Expert Sleepers

User Manual

Revision 1.0

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Introduction

Congratulations on your purchase of an Expert Sleepers “Ivo”. Please read this user manual before operating your new module.

Ivo is a resonant low-pass VCF (Voltage Controlled Filter), switchable between 2-pole (12dB/octave) and 3-pole (18dB/octave) responses, with voltage control over feedback (resonance) as well as cutoff frequency. It will self-oscillate in 2-pole mode.

The module has two audio inputs, one with an attenuator, so it will also mix two signals at the filter input.

The module is 100% analogue, using discrete transistor OTAs.

Installation

House the module in a Eurorack case of your choosing. The power connector is 16-pin Doepfer standard[1]. If using the power cable supplied with the module, the red edge of the cable is closest to the bottom edge of the PCB, and carries -12V. ("-12V" is marked on the PCB itself next to this end of the connector.) Be sure to connect the other end of the power cable correctly, again so -12V corresponds to the red stripe on the cable.

Power requirements

Ivo draws up to 22mA on the +12V rail, and 18mA on the -12V rail.

It does not use the 5V rail.

1 http://www.doepfer.de/a100_man/a100t_e.htm

Inputs and outputs

Ivo's input and output jack sockets are illuminated, lighting red for positive voltage and blue for negative voltage. (Audio appears purple, since it is a rapid alternation of positive and negative.)

Inputs with attenuators are indicated by a dotted line linking the socket to its corresponding attenuator knob.

From top to bottom, Ivo's sockets are:

- Filter cutoff CV input
- Secondary filter cutoff CV input, with attenuator
- Feedback CV input, with attenuator
- Audio input
- Secondary audio input, with attenuator
- Audio output

The two filter cutoff inputs are summed; similarly the two audio inputs are summed (mixed).

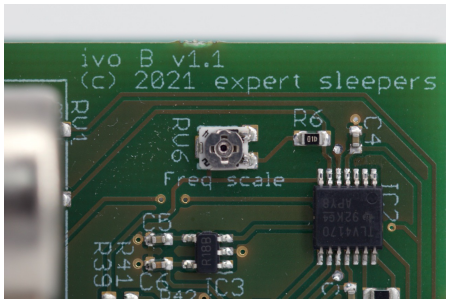
Controls

In addition to the three attenuators, there is a knob for the cutoff frequency (blue) and a knob for the feedback (yellow).

The switch (marked "poles") selects between 2-pole (12dB/octave) and 3-pole (18dB/octave) filter responses.

Calibration

Ivo's cutoff frequency response is approximately 1 Volt/octave. The exact scaling can be adjusted with a trim pot ("RV6") on the PCB as shown below:



Where to get help

Email, forum, and social media links can be found at the bottom of every page on our website[2].

Acknowledgments

Black and white photography by Israel Denadai[3].

2 https://www.expert-sleepers.co.uk
3 http://israeldenadai.com.br/bw