



ALM039 / Pip Filter

TECHNICAL SPECIFICATIONS

Power: +12V 25ma / -12V 25ma
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.

Pip Filter

<https://busycircuits.com/alm039>

The 'Pip Filter' is a compact 4HP voltage controlled 2 pole low-pass filter with resonance, a 'pingable' trigger input and built in VCA. Filter cutoff is controlled via both knob control and dual CV inputs with a built in attenuverter. Resonance is manually controlled and will reach into self oscillation with rough V/Oct tracking. A trigger input allows the filter to be pinged for percussive plucked type sounds. Finally, a built in VCA (normalled open) allows for additional independent amplitude control of the filtered signal.

FREQUENCY CONTROLS

The two frequency inputs are combined and added to the manual Freq knob.

The first input expects 0-5V and features an attenuverter for positively or negatively scaling the CV. The second input expects a wider 0-8V range and will (very roughly) track 1 volt per octave.

RESONANCE

Manual control over the filter's resonance (see diagram right).

TRIG

Send a gate or trigger to 'ping' the filter (see diagram right). This input will only trigger on each rising edge to prevent 'double pings' when using longer triggers or gates.

VCA

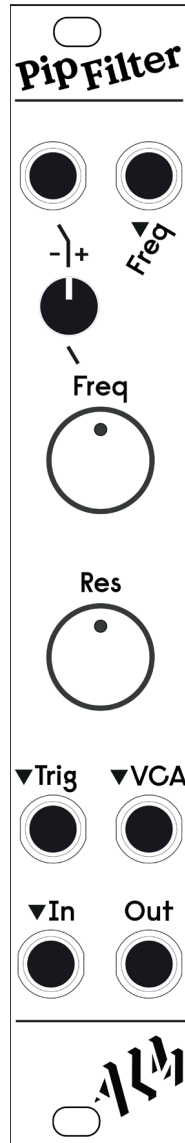
Voltage control over the volume of the output, independent to the filter's cutoff frequency. 0-5V range. Stays fully open when unpatched.

AUDIO IN

Audio input to the filter.

AUDIO OUT

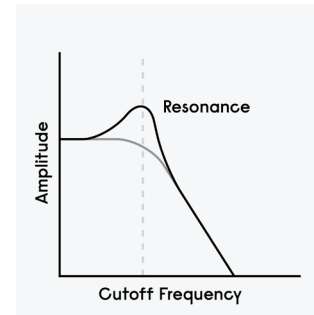
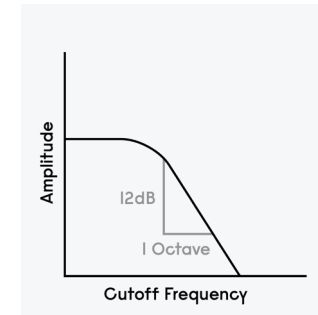
Audio output post filter and VCA.



FILTERING

Above the cutoff frequency, the incoming audio will be attenuated by 12dB/octave.

As the filter's cutoff is reduced, more of the high frequency content in the source audio is cut out, leaving only the low frequency content.



RESONANCE

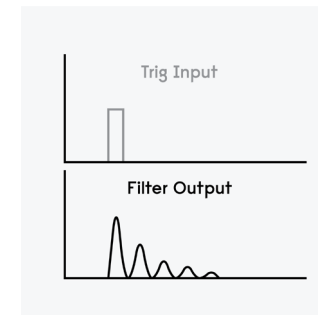
The filter's resonance is the amount of boost applied to the signal in the frequency range just around the cutoff frequency.

If this is turned all the way up, the filter will 'self-oscillate' even without an input, and will approximately track V/Oct when a pitch signal is patched into the Freq input.

'PINGING'

A trigger can be sent to the filter's Trig input to produce a plucked sound even with no audio input.

To ping the filter, the resonance must be set to just before the self-oscillation point before sending the trigger.



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 from 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.