

µMod II Manual

Overview

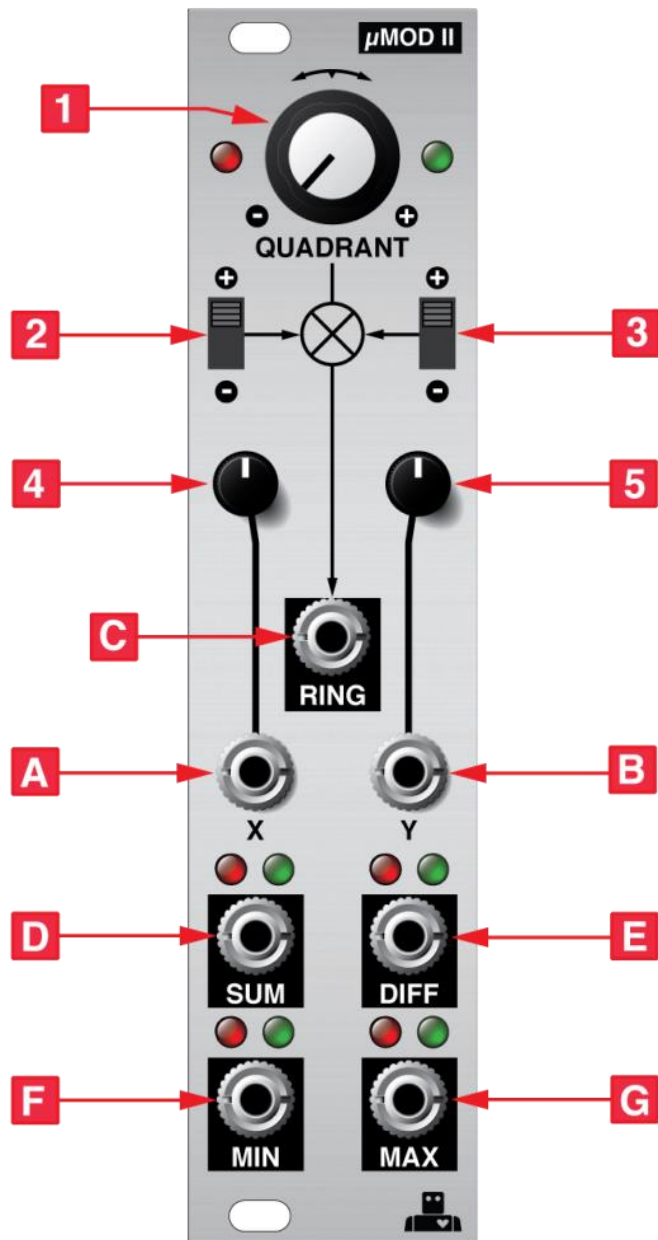
The µMod II is a multi-function module designed for combining audio or CV signals in a variety of ways. Apart from a versatile ring modulator / four quadrant multiplier it also performs analog logic functions useful for generating new combinations of waveforms.

The principle of operation is to take two signals, called X and Y, and produce a series of output signals that are derived from the sources using a variety of analog methods.

Installation

See the [Module Installation Guide](#) for instructions on installing the module in your Eurorack modular system.

Front Panel



Controls

1. **QUADRANT**

The quadrant knob controls shifts the multiplication in to the positive or negative quadrants. For standard ring modulation, set the knob at the 12 o'clock position.

2. **X +/-**

This three position switch controls the rectification of the X input. When in the middle position the input waveform is unaltered. When at + only the positive half of the waveform is passed through. When at – only the negative half is passed through.

3. **Y +/-**

This switch functions the same as the X +/- but for the Y channel.

4. **X Attenuator**

This knob controls the attenuation of the X signal. It is unaltered when the knob is fully clockwise.

5. **Y Attenuator**

This knob functions the same as the X attenuator but for the Y channel.

Inputs & Outputs

A. **X**

X signal input.

B. **Y**

Y signal input.

C. **RING**

Ring modulator output.

D. **SUM**

This output is the result of adding the X and Y inputs, $X + Y$.

E. **DIFF**

This output is the result of subtracting the X input from the Y input, $Y - X$.

F. **MAX**

This output is the maximum of the X and Y signals at any given point in time. It's the analog equivalent of the digital OR operation.

G. **MIN**

This output is the minimum of the X and Y signals at any given point in time. It's the analog equivalent of the digital AND operation.

Analog Logic

The analog logic section of the module produces waveforms that are a combination of the X and Y inputs. This is well suited to creating complex CV from basic waveforms, or creating new interesting forms of audio.

The diagram below illustrates what's possible by combining sine and saw waveforms of two different frequencies via the various logic outputs:

