Associative Quadruple Envelope

Product description

A-envelope is a four independent channels ADSR envelope, with association capabilities.

Association between channels

A-envelope allows to define channel groups, that shares configuration. This capability makes possible to define polyphonic configurations on the go up to 4 voices, in a simple way.

Each channel/group allows:

- Modulate every of the ADSR stages in time, slope or amplitude independently.
- Adjust the amount of modulation using the stage knobs when acting as attenuverters.
- Controlling the duration of each stage from 0 to 20 seconds using the stage knobs.
- Controlling the shape of attack, decay and release stages.
- Controlling the level of the sustain stage.
- Controlling the amplitude of the whole envelope.
- Configure the input activation mode as Gate, Trigger or Re-Trigger.
- Configure the channel in single, loop or auto-loop mode.
- Configure the BEOS (Begin and/or End Of Stage) outputs for each stage.
- Trigger the channel manually using the test button.

User interface

The user interface is meant to give a fast and direct access to every feature.

- Instant visualization of each channel group thru the scale indicators and LED arches.
- Direct monitoring of the signal and BEOS outputs thru specific LEDs.

Characteristics

Time ranges

Attack:

- The minimum amount of time is 400 microseconds, under this value the stage is omitted.
- The maximum amount of time is 20 seconds.

Decay:

- The minimum amount of time is 400 microseconds, under this value the stage is omitted and therefore, the maximum voltage for the attack becomes the one defined by the sustain.
- The maximum amount of time is 20 seconds.

Sustain:

- The minimum amount of time is 400 microseconds, under this value the stage is omitted but the voltage level remains as a reference for the other stages.
- The maximum amount of time is 20 seconds.

Release:

- The minimum amount of time is 400 microseconds, under this value the stage is omitted
- The maximum amount of time is 20 seconds.

Inputs

The ADSR modulation inputs

The ADSR modulation inputs accepts signals from -10 to 10 volts and a bandwidth from DC up to 20kHz. The attenuverters associated to the inputs can amplify/attenuate the input signal from 0 to x2.

Parameter	Value
Input impedance	100kOhms
Maximum input voltage	+/- 10 Volts
Bandwidth	DC to 20kHz

Trigger/Gate inputs

The trigger/gate inputs react to pulses of at least 2.5Volts and 50us.

Parameter	Value
Input impedance	100kOhms
Minimum input voltage	2.5 Volts
Minimum pulse duration	50uS

Outputs

The ADSR envelope outputs

The ADSR envelope outputs have a voltage range of 0-10 volts, and a minimum period time of 400 milliseconds using only the Attack stage. The ADSR envelope outputs are doubled to offer both direct and inverted outputs. Both sets have the same characteristics.

Parameter	Value
Output impedance	1kOhms
Output voltage	0 - 10 Volts

The BEOS outputs

The BEOS (Begin-End Of Stage) outputs have a voltage range of 0 volts when inactive and 10 volts when active.

Parameter	Value
Output impedance	1kOhms
Output voltage	0 / 10 Volts

Power consumption

The power consumption it is been measured with all LEDs on.

The +5V jumper selected (Recommended)

- +5v = 170 mA
- +12v = 35 mA
- -12v = 23 mA

The +12V jumper selected

- +5v = 0 mA
- +12v = 245 mA
- -12v = 23 mA

Protection

- Protection for human body model electrostatic discharge (ESD) of 2kV.
- Power connector reverse protection.
- Protection against power polarity inversion.

Working Temperature

- Working ambient temperature from -20ºC to 70ºC.

Accuracy

- The accuracy for all specified values is < 1%.

Dimensions

- 22HP
- 3U
- 38mm depth from the back of the panel to the power connector, including the connector.