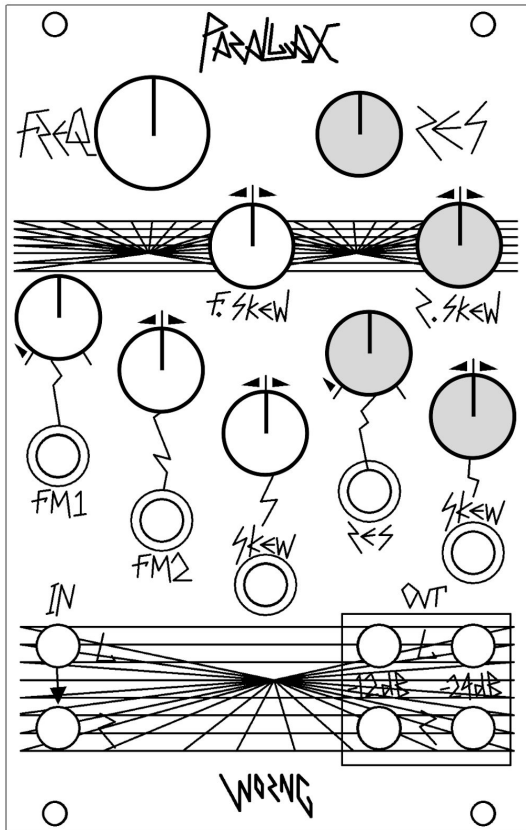


WORNG Electronics Parallax manual

Thank you for purchasing a WORNG Electronics Parallax stereo VCF. Parallax is designed to give you total control over filtering in stereo in an intuitive, playable form factor.



Connecting your Parallax:

Parallax requires 16hp of space in your Eurorack system, and a depth of 25mm. Connect the included power cable to the back of the module and to your power busboard. The connection on the module is shrouded and can only go one way, but is also marked with a line to let you know which way the red stripe should be facing. The module is also protected against damage from reverse power connection, but you should still always be careful connecting power.

Parallax essential concepts:

Parallax is a filter designed to give you a set of controls that allow you to easily treat a stereo signal as a stereo signal rather than a pair of mono signals, as well as giving you control to move around in the stereo domain. The filter topology of Parallax is an extended and hot rodded design with roots in the Sequential Circuits Pro One and Prophet 5 rev 3. An obvious improvement is that the filter is stereo, also -12dB/oct outputs have been added in addition to the traditional -24dB/oct outputs. There are a number of other improvements under the skin to bring the filter into the modular realm, all the while keeping

the rough yet creamy sound that has made this filter a favourite over the years.

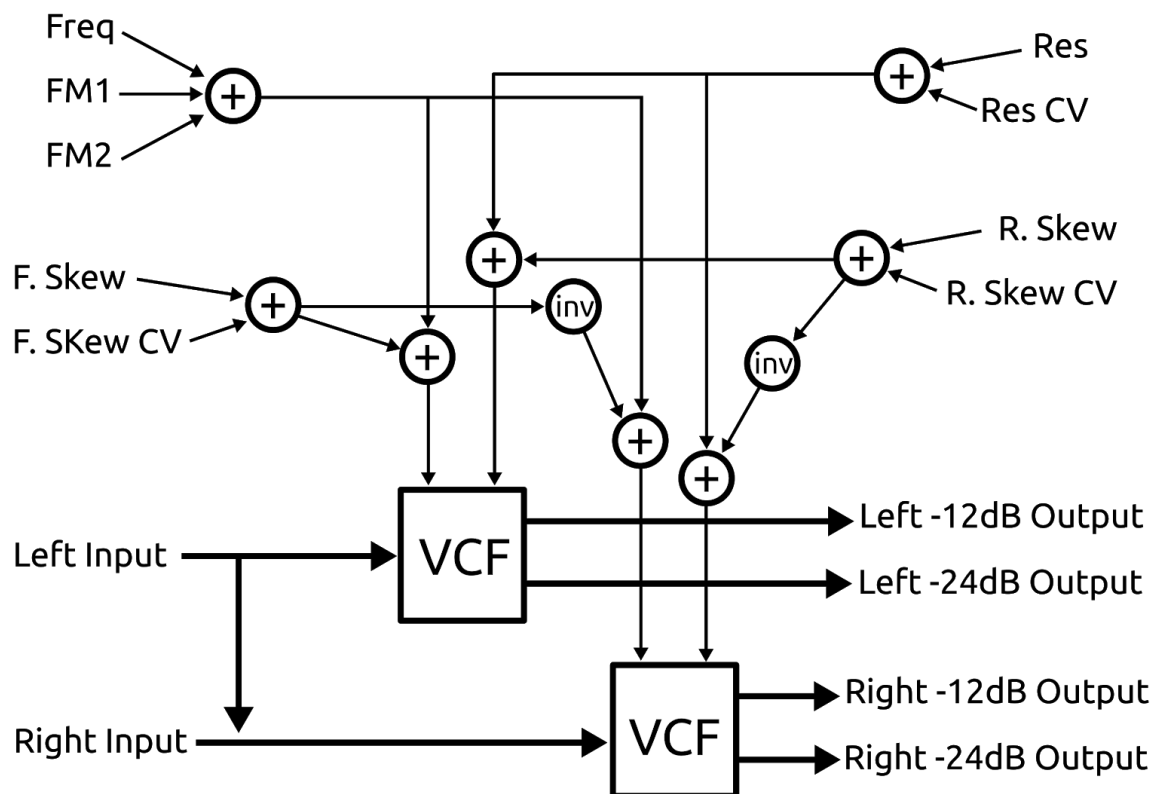
The terminology used on Parallax is the terminology of a stereo signal, so **Freq** controls stereo frequency and **Res** controls stereo resonance. The controls marked **F. Skew** and **R. Skew** are to skew the frequency and resonance in the stereo field, i.e. turning **F. Skew** to the left will increase the cutoff on the left and decrease it on the right. A pair of LED indicators for Frequency (Red) and Resonance (Yellow) are included to give an accurate representation of what is happening in the stereo field, which can be useful in seeing how modulation is affecting your filtration in stereo.

The controls are divided into two sections to the left and right of the module, with different coloured knob caps to help you easily differentiate between them. The left side controls are for the frequency and the right are for resonance.

A design choice was made to include multiple FM CV inputs and to include knobs for CV amount on all inputs as we believe this creates a more playable and more easily fine-tuned filter, so you'll enjoy using Parallax and will find it easier to get the sounds you want.

Finally Parallax has stereo inputs and outputs on the lower part of the module. These are a pair of mono 3.5mm jacks marked L and R to make the stereo pair, as per the eurorack standard. If you wish to use a signal on a stereo 3.5mm TRS cable be sure to break it out into individual L and R signals before patching into the Parallax.

The L input is normalled to the R, so if you patch to L and leave R unpatched the signal will go to both outputs, allowing you to make stereo patches from a mono source. It is a deliberate design decision not to sum the stereo outputs to mono if only one cable is patched in, the Parallax is a proudly stereo device.



Parallax Controls:

Starting at the top of the module the largest and most prominent control is stereo frequency, marked **Freq**. This control alters the cutoff frequency of both the Left and Right channel filters together, allowing you for example to do an even filter sweep over a stereo signal.

To the right, and distinguished with grey knob caps, is the stereo resonance control, marked **Res**. This increases the resonance of both the left and right filters, from flat into self oscillating, and then controlling the amplitude of the oscillation.

Below and to the centre is the Frequency Skew control, marked **F. Skew**. When set to 12 O'Clock and with no modulation of the F. SKew CV the cutoff of the left and right filters will be even. Turning the control anti clockwise will increase the cutoff frequency of the Left filter and decrease the Right, around the base point set by the Stereo Frequency control. Conversely turning clockwise will decrease the cutoff on the Left and increase it on the Right.

To the right is the Resonance Skew control, marked **R. Skew**. Like the Frequency Skew control this skews the resonance amount around the point set by the Stereo Resonance control, moving anti clockwise increasing the amount of resonance on the Left and decreasing the amount on the right and vice versa.

The collection of three black capped controls to the bottom left of the control section are **FM1** CV amount, **FM2** CV amount and Frequency Skew CV Amount, marked **Skew**. These control the amount of CV modulation from the CV inputs below them. **FM1** is a unipolar CV input which modulates the Stereo Frequency. **FM2** also modulates Stereo Frequency but the control is an attenuvertor, so the control is off at the 12 O'Clock position, increases when turned to the right and applies an increasing amount of a negative version of the voltage when turned to the left. The **Skew** CV also goes through an attenuvertor, this gives voltage control over the Frequency Skew parameter.

Finally, the **Res** CV and Res **Skew** CV controls and inputs round out the control section. As expected these provide CV control over the Resonance and Resonance Skew parameters, respectively.

Patch ideas:

Stereo Audio Rate FM

Audio rate filter FM is a great way to add harmonics to your signal, with Parallax you can now do that in stereo for huge width. Patch an

oscillator to the F. Skew CV input and then adjust the depth to dial in the tone you're looking for. This leaves the FM1 and FM2 CV inputs available for more standard modulation, for example from an envelope and/or LFO. We like the sound of the -24dB/oct outputs for audio rate FM, but the -12dB/oct outputs sound good too, have a listen and see which you prefer.

Pinging the filter

The Parallax responds really nicely to being pinged with a trigger or gate signal. Set the **Freq** control to around 12 O'Clock and the **Res** to around 2 O'Clock and patch your triggers or gates to the audio inputs. Use the **Freq** to fine tune the tone and the **Res** to control the length of the pings. You may use all the modulation CV inputs as normal while pinging, but note that higher levels of resonance will cause the tone not to cut out between pings. Both -12dB/oct and -24dB/oct outputs ping nicely, but we prefer the -12dB/oct's brighter tone which brings to mind classic west coast timbres.

Self-patching mayhem

As Parallax has two pairs of outputs and many modulation inputs, you can add a touch of chaos and instability to your filter sound by patching an unused output or two to an unused modulation input. With high levels of resonance you can coax out vowel sounds or simulate feedback, or completely obliterate your tone. Experimentation will be your friend here.

Parallax has a matte black panel which we think looks great, but over time it may develop an inconsistent finish due to oils from your hands collecting on the panel. To clean simply use a soft cloth and a little isopropyl alcohol and your module will look good as new. Always spray the isopropyl onto the cloth and then wipe the module, don't spray directly onto the module.