AMPLITUDE

AMPLITUDE is a discrete transistor core VCA with a wide range of waveform saturation and distortion capability. This module is capable of faithfully reproducing the classic warmth and fat tones associated with vintage analog synthesizers and pushes that capability to the extreme. A novel voltage controlled linear to exponential converter is included and can be used to shape incoming control voltages to the VCA CV input and can be patched out to external modules.

G

GAIN/SATURATION

Turn this control up to add harmonic saturation to th input signal. Signal GAIN and SATURATION are also dependent on the OFFSET and CV LEVEL as well as the input signal amplitude. Use this control to add warm low end harmonic content and thickness to your input signal.

A

CV LEVEL ATTENUATOR

Controls the amplitude level for control voltages (CV) applied to the VCA CV input. Maximum setting will pass control voltages at a 1:1 ratio as long as the CV RESPONSE control is set to fully LINEAR (LIN). CV LEVEL may need to be turned down a bit for mixed LIN/EXP and EXP CV RESPONSE settings, unless the extra gain is desired.

O

OFFSET

Applies up to a +10 volt offset to CV applied to the VCA CV input. OFFSET works as a volume and gain control as well as providing a positive bias to control voltages patched into the VCA CV input. The latter is especially useful for taking advantage of the full voltage swing of bipolar control voltages for through zero modulation.
Setting this control to the *center* position (5 volts) will pass the input signal to the output at unity (no gain) when GAIN/SATURATION is set to the minimum and *no* CV is applied to the VCA CV input. Center position is also sufficient to bias nominal bipolar signals (+/- 5V) applied to the VCA CV input for through zero modulation.
Increasing the OFFSET beyond *center* position will add up to 2 times gain to the input signal. It is possible to add hard clipping distortion to the input signal when this feature is used in conjunction with the GAIN/SATURATION control and varied CV RESPONSE/LEVEL settings.
This control is typically set to minimum (zero volts) when a positive unipolar control voltage is applied to the VCA CV input and will raise the baseline CV level and gain when increased in value.

R

CV RESPONSE

Continuously variable control over the VCA's CV response from linear to exponential. Set to LINEAR (LIN) position to pass control voltages applied to the VCA CV input unaffected. Increase this control to add an exponential response to control voltages applied to the VCA CV input. The processed CV can be accessed for external patching via the CV OUT jack, described below.

L1

CV LEVEL LED

Indicates amplitude and status of CV applied to the VCA CV input and OFFSET control.

L2

CV RESPONSE LED

Indicates CV RESPONSE status. BLUE is linear (LIN), GREEN is exponential (EXP).

RCV

RESPONSE CV INPUT

This input is for modulating the CV RESPONSE with bipolar or unipolar control voltages.
Use the CV RESPONSE control to tailor the offset of modulation. Center position is sufficient for symmetrical fading between LIN and EXP response with a bipolar signal.

VCA CV

VCA CV INPUT

This is the control voltage input for the VCA for amplitude modulation of the INPUT signal.
Use the CV LEVEL attenuator to adjust the emphasis of the control voltage applied to this input.
Use the CV RESPONSE control and/or RCV input to alter the response of the control voltage.

IN

VCA SIGNAL INPUT

This is the signal input to the VCA. DC coupling allows AMPLITUDE to process both audio *and* control voltages.

VCA OUT

VCA SIGNAL OUTPUT

This is the VCA main output.

CV OUT

SHAPED CV OUTPUT

Direct CV output for signals patched through the VCA CV input and processed with the CV RESPONSE control and RCV modulation.

COLOR KEY LEGEND

- PANEL CONTROL
- LED INDICATOR
- INPUT
- OUTPUT



