LOW PASS FILTER

Manual

MOSAIC

CONTENTS

Things To Know	1
Overview	2
Details	3

MOSAIC

THINGS TO KNOW

What is 1U?

1U is a measurement of height in the 19" rackmount standard. Eurorack modules adhere to 3 rack units, or 3U. Mosaic tiles adhere to 1 rack unit in height, and require appropriate rails to mount in a rack or modular case.

What 1U format are Mosaic modules?

We ship our modules with Intellijel 1U formatted front panels. If you use the Pulp Logic format, don't worry! You can purchase Pulp Logic replacement front panels on our Replacement Panels page.

Mosaic Color Guide

Each color indicates a function across the Mosaic lineup.

Green: Audio Signals

Purple: Gate Signals

Blue: Control Voltage

MOSAIC

OVERVIEW

Description

Analog goodness awaits with the four-pole Low Pass Filter. Thanks to CV control over resonance and frequency, the Low Pass Filter can go from squelching leads to dynamic sweeps in an instant. In addition, 1V/Oct tracking allows it to double as a musical sine wave oscillator. Bring analog warmth to your system today in a compact, yet stand out package.

- All Analog Low Pass Filter
- Four-pole, 24db per octave slope
- OTA Architecture
- 1V/Oct tracking
- CV over resonance and frequency amount

Tech Specs

- Width: 14HP
- 38mm
- Front Panel: Ships in Intellijel format. Pulp Logic replacement panels available here.
- Current Consumption: +12V = 20mA, -12V = 20mA

Installation

To install, locate space in your Eurorack case for your 1U module, and confirm the positive 12 volts and negative 12 volts sides of the power distribution lines. Plug the connector into the power distribution board of your case, keeping in mind that the red band corresponds to negative 12 volts. In most systems, the negative 12 volt supply line is at the bottom. The power cable should be connected to the module with the red band facing the front of the module.

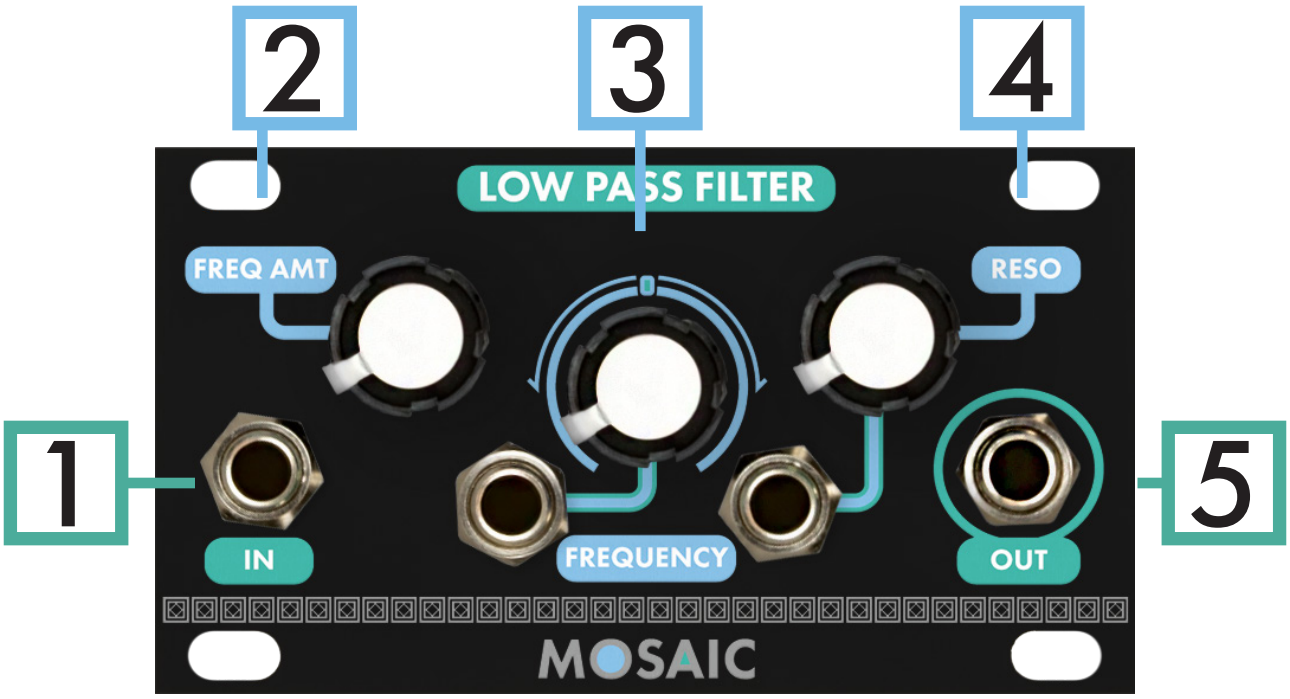
DETAILS

How It Works

Low pass filters are used to attenuate select frequencies from a signal, and are a critical component in subractive synthesis. Depending on the design and settings of the filter, frequencies can be subtly or dramatically attenuated, and even accentuate certain frequencies.

Specifically, a low pass filter sets a cutoff frequency. Signals lower than the cutoff frequency are passed, while signals above the cutoff frequency are attenuated. Attenuation happens at a rate determined by the filter's slope. The increase in slope angle, the more dramatic the attenuation. A 4-pole filter such as the Low Pass Filter has a 24db/oct slope. This is a steep filter slope and lends to a smoother or "creamier" cutoff, and is great for big filter sweeps and cleaner sound design. Patch in your sound, turn up the resonance, and crank the frequency knob to hear the results of low pass filtering!

Diagram



DETAILS

1. In

Audio input jack. Audio sent here will be filtered.

Range: -5V - +5V

2. Frequency Amount

Attenuverter for the Frequency CV. When the knob is fully right, the Frequency CV has a peak voltage of 5V. When knob is fully left, the CV is inverted and has a peak voltage of -5V.

3. Frequency

Controls the cutoff frequency of the filter. When the knob is fully left, the filter fully attenuates the inputed signal. When the knob is fully right, there is no filtering present.

Range: 0V - 5V

4. Resonance

Control over the filter resonance. When the knob is fully left, there is no resonance present in the filter. When the knob is fully right, maximum resonance is achieved. Low Pass Filter tracks 1V/oct, and can be used as a sine wave sound source.

To use the filter as a sound source turn resonance fully right. Then, with no audio present in the input jack, tune the Frequency knob to the desired root note. Send your sequence CV into the frequency CV jack to track 1V/oct!

Range: 0V - 5V

5. Out

Audio output.

Range: 10Vpp