

# Unity



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## Description

Unity is a dual unity mixer with two sets of three inputs. Its versatile normalizing behavior allows it to function as a six-to-one mixer, or two three-to-one mixers. Three modes of operation provide ideal behavior for audio, control voltage, or both. Averaging Mode allows the user to mix audio signals without losing their relative loudness. Unity Mode is great for mixing control signals in situations where you want to add vibrato to a sequence, or create a chaotic modulation source out of LFOs and envelopes. Split Mode sets each channel to a different mode, allowing for mixing CV on one channel and audio on the other. Unite your system with Unity.

- Dual unity mixer
- Six-to-one, or two sets of three-to-one functionality
- Averaging mode for audio signals to retain relative loudness
- Split mode allows for CV on one channel, and audio on the other

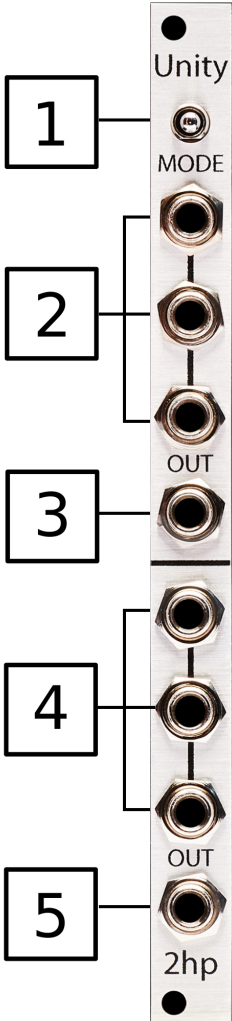
## Installation

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 module with the red band facing the front of the module.

## Specifications

- Size: 2 HP
- Depth 42mm
- Current Consumption:
  - +12V: 10mA
  - -12V: 6mA

# Reference Diagram



# Functional Overview

## 1. Mode Toggle

The Mode toggle selects the gain behavior of the two mixers.

### Averaging Mode

When the toggle is up, all inputs have a gain of  $1/3$ . This mode is ideal for mixing audio signals to maintain relative loudness.

### Unity Mode

When the toggle is in the middle, all inputs have a gain of 1. This mode is ideal for mixing control signals.

### Split Mode

When the toggle is down, the top mixer inputs have a gain of 1, and the bottom mixer inputs have a gain of  $1/3$ . This mode is useful for using the top half of the module to mix control signals, and the bottom half to mix audio signals.

## 2. Mixer 1 Inputs

The top three inputs are summed together and passed to the first output.

### **3. Out 1**

Outputs mix of the first three inputs.

If there is no connection to this output, the mix of the first three inputs will be sent to the second mixer.

### **4. Mixer 2 Inputs**

The bottom three inputs are summed together and passed to the second output.

### **5. Out 2**

Outputs a mix of the second three inputs.

(The first three inputs will also output here if there is no connection to the first output.)