APOGEE ANALOG MULTIMODE FILTER

User Manual, 2023

Something MODULAR

About

Unleash a universe of sonic possibilities with the **APOGEE**, the ultimate Multimode Voltage-Controlled Filter. Designed around the powerful SSI2164 chip, the **APOGEE** goes beyond conventional filtering, offering a rich palette of sound-shaping tools for your Eurorack setup. From crystalline highs to seismic lows, **APOGEE** empowers you to sculpt, shape, and transcend the ordinary.

This modular design provides **3 output modes**: high-pass, band-pass and low-pass. Additionally, the slope (2-pole or 4-pole) of the band-pass and low-pass outputs are **individually switchable** making it easy to sculpt your audio signal with precision.

Self-oscillation is available for all output modes transforming your **APOGEE** into a Voltage-Controlled Oscillator (**VCO**) with the use of the V/OCT input. Unlike many classic 4-pole VCF, the output volume doesn't drop when resonance is increased. The **volume compensation circuit** brings a slight tone coloration reminiscent of Japanese classics from the 80s, such as the Roland SH, with a very round and **liquid resonance**.

Elevate your sonic explorations with the innovative **Cross-Modulation** feature. Let the Band Pass filter dance with the cutoff frequency, unlocking a universe of evolving, organic, and otherworldly tones.

Features

- High-pass, band-pass and low-pass outputs.
- Switchable slope for the BP and LP outputs.
- Self-Oscillating and Volume Compensation.
- The lowpass output goes through an internal VCA.

Specifications

- Module width : 8 HP
- Module depth : 33mm
- Power Consumption : 33mA at +12V / 33mA at -12V
- Reversed polarity protection

Controls

A. CUTOFF knob

Manual control for the filter cutoff frequency from 20Hz to 20kHz.
It is still active when using CV controls, in which case it acts as an offset control.
In self-oscillation mode, this knob acts as a coarse tuning knob.

B. SLOPE Toggle Switches

Selection of the filter slope for Band Pass and Low Pass Outputs.
On both BP and LP, the upper position corresponds to a 12 dB/octave slope (2-pole), the lower position to a rounder 24 dB/octave (4-pole).

C. RESO knob

Manual control for the filter resonance (emphasis).
It is still active when using RESO CV control, in which case it acts as an offset control.

D. CV amount knob

This knob is an attenuverting potentiometer associated with FREQ CV input.

E. X-MOD knob

This knob sets the amount of BP output signal that will modulate the cutoff frequency.

Inputs & Outputs

1. First row : from left to right

- V/OCT : cutoff frequency modulation with V/Oct tracking.
- FREQ CV : Attenuated input for Cutoff Frequency control.
- RESO CV : Direct input for Resonance control.
- LP GAIN : Controls the volume of the signal at the LP output.
  This jack is normalled to +7V when no patch cable is inserted.

2. Second row : from left to right

- INPUT : Audio input.
- HP, BP, LP : Audio Outputs.