LaunchEon

Version 1.0.0

Operation Manual

ENLIGHTENSPEED

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Introduction

Hello and welcome to LaunchEon by Enlightenspeed.

LaunchEon is the CV powerhouse morphing and scenes Rack Extension device that every Reason rack user needs to have. It was designed to add an exceptional amount of power to any Reason setup with minimal amount of work from the user perspective, and although there certainly is a learning curve, once you have picked up the basics you will be able to build complex new instruments and effects setups and get excellent and inspiring new sonic results.

LaunchEon is built on two fundamental concepts: scenes and morphing. These are entirely separate but completely linkable, allowing for several different workflows and capabilities. Scenes allow you to change a lot of things in one click, and morphing allows you to change a lot of things with one dragging gesture. These are simple enough concepts to grasp in essence, but LaunchEon allows you to make these changes for up to 40 different connected values via CV. Some of you may be new to CV and thus we have included some "CV basics" tutorials along with more advanced tutorials to help you get to grips with instrument building.

Why morphing?

Historically, morphing isn't new, with the idea first coming to real fruition back in 2006 when Native Instruments released the Kore hardware and software platform. Kore would be recognisable to Reason users as in practically all respects it bore a striking resemblance to Reason's Combinator which had preceded it by about 18 months, but it added the capability of morphing via a tiny little GUI window. NI discontinued Kore in 2011 citing technical difficulties, and all who were using it mourned, and no-one else has really done anything that quite compared to it since, although some simpler implementations are available in various formats, most notably Camel Audio's Alchemy synth which has a single synth version.

When designing LaunchEon, we decided that we wanted a resurrection of the Kore power in a virtual instrument controller, but that it had to be "Reason flavoured". We initially released a "scenes only" alpha of the first set of concepts to our testing team in 2020. This allowed us to see the strengths and weaknesses of a couple of different ideas we had kicking around but also to really stretch the RE SDK to it's limit. At that stage we realised that there were several very difficult technical challenges in building what was intended, and a long gestation period began. Since then, we have delivered MeloDramatik, Inspiral, Note Latch and the "first draft" of Agnostik, all the while with LaunchEon cooking away quietly on the back burner. All in all, development of LaunchEon has taken about four and a half years from the point when the initial ideas were written down on paper; we are glad that we took our time with this… extremely glad, and we are immensely proud of the result.

LaunchEon is designed to work in tandem with the Combinator, and the new Combinator 2 adds a lot of features that really empowered LaunchEon to be the starting point for focused “super instruments” that go way beyond what even the new Combinator can achieve. Most of this is because of the scenes concept.

Scenes are sets of each output port value stored in LaunchEon’s memory. LaunchEon has 64 scenes which you can then change between with as little as one mouse click, and this will change up to 40 output port values – so one mouse click can mean 40 simultaneous changes, and you have 64 different stored options available for the click. For perspective, note that even the mighty Kore only had 8 storage sets, and only 8 controllable outputs.

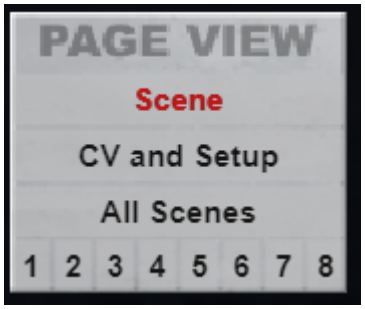
The other crucial element involved is LaunchEon’s randomise capabilities, which allow you to effectively generate 64 new “patches” with a single click. Finding new sounds is as simple as clicking and listening, then picking out the ones you like and locking them.

Control Reference

On/Off

Enables or disables the entire device. Note that when switching the device on and off you are changing between the active scene settings and a 0 value, so this can trigger a lot of changes.

Page View



Changes the viewing states to the following:

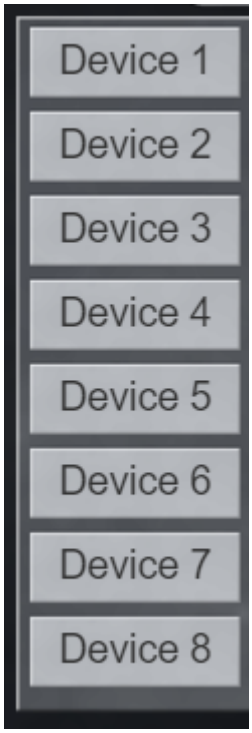
Scene – Shows/edits the current active patterns

CV and Setup – Shows the CV morphing panel, CV values controllers, and preferences.

All Scenes – Shows all scene switching radio buttons

1 – 8 – Each of these pages shows the Enable controls for 8 of the 64 scenes.

Rear Panel Ports & Front/Rear Labelling



The front panel labelling has been designed to work in the same way as RS classic tape strip labels. Changes will reflect on the rear panel tape strip labels for the Pattern ports, and within the CV and Setup page in the preferences section.

The rear panel has the tape strip labels for all ports, there are 32 CV morph ports and 8 Pattern ports.

Pattern Radio Buttons

The Pattern radio buttons in the Scene page run from Off to 8, matching the most common configuration for pattern-based players. For more details on setup of Pattern ports, see the Tutorials section of the manual.

Scene Up/Down

The Scene arrow controllers simply change the scene by +1 or -1. When a control is the highest or lowest number it will loop round – so if the control is at 0 and you press to go down by one it will move to 64.

Micro Controllers

The Micro Controller areas have four sections which are tied to the relevant scene number.

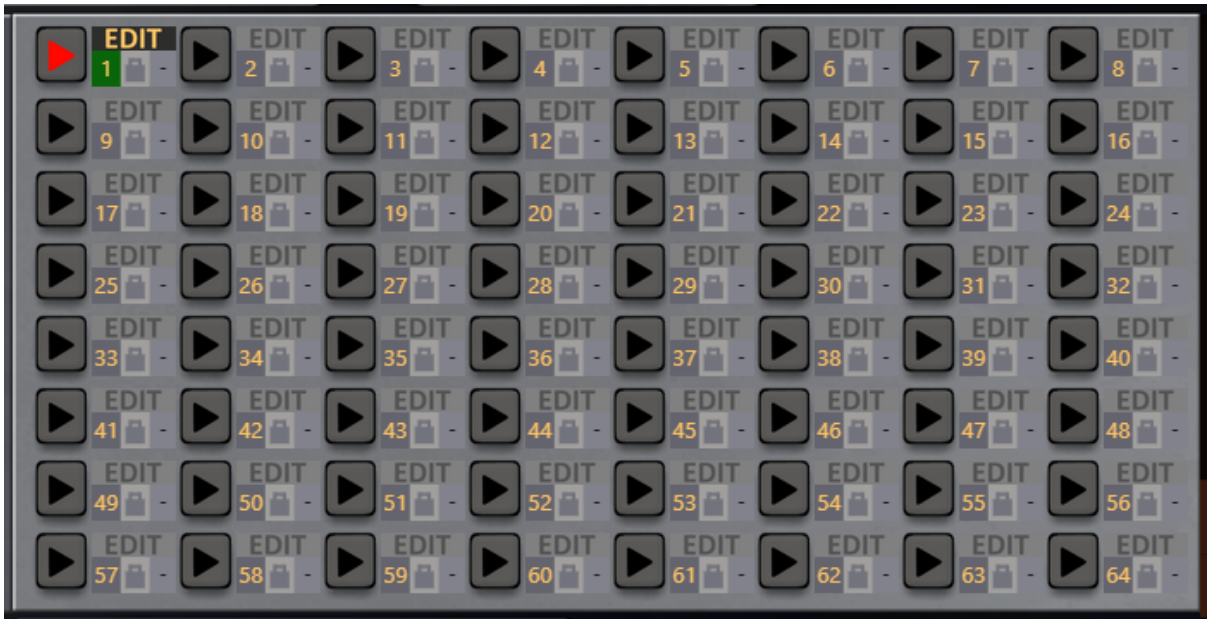
Edit Selector – This determines which scene is being edited when using the functions within the operations panel. This can also be done from the Operations Panel itself.

Scene Display – Shows which Scene is currently playing by illuminating green and will also change the scene and edit selection if clicked upon. This behaviour can be changed by the preferences settings – for more details on this, see the Tutorials section.

Locking – Locks the scene to prevent the randomizer functions changing the details.

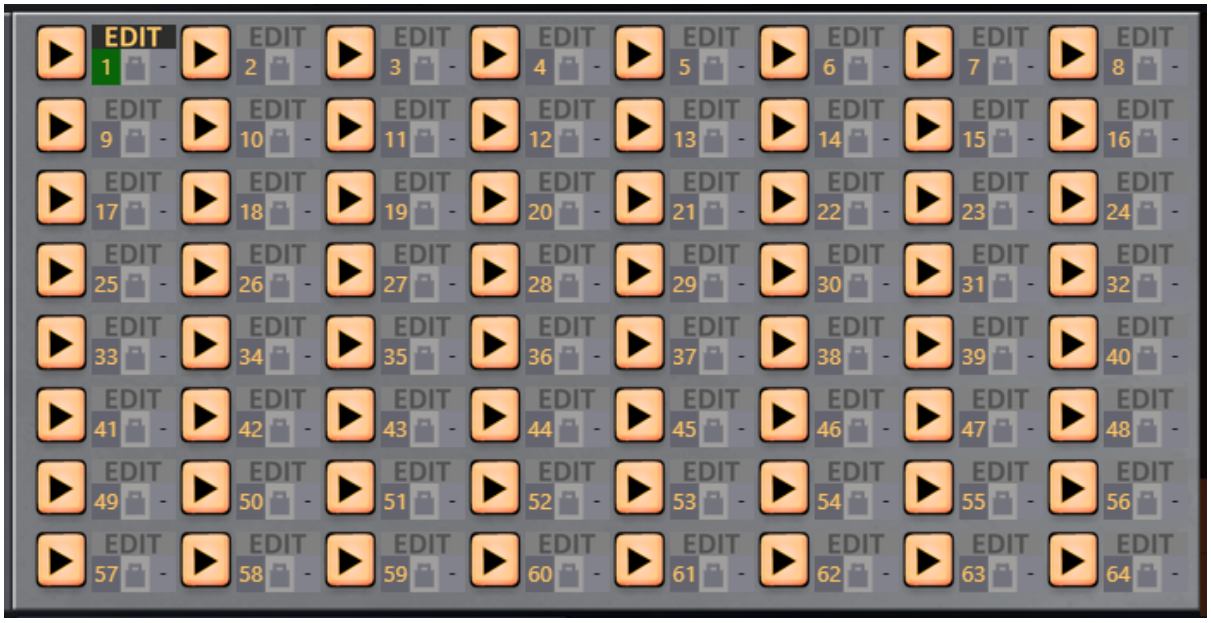
User Number – A usability feature where the user can add their own numbering to a scene. Becomes increasingly important when in the later stages of developing instruments and patches.

All Scenes Radio Button



All 64 of these controls set the scene to the corresponding button number.

Enables - pages layout explanation and functionality



The Enables pages (1-8 on the Page View) each have 8 different scenes related to them. Page 1 is scenes 1-8, Page 2 is scenes 9-16, and so on until Page 8 which is scenes 57-64.

The Enables buttons are then organized in the same rows as the Pattern buttons and with the same labelling. Each button is effectively a mute for the Pattern when the relevant scene is engaged.

Switch Timers

Each timer sets the interval until a change is made from LaunchEon's output ports. LaunchEon controls the flow as a sender, removing any requirement for standardization of receiving devices.

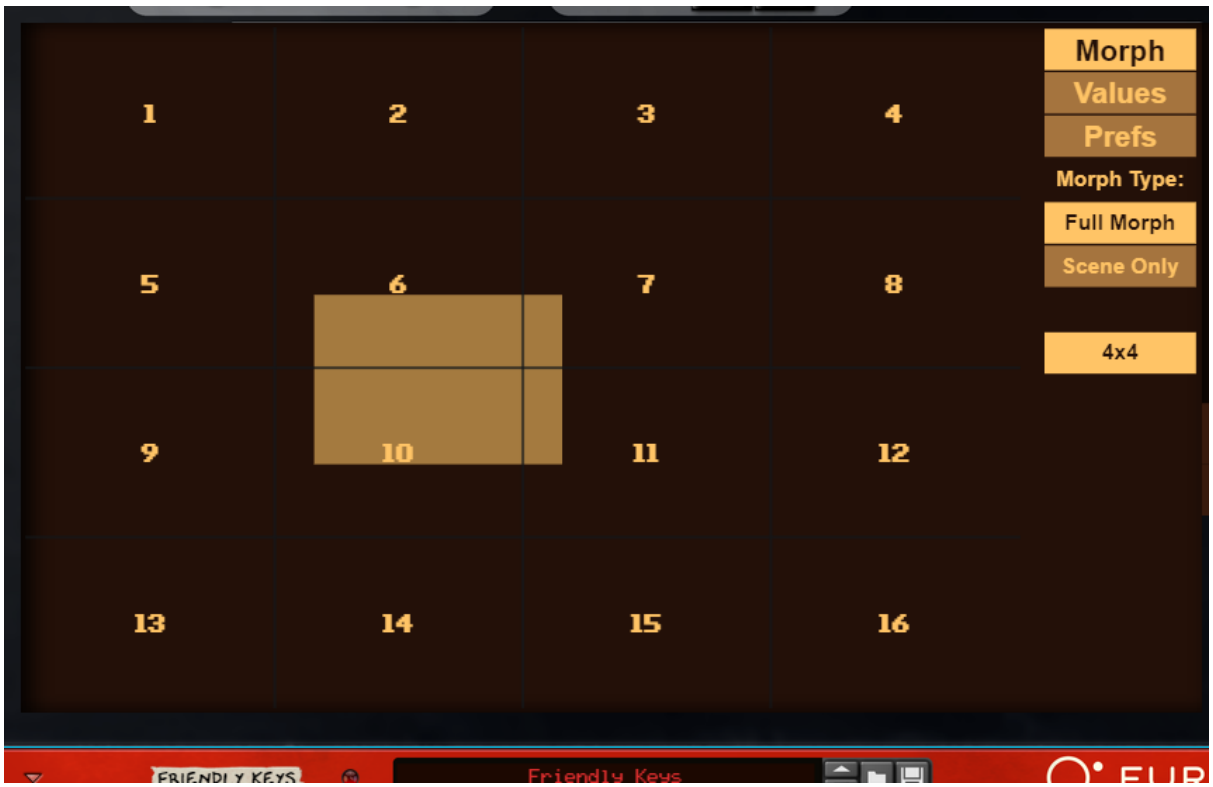
The timers work on "last gesture" priority, so the most recent user change will overrule anything prior.

The delay can be off entirely, or set to: ¼, ½, 1/1, 2/1, or 4/1 bars.

As can probably be deduced, **Master** controls the timing of all scene changes, **Scenes** will affect single device Scene changes, **Enables** affect single device enable changes, and **Scene CV** affects timing of event CV. **Note that none of the controls will affect morphing CV timing, which is immediate.**

The Morphing Panel

The Morphing Panel – Full Morph



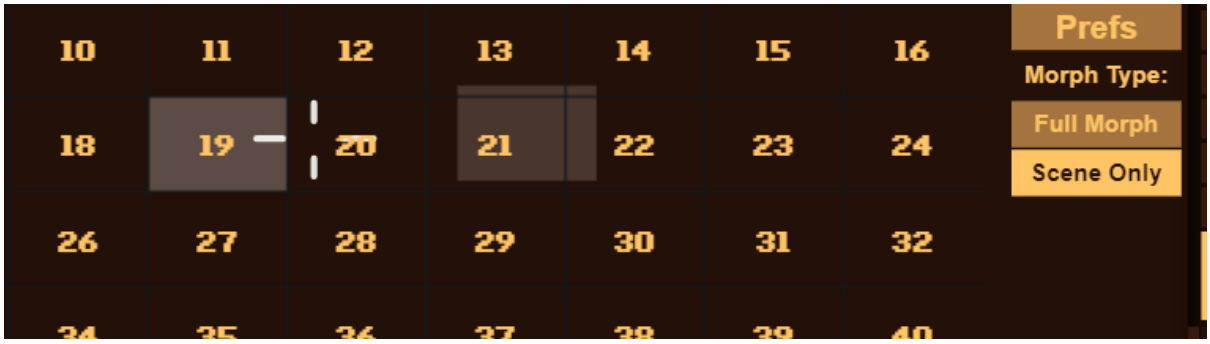
The morphing panel is simply a big draggable grid, where each square in the grid represents the stored values that will be sent to the output ports if that square is fully in focus. In the above picture, the morphing square is partially inside 4 different squares, and so each of these influences the output numbers proportionately.

Ctrl-Clicking within the bounds of any square will set the display and values to the selected square.

The Morphing Panel – Grid Size

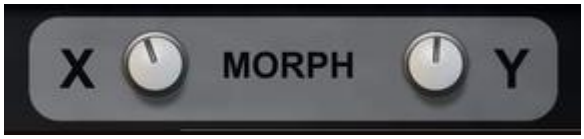
The sizing of the grid comes in three flavours: 2x2, 4x4 and 8x8. Each has its own advantages in terms of manageability. See the Tutorials section for more info on the best settings for different instrument types.

The Morphing Panel – Scene Only



The Scene Only morphing is a unique feature that moves directly between scenes without visiting all the other scenes in between. This has many applications but is arguably at its best when used as a control for morphing larger mixes or drum buses. See the Tutorials section for more info on the best settings for different instrument types.

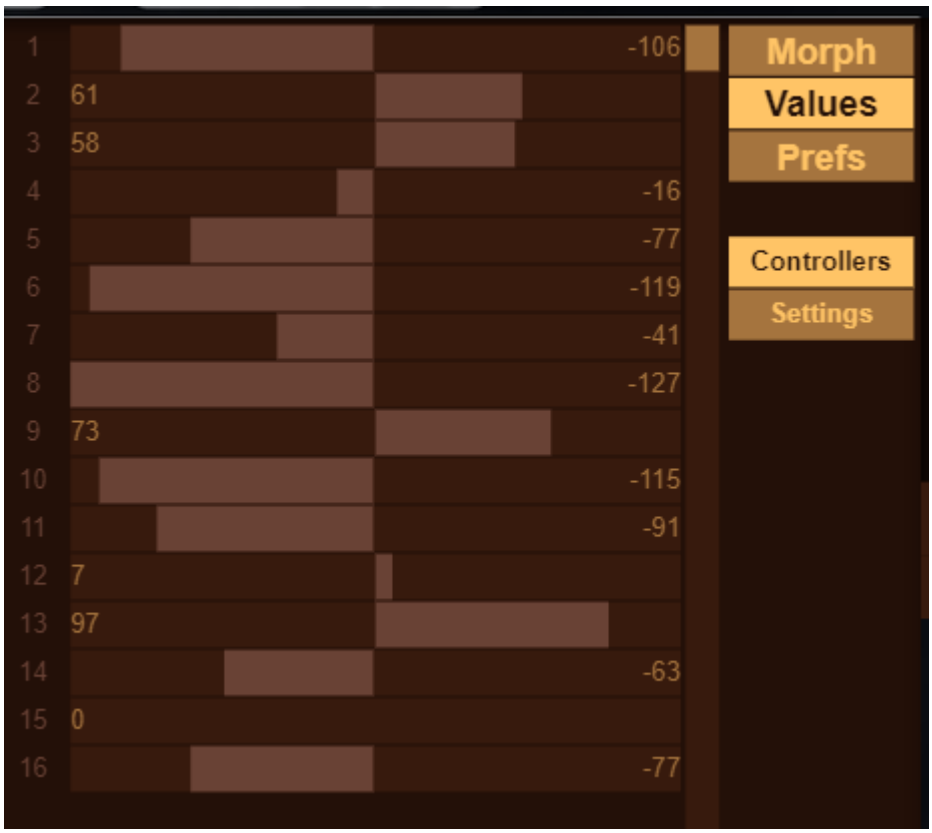
Morph X/Morph Y



The simplest versions of the Morph controls, the X and Y dials, allow you to perform linear X or Y gestures effortlessly. Having these available as Remoteables that can be targeted via a Combinator adds an extra level of depth, as self-modulating setups are easily achieved. See the Tutorials section for more info building advanced CV powered instruments.

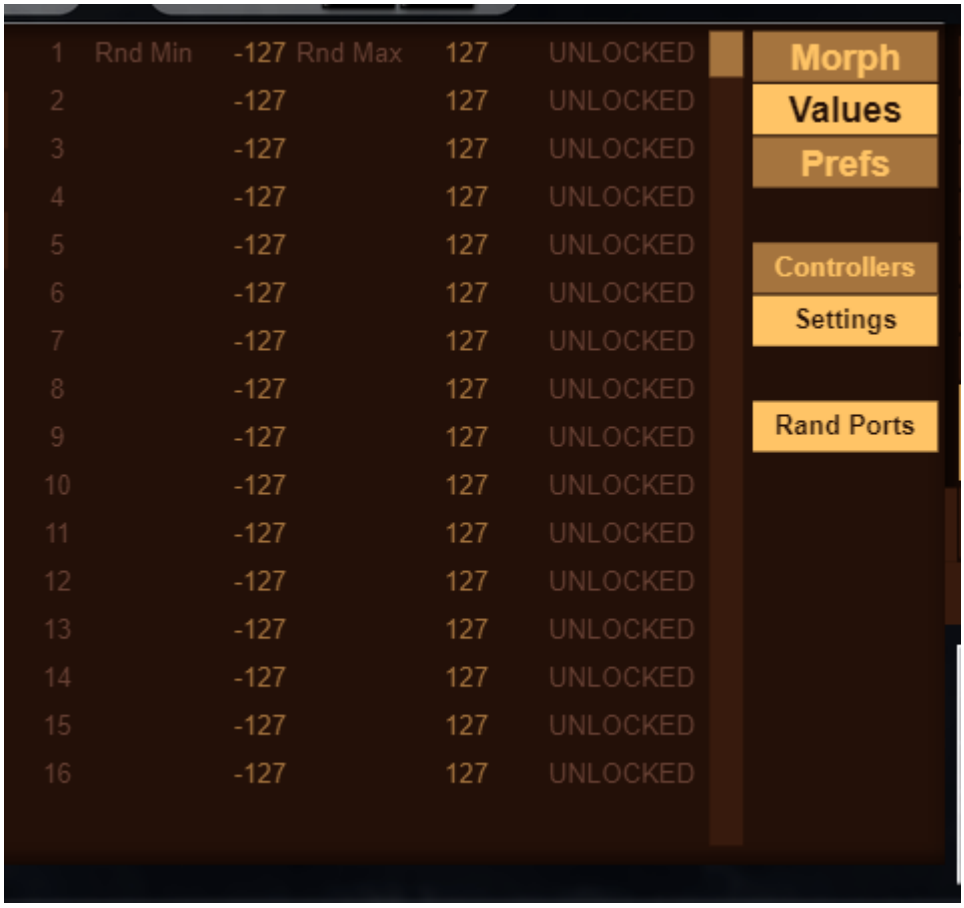
The Values Panel

The Values Panel – Controllers



The Controllers panel includes a scrolled set of tappable and draggable bars for setting the individual values of output ports in a scene. The range of each bar is from -127 to 127. If the relevant scene (or some proportion of it) is active when changing the value, then this will affect the output in realtime.

The Values Panel – Settings

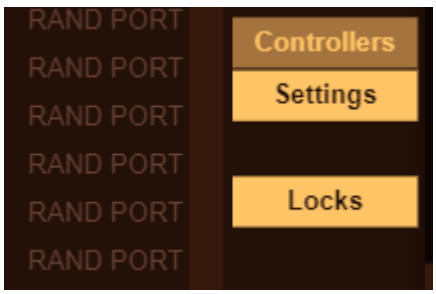


The values panel settings allow you to control the ranges in which scene values may be randomized.

The Values Panel – Locks

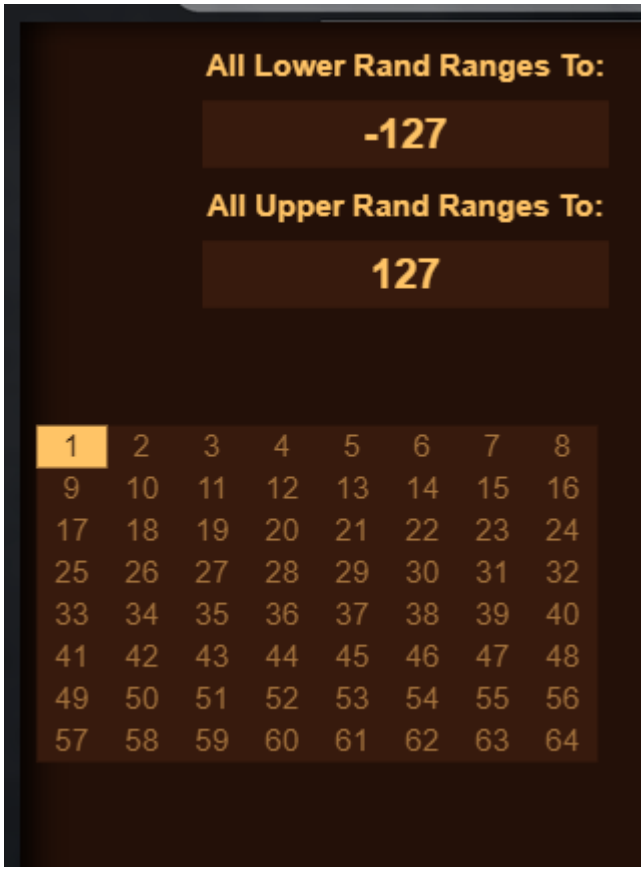
There is also a locking feature here which will stop changes to the Global Randomizer Range affecting it, as well as locking the port for all scenes to stop the randomiser functions causing accidental changes. See the Tutorials section for more info on taking care with your sounds, if using resonance or feedback.

The Values Panel – Rand Ports



The Rand Ports mode gives the ability to randomise any port which is not locked in all scenes, assuming that the relevant scenes are not locked.

The Values Panel – Global Randomizer Ranges

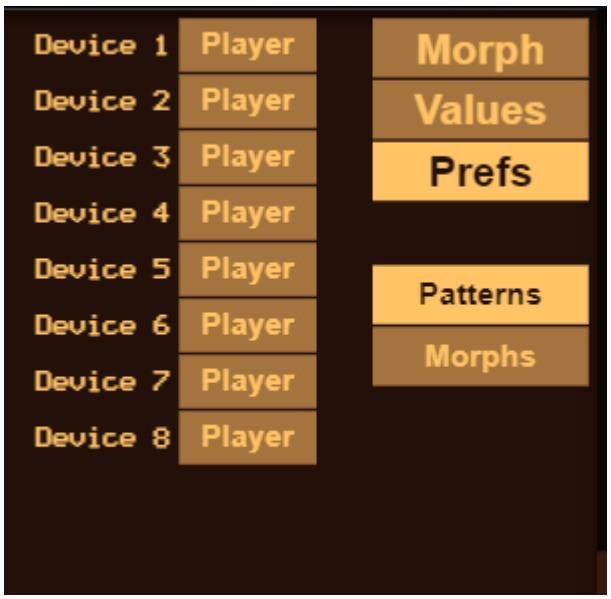


The Global Randomizer range will change the ranges for all randomizers, unless the individual lock is active.

Below this we have the scene selection area, which runs independently of the Master Scene selection.

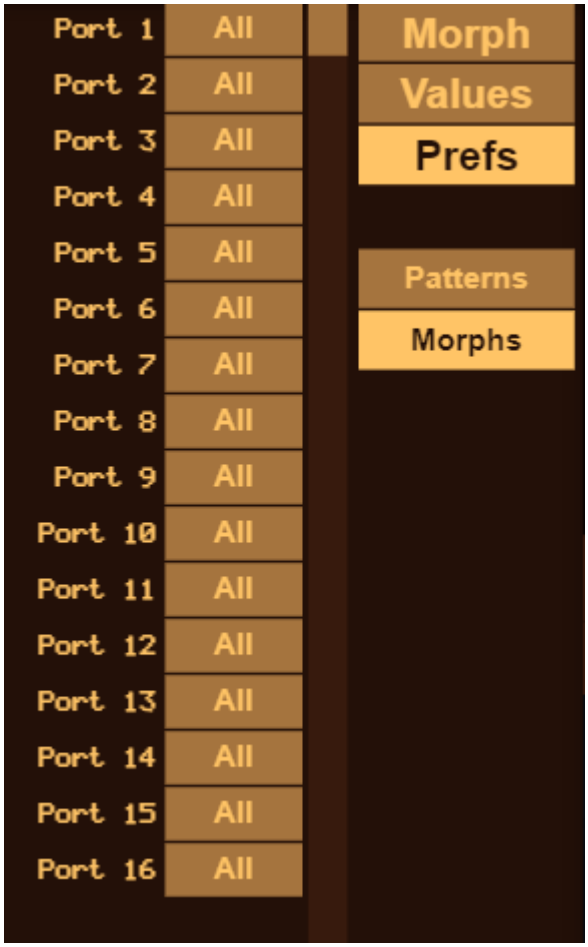
The Prefs Panel

The Prefs Panel – Patterns



Patterns can be in 2 main variants; the “Player” version is the simple (Off) 0 – 8 that is the de facto standard for pattern Player devices. The other variant is “Classic” which is compatible with the higher resolution of the older devices such as Redrum and Matrix.

The Prefs Panel – Morphs



Each CV morphing port has 3 possible modes –

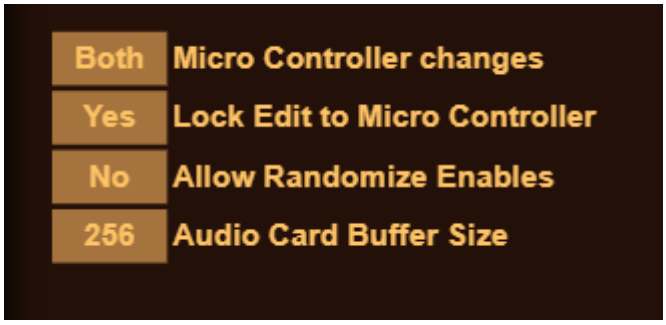
All – The port will react to all changes.

Scene – The port will react to Scene changes but not Morph changes

Morph – the port will react to Morph changes, but not Scene changes.

See the Tutorials section for more info on advanced workflows.

The Prefs Panel – Miscellaneous Prefs including the advanced Micro Controller settings



The Miscellaneous Preferences hold some important options.

Micro Controller Changes – If this is set to Both, then clicking on the Micro controller will change the scene and change what is displayed on the relevant button panel. If it is set to Scene, then it will change the scene but not the display. If it is set to Display, it will change the displayed scene but not the active scene. When in either of the split modes (i.e., not Both), the displayed scene is illuminated in red.

Lock Edit to Micro Controller – When this is active the edit focus will move with changes to the Micro Controller, however, the EDIT button will not change the Micro Controller status at any point.

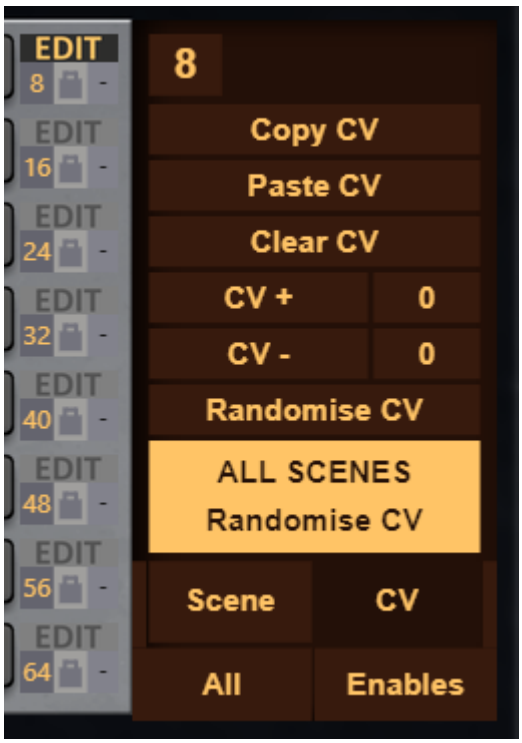
Allow Randomize Enables – This is included for sanity within the early processes of building, because enables will constantly have you running back and forth to get sound back when enables become inactive. Enables randomizing is a great feature later on, once you are actively working on a track or a remix, but not when setting up and exploring. The default is that it is switched off.

Audio Card Buffer Size – In order to get the best results from LaunchEon's "master" position over the "slave" pattern switching devices, we need to set this to the same as the Audio card buffer setting, or the next one higher if that value isn't available.

During testing of LaunchEon we were able to confirm working support for all buffer sizes up to and including 1024 samples.

The Operations Panel

The Operations Panel – Tabs and the Micro Controller Edit button



The tabs at the bottom of the operations panel determine which variables are being edited. As well as “All”, you can also perform operations on the Scene Patterns, the Enables, and the CV in isolation from the others.

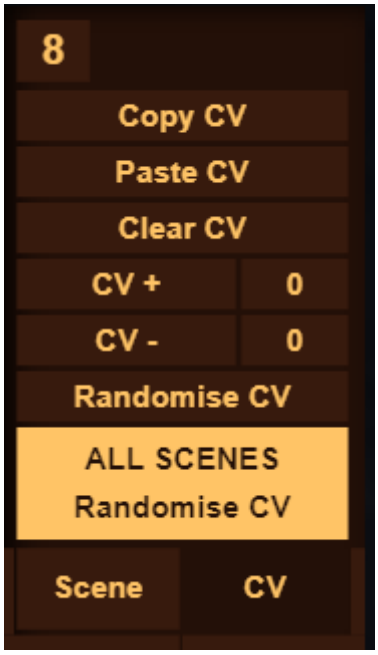
The display showing the scene number is editable.

The Operations Panel – Scene

Each aspect has basic functions such as Copy, Paste and Clear and Randomise.

The Scene tab also allows you to increment or decrement all patterns by one, and the larger button allows you to Randomise the patterns for all scenes.

The Operations Panel – CV

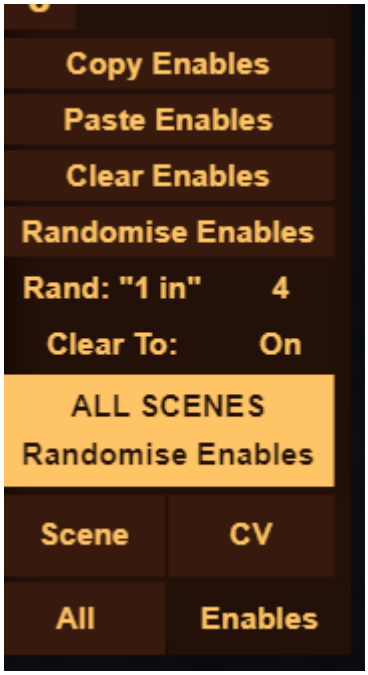


The CV tab allows you to set specific amounts that you can increment and decrement values by, as well as the basic operations and the All Scenes Randomise.

The Operations Panel – All

The All tab just has the basic operations and the Randomise Everything! button.

The Operations Panel – Enables



The Enables tab allows you to set a parameter for how Enables will randomize, where the algorithm will ensure that on average 1 in every 'x' is switched off. There is also a Clear To preference to decide whether clear switches all Enables on or off, as well as the basic operations and the All Scenes Randomise. These two features are also available in the All tab for now but will eventually be removed to make way for more features.

Any questions? As in, reasonable ones not answered by this document?

We might not answer at all, if you send us a line to enlightenspeed@gmail.com

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