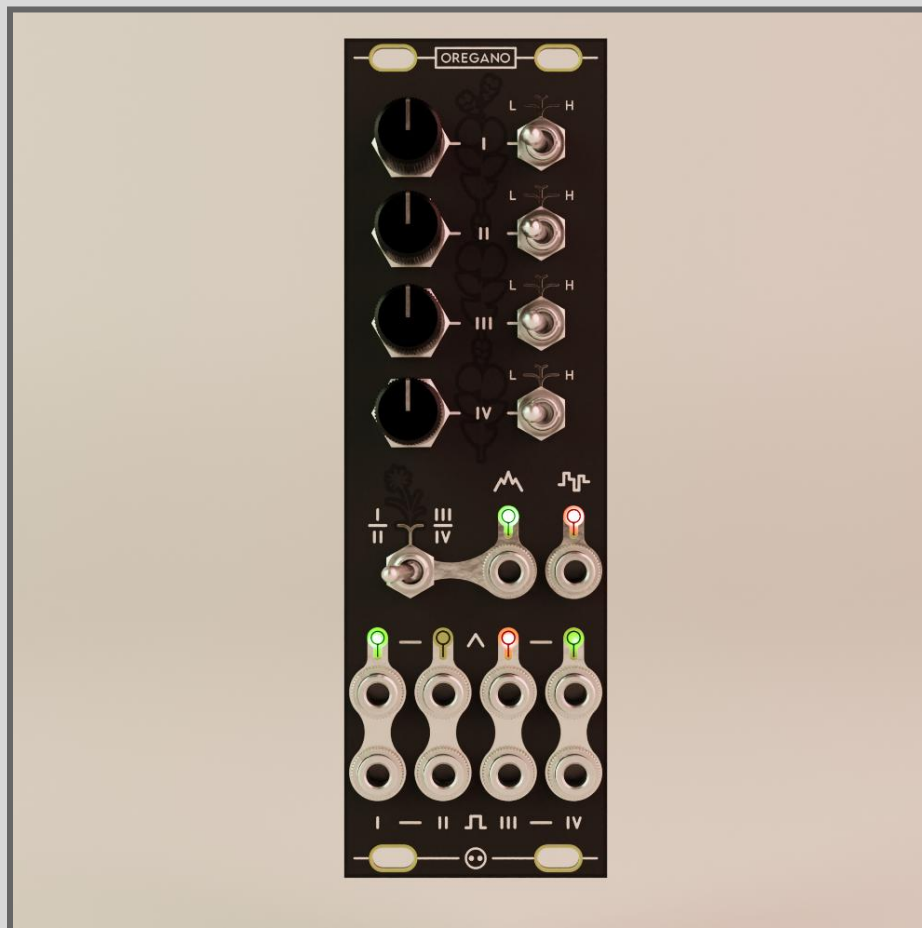


# NOH



## OREGANO - User Manual

V1.0

## Specs-

The NOH Modular Oregano is a 4-channel LFO with triangle and square outputs, with mixed and random outputs. It has the following specs:

- Height- 3U
- Width- 8HP
- Depth- 27mm
- Power- +12V (80mA) // -12V (80mA)

## Description-

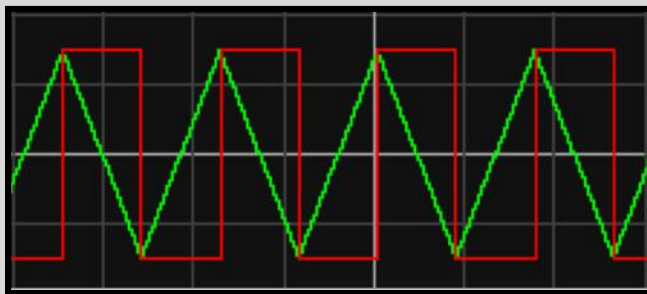
Oregano has four independent LFOs with frequency control and range switch. Each LFO generates synced triangle and square waveforms, with a mixed output from two user-selectable triangle waves. Finally, there is a 4-bit DAC where each square wave is assigned a bit to create pseudo-random voltage.

## Giving Power to the Module-

Supplying voltage to the module requires a 10-pin (5x2) ribbon cable. The cable should be connected to the header on the back of the module. **Care should be taken in matching -12V, usually associated with the red stripe on the ribbon cable, to the “-12V” or the stripe indication on the board.**

## LFO OUTPUTS -

- LFOs are labelled from “I” to “IV” and have both a triangle and a square wave output. The triangle output of each will show through a bi-polar LED.
- The triangle and square waves are +/- 5V and have the following phase behaviour -



## FREQUENCY CONTROL -

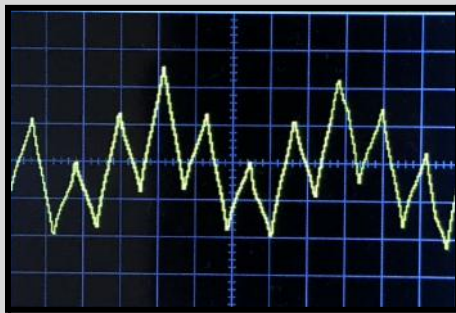
- Frequency controls are labelled to their corresponding LFO, “I” through “IV”. There is also a switch to toggle between two frequency ranges, going from minutes to audio rates.
- The frequency range is approximately -

Switch Position	Minimum	Maximum
L	2[min]30[sec]	1[Hz]
H	2[sec]	113[Hz]



### MIXED OUTPUT -

- The mixed output will mix two triangle waves taken from the LFOs. The switch will decide whether the first 2 LFOs will mix, or the 2 last.
- This yields a lot of unexpected and free-moving CV sources from triangle waves-



### PSEUDO-RANDOM OUTPUT -

- The pseudo-random output is taking all square waves and summing them with a certain weight applied to each. This yields jumping voltage, an amazing source for CV or low-rate audio noise.
- The output is bi-polar and the behaviour is shown below, with the difference of being bi-polar between +/- 5V.

