



THE HARVESTMAN
DIGITAL AUDIO ELECTRONICS



**MODEL RI982 "POLIVOKS VCF"
OPERATOR'S MANUAL**

Classic Voltage-Controlled Filter from the Soviet Union.

POLIVOKS VCF



CUTOFF FREQUENCY



CV I



CV II



RESONANCE



MIXER



LP



BP



THE HARVESTMAN-R1982
"POLIVOKS VCF"
USER'S MANUAL

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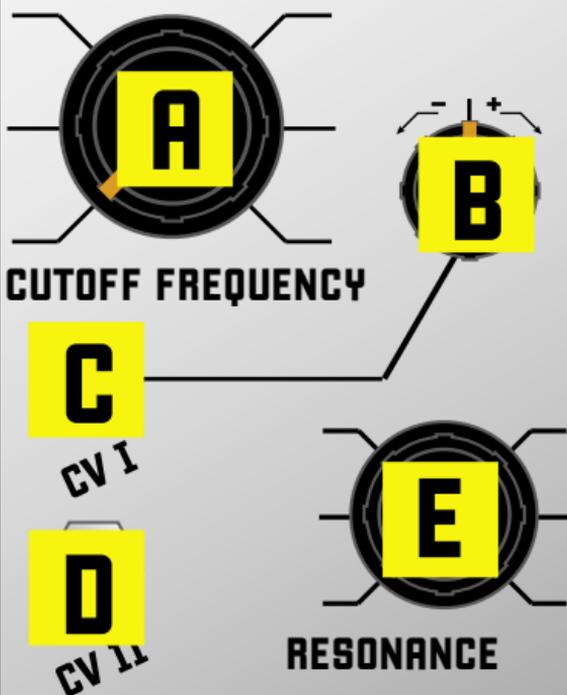
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POLIVOKS VCF



THE HARVESTMAN R-1982



A Manual cutoff frequency control

Controls the frequency at which spectral components of the input signal become attenuated.

B Cutoff CV multiplier (bipolar)

Adjusts the level of incoming control voltages on input CV1, applied to the cutoff frequency parameter. This is a bipolar multiplier. The 12 o'clock setting stands for zero. Values counterclockwise of this point invert the control voltage, while clockwise settings do not.

C Cutoff CV input 1

Accepts a control voltage for modification of the filter's cutoff frequency. Governed by the adjoining multiplier control.

D Cutoff CV input 2

An additional input for control of cutoff frequency. Very sensitive!

E Manual resonance control

Controls the amount of feedback within the filter circuit, which emphasizes the parts of the spectrum near the cutoff frequency. At high settings the filter will self-oscillate, but this is very unstable and heavily dependent on the amplitude and other characteristics of the input signals.

F Audio input 1

Insert an audio signal here.

G Audio input 1

Insert another audio signal here.

H Input 1 attenuator

This controls the level of the signal present at Input 1. Note that "hot" mixes can reveal the characteristic Polivoks distortion, especially at higher resonances.

I Input 2 attenuator

This controls the level of the signal present at Input 2.

J Low pass output

This output presents the filtered signal, with frequencies above the cutoff frequency attenuated at 12db/octave.

K Band pass output

This output presents the filtered signal, with frequencies above and below the cutoff frequency attenuated at 6db/octave.



Introduction

The Polivoks VCF is an authentic adaptation of the classic Soviet 2-pole analog filter circuit. Done with the blessing of its original designer, Vladimir Kuzmin (royalties paid!), this device uses no capacitors in the filter core and original NOS Soviet op-amps for maximum signal flow authenticity. This filter features simultaneous low- and band-pass outputs, a 2-input mixer, bipolar CV multiplier, and an extraordinarily unstable resonance characteristic.

First released in 1982, the Polivoks was the first Soviet synthesizer design under full voltage control. Noted by Western synthesizer enthusiasts for its raw and aggressive sound, the Polivoks filter circuit is easily overdriven, rough in sonic character, and unique among all other musically adapted filter designs.

Configuration

The Polivoks VCF occupies 10HP of rack space and requires a “Eurorack”-style power distribution board. When connecting the power cable to your enclosure, orient the red band of the module’s power cable to point towards the -12V power rail.

Tips and Tricks

- Watch your signal mix levels! There is a “sweet spot” where the instability of the filter resonance is very interesting. Below this zone, the self-oscillation is much simpler, and above it, it is absent. Experiment to find a mix setting that is right for your sound.
- If you take the bandpass output, invert its phase (using an external module), and patch it back into the mixer, you can obtain interesting dual-resonance feedback patches! Use the mix control to govern the peak.
- The manual cutoff control is scaled for maximum playability. You may find that settings outside of the knob’s range may be useful to you, so you may extend its range by applying external control voltages. Try playing with the “hump” at the low end of the dial with a distortion pedal after the filter!



Warranty

Repairs resulting from a defect of the device or its construction process shall be covered for two years after manufacture, with customer paying transit costs to The Harvestman.

Device dysfunction resulting from incorrect power supply voltages, backwards power cable connection, attempted reverse-engineering or decoding of intellectual property, abusive performance, fluid encroachment, or out-of-specification voltage input is not covered by this warranty, and normal service rates will apply.

The Harvestman implies and accepts no responsibility for undesirable harm to person or apparatus caused through operation of this device.

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