1 2 3 4 ↑A ↑B ↑C D

ext

e-f   sense
÷2   ÷4   ÷8

rate ⌒ ⎍ cv
↻
↑   ↓   y

rate cv

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Pathways

Pathways is a modular matrix mixer designed for feedback manipulation, creative routing, weird synthesis… and many other things.

FEATURES

• 4x 1/4" inputs with gain / drive control, 4x 1/4" outputs

• Each of the 16 matrix intersections can be controlled manually or via CV, a dedicated LED gives visual feedback of the channel level

• An envelope follower is normalled to input four, the signal then gets fed through a clock divider with three cascaded outputs. Willingly, an external signal can be inserted into the divider

• Two voltage controlled LFOs can modulate any parameter and create dynamic feedbacks, asymmetrical panning, tempo-related fx send/returns

• If patched into itself, each channel can self oscillate so it can be used as a polyphonic cv-controllable drone synthesizer

• full eurorack compatibility, each parameter has its own 1/8" input jack

• Pathways is powered via the included 9V center-negative [-o)+] universal power supply

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Pathways
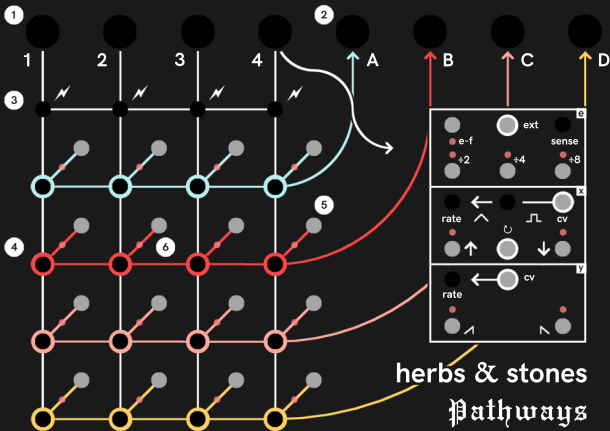
THE MATRIX

The core of Pathways is the 4x4 VCA matrix on the left of the panel.

The inputs (1) are on the top left side of the panel, the outputs (2) on the right side.
Under the four inputs jacks there are four gain/drive knobs (3) that can amplify and bring to saturation any input signal. Pathways accepts signals up to 10Vpp.

Each of the four rows can be imagined as a 4 input mixer, each arrow on the right visually connects the four volume knobs to the output jack.

Each of the 16 intersections has it's own volume control (4) that doubles as an attenuator when an external signal is patched into the CV input (5) it's own LED volume indicator (6).

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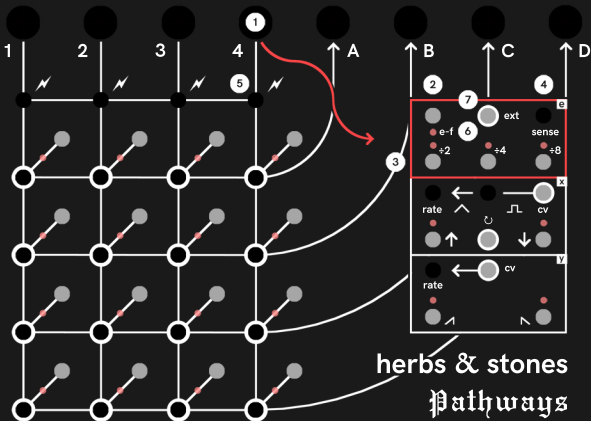
THE ENVELOPE FOLLOWER / CLOCK DIVIDER

Input four (1) is normalled to an envelope follower (2), it's output is then routed to a 3 stage clock divider (3).

The envelope follower has a sensibility control knob (4), the output is dependent on the relation between input gain (5) and sensibility. Visual feedback of the signal generated is given by a dedicated LED (6).

The clock divider has an external input jack (7), if a clock/LFO is patched into it it'll bypass the envelope follower signal.
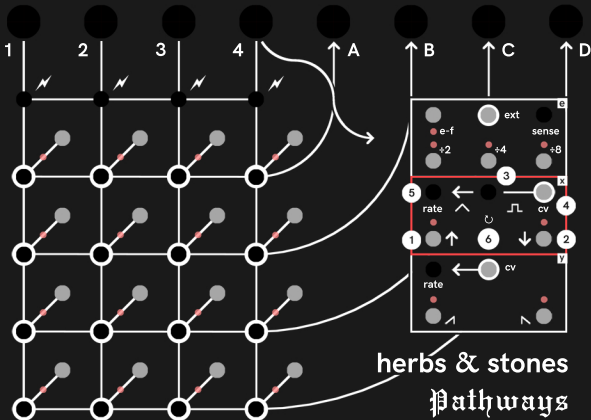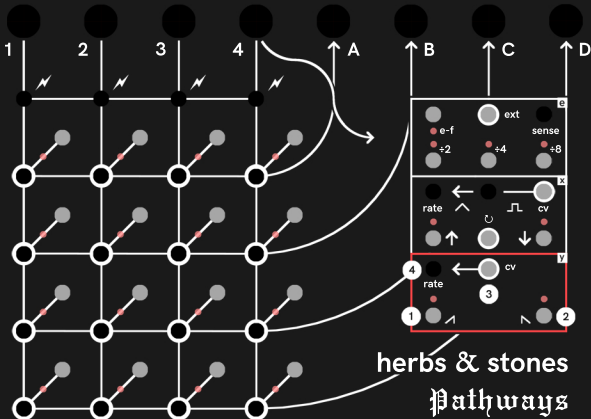
LFO X

LFO X is a voltage controlled LFO with two outputs (1,2) 180° out of phase between each other. The shape knob (3) controls the triangle wave saturation level: at 0% the output is a triangle-sine wave mix, at 100% a squarewave with smooth edges.

The CV input (4) accepts signals between 0-5V, once an external voltage is detected at the input the rate knob (5) acts as an attenuator.

If a gate signal is patched in the "reverse" input (6) the right output (2) gets inverted while the gate input is high, thus creating a more complex time-dependent CV waveform.
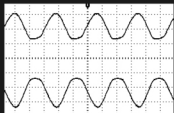
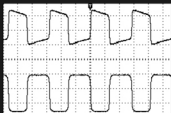LFO X stops when speed knob is turned fully counterclockwise.

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LFO Y

LFO Y is a voltage controlled LFO with two outputs:
rising sawtooth (1) and desceding sawtooth (2).

The CV input (3) accepts signals between 0-5V, once an external voltage is detected
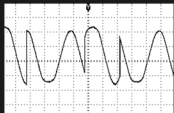at the input the speed knob (4) acts as an attenuator.

LFO X shape knob 0%

LFO X shape knob 100%

LFO X (2) modulated by LFO Y

LFO X (2) modulated by LFO Y

LFO X (2) modulated by LFO Y

LFO Y outputs (1,2)

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