

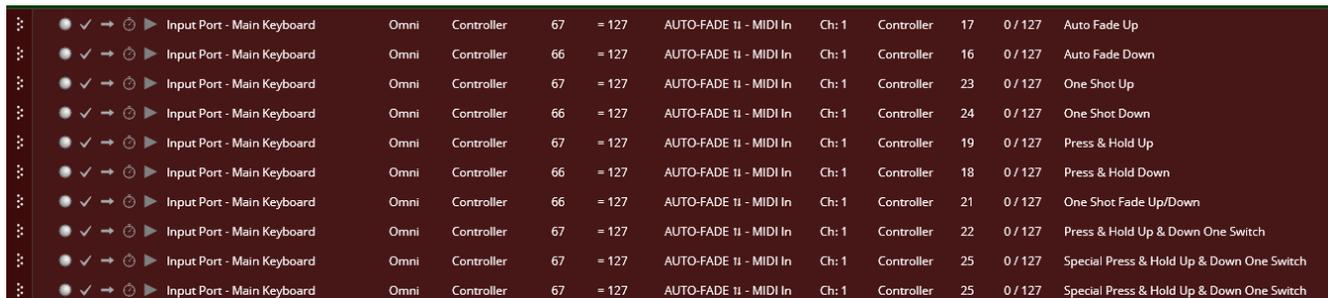
AUTO-FADE ↕ for Cantabile© 4 Performer

The following is a pdf instruction and reference for the AUTO-FADE ↕ rack for Cantabile 4 Performer. The design has been evolving a while but this is pretty well the Swiss Army version I use in my setup. I will include a Song file and Controller Bar file to try it out with and to get introduced to the ways to route it with your song bindings. I will also include a tutorial video.

To begin with the rack's purpose is to provide a way to automatically control the gain control sliders in Cantabile or on external MIDI devices. In use you trigger it with a MIDI CC message that suits the function you desire and it outputs a CC7 value stream that can be routed or bound to the target you want. The values you set on these song level binding targets allow you to adjust the range of the auto fade to your needs. There are 3 basic speeds that are easy to switch from the song level and you can also adjust the base speed that the 3 speeds all use. You can set the down speed different than the up speed when making the base speed adjustments. I will explain each part in more detail below.

Input triggers

Triggering the fader rack is done with bindings that are configured as seen in the picture below



● ✓ → ↻ ▶	Input Port - Main Keyboard	Omni	Controller	67	= 127	AUTO-FADE II - MIDI In	Ch: 1	Controller	17	0 / 127	Auto Fade Up
● ✓ → ↻ ▶	Input Port - Main Keyboard	Omni	Controller	66	= 127	AUTO-FADE II - MIDI In	Ch: 1	Controller	16	0 / 127	Auto Fade Down
● ✓ → ↻ ▶	Input Port - Main Keyboard	Omni	Controller	67	= 127	AUTO-FADE II - MIDI In	Ch: 1	Controller	23	0 / 127	One Shot Up
● ✓ → ↻ ▶	Input Port - Main Keyboard	Omni	Controller	66	= 127	AUTO-FADE II - MIDI In	Ch: 1	Controller	24	0 / 127	One Shot Down
● ✓ → ↻ ▶	Input Port - Main Keyboard	Omni	Controller	67	= 127	AUTO-FADE II - MIDI In	Ch: 1	Controller	19	0 / 127	Press & Hold Up
● ✓ → ↻ ▶	Input Port - Main Keyboard	Omni	Controller	66	= 127	AUTO-FADE II - MIDI In	Ch: 1	Controller	18	0 / 127	Press & Hold Down
● ✓ → ↻ ▶	Input Port - Main Keyboard	Omni	Controller	66	= 127	AUTO-FADE II - MIDI In	Ch: 1	Controller	21	0 / 127	One Shot Fade Up/Down
● ✓ → ↻ ▶	Input Port - Main Keyboard	Omni	Controller	67	= 127	AUTO-FADE II - MIDI In	Ch: 1	Controller	22	0 / 127	Press & Hold Up & Down One Switch
● ✓ → ↻ ▶	Input Port - Main Keyboard	Omni	Controller	67	= 127	AUTO-FADE II - MIDI In	Ch: 1	Controller	25	0 / 127	Special Press & Hold Up & Down One Switch
● ✓ → ↻ ▶	Input Port - Main Keyboard	Omni	Controller	67	= 127	AUTO-FADE II - MIDI In	Ch: 1	Controller	25	0 / 127	Special Press & Hold Up & Down One Switch

The Source CC is set as a Controller type with the conditions set to = 127. The Target values determine the kind of trigger you are sending.

Momentary CC16 – triggers a fade down when pressed from wherever the gain slider travel position is and stops when pressed again and resumes when pressed again. It automatically stops when it reaches value 0.

Momentary CC17 – triggers a fade up when pressed from wherever the gain slider position is and stops when pressed again and resumes when pressed again. It also automatically stops when it reaches value 127.

Momentary CC18 – pressing and holding triggers a fade down and when released it stops wherever it is in it's travel. Pressing and holding will cause a resume of the down fade till it hits 0 value and automatically stops.

Momentary CC19 – pressing and holding triggers a fade up and when released it stops wherever it is in it's travel. Pressing and holding will cause a resume of the up fade till it hits 127 value and automatically stops.

Momentary CC20 – resets the fader rack & sets it to 0 value ready for a fade up trigger.

Momentary CC21 – triggers a non uninterruptible fade up that stops when it reaches value 127. When pressed again it performs a down fade in the same fashion till it reaches 0 value.

Momentary CC22 – initial pressing and holding triggers a fade up and when released it stops wherever it is in it's travel and if held till it reaches value 127 it automatically turns off. Pressing and holding again will cause a switch to the down fade from wherever it is till it is released or reaches 0 value and automatically stops.

Momentary CC23 – triggers a non uninterruptible fade up that stops when it reaches value 127.

Momentary CC24 – triggers a non uninterruptible fade down that stops when it reaches value 0.

Momentary CC25 – initial pressing and holding triggers a fade up and when released it stops wherever it is in it's travel and reverses and fades down uninterruptible till it reaches 0 & automatically turns off.

Expression pedal CC11- The CC11 Expression pedal input can be set to behave 3 ways.

OFF – No CC11 pedal triggers accepted.

Auto Fade switch – where when you press the expression pedal down it triggers a fade up and when you park the pedal in the approximate center it's travel the fade stops. When you pull back on the pedal it triggers a fade down. Good for smoothing out your pedal fades.

Manual Override – where the expression pedal can manually override the travel position of the fader rack. It does so with kjump protection included. It can be useful when you want to do expression manually and then trigger an autofade from wherever you last left the expression pedal.

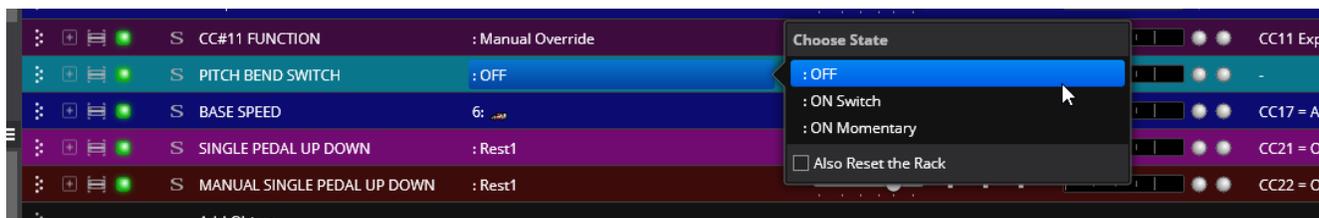


Pitch Bend Wheel – The pitch bend wheel can be used to trigger fades and has 3 ways it can be set.

OFF – No pitch bend triggers accepted

ON Switch – When you do a bend up it starts a fade up from where ever it is, when you do a bend down it reverses direction and fades down. It auto stops at 127 and zero values.

ON Momentary – When you bend up and hold it fades up till you release and it stops. When you bend down and hold it fades down till you release and it stops. It also has auto stop at value 0 and 127.

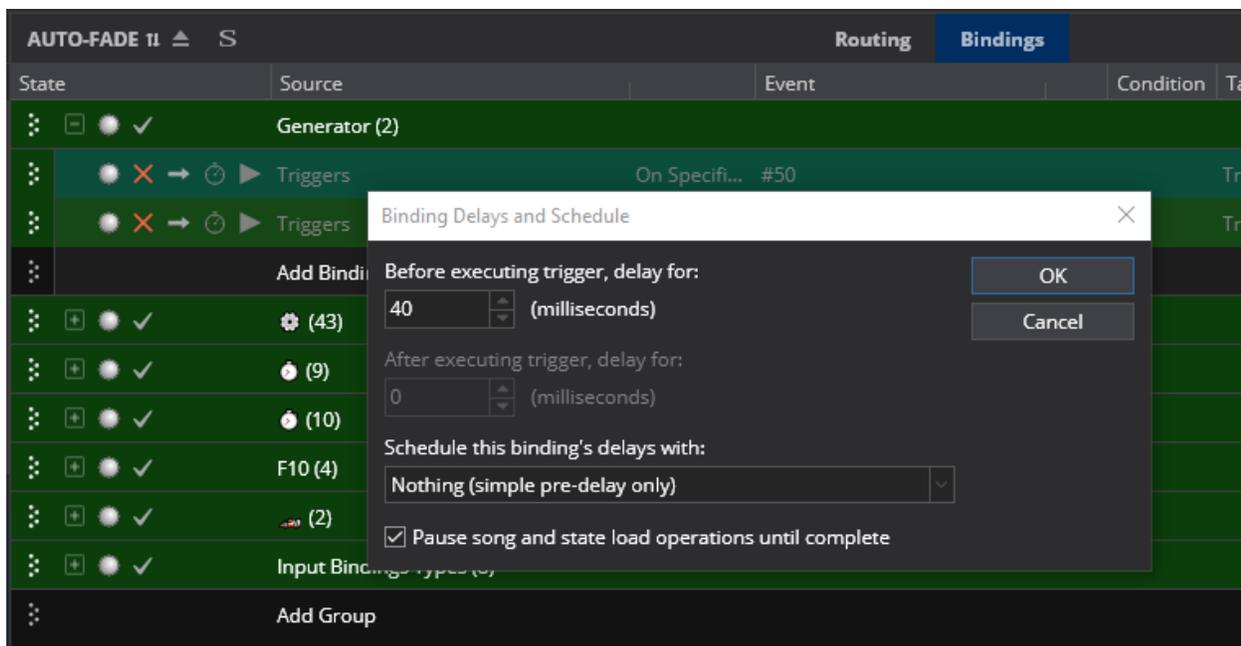


Fade Speed Settings

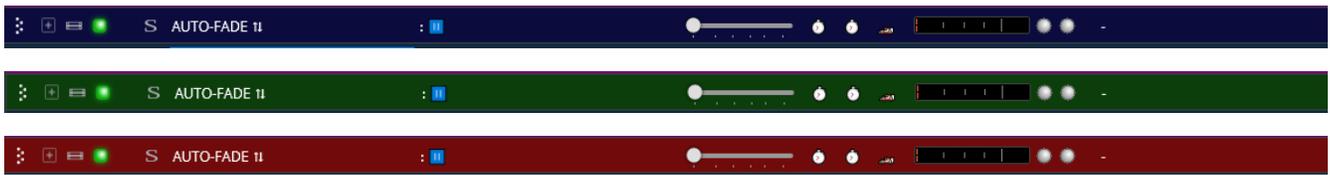
You can adjust the delay settings that determine the speed of the up and down fade events by either opening the rack to the bindings and editing the top 2 bindings or pressing the custom buttons on the rack. The first button opens the base speed adjustment for the up fade and the second opens the adjustment for the down fade. These can be set the same or different depending on what you need. There is also a 3 speed gear shift of sorts that is accessible from the custom buttons on the rack itself.



Set the base delay time for up and down fades and press then F10 to save the changes to the song file.

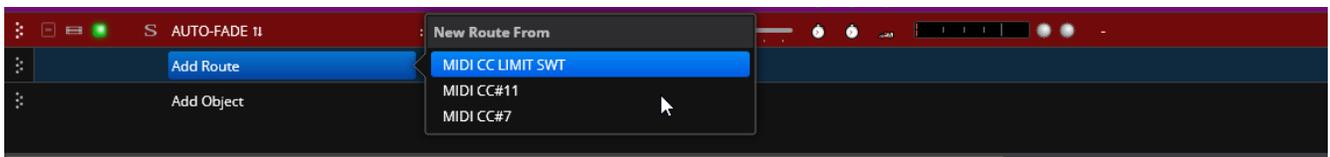


Pressing the Gear shift changes the rack color to show the speed. Blue is the slowest, Green is the medium and Red is the fastest. This is only available when the fader is stopped.



Output Ports and Signals

The rack has 3 MIDI out ports.



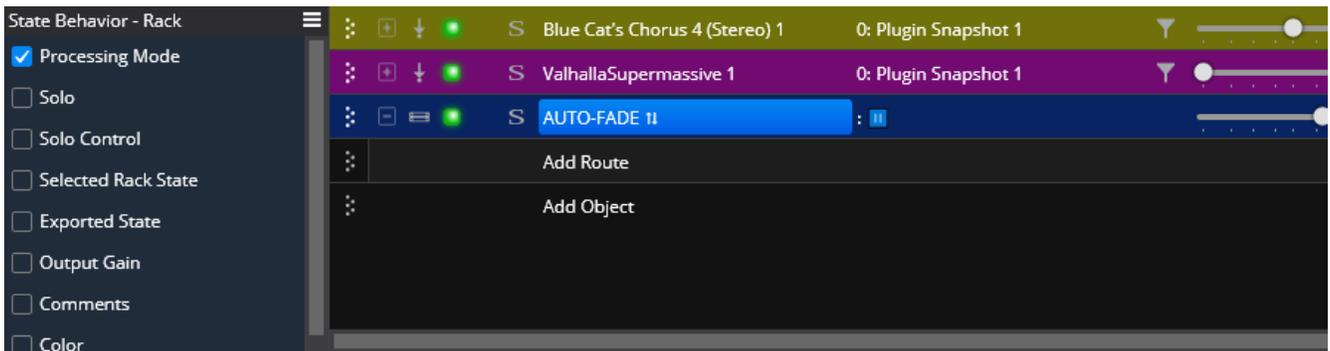
MIDI CC LIMIT SWT - outputs a CC100 no edge message when the fader rack value is 127 and a CC101 message when the fader rack value is zero.

MIDI CC#11 – outputs the auto fader values to CC11 and also the override pedal output explained above.

MIDI CC#7 – outputs the auto fader values to CC7.

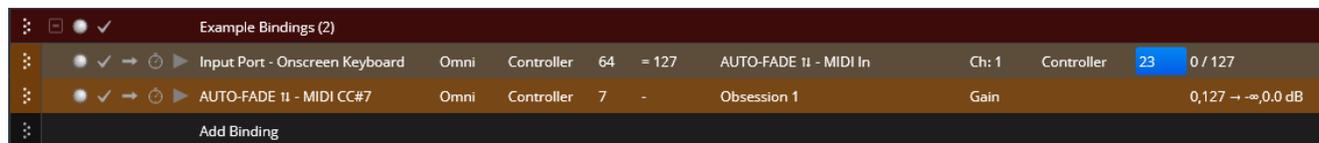
Installation and Setup

When you add the Fader rack to a song you need to do a few things. First make sure that there are no input routes to the rack unless you want them. Also set the states behaviors for the rack as shown here.



Notice that the Selected Rack State and Exported State are unchecked. The rack does use them.

A typical set of bindings for it would look like this.



The first one takes an input from a damper pedal and sends a trigger to the rack. The second one routes the MIDI from the fader rack to the target synths' Gain slider. So when you want the fade up you press the pedal and the rack does the rest. The target value is where you set the range and if you wish you can invert it there as well which is useful for cross fades.

The fader rack can be used only once in a song but can be set different for different song states.

Dave Doré - July 2022