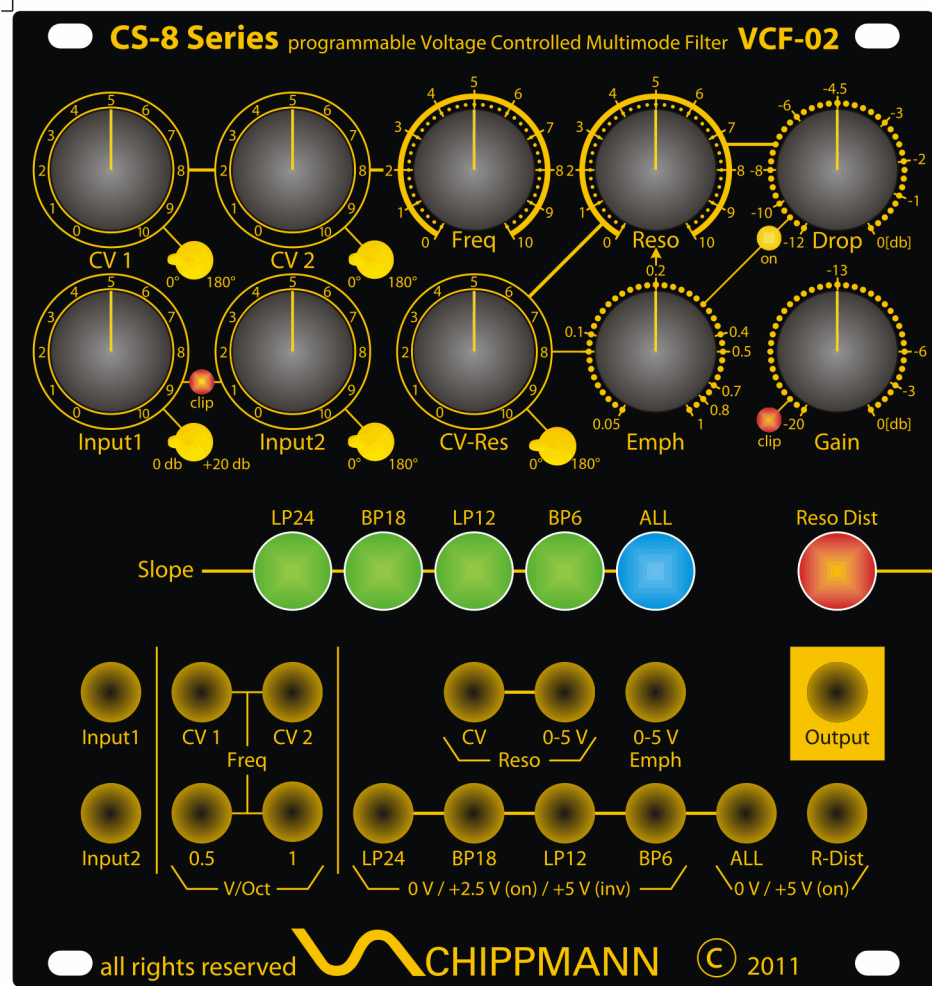


CS-8 Series – 3HU Rackmount Modules

- programmable Voltage Controlled Multimode Filter VCF-02



Brief introduction:

- The first Schippmann 3 HU rackmount module „VCF-02“ is a 4 pole multimode filter providing 63 Allpass/Notch/Phaseshifter, 27 Lowpasses, 18 Highpasses and 13 Bandpass functions. So, all in all 121 non-redundant filter functions are possible. The filter functions are a result of a non-inverse/inverse mix of 5 taps within the filter block, selected by 5 tactile switches (green coloured in the drawing). All these 5 switches are able to be controlled by an external voltage (0-1 Volt = off, 1-3 Volt = non-inverse (green lightning), 3-5 Volt = inverse (red lightning)) and may be automatized by sequencer. The generation of basic functions (Highpass, Lowpass, Bandpass and Allpasses) is easier than it may seem first. Knowing some simple rules will allow the customer to select and jump quickly between different slopes and functions. Moreover, it is possible to modulate these 5 filter function control inputs with audio rate signals and so, generating hard and weird ringmodulation effects.
- There are 2 potentiometer controlled audio inputs with a common clip detector and a gain up switch (0/+20 db) for the first input and a phase inversion switch (0°/180°) for the second input.
- The filter provides 4 independent cutoff-frequency CV inputs, two of them are potentiometer controlled with an inverse switch (0°/180°) for each of them and two fixed sensitivity inputs (0.5

Volt/Oct. (not calibrated) and 1 Volt/Oct. (calibrated)).

- Two independent resonance CV inputs, one of them potentiometer controlled and phase inversion (0°/180°), the other one fixed are providing high flexibility controlling.
- A new and very powerful function called "SAT" (Saturation) allows to set the emphasize of the resonance. While increasing the resonance this parameter (SAT) determines how much the harmonics in the audio signal will be emphasized. The range goes from very thin sounding to very strong and deep sounding emphasize of the harmonics. A fixed CV input (0-5 Volts) allows to control this parameter over the full range.
- In many filter designs exists a well-knowing effect of a typical filter output gain drop of -14 db when the resonance is increasing. In these relating filter modes (automatically detected) this drop is adjustable from -12 db to 0 db (no drop). A LED indicates when this function is deactivated. This function is only active for all kind of lowpass functions.
- A tactile switch called "DIST" provides a second harmonic distortion, especially of the resonating sound of the filter output and sounds warm. This parameter is also CV controlled (0-3 V = off, 3-5 V = on).
- Finally there is an output gain potentiometer with a clip detecting LED and a range from -20 db to 0 db.

Mechanical info: height: 129 mm, width: 24 TE (121.92 mm), Front panel: 2 mm thickness electroplated Aluminium with printing under the oxide.

Technical info: Power supply: ± 12 V (safe against wrong polarity!), current: ca. 150 mA max., output noise (worst case, filter wide open, no resonance): tap LP24: $<90 \mu\text{Vrms} \Rightarrow -81$ dbV, tap LP12: $<70 \mu\text{Vrms} \Rightarrow -83$ dbV, tap BP18: $<60 \mu\text{Vrms} \Rightarrow -84$ dbV, tap BP6: $<70 \mu\text{Vrms} \Rightarrow -83$ dbV, tap ALL: $<150 \mu\text{Vrms} \Rightarrow -76$ dbV

Pricing: ca. 600 Euro (including 19 % VAT) equals 500 Euro net.

NOTE: This is a preliminary data sheet. All infos including optical designs giving here are preliminary and could change!