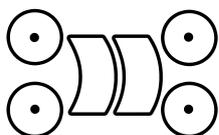


SBAM Manual v1.0

for Windows and Mac

Reference manual by Tomavatars



Tomavatars

Game dev, sound design, music, playful technologies...

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Main information

1.1 Plugin overview

SBAM is a Max for Live instrument made by [Tomavatars](#). It's a adaptation of an original script I made for UVI Falcon years ago. SBAM is a sampler sequencer. You can load your own samples in 4 sampler engines. These sampler engines automatically slices your samples based on the Slicer sequencer slices quantity.

Main features:

- Use the **Players** sequencer to trigger the sample you want at the step you want
- Use the **Slices** sequencer to trigger the slice of the current sample you want at the step you want
- Use 6 other sequencers in parallel to modulate different types of parameters and effects
- Use the 4 **Mod** sequencers to modulate any Ableton device mapped parameter
- Store 8 patterns and recall them from midi
- Different play behaviors and a few options

SBAM comes with a sample library.

You are invited to load your own samples and play with them.

You'll be able to save and load your own presets.

Special Thanks

To all the Unfiltered Audio Underground peeps, thank you all for your support and your kindness! Thanks to Darren at Isotonic, and Chapelier Fou for the feedback.

To my patrons on Patreon: Sam Lundell, François E., Dawesome Music, Dylan Ratner, Naomi and Josh.

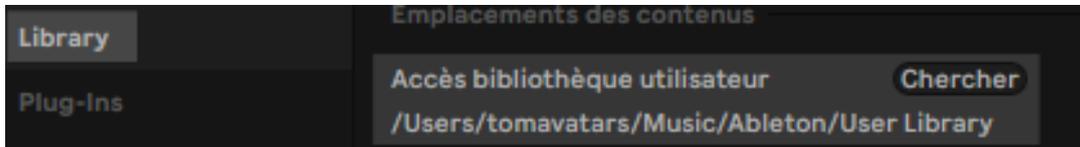
To all my family members and friends that always believed in me. I'll make it one day.

1.2 System Requirements

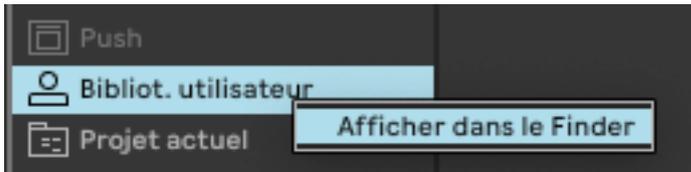
- Live Version: 12 with Max for Live
- Operating System: Windows, Mac

1.3 Installation Instructions

Unzip the ZIP file and copy the plugin amxd file to your User Library folder. There are two ways to find where your User Library is located: Go to Preferences – Library – Location of User Library

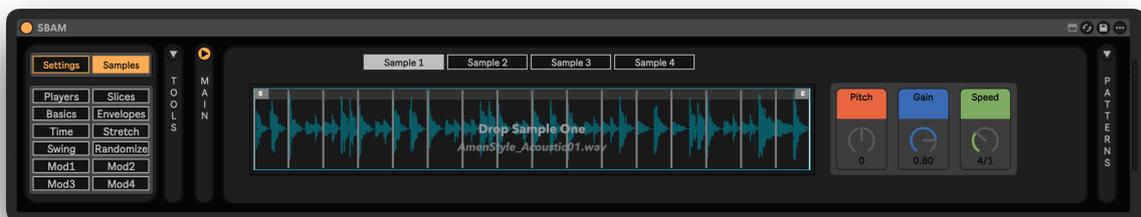


Or [right-click] on the User Library in the Browser – Show in Finder (Explorer)



1.4 Navigation

Here is the SBAM unit

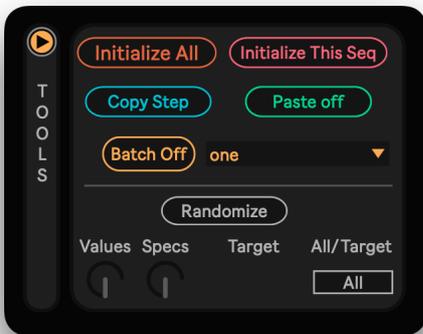


There are 4 sections with 3 that are collapsible:

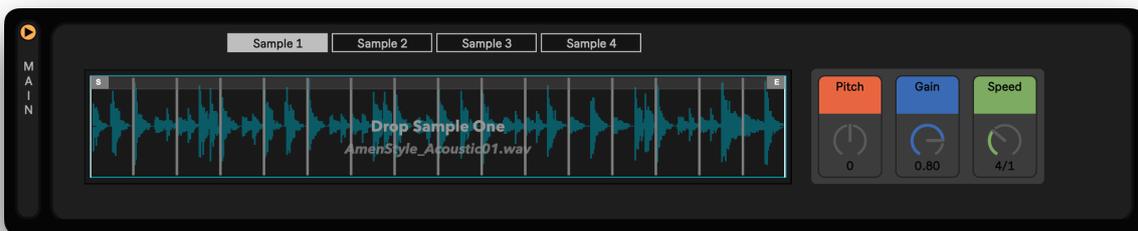
Menu: On the right, a tabbed menu to select which **Main** section to display



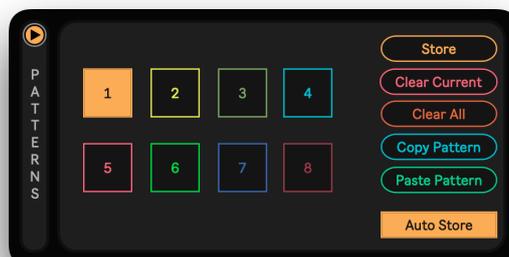
Tools: next to the **Menu**, a collapsible **Tools** section. It will allow you to make a few useful operations on the sequencers.



Main: next to the **Tools**, the collapsible **Main** section. Here, you will find the settings, the sample importer and manipulate all the sequencers. It's the core of the unit.



Patterns: finally, the collapsible section **Patterns**. You'll be able to store and recall up to 8 saved states of all the sequencers.

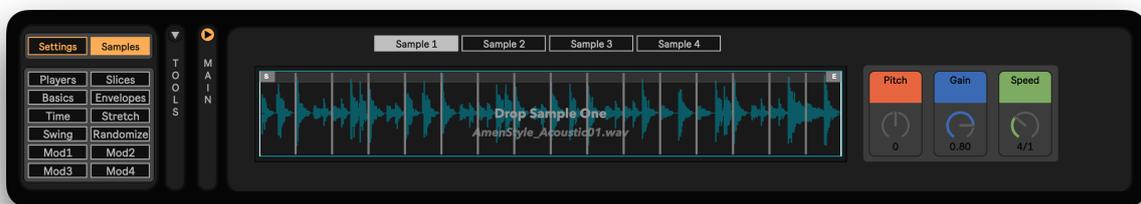


First steps

2.1 Import samples

In order to play some sound with SBAM, you need to import samples. You can switch and play between 4 different samples using the **Players** Sequencer.

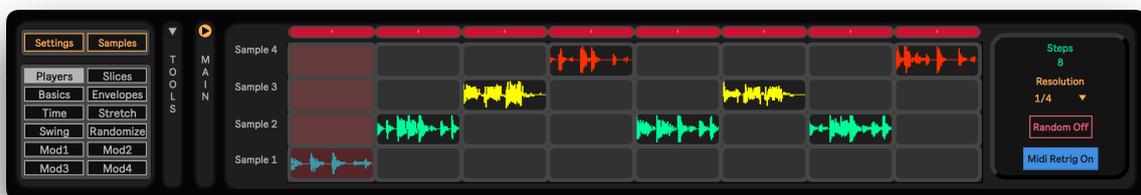
In the **Menu**, select the Samples tab.



The Samples Menu

Select which sample player you want to assign your first sample with the tabbed menu. Then, drag and drop a sample on the « Drop Sample » window. For best result depending on what you do with the samples, it's sometimes best to use loops that are already well cropped. If you wish to set the number of slices, head to the **Slicer** tab and set the number of slices in the sequencer settings.

2.2 Play



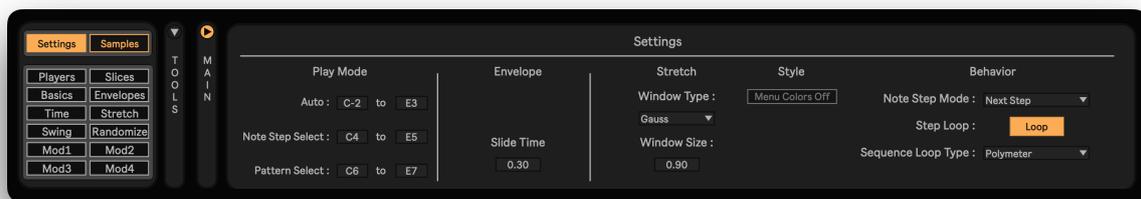
The Players Sequencer

Once you've drop your sample, you can navigate to the Players tab. Here, you will be able to manipulate which sample you want to play on which step.

Just drag your mouse on the steps to select the samples. There are 4 lanes to select the sample. The one on the bottom is sample 1 up to sample 4 on the top.

2.3 Play Modes

In order to understand the different ways to play the sequencers, head to the settings page.



The Settings Page

Here, you have a few options, but what I want you to learn is the Play Modes. SBAM is an instrument that you control with MIDI notes. But SBAM has different types of controls depending on the range of the MIDI notes played.

- Auto: from the C-2 note to E3, all the sequencers will be played normally, following their own resolution and proper rules. Steps will be played sequentially.
- Note Step Select: from C4 to E5, a note will play the corresponding step. C4 will play step one for all sequencers, C#4, step 2, D4, step 3 etc... Sequencers that has lower length than 16 will loop through the steps, like a modulo.
- Pattern Select: from C6 to E7, each note will play like auto but will switch the pattern from the 8 patterns of SBAM.

A last rule, when a midi note stops, SBAM stops playing until a new note is played.

2.4 Sequencer settings



Sequencer Settings

All the sequencers have this section on their right (Players, Slices, Envelope, Time and Stretch has specific controls).

- *Resolution* allows you to control the rate of the sequencer, how fast it will play each steps.
- *Random On* will select random steps instead of incremental while *Random Off* will play the steps incrementally.
- *Midi Retrig On* will retrigger the sequence from the start on each new midi note. *Midi Retrig Off* will never retrigger the sequence on the first step and will continue on it's last step.

2.5 Sequencers length



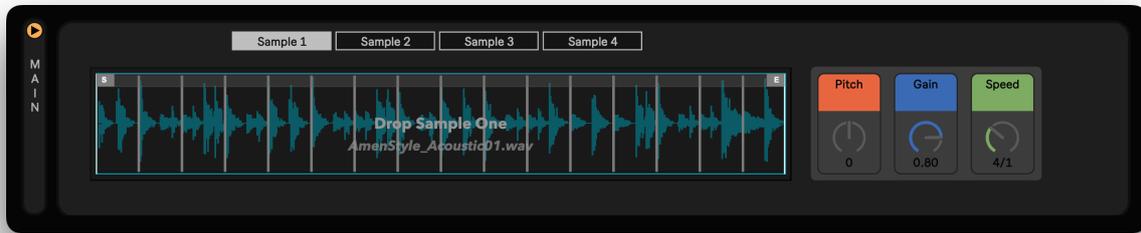
Top bar sets the sequencer length

All the sequencers have a length control, setting the length of the sequencer loop. **Players** and **Slices** have a specific control for the length on their sequencer settings.

All the other sequencers have 16 steps maximum. You can set the length of these sequencers with the top bar, dragging from right to left. Changing the length of the sequence will change their loop behavior.

There is a setting that will change how these loops behave: Sequence Loop Type. Where' you decide if the length of the sequencer will make the sequencer behave in polymeter or polyrhythm.

Samplers



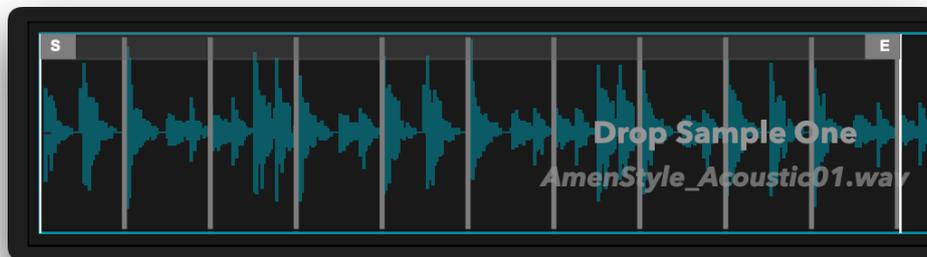
The Samples Page

Here is the samplers page and where you can drag and drop your 4 samples on the 4 samples pages accessible from the tab on the top of the window.

You can set the individual *Pitch*, *Gain* and *Speed* on the samples on with the knobs on the right side.

Speed will auto adjust when you drop the sample. *Speed* sets the length of the sample as well as it's pitch. *Pitch* works with semitones.

There are lines appearing on the sample window. These are determined by the



Adjust Start and End of Sample Loop

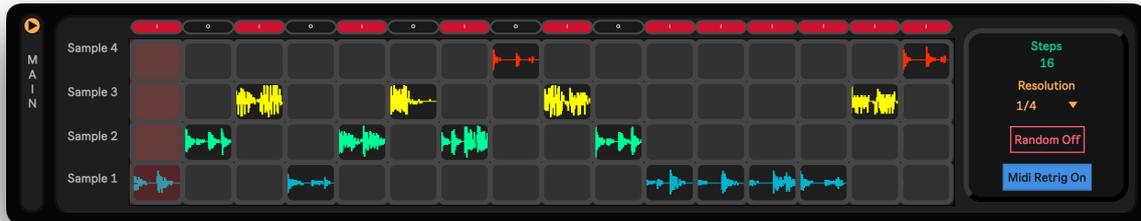
number of slices set in the [Slices](#) pages.

You can also manually adjust the *Start* and the *End* of the sample loop with the brackets *S* and *E* on the top of the sample window.

Sequencers

Now, let's dig through all the sequencers!

3.1 Players



The Players Sequencer

We already seen this one but let's dig a little deeper.

The settings of the **Players** sequencer has one specificity. You can choose the length of the sequencer with the box *steps*, from 2 steps to 32 steps.

Players also has a **Mute** lane on it's top, with red buttons. You can mute the sound of steps when deactivating them.

The Players resolution has some influence on other sequencers, like the **Time** sequencer.

Players are triggers to play the samples, so it'll have also an influence on how slices are played.

3.2 Slices



The Slices Sequencer

The **Slices** sequencer will play the part (slice) of the current sample following a grid. Vertical axis are the slices. Horizontal axis are the steps of the sequencer.

Drag the mouse on the grid to adjust the slices on the steps.

In the **Slices** sequencer settings, like the **Players** sequencer, you can set the number of steps from 2 to 64. You can also set the number of slices from 4, 8, 16, 32 and 64. **This specific setting will change how the samples are sliced, more slices will result in smaller portions of the sample.**

The two boxes on the left of the slicer is a visual guide to know where you are on the grid.

3.3 Basics



The Basics Sequencer

Basics is another type of sequencer and like the following sequencers it has maximum 16 steps. Head to [Sequencers Length](#) to learn more about how to resize these sequencers.

Basics contains 3 lanes. It has *Pitch*, *Pan* and *Velocity* parameters.

- *Pitch* allows you to pitch up or down the current step meaning that the sample will be played slower or faster.
- *Pan* allows you to pan the sound to the left or the right.
- *Velocity* is volume adjustment.

3.4 Envelopes



The Envelopes sequencer

Envelopes is a sequencer to control steps envelope

Envelopes contains 3 lanes. It has *Attack*, *Decay* and *Gate* parameters.

- *Attack* will set the attack of the step, the rising of the volume.
- *Decay* will control the decay of the envelope for the current step, the falling of the volume.
- *Gate* will control the size of the envelope.
- *Transient* is another type of envelope based on tangent shaping. Negative value will lower the attack and enhance the body of the sound. Positive value will lower the decay and enhance the attack. Time of the transient envelope is bind to the resolution of the **Envelope** sequencer.

There's also a specific setting for this sequencer: *Resolution/Slice Size*. When Resolution is on, the envelope size of a slice will depend on the resolution of the Slice sequence. In Slice Size, the envelope size will depend on the slice size (e.g. if there are 64 slices, then the envelope will only play 1/64 of the sample).

3.5 Time



The Time Sequencer

Time is a sequencer to control steps ratchet and inversion of the sound.

Time contains 4 lanes.

- *Ratchet* will set how many times the step will repeat itself. It is bind to the Player resolution.
- *Type* determines the type of the *Ratchet*. Here's a list and explanation:
 1. Straight repetition
 2. Pitch up from -12 semitones to 0
 3. Pitch down from 0 to -12 semitones
 4. Pitch up from 0 to +12 semitones
 5. Pitch down from +12 to 0 semitones
 6. Amplitude up from 0 to 1
 7. Amplitude down from 1 to 0
 8. Speeds the ratchet up
 9. Slower the ratchet down
- *Mod Speed* will determine how speed the pitch ratchets with play and loop. It'll also have an influence on the shape of speed up and slower down.
- *Reverse* will reverse the sound.

The **Time** sequencer has a special setting: *Freeze Off/Freeze On*. In *Freeze Off* the ratchet speed will be relative to the fastest sequencer between Players and Slices. In *Freeze On*, the speed of the ratchet will be relative to the Time speed (resolution) and will play even if Slices or Players are faster and changing their steps -> ratchet freeze.

3.6 Stretch



The Stretch Sequencer

Stretch is a sequencer to control steps time stretch and whole device time division.

Stretch contains 3 lanes.

- *Ratio* will set the speed of the stretch. It's a bipolar knob, negative values will time compress (speed up the sound), positive values will time stretch (speed down).

- *Window* will set the speed of the algorithm. Low values will play few windows, high value will play a lot of windows.
- *Time Div* will divide the time of all the device sequencers allowing for freezing some steps etc...

Stretch settings has two settings for managing the stretch windows:

- *Type* will determine which kind of window is used, between Gauss and Trapezoid.
- *Size* is the size of the window. Small values will make the stretch feel more thin.

3.7 Swing



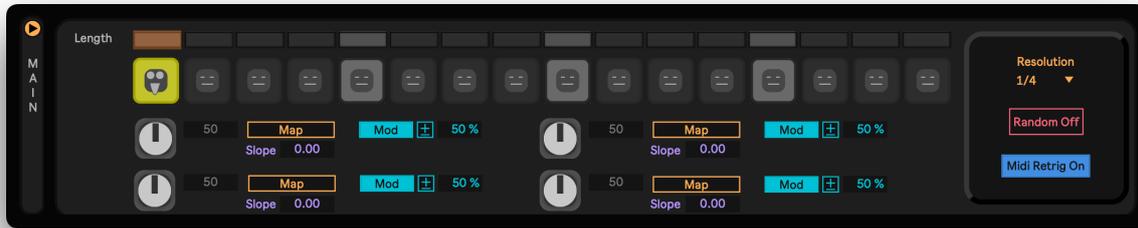
The Swing Sequencer

Swing is a sequencer to control the timing of the whole unit

Swing contains 3 lanes.

- *Swing* will add some offset to the steps of all the sequencers. Negative values adds negative offset, positive value adds some positive offset.
- *Shaper* is speeding up or down the play rate of all the sequencers in an exponential fashion.
- *Morph* will morph between different shapes for the *Shaper*.

3.8 Mods (1, 2, 3 & 4)

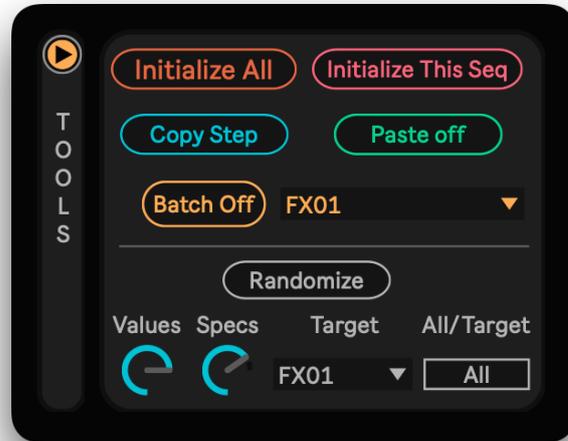


The Mod Sequencers

Mods are 4 sequencers to control Ableton other devices parameters. There are 4 Mod sequencers with 4 parameters to map each. They behave like the other sequencers with some specific editing behavior.

- The *Map* button will allow you to select a control from another unit in your Ableton session, might be on the same track of another track. This is the core of these sequencers.
- When you map a control, the knob corresponding to this map will set the value of this control when reaching the corresponding step.
- Clicking on a step (the lane with the funny faces) will select this step state for all 4 mappings. You'll be able to change the values of the 4 knobs for this specific step.
- There are two modulation modes : *Mod* and *Remote*.
 - *Mod* will modulate the existing value of the mapped control. You can set it to unipolar or bipolar. The depth control on the right will set the power of the modulation.
 - *Remote* will modulate from the range you set on the two controls on the right: min and max value. It is not a relative modulation but a strict modulation.
- *Slope* is a parameter that will not have a specific value for each step but for the parameter. It will set the curve of the modulation when steps are changing. A value of 0 will make instant jumps. A value of 1 will take to whole step (bind to resolution) to for from previous value to current value.

Tools



The Tools

The **Tools** section can help you speed your workflow. There are a few options that will be covered here.

4.1 Initialise

- *Initialize All* will initialise all the sequencers values
- *Initialize This Seq* will just initialize the currently opened sequencer.

4.2 Copy/Paste step

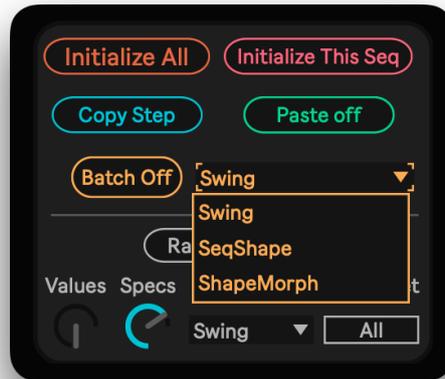
Clicking *Copy Step* will copy the latest control that you used. The *Paste On* button will automatically be lit and you will just need to click on other controls of the same parameter lane to paste the value. You will need to click on the *Paste On* button to clear the copy cache.

For the **Mod** sequencers, it'll work the same except that it will paste the value of the 4 parameters when clicking on another step.

4.3 Batch

Batch is super useful for quick editing all the controls of a specific sequencer lane.

To use it, click on the *Batch* button. Depending on the sequencer you're currently using, you'll have a set of options in the dropdown menu below the button, to select the target of the batch editor.



Enabling batch and selecting target

When your target is selected, you'll be able to drag on the batch window to set the values of all the controls.



The Batch Tool

Randomize

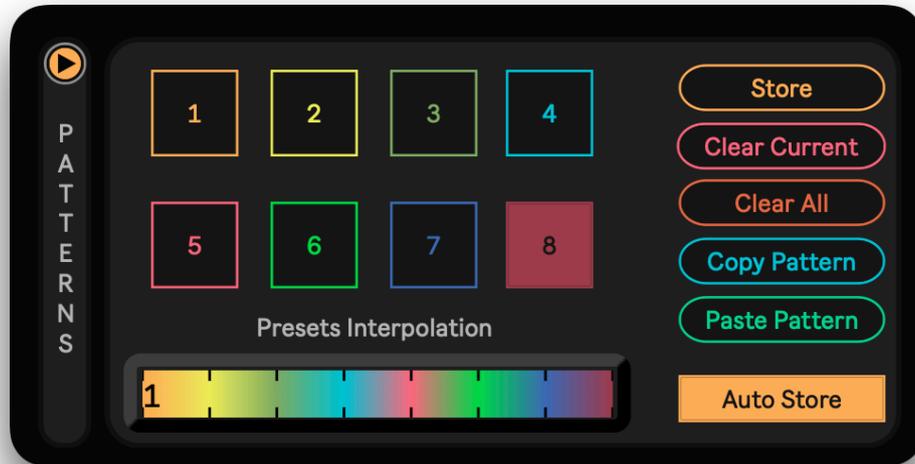
Randomize will randomize the parameters of the actual .sequencer Value knob is controlling the parameters of the sequencer.

Specs is controlling the settings of the sequencer..

The buttons *All/Selected* sets which parameters the randomization will target. *All* will target all the parameters of the current sequencer. *Selected* will control the parameter selected in the dropdown menu.

Patterns

The **Pattern** section allows you to store states of the sequencers. It will not save the state of the settings nor the samples.



The Pattern Section

There are 8 patterns. Click on on pattern numbered button to select and recall a pattern.

The buttons on the sides are utilities.

- **Store** is a manual way to store the current pattern
- **Clear Current** will clear the current pattern and initialize all the sequencers
- **Clear All** will clear all the patterns and initialize all the sequencers
- **Copy Pattern** will copy the current pattern
- **Paste Pattern** will paste the copied pattern on the current selected pattern
- **Auto Store** will auto save the current pattern when selecting another pattern

Don't forget that you can play the patterns with MIDI notes from C6 to E7.

Presets Interpolation

The **Presets Interpolation** slider will interpolate all the sequencers values and settings through all the presets. It can be heavy on ressources. Using the slider will automatically disable the **Auto Store** function in order to avoid overwriting.

Randomizer



The Randomizer is accessible from the left menu

The **Randomiser** will allow you to randomize every parameters of the different sequencers.

The top knobs are controlling the parameters of the sequencers.

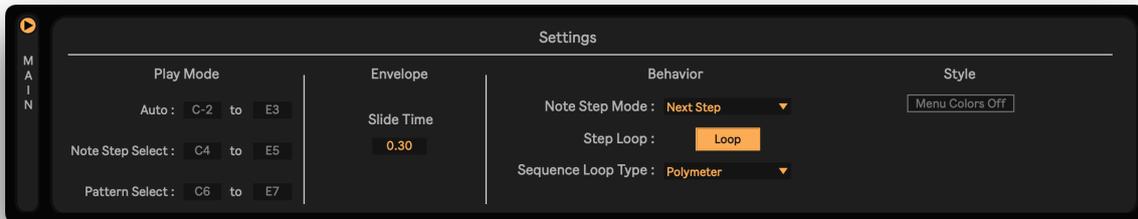
The bottom knobs (Specs) are controlling the settings of the sequencers (Resolution, Random, Midi Retrig etc...)

The buttons *All/Selected* sets which parameters the randomization will target. *All* will target all the parameters of the concerned sequencer. *Selected* will control the parameter selected in the dropdown menu below.

Press on the dice to randomize.

Settings

The **Settings** window will allow you to set a few parameters.



Settings page

The section on the left is just a reminder of the play modes with MIDI.

Envelope

Slide Time is a settings to reduce clicks when switching slice or sample.

Behavior

In the behavior section, there are a few useful settings.

- *Note Step Mode*: when playing in Note Step Mode, set if the steps are looping or playing the step after if the note is longer that the step length (resolution).
- *Step Loop*: it might be useful for something but I can't remember what...
- *Sequence Loop Type* : Where' you decide if the length of the sequencer will make the sequencer behave in *Polymer* or *Polyrhythm*. In *Polymer*, the steps will play on beat but will shift. In *Polyrhythm*, the steps will be stretched according to their length and resolution.

Style

An option to add colors to the left menu.

A final word

SBAM is an instrument designed with fun and experimentation in mind. The original one was a Falcon script with a kind of video game coded in it ^^ It's an instrument made for experimenting stuff, and it's not perfect. Just try it, and make your original samples sounds like nothing else.

Thank you so much for purchasing SBAM!

