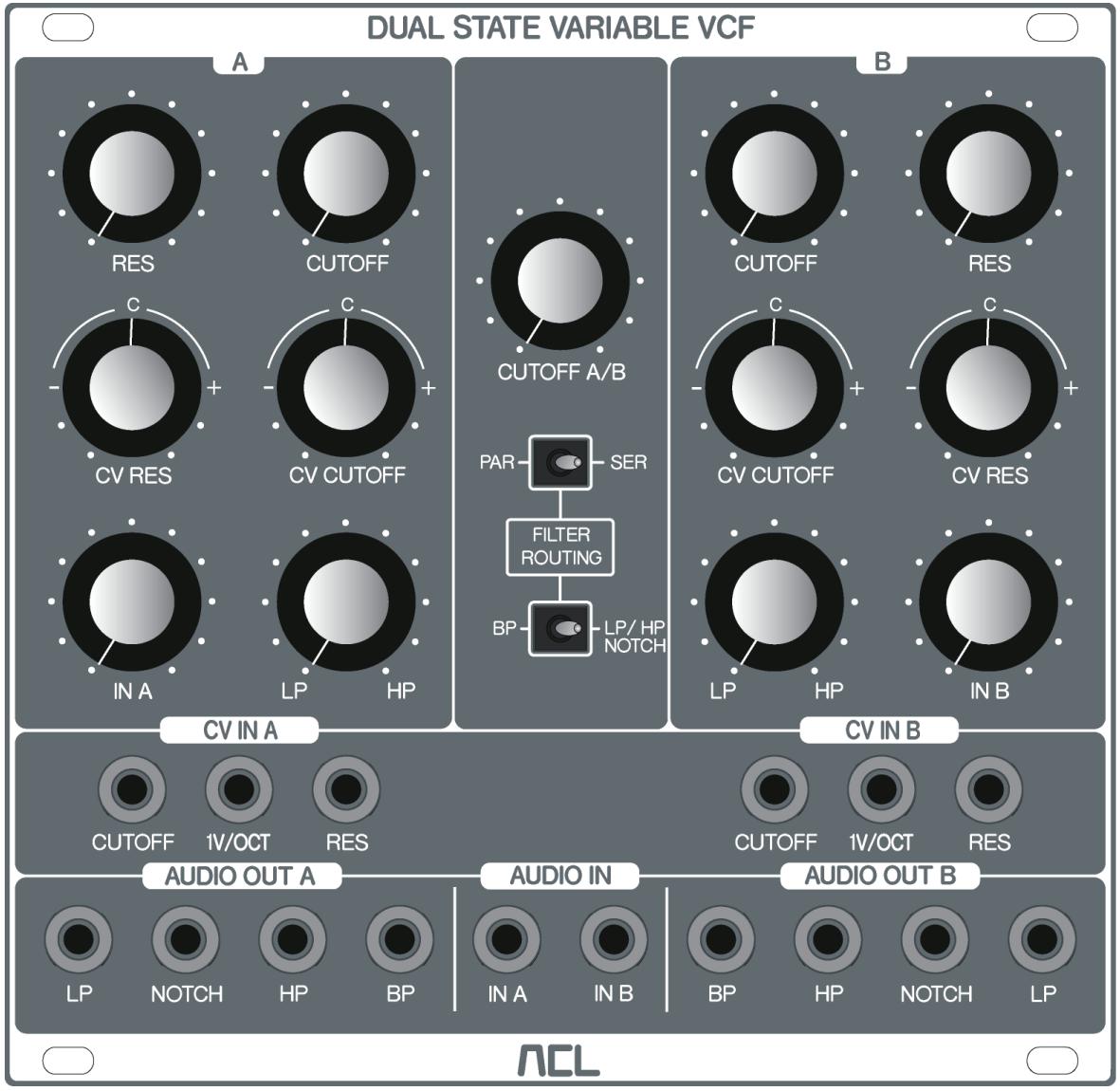
Audiophile Circuits League
Musical Instruments Manufacture

DUAL STATE VARIABLE VCF

User´s Manual



Eurorack Synthesizer Modules

26 HP

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1. INTRODUCTION

Audiophile Circuits League. -DUAL STATE VARIABLE VCF module contains two 12dB multimode VCF´s A and B, with Lowpass, Bandpass, Highpass and Notch-Output. Both filters A and B can be controlled individually and simultaneously in the same time. Filters can be routed in parallel or serial configuration. All Audio and CV-inputs are normalized from filter A→B. CV inputs for Cutoff and Resonance of each filter got a attenuverter.
(For details about normalization, see section 5. CHARACTERISTICS)

2. WARRANTY

In the event of a fault in use, we will repair or replace it free of charge under the warranty terms stated below. The warranty period is valid for one year from the day of purchase. If repair is necessary, please ask the dealer you purchased it from.

We can not guarantee the incidental damage caused by the breakdown or damage that occurred during use of this product. In addition, warranty will expire in the following cases:

· Failure / damage caused by use of unspecified power supply / accessories.
· Failure / damage caused by incorrect connection or use of power cable.
· Failure / damage caused by improper handling method.
· Failure / damage caused by natural disasters (fire, flooding etc.) and pollution.
· When the cause of breakdown or damage lies in equipment other than this product.
· Failure / damage caused by improper modification, adjustment, parts replacement.
· Failure / damage when used under particularly severe conditions, when loaned/rental/hired out to 3rd party.

Is it a malfunction?

Please read the user's manual carefully and check again. If you think that there is still a problem, please consult the dealer you purchased from or contact us (English) .

support@audiophilecircuitsleague.com

3. INSTALLATION

⚠WARNING

*Always turn the Eurorack unit off and unplug the power cord before pluging the Eurorack power cable.

*When attaching the Eurorack power cable, please be careful not to touch the terminal part.

Connect to the Eurorack's system power supply (+ 12V) using the supplied Eurorack power cable.

Connect the 16-pin connector to the Eurorack power connector. Connect the red mark on the power cable so that it matches the pin on the (- 12 V) side of the power connector.

Connect the 10 pin connector to the shrouded header on the back of the module. The header is protected against reverse-plugging.

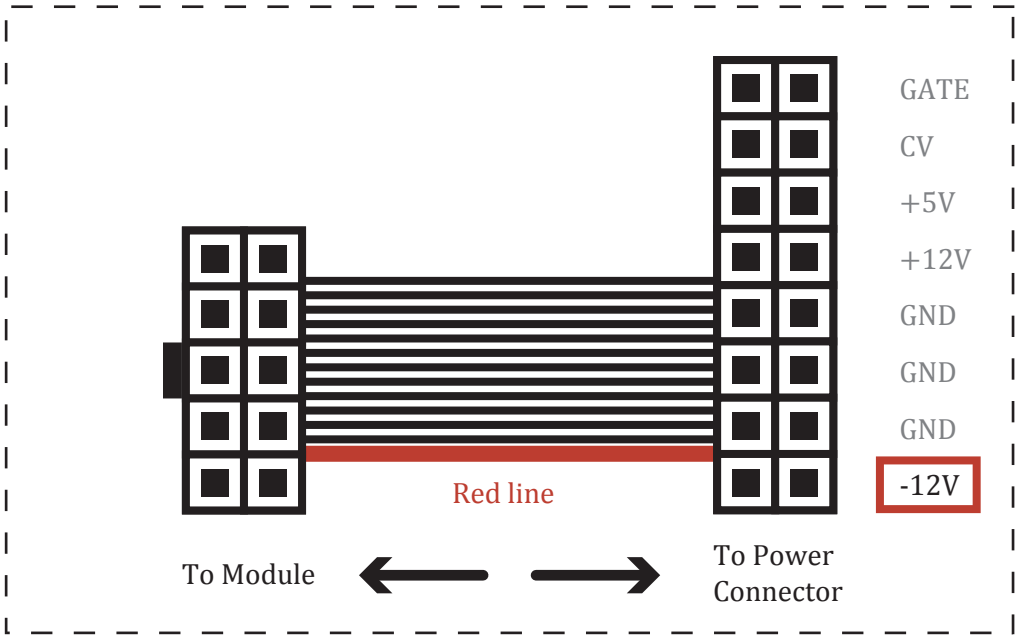

FIG.1：Eurorack power cable

4. FUNCTION OF PANEL COMPONENTS

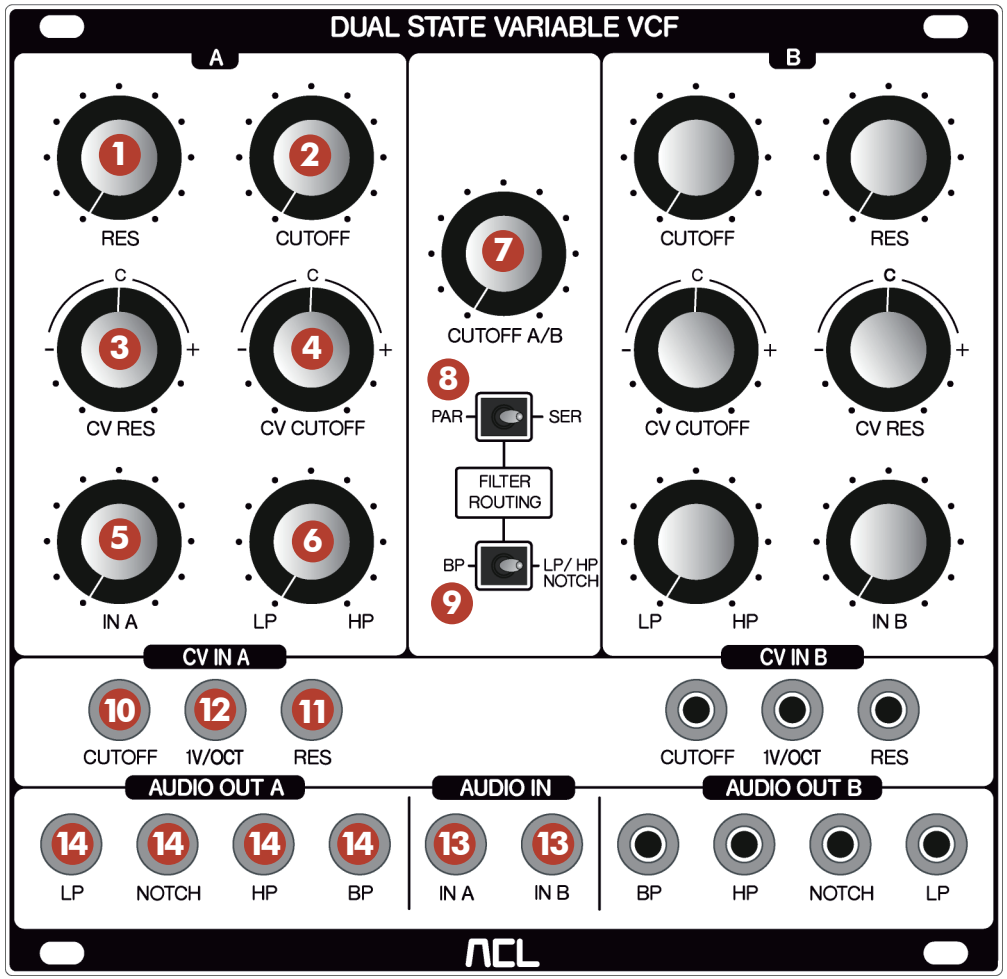

FIG.2 : Front Panel

① "RES" knob

Adjust the depth of the filter resonance.

② "CUTOFF" knob

Adjust the filter cutoff frequency.

③ "CV RES" knob

It is an attenuverter that adjusts the strength of the signal input from the ⑪"RES CV" jack in the plus / minus direction.

④ "CV CUTOFF" knob

It is an attenuverter that adjusts the strength of the signal input from the ⑩"FILTER CV" jack in the plus / minus direction.

⑤ "IN A" knob

This is an attenuator that adjusts the strength of the audio signal input from ⑬"IN A" .

⑥ "LP HP" knob

In the serial mode, the audio signal proceeds with filter A → B, but the signal received by filter B from filter A can be gradually changed from LowPass to Notch to HighPass by this knob (See FIG.3).

In both the parallel and serial mode, it is also possible to gradually change the audio signal output from the "NOTCH" jack from LP to Notch to HP (See FIG.4).

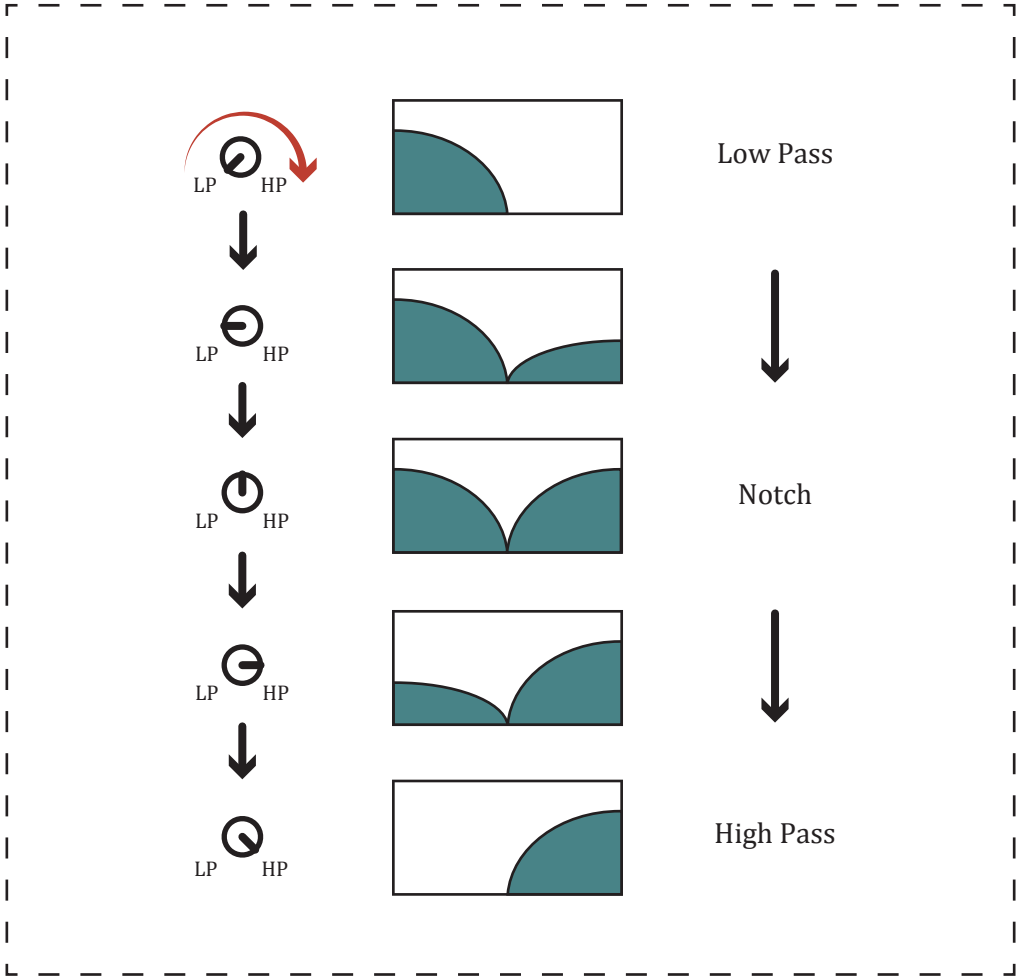

FIG.3: Filter type change by "LP HP" knob setting

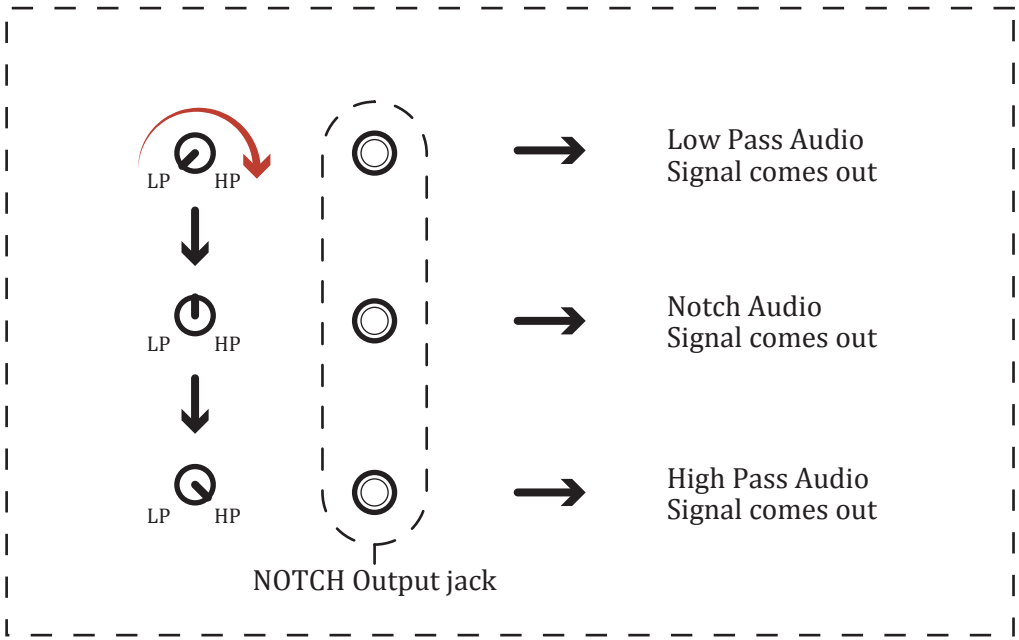

FIG.4: Changing audio output signal from "Notch" jack by "LP HP" knob setting

⑦ "CUTOFF A/B" knob

CUTOFF of both filters A and B can be adjusted together by one knob. For example, the position where the knob is fully opened in the clockwise direction is defined as "0". Assume that the value of each parameter is

DUAL CUTOFF = "0", CUTOFF A = "- 1", CUTOFF B = "- 2".

Then, if you set DUAL CUTOFF to "-2", it changes in conjunction with

CUTOFF A = "-3" and CUTOFF B = "- 4"

(See FIG.5).

When using filters A and B in stereo, you can simultaneously control the left and right channels with one CUTOFF A/B knob.

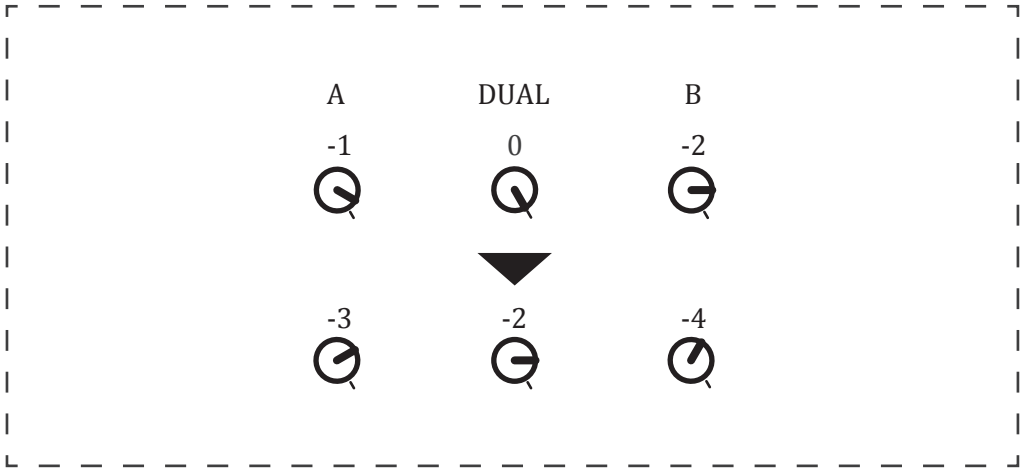

FIG.5: Reaction of CUTOFF A, B in conjunction with the operation of DUAL CUTOFF

＊Besides CUTOFF A and B, the knob itself does not actually rotate according to the movement of DUAL CUTOFF.

⑧ "PAR-SER" selector

Switch the functions of filters A and B to parallel or serial mode. In parallel mode, filters A and B can be used independently. In the serial mode, the audio signal goes from A to B. However, even when using the serial mode, it is also possible to output audio on the filter A side, so flexible patching is possible.

⑨ "BP-LP/HP/NOTCH" selector

When using the serial mode, select and switch the filter type of the audio signal to filter A → B. When "BP" is selected, the audio signal going from A to B, that is, the audio signal received from A by filter B becomes band pass. On the other hand, if you select "LP / HP / NOTCH", the audio signal received by filter B is specified by the position of the ⑥ "LP HP" knob as explained in the ⑥ "LP HP" knob section.

⑩ "CUT OFF" CV input jack

It is a CV input for cutoff. The "CV CUTOFF" knob functions as an attenuverter that adjusts the strength of the signal input from this jack in the plus / minus direction.

⑪ "RES" CV input jack

It is CV input for resonance. The "CV RES" knob functions as an attenuverter that adjusts the strength of the signal input from this jack in the plus / minus direction.

⑫ "1V/OCT" input jack

This filter can also be used as a substitute for the oscillator by self-oscillation. At that time, you can use this input jack to attach the scale. For a method of substituting as an oscillator.

⑬ "IN A" "IN B" input jacks

Input the audio signal for processing with filters A and B.

⑭ "LP" "NOTCH" "HP" "BP" output jacks

It outputs the filtered audio signal. Since all jacks can output simultaneously. So variety of patching is enabled. As mentioned above, only the "NOTCH" output jack has a special function, so you can use it by switching the filter type output by "LP HP" knob (See FIG.4).

5. CHARACTERISTIC

All audio / CV input signals are normalized (internally connected) from filter A to filter B. "Normalization" means that audio / CV signals are automatically duplicated from filter A to filter B when no cable is inserted on filter B side. In other words, both A and B filters can be controlled and processed from one cable input (See FIG.6). This feature economizes the need to duplicate signals using external multiple modules.

Conversely, when inputs A and B are performed using two patch cables, it is possible to control and process filters A and B independently (See FIG. 7).

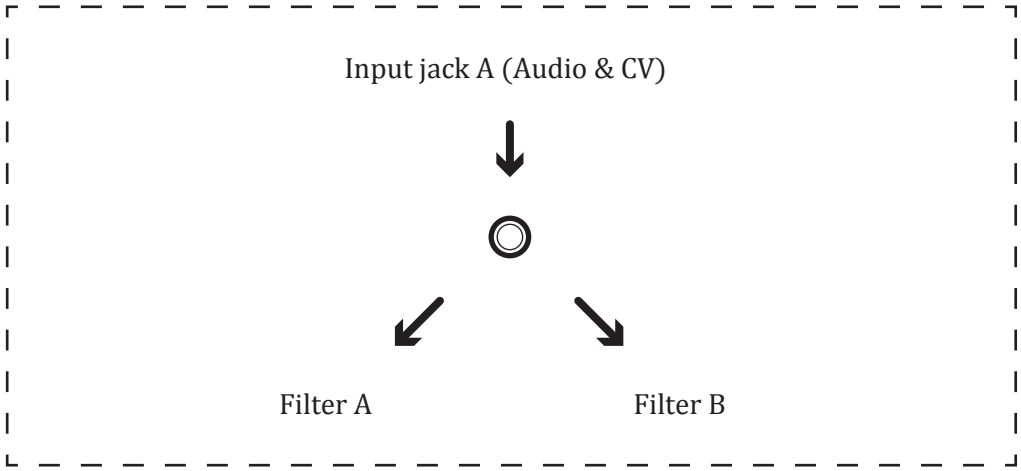

FIG.6: When only input A is plugged in (Normalized)

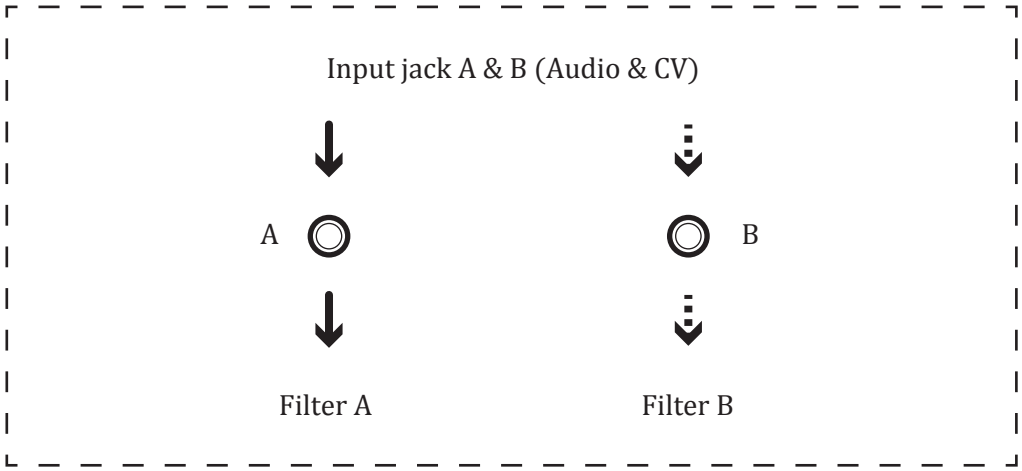

FIG.7: When inputs A and B are plugged in (not Normalized)

6. SPECIFICATIONS

Power

Eurorack system power supply

Width

26 HP

Depth

22 mm

Power consumption

Ca. 50 mA on - 12 V / ca. 53 mA on + 12 V

Accessories

· Eurorack power cable x1

· Mounting screws x4