PORTAIL

MIDI TO CV engine

Portail MIDI to CV Converter: User Manual V0.9

Introduction

Portail is a versatile, compact and powerful MIDI to CV interface for your eurorack or CV controllable synthesizers. This module acts as the bridge between your MIDI controllers, sequencers, or DAW and your modular system, translating MIDI data into the analog signals needed to control your beloved oscillators, filters, envelopes...

You can use it with its midi device Usb port or its type A midi TRS input.
It can stock up to 16 configuration preset and is delivered with basic midi configuration, but if you want to go in-depth and make your very own, you can configure it via your phone/tablet/computer (or SYSEX messages) using the web app here :
https://www.eowave.app/portail/

But first , we need that small bite of explanation:

What are D-GATEs outputs and what are the differences between D-GATE and CV outputs?

D-Gates (for Dynamic Gates) aren't classical Gates outputs. In fact they can provide CV as the CV outputs but with some differences:
CV outputs provide 16 bit CV allowing for v/oct tracking between -5 and +10V
D-Gates outputs CV are 12 bits and unipolar between 0 and 10V

That being said, you can assign on these LFOs, envelopes, make their amplitude react to the midi notes velocity and way more.

On the configuration side , D-Gate outputs, in some mode can be linked to the CV output (for example in polyphonic mode, you can set each CV voice to trig a gate output function when it is turn to play)

So now, you know that you got in reality 16 CV on this 5hp modules, let's dig into the configurator and how to route everything

To maintain the slimmest possible design and avoid adding noise, we opted for a system that utilizes an external editor for creating presets, rather than including an on-board screen.

This manual explains how to use the web-based configurator to unlock the full potential of your *Portail* module. With this editor, you can customize each of the 8 CV and 8 Gate outputs, set up complex modulation routing, and configure global settings to perfectly integrate the module into your setup.

Getting Started

Installation

- Turn off your Eurorack synthesizer system.

- Connect the 10-pin side of the IDC power cable to the 2x5 pin header on the back of the module, making sure the red stripe on the power cable is connected to the -12V terminal.

- Connect the 16-pin side of the IDC power cable to the 2x8 pin header on your Eurorack power supply, ensuring the red stripe on the power cable is connected to the -12V terminal.

- Install the module in your Eurorack synthesizer case.

- Turn on your Eurorack synthesizer system.

- start using one of the 8 preset of the *Portail* (see p# or connect it to the editor)

Note: This module is equipped with reverse polarity protection, so it will not be damaged if the power cable is incorrectly installed.

Connecting to the Editor

The Portail configurator is a web page that communicates with your module directly via USB.

- **Connect Your Module:**
  - Ensure your Portail module is powered on in your eurorack case.
  - Connect a USB C cable from the module's USB port to your computer/phone*/tablet*.
  - *Note on iOS: Products running on iOS (Apple phones and tablets) do not currently allow the Web MIDI API. The configurator will not be able to connect to the Portail from these devices. it can work however with the web midi browser : App Web MIDI Browser
  - Check browser compatibility here: https://caniuse.com/midi
  - Open the Portail editor page in a WebMIDI-compatible browser (Google Chrome is recommended). https://www.eowave.app/portail/
  - If your browser asks for authorization to use the MIDI USB device, accept it.At the top left of the editor, click the dropdown menu labeled [select your interface].
  - Select "Portail" from the list of available MIDI devices.

- **Program your portail:**
  - Once the portail is connected click on "request from portail" to get the current portail configuration.

    - make the change you want and click on update all parameters to send your configuration to the Portail.
    - if you are happy with your configuration, click on "save parameters" to save in the portail (so even if you turn off and on your portail, your configuration will be saved

- **Possible Troubleshoot:**
    - If you are using the Portail with your phone and the USB cable is disconnected, you might need to reload the page to reconnect to the Portail once replugged (even if the portail is selected in the interface menu).

The Editor Interface

The editor is organized into a main control bar and four configuration tabs.

Main Control Bar

This bar contains the primary actions for managing your module's configuration.

- **Select your interface:** The dropdown menu used to connect to your Portail module.
- **request from portail:** Clicking this button will load the current preset configuration stored on your Portail module into the web editor. This is useful if you want to edit the settings that are currently active on the module.
- **update all parameters:** This sends all the settings currently configured in the web editor to the Portail's temporary memory. The changes will take effect immediately, but they will be lost if the module is powered off.
- **Save parameters:** This saves the settings from the editor into the Portail internal non-volatile memory and replaces the current portail preset.
- **Save to file:** download the current configuration as a text file.
- **Load file:** Import a configuration text file.

Navigation Tabs

The main configurator is split into five tabs:

- ***CV:*** Configure the 8 Control Voltage (CV) outputs. These are typically used for pitch, modulation, and other variable voltage signals.
- **GATE:** Configure the 8 Gate outputs. These are the same as CV except they don't have V/Oct tracking
- **FX:** Set up MIDI effects per line, which can process incoming MIDI data before it is sent to the outputs.
- **MOD MATRIX :** set and route the cc mapping
- **GLOBAL:** Configure settings that affect the entire module, such as the master clock and MIDI routing.

Global Settings (GLOBAL Tab)

This tab controls module-wide parameters.

- **Clock state:** A switch to start or stop the internal clock generator.

- **Master Clock source (internal or external)**: A switch to select the master clock source.
  -> Internal: The Portail generates its own clock based on the speed setting.
  -> External: The Portail syncs to an incoming MIDI clock signal via the USB or MIDI DIN port.

- **Speed:** A slider and number box to set the tempo of the internal clock, from 30 to 250 BPM. (you can also control the speed with the CC#

- **Active midi out copy:** When checked, the module acts as a MIDI Thru. All MIDI messages received at the USB or MIDI IN port are passed directly to the MIDI OUT port on the back of the module.

- **reset on continue**: A specialized function for compatibility with certain sequencers or Ableton live.

- **Disable default midi mapping:** disable the cc control grid (see p#)

- **Latest firmware:** A link to download the latest firmware file (.uf2) for your module. See chapter # at the end of the manual for upgrade details.

Configuring Outputs (CV & D-GATE Tabs)

About outputs

The CV and D-GATE tabs are organized as a series of rows, one for each of the 8 outputs of each type. The configuration process is the same for both.

1. **Select Output Type:** The first dropdown menu in each row determines the fundamental function of that output (e.g., Note, LFO, Clock, etc.).

2. **Configure Parameters:** Once you select a type, a set of dropdown menus and controls will appear to its right. These are the specific parameters for the chosen function.

3. **Update the Module:** After configuring your Portail, you can send your configuration to the module by clicking the update all parameters button

4. If you are happy with your configuration, you can click on **save parameters,** it will save the configuration on the Portail (so your preset can be reloaded if you turn off and on you Portail)

in the D-Gate tab, some functions, like Gate or Trig, can be linked to a CV Note output. If you select a CV output as the «Source» for a Gate, the MIDI Channel parameter will be hidden, as it will automatically follow the channel of the selected CV output.

Output Types

Here are the functions you can assign to CV and D-Gate output, some work with both and some just with one type ; it will be specified next to the function.

By default, each parameter except the channel is assigned to a cc mapping who will be specified next to it. If you want to reassign the CC, see the chapter#

Note	**CV**	**Page#**
Gate	**D-GATE**	**Page#**
Trig	**CV & D-GATE**	**Page#**
CC (Control Change)	**CV & D-GATE**	**Page#**
Vel (Velocity)	**CV & D-GATE**	**Page#**
AT (Aftertouch)	**CV & D-GATE**	**Page#**
POLY AT (poly aftertouch)	**CV & D-GATE**	**Page#**
PB (Pitch bend)	**CV & D-GATE**	**Page#**
CLOCK	**CV & D-GATE**	**Page#**
LFO	**CV & D-GATE**	**Page#**
ENV (Envelope)	**CV & D-GATE**	**Page#**
RANDOM	**CV & D-GATE**	**Page#**
CV ARP (Arpeggiator)	**CV**	**Page#**
EUCLIDEAN	**D-GATE**	**Page#**
SEQ (Sequencer)	**CV**	**Page#**
SEQ (Sequencer)	**D-GATE**	**Page#**
CC RECORDER (Sequencer)	**CV**	**Page#**

Note cv

Convert midi notes to V/OCT CV

Parameters:

- MIDI Channel
- Poly/Mono Group
- Pitch Bend Range,
- Vibrato
- Glide
- Legato
- Min
- Max

Midi Channel :
Select the midi channel

Poly/Mono Group :
Configure the mode of the output.

mono modes:

mono last will prioritize the last midi note received on the CV output
mono low will prioritize the lowest midi note received on the CV output
mono high will prioritize the lowest midi note received on the CV output

Polyphonic mode:

poly group will play the notes in a round robin manner (one after each other when receiving midi notes)

How to create a polyphonic group:

Select one of the 4 «poly group»
set a second CV row to note and select the same polyphonic group.
Redo this operation for the number of notes you want in your poly group. (The number of cv voice in the same group will define the polyphony voice number)
You can then link D-gates outputs(with the gate,trig, velocity and envelope types) to these CV voices by selecting one of the CV who is in the polyphonic group in their source parameter.

Pitch Bend Range :
Set the pitch bend range.

Vibrato :
You can add a vibrato to your pitch cv output. The mod wheel (CC#1) control the amplitude of the vibrato and the vibrato parameter will set the frequency.

Glide :
Set the glide time between two notes

Legato :
Select if the glide will be applied between all the notes or only when two notes are played without being released

Min :
Set the minimum note of the midi filter

Max :
Set the maximum note of the midi filter

Gate D-GATE

Output a gate when a midi note is received

Parameters:

- MIDI Channel
- Source
- Range
- Velocity sensitive
- Up
- Down
- Retrig

Midi Channel :
Select the midi channel

Source :
Choose from which source the gate is being activated :
Note is all the notes received from a midi channel
CV1...8 is from a CV row

Range :
Set the range (maximum value) of the gate output between 1 and 10V

Velocity sensitive :
Allow the gate to be velocity sensitive. In this case, the gate amplitude will correspond to the velocity of the midi note received (eg: let say the range is 10V, if a midi note has a velocity of 127, the gate output will be 10V and if the velocity is 64, the gate output will be 5V)

Use case : *it is perfect to control analogical envelopes and modules since their trig/gate inputs respond most of the time to the amplitude of the signal.*

Up :
Set the time of a small attack envelope for the gate

Down :
Set the time of a small decay envelope for the gate

Use case : it can avoid clicks when the gate is for example used to control VCA

Retrig :
If retrig is on, when a new note is received, it will always retrig (even if the last note is still maintained)

Trig CV & D-GATE :

Output a trig when a midi note is received

Parameters:

- MIDI Channel
- Source (only for D-Gate)
- Note
- Length
- Velocity sensitive
- Val min
- Val max

Midi Channel :
Select the midi channel

Source (only D-Gate):
Choose from which source the gate is being activated :
Note is all the notes received from a midi channel
CV1...8 is from a CV row

Note :
Choose which midi note will trig the voice

Length (CC##):
Set the duration of the trig,
Latch will make the trig output act as a gate (stay on while the midi note is on)
or set a fixed time between 1 and 127 ms .

Velocity sensitive (CC##) :
Allow the trig to be velocity sensitive. In this case, the gate amplitude will correspond to the velocity of the midi note received

example: the minimum is set to 2V and the range is 5V,
If a midi note has a velocity of 127, the trig output will be 5V
If the velocity is 64, the trig output will be 3.5V.
If the velocity is 0, the trig output will be 2V.

Use case : it is perfect to control analogical envelopes and modules since their trig/gate inputs respond most of the time to the amplitude of the signal.

Minimum (CC##):
Set the minimum voltage output when if the Velocity sensitivity is activated

Range (CC##):
Set the maximum voltage output

Use case : being able to set the min and max values of your dynamic gates allows you to have fine control when you use these to control analog gear and avoid the use of an external attenuator/amplifier to scale your signal

---

CC (Control Change) CV & D-GATE :

Convert a Control change message into a CV

Parameters:

- MIDI Channel
- Number
- Range
- Filter

Midi Channel :
Select the midi channel

Number :
Choose which CC will be used

Range (CC##):
Set the range of the CV output

Filter (CC##):
Choose the amount of filtering on the cv output (glide time)

Vel (Velocity) CV & D-GATE :

Convert notes velocity a CV

Parameters:

- MIDI Channel
- Source
- Range

Midi Channel :
Select the midi channel

Source :
Choose choose if the velocity come from all the notes from a midi channels or from another CV line

Range :
Set the range of the CV output

AT (Aftertouch) CV & D-GATE :

Convert an aftertouch message into a CV

Parameters:

- MIDI Channel
- Range
- Filter

Midi Channel :
Select the midi channel

Range :
Set the range of the CV output

Filter :
Choose the amount of filtering on the cv output (glide time)

POLY AT (polyphonic aftertouch)CV & D-GATE:

Convert a polyphonic aftertouch message into a CV

Parameters:

- MIDI Channel
- Source
- Range
- Filter

Midi Channel :
Select the midi channel

Source :
Select which note is generating the aftertouch.

Range :
Set the range of the cv

Filter :
Choose the amount of filtering on the cv output (glide time)

PB (Pitch bend) CV & D-GATE :

Convert a pitch bend message into a CV

Parameters:

- MIDI Channel
- Range
- Filter

Midi Channel :
Select the midi channel

Range :
Set the range of the CV

Filter :
Choose the amount of filtering on the cv output (glide time)

Clock CV & D-GATE :

Generate a clock output based on the incoming midi clock or internal clock generator

Parameters:

- MIDI Channel
- Type
- Div
- Length
- Range

Midi Channel :
Select the midi channel

Type :
Select if the output generate :
Trigs corresponding the master clock division
a trig when a midi start message is received
a high gate when the a midi start message is received who stay high until a midi stop message is received

Div :
Set the division of the midi clock

Length :
Set the length of the outputted clock or start trig

Range :
Set the amplitude of the trig output

LFO CV & D-GATE :

Generate a LFO on the CV output

Parameters:

- MIDI Channel
- Type
- Speed
- Mode
- Range

Midi Channel :
Select the midi channel

Type :
Choose the LFO waveform between Saw up , Saw down, Square , Triangle , Sine, Random , noise.

Speed :
Sets the LFO's speed as a time division of the master clock (external or internal).

Mode :
Choose the behavior of the LFO:

Continuous: The LFO runs freely and never stops.
Note Reset: The LFO restarts its cycle every time a new note is received.
Gated (Key-Down): The LFO only runs while a key is held down.

Range :
Set the amplitude of the LFO CV output

ENV (Envelope) CV & D-GATE :

Generate an envelope on the CV output when a midi note is received

Parameters:

- MIDI Channel
- Source
- Note
- Type
- Attack
- Decay
- Sustain
- Release

Midi Channel :
Select the midi channel

Source :
Choose from which source the Envelope is being triggered (from a midi channel note or another CV line)

Note :
If the envelope is triggered by a midi channel, choose which note will trig it.

Type :
Choose the type of the envelope
AR : Attack/Release
AD : attack/decay
ADSR : attack/decay/sustain/release
LOOP : Looping envelope (like an LFO, the envelope retire itself at its end.

Attack :
set the attack time between 0 ms and 13 secondes (the values are set in a exponential order)

Decay :
set the decay time between 0 ms and 13 secondes (the values are set in a exponential order)

Sustain :
set the sustain level

Release :
set the release time between 0 ms and 13 secondes (the values are set in a exponential order)

RANDOM CV & D-GATE :

Randomise the cv output when a midi note is received

Parameters:

- MIDI Channel
- Source
- Div
- Base note (only for cv)
- Length (only for D-Gate)
- Random trig (only for D-Gate)
- Random level (only for D-Gate)
- Range
- Smooth

Midi Channel :
Select the midi channel

Source :
Choose from which source the random is being triggered it can be:
- from a midi channel note
- from another CV line
- from the master clock

Div :
If the random is being triggered by the master clock, choose a division of it to trigger the random.

Base note (only for cv) :
Set the note around which the random will be done

Length (only for cv) :
Set the length of the trig(latch is always random change the time every gate or set the time in milliseconds)

Random trig (only for D-Gate) :
Set the probability of a new random value to occur when activated

Random level (only for D-Gate) :

Range :
set the range of the CV output

Smooth :
set the glide time between two random values

CV ARP (Arpeggiator) CV :

Arpeggiate the incoming midi notes

Parameters:

- MIDI Channel
- Div
- Range
- Direction
- Hold

Midi Channel :
Select the midi channel

Div :
Set the division of the master clock who will make the arpeggiator go forward

Range :
Set the arpeggiator range (if it only play between the midi notes received or if it play the same note one or more octave upper)

Dir :
Choose how the arpeggiator notes will be played (forward, backward, pendulum, random)

Hold :
Choose if the arpeggiator keep the notes and continue to play these until new notes are inputted or if it stop when no notes are played

---

EUCLIDEAN D-GATE :

Generate an euclidean sequence (describe here euclidean sequencer)

Parameters:

- MIDI Channel
- Div
- Gate length

- Steps
- Events
- Rotate
- Range

Midi Channel :
Select the midi channel

Div :
Set the division of the maser clock who will make the sequencer go forward

Gate length :
Set the length of the trig(latch is always random change the time every gate or set the time in milliseconds)

Steps:
Set the length of euclidean sequence

Events :
Fill the sequencer buffer with notes

Rotate :
Rotate the euclidean buffer

Range :
Select the range of the gate output

SEQ (Sequencer) CV & D-GATE :

Sequence a cv or dynamic output from midi CC

The CV sequencer work a bit differently than the other other CV out types.
You can choose a length of the sequence, and each step will correspond to the value of a CC (starting at CC1)
The idea behind it is to use a midi controlled (typically one with several sliders next to each other) and create sequences instinctively

For example, if you set a length of 4, step 1 will have the values of CC1, step 2 will have the value of CC2 , step 3 will have the value of CC3 , step 4 will have the value of CC4 ....

Parameters:
- MIDI Channel
- Type (only for D-Gate)
- Base note (only for CV)
- Div

- Gate length (only for D-Gate)
- Steps
- Direction
- Glide (only for CV)
- Range (only for D-Gate)
- Note in function

Midi Channel :
Select the midi channel

Type (only for D-Gate) :
Choose if the sequencer output gates or continuous CV

Base note (only for CV):
Choose which note will be sent if the CC of a step has a value of 0.

Div :
Choose the division of the master clock the sequencer will run at

Gate length (only for D-Gate) :
Choose the length of the gate.

Steps :
Choose the number of steps in the sequence (length).

Direction :
Choose how the sequencer notes will be played (forward, backward, pendulum, random)

Glide (only for CV):
Set the glide timer between two sequencer notes.

Range (only for D-Gate):
Select the range of the output

Note in function:
Choose if an inputted note transpose or randomise the sequence.

CC RECORDER CV & D-GATE :

Record the a CC and play a CC

The CC recorder allows you to record a cc inside a grid, and play it back (in the way voltage block use to do)

Parameters:
- MIDI Channel

- CC#
- Div
- Length
- Glide
- Note
- Note in dest
- Range

Midi Channel :
Select the midi channel

CC#
Choose the CC who will be recorded.

Base note (only for CV):
Choose which note will be sent if the CC of a step has a value of 0.

Div :
Choose the division of the master clock the sequencer will run at

length :
Choose the number of steps in the sequence (length).

Glide :
Set the glide time between two steps

Note :
Choose which note will trig the note in function

Note in function :
select which function the note will trig

Range:
Select the range of the output (select note scale if you want v/oct notes or link it to a cv effect)

MIDI Effects (FX Tab)

The FX tab midi effect is usable on midi notes received or generated by the Portail.

Notes and gates Effects:

Some effects are designed specifically for midi notes(cv FX) while others are for gates.
Midi notes effects will work on cv outputs with note, arp, random , or seq type
Gate effect will work with gates output with

Effect Chaining:

You can chain multiple effects together, meaning the output of one effect becomes the input for the next. The order in which you link them is crucial, as it determines the final output. The effects are processed in the order you select them on the FX list.

How to Assign an Effect

Select Effect Type:
Navigate to the FX tab and choose an effect from the «Type» menu. This is where you pick the kind of processing you want to apply (e.g., a Scale effect to quantize notes, or a Random Note effect to add randomness).

Select Destination:
After choosing the effect, select its output destination «dest»menu.
This is the CV or Gate output channel where the processed data will be sent.

If you assign multiple effects to the same output, they are automatically chained together in the order they appear on the FX list.

Example:

- FX1: Random Note effect with a destination of CV1.
- FX2: Scale effect with a destination of CV1.
- FX5: Transpose effect with a destination of CV1.

In this scenario, the incoming MIDI data for CV1 will first be processed by **FX1 (Random Note effect)**. The output of the Random Note effect will then be passed to **FX2 (Scale effect)**, which will quantize the now-randomized notes to a specific scale. Finally, the output of the Scale effect will be passed to **FX5 (Transpose effect)**, which will shift the pitch of the scaled notes. The final, processed CV data will then be outputted on the CV1 channel. The data flows sequentially from **FX1 → FX2 → FX5** and then to the output.

EFFECT TYPES

Here are the FXs you can assign to CV and D-Gate output, some work with both and some just with one type ; it will be specified next to the function.

NOTE FX

NOTE FILTER Note :

Filter the midi note range

Parameters:

- Dest
- Lower
- Higher

Dest :
Select the CV row who will have this effect

lower :
Select the lowest note below which midi notes will be ignored

Higer :
Select the Highest note above which midi notes will be ignored

---

RANDOM OCTAVE Note :

Randomly changes the octave of the note being played.

Parameters:

- Dest
- Range
- Probability

Dest :
Select the CV output who will have this effect

Range :
Select the octave range

Probability :
Set the probability for the new note to be played at another randomized octave

---

RANDOM NOTE Note :

Randomly add a note interval to the note being played.

Parameters:

- Dest
- Range
- Probability

Dest :
Select the CV row who will have this effect

Range :
Select the note range

Probability :
Set the probability of the new note to be played added to the random note (0% = play the original note all the time , 100% = play the original note with the random note all the time)

CHANCE Note :

Randomly changes the octave of the note being played.

Parameters:

- Dest
- Probability
- Vel pro

Dest :
Select the CV output who will have this effect

Range :
Select the octave range

Probability :
Set the probability of the new note to be played at another randomized octave
Vel prob :
Links a note's velocity to the probability that the note will be played

---

ACCUMULATE Note :

Randomly add a note interval to the note being played.

Parameters:

- Dest

- Amount
- Reset

Dest :
Select the CV row who will have this effect

Amount :
?

Reset :
?

TRANSPOSE Note :

Transpose the notes of a cv row

Parameters:
- Dest
- semitones
- octaves

Dest :
Select the CV row who will have this effect

Semitones :
Transpose the notes in semitones

Octaves :
Transpose the notes in octave

SCALE Note :

Scales the notes of a CV row to a scale

Parameters:
- Dest
- Scale
- Root note

Dest :
Select the CV row who will have this effect

Scale :
Select the scale

Root note :
select the root note of the scale

MICROTONAL Note :

Apply the notes to a table (this effect will always be at the end of the FX chain)

Parameters:

- Dest
- table

Dest :
Select the CV row who will have this effect

Table :
Select the table where the notes will go thru

D-GATE FX

DELAY
HUMANIZE
LOGIC
RANDOM VELOCITY
RANDOM TRIG LENGTH
EUCLIDEAN
INVERT
REPEAT

DELAY Gate,Trig,env :

Randomly add a note interval to the note being played.

Parameters:

- Dest
- Amount

Dest :
Select the D-Gate row who will have this effect

Amount :
Set the delay time in millisecondes between 0 and 1041 ms

HUMANIZE Gate :

Randomly add a note delay to the note being played.

Parameters:

- Dest
- Amount

Dest :
Select the D-Gate row who will have this effect

Amount :
set the amount of

LOGIC Gate :

Randomly add a note interval to the note being played.

Parameters:

- Dest
- Function
- Modulator

Dest :
Select the D-Gate row who will have this effect

Function :
AND: if both dest and modulator gate are High, dest Gate will be High. else, dest gate will be low

OR: if at least one of dest or modulator gate is High, dest Gate will be High. else, dest gate will be low

NAND: if both dest and modulator gate are High, dest Gate will be Low. else, dest gate will be High

NOR: if both dest and modulator gate are Low, dest Gate will be High. else, dest gate will be low

XOR: if the states of dest and modulator gate are different (one High and one Low), dest Gate will be High. else, dest gate will be low

XNOT: if the states of dest and modulator gate are the same (both High or both Low), dest Gate will be High. else, dest gate will be low

NOT: if the input gate is High, dest Gate will be Low. else, dest gate will be High

Modulator :
select the D-gate row the dest. row will do the binary logic with

---

RANDOM VEL Gate :

Randomly changes the velocity of the Dest gate.

Parameters:

- Dest
- Range
- Type

Dest :
Select the GATE output who will have this effect

Range :
The range of the random velocity value generated

Type :
how it mix with the existing velocity:

added: generated random velocity will be added with the dest note velocity.
substracted: generated random velocity will be substracted with the dest note velocity.
replaced: the original dest note velocity will be replaced by the one generated .

RANDOM TRIG LENGTH Gate :

Randomly change the length of the trig being played.(only on trig in gates rows)

Parameters:

- Dest
- Range
- Vel control

Dest :
Select the D-Gate trig row who will have this effect

Range :
select the range of the random (0= same as input length, 127 = longer as input trigg)

Vel control :
how the velocity play on the random length

INVERT Gate :

Invert a gate signal (if it is off, it will be on)

Parameters:

- Dest

Dest :
Select the D-Gate row who will be reverted

REPEAT Gate :

Ratcheting engine

Parameters:

- Dest
- Amount
- Number

Dest:
Select the D-Gate row who will have this effect

Amount:
division of the clock

Number:
number of repeats

MIDI CC Mapping

One of the features of the Portail is the ability to control almost any parameter with an external MIDI controller.

you can assign up to 32 CCs to parameters by midi learning.

How to Map a Parameter to a MIDI CC

1. Go to the «MOD MATRIX» tab:

2. Add a new mapping: Click on the + button, it will add a new row with a new mapping slot.

3. Learn a CC: click on the row number on the left,. the box will turn red. you can now send a CC message, the portail will get it. The cc number and channel will be displayed on the right of the row number
4. Assign the mapping to a parameter: select on the destination dropdown the output destination of the mapping ,then select the parameter you want to modify.

5. set the range: set the minimum and maximum target value to scale(or revert) your cc mapping.

6. add more mapping: Click on the + button to add more mapping or to the bin on the right of a mapping row to remove it.

7. IMPORTANT - Save Your Mapping: The mapping is now active in the module's temporary memory. To make it permanent, you must click update all parameters and then Save parameters.
Your MIDI controller can now adjust the Portail parameters in real-time.

NB : If the type of a cv, midi or effect row where a mapping has been set is changed. The mapping will be removed from the mapping list.

Firmware Update

1. Click the global tab of the online editor
2. click on latest firmware and download it.
3. Plug your modules to your computer with the usb
4. press the left button of the portail (▼) and power up your module with your modular rig (while pressing.
5. Your module will be recognized as a usb drive by your computer (accept if your computer asks for authorization for the device) named RPI-RP2
6. drag and drop the downloaded firmware into the RPI-RP2
7. the Portail usb drive will disconnect by itself and reboot.

you now have your Portail updated