

# LPF



## **Description**

---

LPF is a four-pole, voltage controlled low-pass filter. Its 24 dB per octave slope and OTA topology provide a smooth, buttery character. Resonance can be pushed to self oscillation, turning it into a sine wave VCO with accurate 1V/oct tracking across four octaves.

In addition, CV over resonance gives dynamic sound shaping possibilities under voltage control. Hit the slope with LPF.

- Analog, voltage controlled low pass filter
- Classic four pole, OTA topology
- CV over resonance
- Capable of self oscillation
- Accurate 1V/oct tracking across four octaves

# Table of Contents

<a href="#"><u>Installation/Specifications</u></a>	4
<a href="#"><u>LPF</u></a>	5
<a href="#"><u>General Functions Overview</u></a>	6

## **Installation**

---

To install, locate 2 HP of space in your Eurorack case 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 LPF with the red band facing the front of the module.

## **Specifications**

---

**Format:** 2 HP Eurorack module

**Depth:** 47mm (Skiff Friendly)

**Max Current:** +12V = 20mA  
-12V = 20mA



## General Functions Overview

---

### 1. INPUT:

Audio input

Range: 10Vpp

### 2. FREQ:

Sets the cutoff frequency of the filter

Also known as the corner frequency, or -3dB down point

### 3. RES:

Sets the resonance, or “Q” of the filter

When fully right, the LPF will self-oscillate and output a very pure sine tone whose frequency is determined by FREQ

### 4. ATTEN:

Attenuverter that sets the attenuation and inversion of the signal present at FREQ CV input

If the knob is far left, the FREQ CV input will accept voltage from 0V to -10V

If the knob is far right, the FREQ CV input will accept voltage from 0V to 10V

### 5. FREQ CV:

Control voltage input for FREQ

Control voltage is added to the knob position and scaled by the Atten knob

LPF will track 1V/oct for up to four octaves

Range:  $\pm 10V$

**6. RES CV:**

Control voltage input for RES

Control voltage is added to the knob position

Range:  $\pm 5V$

**7. OUTPUT:**

Lowpass filter output

Range: 10Vpp