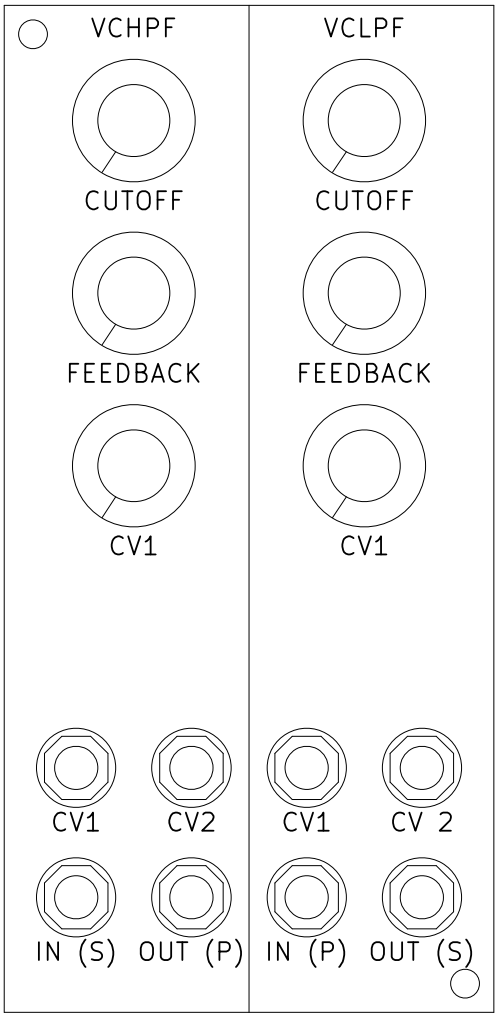
.: Dual MS20 VCF User Manual :.

Brief:

This module contains two MS20 style Voltage Controlled Filters, one configured as a High Pass Filter, and the other configured as a Low Pass Filter. Each VCF has controls for cutoff frequency, feedback, and a CV attenuator. Normalization is provided behind the panel for series and parallel filter configurations.

Panel layout:



Description of the controls:

- CUTOFF: the cutoff frequency control. Clockwise rotation results in increasing cutoff frequencies.
- FEEDBACK: the feedback control. Clockwise rotation results in more feedback. These filters are configured for extreme amounts of feedback, and self-oscillation can occur at even moderate amounts of feedback. The feedback is highly dependent on the amplitude of the input signal- the best sounds are often found when the input signal is turned down, high input amplitudes can “swamp” the self resonance and make the feedback sound weak. Experimentation is suggested to find the sweet spots.
- CV 1: attenuator for the control voltage input CV 1.

Description of the jacks:

- CV 1: attenuated control voltage input.
- CV 2: unattenuated control voltage input. This will have roughly a 1 volt per octave response, but don’t expect good tracking from these filters.
- IN: signal input
- OUT: signal output.

Series/Parallel normalization:

The signal input and output jacks are normalized to allow for series or parallel operation of the filters. To achieve a series HPF → LPF arrangement, plug the signal input into the **IN (s)** jack associated with the High Pass filter side, and take the output from the **OUT (s)** jack associated with the Low Pass Filter side. This will route the signal first through the HPF and then through the LPF. Running the HPF into the LPF like this results in a Band Pass Filter response, with the bandwidth determined by the relative cutoff frequencies of the two filters.

To achieve a parallel filter configuration, plug the signal input into the **IN (p)** jack associated with the Low Pass filter side, and take the output from the **OUT (p)** jack associated with the High Pass Filter side. This will route the signal through both the HPF and LPF, and then combine the signals together.

If independent filter operation is desired, just plug jacks into the IN and OUT jacks of the two filters.

CV normalization:

Behind the panel the CV1 and CV2 jacks for the HPF and LPF sides are normalized together, so that when you plug a CV signal into the CV1 jack of the HPF side it is routed to the CV1 jack of the LPF side as well. Likewise with the CV2 jacks. Inserting a plug into the CV1 and/or CV2 jacks on the LPF side breaks this normalization.

This is provided as a convenience, so that you can control both High Pass and Low Pass filters from a single CV source, such as an ADSR or LFO.

Calibration:

This module requires no calibration.

Current draw:

+12 volts: 55mA

-12 volts: 55mA