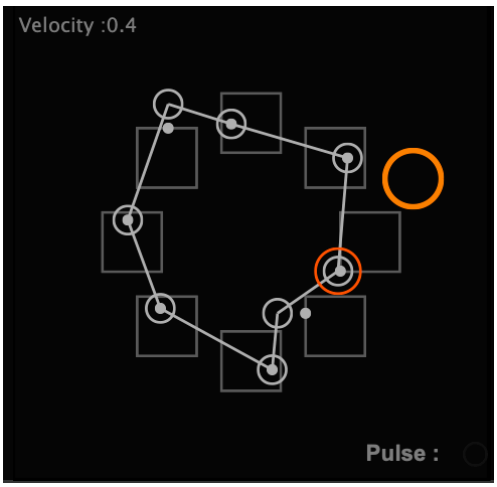
Speed

PositionRandom

If turn on, the grabbing action is repeated at the set interval.

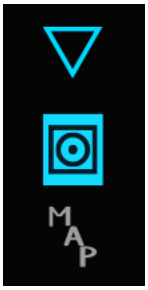
PositionRandom

When grabbing, a random value is added to the position.



If turn on,
handle icon becomes orange circle.
The click on main display is disable.
However, this setting is enabled when you control “Grab” directly using a MIDI controller or your direct click.

5. Detail and Map

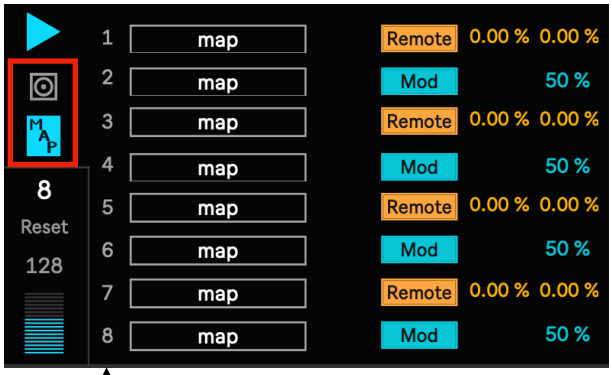


Close

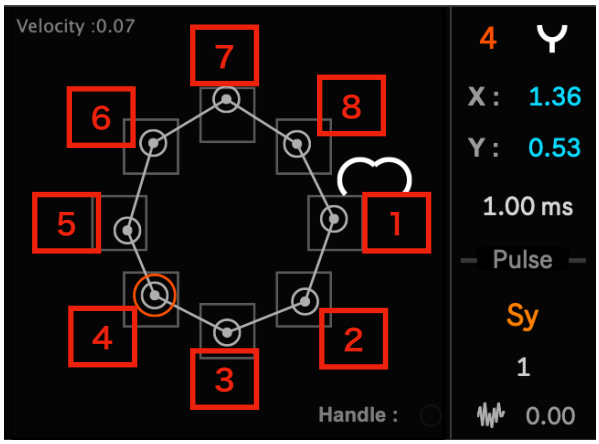
Open

Mass and Range

Map



Corresponds to the red number below



5.1 Mass and Range

Mass　Range Amount　Range Type

Here, you can set “Mass”, “Range Amount”, and “RangeType” for each point.

Mass

It works basically the same as “Spring,” but the motion changes depending on the individual masses.

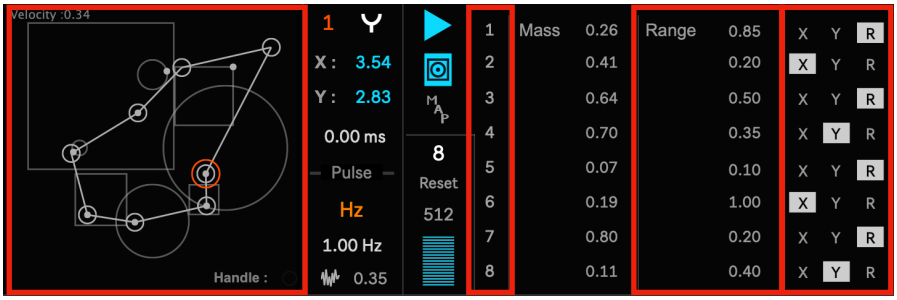
Range Amount

Determine the range to be used as the modulation source.

RangeType

Select the value to be used as the modulation source from the x-axis, y-axis, or radius.
XandY : -1-1、Radius : 0-1

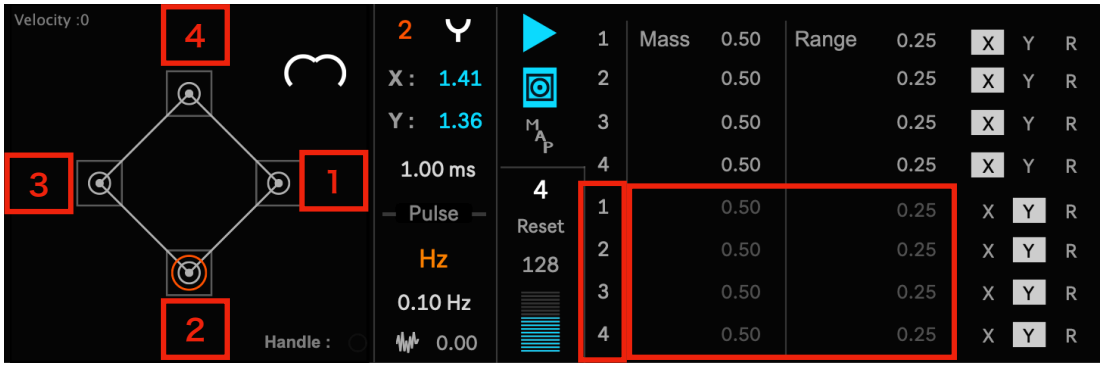
Range and the type on main display



Please carefully examine the shapes numbered 1 through 8 and compare them with “RangeAmount” and “RangeType”.

It should be clear that if ”RangeType” is X or Y, you'll see a rectangle, and if it's R, you'll see a circle, and that their sizes are determined by “RangeAmount”.

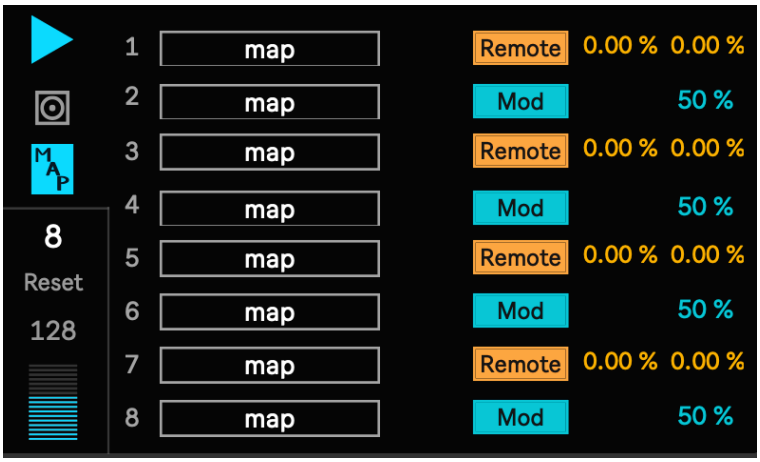
If num is less than 8



Multiple mappings can be assigned to a single point. You can select a different “RangeType” for each one.
“Mass” and “RangeAmount” is shared.

Here, the modulation source of mappings
Mapping 5 : point1 RangeType : Y
Mapping 6 : point2 RangeType : Y
Mapping 7 : point3 RangeType : Y
Mapping 8 : point4 RangeType : Y

5.2 Map



Select the parameters to map here

Remote :
If “RangeType" is X or Y, minimum : -1. Maximum 1
if it is r, the scale : minimum : 0. Maximum 1

Modulate :
If “RangeType” is X or Y, it becomes a bipolar distribution centered on the value of the parameter.
If “RangeType” is R, it is unipolar.

Whether it is unipolar or bipolar is automatically determined by the “RangeType”.

6. Tips for runaway and too slow

For runaway (panic!)

When panic, push “Reset”.
Or
Set “Damp” to a shorter value and “SpeedRange”
to a higher value.

For too slow

Increase ”SpeedScale”, increase “Spring" value (make it stiffer), and increase “damp” (make it longer)

Spring and Damp setting image

Ex) 1 Damp : short (lower), Spring : soft (lower), DownSample : high
Movements become sluggish, and recovery is slow.

Ex) 2 Damp : long (higher), Spring : soft (lower), DownSample : optional
The movement isn't sluggish; it sways continuously. Like a jelly.

Ex) 3 Damp : long (higher), Spring : hard (higher), DownSample : optional
It moves quickly and shakes violently. (Prone to running wild). Like a Stiff spring.