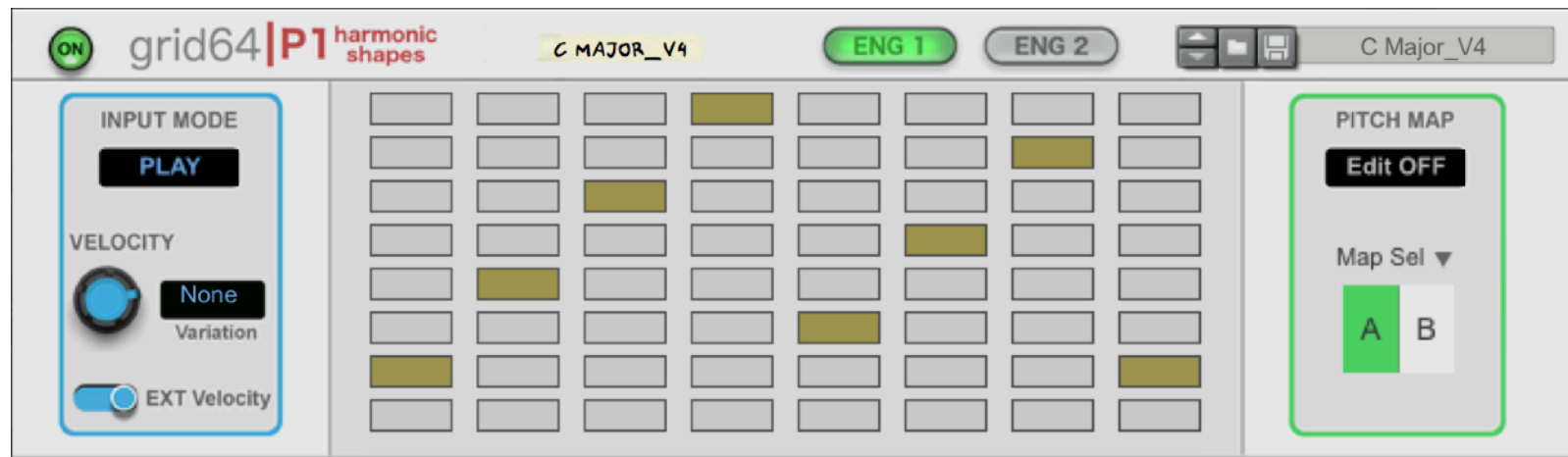


# Grid64 Player

Model P1: Harmonic Shapes

Rack Extension for Reason



## USER MANUAL

version 1.0.0

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# 1. Introduction

The grid64 Player series of rack extensions takes inspiration from the tools developed over the years by the user community of grid MIDI controllers, and wants to bring some of those workflows to the Reason environment.

The model P1 is the next player in the series and its focus is on harmony. Like for the previous model P0, the pads on rows 2 through 8 can be programmed to create a variety of note layouts. But unlike the model P0, the pads on the bottom row are able to store 8 different chord shapes. These chord shapes can then be used to play different types of chords based on the Engine type selected:

- with Engine 1 selected, the bottom pads simply trigger the chords as they were stored in their respective slots, but more than one slot can be triggered at once to create more complex chords
- with Engine 2 selected, the bottom pads select a chord shape, then when any other pad is pressed, a chord is triggered using that chord shape. More than one pad can be pressed at the same time to play more complex chords.

The advantage of a grid layout compared to a traditional piano keyboard is that the shape of chords remains unchanged when transposing the notes to other musical keys. In addition, the model P1 offers several ways to modify the note layout thus expanding the possibilities for harmonic experimentation.

The device was made to be used with a controller with an 8x8 pad layout. The models supported are the Novation Launchpads, NI Maschine Jam, Ableton Push and the Akai APC Mini. For those, you can download custom Remote files which enable two-way communication with Reason\*.

If you don't have a grid controller, you can still use a midi keyboard to trigger the grid64 Player.

\* Reason standalone mode only, the Reason Rack plugin does not support Remote.

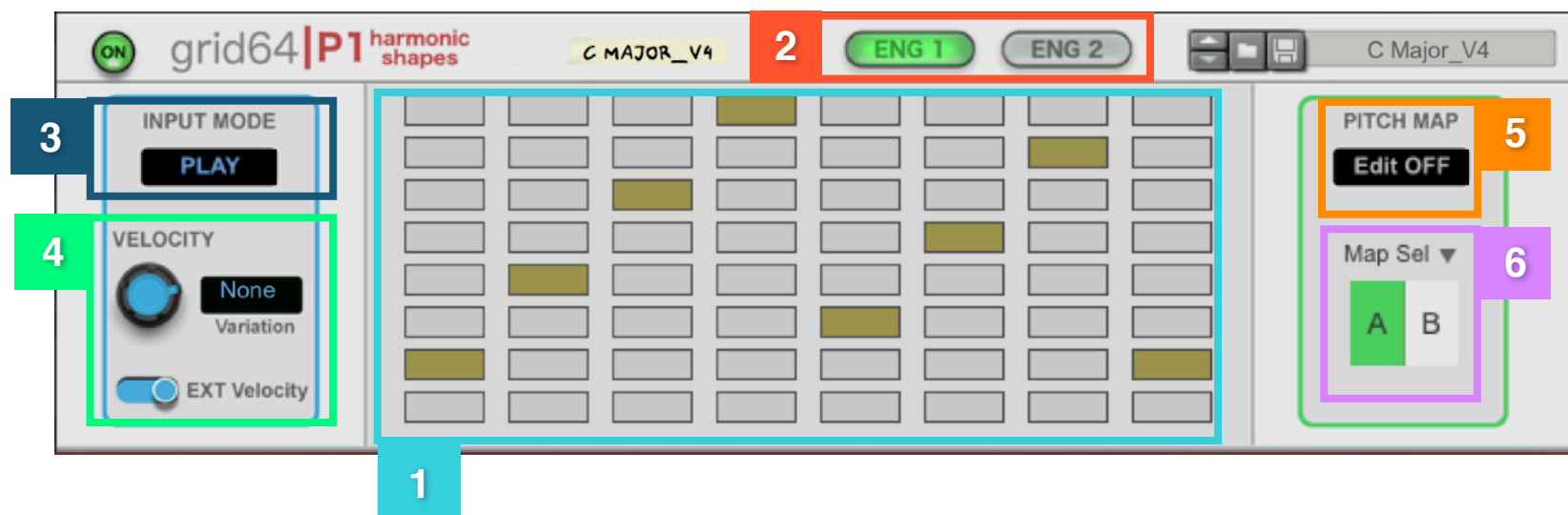
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## 1.1 Product Details

- Interface for 8x8 grid MIDI controllers featuring two-way communication with Reason (in standalone mode, after setting up the control surfaces for the supported models, Remote files are provided)
- Enable "Learn" mode to save up to 8 chord shapes using the bottom row of pads
- Enable "Play" mode to trigger chords using two Engine types
- Engine 1: use the bottom 8 pads to trigger the stored chords, additional notes can be played on top using the other pads. Multiple slots can be triggered at once to create more complex chords
- Engine 2: use the bottom 8 pads to select a chord shape, then use that shape to play a chord by pressing on any other pad. Multiple pads can be triggered at once to create more complex chords
- Fully programmable pitch layout where the user can assign a specific pitch and color to each pad
- Row or column edit menus with the ability to copy/paste, transpose, rotate, shuffle and randomize all the pitches in a given row or column
- Map edit menu with the ability to copy/paste, transpose, shuffle, randomize and assign presets to all the pitches in the selected map
- Two configurable map variations A and B per patch which can be switched during play
- EXT Velocity switch allows to bypass the MIDI velocity from a controller and uses instead the velocity set by the Velocity knob with 4 amounts of velocity variation - None, Low, Medium, High.
- The device can also be triggered with the mouse or with a regular midi keyboard using notes C0 to D#5

## 2. Overview

Here is a quick overview of the main interface elements. For more details on each section, refer to later parts of this manual.

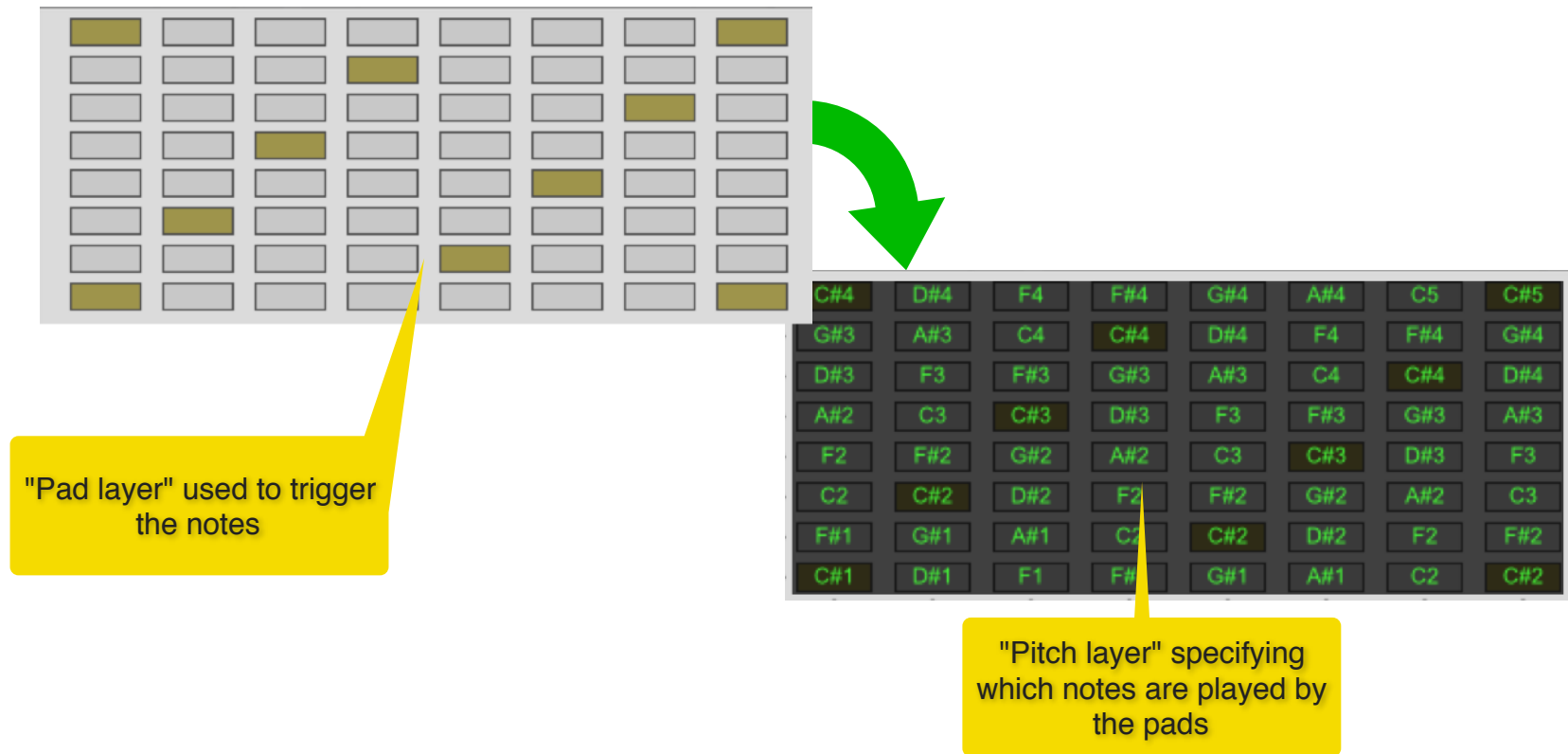


1. Main interface which shows which pad is triggered from a connected controller. You can also use the mouse to trigger a pad. When edit mode is "ON", the interface allows you to choose a note for each pad and assign a pad color (see section 3.2.2 for more details). The bottom row of pads is used to select the slots for storing the chords.
2. Engine select buttons. Engine 1 allows to play back the chords stored in memory. Engine 2 uses the chord shapes stored in memory to trigger new chords when pads are pressed.
3. Input mode selection: if "Learn" mode is engaged, chords you play and their shapes are stored in memory. Use "Play" mode to play back the chords and to trigger the shapes across the grid.
4. If your device is not capable of sending MIDI velocity, here you can select the desired velocity level and the amount of random variation. If your device can send MIDI velocity, you might still desire to use this to achieve "Fixed" velocity. In either case, the EXT velocity slide needs to be in the OFF position to bypass the velocity from the controller.
5. Click in the display to enable "Edit" mode. Once "ON", you will be able to configure the pitch map to suit your needs.
6. There are 2 pitch map variations which can be freely switched to access more notes. There are several editing functions which make it possible to quickly duplicate maps and alter maps in various ways for more advanced uses.

### 3. Usage

grid64IP1 is a player device and hence it needs to be instantiated on top of an instrument. This can be a synth, a sampler, a drum machine or anything which receives notes and is able to make noise!

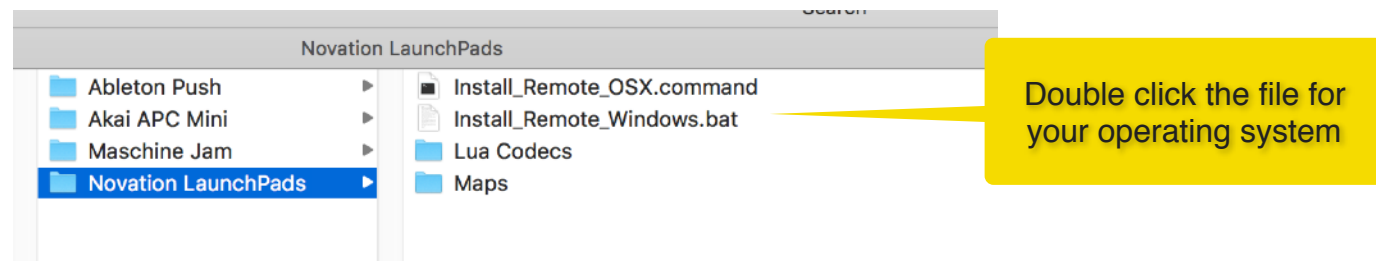
Before going into the details of programming the device, let's get some basics out of the way. The pads grid layout is basically an interface layer sitting on top of the underlying "pitch map" layer. A pad press triggers whichever note is programmed in the underlying "pitch map" layer. In Engine 1, this "pitch map" layer is fully programmable and it can be edited and altered in many different ways. Furthermore, you can switch between two different "pitch maps" while playing the device by using the Map select buttons.



## 3.1 Setting up your grid controller in Reason (standalone)

### 3.1.1 Install the Remote files

You can download the remote files from the grid64P0 product page in the Reason Studios Shop. Once you have downloaded and unzipped the files, navigate to the folder for your midi controller. In there, you will find two installer files, one for Mac and one for Windows. Double click the installer for your operating system. On Mac OS X, you will see the terminal window open when the process is completed. On Windows, you will see the console flash quickly and then closing.



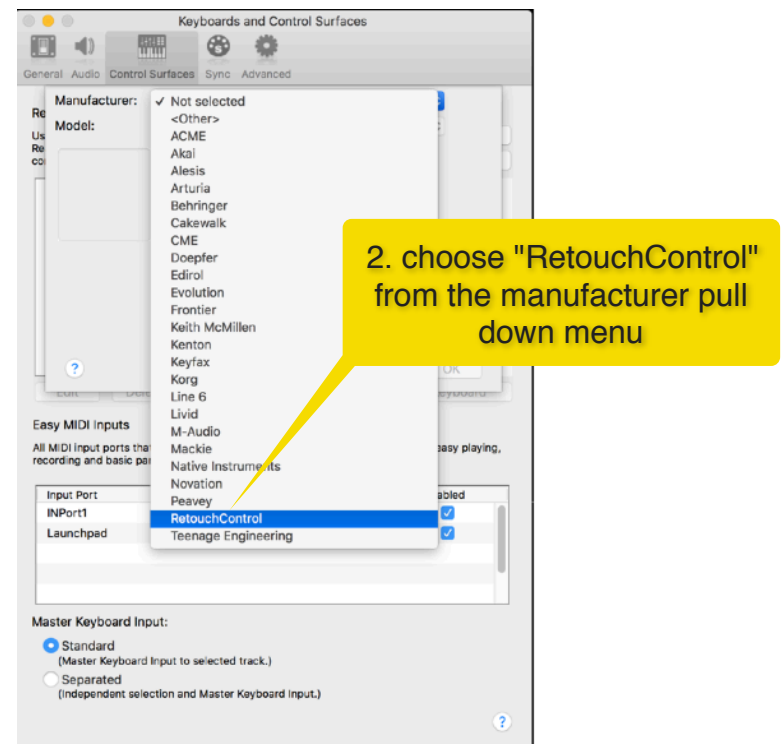
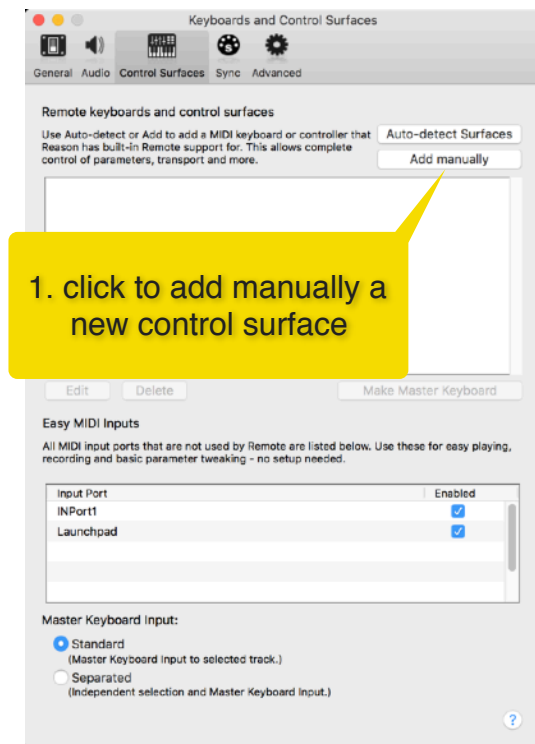
Alternatively, you can copy and paste the remote files manually. This is what you do:

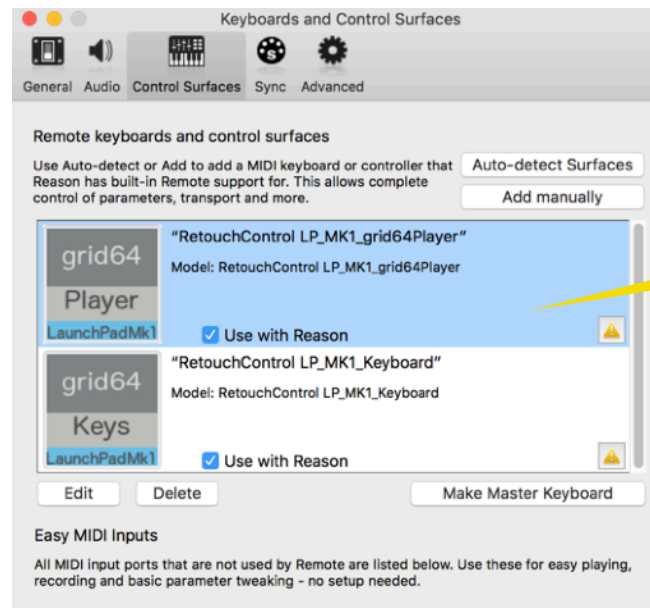
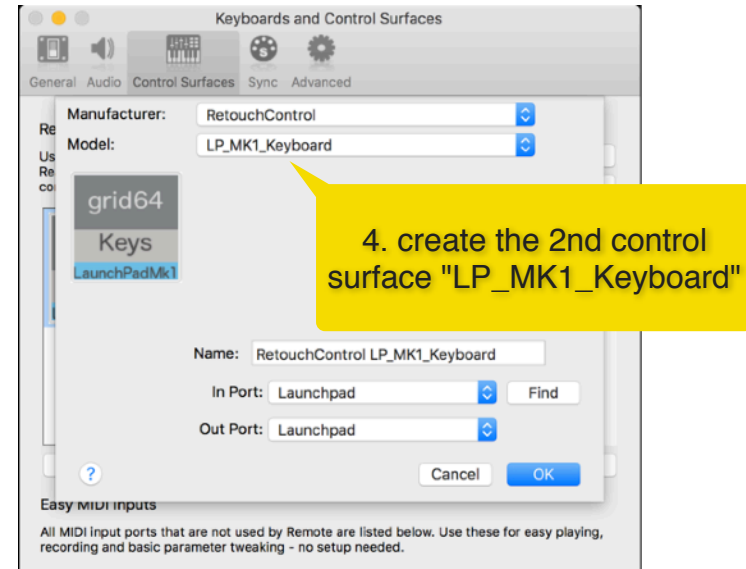
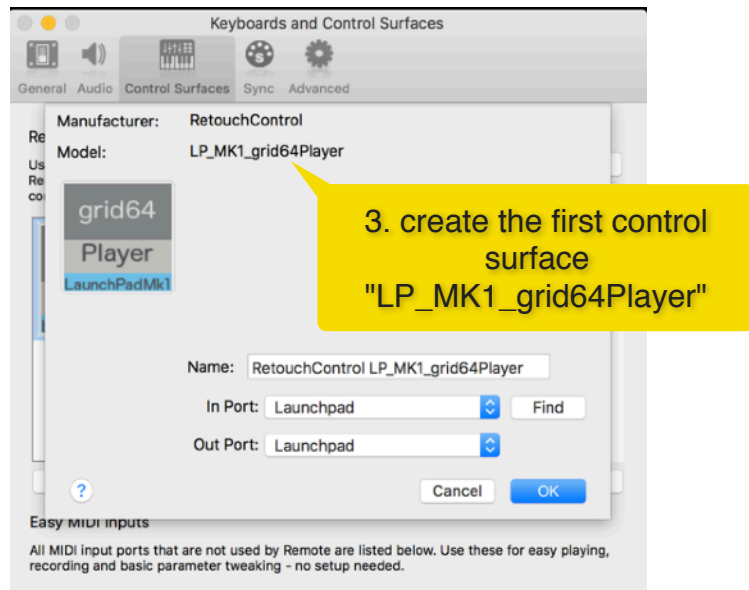
1. Go to the download, open the folder for your controller, then open "Lua Codecs", copy the entire folder in there and paste it at this location:  
Mac -> Macintosh HD/Library/Application Support/Propellerhead Software/Remote/Codecs/Lua Codecs  
Windows -> C:/ProgramData/Propellerhead Software/Remote/Codecs/Lua Codecs
2. Go back to the download, open the folder for your controller, then open "Maps" copy the entire folder in there and paste it at this location:  
Mac -> Macintosh HD/Library/Application Support/Propellerhead Software/Remote/Maps  
Windows -> C:/ProgramData/Propellerhead Software/Remote/Maps

Please note, on Windows the directory "ProgramData" is hidden by default. You need to enable "Show hidden files". See how to do it here: <https://support.microsoft.com/en-us/help/14201/windows-show-hidden-files>

### 3.1.2 Creating Control Surfaces in Reason (standalone)

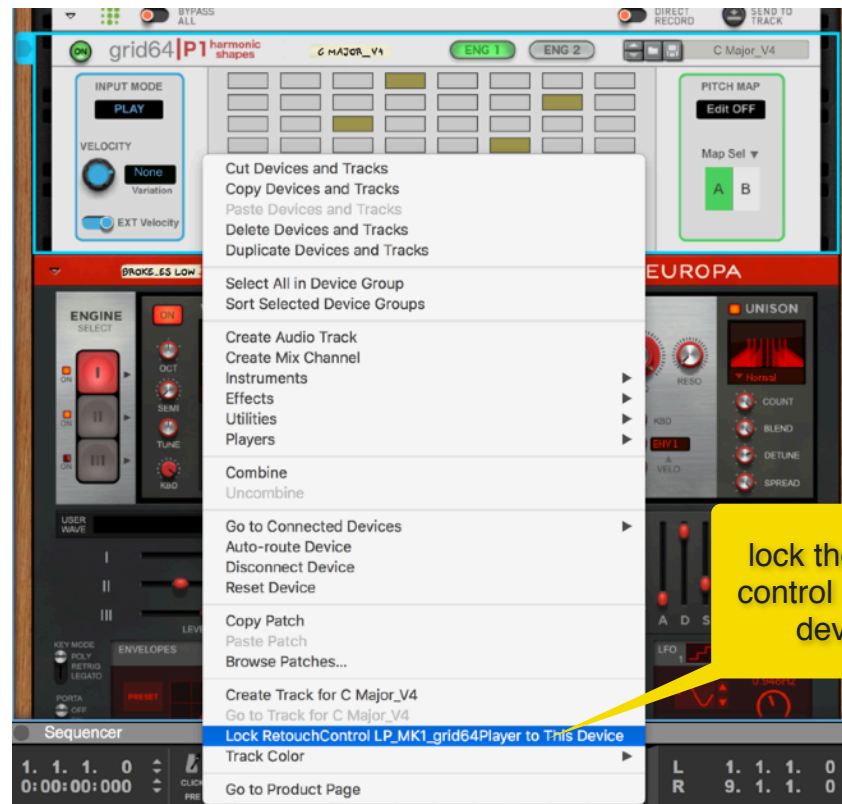
Once the remote files have been installed, start Reason. Go to "Preferences" -> "Control Surfaces" and click on "Add Manually" to create a new control surface. In the example below, we are showing how to configure a Launchpad MK1 as a controller. You will need to create two control surfaces. For each, you use as In and Out ports the midi ports of the Launchpad.





### 3.1.3 Using the Control Surfaces in Reason (standalone)

Now that the control surfaces have been created, you will be able to play the grid64 Player directly from your controller, but first, you need to lock the "LP\_MK1\_grid64Player" control surface to the player instance that you want to control, as shown below.



### 3.1.4 "What if I don't have a grid controller?"

If you don't have one of the supported grid controllers, you can use your MIDI keyboard to trigger the pads. See the following drawing for the details of the midi notes triggering each pad. The notes names shown below are based on the standard note assignment in Reason where C3 corresponds to midi note number 60.

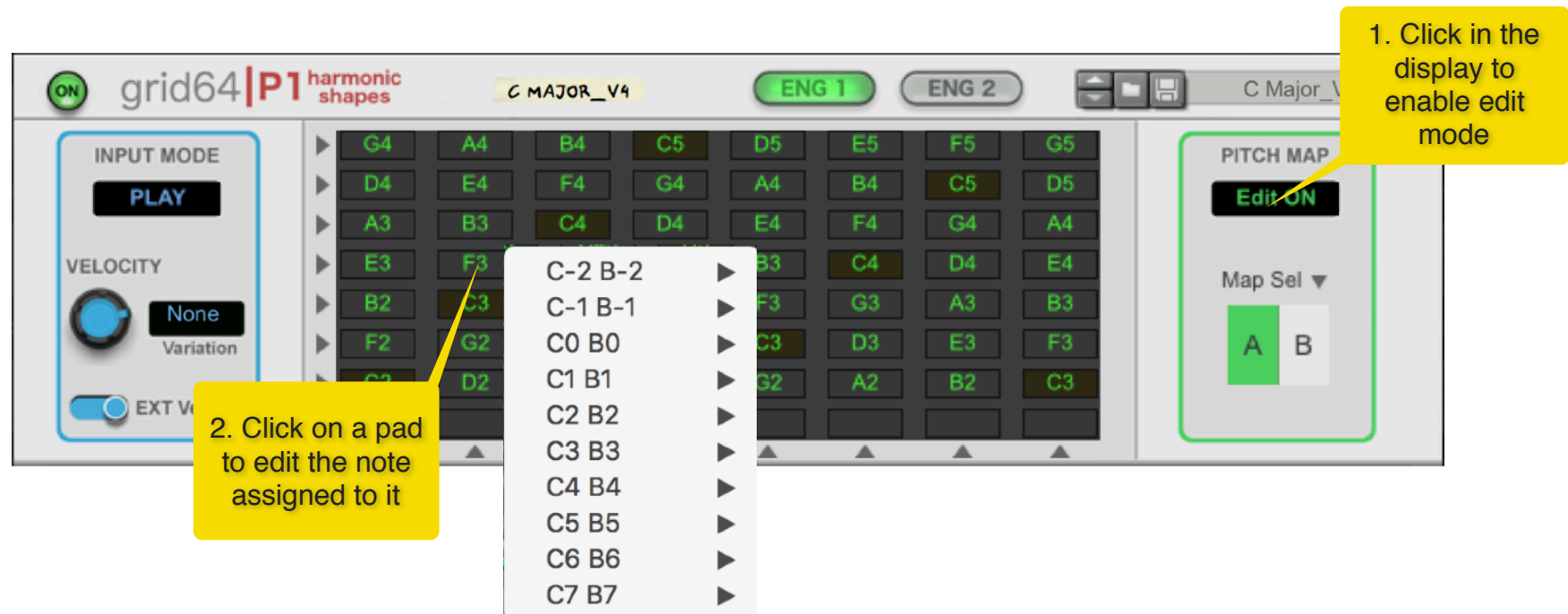
<b>G#4</b>	<b>A4</b>	<b>A#4</b>	<b>B4</b>	<b>C5</b>	<b>C#5</b>	<b>D5</b>	<b>D#5</b>
<b>C4</b>	<b>C#4</b>	<b>D4</b>	<b>D#4</b>	<b>E4</b>	<b>F4</b>	<b>F#4</b>	<b>G4</b>
<b>E3</b>	<b>F3</b>	<b>F#3</b>	<b>G3</b>	<b>G#3</b>	<b>A3</b>	<b>A#3</b>	<b>B3</b>
<b>G#2</b>	<b>A2</b>	<b>A#2</b>	<b>B2</b>	<b>C3</b>	<b>C#3</b>	<b>D3</b>	<b>D#3</b>
<b>C2</b>	<b>C#2</b>	<b>D2</b>	<b>D#2</b>	<b>E2</b>	<b>F2</b>	<b>F#2</b>	<b>G2</b>
<b>E1</b>	<b>F1</b>	<b>F#1</b>	<b>G1</b>	<b>G#1</b>	<b>A1</b>	<b>A#1</b>	<b>B1</b>
<b>G#0</b>	<b>A0</b>	<b>A#0</b>	<b>B0</b>	<b>C1</b>	<b>C#1</b>	<b>D1</b>	<b>D#1</b>
<b>C0</b>	<b>C#0</b>	<b>D0</b>	<b>D#0</b>	<b>E0</b>	<b>F0</b>	<b>F#0</b>	<b>G0</b>

## 3.2 Creating a note layout

The pads on row 2 through 8 can be programmed to create a variety of note layouts. The factory sound bank contains a selection of ready-made layouts for you to use. This section explains how to customize existing layouts or create brand new ones.

### 3.2.1 Editing of Single Pads

To create your custom mappings, enable the pitch map edit mode by pressing in the display area as shown below. Once edit mode is active, just click on a pad with a note name to change its value by choosing a different note from the context menu. To change the color of the pad, press "Alt" on the keyboard, then click with the mouse on the pad and select a color from the context menu.





Press the **Alt** key and click on a pad to change its color



White color when active, grey (off) when inactive

Bright yellow color when active, dark yellow when inactive

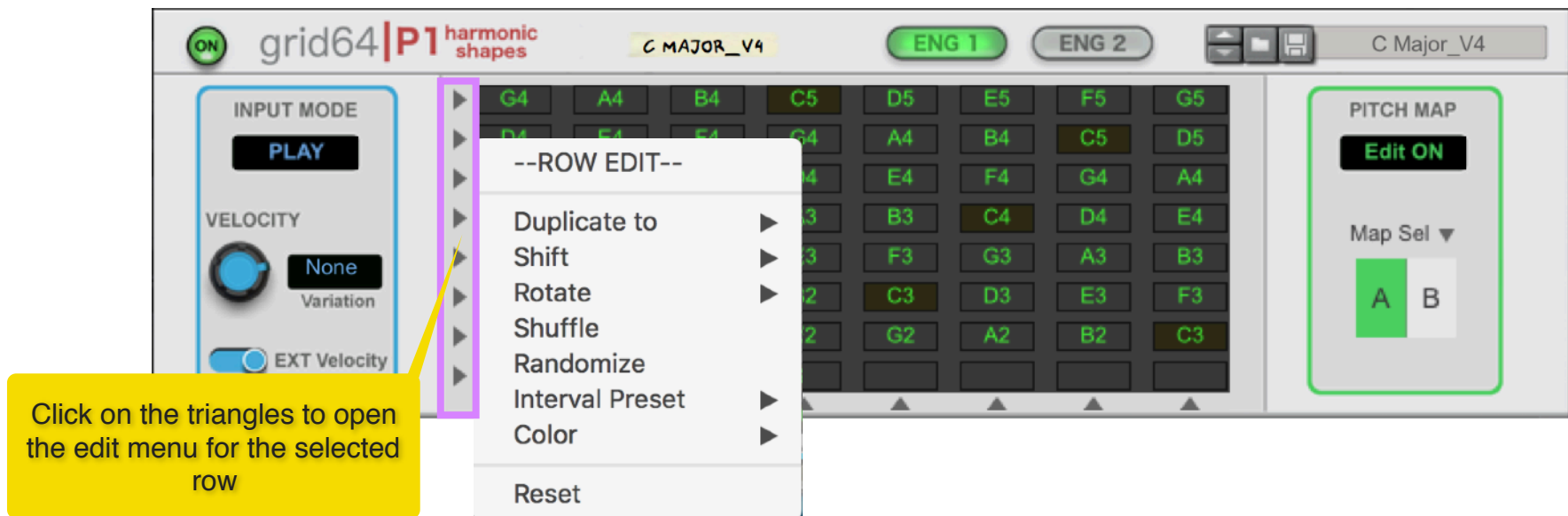
Bright green color when active, dark green when inactive

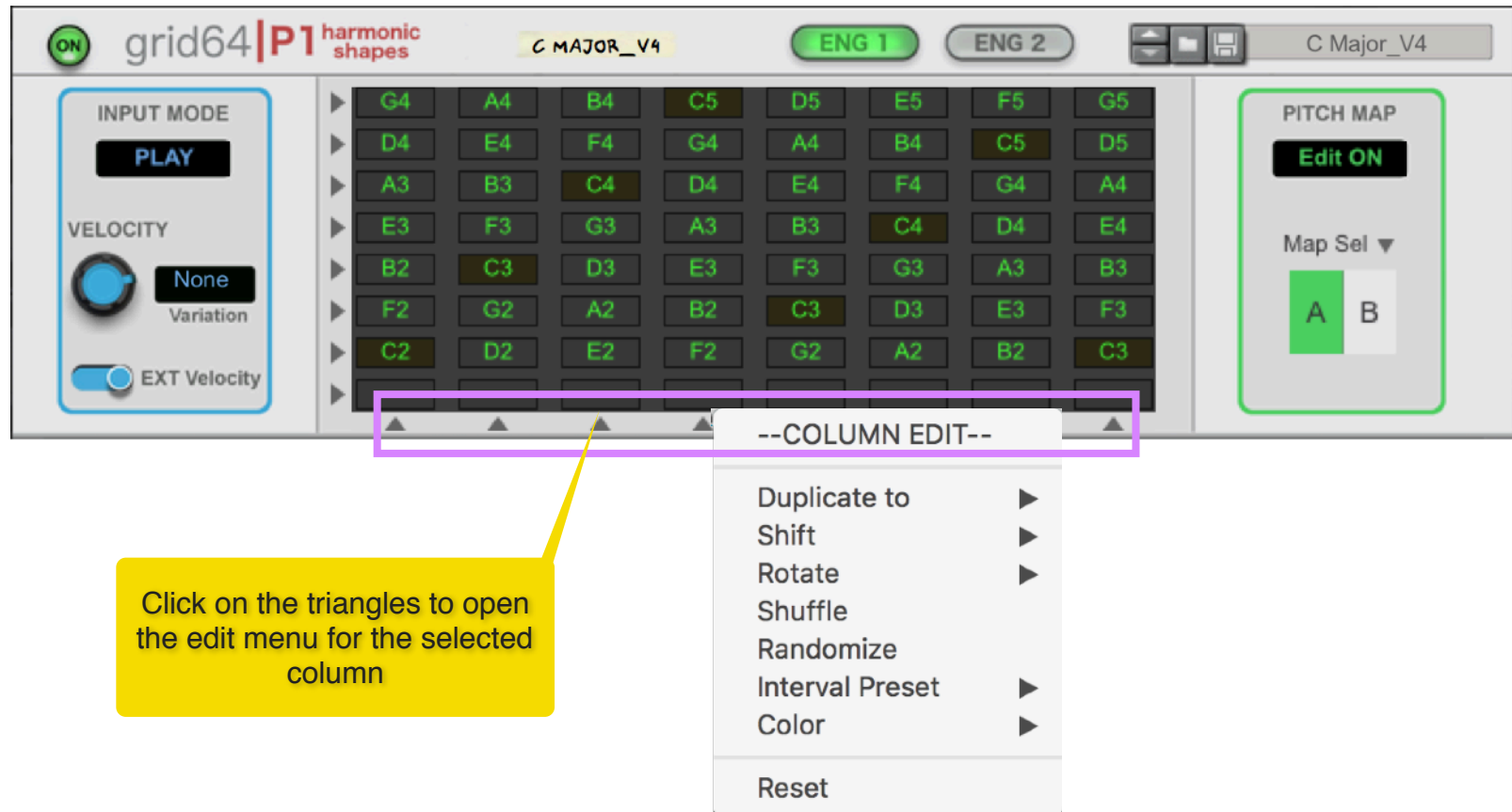
Bright orange color when active, dark orange when inactive

So far, we have discussed editing of single pads. What if we want to edit multiple pads at once? This is possible, and there are 3 ways to do that. You can edit at once single columns, single rows, or the entire map. These options are illustrated below.

### 3.2.2 Row and Column Edit menus

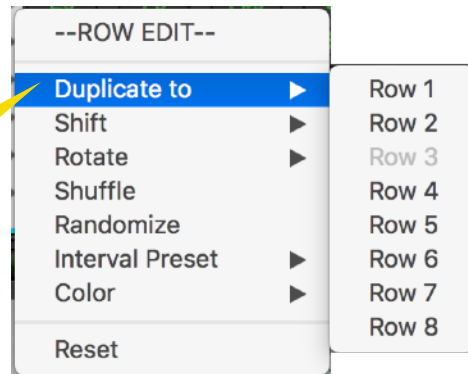
To edit an entire row or column of pads, click on the corresponding triangle to open the Edit context menu.



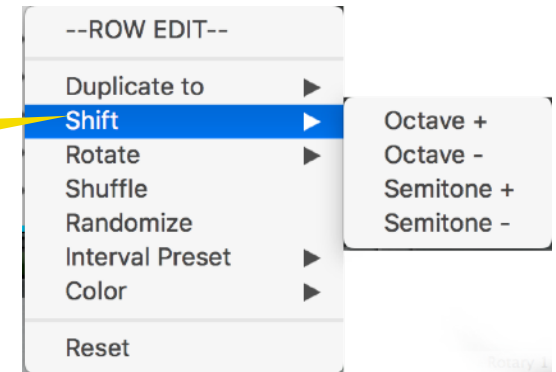


Both the Row and Column edit menus offer several editing options and these are explained below:

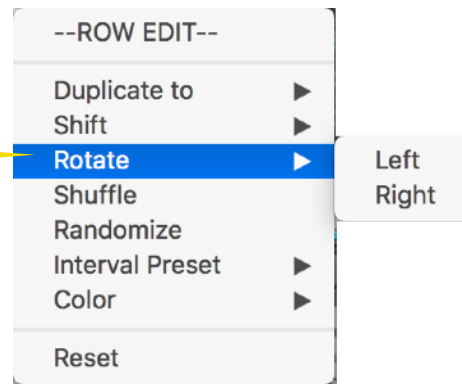
Duplicate the selected Row/Column to another Row/Column



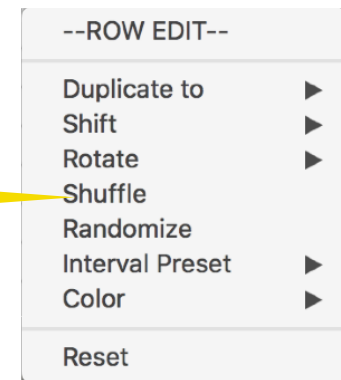
Shifts the notes in the selected Row/Column by octave or semitone



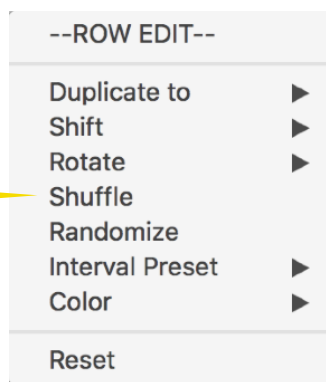
Move the notes by one position left or right for Rows, and up or down for Columns



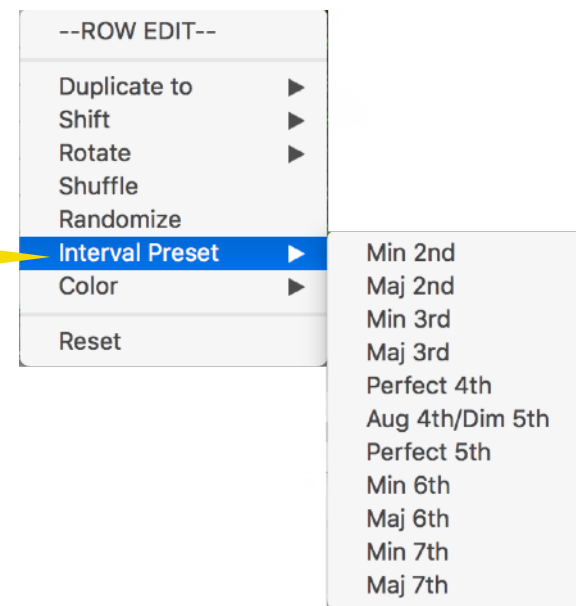
Shuffle around the positions of the notes



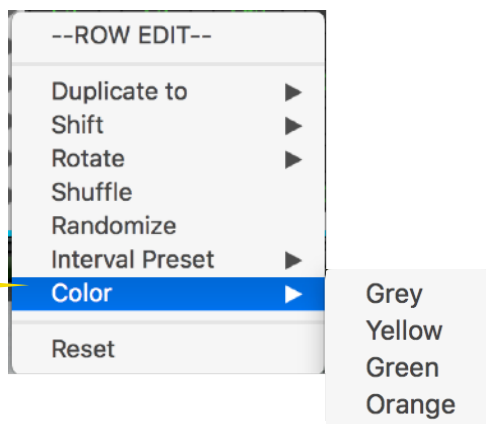
Randomize the values of the notes in the Row/Column



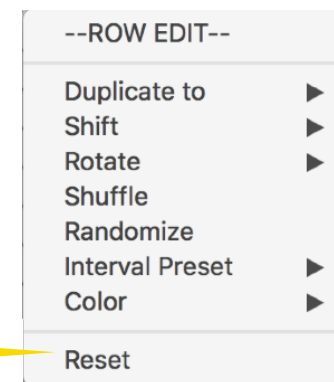
Assign notes with each successive pad being the selected interval apart from its predecessor. The first note in the Row/Column is the starting note in the sequence



Assign the same color to all the pads in the Row/Column

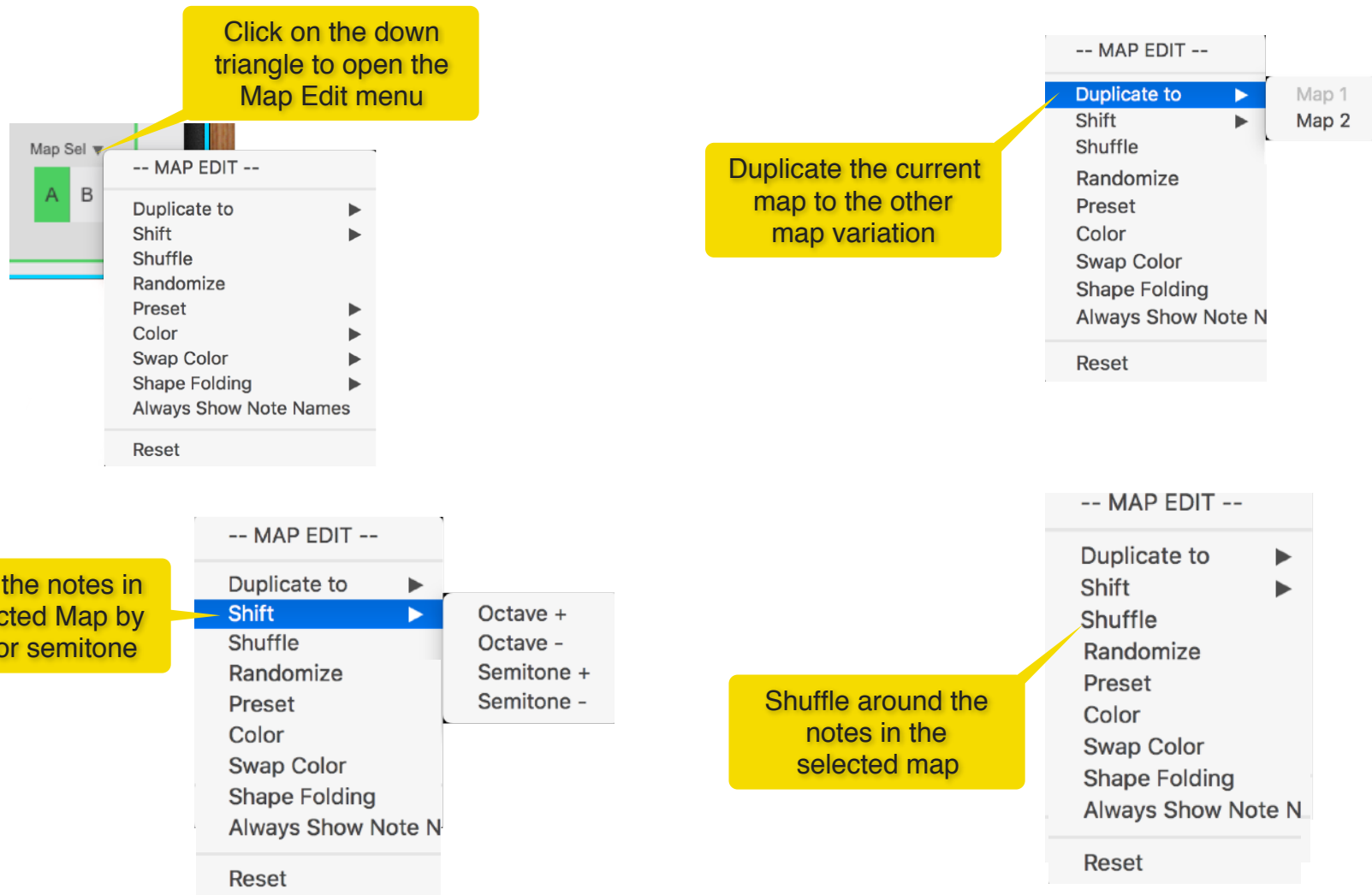


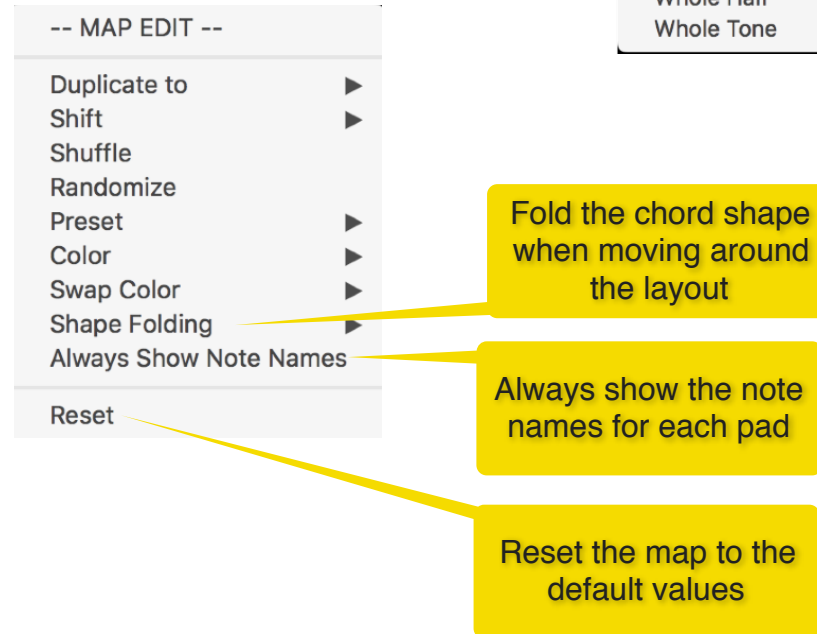
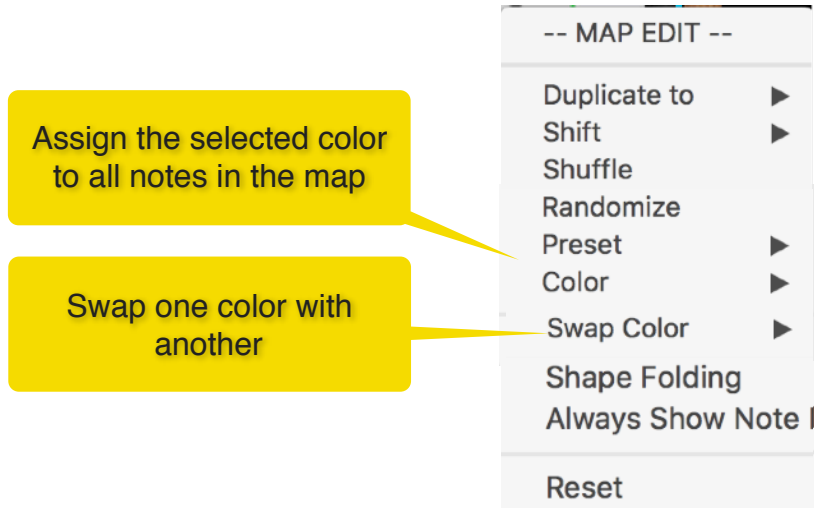
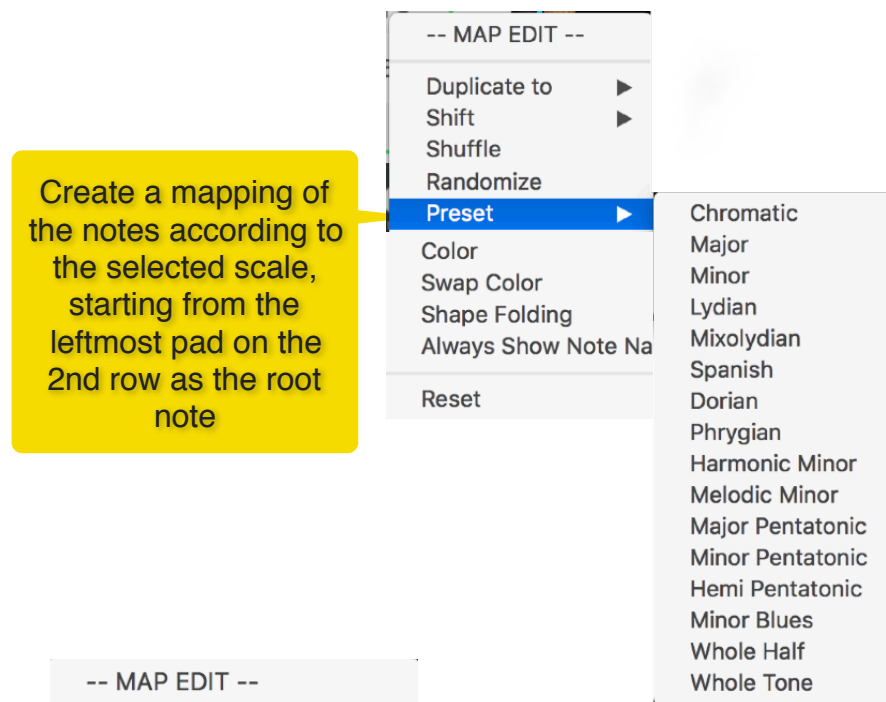
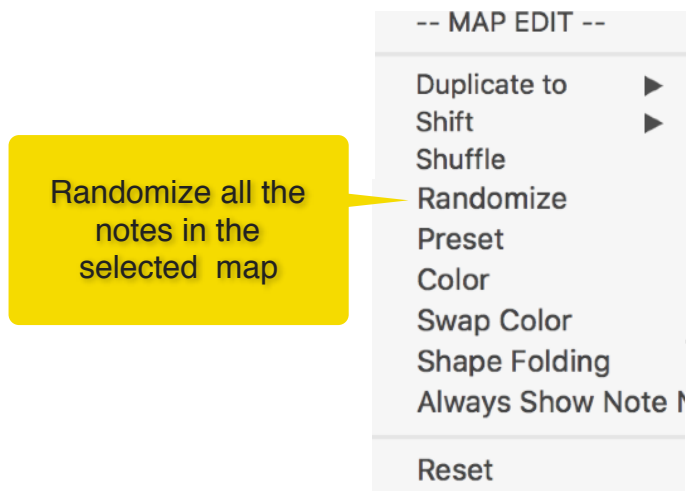
Resets all pads in the Row/Column to default values



### 3.2.3 Map Edit menu

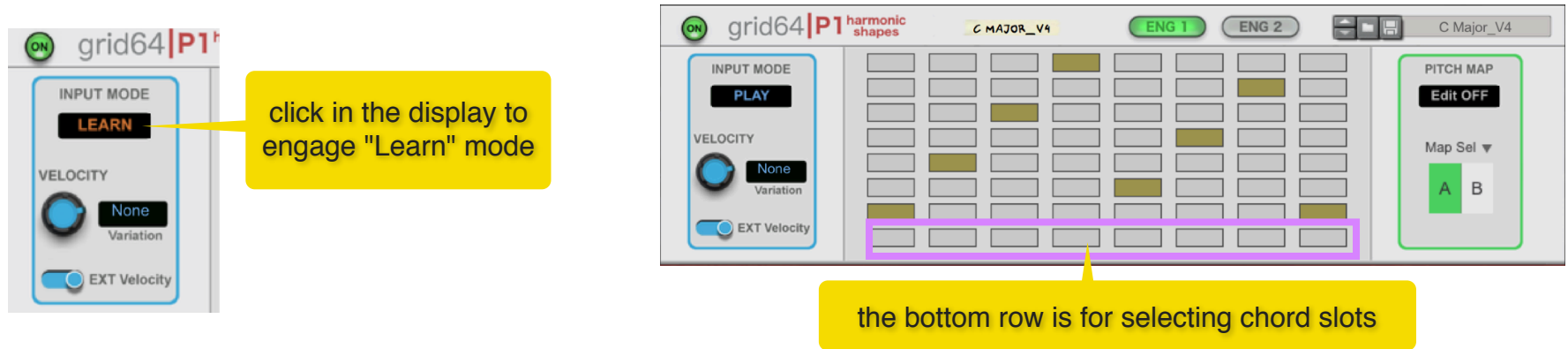
In addition to the Row/Column edit menus, you can also perform editing functions which affect all the pads for the selected Map. You access these functions by clicking on the down triangle in the "Map Sel" area, as shown below.





### 3.3 Input Mode: "Play" vs "Learn"

Once you have a note layout configured, it's time to play! But first you might want to save some chords and chord shapes. In order to do that, you need to engage "Learn Mode". To enable "Learn" mode, click in the "Input Mode" display. The next step is to select a chord slot to store the chord.



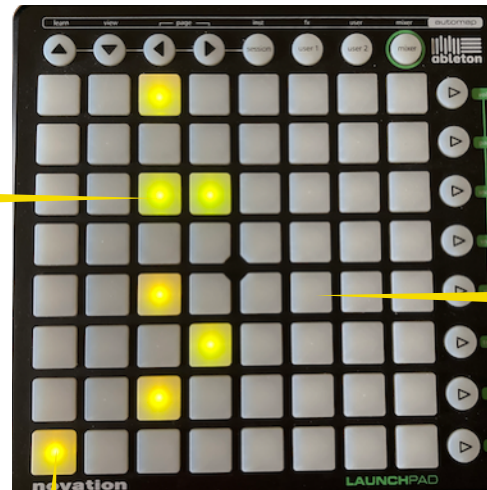
#### 3.3.1 Learn from a MIDI controller

If you have a supported MIDI controller enabled in Reason, then it's quite easy to start playing chords on the pads. With "Learn" mode enabled, the device is always recording and stores the last chord you played (until you lift the fingers from the pads). The chord is stored in the slot currently selected. To learn another chord, select another chord slot. You can always audition the chords you stored by pressing the respective chord slot pads.



For a given chord slot, you can edit the chord stored in memory by keeping the chord slot pad pressed: if you want to add another note to the chord, just press its pad. Similarly, if you want to remove a note from the chord, press its pad. A similar procedure can also be used when using a regular midi keyboard to trigger the device (see page 12 for the midi note assignments)

3. Press on a lit pad to remove a note from the chord

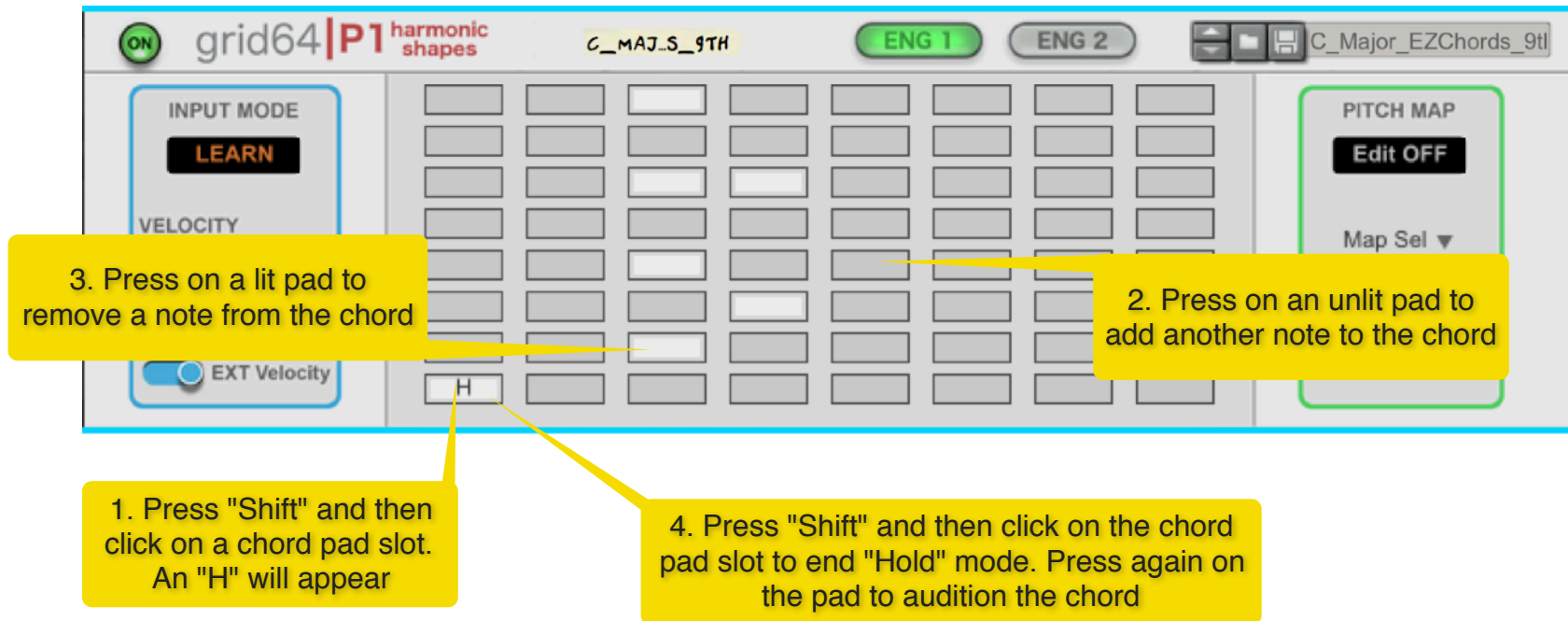


2. Press on an unlit pad to add another note to the chord

1. Keep the chord slot pad pressed while editing

### 3.3.2 Learn with the mouse

Although it's not possible to play chords with the mouse (after all you can only click on a single pad at once) you can still learn chords using the mouse and trigger them by pressing the chord slot pads. In order to learn a chord, make sure that "Learn" mode is engaged. Then press the "Shift" key and click on a slot pad and you should see an "H". This means that the slot is in "Hold" mode, and you can click on other pads to add or remove notes to the chord. Once you have created your desired chord, press "Shift" and click again on the chord slot pad. Now the "H" will disappear and further clicking on the chord pad will trigger the chord you just learnt.



### 3.3.3 Chord Edit Menu

There is a chord edit menu which speeds up the operation of copying/pasting or resetting a chord for each chord slot. In order to access the menu, make sure that the Input Mode is set to "Play", then press the "Alt" key and click on any of the 8 chord slots to copy/paste or reset a chord on that particular slot.



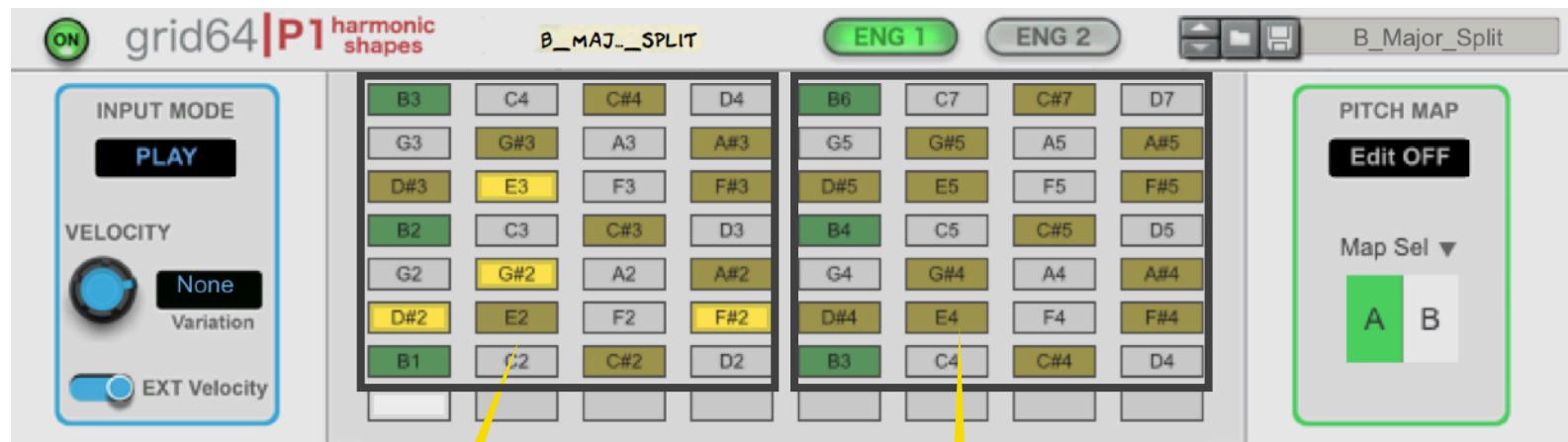
2. Press "Alt" and then click on the chord pad slot to access the Chord Edit menu

## 3.4 Engines

Once you have learnt some chords, then you can play them using either Engine 1 or Engine 2. In this section, we'll describe how both Engines work and how to use them.

### 3.4.1 Engine 1

Engine 1 is pretty straightforward. When you press on a chord slot pad, if there is a chord stored at that location, then it will be triggered. You can press more than one chord slot at once if you want to create more complex chords. Furthermore, you can add other notes to the chord or play a melody on top by keeping the chord slot pressed and then pressing other pads. For example, the factory patches in the "Split Half" folder have the note layout split in two halves: the left half can be used to play the chords, while the right half can be used to add extra notes to the chord or play a melodic line on top. This is just one example: because the note layout is fully configurable, the possibilities for experimentation are numerous.



The left half can be used to program the chords triggered by the chord slot pads

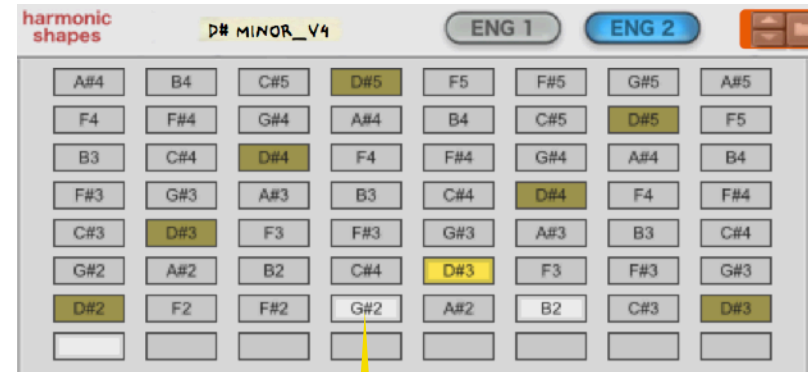
The right half can be used to play additional notes

### 3.4.2 Engine 2

Engine 2 uses a different approach. Pressing a chord slot pad will not trigger a chord. Instead it selects that chord, specifically it selects the geometric shape of that chord. Now, if you press a regular note pad, a chord is formed using the shape of the selected chord, and the note you pressed will be part of the chord. This is great for trying out a particular shape with other notes and discover new chords. Because you can store up to 8 chord shapes, you can in theory have hundreds of chords available to play per patch. Furthermore, you can press more than one pad at once to create more complex chords!



Pressing the D#2 pad to create the first chord

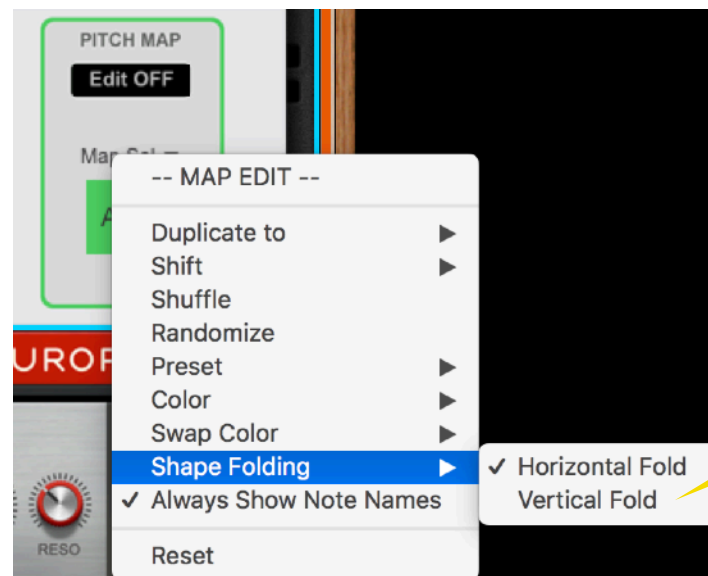


Pressing the G#2 pad to create the second chord using the same shape



Pressing both the D#2 and the C#4 pad to create a more complex chord

An important parameter which affects the chord generated when using Engine 2 is "Shape Folding". Once you have created a certain shape, you will find that it is impossible to replicate that same shape across all the pads on the grid. For example, as you move closer to the edges, you "run out" of pads. This is when "Shape Folding" comes into play. There are two types of folding, Horizontal and Vertical, and they are enabled in the Map Edit menu. By default, Horizontal folding is enabled while Vertical folding is disabled. Basically shape folding will wrap around the notes which fall beyond the grid boundaries so that they are played on the other side. This can create some interesting results, but much depends on the type of note layout selected. You can decide to disable Shape Folding. In that case, the notes which fall beyond the grid boundaries are simply ignored.



Shape Folding options in the menu



1. Playing F3 with the original chord shape



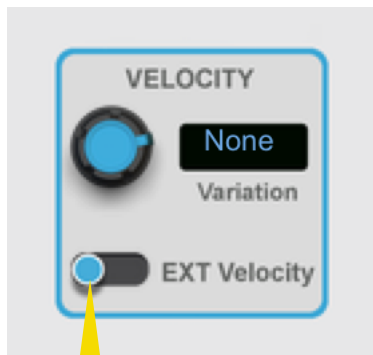
2. Playing G#3, the chord shape is folded, with the folded notes played on the opposite side



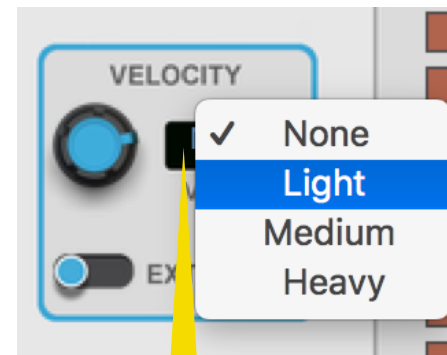
3. Playing F#3, the chord shape is not folded, the notes that fall out of the grid are not played

## 3.5 Velocity

If your grid controller is only sending a fixed midi velocity (usually 127), you can disable the "EXT" velocity switch and use the velocity knob to assign a custom velocity to the incoming notes. Furthermore, you can select one of the velocity variation modes to add a varying degree of offset from the base velocity set by the velocity knob.



switch off the EXT velocity to use the internal velocity instead of the velocity from your midi controller



click in the display to set a variation amount to the internal velocity

## 4. MIDI Implementation

### MIDI CC - Parameter

[12] = Engine,  
[13] = Map Variation  
[14] = Velocity

## 5. Remote Implementation

To obtain the complete list of all the available parameters which are controllable via Remote, use the "Extract Device Remote Info" from the File menu in Reason.

Manufacturer		Model			
Retouch Control		com.retouchcontrol.grid64P1			
Remotable	Min	Max	Input type	Output type	
Grid 1	0	127	Value	ValueOutput	
Grid 2	0	127	Value	ValueOutput	
Grid 3	0	127	Value	ValueOutput	
Grid 4	0	127	Value	ValueOutput	
Grid 5	0	127	Value	ValueOutput	
Grid 6	0	127	Value	ValueOutput	
Grid 7	0	127	Value	ValueOutput	
Grid 8	0	127	Value	ValueOutput	
Grid 9	0	127	Value	ValueOutput	
Grid 10	0	127	Value	ValueOutput	
Grid 11	0	127	Value	ValueOutput	
Grid 12	0	127	Value	ValueOutput	
Grid 13	0	127	Value	ValueOutput	
Grid 14	0	127	Value	ValueOutput	
Grid 15	0	127	Value	ValueOutput	
Grid 16	0	127	Value	ValueOutput	
Grid 17	0	127	Value	ValueOutput	
Grid 18	0	127	Value	ValueOutput	
Grid 19	0	127	Value	ValueOutput	
Grid 20	0	127	Value	ValueOutput	
Grid 21	0	127	Value	ValueOutput	
Grid 22	0	127	Value	ValueOutput	
Grid 23	0	127	Value	ValueOutput	
Grid 24	0	127	Value	ValueOutput	
Grid 25	0	127	Value	ValueOutput	

Grid 26	0	127	Value	ValueOutput
Grid 27	0	127	Value	ValueOutput
Grid 28	0	127	Value	ValueOutput
Grid 29	0	127	Value	ValueOutput
Grid 30	0	127	Value	ValueOutput
Grid 31	0	127	Value	ValueOutput
Grid 32	0	127	Value	ValueOutput
Grid 33	0	127	Value	ValueOutput
Grid 34	0	127	Value	ValueOutput
Grid 35	0	127	Value	ValueOutput
Grid 36	0	127	Value	ValueOutput
Grid 37	0	127	Value	ValueOutput
Grid 38	0	127	Value	ValueOutput
Grid 39	0	127	Value	ValueOutput
Grid 40	0	127	Value	ValueOutput
Grid 41	0	127	Value	ValueOutput
Grid 42	0	127	Value	ValueOutput
Grid 43	0	127	Value	ValueOutput
Grid 44	0	127	Value	ValueOutput
Grid 45	0	127	Value	ValueOutput
Grid 46	0	127	Value	ValueOutput
Grid 47	0	127	Value	ValueOutput
Grid 48	0	127	Value	ValueOutput
Grid 49	0	127	Value	ValueOutput
Grid 50	0	127	Value	ValueOutput
Grid 51	0	127	Value	ValueOutput
Grid 52	0	127	Value	ValueOutput
Grid 53	0	127	Value	ValueOutput
Grid 54	0	127	Value	ValueOutput
Grid 55	0	127	Value	ValueOutput
Grid 56	0	127	Value	ValueOutput
Grid 57	0	127	Value	ValueOutput
Grid 58	0	127	Value	ValueOutput
Grid 59	0	127	Value	ValueOutput
Grid 60	0	127	Value	ValueOutput
Grid 61	0	127	Value	ValueOutput

Grid 62	0	127	Value	ValueOutput
Grid 63	0	127	Value	ValueOutput
Grid 64	0	127	Value	ValueOutput
Map	0	1	Toggle	ValueOutput
Engine	0	1	Toggle	ValueOutput
Velocity	0	127	Value	ValueOutput
Grid LED 1	0	7	-	ValueOutput
Grid LED 2	0	7	-	ValueOutput
Grid LED 3	0	7	-	ValueOutput
Grid LED 4	0	7	-	ValueOutput
Grid LED 5	0	7	-	ValueOutput
Grid LED 6	0	7	-	ValueOutput
Grid LED 7	0	7	-	ValueOutput
Grid LED 8	0	7	-	ValueOutput
Grid LED 9	0	7	-	ValueOutput
Grid LED 10	0	7	-	ValueOutput
Grid LED 11	0	7	-	ValueOutput
Grid LED 12	0	7	-	ValueOutput
Grid LED 13	0	7	-	ValueOutput
Grid LED 14	0	7	-	ValueOutput
Grid LED 15	0	7	-	ValueOutput
Grid LED 16	0	7	-	ValueOutput
Grid LED 17	0	7	-	ValueOutput
Grid LED 18	0	7	-	ValueOutput
Grid LED 19	0	7	-	ValueOutput
Grid LED 20	0	7	-	ValueOutput
Grid LED 21	0	7	-	ValueOutput
Grid LED 22	0	7	-	ValueOutput
Grid LED 23	0	7	-	ValueOutput
Grid LED 24	0	7	-	ValueOutput
Grid LED 25	0	7	-	ValueOutput
Grid LED 26	0	7	-	ValueOutput
Grid LED 27	0	7	-	ValueOutput
Grid LED 28	0	7	-	ValueOutput
Grid LED 29	0	7	-	ValueOutput
Grid LED 30	0	7	-	ValueOutput

Grid LED 31	0	7	-	ValueOutput
Grid LED 32	0	7	-	ValueOutput
Grid LED 33	0	7	-	ValueOutput
Grid LED 34	0	7	-	ValueOutput
Grid LED 35	0	7	-	ValueOutput
Grid LED 36	0	7	-	ValueOutput
Grid LED 37	0	7	-	ValueOutput
Grid LED 38	0	7	-	ValueOutput
Grid LED 39	0	7	-	ValueOutput
Grid LED 40	0	7	-	ValueOutput
Grid LED 41	0	7	-	ValueOutput
Grid LED 42	0	7	-	ValueOutput
Grid LED 43	0	7	-	ValueOutput
Grid LED 44	0	7	-	ValueOutput
Grid LED 45	0	7	-	ValueOutput
Grid LED 46	0	7	-	ValueOutput
Grid LED 47	0	7	-	ValueOutput
Grid LED 48	0	7	-	ValueOutput
Grid LED 49	0	7	-	ValueOutput
Grid LED 50	0	7	-	ValueOutput
Grid LED 51	0	7	-	ValueOutput
Grid LED 52	0	7	-	ValueOutput
Grid LED 53	0	7	-	ValueOutput
Grid LED 54	0	7	-	ValueOutput
Grid LED 55	0	7	-	ValueOutput
Grid LED 56	0	7	-	ValueOutput
Grid LED 57	0	7	-	ValueOutput
Grid LED 58	0	7	-	ValueOutput
Grid LED 59	0	7	-	ValueOutput
Grid LED 60	0	7	-	ValueOutput
Grid LED 61	0	7	-	ValueOutput
Grid LED 62	0	7	-	ValueOutput
Grid LED 63	0	7	-	ValueOutput
Grid LED 64	0	7	-	ValueOutput
Device Name	0	0	-	TextOutput
Patch Name	0	0	-	TextOutput

Select Patch Delta	0	0	Delta	TextOutput
Select Previous Patch	0	0	Trig	TextOutput
Select Next Patch	0	0	Trig	TextOutput

## 6. Version History

**Version 1.0.0:** initial release