

# ESP

Card by Ben Regnier

Source and build at

[https://github.com/benregnier/Workshop\\_Experiments/tree/main/ESP](https://github.com/benregnier/Workshop_Experiments/tree/main/ESP)

ESP is a card based upon the Korg MS-20 External Signal Processor.

It accepts an external signal and does the following to it:

1. Adjustable gain (main knob) - from 0.5x to 32x, with soft clipping. When using guitar i use the Amplifier as a pre-amp, with fairly high levels of gain. Some clipping is helpful for getting accurate pitch out.

Post-Gain signal is sent to Audio Out 1.

2. Bandpass filter: the x and y knobs adjust the low and high cuts for a variable bandpass filter, very useful for improving tracking by removing low and high frequencies.

Post-bandpass signal is sent to Audio Out 2.

ESP provides the following output signals:

CV Out 1: 1v/Oct pitch out

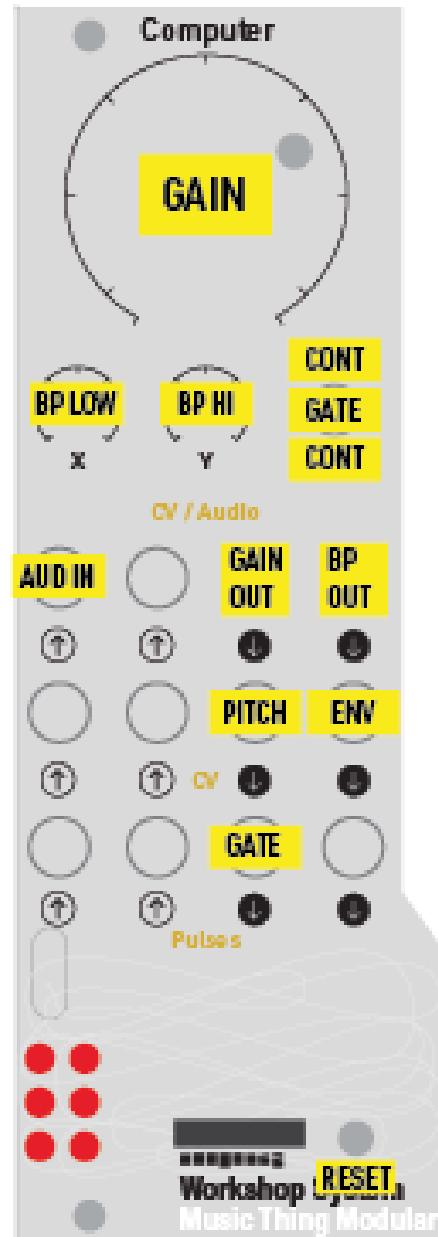
CV Out 2: Envelope out

Pulse Out 1: Gate out

Pulse Out 2: 2ms trigger from Gate.



## ESP



The switch controls whether the pitch update only happens at gate high (middle position) or is continuous (any other position).