Pip LFO

https://busycircuits.com/alm048

The 'Pip LFO' is a compact 4HP all analogue low frequency oscillator with a wide frequency range, voltage control, numerous outputs, reset input and a VCO mode.LFO speed is set via a manual control and voltage control input. There is a unipolar square wave output along with both bipolar and uni-polar triangle, saw and sine waveform outputs. When VCO mode is activated, the frequency jumps to audio range and will track V/Oct for approx 5 octaves. A reset input allows the LFO waveform cycle to be reset and produces hard sync functionality in VCO mode.

ALM048 / Pip LFO

TECHNICAL SPECIFICATIONS

Power: +12V 40ma / -12V 20ma
Size: 4HP
Depth: 32mm (approx)

Module Installation

With your modular synth powered **off** connect the 10 pin end of the supplied standard eurorack power connector cable to the 10 pin power connector on the rear of the module.

The red stripe on the cable should be orientated to match the text 'RED' marked on the rear of the module near the power connector (this is -12V). Connect the 16 pin end of the cable to your eurorack bus board (Refer to your bus board documentation for the correct orientation).

You are now safe to power up your modular synth. If the module fails to power up check you have the power cable correctly orientated and have carefully read this manual.

All ALM modules feature reverse power protection.

FREQ
LFO Frequency setting control and additional CV input.

The LFO frequency range is approximately 0.01Hz (90s cycle) to 30Hz (0.03s cycle). See below for range in VCO mode.

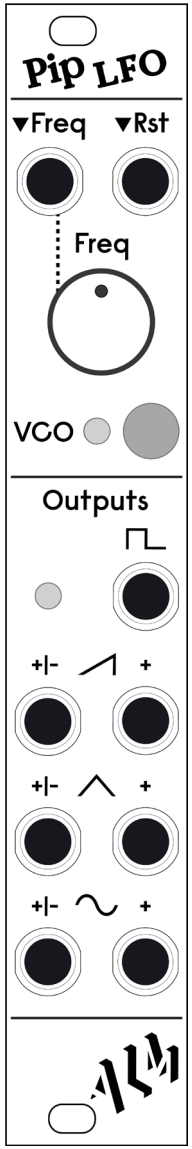
RESET (Rst)
LFO reset trigger input. A trigger here will reset all waveform cycles (note works as hard sync in VCO mode).

VCO MODE
When engaged (indicated by associated LED) the LFO will operate at audible frequency range.

In this mode the unit will track 1 volt per octave roughly over 5 octaves and will go into the ultrasonic frequencies.

OUTPUTS
Individual outputs provide square, saw, triangle, and sine waves at the LFO's set frequency displayed by the red LED indicator.

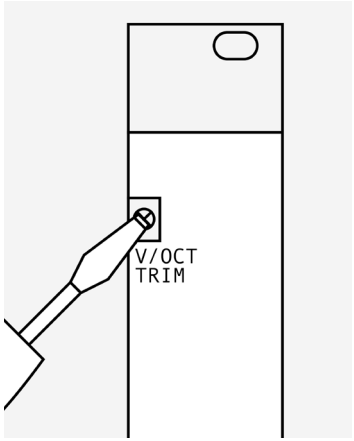
The saw, triangle, and sine wave outputs offer both bipolar (±5V) and unipolar (0-5V) signals simultaneously.



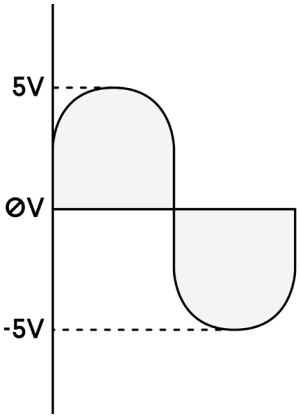
V/OCT TRIM
On the back of the module there is a small screw which can be used to finely adjust the frequency tracking when in VCO mode.

To calibrate, measure pitch with a tuner, applying 1V then 3V into the Freq input. Use a small flat head screwdriver to fine tune the frequency for each voltage until both are in tune (i.e. the same note 2 octaves apart).

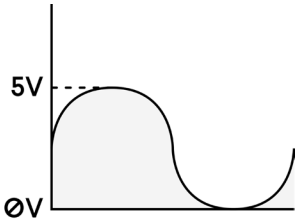
Note the module ships precalibrated.



BIPOLAR
Bipolar outputs (marked +|-) will oscillate between -5V and +5V



UNIPOLAR
Unipolar outputs (marked +) will oscillate between 0V and +5V



NOTE
The square wave output is unipolar only and 0-8V.

Support

Need help? Email your questions to help@busycircuits.com

For the latest news, additional info, downloads and firmware updates please visit the ALM website at http://busycircuits.com. Also follow @busycircuits on YouTube and Instagram.

Limited Warranty

From the date of manufacture this device is guaranteed for a period of 2 years against any manufacturing or material defects. Any such defects will be repaired or replaced at the discretion of ALM. This does not apply to;

•Physical damage arising for mis treating (i,e dropping, submerging etc).

•Damage caused by incorrect power connections.

•Overexposure to heat or direct sunlight.

•Damage caused by inappropriate or misuse.

•Use of incorrect or non official firmware

No responsibility is implied or accepted for harm to person or apparatus caused through operation of this product. By using this product you agree to these terms.