SALLEN KEY

USER MANUAL

Thank you

Thank you for purchasing SALLEN-KEY and thank you for the support to BLACK NOISE.

SALLEN-KEY is our tribute of the legendary MS-20 filter. We've tried our best to honor this unique and iconic filter.
What make this filter special it is non linear feedback path.
This design avoid the filter to clipping when self-oscillating, but also give it is unique color.

We've choose to integrate LED's instead of diode. It not only slighlty change the color of the resonance but also give nice feeback information about the drive of the resonance path.

Unlike the original we add a crossader allowing you the blend the Low Pass and High Pass filter to create complex filtering.

We hope you'll like as much as we are.

Summary

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1

Unplug you rack power from the main.

2

As shown on the sketch on the right, align the red line from the power ribbon cable with the line draw next to the power connector.

3

Check twice the alignment of the ribbon cable.

4

Turn *Q* knob up to 11.

5

Plug you rack power to the main and power you rack.

4

If the LEDs above the *Q* knob light up you module is ready, if not please contact us at : contact@blacknoisemdodular.com

General Specifications

⚡ **Power Consumption**
+12V : 18mA
-12V : 18mA
+5V : 0mA

↔ **Panel Width**
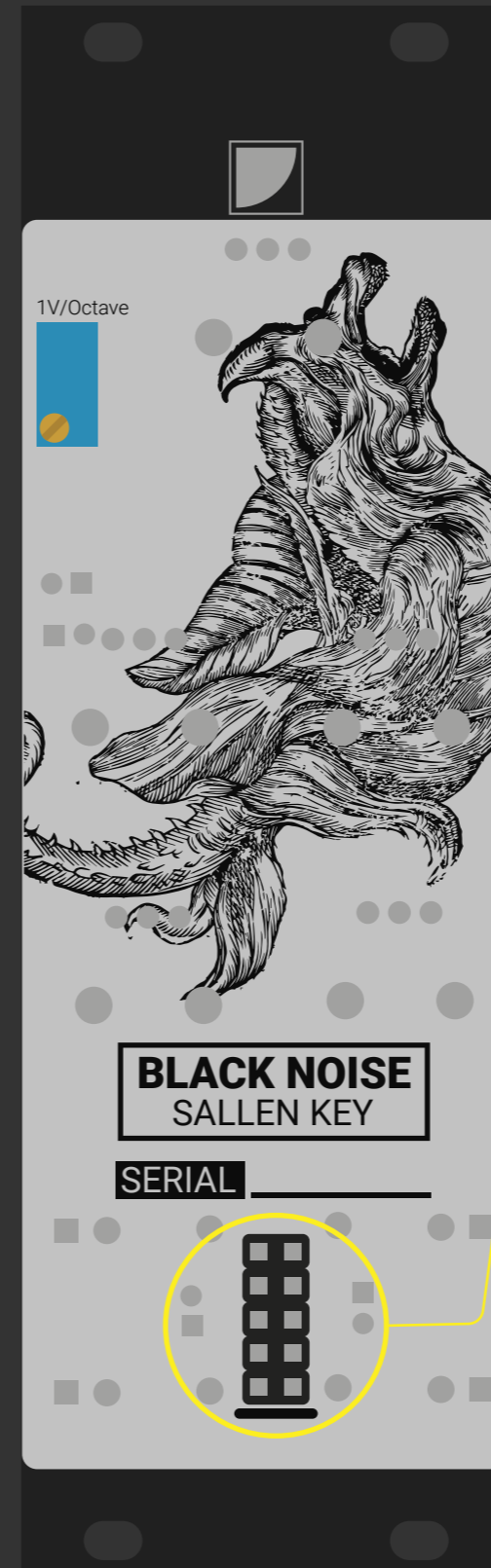8HP

↔ **Module Depth**
20mm - skiff friendly

Warranty

BLACK NOISE warrants is products to be free of defects in materials or workmanship and to be conform with the specifications at the time of shipment for a period of two years from the date of purchase.
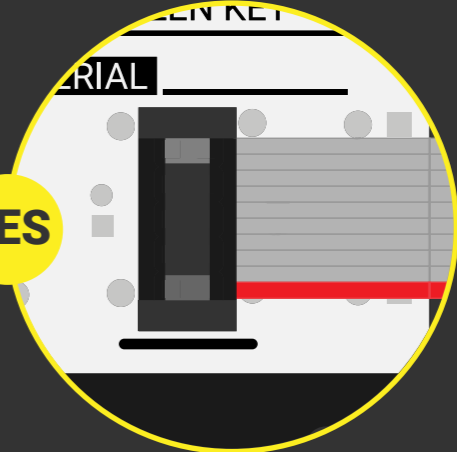
During that period any malfunctionning or damaged units will be repaired, service and calibrated into your workshop. This warranty does not cover any problems resulting from damages during shipping, incorrect installation or power supply, abusive treatement, or any other obvious user-inflicted fault.

If your product warranty is passed, it still can be serviced as long as parts are available in our workshop. We reserve the right to charge for labor, parts and transit expenses where applicable.
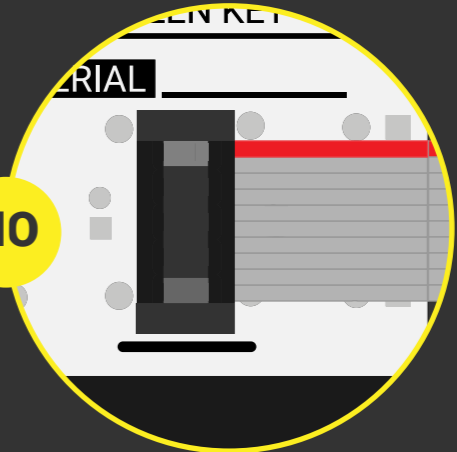
Before sending your product to our workshop please contact us for RMA and details. Any unsoli-cited parcel will be rejected and or returned. The postage to our workshop is on the customer. The return of your module is on us. BLACK NOISE can not take any responsability for damages caused during transport.
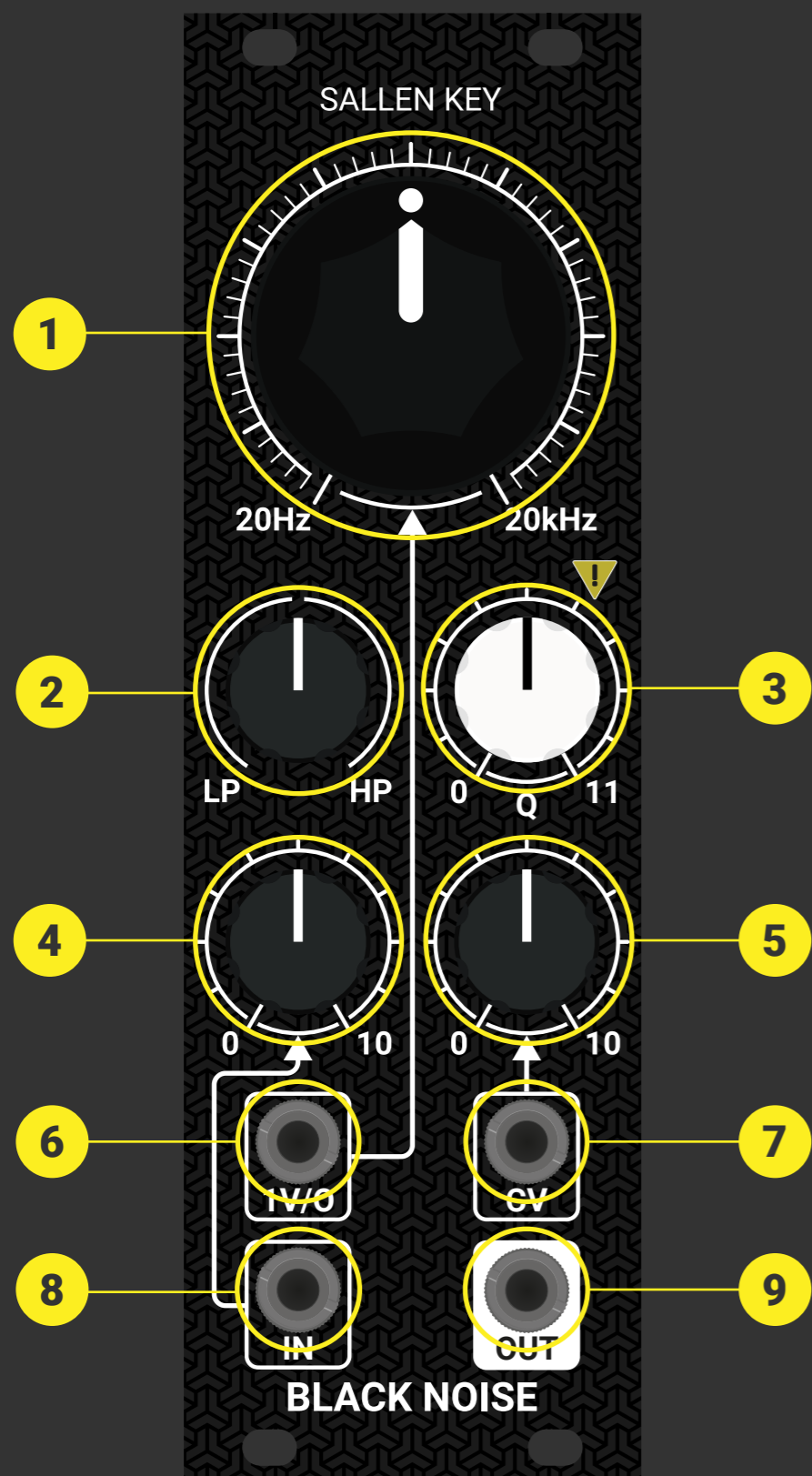
1V/Octave

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SERIAL

YES

NO

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20Hz   20kHz

LP   HP   0   Q   11

0   10   0   10
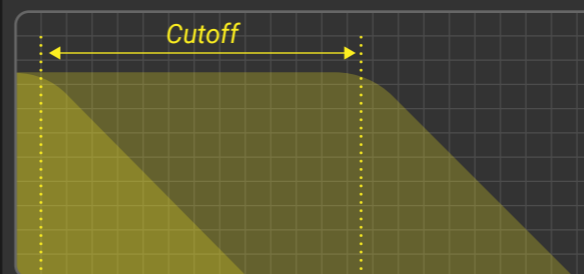
1V/O   CV

IN   OUT

BLACK NOISE

1 Cutoff

Cutoff

Allow you to control the cutoff frequency of both filters.
Cutoff frequency can also be controlled by CV using the dedicate *Cutoff CV* input. *Cutoff CV* input can be attenuated using the dedicate knob.
When the filter self-oscillate *Cutoff* knob allow you to control frequency aka the pitch.

2 LP/HP Crossfader

12dB Low Pass   *6dB High Pass*
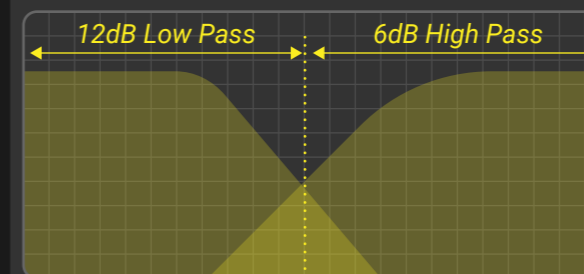
Sallen-Key is composed of two filters :
A −12dB/oct Low Pass
A +6dB/oct High Pass
The knob act as a crossfader between both filters.
Full left is 100% LP, full right is 100% HP in between position will offer you a mix of both.

3 Q - Resonance

Q
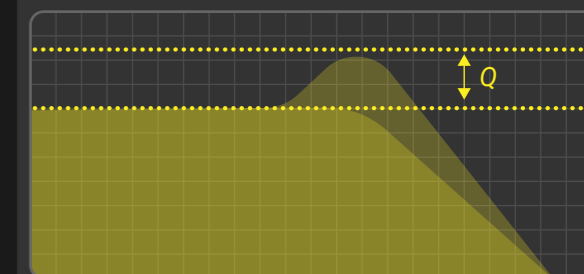
Like the original MS20, Sallen-Key offer a non-linear feedback path. This design avoid the filter to clipping when self-oscillating, but also give it is unique color.
Due to is design the resonance is dependent of the input gain. You can attenuate the input gain with the dedicate attenuator.
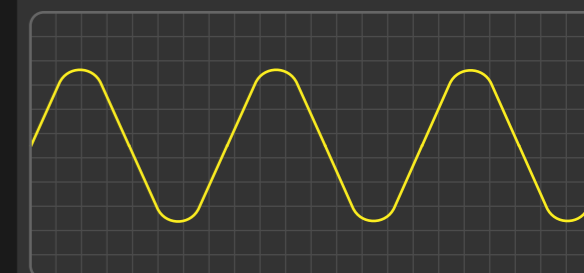
4 Input Gain
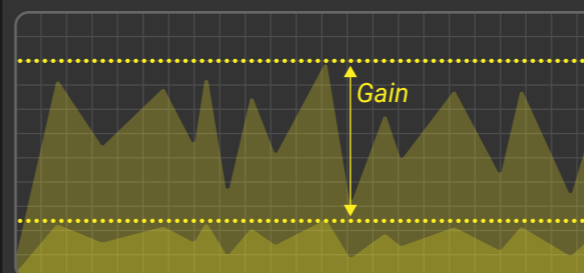
Gain

Gain of the input signal can be control using the dedicated attenuator.
Due to is design the resonance is dependent of the input level.
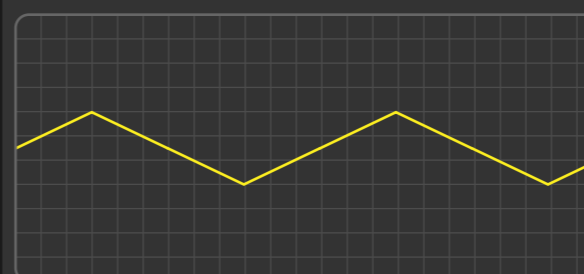
5 Cutoff CV Attenuator

Level

Level
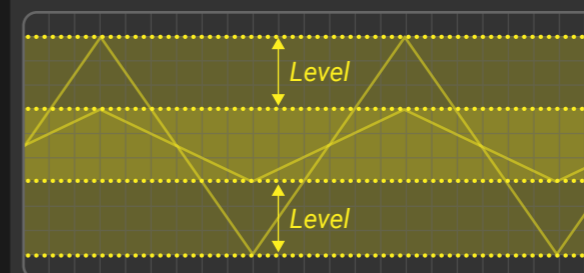
Cutoff CV Attenuator allow to attenuate the amplitude of the *Cutoff CV Input*.

6 1V/Octave Input

Since *SALLEN-KEY* can self-oscillate it can be use as sound source. Using the 1V/Oct you can control the frequency aka the pitch.
SALLEN-KEY can track over 6 octaves. You can adjust the tracking using the trimmer on the back.
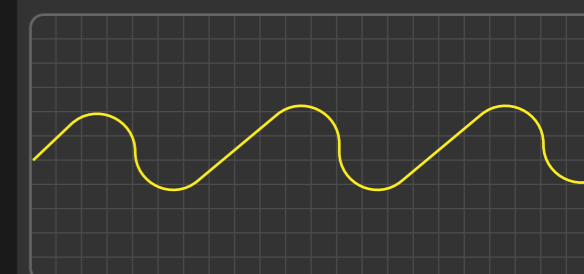
7 Cutoff CV Input

Cutoff can be modulated by CV using the dedicated input. You can attenuate the amplitude of the CV signal using the dedicated attenuator.

8 Audio Input
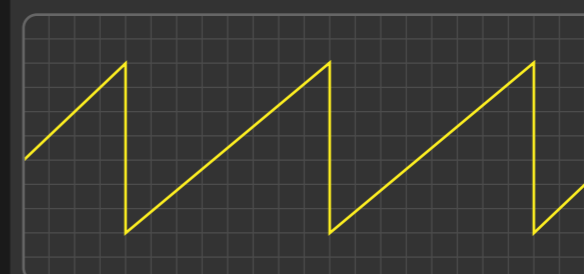
Input for the audio signal.

9 Audio Output

Output of the filtered signal.

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