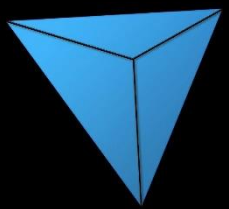
novation

LAUNCHPAD

RETINA

Official Documentation



mat1jaczyyy

Retina v2.1

LAUNCHPAD
LIGHTS

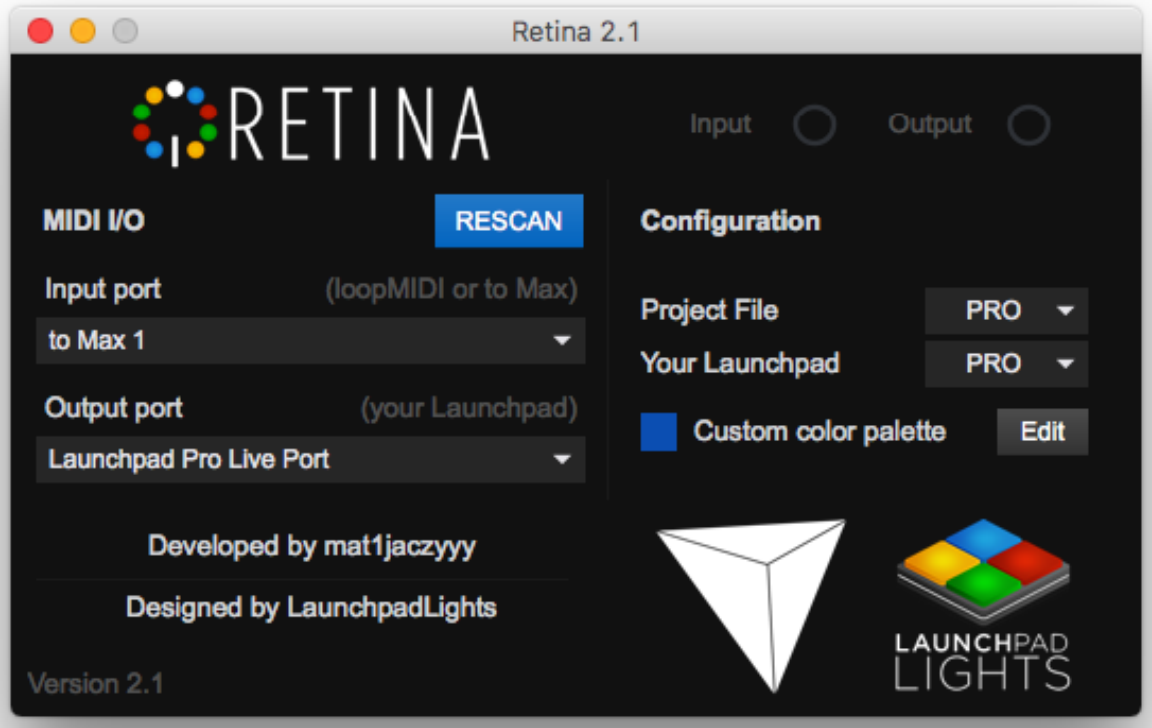
Table of Contents

Overview

What is Retina?

Retina is an application written in the Cycling ’74 Max programming language. It enables the user access to some hidden features of the Novation Launchpad MK2 and the Novation Launchpad Pro. Its most notable features unlocked are top lights conversion, support for the side LED (Launchpad Pro only) and custom color palettes.

Retina can run on any Windows or macOS-based computer, and requires Max 7 to be installed. The application takes input from other applications (such as Ableton Live) and modifies it before outputting it to the Launchpad. It’s designed to be used with Live (all editions are supported – including Lite), but it should work with any other DAW or app if it uses the Drum Rack Layout for lightshows.



System Requirements

Using Retina will slightly limit the “speed” of your lightshows, partly because Retina takes a share of CPU power which might be needed to power Live, and partly because the Launchpad cannot respond to so many SysEx messages at a time. If you’re looking to experience lag-less lightshows, you’re better off sticking to the normal outputs. I’ve heard versions 7.2.x and earlier of Max help reduce some lags, but I haven’t tested such myself.

Since Windows doesn’t natively support routing MIDI between applications, you will have to install a virtual MIDI port driver to successfully route the output of Live into the input of Retina. A very popular and stable choice is Tobias Erichsen’s loopMIDI, and is recommended for use with Retina. MacOS natively supports routing MIDI between applications, so you will not require any other software.

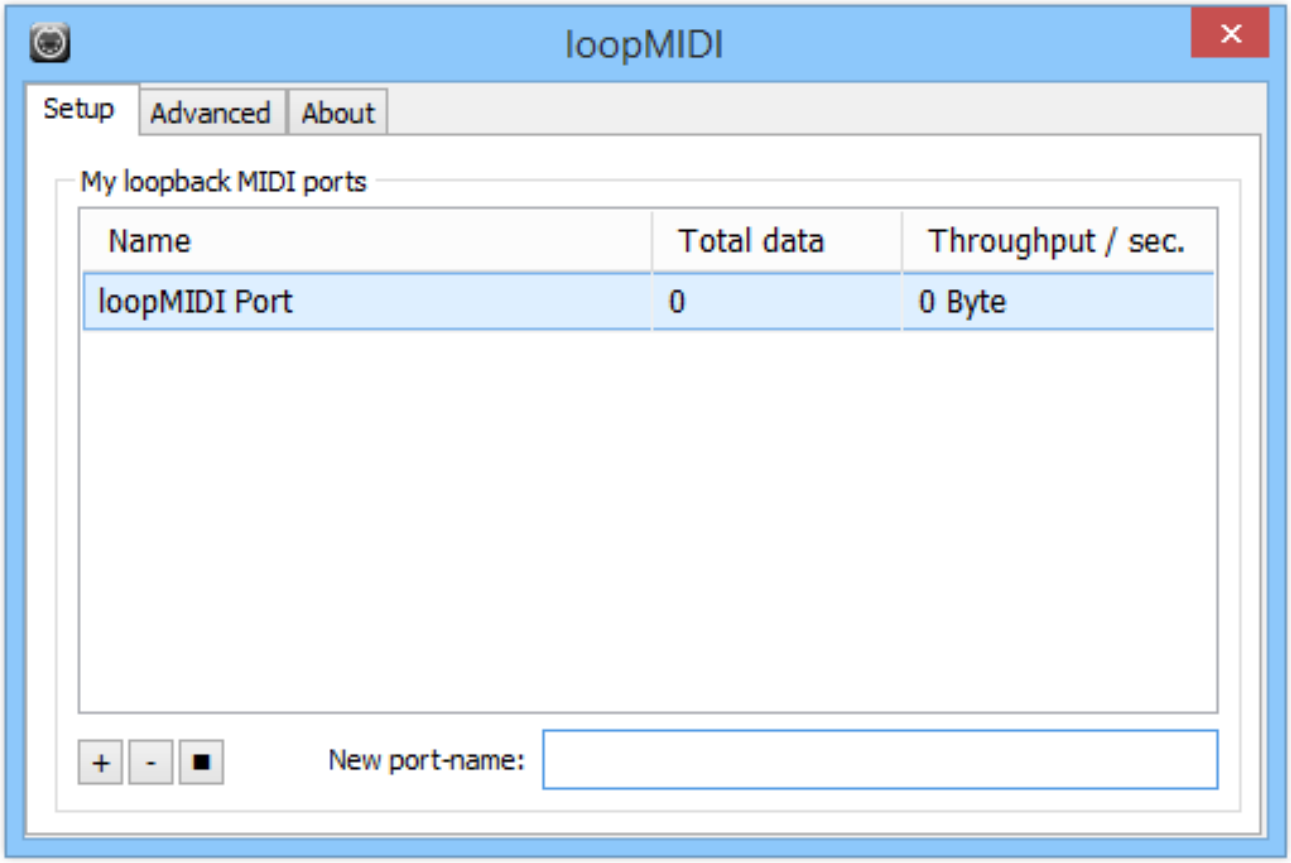
Retina is built upon the Max programming language, and requires the Max Runtime. The easiest way to get this is simply by having Max 7 installed on your computer, which is what most people already have. Retina does not use Max for Live, but rather it runs as a standalone application, both to allow Live Lite users to use the plugin and to work around Live blocking SysEx message output. Live 10 plans to allow for SysEx output, and in such case a Max for Live release of Retina will be considered.

To summarize, external software you will need to use Retina properly is: Max 7 (both OS) and loopMIDI (only if you’re on Windows).

Setup and Installation

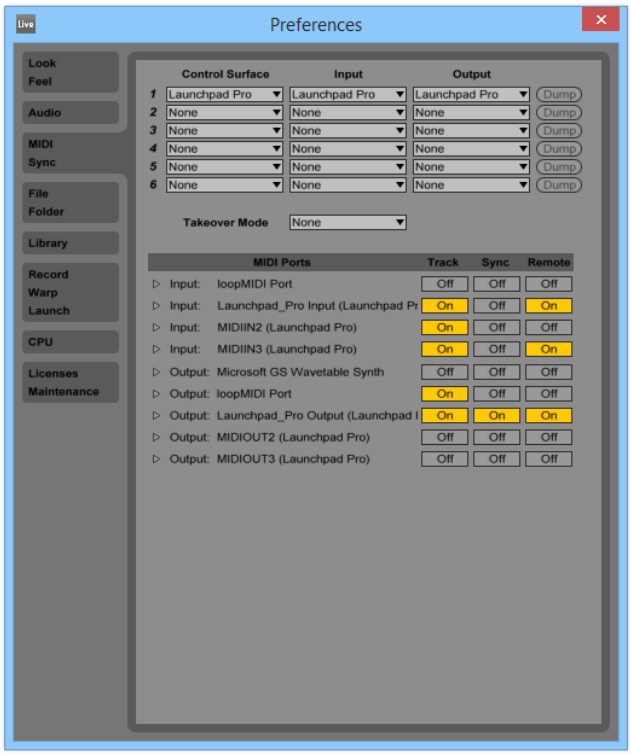
Configuring loopMIDI (Windows only)

You won't need to do this on macOS because macOS supports native MIDI routing between applications, unlike Windows. Create a MIDI port your Launchpad in loopMIDI, these are the ports you will be outputting to in Live and inputting from in Retina. You can give it any name you like, which is very useful for identifying the output of multiple Launchpads.



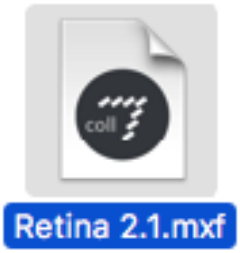
Configuring Ableton Live

Start Retina by opening the Max patch. This will create the routing ports if you're on macOS so we can set them up in Live. Navigate to Link/MIDI in the Preferences. On Windows, you will be doing changes to the loopMIDI ports that you have created earlier, and on macOS you will be doing changes to the "to Max" ports. For each of those ports, disable Track and Remote on the input ports, and enable them on the output ports.



In your project file, set the input to “All Ins” or your Launchpad as you would usually, and set the output to either “to Max” if you’re on macOS or your loopMIDI port if you’re on Windows.

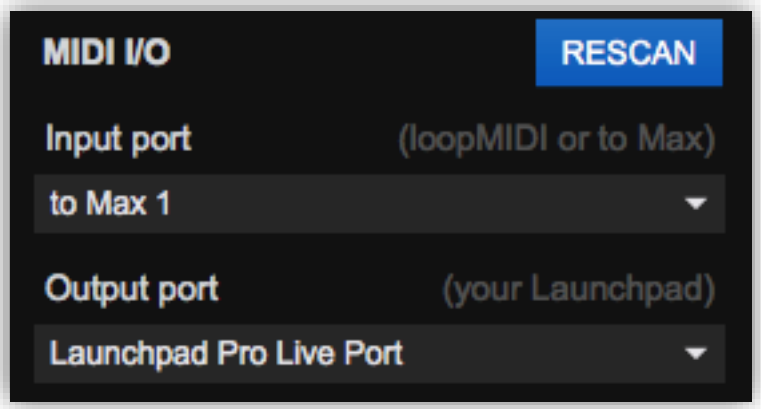
Installing Retina



Place the Retina Max patch wherever you want on your computer. That's it. To start Retina, double click the Retina Max patch file.

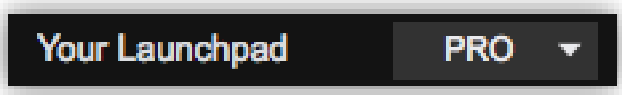
MIDI I/O Ports

Retina must communicate in between Live and the Launchpad to alter the MIDI notes, acting as a sort of middleman. Your input port should be set to one of the "to Max" ports on macOS or one of your loopMIDI ports on Windows, and your output port should be set to your Launchpad. If you reconnect a device, it won't update right away, but you can refresh the list of MIDI devices by clicking the Rescan button.



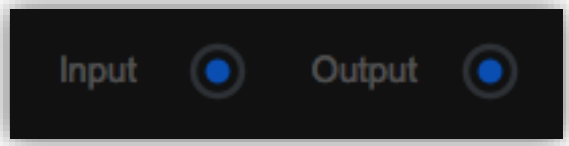
Launchpad Configuration

Retina must know which model of Launchpad you are using because the SysEx messages to control the lights differ between the MK2 and Pro models. Select your Launchpad appropriately from the "Your Launchpad" dropdown box.



Input and Output indicators

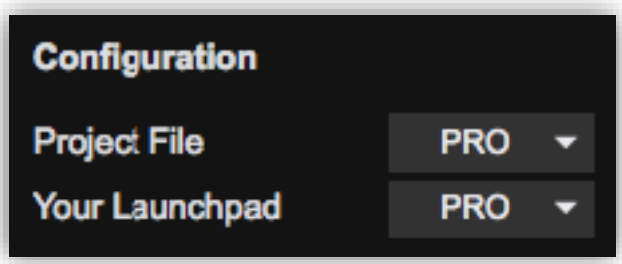
Retina flickers the Input and Output indicators upon receiving input and sending output. These serve to signalize the data flowing from Live, through the application, over to your Launchpad.



Features

Top Lights

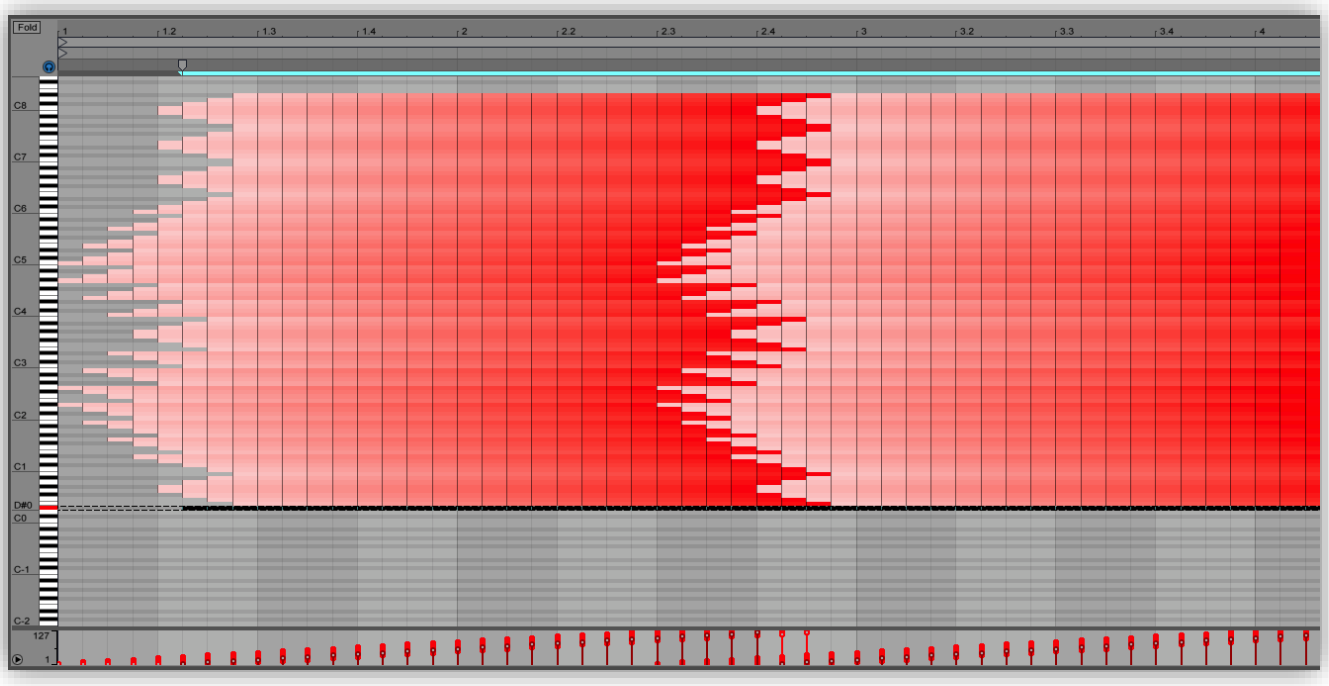
Retina handles top lights for you, so there is no need to keep a plugin at the end of the chain. It ignores CC messages for now, so having a top lights device there will result in them not displaying at all.



You can also use the “Project File” dropdown box to select what Launchpad model the project file you are running was intended for. This is useful for correctly shifting the top lights row into place.

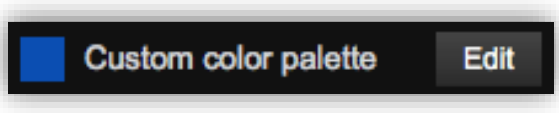
Mode Light (Launchpad Pro only)

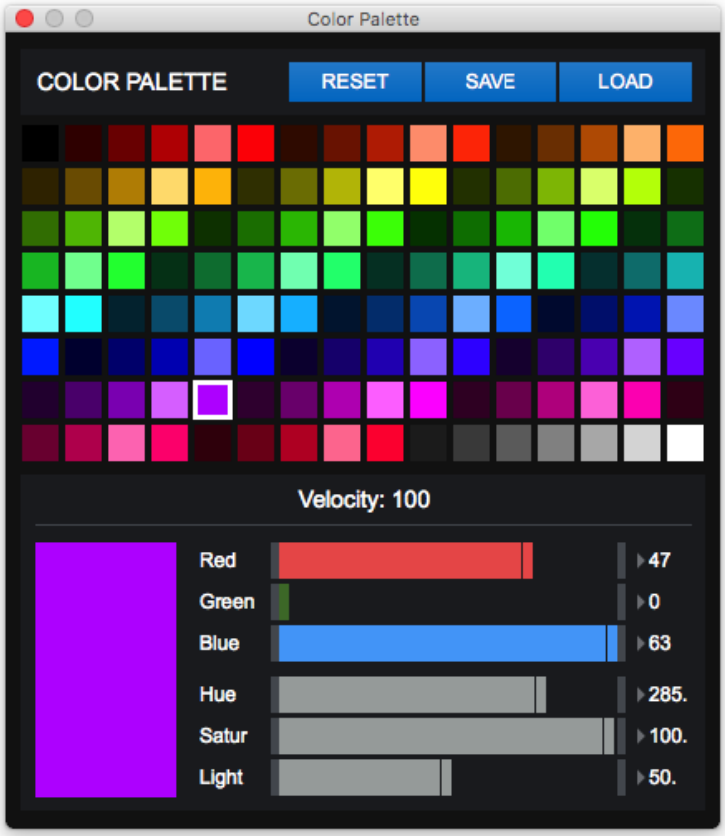
The Mode Light reacts to MIDI notes sent to Retina on notes D#0 (decimal 27) and E8 (decimal 124), and it will react to MIDI data only if both Project File and Your Launchpad are set to PRO. It supports both Novation colors and custom colors.



Custom color palette

Custom color palettes allow you to remap currently existing velocity numbers to any RGB color value within the RGB standard available on the Launchpad MK2 and Pro. The feature can be turned on or off by clicking the button to the left side of the text. Disabling it will keep the stock colors from Novation, while enabling it will make the Launchpad display the custom color defined for each velocity instead.





The default color palette in the editor matches the stock colors from Novation. Clicking on a color will select the desired color, its velocity number and load its RGB values into the sliders. You can move the sliders or input a number, and you will see a live preview of the color you're choosing both in the UI and on the Launchpad on the C1 note. Your changes are applied automatically. The RGB color values on the Launchpad function similarly to standard computer RGB, but its values range from 0 to 63 rather than 0 to 255. This kind of standard allows for up to 262k different color combinations. HSL sliders are also exposed, and these allow for selecting the more intuitively. When they are changed, they are converted to equivalent RGB values and stored.

The Reset button will reset your custom colors back to stock Novation ones. You should really use this only if you've messed up your palette, as you can simply turn off the feature to go back to stock colors for a while.

The Save and Load buttons allow you to read or write your palette in a file for sharing with your projects and loading it back in another session. You can also open these files in a text editor and change the values, if you prefer. Retina will load it just fine, as long as you keep the file syntax the same.