ADDAC System

Instruments for Sonic Expression

Est.2009

INTRODUCING ADDAC107 ACID SOURCE

USER'S GUIDE . REV01

April.2023

ADDAC System

From Portugal with Love!

Welcome to:
ADDAC107 ACID SOURCE USER'S GUIDE

Revision.01 April.2023

DESCRIPTION

We started this module with the idea of developing a complex drum source however, somewhere along the process, we noticed how much better it performed as a synth voice and simply embraced this lucky accident.

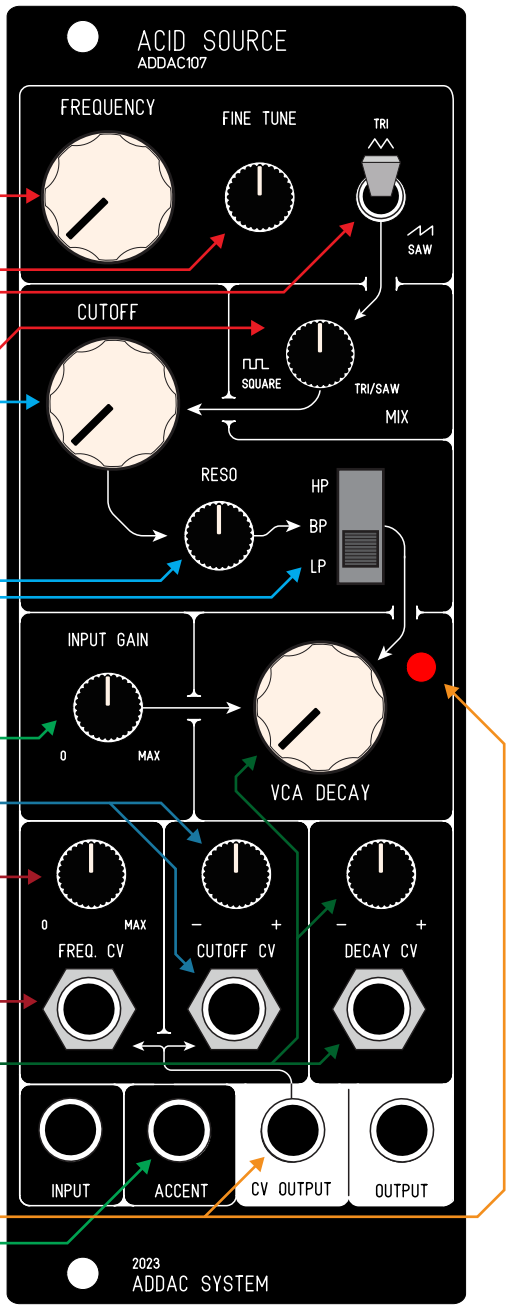
It features a VCO with a [FREQUENCY] and [FINE TUNE] knob plus a dedicated CV Input and Attenuator knob (tunable over 4 octaves).

The VCO waveform output is achieved by selecting either a Triangle or Saw through a switch.
the selected waveform can then be mixed/balanced against the square wave.
The resulting mix is then sent to the Filter.

The Filter features a [CUTOFF] and [RESO] resonance knob plus a Cutoff CV Input and Attenuverter knob.
A 3 position switch is used to select the filter type: Highpass, Bandpass or Lowpass.
The resulting output is then sent to the VCA.

The VCA features an Input with [INPUT GAIN] knob which at maximum can amplify the incoming signal by a factor of 2. **This is a very important control (more about it in the next page)**. It accepts any signal Trigger, Gate or CV.
Whatever input is plugged in the signal is then fed through an AD with a very short attack and controllable decay through the [VCA DECAY] knob plus the CV Input and Attenuverter knob.
The resulting slewed signal is then used to control the VCA gain. This signal is also sent to the CV OUTPUT as well as the LED monitor.
The Accent input adds to the Input signal creating a different amplitude output

The CV OUTPUT is also normalled to the Frequency and Cutoff inputs.



This module will also be available as a full DIY kit..

Tech Specs:
9HP
4 cm deep
80mA +12V
80mA -12V

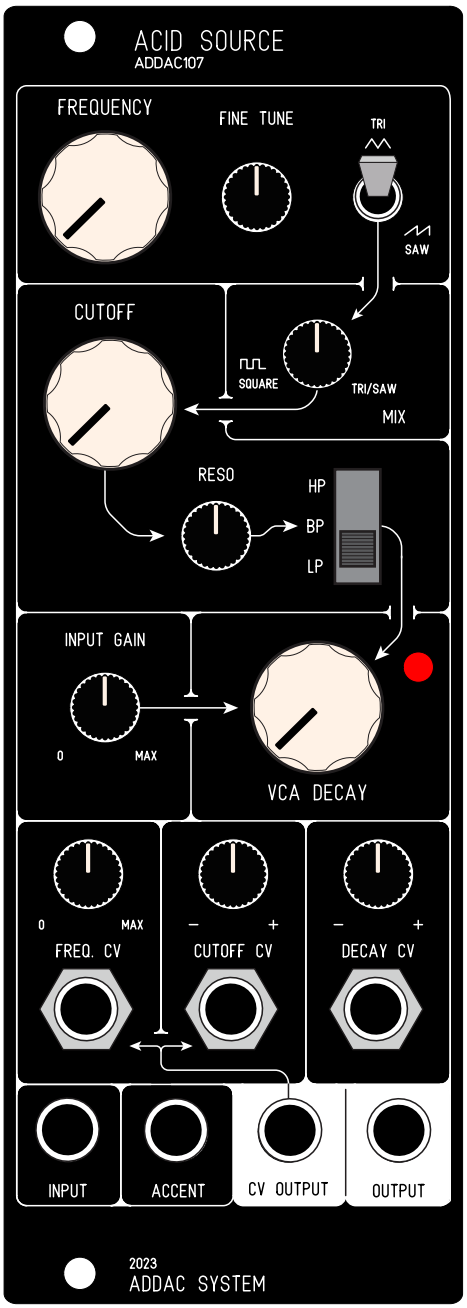
INPUT GAIN

The [INPUT GAIN] knob,

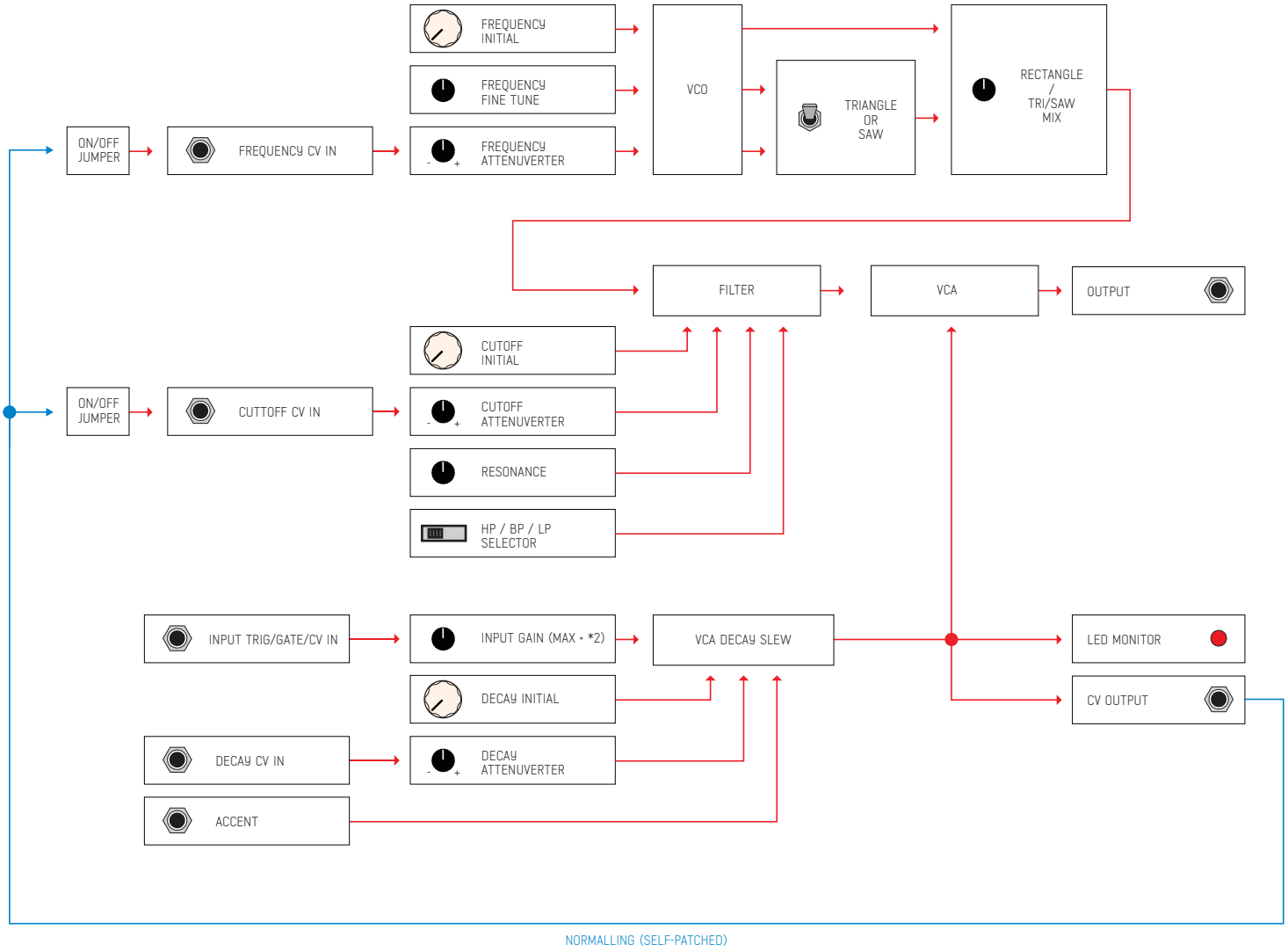
Usually Attack/Decay envelopes have a maximum voltage of +5v, no matter if the input gate is +5v or above the AD will clip at +5v. In this case we did not use this clipping method and instead allow the incoming voltage to determine the maximum AD voltage, meaning that if a +5v gate is present then the AD maximum voltage will be +5v but if a gate of +10v is sent then the AD maximum voltage will be +10v.
This also means that with higher input voltages the decay, although falling at the same speed, will be longer than with lower voltages as it has a longer range to go back to 0v.
As we mentioned before the [INPUT GAIN] knob can amplify the incoming input by a factor of 2, allowing to use a standard +5v gate or envelope and being able to make the resultant AD go up to +10v.

The AD signal is responsible for opening the VCA.
Up to +5v the VCA will open to unity gain above this value the VCA will start to amplify and eventually saturate and distort.
This saturation will add harmonics to the signal which will change it's gentle timbrical nature to a more unique and peculiar timbre that will make the module shine in Acid contexts.

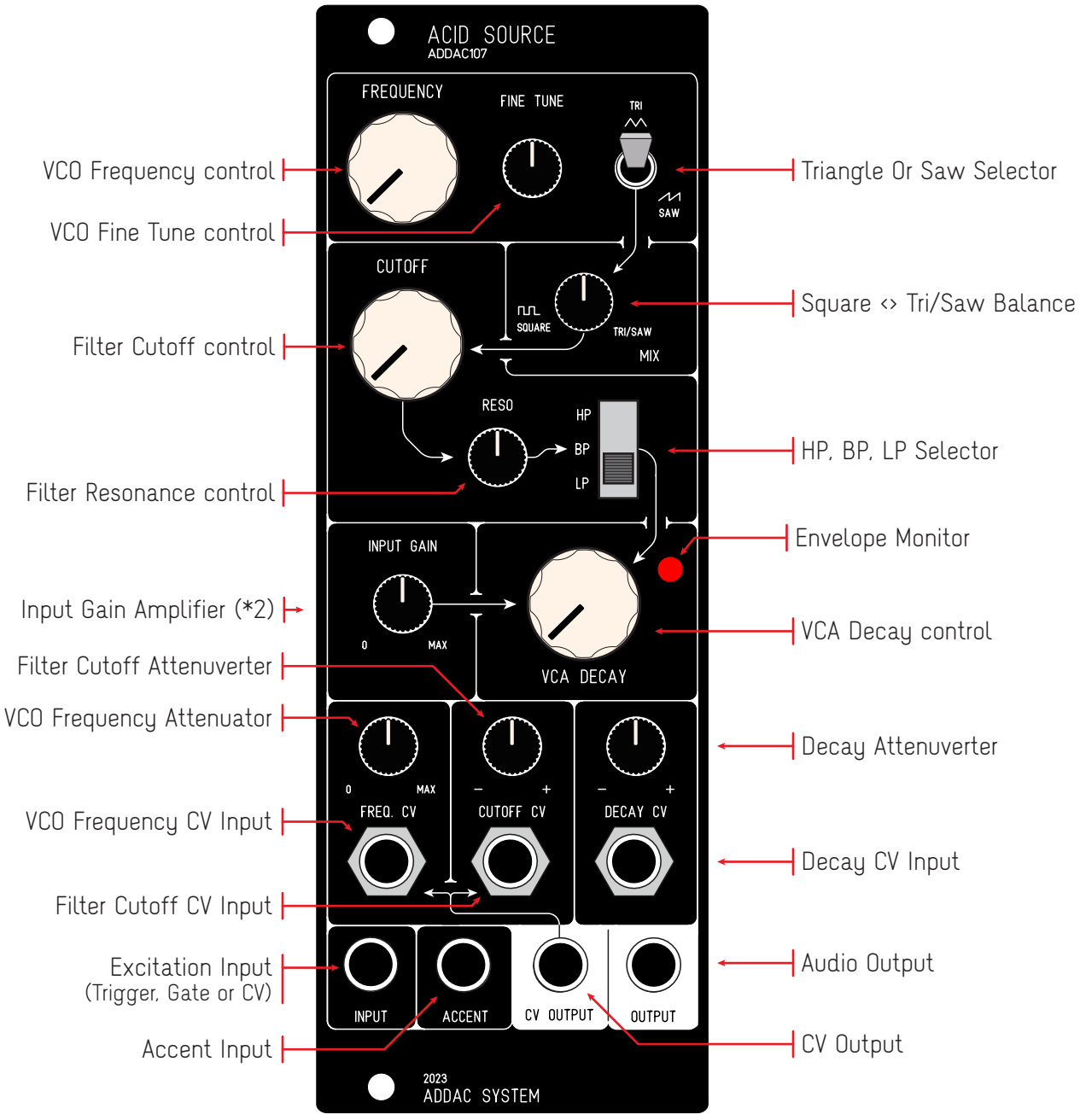
Adding high levels of Resonance or even filter self oscillation in combination with high VCA saturation will create even more harmonics that we highly encourage the user to explore.



SIGNAL FLOW DIAGRAM



CONTROLS DESCRIPTION



For feedback, comments or problems please contact us at:
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