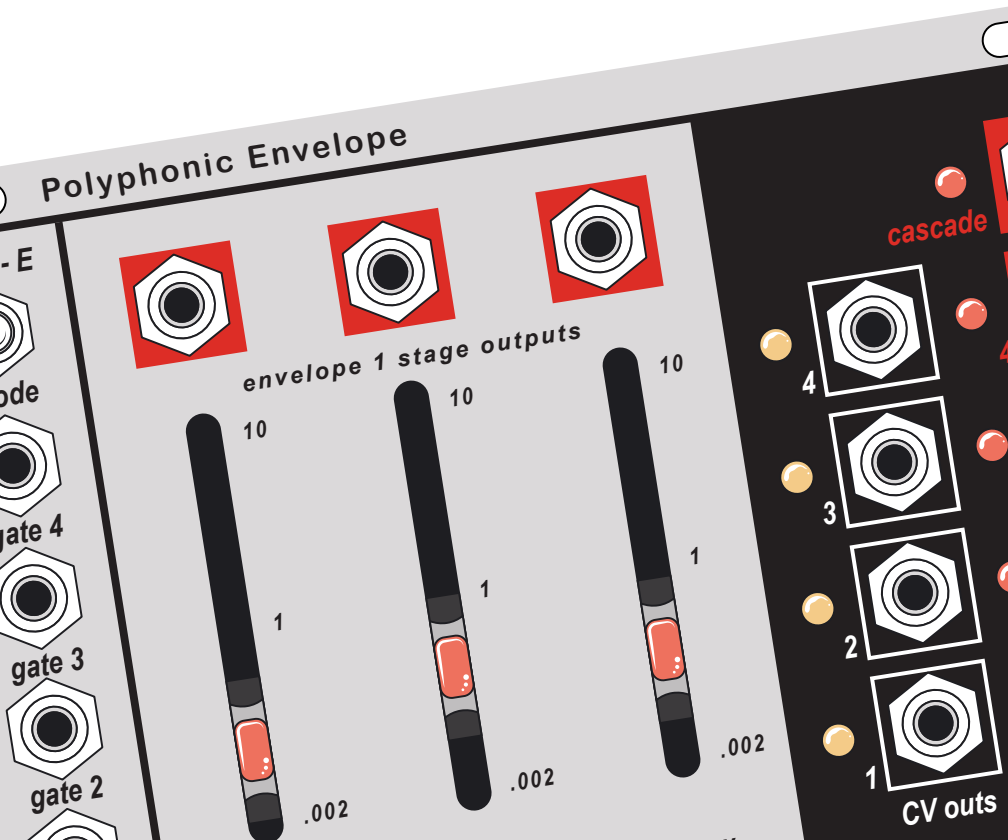




VERBOS ELECTRONICS

Polyphonic Envelope



The core of the Polyphonic Envelope is a set of four Attack-Hold-Decay envelope generators. Time constants of all four envelope generators are controlled by a single set of sliders and CV inputs. One set of controls means the four envelopes start with the same times, then variation can be added by the Skew controls. The setting of the sliders and CV inputs are always the settings of Envelope 1, then Skew allows the times to get longer or shorter on following envelopes. The Level Tilt section controls the height of the envelopes as a group. With the Level Tilt control centered, all four envelopes will rise to 10 volts. If the control is turned clockwise, the first envelope will be 10 volts tall and each subsequent envelope will be successively lower in voltage. If the control is turned counter-clockwise, the first envelope will be the lowest voltage and each subsequent envelope will be successively higher, with Envelope 4 10 volts tall. Level Tilt can also be voltage controlled with a reversing attenuator. Each envelope has a Gate input, sensitive to note duration, as well as a CV Output and End Pulse output. Envelope 1 has gate outputs for the individual stages.

When the envelope generators are used as a group, logic is included to Cascade them one after another. Although Skew and Level Tilt can be used to vary the envelopes when they are used individually, these controls become particularly useful while the envelopes are Cascaded. The Mode switch selects H, D or E (Hold, Decay or End) to determine which stage will trigger the next envelope in a Cascade.

The Cascade trigger output sends out a trigger corresponding to whichever stage is used in the current mode from Envelope 4, allowing a second Polyphonic Envelope (with four more envelopes) to be cascaded after the first. Cascade mode is dynamically engaged and disengaged allowing envelopes to be triggered independently, even between Cascades. When gated from their individual Gate inputs, all envelopes can be used independantly, including looping to create four unsynchronized LFOs. The All outputs combine all four CV outputs and all four End Pulses.

22HP • 240g • +12v 75mA • -12v 30mA

mode switch

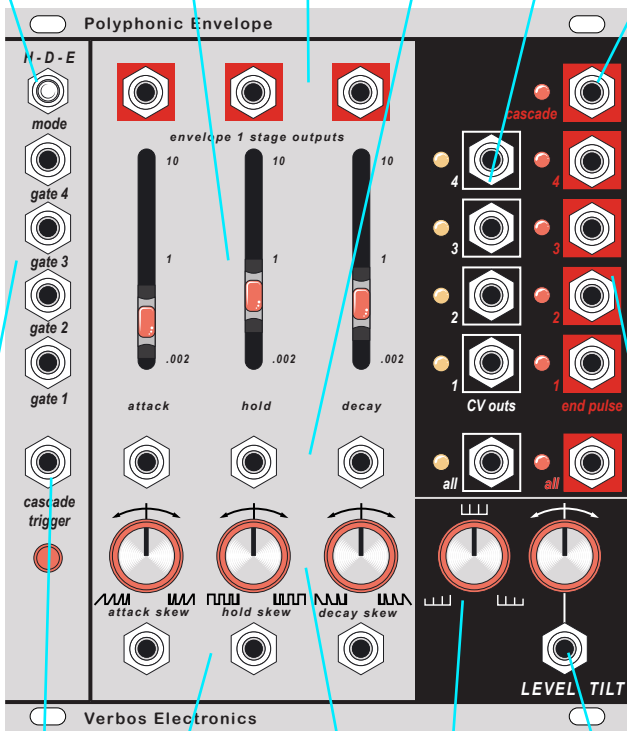
envelope 1 stage outputs

CV outputs

manual time controls

time CV inputs

Cascade output



Cascade trigger

Skew controls

Level Tilt CV input

gate inputs

Skew CV inputs

Level Tilt control

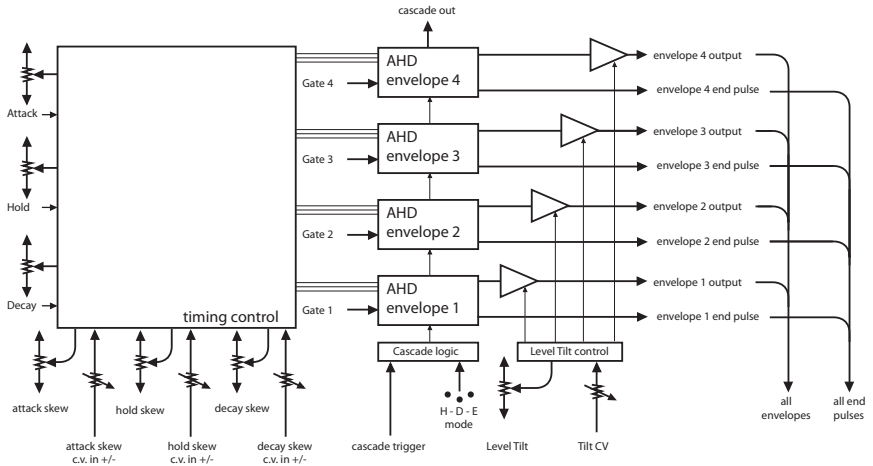
End Pulse outputs



VERBOS ELECTRONICS

designed and assembled in Berlin, Germany

Block Diagram



Verbos Electronics GmbH
info@verboselectronics.com
www.verboselectronics.com