Gotharman's EuroBoard MkII

User Manual

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Overview

Thank you very much for purchasing/consider to purchase Gotharman's EuroBoard MkII.

EuroBoard is a eurorack module which can hold one of the analog filter boards, which are available for Little deformer 3, Tiny LD, Urano, Anamono X and Xmini, for using these filters in a eurorack system.

Compared to the first EuroBoard module, MkII is smaller (14hp vs 22 hp), and has jumpers added to set the polarity of each parameter, to make it fit all the different filter boards.

Parameters

The four main parameters are **Cutoff**, **Cutoff2**, **Reso** and **Feed**. These parameters might have different functions on the various filters. This will be explained for each filter board in the following chapters of this manual.

The **Cutoff** parameter can be modulated by the **CutCV1** and **CutCV2** inputs through the attenuators.

The **Cutoff2** parameter can be modulated by the **Cut2CV** input through the attenuator.

The **Reso** parameter can be modulated by the **Reso CV** input through the attenuator.

The **Feed** parameter can be modulated by the **FeedCV** input through the attenuator.

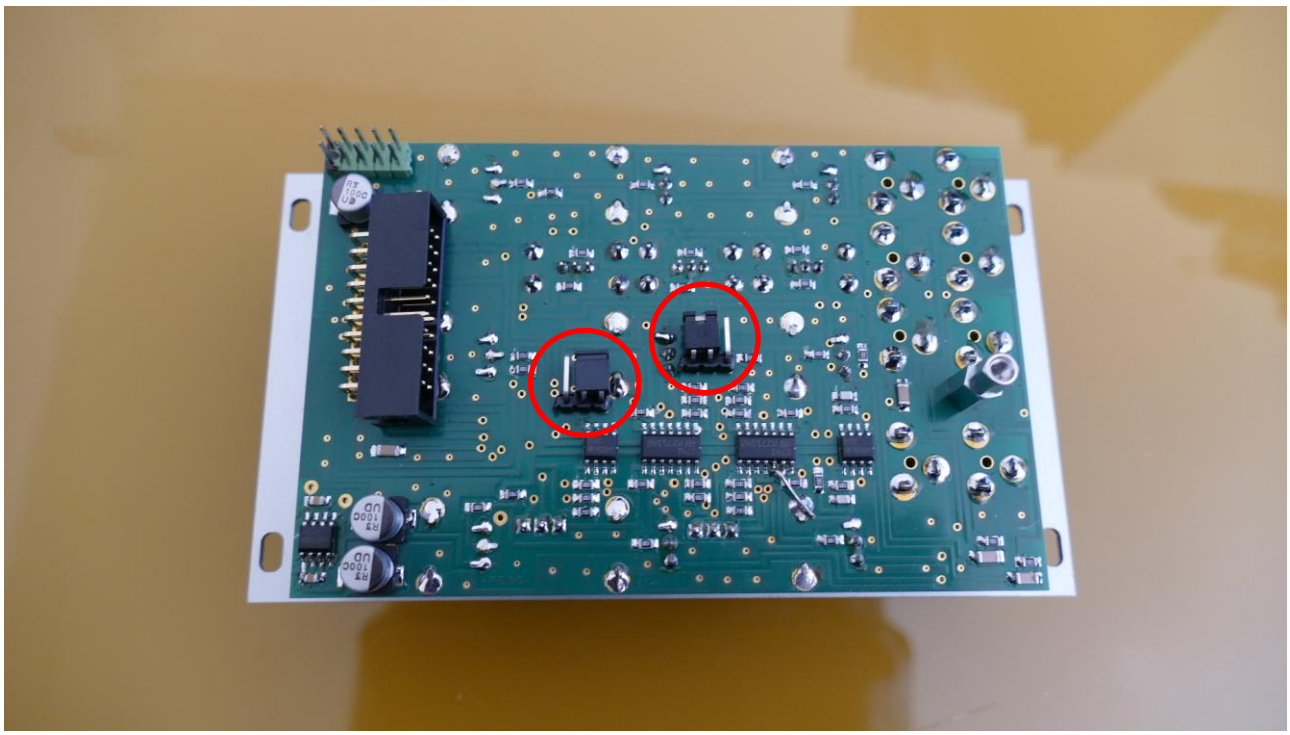
The **LPF**, **BPF** and **HPF** switches are used for switching specific filter outputs on or off, and for changing filter modes. The functionality of these are explained separately for each filter board in the following chapters.
If a switch is **up**, it is **off**, if it is **down**, it is **on**.

Jumpers

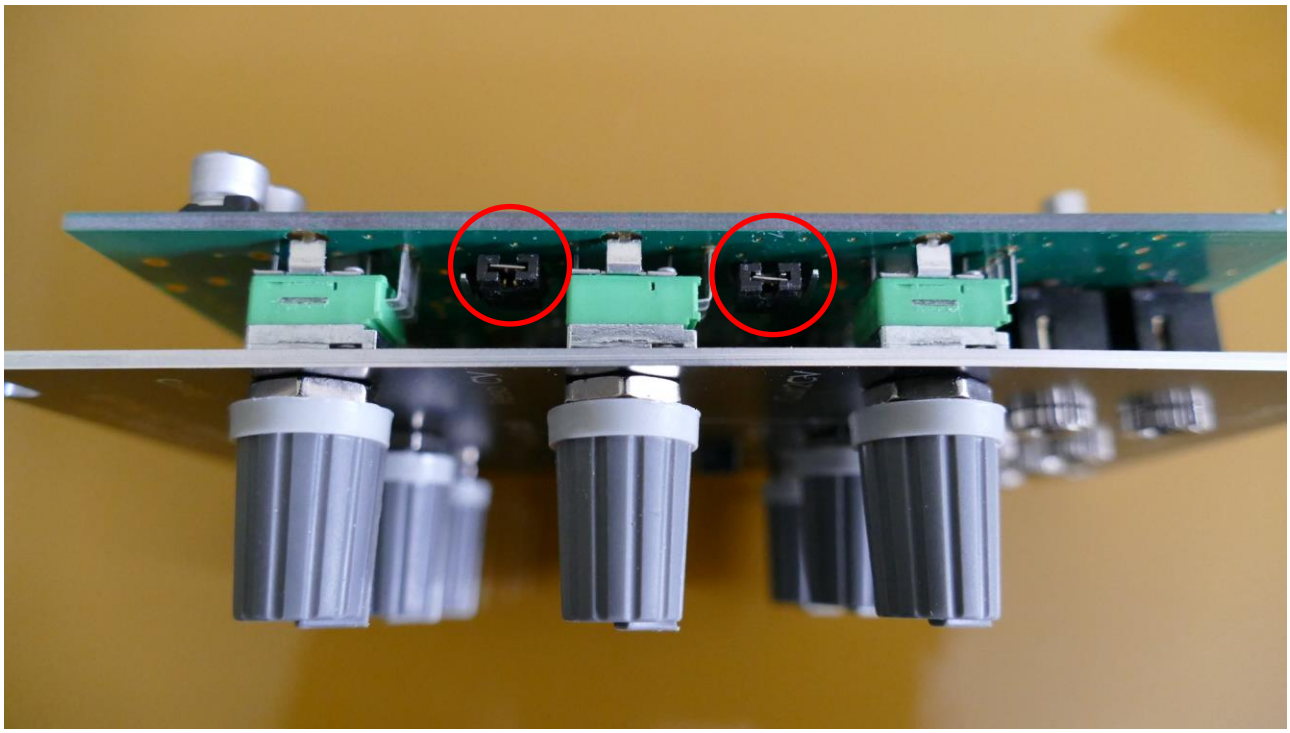
The polarity of the parameters on the various filter boards are not the same. LD3, Urano, Tiny LD and other instruments sets the polarity of the various parameters, when you select the installed filter board in the VCF menu.

On EuroBoard MkII you will have to set the polarity of each parameter, using jumpers. The recommended jumper settings are shown for each filter board in the following chapters of this manual.

The location of the jumpers:



The Cutoff and Feed jumpers.

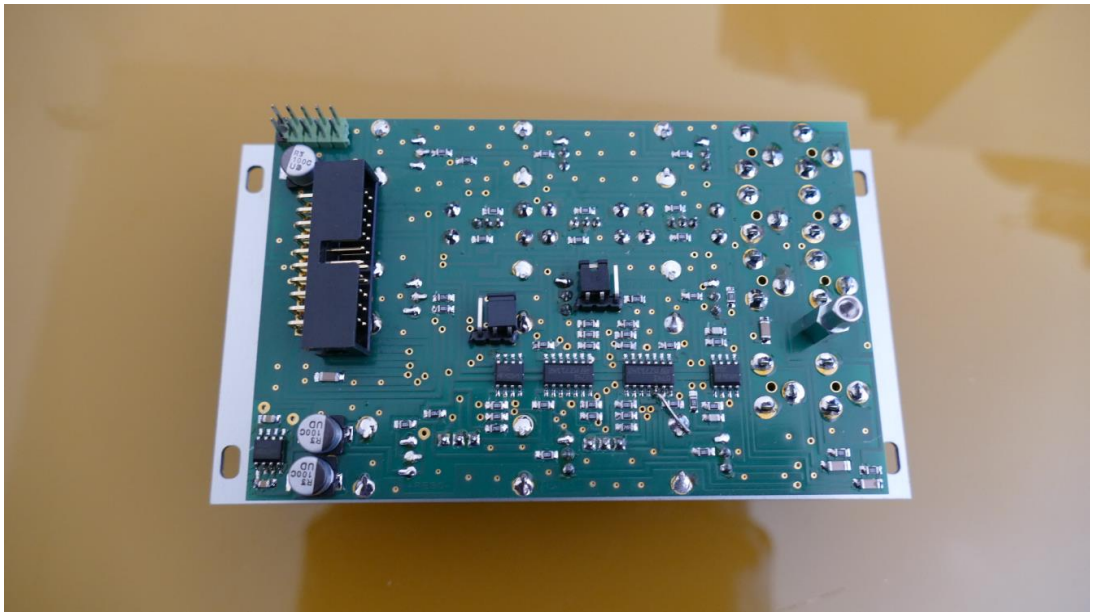


The Reso and Cutoff2 jumpers.

When a jumper is placed on the upper 2 pins, the parameter is normal.
When a jumper is placed on the lower 2 pins, the parameter is inverted.

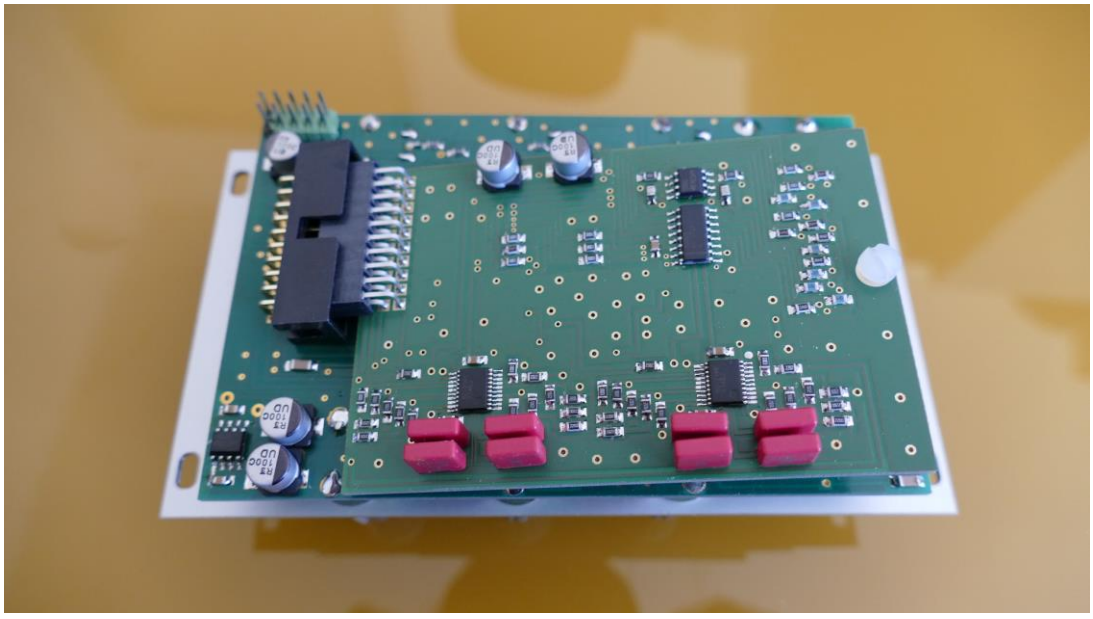
Installing a Filter Board

Place EuroBoard MkII on a surface, with its front facing downwards.

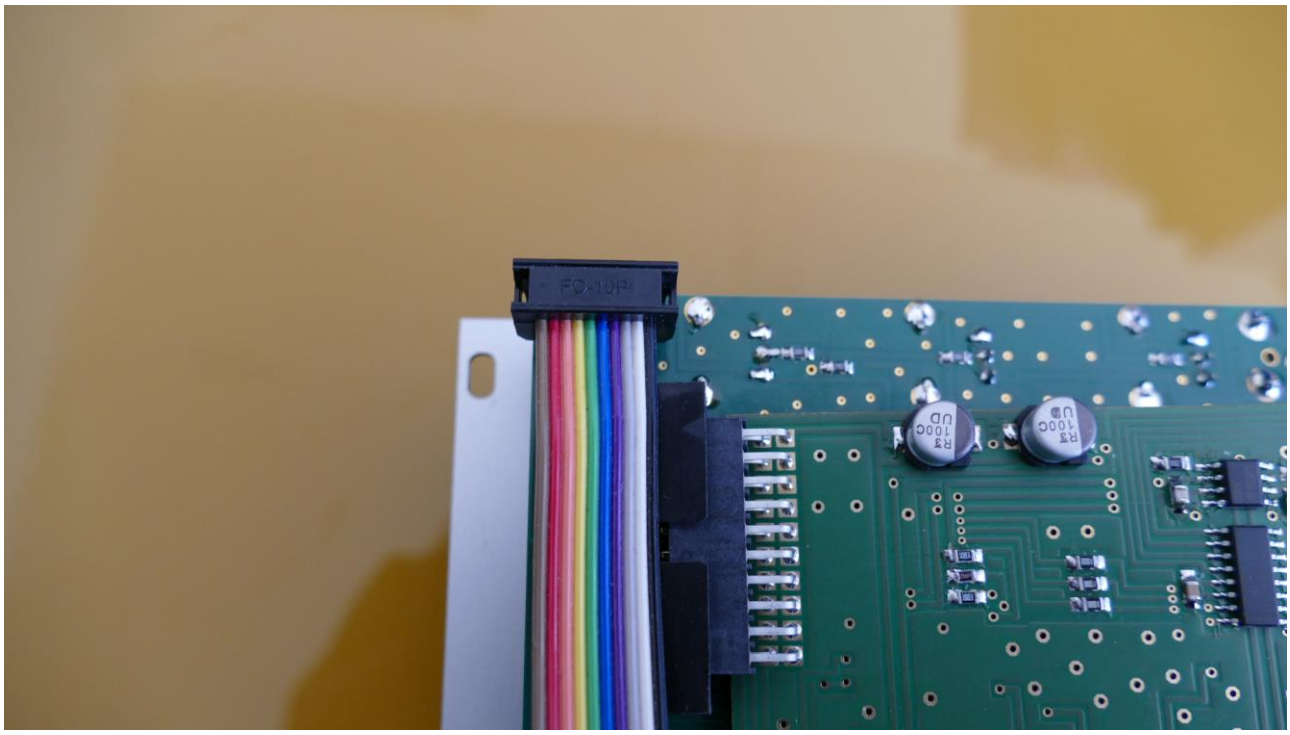


Check the chapter in this manual, for the filter board that you will install, and set the jumpers to the recommended settings.

Place the filter board with the electronic parts facing upwards, into the filter board connector. Insert and tighten the vinyl screw that came with EuroBoard MkII, into the filter board hole, using a screwdriver.



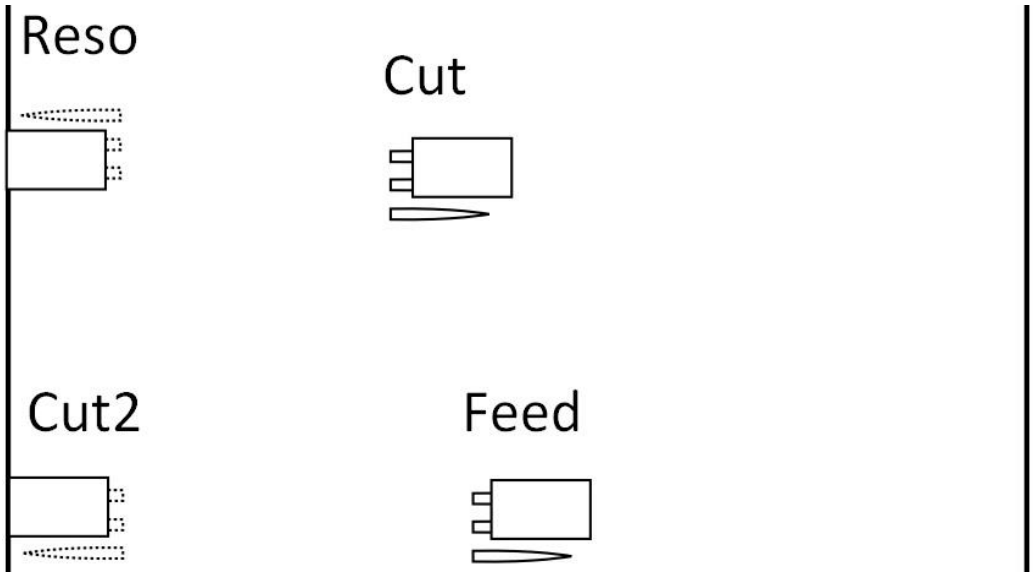
Connecting the Power



Connect the power cable with the brown cable (-12V) facing upwards, if it is a multi-colored cable, or the red line facing upwards, if it is a grey cable.
Connect the other end of the cable to your eurorack power bus.

VCF1 Single Filter

Recommended jumper settings:



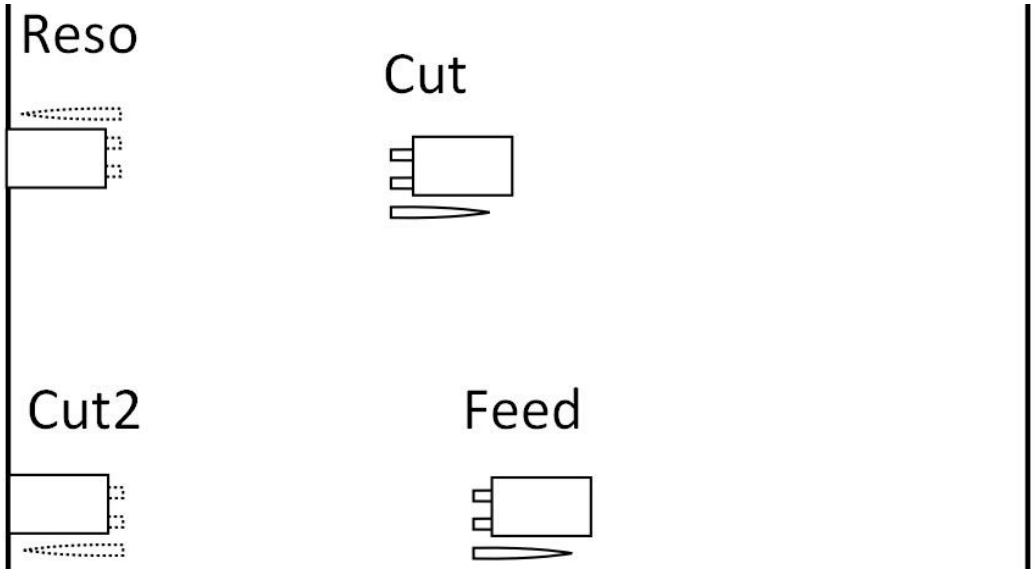
Parameters:
Cutoff: Cutoff
Cutoff2: Filter block 2 cutoff
Reso: Reso
Feed: Feed

Switches:
LPF: LPF output on/off
BPF: BPF output on/off
HPF: HPF output on/off

Outputs:
1: Filter output
2: Filter output with analog distortion added

VCF2 Dual Filter

Recommended jumper settings:



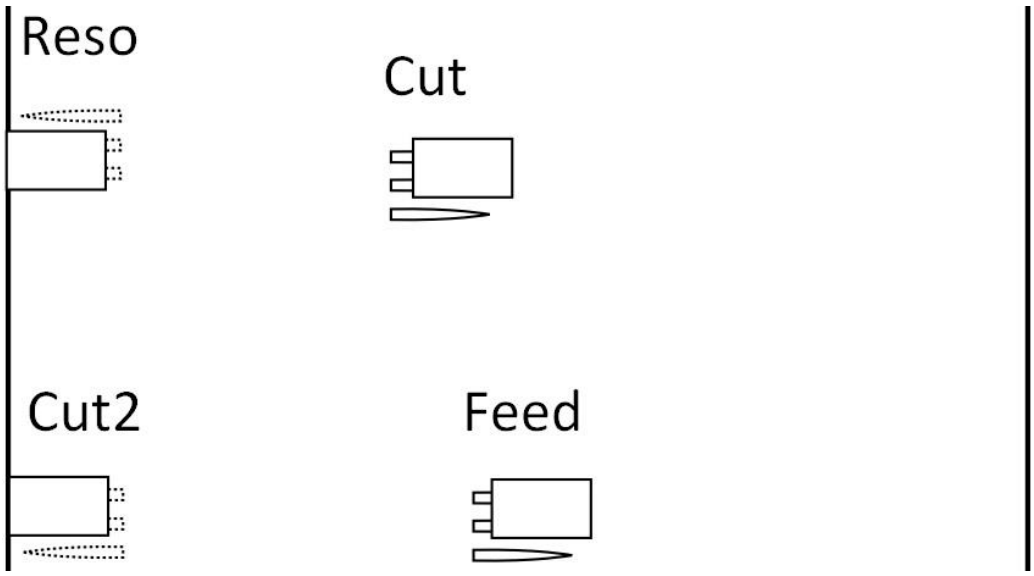
Parameters:
Cutoff: Filter 1 (always BPF) Cutoff
Cutoff2: Filter 2 cutoff
Reso: Filter 1 and 2 Reso
Feed: Filter 1 and 2 Feed

Switches:
LPF: Filter 2 LPF output on/off
BPF: Filter 2 BPF output on/off
HPF: Filter 2 HPF output on/off

Outputs:
1: Filter 1 and 2 output
2: Filter 1 and 2 output with analog distortion added

VCF3 Trippple Filter

Recommended jumper settings:



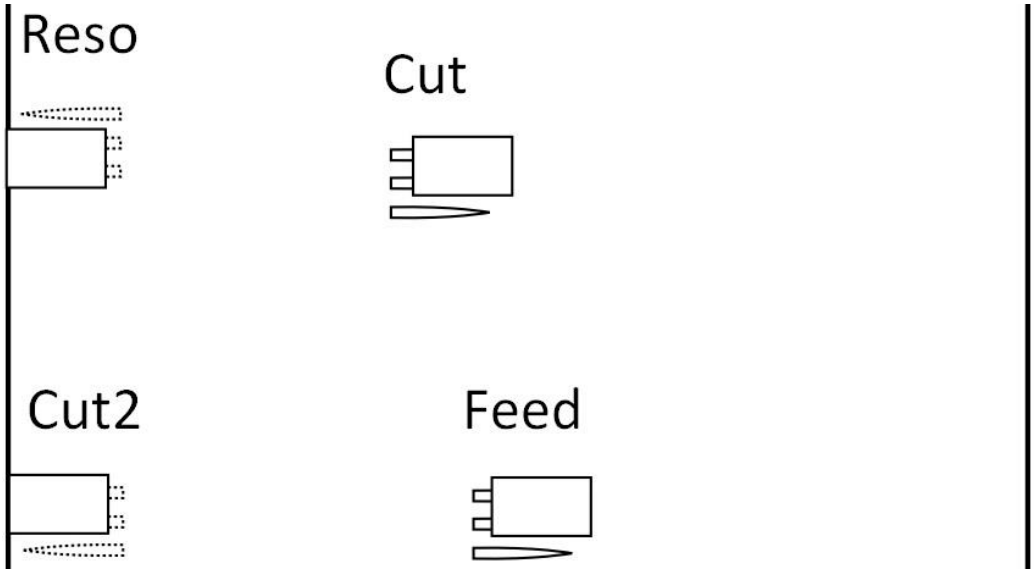
Parameters:
Cutoff: LPF Filter Cutoff
Cutoff2: BPF Filter cutoff
Reso: LPF, BPF and HPF Filters Reso
Feed: HPF Filter cutoff

Switches:
LPF: LPF filter to output 1 on/off
BPF: BPF filter to output 1 on/off
HPF: HPF filter to output 1 on/off

Outputs:
1: LPF, BPF and HPF filters output
2: All 3 filters as BPF's output

VCF4 Gotharman's First

Recommended jumper settings:



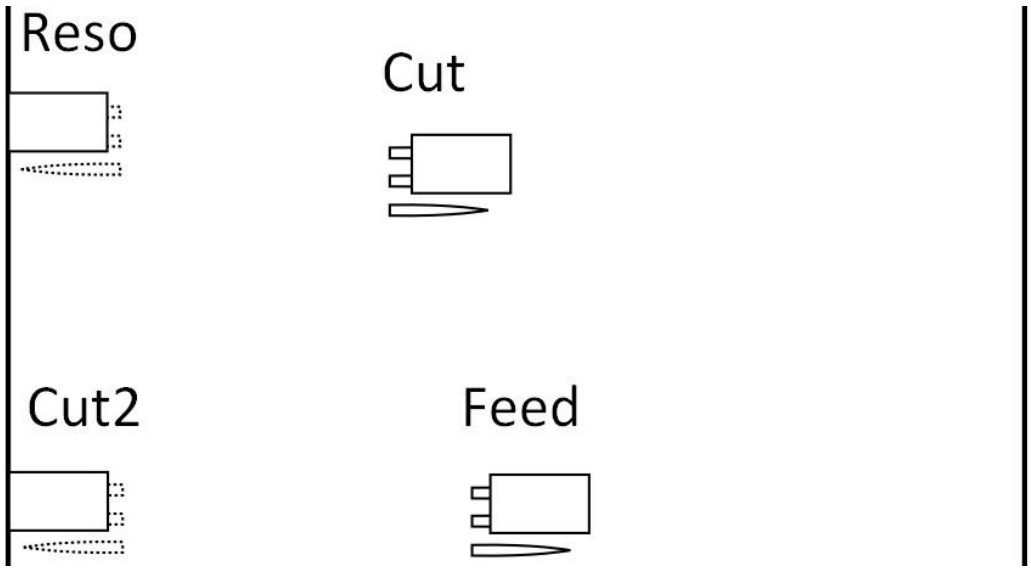
Parameters:
Cutoff: Cutoff
Cutoff2: Filter block 2 cutoff
Reso: Reso
Feed: Feed

Switches:
LPF: LPF output on/off
BPF: BPF output on/off
HPF: HPF output on/off

Outputs:
1: Filter output
2: Filter output with analog distortion added

VCF5 miniProphet

Recommended jumper settings:



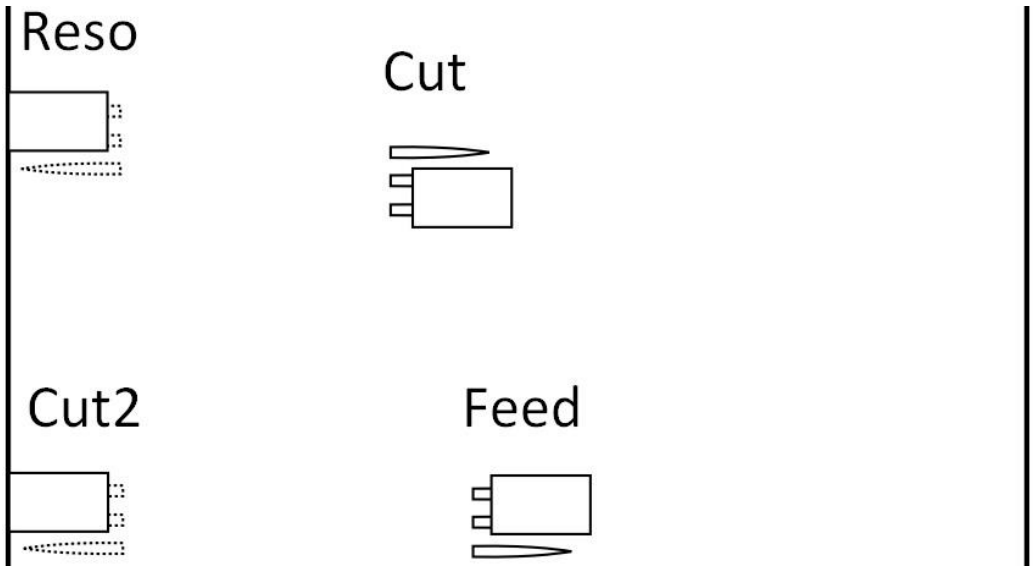
Parameters:
Cutoff: Cutoff
Cutoff2: No function
Reso: Reso
Feed: No function

Switches:
LPF: Out 1 12/24 db
BPF: Out 2 18db on/off
HPF: Out 2 6db on/off

Outputs:
1: 12/24db output
2: 6/18db output. These outputs are inverted, so mixing them with output 1 can create new filter types!

VCF6 SP Filter

Recommended jumper settings:



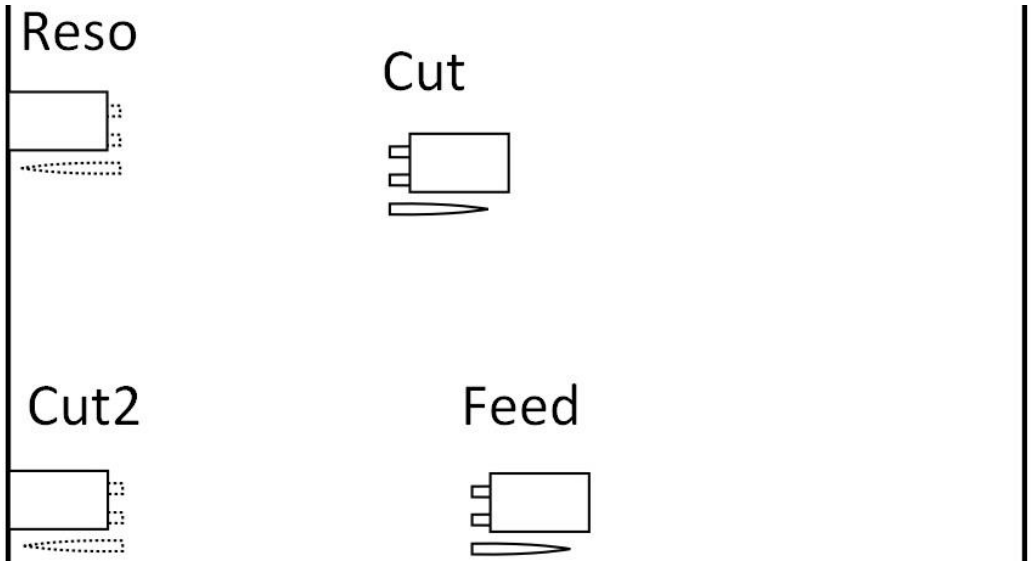
Parameters:
Cutoff: Cutoff
Cutoff2: No function
Reso: Reso
Feed: Sample Rate

Switches:
LPF: 6/12 bits
BPF: No function
HPF: No function

Outputs:
1: Filter output
2: Filter output with added analog fuzz

VCF7 Tubaz

Recommended jumper settings:



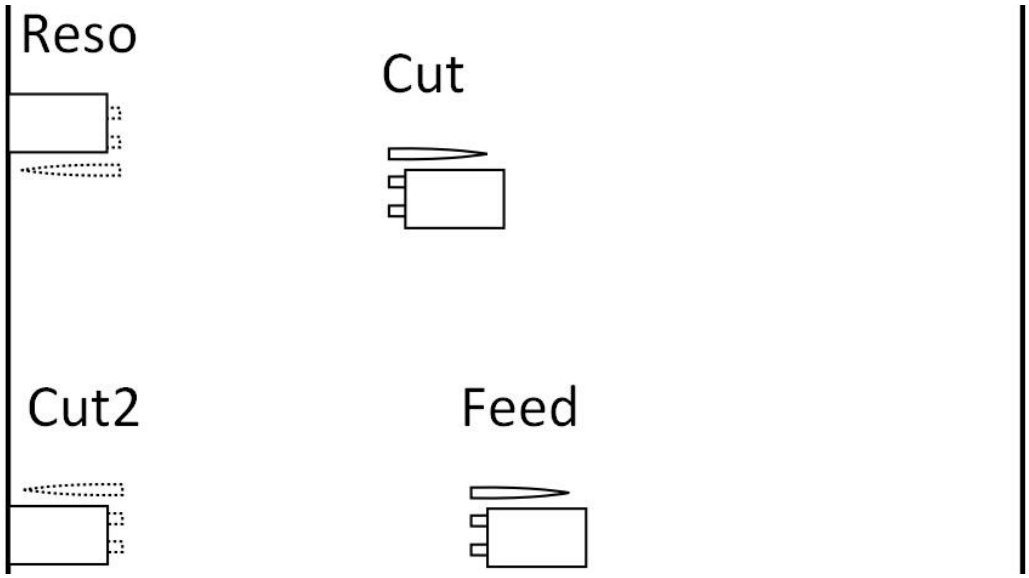
Parameters:
Cutoff: Cutoff
Cutoff2: No function
Reso: Reso
Feed: Feed

Switches:
LPF: Out 1 LPF/BPF
BPF: No function
HPF: No function

Outputs:
1: LPF/BPF output
2: HPF output

VCF8 Dual Spaze SSI2144 filter

Recommended jumper settings:



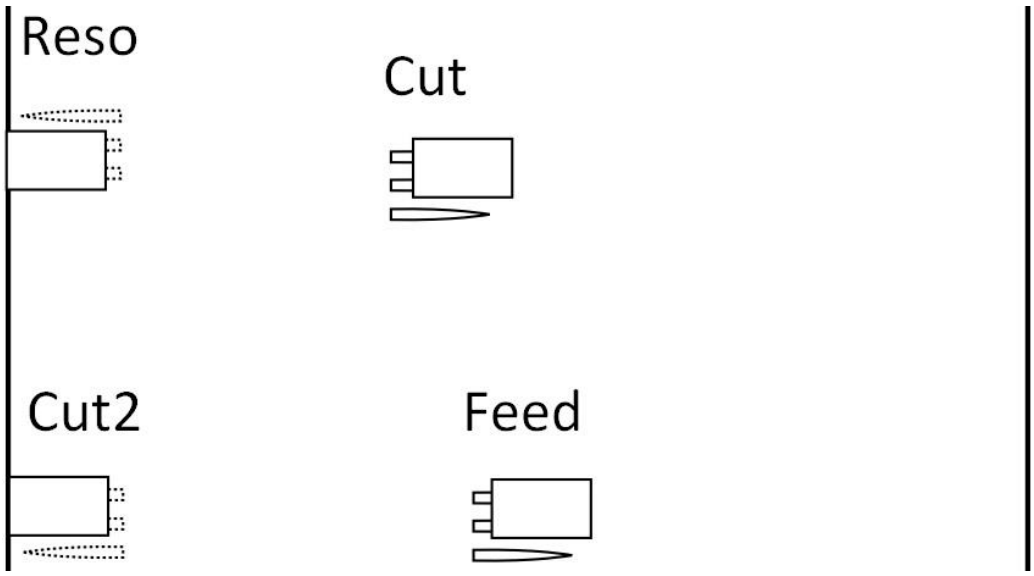
Parameters:
Cutoff: HPF 1 and 2 Cutoff
Cutoff2: LPF 1 and 2 Cutoff
Reso: All 4 filters Reso
Feed: Spaze – Spazing between HPF/LPF set 1 and HPF/LPF set 2

Switches:
LPF: HPF 2 LPF/HPF mode
BPF: HPF 1 LPF/HPF mode
HPF: HPF/LPF sets 1 and 2 serial/parallel mode

Outputs:
1: HPF/LPF set 1 output
2: HPF/LPF set 2 output

VCF9 Xtra Distortion Filter

Recommended jumper settings:



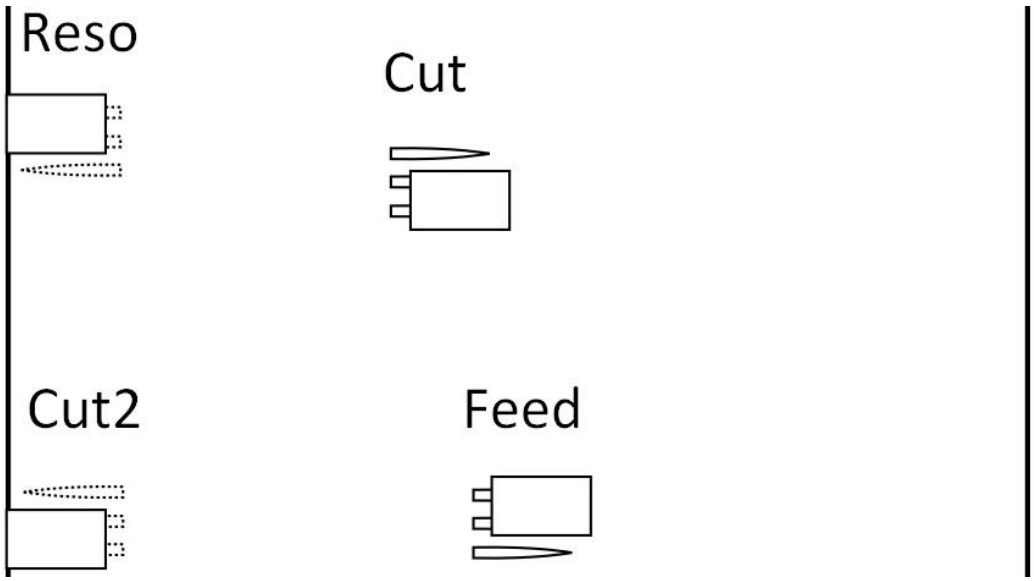
Parameters:
Cutoff: Cutoff
Cutoff2: Analog distortion Drive
Reso: Reso
Feed: Feed

Switches:
LPF: LPF output on/off
BPF: BPF output on/off
HPF: HPF output on/off

Outputs:
1: Filter output
2: Filter output with analog distortion added

VCF10 Dual SSI2140 Multimode Filter

Recommended jumper settings:



Parameters:

Cutoff: Multi mode filter Cutoff

Cutoff2: BPF filter cutoff

Reso: Multi mode filter Reso

Feed: BPF filter Reso

Switches –Multi mode filter type:

LPF	BPF	HPF	Mode
Off	off	off	LPF 24db
On	off	off	LPF 18db
Off	on	off	LPF 12db
On	on	off	LPF 6db
Off	off	on	BPF
On	off	on	Notch
Off	on	on	HPF
On	on	on	AllPass

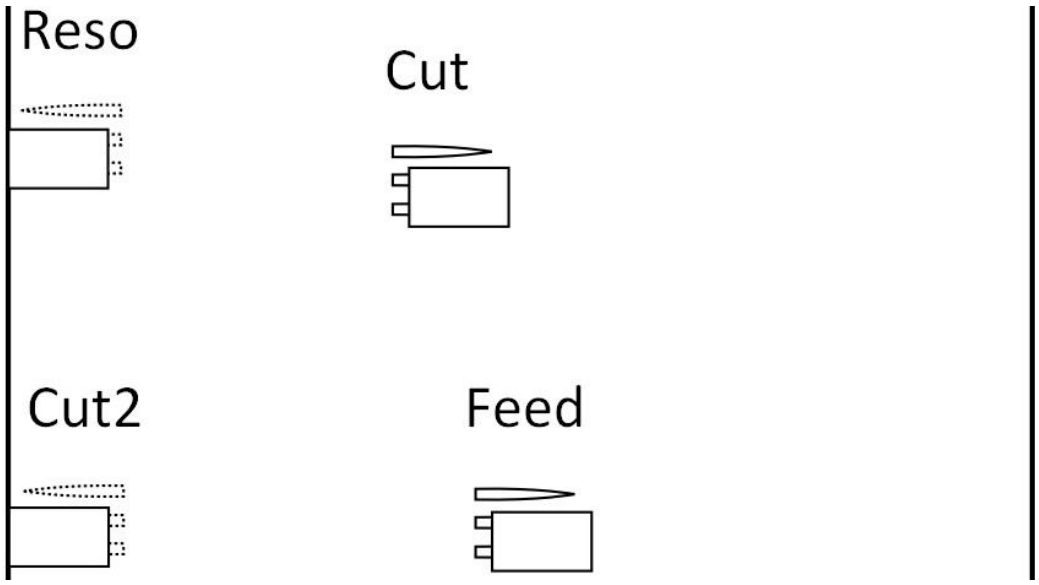
Outputs:

1: Multi mode Filter output

2: BPF Filter output

VCF11 Zaturn Filter

Recommended jumper settings:



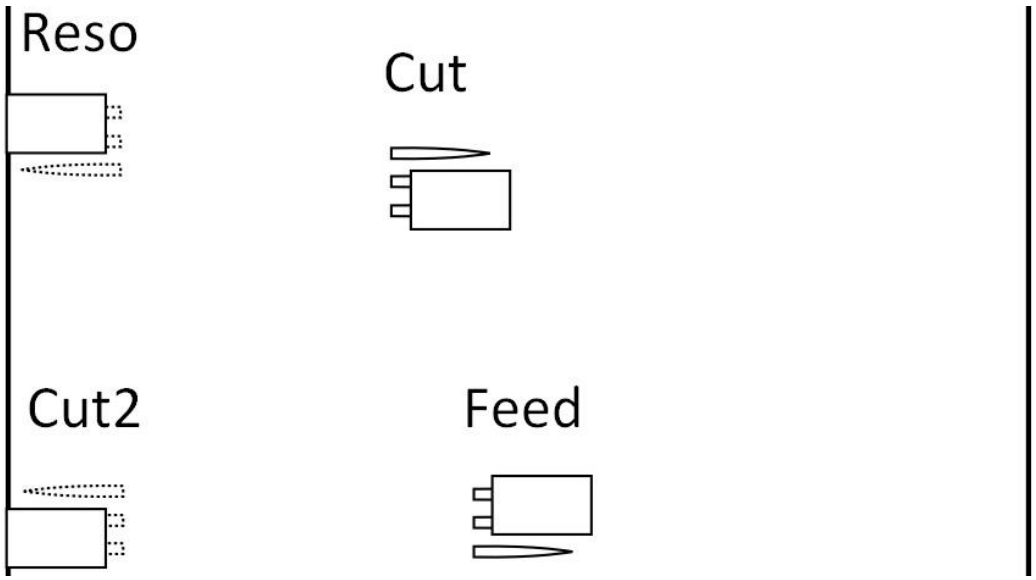
Parameters:
Cutoff: Filter 1 Cutoff
Cutoff2: Filter 2 Cutoff
Reso: Filter 1 Reso
Feed: Filter 2 Reso

Switches:
LPF: Filter 1 LPF/BPF mode
BPF: Filter 2 LPF/BPF mode
HPF: No function

Outputs:
1: Filter 1 output
2: Filter 2 output

VCF12 FilterBank

Recommended jumper settings:



Parameters:
Cutoff: LPF, BPF2 and HPF Cutoff offset
Cutoff2: BPF1 and BPF3 Cutoff offset
Reso: All five filters Reso
Feed: Cutoff spread for all five filters. The HPF has the highest cutoff frequency, BPF3 the next highest… LPF the lowest.

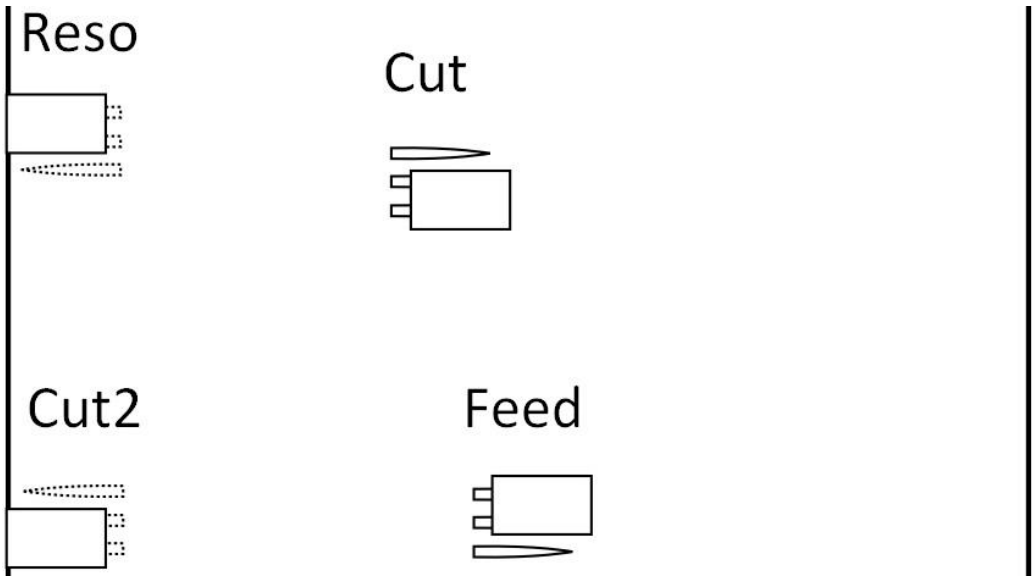
Switches:
LPF: HPF to Out1 or Out2
BPF: BPF1 to Out1 or Out2
HPF: No function

LPF and BPF2 are always assigned to Out1.
BPF3 is always assigned to Out2.

Outputs:
1: LPF + BPF2 + BPF1 (if set to 1) and HPF (if set to 1)
2: BPF3 + BPF1 (if set to 2) and HPF (if set to 2)

VCF13 Diode Drive Filter

Recommended jumper settings:



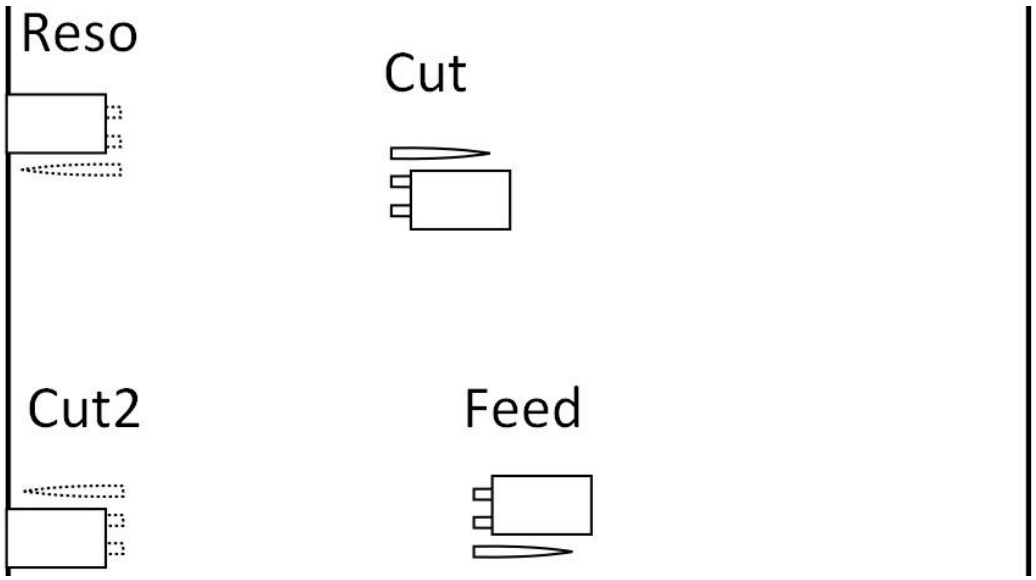
Parameters:
Cutoff: Filter A Cutoff
Cutoff2: Filter B Cutoff
Reso: Filter A Reso
Feed: Filter B Reso

Switches:
LPF: Filter A 12db/24db LPF mode
BPF: Filter B HPF/BPF mode
HPF: Diode Drive on/off.

Outputs:
1: Filter A output
2: Filter B output

VCF14 Transistor Ladder Filter

Recommended jumper settings:



Parameters:
Cutoff: Filter Cutoff
Cutoff2: Filter Drive
Reso: Filter Reso
Feed: Low Frequency Compensation

Switches:
LPF: Output 1 24db/12db LPF mode
BPF: Output 2 18db/6db LPF mode
HPF: No function

Outputs:
1: 24db/12db LPF
2: 18db/6db LPF

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