

NoteMix Player

Note Mixer/Shifter/Splitter/Filter with Snapshot Morphing

Rack Extension for Propellerhead Reason



USER MANUAL

version 1.0.0

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Introduction

NoteMix is a multifunction utility player which can be used to affect incoming notes from midi clips, from CV, or both. Notes can be distributed among up to 8 channels with each having knobs for controlling the velocity levels, knobs for shifting the pitch, and buttons for mute and solo. Note ranges for each channel are configured from a settings page within the display. The display also allows to save the state of the knobs in 8 snapshot locations labelled A thru H, and it is possible to morph between the snapshot values by moving the white cursor. The device can be used as a:

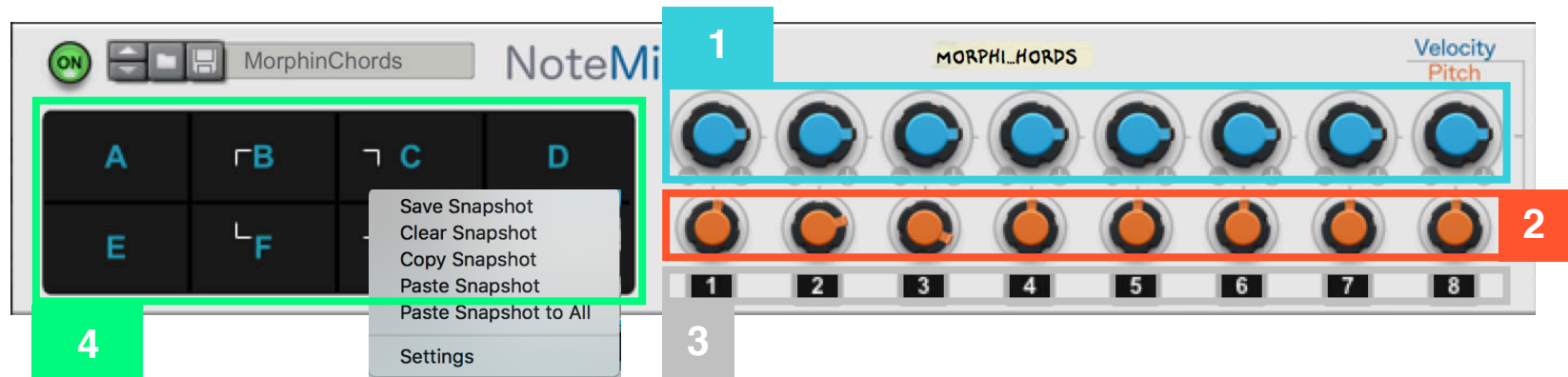
- mixer to adjust the velocity levels of incoming notes based on user definable note ranges
- pitch shifter to shift the pitch of all or selected ranges of incoming notes
- combiner of notes from 8 distinct CV input sources
- note splitter with up to 8 bands which can be affected independently
- note filter to isolate or remove notes based on user defined ranges
- CV utility with snapshot morphing to control parameters on other devices in the rack via control voltage

These functions are not exclusive and can be combined for even more flexible uses. For more details, please refer to the “Usage” chapter in this manual.

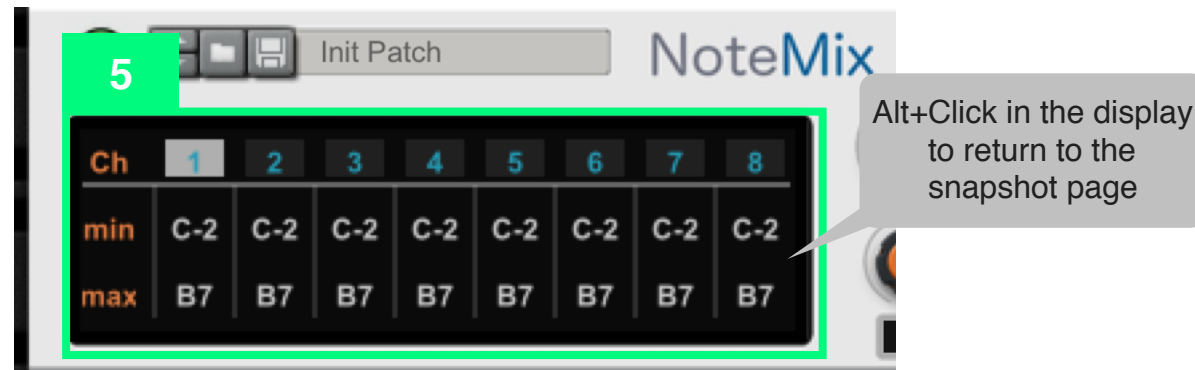
Overview

The main interface elements on the front and back panels are illustrated below.

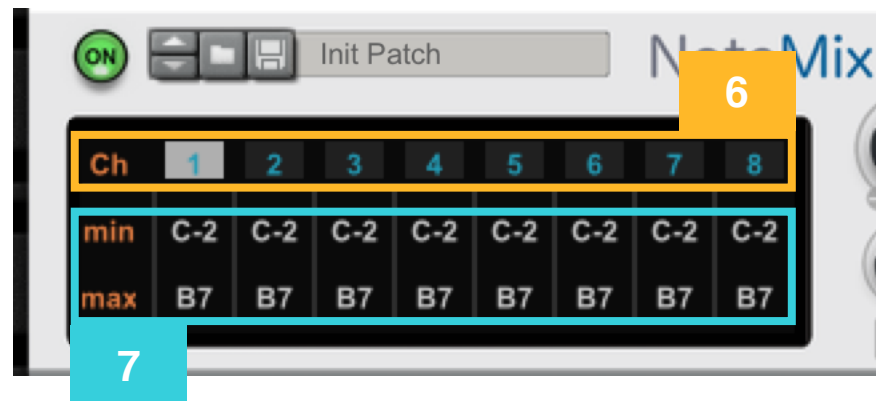
Front



1. Knobs for controlling the velocity level of incoming midi notes. In the default 100% position, the velocity values of the incoming notes are kept unchanged. Rotating the knobs to the left of the default position will scale down the velocity all the way down to 0%. Rotating to the right will increase the velocity up to 125% of the original value, but it never exceeds the maximum velocity of 127
2. Knobs for controlling the pitch of the incoming notes. In the default position, the pitch is kept unchanged. Rotating the knobs to the left shifts the notes down by a maximum of one octave. Rotating to the right shifts the notes up by a maximum of one octave.
3. Channel indicator buttons which turn into channel Mute by clicking on them. Pressing **Alt** while clicking turns them into channel Solo.
4. Snapshot and Morphing pad which can be used to save snapshots of the positions of the velocity and pitch knobs and then morph between different snapshot values by moving the white rectangle cursor. If **Alt** is pressed while clicking in the display, a contextual menu offers several options for saving plus copying/pasting snapshots, along with the ability to access the “Settings” page



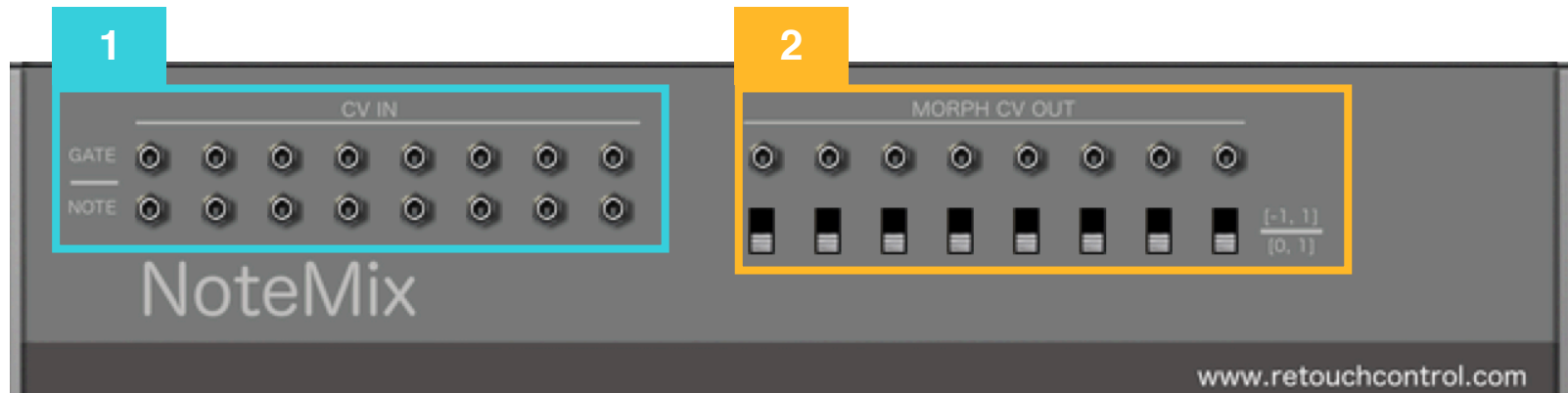
5. Settings Page which is accessed by **Alt+Click** in the display area and choosing “Settings” from the context menu. Here you can enable channels and define note ranges for each channel. For more info, please refer to the “**Set Up**” chapter of this guide.



6. area to enable/disable channels for receiving midi notes from MIDI clips. By default, only channel 1 is enabled. For CV, any channel which has active gate and note CV connections in the back of the device is automatically activated. For more info on the differences, see the “**Set Up**” chapter.

7. area to define a note range to process for each channel, which affects *both* notes from MIDI clips and CV inputs. For more info, please refer to the “**Set Up**” chapter of this guide.

Back



1. Gate and Note CV inputs to connect up to 8 incoming sources at once. Each input source is assigned to a corresponding channel with velocity level, pitch, and mute/solo controls in the front of the device

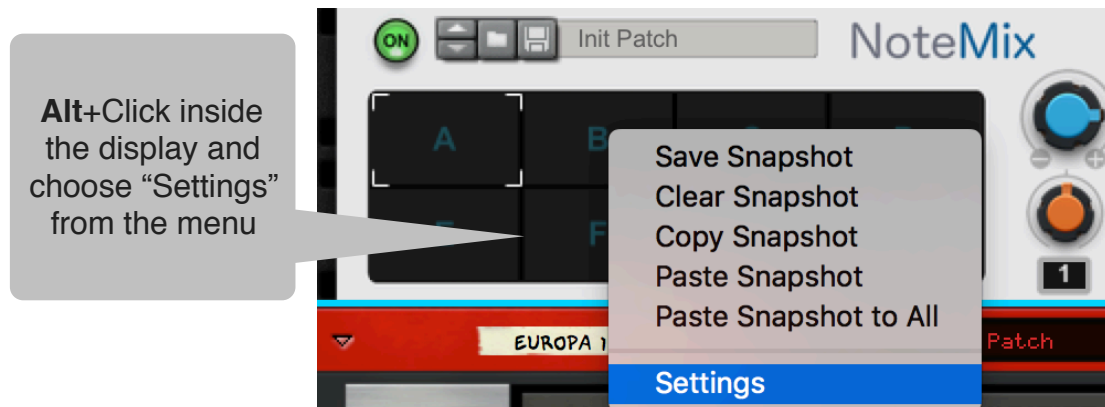
2. CV outputs for sending out the value of the velocity levels knobs. By default, the CV value is a continuous unipolar number between 0 and 1. However, this can be changed to bipolar (-1, 1) by activating the corresponding polarity switch

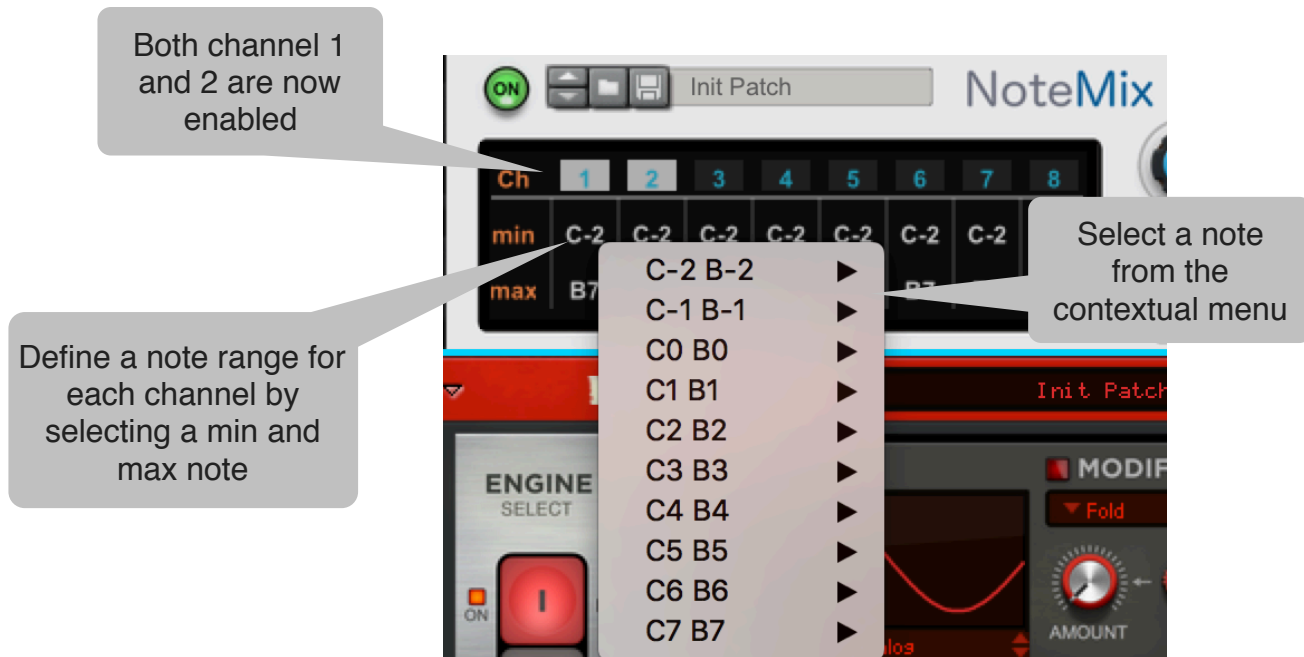
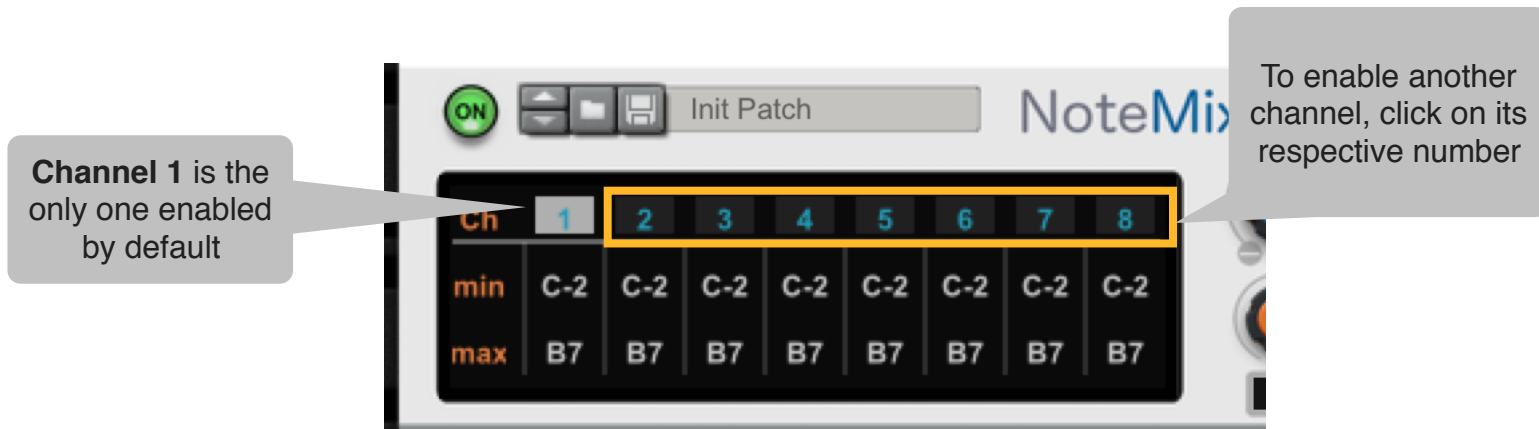
Set Up

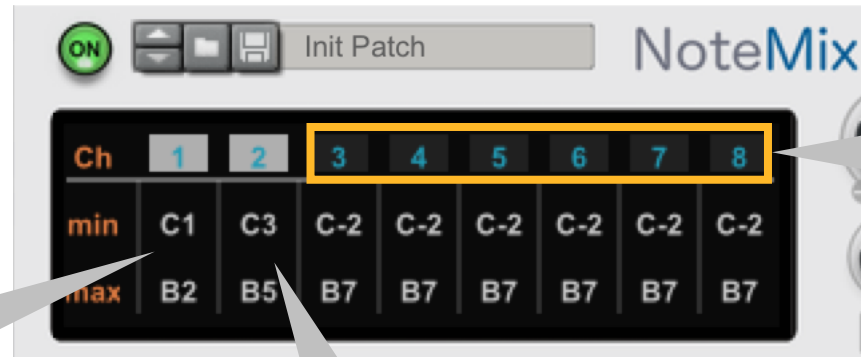
NoteMix processes incoming notes differently depending on whether they are coming from MIDI clips in the sequencer or from the gate and note CV inputs in the back of the device. Those differences are explained in the next two sections in detail.

Notes from sequencer MIDI clips

By default, the device receives all incoming notes from MIDI clips on channel 1 which is the only one enabled. If you adjust the velocity level or the pitch shift of channel 1, all the notes will be affected. In order to process different note ranges on different channels, those channels need to be enabled first and note ranges need to be defined for each channel. This is done via the “Settings” screen which is accessed by pressing **Alt** and then clicking in the display area.







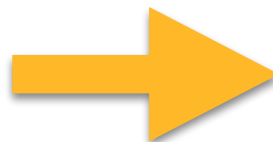
Channel 1 processes notes in the range C1-B2

Channel 2 processes notes in the range C3-B5

All other channels are inactive



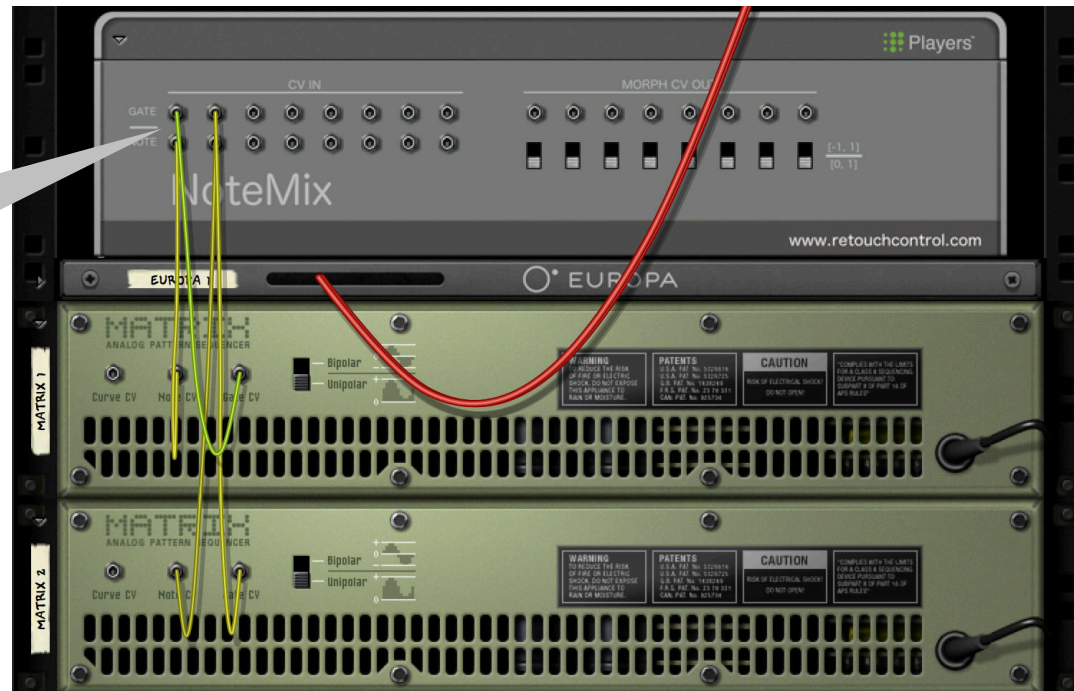
Alt+Click in the display to return to the snapshot page

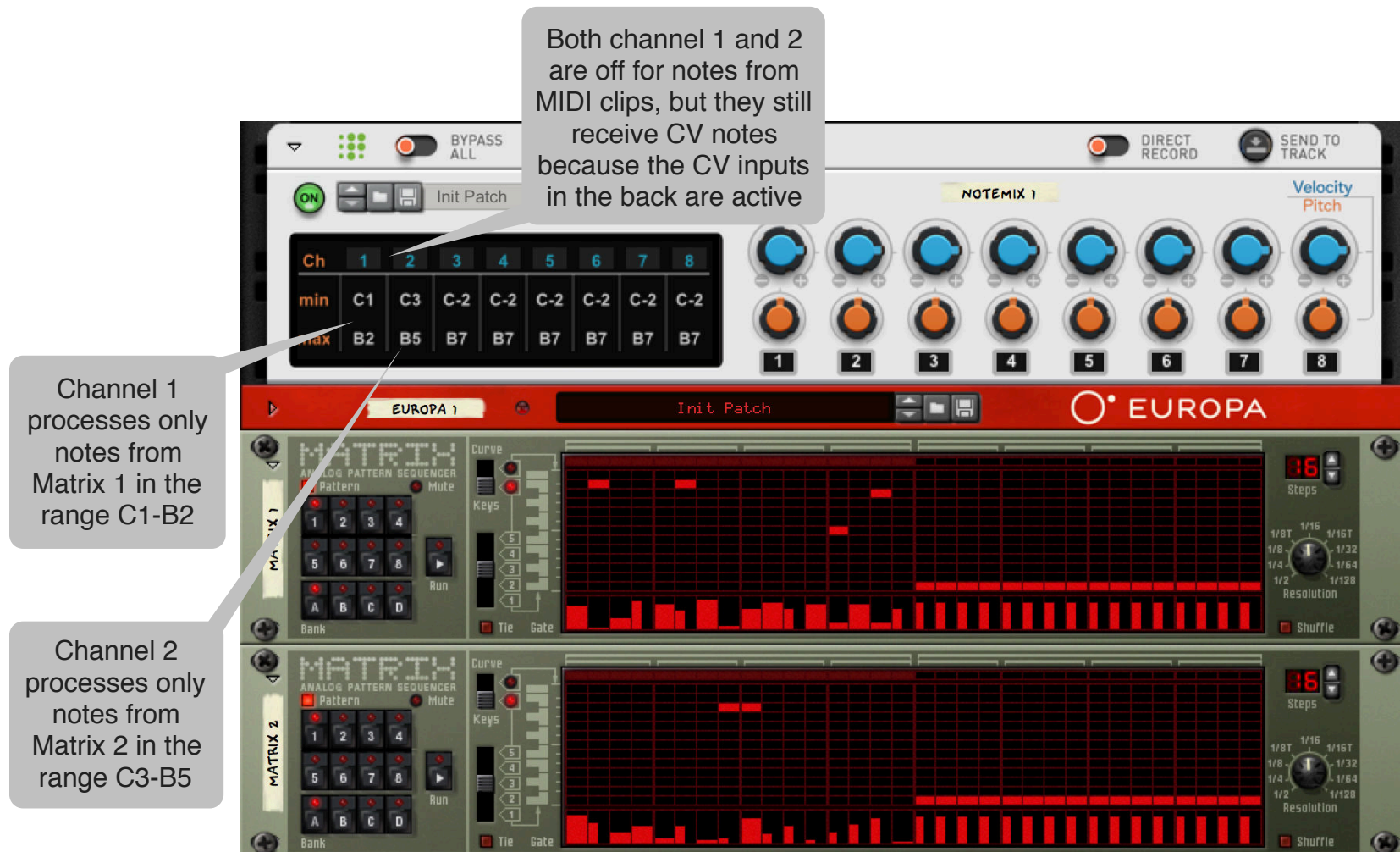


Notes from CV inputs

By default, any channel which has an active gate and note CV connection in the back of the device is automatically enabled. This is true whether or not the channel is enabled in the “Settings” page. Furthermore, those channels will receive all incoming CV notes. If you want to limit the range of CV notes processed by each channel, you should define note ranges in the Settings page.

Two Matrix devices are connected to channel 1 and 2 which are activated automatically



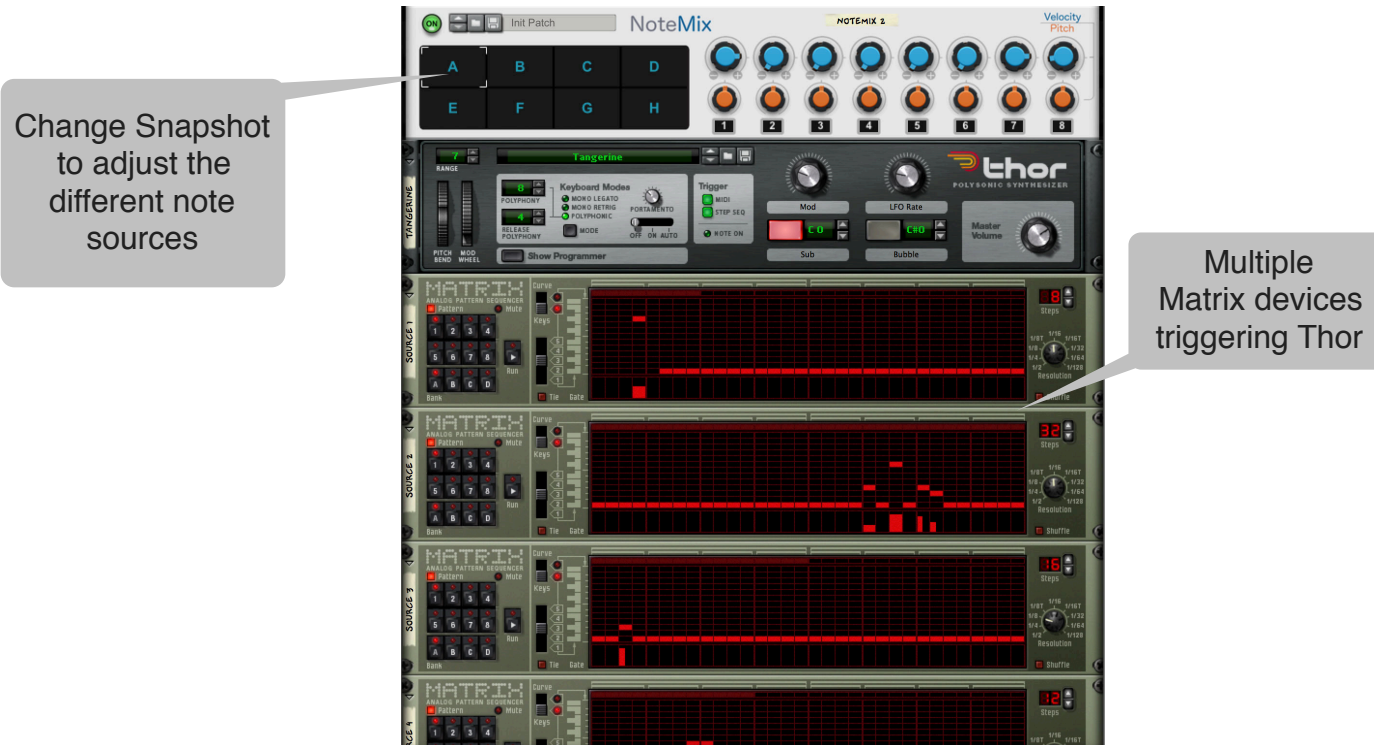


Usage

In this chapter, some use cases for the device are illustrated with reference, whenever possible, to the factory patches. For a more detailed description of the basic factory patches, please refer to the appendix.

Note Mixer & Combiner

The patch in the Combinator folder named “*Tangerine*” shows an example of connecting multiple CV input sources from Matrix devices to play the same instrument, in this case “Thor”. Each Matrix device is automatically assigned its own channel once the CV connections become active. With this set up, you can “mix” the notes coming from the different devices, take notes in and out by adjusting the velocity levels or using the mute and solo buttons.



Note Splitter

The patch “*OctaveNoteBands*” shows an example of splitting the incoming MIDI clip notes into “bands”, each controlled by a separate channel in the device. As you can see from the Settings page, all channels are activated, and each channel has a note range assigned to it. In this particular case, channel 1 processes notes in the range C0-B0, then channel 2 processes notes in the range C1-B1 and so on. With some similitudes to a parametric EQ, you can process each band separately. For example, adjust the velocity of a certain band, mute or solo a particular band of notes, pitch shift only certain notes and so on.



Note Filter

The patch “*MidOctaveFilter*” shows an example of a very simple note filter set up where only notes in the range C3-B3 are passed thru the connected device. All other notes are filtered out. Please notice that this patch works with both notes from MIDI clips or notes from CV connected into the CV inputs of channel 1.



Note Shifter

The patch “*ShiftDownOneOctave*” is an example of a simple pitch shifter. In this case, all incoming notes on channel 1, whether from MIDI clips or from connected CV inputs on channel 1, are shifted down by exactly one octave (-12 semitones). The patch “*ShiftUpOneOctave*” does the opposite, where all notes are instead shifted up by one octave (+12 semitones).



Note Adder

By activating more than one channel set to the same note range, it is possible to multiply the note streams. For example, if you enable both channels 1 and 2 and set them to the same input range, the notes will be effectively doubled, making the part twice as loud. This is not particularly useful, however, if you pitch shift the incoming notes in one of the channels, some more interesting results can be achieved.

The patch “AddAFifth” shows an example where the incoming notes in channel 2 are shifted by +7 semitones, effectively adding a fifth to each note which is played.

Both Channel 1 and 2 are enabled and set to the same range

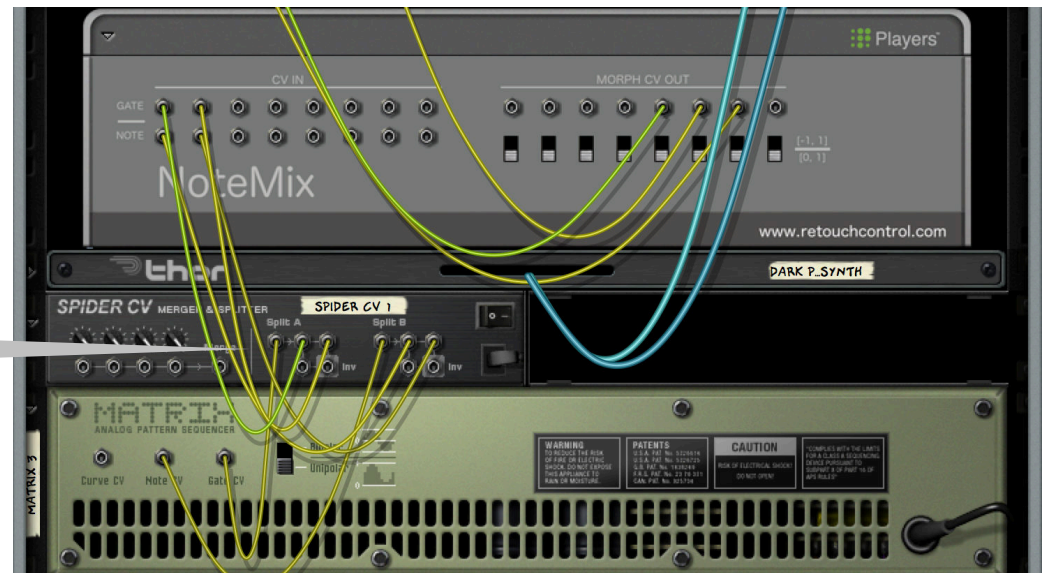


The Pitch Offset of Channel 2 is set to +7 semitones

This trick can also be used with incoming CV data, as shown in the patch “*AddAFifthToCVNotes*”.



CV signals are duplicated by using a Spider CV splitter and then sent to NoteMix



This idea of adding note streams can be further expanded like in the patch “*MorphinChords*” where full chords can be created. Here each snapshot has certain pitch shift values assigned to channels 1, 2, 3 and 4 to create various types of chords. This patch is best used with monophonic note inputs, i.e. by playing one single note at a time.

Four channels are activated to create 4 notes chords



Pitch Shift of channel 1 is set to +4 semitones

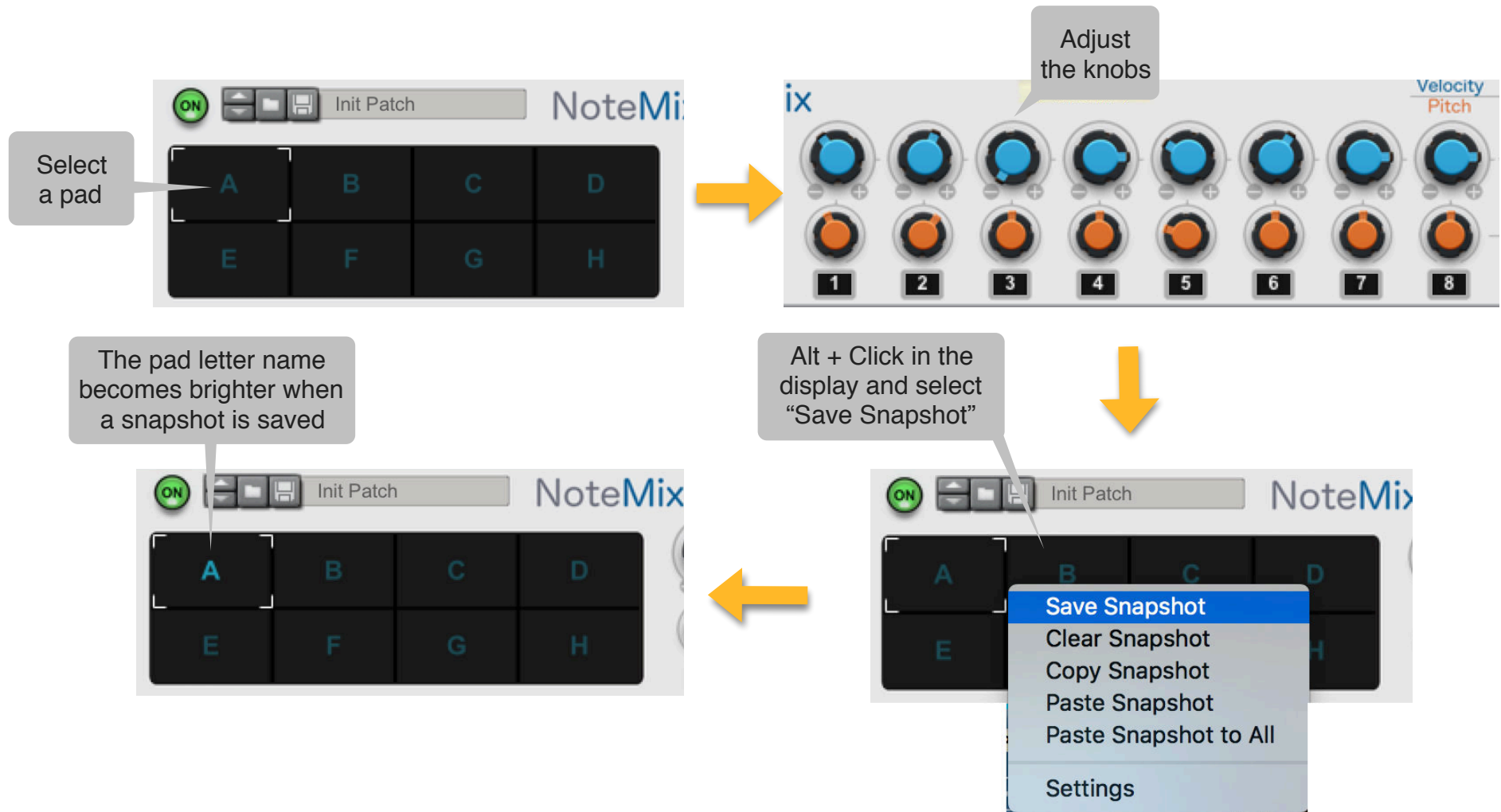
Pitch Shift of channel 2 is set to +7 semitones

Pitch Shift of channel 3 is set to +11 semitones

Pitch Shift of channel 4 is left to default. It's a Major 7th chord!

Snapshots and Morphing

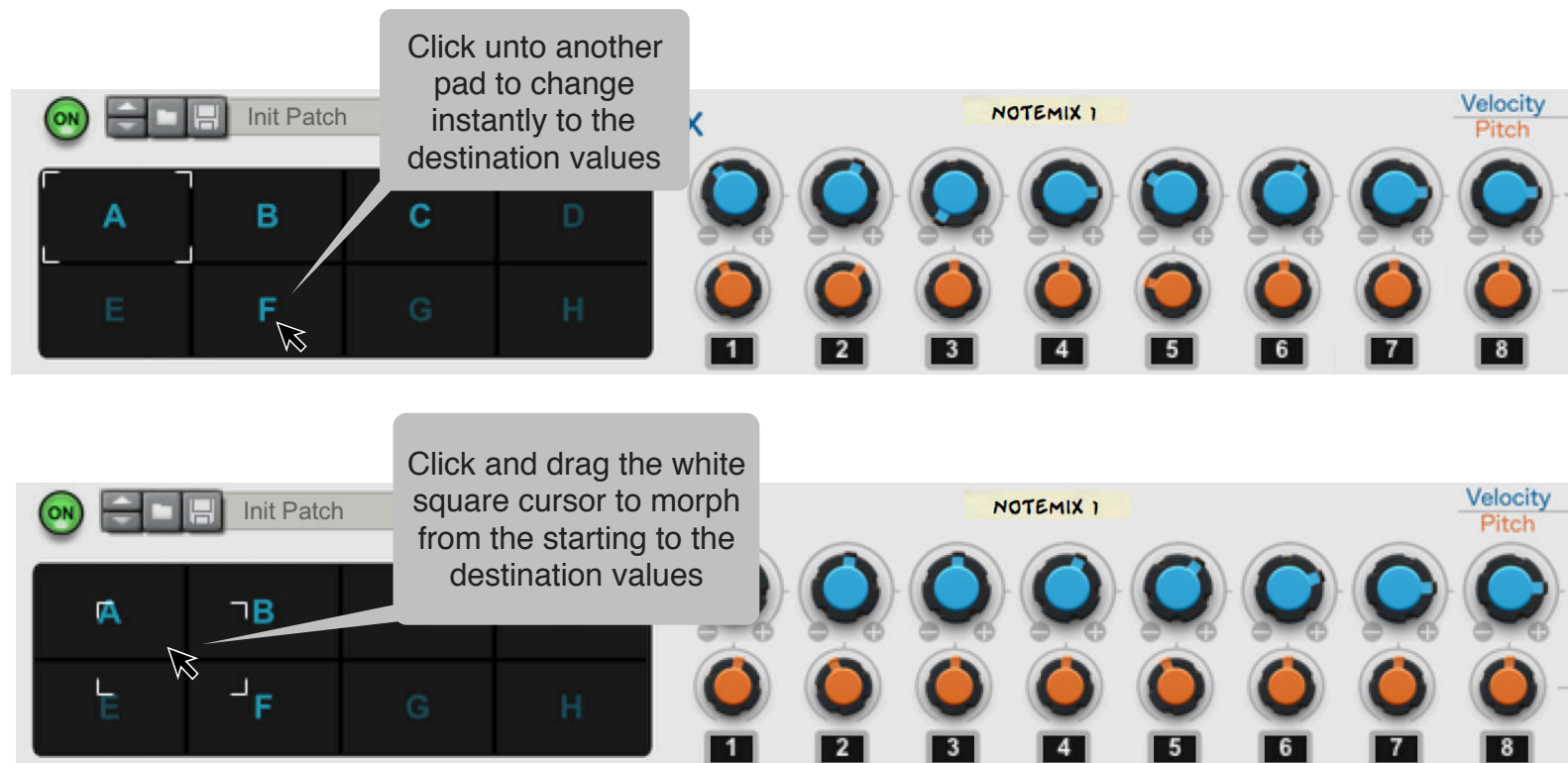
The device is capable of storing the state of the velocity level and pitch shift knobs in snapshots. There are 8 snapshot pads labelled A thru H in the display area, and a snapshot can be assigned to each pad. The process of assigning a snapshot is illustrated below.



Once you have saved a snapshot to a pad, you can copy it and paste it to another pad or to all other pads by using the “Paste Snapshot” or the “Paste Snapshot to All” commands respectively. Please be aware, the Paste commands are destructive, so they will erase whatever data was previously stored in a pad. If you want to reset the pad to the default values, you can use the “Clear Snapshot” command.

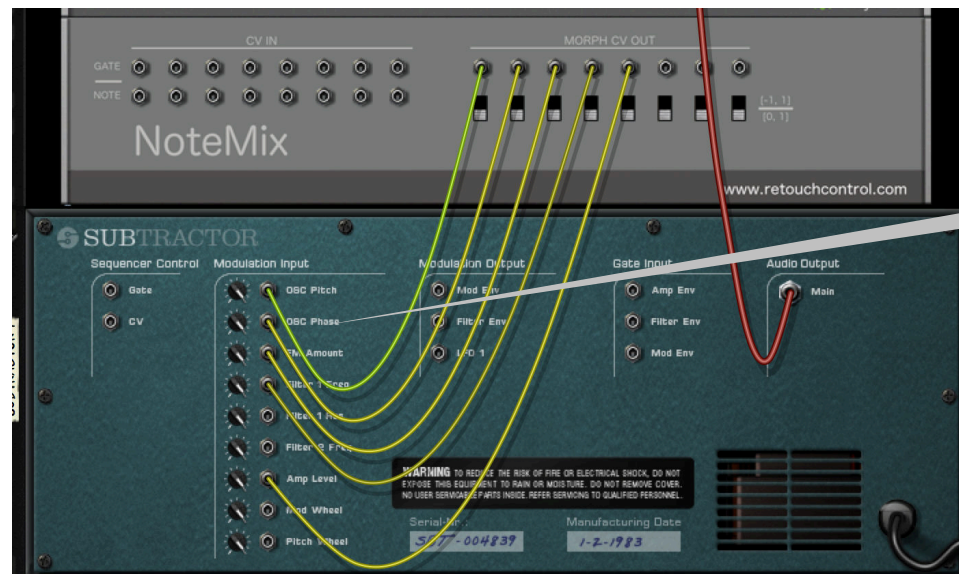
If you have several snapshots assigned to different pads, you can go from one snapshot to another in two different ways:

1. by clicking directly in the pad of the destination snapshot -> the values of the knobs will change instantly from those of the starting snapshot to those of the destination snapshot
2. by clicking and dragging the white square cursor from the starting pad to the destination pad -> the values of the knobs will morph gradually from those of the starting snapshot to those of the destination snapshot. If the starting pad and the destination pad are not contiguous and the cursor needs to transverse other pads with snapshots assigned to them, then the value will morph to those of the other snapshots before changing to those of the destination pad.



The velocity level knobs have CV outputs in the back of the device so that it is possible to send their value to other connected devices. This enables an additional use of the device, as a CV controller with snapshots and morphing capabilities. If you would like to use the device this way and are not interested in affecting incoming notes, then you should turn the device OFF. The snapshot pads and morphing will still work, but incoming notes are simply passed downstream to any connected instrument without being affected by the position of the velocity or pitch knobs.

Turn the device OFF if you just want to use the snapshots to send out CV values and don't want to affect incoming notes



using the velocity level values to affect parameters in Subtractor

MIDI Implementation Chart

CC PARAMETER

[12] = "Velocity Level Ch1",
[13] = "Velocity Level Ch2",
[14] = "Velocity Level Ch3",
[15] = "Velocity Level Ch4",
[16] = "Velocity Level Ch5",
[17] = "Velocity Level Ch6",
[18] = "Velocity Level Ch7",
[19] = "Velocity Level Ch8",
[20] = "Pitch Shift Ch1",
[21] = "Pitch Shift Ch2",
[22] = "Pitch Shift Ch3",
[23] = "Pitch Shift Ch4",
[24] = "Pitch Shift Ch5",
[25] = "Pitch Shift Ch6",
[26] = "Pitch Shift Ch7",
[27] = "Pitch Shift Ch8",
[28] = "Mute Ch1",
[29] = "Mute Ch2",
[30] = "Mute Ch3",
[31] = "Mute Ch4",
[33] = "Mute Ch5",
[34] = "Mute Ch6",
[35] = "Mute Ch7",
[36] = "Mute Ch8",
[37] = "Solo Ch1",
[39] = "Solo Ch2",
[40] = "Solo Ch3",
[41] = "Solo Ch4",
[42] = "Solo Ch5",

[43] = "Solo Ch6",
[44] = "Solo Ch7",
[45] = "Solo Ch8",

Remotable Items

Scope

Manufacturer

Retouch Control

Model

com.retouchcontrol.NoteMix

Remotable	Min	Max	Input type	Output type
Ch1 Velocity Level	0	4194304	Value	ValueOutput
Ch2 Velocity Level	0	4194304	Value	ValueOutput
Ch3 Velocity Level	0	4194304	Value	ValueOutput
Ch4 Velocity Level	0	4194304	Value	ValueOutput
Ch5 Velocity Level	0	4194304	Value	ValueOutput
Ch6 Velocity Level	0	4194304	Value	ValueOutput
Ch7 Velocity Level	0	4194304	Value	ValueOutput
Ch8 Velocity Level	0	4194304	Value	ValueOutput
Ch1 Pitch Shift	0	24	Value	ValueOutput
Ch2 Pitch Shift	0	24	Value	ValueOutput
Ch3 Pitch Shift	0	24	Value	ValueOutput
Ch4 Pitch Shift	0	24	Value	ValueOutput
Ch5 Pitch Shift	0	24	Value	ValueOutput
Ch6 Pitch Shift	0	24	Value	ValueOutput
Ch7 Pitch Shift	0	24	Value	ValueOutput
Ch8 Pitch Shift	0	24	Value	ValueOutput
Ch1 Mute	0	1	Toggle	ValueOutput
Ch2 Mute	0	1	Toggle	ValueOutput
Ch3 Mute	0	1	Toggle	ValueOutput
Ch4 Mute	0	1	Toggle	ValueOutput
Ch5 Mute	0	1	Toggle	ValueOutput
Ch6 Mute	0	1	Toggle	ValueOutput
Ch7 Mute	0	1	Toggle	ValueOutput
Ch8 Mute	0	1	Toggle	ValueOutput
Ch1 Solo	0	1	Toggle	ValueOutput
Ch2 Solo	0	1	Toggle	ValueOutput
Ch3 Solo	0	1	Toggle	ValueOutput
Ch4 Solo	0	1	Toggle	ValueOutput

Ch5 Solo	0	1	Toggle	ValueOutput
Ch6 Solo	0	1	Toggle	ValueOutput
Ch7 Solo	0	1	Toggle	ValueOutput
Ch8 Solo	0	1	Toggle	ValueOutput
Morph X position	0	4194304	Value	ValueOutput
Morph Y position	0	4194304	Value	ValueOutput
Device Name	0	0	-	TextOutput
Patch Name	0	0	-	TextOutput
Select Patch Delta	0	0	Delta	TextOutput
Select Previous Patch0	0		Trig	TextOutput
Select Next Patch	0	0	Trig	TextOutput

Appendix

Description of the basic factory patches

Patch Name	Description	Usage
“AddAFifth”	Adds a note 7 semitones up the currently played note	Works with notes played from a sequencer clip, a midi input device, or from CV inside a combinator
“DrumSequencerMixer”	Each channel is assigned to a note coming from the Drum Sequencer Player in its default note assignment (C1 - G1)	Works with notes played from the Drum Sequencer, a sequencer clip, a midi input device, or from CV inside a combinator
“MidOctaveFilter”	Lets only notes in the range C3-B3 pass	Works with notes played from a sequencer clip, a midi input device, or from CV inside a combinator
“MorphinChords”	Each snapshot is assigned positions for the pitch shifts which create a chord	Works with notes played from a sequencer clip, a midi input device, or from CV inside a combinator
“OctaveDown” or “OctaveUp”	Add a note 1 octave down or up to any incoming notes	Works with notes played from a sequencer clip, a midi input device, or from CV inside a combinator
“OctaveNoteBands”	Incoming notes are split in octave bands assigned to the eight channels	Works with notes played from a sequencer clip, a midi input device, or from CV inside a combinator
“ShiftDownOneOctave” or “ShiftUpOneOctave”	Incoming pitches are shifted one octave down or up	Works with notes played from a sequencer clip, a midi input device, or from CV inside a combinator