

VEASY

ReTrigger Gated CV Manipulator

Operation Manual

Version 1.1.0

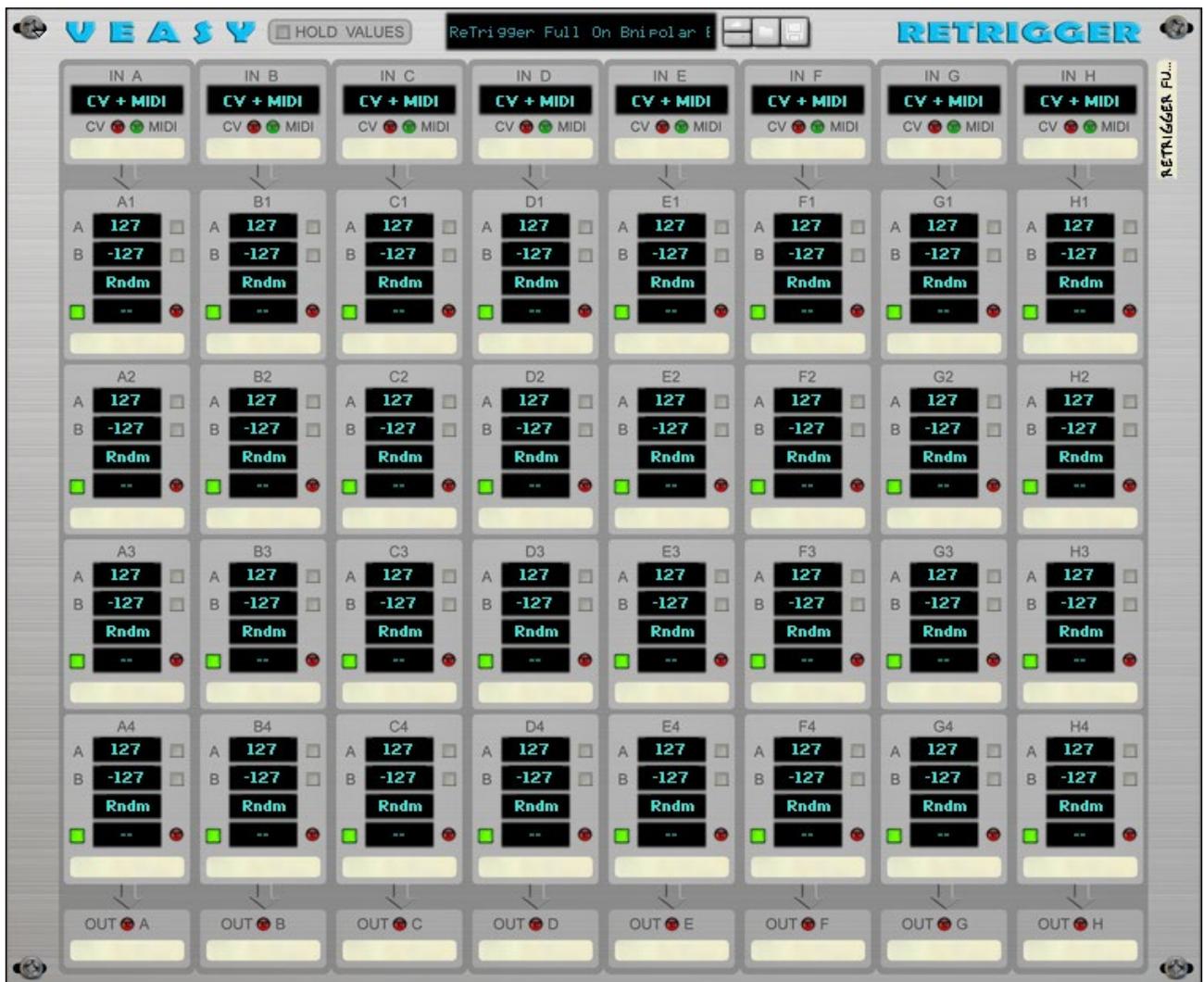


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Introduction

Thank you for your interest in the ReTrigger Gated CV Manipulator!
In this manual the features and functions of the device are explained.

Functions

The Retrigger Gated CV Manipulator is a Rack Extension Utility for Reason. It's designed to apply CV changes, without drawing any automation, on every incoming Gate CV or MIDI change to any parameter of any device in the Reason Rack that accepts CV altering.

Each of the eight columns has an input selection (CV + MIDI, CV Only or MIDI Only and BLOCK). When input passes, it triggers four groups of controls to manipulate any automatable parameters on other devices or modulate the routing in a Combinator Programmer. If that's not enough, you can internally link the output to another input so you have another four groups to control. With only one incoming pulse it's possible to change 32 external parameters! Or you just chain two ReTriggers and have 8 groups per column times 8 columns.

Features

The ReTrigger is optimally coded with maximum speed and usability in mind. For example internally it's programmed to use fast Switch statements instead of slow If-Then-Else statements. Columns and Groups that are not connected with cables or are turned off with BLOCK are not rendered. Calculations are only made when input is provided which consumes less processor power than for instance a LFO based effect. Therefore the overhead for your processor is very low and it's possible to chain multiple instances.

It's also possible to link the CV OUT of a Group to the CV IN of another group. This way it's possible to act on 32 Groups with only 1 Gate CV pulse.

Cable connections are shown with colored LEDs and indicators; red means no connection, green means connection established. Also when the device is in folded state you will be informed about the operation of the device with corresponding colored LEDs.

All CV input and output jacks are located exactly behind the corresponding Front Panel displays or LEDs. So when you hold the cursor on a display or LED you want to connect and hit 'TAB' to flip the rack, your cursor is directly located in the right spot. Also the naming label of the device stays in the same spot in all possible states of the device.

Every stage can be labeled. The labels stay in the same place when the rack is flipped with 'TAB'. When a ReTrigger is added it has blank labels because of the initial patch. Multiple patches are added and are named to have Blank or Filled Labels. When you select a patch with Filled Labels or when you right clicking the device and select 'Reset Device' from the drop down menu, the labels are filled with the name of the stage or group. Labels can be altered in both Front as well as Back Panel view and maintain the same caption in both views.

Although the output can be set to Rndm (random) the outcome is predictable. With the Test buttons the border values can be set by hand (and ear). When you are satisfied with these values,

you can turn them off and enjoy random (or up-down) values. Or you can leave both on to get an alternating effect between values A and B. The outputted CV value is always shown in the corresponding display.

All controls can be set exact, with the cursor and consistent with the Reason standards. The notes in Ranges can be set by use of a drop down menu in which the notes are ordered by name and then by octave.

All controls can be reset the Reason way by CTRL-clicking and values can be changed precisely by holding SHIFT while dragging.

A ReTrigger can be inserted in the Gate flow without the use of CV mergers or splitters.

You can turn whole columns or individual groups off.

Rndm (random) and Updn (Up – down) never output the same value twice.

ReTriggers also respond to MIDI input and can handle MIDI and CV input simultaneously, directly from a MIDI source like a keyboard, but also inside a Combinator when 'Receive Notes' is selected. When this turns out to be an undesired effect MIDI input can be blocked. Also CV input can be blocked so only MIDI is handled.

All settings on the device are fully automatable. See the Automation section for all possibilities.

Starting point patches are available. Of course you can also save your settings as a patch.

With the ReTrigger you can also toggle knobs on or off, or set it to bypass. When a device you want to influence is mounted in a Combinator you can change the parameters by connecting Rotary and CV input jacks. They both translate incoming CV a bit different, so on the Back Panel of the ReTrigger you can search for the values in look up tables in the right bottom corner.

Intentional use

While beta testing the ReArranger CV Randomizer (<https://www.reasonstudios.com/shop/rack-extension/rearranger-cv-randomizer/>) some testers replied that they didn't have the right microphones, recording locations or time to make recordings of their favorite instruments and make multi sampled, multi mic'd instruments. But there are lots of one shot quality samples out there. The ReTrigger is intentionally designed to turn a single shot sample into a constantly changing one, so the effect can closely match multiple sampled ones. But every sample needs a different approach. For example, a bass drum can be changed with EQ but also with compression (and lots of other FX and VSTs). And the amount of compression or the gain or frequency should alter, but between the right values, otherwise the desired effect would not be reached.

So, the ReTrigger does that by reacting on every CV Gate pulse it gets. Only when it gets an input pulse, so there are no more changes and calculations in your DAW than you ask for. The effect is also different than LFO based effects, because they might result in the same changes over and over.

To mimic the ReArranger changes in EQ or any other effect must be set between border values very specific. That's where the Test buttons come in. When set to on, the output will be limited by

the value of the corresponding value. So you can set the right value by changing the value and listen what still feels natural. Then you can set the other border likewise. If you turn on both Test buttons the output alternates between both values so you can test the borders like that. When you are satisfied you can turn them both off and let the ReTrigger compute random or up-down values. Of course drastic changes can also do the right job, you set the borders!

It's also possible to, for example, pan sound sources on every pulse. Or change parameters on a synth every time you hit a key on the keyboard.

And finally hooking up a ReTrigger after a ReArranger can make for even more creative effects!

Location in Reason

You can find the ReTrigger Gated CV Manipulator by selecting 'Utilities' in the Browser or 'Add device' in the rack. Then navigate to 'Veasy' and select, double click or drag the ReTrigger into the rack.

Video Manual, Examples and Tutorials

This manual is also available as a Video Manual called 'ReTrigger Demo'. It includes examples and tutorials and can be found at <https://veasy.nl/#ReTrigger>.

Updates 1.1.0

Added 'Hold Values' to Front Panel (thanks Teflon Tomb)

GUI design changes for uniformity among all Veasy Rack Extensions

Updates 1.0.3

Added Group Name to Parameter Names for Remote clarity

Version number on Back Panel

Updates 1.0.2

Folded Front letters D – G changed to E - H

Updates 1.0.1

Erased shadow below buttons

Added black rails to Folded Back Panel

Changed appearance of green LEDs on Folded Front Panel

Added French and German languages

Questions / feature requests / bugs

When you have any questions or feature requests or you want to report a bug, please send an email to support@veasy.nl.

Front Panel



Hold Values



Toggle button that, when pressed, will hold all Output Values in the displays. When not pressed the values will be reset to "--" after a short while.

Patch Browser



Standard Patch Browser with display and Previous / Next / Folder / Save functionality. Starting point patches are added and can be found in the Browser under 'Rack Extensions / ReTrigger Gated CV Manipulator'.

Device Label



Label to name the device for your convenience. This is also the name that shows up in the Programmer of a Combinator. By setting the label caption on the Front Panel it changes automatically on all panels and vice versa.

8 Columns by 4 Groups of manipulation

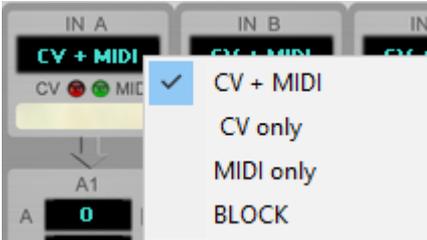


The device is divided into 8 similar columns (A to H), with an Input Selector with CV and MIDI LEDs, 4 groups of Settings (1 - 4) and a Patch Out LED indicator. With labels to help you keeping things ordered.

In



Input Selector



CV + MIDI

Both CV and MIDI input will be handled simultaneously.

CV Only

Only CV input will be handled.

MIDI Only

Only MIDI input will be handled.

BLOCK

All input will be blocked for this column.

CV / MIDI LEDs



When a CV cable is connected to the CV input jack on the Back Panel, the dimmed red CV LED turns dimmed green and will light up green when input is detected. When 'MIDI Only' or 'BLOCK' is selected at the Input Selector, CV LED will turn red whether a cable is connected or not. The MIDI LED will light up green when MIDI input is detected. When 'CV Only' or 'BLOCK' is selected at the Input Selector the MIDI LED will turn dimmed red to indicate no MIDI input will be handled.

Label



Label to name the Input source. By setting the label caption on the Front Panel it changes automatically on the Back Panel and vice versa. Labels stay in place when you flip the rack by hitting 'TAB'.

Groups



Every column consists of 4 groups of settings that are all triggered by the Input simultaneously.

Value A



Can be set from -127 to 127 by clicking the display and dragging up or down. Hold 'SHIFT' while dragging to make more precise changes.

Test Button A



Toggles the Test Function on or off. When the Test Function is on, the button turns red and Value A is outputted directly to the designated output display and when the Enabled Button is on and the CV Output Jack on the Back Panel is connected the output is sent out to this CV Output jack. The Action is bypassed, so you can test the value before sending out Random or Up <-> Down values.



When both Test Button A and Test Button B are on, the output alternates between the A and B value. This way you can test whether both values still sound right before sending out Random or Up <-> Down values. Or use it to keep alternating if that is the desired effect.

Value B



Can be set from -127 to 127 by clicking the display and dragging up or down. Hold 'SHIFT' while dragging to make more precise changes.

Test Button B

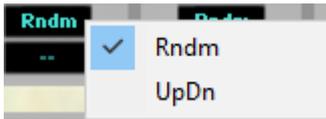


Toggles the Test Function on or off. When the Test Function is on, the button turns red and Value A is outputted directly to the designated output display and when the Enabled Button is on and the CV Output Jack on the Back Panel is connected the output is sent out to this CV Output jack. The Action is bypassed, so you can test the value before sending out Random or Up <-> Down values.



When both Test Button A and Test Button B are on, the output alternates between the A and B value. This way you can test whether both values still sound right before sending out Random or Up <-> Down values. Or use it to keep alternating if that is the desired effect.

Action



Rndm (Random)

If both Test Buttons A and B are off, a random value between (and including) the A and B value is generated. Random never outputs the same value twice (unless the A and B values are equal).

UpDn (Up <-> Down)

If both Test Buttons A and B are off, the value that will be outputted will move between (and including) Value A and B one by one until value A or B is reached. It then will continue the other way around.

Enable Button



Toggles Enabled on or off. When Enabled is on, the button turns green and output is sent to the designated output display and when the CV Output Jack on the Back Panel is connected the output is sent out to this CV Output jack.

Output Value



The display shows the generated output value. When no output is generated two dashes (--) appear in the display.

CV Out LED



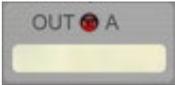
When cables are connected to the corresponding CV Out jack on the Back Panel the LED turns to dimmed green and blinks when a value is sent out.

Label

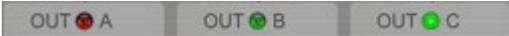


Every group has a Label to name it's activity. By setting the label caption on the Front Panel it changes automatically on the Back Panel and vice versa. Labels stay in place when you flip the rack by hitting 'TAB'.

Out



Patch Out LED



When a cable is connected on the Back Panel, the dimmed red LED will turn dimmed green. When CV Input is detected the respective CV Out LED will blink bright green and the same CV is outputted at the corresponding CV Out Jack on the Back Panel

Label



Every column has a Label to name it's destination. By setting the label caption on the Front Panel it changes automatically on the Back Panel and vice versa. Labels stay in place when you flip the rack by hitting 'TAB'.

Folded Front Panel



Device Label



Label to name the device for your convenience. This is also the name that shows up in the Programmer of a Combinator. By setting the label caption on the Front Panel it changes automatically on all panels and vice versa.

Columns (A - D and E - H)



Each Column on the Front Panel is represented as a row of LEDs. The first two LEDs are the Columns CV In LEDs, the next four LEDs are the Groups CV Out LEDs and the single last LED is the Patch CV LED. The act and respond exactly the same as the Front Panel LEDs, so dimmed red means no cable connected, dimmed green means that the cable is connected, but there is no input or output. Blinking bright green means input or output is received or transmitted.

Back Panel



All CV Input and Output jacks are located exactly behind the corresponding Front Panel displays. So when you hold the cursor on a display you want to connect and you hit 'TAB' to flip the rack, your cursor is directly located in the right spot.

Device Label



Label to name the device for your convenience. This is also the name that shows up in the Programmer of a Combinator. By setting the label caption on the Front Panel it changes automatically on all panels and vice versa.

8 Columns by 4 Groups of CV Jacks



In

CV In Jack



Connect a CV input source to this CV In Jack. Every time the source gives a pulse the Groups in the corresponding Column are triggered. The source can be a device like the Matrix Pattern Sequencer or any device with CV output. After connecting a cable to this CV In Jack the corresponding LED on the Front Panel will turn from dimmed red to dimmed green. When it's triggered it will blink bright green.

Label



Label to name the Input source. By setting the label caption on the Back Panel it changes automatically on the Front Panel and vice versa. Labels stay in place when you flip the rack by hitting 'TAB'.

Groups

CV Out Jacks



Connect another device with CV inputs that you would like to control to this CV Jack. After connecting a cable to this CV Out Jack the corresponding LED on the Front Panel will turn from dimmed red to dimmed green. When it's triggered it will blink bright green.

Label



Every group has a Label to name it's activity. By setting the label caption on the Back Panel it changes automatically on the Front Panel and vice versa. Labels stay in place when you flip the rack by hitting 'TAB'.

Out

Patch Out Jack



When connected this CV Jack will output the same CV value as the value originally received at the CV In Jack for that Column. The Patch Out Jack can be used to insert a ReTrigger in a Gate CV Path without the use of a CV merger or splitter. It can also be used to connect to another Columns CV In jack to trigger that Columns Groups as well. This way you can trigger up to 32 Groups! After connecting a cable to this CV In Jack the corresponding LED on the Front Panel will turn from dimmed red to dimmed green. When it's triggered it will blink bright green.

Label



Every column has a Label to name it's destination. By setting the label caption on the Back Panel it changes automatically on the Front Panel and vice versa. Labels stay in place when you flip the rack by hitting 'TAB'.

Bypass / on / off table

Through Rotary (Min = 0 Max = 2) By: 63 to 127 On: 0 to 62 Off: -1 to -127	Through Rotary (Min = 0 Max = 1) On: 63 to 127 Off: 62 to -127
OUT G3	OUT H3
Through CV Input (Min = 0 Max = 2) By: 64 to 127 On: -63 to 63 Off: -64 to -127	Through CV Input (Min = 0 Max = 1) On: 0 to 127 Off: -1 to -127
OUT G4	OUT H4

It's also possible to manipulate buttons on a device. The values that set the state of a button differ when set 'Through Rotary' or set 'Through CV Input' (using the Rotary or CV In Jacks on the Back Panel of a Combinator / Mix Channel / Audio Track). Please consult the table on the Back Panel for the correct values.

Folded Back Panel

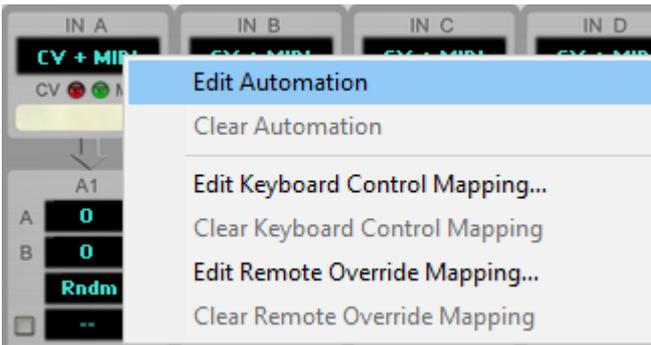


Device Label



Label to name the device for your convenience. This is also the name that shows up in the Programmer of a Combinator. By setting the label caption on the Front Panel it changes automatically on all panels and vice versa.

Automation



All the parameters on the device can be automated by right clicking on the display or button and selecting Edit Automation.

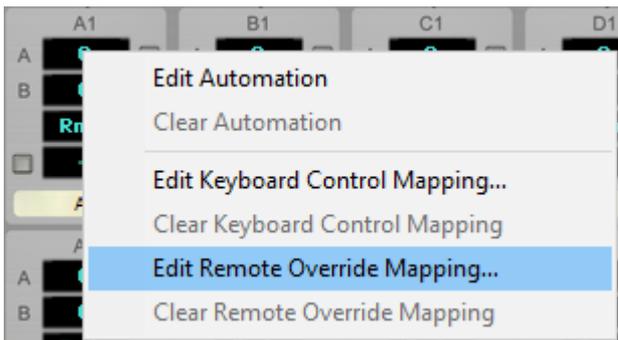


After selecting Edit Automation the item will get a green rectangle around it.



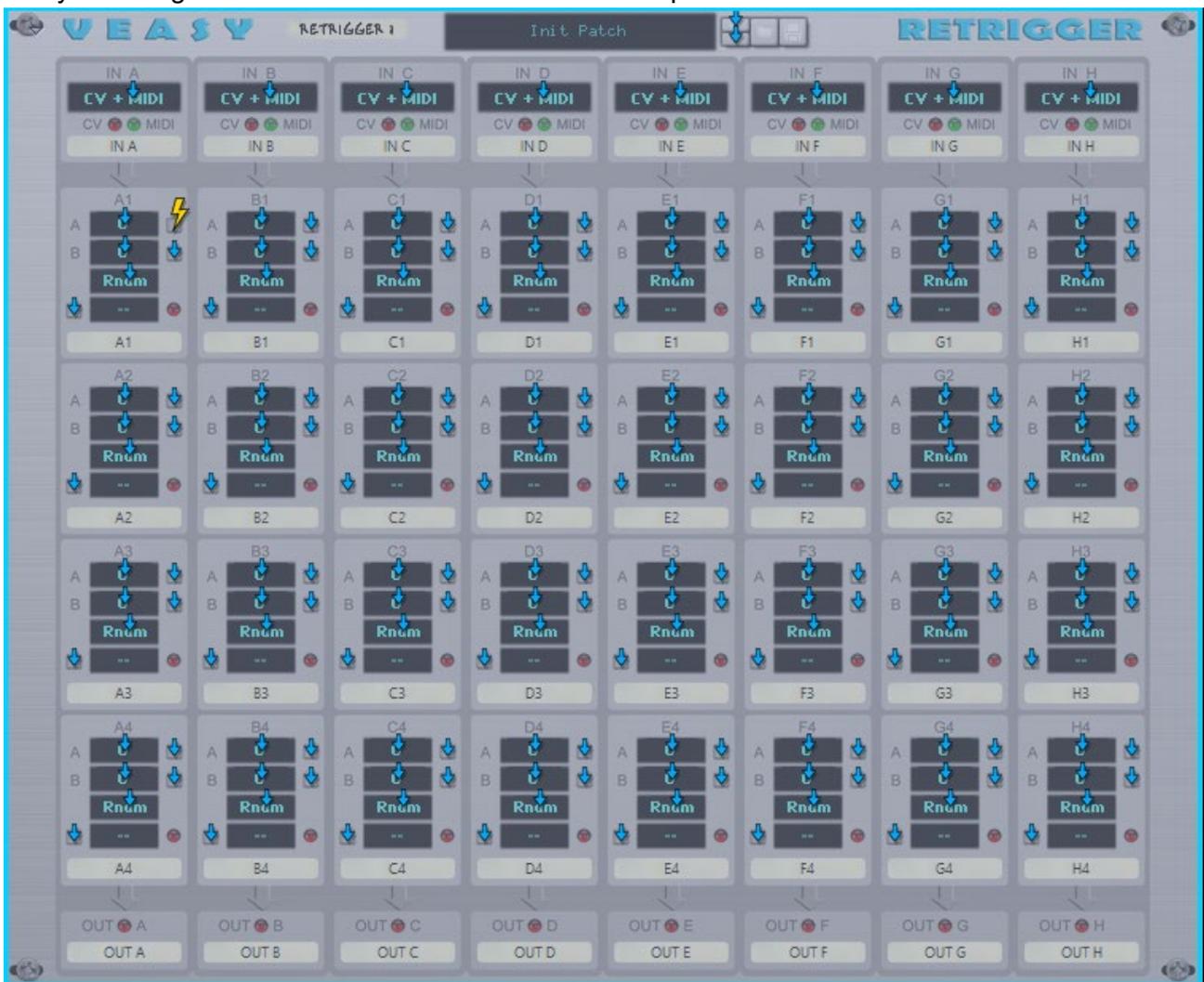
And an Automation Lane will be added in the Sequencer Window.

Remote Mapping



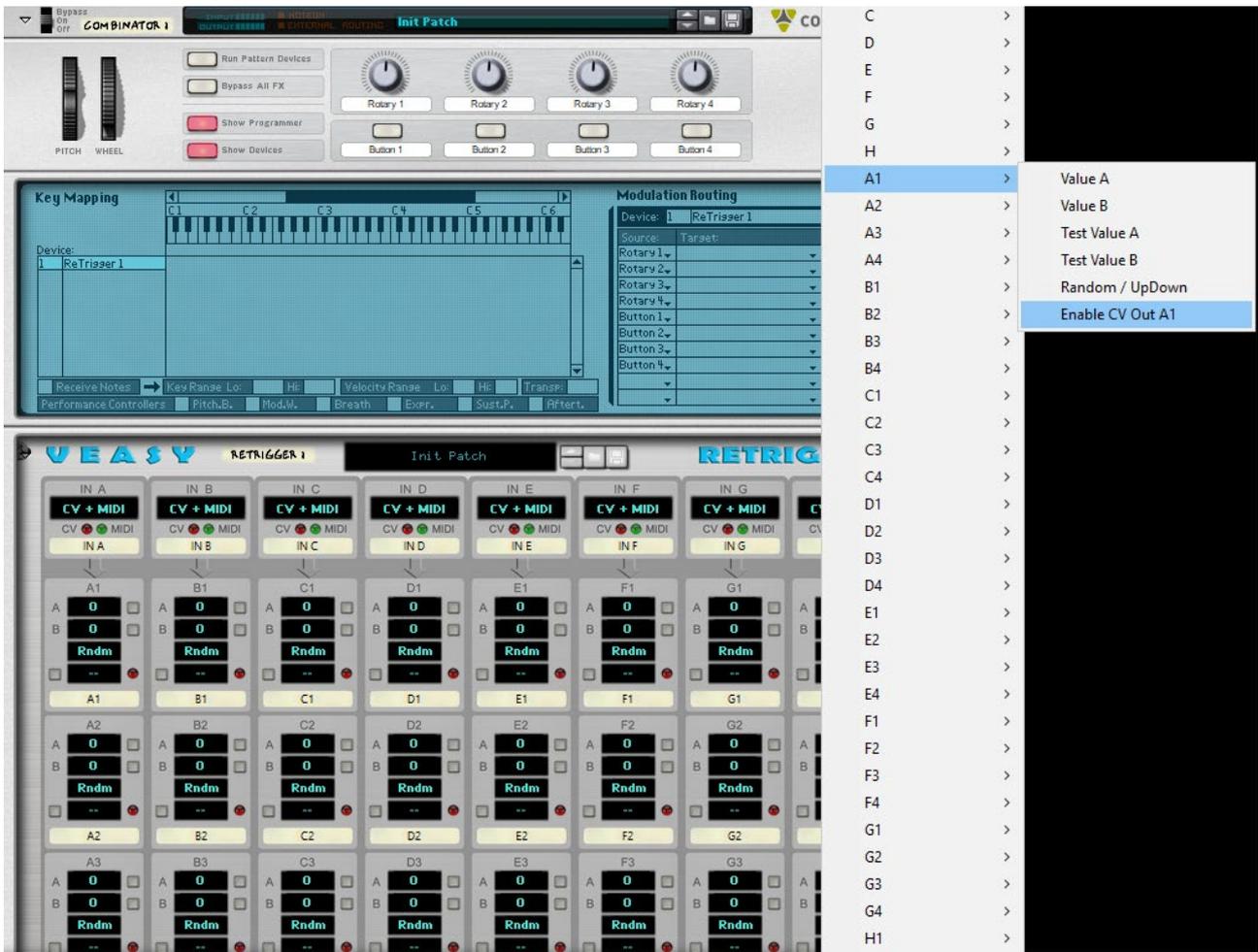
All the parameters on the device can be controlled with Remote by right clicking on the display or button and selecting Edit Remote Override Mapping.

Or by selecting Remote Override Edit Mode from the Options menu.



After clicking the device in the rack it gets focus and double clicking the blue arrows makes the parameters Remote-able. Already mapped items are indicated by the yellow lightning icons.

Modulation Routing through a Combinator



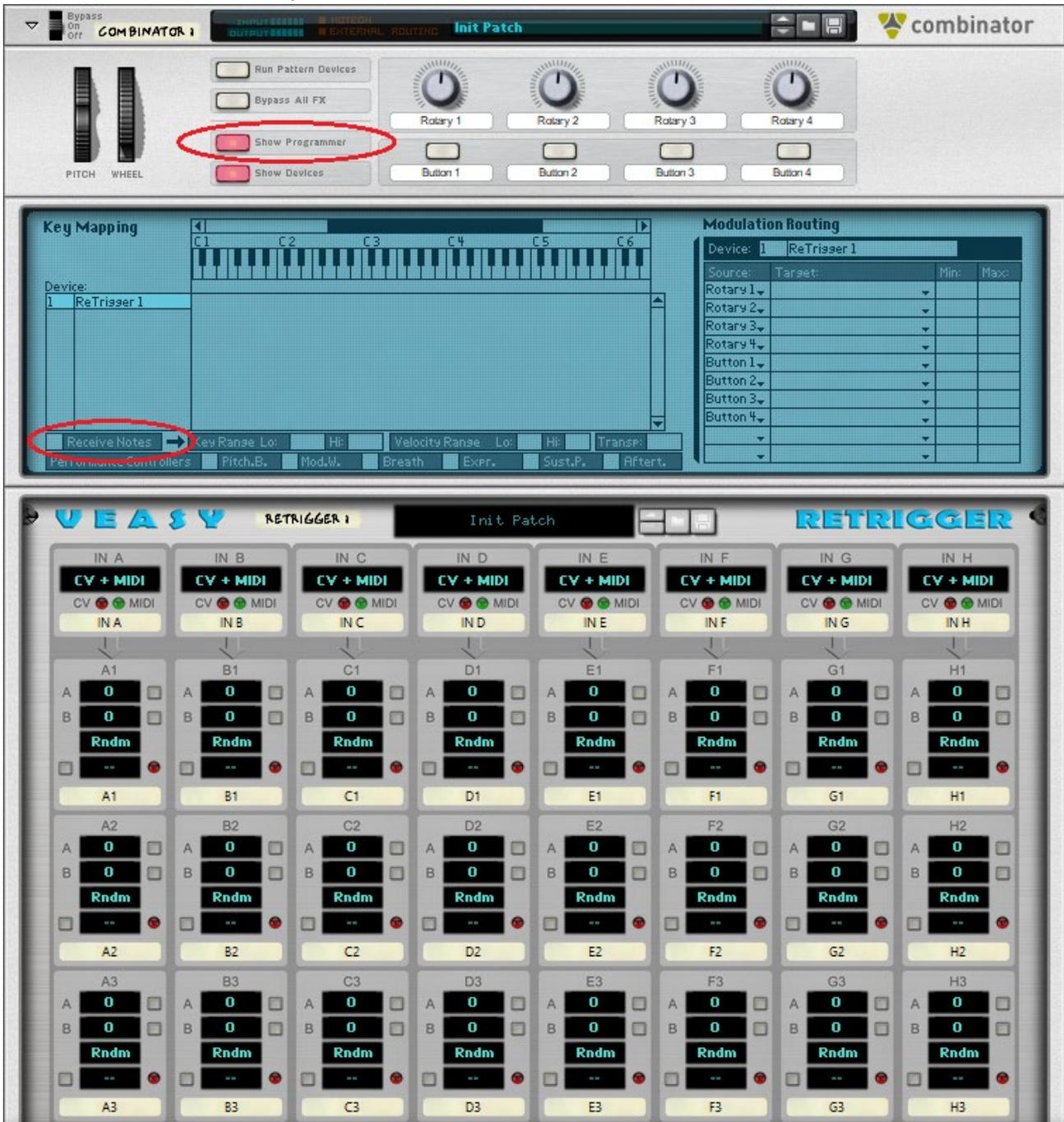
You can also insert the ReTrigger into a Combinator. Click 'Show Programmer'. In the Device list on the left select the device and in the Modulation Routing table on the right you can now select a parameter. You can now route CV cables from other devices onto the Combinator Rotary and CV input jacks.

This is also the way to manipulate other devices with the ReTrigger when they don't have CV Jacks on the Back Panel for certain parameters!

How to receive MIDI input

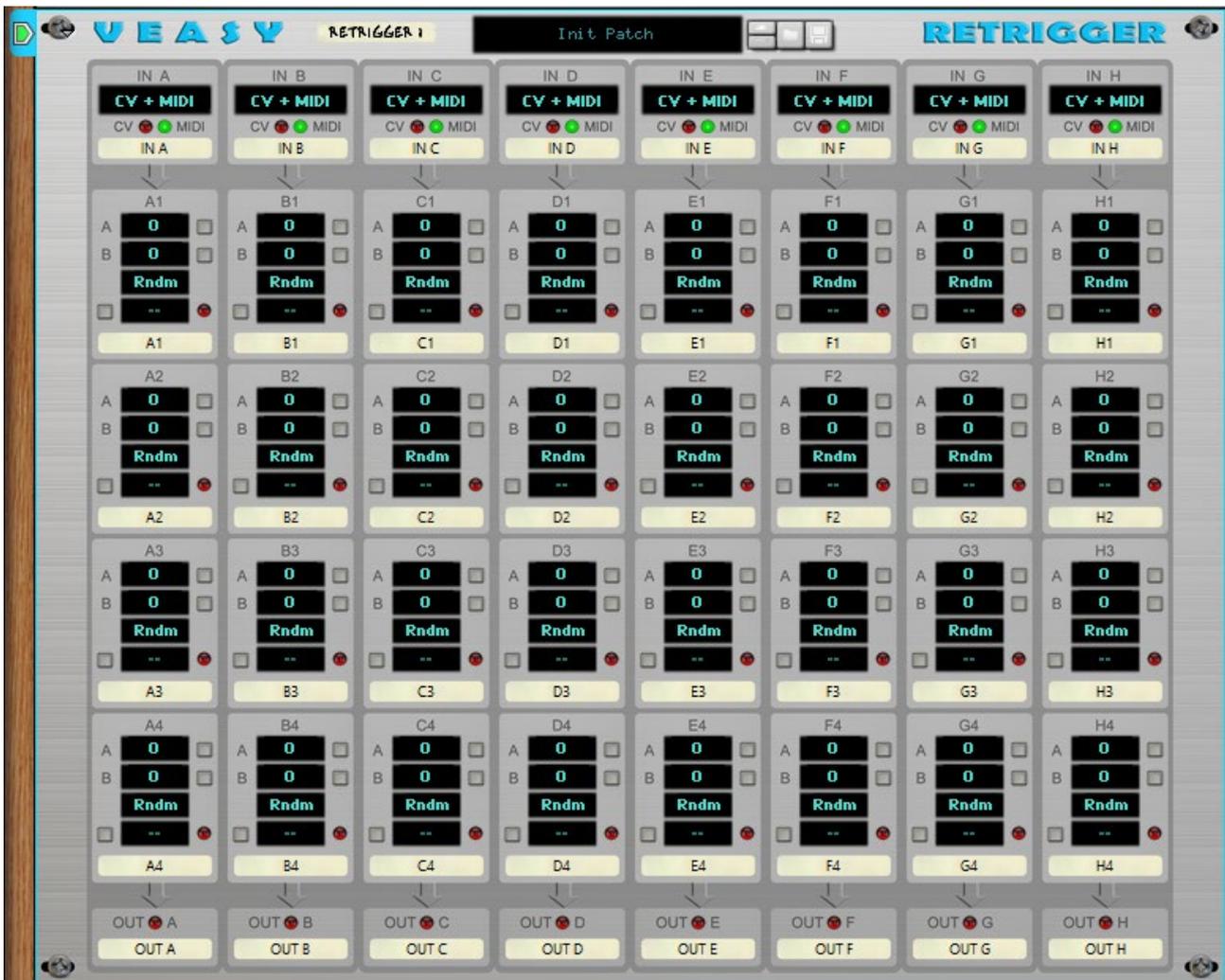
'Receive Notes' inside a Combinator

To make a ReTrigger receive MIDI data from the Combinator, click 'Show Programmer' on the Combinator, select the ReTrigger in the Device list and tick the box 'Receive Notes' in the left bottom corner of the display.



Receive Notes is off, the default value for ReTriggers. Tick the box to start receiving MIDI notes.

Selecting the device for MIDI input



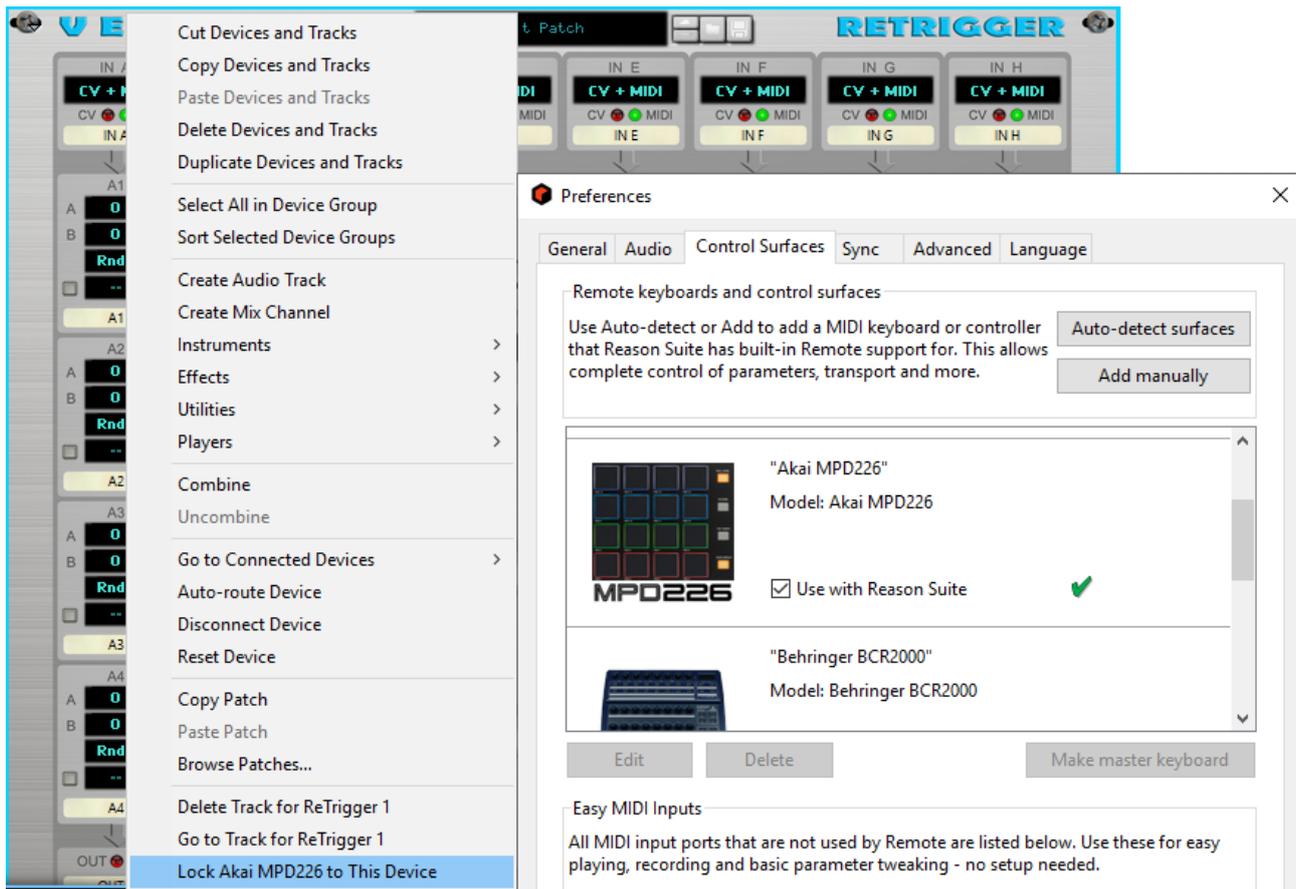
When selecting the ReTrigger a blue border appears around the device and in the upper left corner a blue box appears with a pointer. If you click the pointer again it will become hollow. When you touch a MIDI controller a green fill shows the activity. Here you can see all the Columns receive MIDI input because the Input Selector is 'CV + MIDI'. As a result all MIDI LEDs blink bright green.

Using the Advanced MIDI

The screenshot displays the Reason Rack interface. At the top, the 'Hardware Interface' section includes buttons for 'ASIO MRI8 ASIO Dr...', 'AUDIO I/O', 'MORE AUDIO', 'BIG METER', and 'ADVANCED MIDI' (circled in red). Below this are 'SAMPLING INPUT', 'AUDIO INPUT', and 'AUDIO OUTPUT' sections with various level meters. The 'ADVANCED MIDI DEVICE' section shows 'ReTrigger 1' selected on 'CHANNEL 1' (circled in red), with a dropdown menu open showing options like 'Scroll to Connected Device', 'Disconnect', 'Master Section', and 'ReTrigger 1 (ReTrigger): In'. The 'Preferences' window is open, showing the 'Sync' tab. Under 'External control', 'Bus A' is set to 'MPD226' with a green checkmark. Under 'MIDI clock sync', 'Input' is 'No MIDI Clock Input' and 'Output' is 'No MIDI Clock Output'. Three checkboxes are checked: 'Send MIDI clock while sequencer is stopped', 'Send song position pointer', and 'Send stop/continue when repositioning'.

In the 'Sync' tab of the Preferences Window, you can set a maximum of four busses at 'External control'. In this case only Bus A is set to 'MPD226' (AKAI padcontroller). After clicking the 'Advanced MIDI' button on the Hardware Interface device in the top of the Reason Rack the Advanced MIDI Devices appear. Bus Select is set to 'A' and 'MPD226' is shown in the display. When clicking the Channel 1 button the ReTrigger is selected. All MIDI output from the MPD226 will now reach the ReTrigger no matter what device is selected.

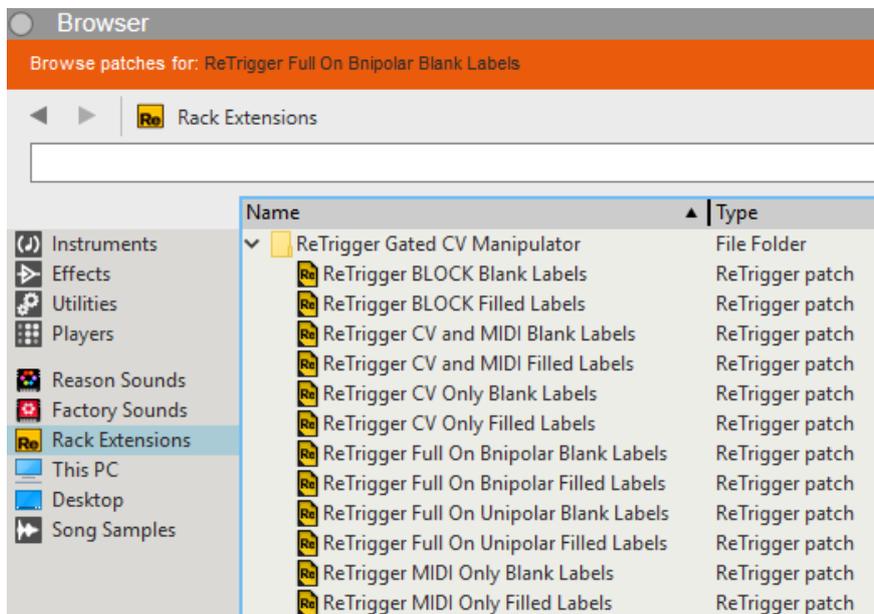
Using a control surface



After adding a Control Surface, this Control Surface can be selected by right clicking the ReTrigger and selecting 'Lock <Control Surface Name> to This Device'. This way all MIDI from the controller will reach the ReTrigger no matter what device is selected in the Reason Rack.

Patches

For your convenience it's possible to save all settings on the ReTrigger in a Patch, just click the Disk Icon of the Patch Browser and save it.



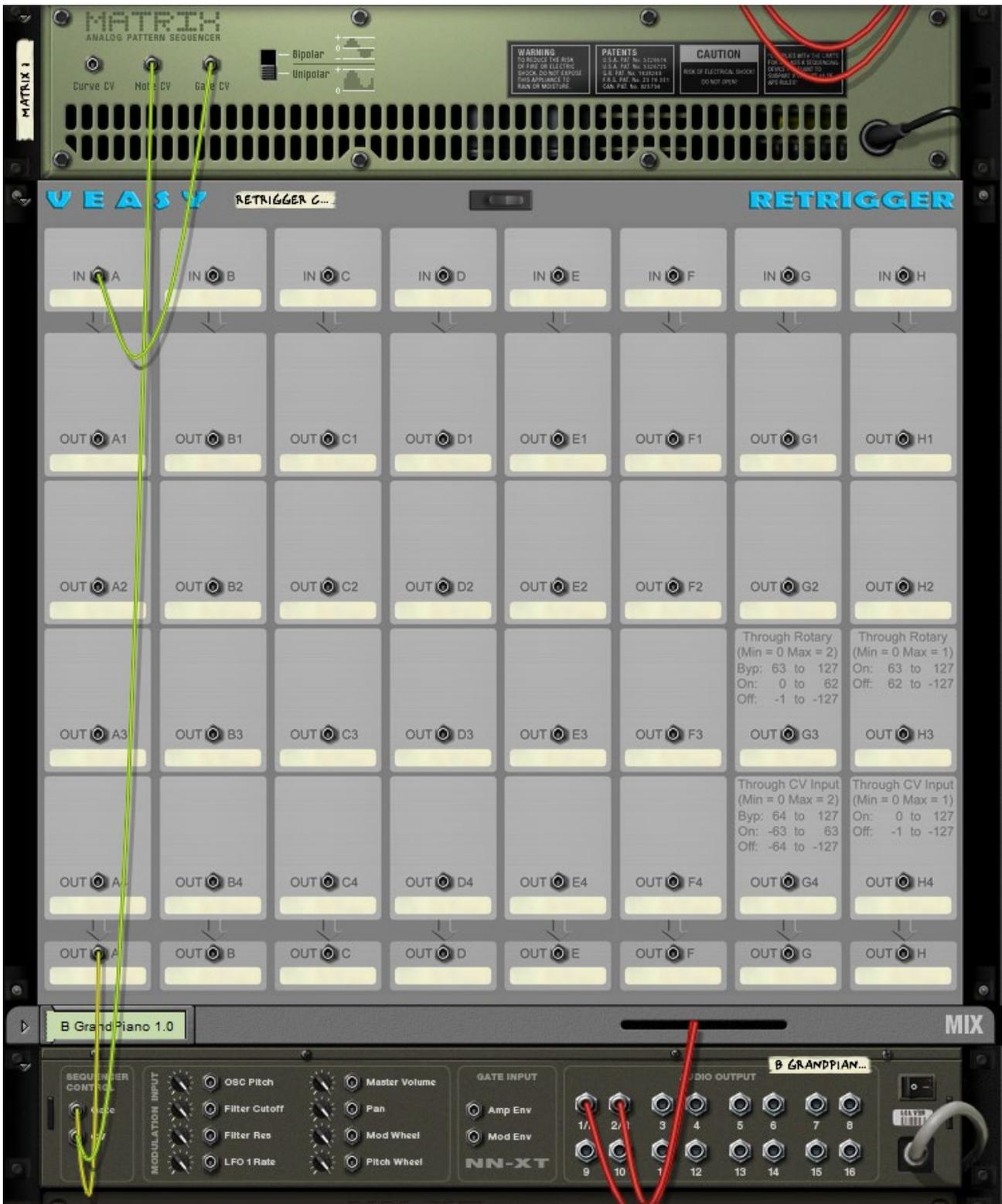
The ReTrigger comes with 8 patches. The first item in the Name is what all Input Selectors are set to in all Columns. Then it states 'Blank Labels' or 'Filled Labels'. Filled Labels means the label captions are the same as the Group Name. They are used for a fast starting point. You can find the patches by clicking the Browse button on the Patch Browser or by clicking 'Rack Extensions' in the left pane of the Browser Window and selecting 'ReTrigger Gated CV Manipulator'.

4 more patches are added by user request (Teflon Tomb) in version 1.1.0 to be able to start the device with all values set to the max (bi- or unipolar) and all outputs Enabled, see patches with 'Full On' in the name.

Reset Device

After adding a ReTrigger to the rack the 'ReTrigger CV and MIDI Blank Labels' patch is loaded. After right clicking the ReTrigger and selecting 'Reset Device' from the menu the labels will get filled and all of the parameters will be set to their initial values.

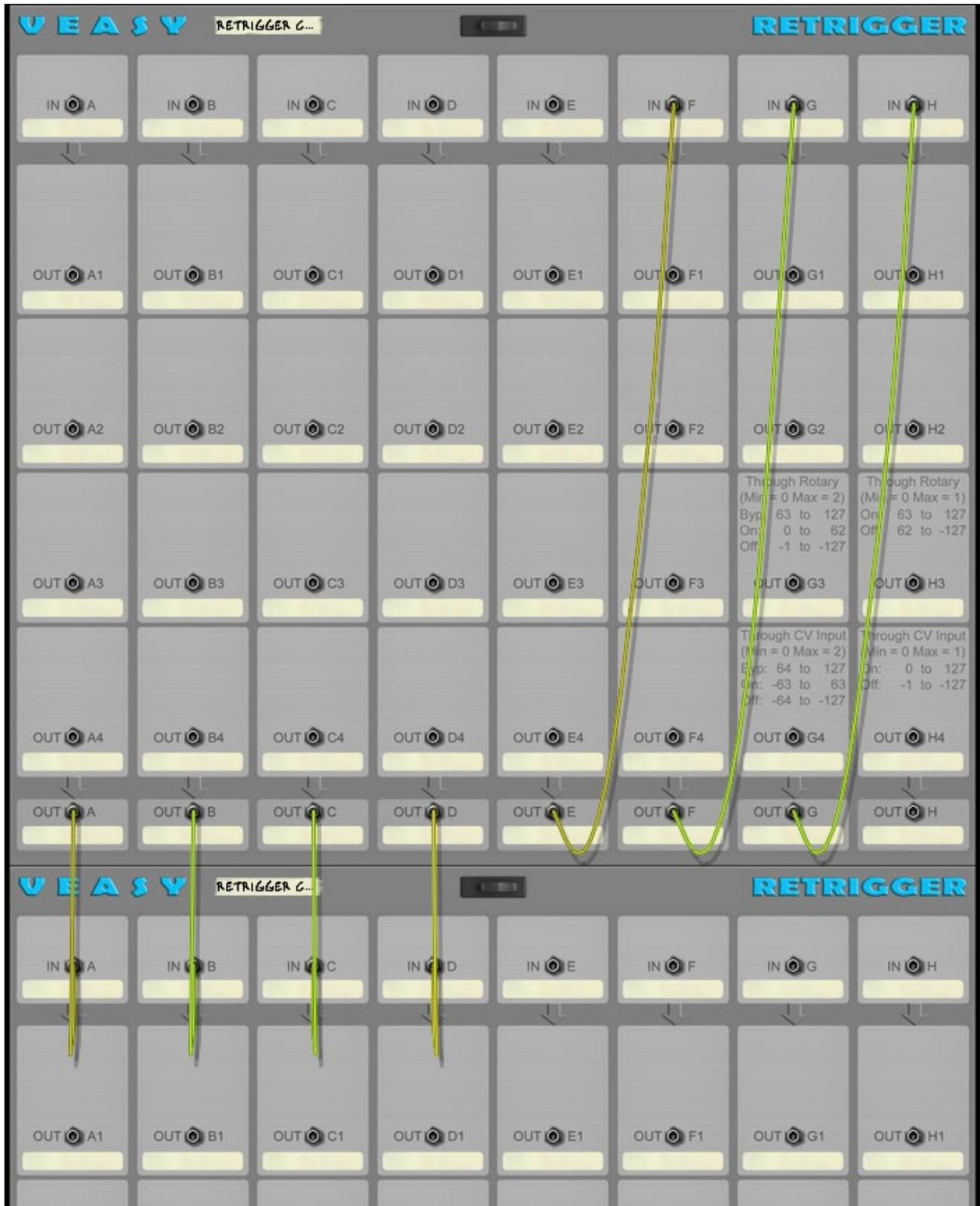
Routing without CV Splitter or Merger



The Matrix Pattern Sequencer would normally play the NN-XT Advanced Sampler by connecting the Gate and Note CV Jacks of the Matrix to the Sequencer Control CV Jacks of the NN-XT directly. As shown in this example the Gate CV is first connected to the ReTriggers CV In Jack and the ReTriggers CV Patch Out Jack is connected to the Gate CV In Jack of the NN-XT. This way

the ReTrigger gets the same pulses as the NN-XT from the Matrix and the NN-XT is played like it normally would be. No external CV merger or Splitter needs to be added.

Chaining



Multiple ReTriggers can be chained together to get access to more Groups per Column. Just connect the CV Patch Out Jack of the first ReTrigger to the CV In Jack of the second ReTrigger (in this example Column A – D).

It's also possible to connect the CV Patch Out Jack to another Column the CV In Jack of the same ReTrigger.

Enjoy!