

BLACK 3109 VCF/VCA

THANK YOU FOR PURCHASING THIS ERICA SYNTHS BLACK SERIES MODULE!

The Erica Black Series includes high-end modules with unique functionality and superior build quality. Only the best, highest quality components are used, all inputs and outputs are protected against undesired overvoltage. When designing the Black Series, we placed an emphasis on usability with the goal of providing an enjoyable user experience. Big knobs are assigned to functions that make differences in sound. The Erica Black Series consists of a range of modules that are needed to put together an entire synth. Enjoy!

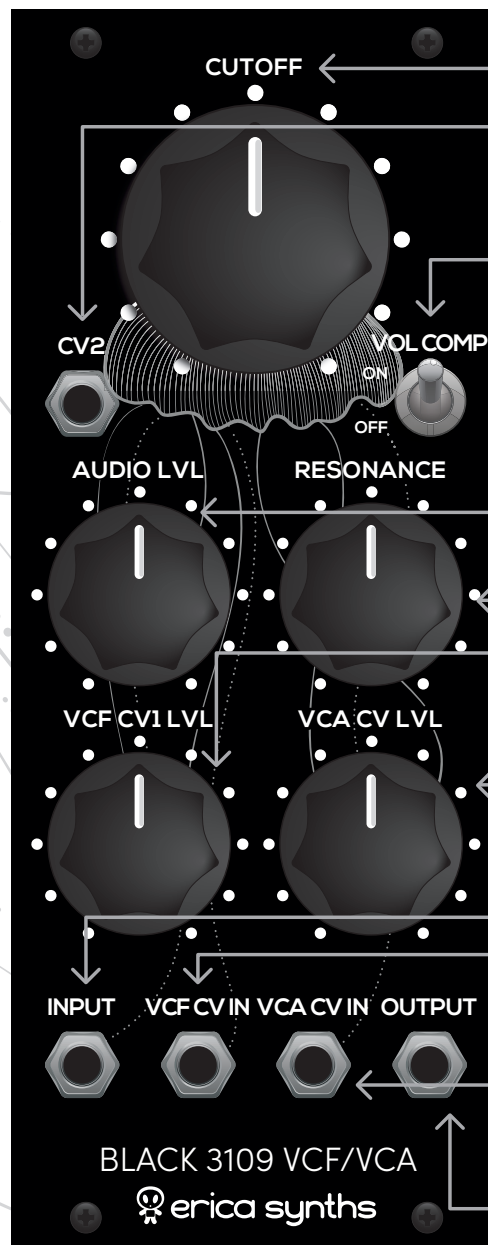
The **Erica Synths Black 3109 VCF/VCA** is a lowpass filter and voltage-controlled amplifier combo built around the AS3109 VCF integrated circuit, a contemporary version of the IR3109 chip, found on vintage Roland synths such as the Jupiter series, Juno series and the SH-101. The 3109 VCF/VCA is our attempt to recreate the iconic sound of these synths, but we also aim to improve upon it. Filters based on IR3109 had several drawbacks, including a volume drop when the resonance is increased so we added a volume drop compensation as well as a built-in VCA for more versatility in compact setups. Additionally, 1V/oct tuning is implemented so you can use this module for perfect VCF keyboard tracking and also as a VCO.

FEATURES:

- 24dB/oct lowpass VCF
- Volume drop compensation
- Built-in VCA
- Cutoff level attenuverter
- 1V/oct tracking

SPECS:

Audio level	10Vptp
Cutoff CV level (full span)	-5V - +5V
VCA CV level	0 - +10V
Max power consumption	25mA@+12V, 25mA@-12V
Module width	10HP
Module depth	35mm



CUTOFF

This is the manual cutoff control. An external CV is added to the knob position.

CV2

This is the second cutoff CV input. It applies the CV without attenuation, therefore here you can connect the CV for 1V/oct tracking.

VOL COMP

This is the volume drop compensation switch. When it is ON, the volume will not drop when resonance is increased.

AUDIO LVL

This is the audio signal level attenuator.

RESONANCE

This is the resonance control. In "classic" mode (VOL COMP switch set to OFF), the volume will drop slightly when the resonance is increased. If you set the VCF to self-oscillate and apply 1V/oct CV, you can use the module as a VCO. It works particularly well as bass drum synthesizer when punchy envelopes are applied to the CV input.

VCF CV1 LVL

This is the cutoff CV attenuverter. At 12:00 no CV is applied, turning the knob clockwise increases the CV amount, turning it counter-clockwise, the incoming CV is inverted.

VCA CV LVL

This is the VCA CV attenuator. If nothing is patched into VCA CV IN, it acts as VCA bias control – you need to dial it all way clockwise in order to open the VCA.

INPUT

This is the audio input of the module.

VCF CV IN

This is the cutoff CV input with the attenuverter.

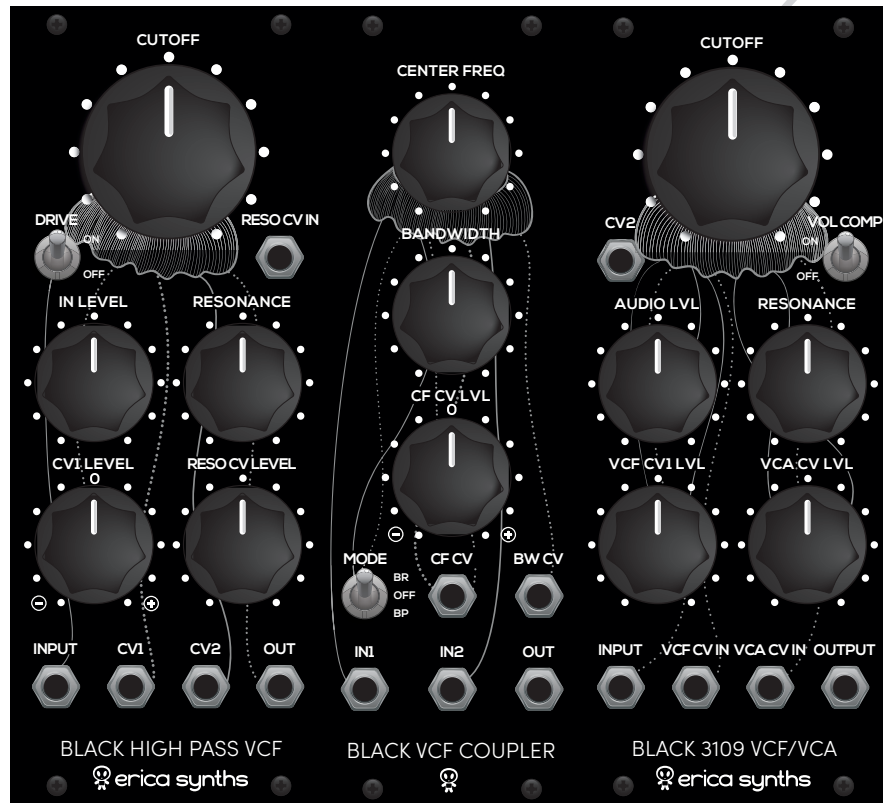
VCA CV IN

This is the VCA CV input. Please, note that the input is normalised to +10V and you need a 0 - +10V envelope to fully open the VCA.

OUTPUT

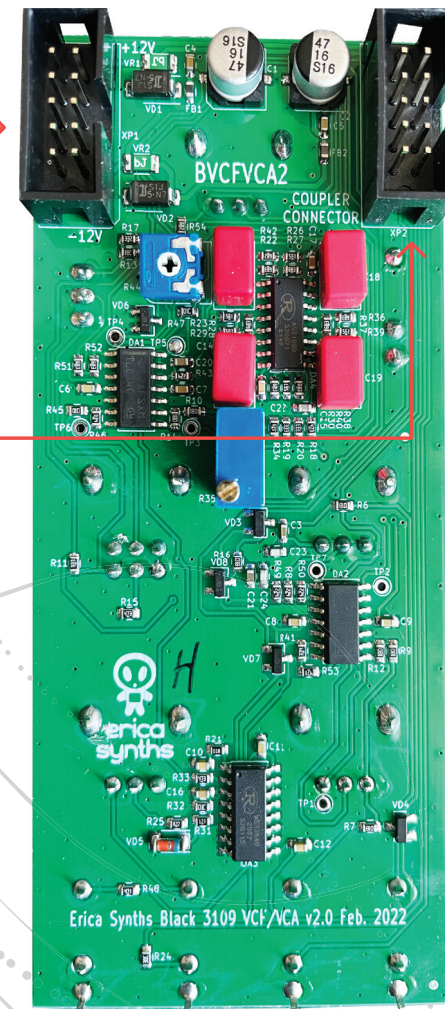
This is the audio output.

The Black 3109 VCF/VCA has a hidden feature – compatibility with the Black Filter Coupler connector. The Erica Synths Black Filter Coupler is a satellite module for the Black High Pass and the Black Low Pass VCFs and now also the Black 3109 VCF/VCA. Similar to classical Moog systems, it turns both high-pass and low-pass filters in to Bandpass and Band Reject filters with adjustable and CV controllable bandwidth and centre frequency and therefore significantly expands the functionality of your modular system. Please note that the Black Filter Coupler works only with Erica Synths modules and you need both the Black High Pass and Low Pass VCFs.



This is a Eurorack standard PSU connector.

Remove the jumper and connect the Erica Synths Black Filter Coupler here. 2x5pin ribbon cable is supplied with the Black Filter Coupler module.



SAFETY INSTRUCTIONS

Please follow the instructions for use of the Erica Synths module below, 'cause only this will guarantee proper operation of the module and ensure warranty from Erica Synths.



Water is lethal for most of the electric devices, unless they are made waterproof. This Erica Synths module is NOT intended for use in a humid or wet environment. No liquids or other conducting substances must get into the module. Should this happen, the module should be disconnected from mains power immediately, dried, examined and cleaned by a qualified technician.



Do not expose the module to temperatures above +50° C or below -20° C. If you have transported module in extreme low temperatures, leave it in room temperature for an hour before plugging it in.



Transport the instrument carefully, never let it drop or fall over. Warranty does not apply to modules with visual damages.



The module has to be shipped in the original packaging only. Any module shipped to us for return, exchange and/or warranty repair has to be in its original packaging. All other deliveries will be rejected and returned to you. Make sure you keep the original packaging and technical documentation.



This device complies to the EU guidelines and is manufactured RoHS conforming without use of lead, mercury, cadmium and chrome. Nevertheless, this device is special waste and disposal in household waste is not recommended.

User manual by Girts Ozolins@Erica Synths.
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You will find Erica Synths terms of warranty at www.ericasynths.lv

Items for return, exchange and/or warranty repair have to be registered at SUPPORT on www.ericasynths.lv and send back to us according to instructions in the support page.