

S&H Sequencer 1.0.1

amount

s & h

length

input

off

notes

cc

99

res

8

steps

16

cc out

1

Map

0 %

100 %

smooth

curve

S&H SEQUENCER

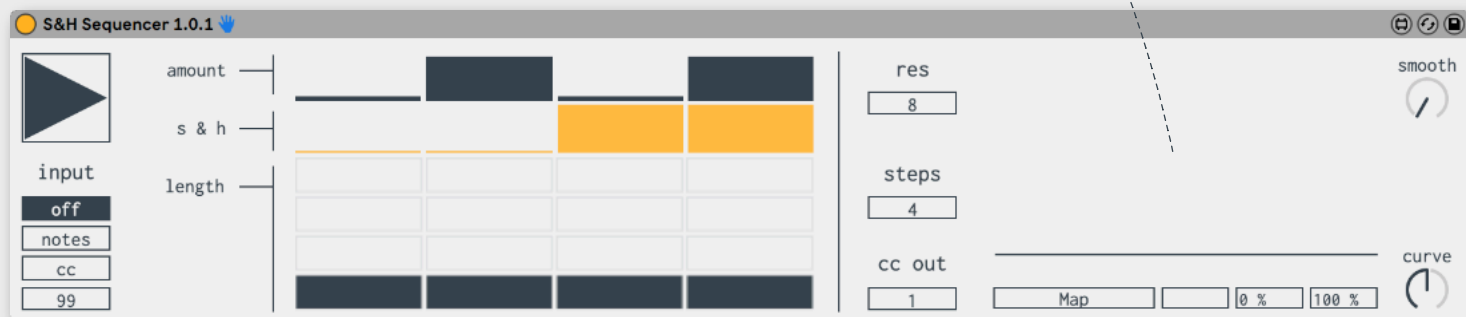
A control signal sequencer with
a sample & hold extension

OVERVIEW

The **S&H Sequencer** features variable lengths per step and adjustable note resolutions, as well as signal smoothing options. It can be controlled via MIDI or mapping and automation and it can send either CC data or mapping data as well.

It's made up of the following sections:

- Transport control
- Step control grid
- Note resolution and sequence length
- Signal monitor



- Control signal output routing
- Signal smoothing

TRANSPORT CONTROL



input

off

notes

cc

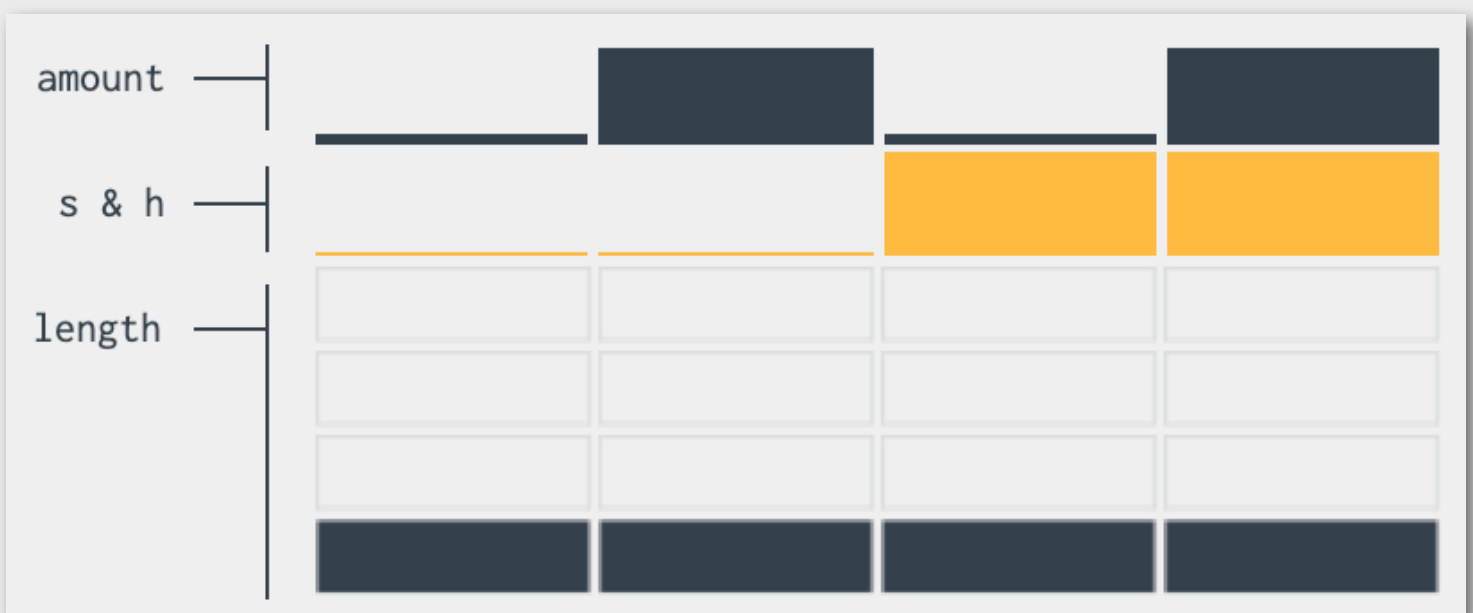
99

The **play** button on the top-left corner starts or stops the sequencer. It can be mapped to a controller using Ableton's Live mapping features. It can also be directly mapped to either incoming MIDI notes or CC data.

STEP CONTROL GRID

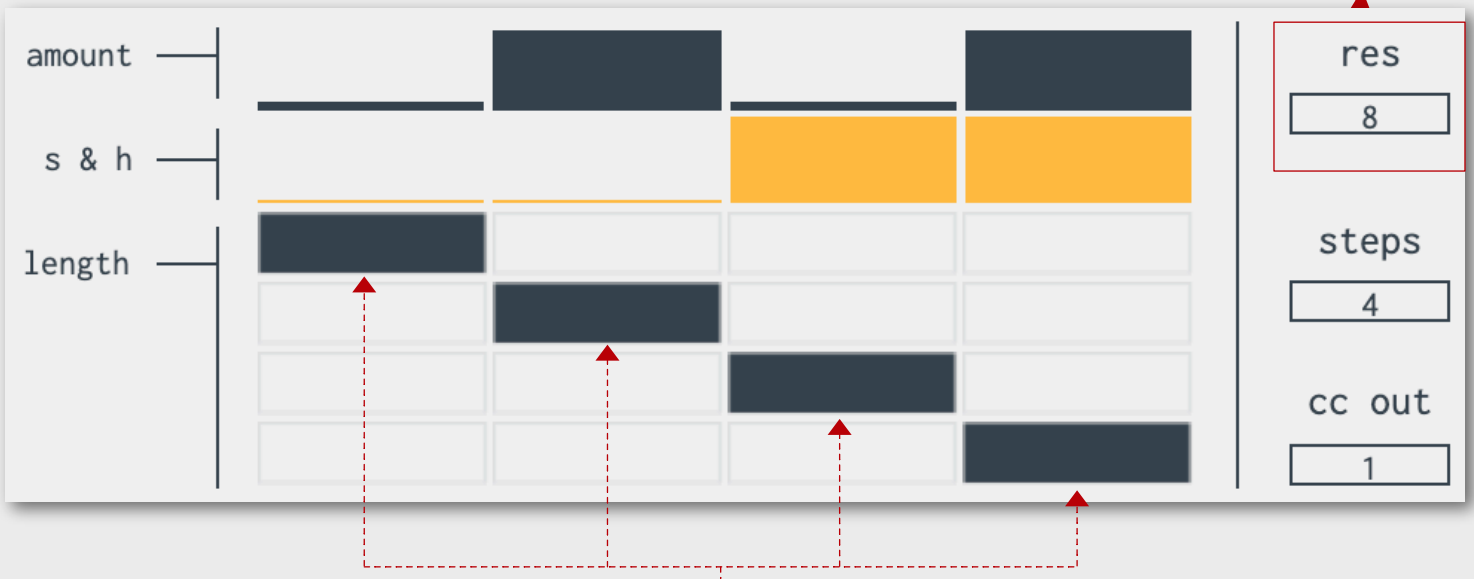
Next up are the controls for the sequencer proper, divided into three parts:

- The first row of faders allows you to assign specific control values to each step.
- The second row of faders adds a random amount to the values specified above, effectively creating the effect of a sample & hold signal being fed by noise (the maximum amount provides a completely random value, the minimum amount reduces the randomness down to whatever value you specified above).



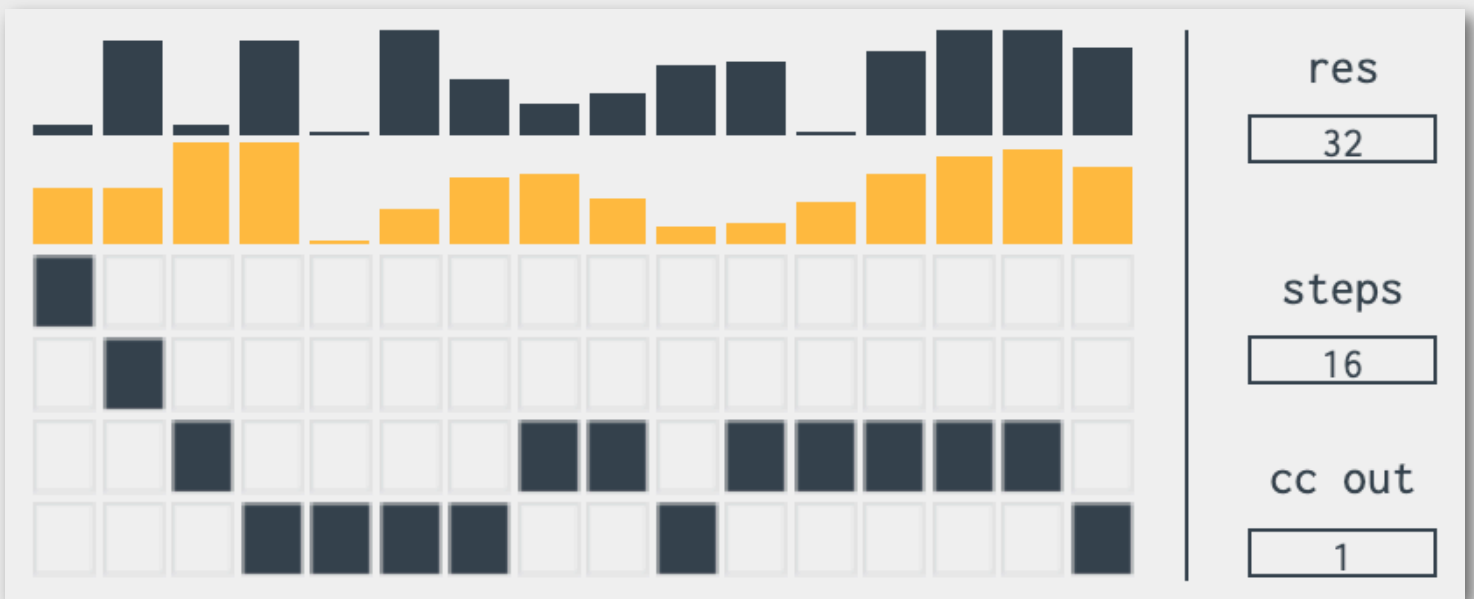
SEQUENCE LENGTH & NOTE RESOLUTIONS

In the diagram below, the sequencer's step resolution is set to eighth notes



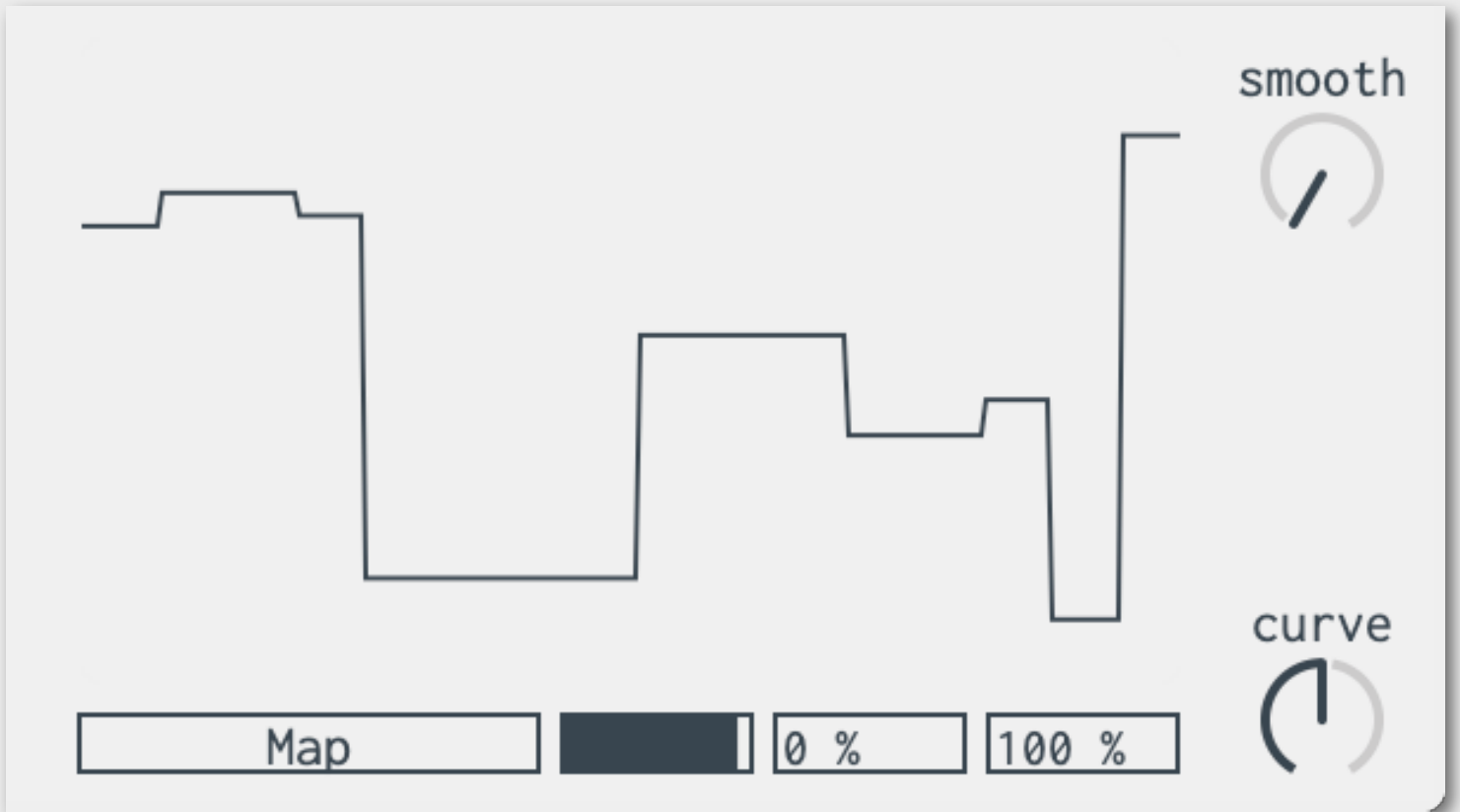
The 1st step's duration is a half-note (or $1/8 \times 4$), the 2nd step is a dotted quarter-note, the 3rd step is a quarter-note, and the 4th step is an eighth-note

Below the two rows of faders is a grid that specifies the length of each step, which is relative to the note resolution set on the sequencer. In the example above, the note resolution is set to an eighth note. The grid is set up from bottom to top, the lowest cell in each column representing a value of 1x the note resolution, the top cell being 4x. So, the length of each step is equivalent to the note resolution multiplied by this value.



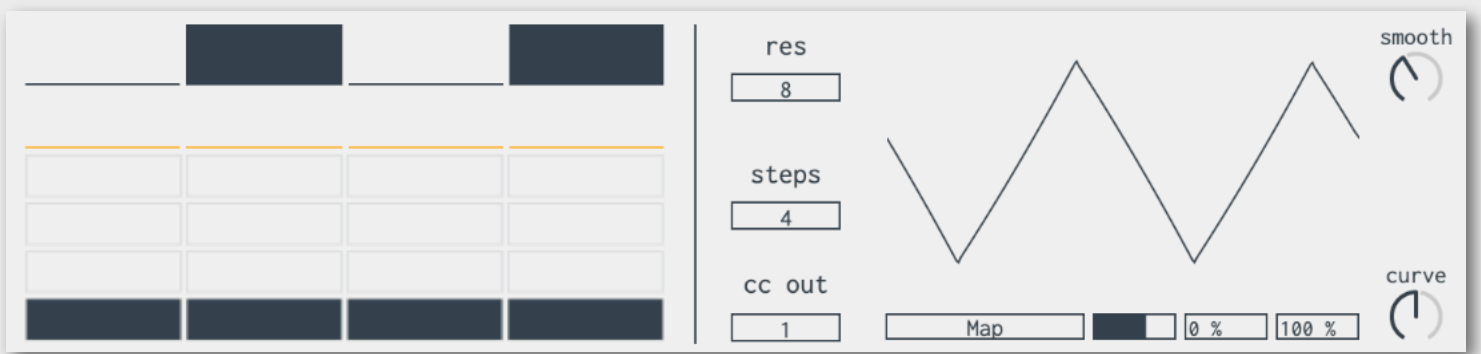
In the above diagram, you're seeing the highest possible values for the **Step Control Grid**. The S&H Sequencer can play rhythms as small as 32nd notes and as large as whole notes (if you then set the **length grid** values to 4, each step can last up to 4 bars). The number of steps per sequence ranges from 1 - 16.

SIGNAL MONITOR



To the right of the device, you'll find a **Signal Monitor** that shows you how your sequence translates into the control signal being sent out.

To the right of the Signal Monitor, you'll find a couple of **Smoothing Controls**, which add a *portamento* effect to the signal, interpolating the values in between, also with potentially a curved delayed response. (see examples below).



In this first example, you get a triangle-like wave with the period of an eighth note. The **smooth** knob makes the signal lag behind, with a delay time up to 1.5 times over the note resolution. In this case, the curve knob is at zero (i.e. the center position – it provides both negative and positive values), so you get a linear interpolation.



In this second example you see the same settings, with the **curve** set to an extreme negative value.

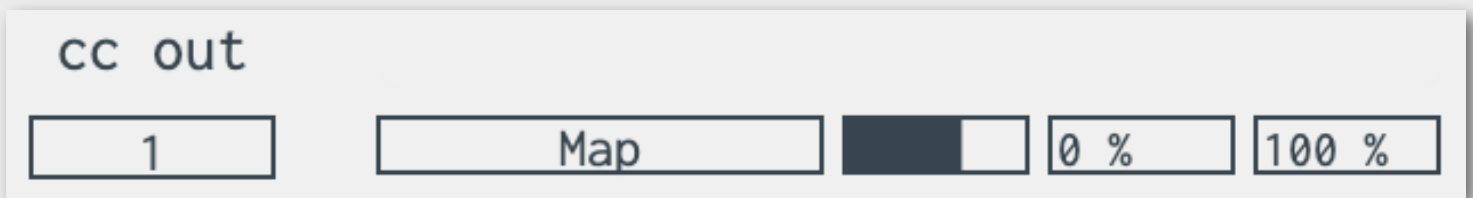


In this third example, the curve is set to an extreme **positive value** (it takes an exponentially longer time for the signal to rise up or fall down)



You can achieve rather smooth transitions with longer values and long notes.

SENDING THE SIGNAL OUT



The output of the S&H Sequencer can be sent out as a MIDI CC signal, or you can map it to a parameter in live.

The **cc out** number box lets you specify the controller number you'd like to use.

To map the signal to any parameter, click on the **Map** button, then click on the parameter in question.

You can also use the **CC Mapper** Max for Live devices provided in the **Modulo** package (CCMS & CCML) if you'd like to control multiple parameters at once (or you can just map the signal to a Macro).

Thanks for your support!

If you have any questions, please send me an email: hello@flaviogaete.info

Enjoy,

A handwritten signature in black ink, appearing to be "Flavio".

Flavio



flaviogaete.info