



rack: (n) a framework, typically with rails, for holding or storing things.

Tier: (n, n, Ger) Animal.

Congratulations! You are now a the proud human to an AFA Pit Viper Module.

This module is based on the exact same circuit as our highly acclaimed Pit Viper overdrive pedal modified for use with Eurorack level voltages and with additional CV controlled circuitry.

While you can get instant gratification by plugging the module and letting loose, you should understand that your Pit Viper is no ordinary animal. Read this manual thoroughly to understand it better....

KNOBS

TOXICITY - Gain knob. Turn CW to increase distortion.
HISS - Tone knob. Turn CW to cut treble.
VENOM - Volume knob. Set dry/wet balance with this and the BLEND knob

FEAR Switch

Soft clipping controls. Adds texture at cost of volume.
Middle - Off
Left - Lopsided loud clipping
Right - More tube like, less highs

MALICE Switch

Hard clipping controls. Like FEAR but acts more as a limiter.

Middle - Off

Left - Grittier harmonics

Right - Spongier, less treble

BLEND KNOB

Turn CW → Wet
 Turn CCW ← Dry

INPUT JACK

OUTPUT JACK

CV Level CV Input

This CV input cuts treble, complementing the HISS knob. Works best with unipolar CV (0-10V). Turning up this knob with the input not connected will cut treble. Works better on some signals (e.g. triangle waves) than others.

Off/On Attenuverter ↔ Input

Rising CVs here will increase overall gain and saturation at the cost of dynamics and noise.

Attenuverter

-1 ↔ +1

Input Jack

Off ↔ On

Activates a feedback loop with ragged resonant filtering characteristics.

See next page for instructions on configuring this control.

BITE

SATURATION

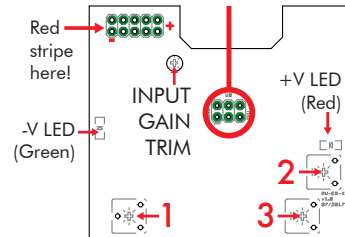
FILTER

IMPORTANT - The Saturation and Filter controls do not operate without a control voltage (0-10V) connected to their respective inputs. You **must** connect a CV or an offset to make them work. The Off/On switches simply send attenuverted CV to the Saturation and Filter Circuits.

FILTER & POWER BOARD

FILTER CONFIGURATION

- Passive clipped low pass
- Unbuffered high pass
Mild shaping and bass cut
- Buffered high pass
Pronounced bass cut
- Buffered Low Pass
Can self-oscillate with gain



1 - FILTER CV SENSITIVITY

Intensity control for the feedback filter. Turn CW for more sensitivity - dramatic and extreme effects but with less range.

2 - FILTER GAIN

Turn clockwise to increase the level of filtered feedback and increase likelihood of oscillation.

3 - SATURATION CV SENSITIVITY

Intensity control for overall distortion. Turn CW to increase sensitivity, resulting in more saturation at the cost of dynamic range and a little noise. May not be audible at high TOXICITY settings.

SAFETY

We attempt to build safe products.
Here are some further cautions you should exercise while using them.

1. Do not eat or attempt to cook the Pit Viper.
2. The Pit Viper module follows the Eurorack standard power connection scheme, includes a standard 16-to-10 pin power connector, has reverse polarity protection diodes and a shrouded 10 pin header to ensure the power is connected only one way - the right way. Nonetheless, please make sure that your power supply puts out power in the correct manner (red stripe negative!)
3. When making any changes to trim pot settings, use a small screwdriver and do not exercise force on the body of the trimmer! A small adjustment can go a long way, so be gentle!
4. While developed and tested at a more standard +/- 12V DC, the Pit Viper Eurorack module can be safely operated up to +/- 15VDC. Exceeding this voltage may lead to damage of the circuit or ICs.
5. Do not bathe with the Pit Viper.
6. Your cat may take offence to the sounds made by Pit Viper. This is normal. If you do not have a cat, please adopt a cat (unless, of course, you are allergic 🐾).

TECHNICAL DETAILS

Width: 12 HP (60.96 mm)

Power Consumption:

approx 35 mA +12V, 25 mA -12V

Depth with power cable: approx 46mm

Audio Input: mono 1/8" with input overload protection

Input Impedance: nom >500kΩ

Audio Output: mono 1/8" with input overload protection

Output Impedance: nom. approx 1kΩ

CV (0-10 VDC) Inputs:

Bite - Attenuator

Saturation - Attenuverter input for bipolar CV

Filter - Attenuverter input for bipolar CV

One 25cm 16-to-10 pin power cable included.

TIPS AND TRICKS

1. The opamp (TLC2272) at the back of the circuit is socketed. Swap it out with other opamps to see how the distortion character changes. We do not take responsibility for damages to circuit or opamp from any modifications, so please be careful!

2. This is NOT a precision device, the idea being to add dirt and character. If you however still feel the need to change our home-rolled vactrols on the filter board for fancy/matched ones, we've included extra solder holes in place for exactly that.

3. Use the BLEND knob and the VENOM knobs together to set your optimal wet/dry volume balance.

4. Keep in mind that the Pit Viper is essentially voiced for the midrange and has a low cut at the input.

5. If you choose to adjust the trimpots, do keep in mind that the filter gain and sensitivity should be adjusted together to determine the best results. Go to our website for a video that will demonstrate this process better.

COSMETIC CARE

The Pit Viper surface is aluminium hand polished to a mirror finish. Clean the surface with a microfibre cloth when necessary. It should stay untarnished for very, very long - if you feel the need to brighten it up, use a little aluminium or general metal polish to liven up the surface.

WARRANTY

All Animal Factory Amplification products, unless otherwise specified, are protected by a 2-year warranty on manufacturing and workmanship. This does not cover cosmetic damage by routine use.

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