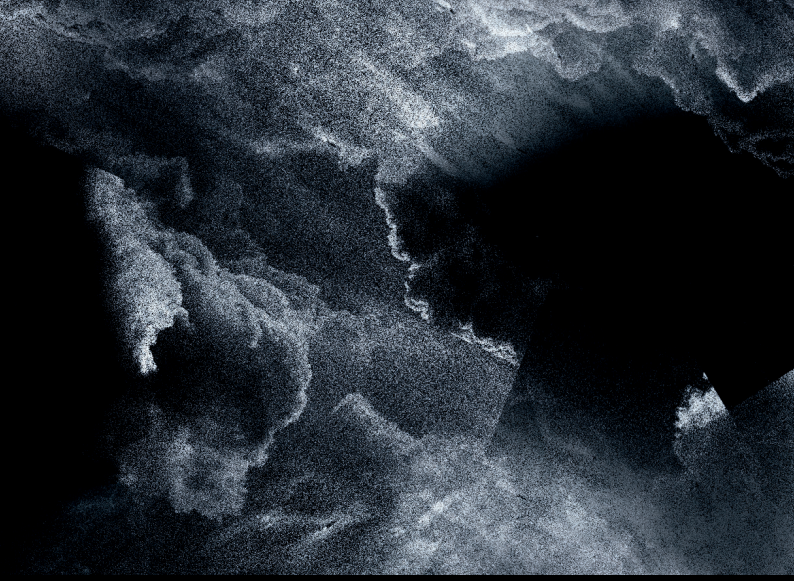
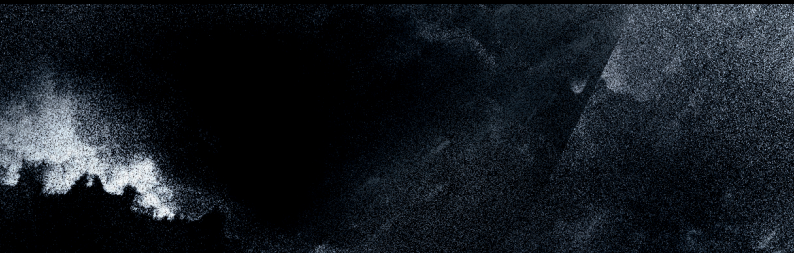
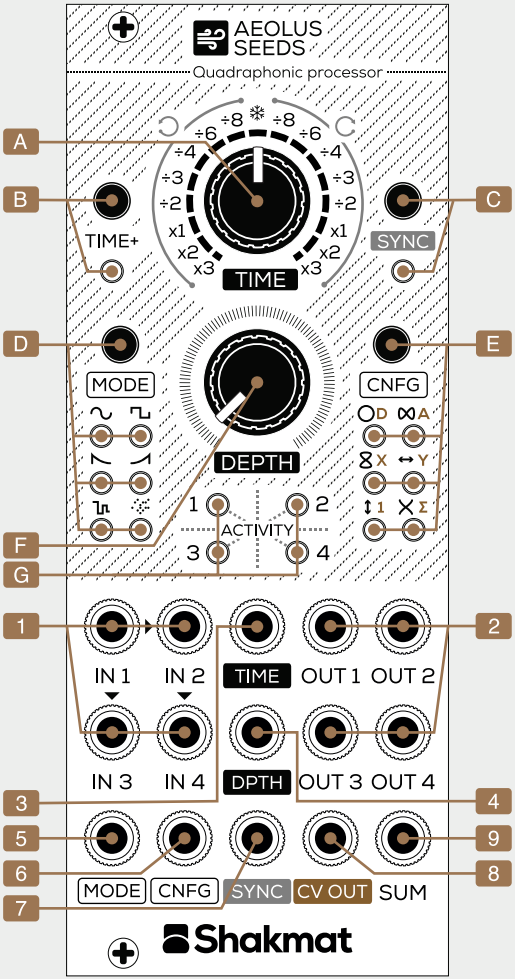


Shakmat
Aeolus Seeds

- 10HP Eurorack Module
- Built & designed in E.U.
- www.shakmat.com




AEOLUS SEEDS
Quadraphonic processor
÷8
÷6
÷4
÷3
÷2
x1
x2
x3
TIME
TIME+
SYNC
MODE
CNFG
DEPTH
ACTIVITY
1
2
3
4
IN 1
IN 2
TIME
OUT 1
OUT 2
IN 3
IN 4
DPTH
OUT 3
OUT 4
MODE
CNFG
SYNC
CV OUT
SUM
Shakmat
A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9

Introduction

Aeolus has four sons: the winds from north, south, east and west. Blowing from the four cardinal points, they manipulate the dynamics of a fully analog signal path through four VCAs driven by a handy multi channel modulation source.

As well as an obvious tool for quadraphonic spatialisation, Aeolus Seeds is also a useful device for vector synthesis, thanks to its Sum output.

The CV output also pushes the exploration further by providing signals to other modules, enabling you to breathe more life into the sound spatialisation of a quad environment.

1 Inputs
2 Outputs
3 Time CV input
4 Depth CV input
5 Mode CV input
6 Config CV input
7 Sync CV input
8 CV output
9 Sum output
A Time potentiometer
B Time+ button & LED
C Sync button & LED
D Mode button & LEDs
E Config button & LEDs
F Depth potentiometer
G Activity LEDs

Installation

The Aeolus Seeds requires a standard 2x5 pin eurorack power cable. Make sure the red stripe on the cable matches the -12V side of the Aeolus Seeds power header.

Basics

The Aeolus Seeds is a quadraphonic modulator/spatialiser designed around four VCAs driven by four modulation sources called *Modulators*. Those *Modulators* have two controls: Time `[A]` and Depth `[F]`.

The Time parameter acts on the modulation speed. Its potentiometer `[A]` has a special mapping: at noon it freezes the modulation and from there, the rotation of the signal matches the rotation of the potentiometer. Turned clockwise it increases the speed of a modulation running clockwise. Turned counter clockwise it also increases the speed, but for a modulation running counter clockwise. In addition to the potentiometer, the Time parameter also has a dedicated CV input `[3]`.

The Depth parameter sets the modulation depth from a constant gain for all the channels to a full range modulation. Like the Time parameter, Depth is controlable by a potentiometer `[F]` or by its dedicated CV input `[4].`

The inputs of the Aeolus Seeds are normalised as such: IN 1 goes to IN 2, 3 & 4 while IN 2 goes to IN 4. This normalisation allows you to easily turn a mono signal (using only IN 1) or a stereo signal (using IN 1& IN 2), into a quadraphonic one.

By default, the Sync input `[7]` resets the *Modulators*. Pressing the Sync button `[C]` synchronises the module to an external clock by converting the Sync input to a clock input.

The Time+ button `[B]` changes the time range. When activated it allows for slower modulations. When Sync is activated alongside Time+, the incoming clock is pre-divided by 4.

Modes

The type of modulation generated by the *Modulators* is set by a dedicated button and LED menu **[F]**. Pressing this button will cycle through the 6 modes from left to right and top to bottom.
The mode is also selectable via CV by using the Mode input **[5]**.

Quadrature Sine

In this mode, each VCA is modulated by four identical sine LFOs, each phase shifted by an angle of 90° from one another.

Square LFO

This mode generates radical gating of the signal by adressing each output successively from a quarter phase width pulse.

Decays

This mode triggers decay envelopes periodically, on each output. The Time parameter acts on the triggering period and the Depth parameter acts on the decay time.

Attacks

This mode triggers attack envelopes periodically, on each output. The Time parameter acts on the triggering speed and the Depth parameter acts on the attack time.

Random

This mode generates random linked pans. As there is no sense of rotation in randomness, the Time potentiometer turned clockwise produces a stepped random, and when turned counter clockwise it delivers a slewed random.

Granuliser

This mode is inherited from the Gemini's Path stereo processor, and creates random openings of the VCAs. The Time potentiometer turned clockwise produces harsh grain envelopes, and smooth grain envelopes when turned counter clockwise.

Configurations

The configuration sets the way the VCAs are successively adressed by the *Modulators*. In practice, it defines the path the sound is taking through the quadraphonic space.

The dedicated button and LED menu **[E]** cycle through the configurations from left to right and top to bottom. Those configurations are also accessible via CV by using the CNFG input **[6]**. There are 6 configurations distributed in two groups :

Quad

Speakers are independent

Circle

Eight

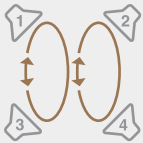
Infinite

Dual

Speakers are linked by pairs

Left/Right

Front/Back



Diagonal

CV Output

The Aeolus Seeds has a specific CV output [8] that is assignable to different parameters of the *Modulators*. To select the type of CV signal you want, hold the CNFG button [E] for two seconds (until the LED menu starts blinking), then navigate through the menu by clicking the CNFG button. There are 6 different CV output assignations:

D Distance

Outputs the distance from the center of the modulation. this option gives great results while assigned to a filter cutoff (the further the sound, the more it will be perceived as filtered), or the dry/wet parameter of a reverb.

A Angle

Outputs the angle of the modulation rotation, or which direction the sound is coming from. This gives a nice swirl effect when sensibly assigned to the pitch of the source.

X X

Outputs the X parameter of the modulation.

Y Y

Outputs the Y parameter of the modulation.

1 One

Outputs the modulation of the first channel.

Σ Sum

Outputs the mean value of all the modulations.

The use of the CV output really gives life to the sound spatialisation of a quad environment. Use it to control parameters and simulate a non-homogeneous acoustic space.

Additional Modes

In addition to the 6 main modes, the Aeolus Seeds offers 6 utilitarian modes that are accessed by holding the Mode button [D] down for 2 seconds. In those additional modes, there are no configurations available and the Mode [5] and CNFG CV inputs [6] are disabled.

XY XY

This mode allows a direct XY control of the quadraphonic spatialisation. The Time parameter controls the X position of the signal and the Depth parameter controls the Y position of the signal.

Stereo

This mode controls the pan and gain of two stereo signals. Time is the gain parameter and Depth is the pan parameter.

4 VOL Quad Volumes

This mode gives a single control (Depth) to the 4 channels' volume.

A/D Polarity

This mode allows an angle/distance control of the spatialisation. The Time parameter controls the angle and the Depth parameter is the distance. This mode works well with the SUM output as it turns the module into a signal scanner.

VCA Stereo VCAs

This mode controls the gain of two paired VCAs. Time is the gain of the first & second VCAs, Depth is the gain of the third & fourth.

4 VCA Quad VCAs

In this mode the potentiometers are disabled as the 4 CV inputs work as a direct control of each VCA gain.

Sum output

The sum output [9] of the Aeolus Seeds provides a mix of the four outputs. This feature opens the module to a whole new range of applications such as modulated mixing, automated morphing and vector synthesis.

For example, the inputs can be fed 4 waveforms coming form an analog VCO, allowing for automated morphing of those waveforms.

Using the Sum output in conjunction with the square LFO mode makes a great signal switcher. The envelope Decay mode leads to some interesting results for rhytmic duties, by feeding the module's inputs with different noise sources.

The Polarity mode, from the additional modes, allows direct crossfade control between 4 audio sources. Also, thanks to the Sync input the module can generate rhythmically accurate modulations that lead to some very interesting results while different drums, percussions and FX returns are fed into the inputs.

Specifications

Size	CV Inputs
10 HP	-5 to 5V
Depth	CV Output
29 mm	0 to 8V
Current Draw	Analog Inputs & Outputs
65 mA @ +12V	-10 to +10V
20 mA @ -12V	