

HoRNet VCA

VCA offer a toolkit for controlling the track level, it can work as a simple Voltage Controlled Amplifier using a control signal in it's sidechain input.

Starting from there you can add functionality like an envelope follower on the control signal, with attack and release ranging from 1ms to 3000ms or an RMS module.

The VCA acts only if the control signal is above the set threshold that goes from -80dB to 0dB, above this threshold positive or negative gain, which can be scaled by a specific control, is applied.

You can also transform VCA in a complete compressor or expander using its input or its output as control signal for feedback or feedforward compression/expansion.

Summing it up VCA is:

- A volume control tool with optional RMS detection and attack and release settings.
- A feed forward compressor with optional RMS detection and external sidechain.
- A feedback compressor with optional RMS detection and external sidechain.
- An expander with optional RMS detection.

The image shows the HoRNet VCA plugin interface with various parameters and a gain view. Annotations explain the function of each parameter:

- THRESHOLD** (-80.0 dB): Sets the threshold level for the VCA activation. VCA starts working if reference is above.
- SCALE FACTOR** (9.1): Scales the computed gain by this factor, works as ratio control when VCA behaves like a compressor. Multiplies the computed gain by this factor.
- ATTACK** (1 ms): Sets the attack time of the envelope detector.
- RELEASE** (1 ms): Sets the release time of the envelope detector.
- GAIN OFFSET** (0.0 dB): Offsets the computed gain by this amount.
- RMS**: Activates the RMS detection.
- REVERSE GAIN**: Reverses the computed gain. If set the VCA works like a compressor, decreasing the gain for signals above threshold.
- INTERNAL REFERENCE**: Input signal as reference. If set the input signal is used to control the VCA, the plugin works as a standard compressor.
- IGNORE ENVELOPE**: Ignores the envelope settings. If set the envelope detector is ignored and the control signal directly changes the gain.
- FEEDBACK**: Output signal as reference. If set the output signal is used to control the VCA transforming the plugin in a feedback compressor.
- RELATIVE GAIN**: Gain is relative to sidechain. If set the gain is computed relative to the control signal otherwise is relative to the set threshold.
- RETURN TO THRESHOLD**: Gain to thresh. with no inp. If set the gain is set to the threshold level if no control signal is present.

GAIN VIEW

The gain view shows a waveform representing the applied gain over time. The y-axis ranges from -40 to +40 dB. The waveform shows a series of peaks and troughs, indicating the gain being applied to the signal.

HOARNET VCA
Voltage Controlled Amplifier

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