

ESP

Card by Ben Regnier

Source and build at

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 hard 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:

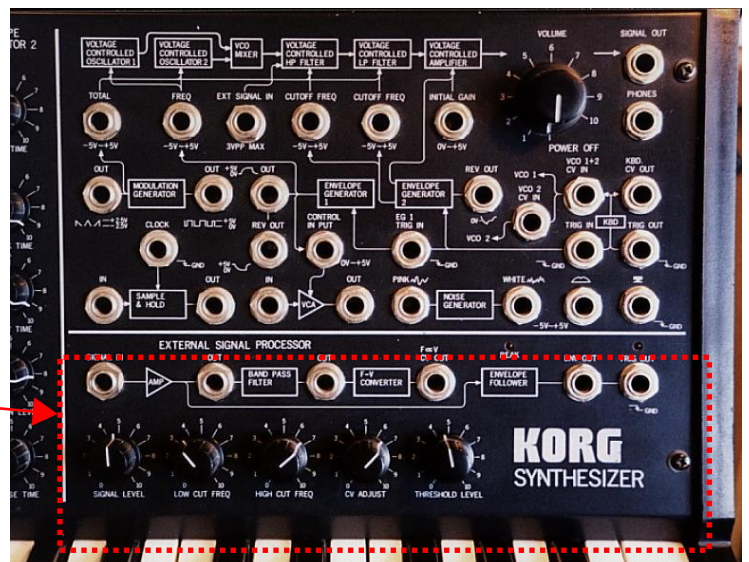
CV Out 1: **1v/Oct pitch out**

CV Out 2: **Envelope out**

Pulse Out 1: **Gate out**

Pulse Out 2: **2ms trigger from Gate.**

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



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