KOMA ELEKTRONIK – DUAL DISCRETE VCA

USER MANUAL

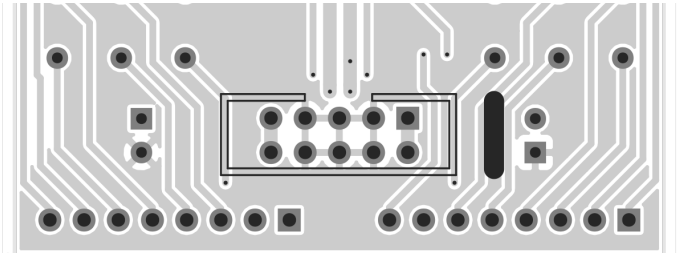
Dear User,

Thank you for purchasing our Dual Discrete VCA!

The KOMA Dual Discrete VCA offers two independent high quality VCA channels, both built up out of discrete transistor cells with low CV and audio bleed, very low noise and distortion. The VCA's feature set also enables you to experiment with the linear/exponential response curve, changing the dynamics of your sound. Play around with the gain settings for creative distortion effects in the classic KOMA style:

High quality sound by default, noise by choice!

POWER CONNECTION



A close up of the Power Connector on the back side of the module.

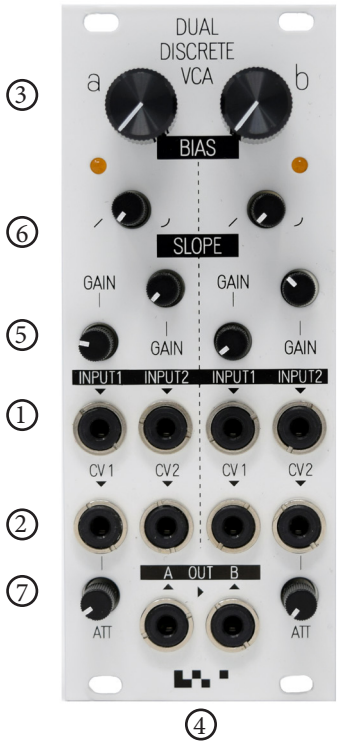
Always make sure you align the red stripe on the power connector to the white stripe marker on the module.

Made with love in Berlin, Germany.

Questions? Need help?

Please contact us at:
support@koma-elektronik.com

KOMA Elektronik GmbH
Koloniestrasse 29
13359 Berlin
Germany



FEATURES AND FUNCTIONS

① INPUT 1-2 (A+B)
Input to VCA. Designed primarily for audio signals. 100k Impedance. AC coupled

② CV INPUT 1-2 (A+B)
CV control for VCA Volume, 100k Impedance. DC coupled.

③ BIAS (A+B)
Manual control of VCA volume. The value of the BIAS control is mixed together with the incoming CV signal.

④ OUT (A+B)
Output from VCA, 1k impedance. AC coupled.

⑤ GAIN (A+B)
Pre-gain for input signal. Allows overdriving the input stage (saturation / distortion).

⑥ SLOPE (A+B)
VCA response shape from linear / to exponential. Fully CCW = linear. Fully CW = exponential.

⑦ ATT (A+B)
Attenuator for CV 1 input on channel A and CV 2 input on channel B. Attenuates the voltage of the incoming CV signal. Unipolar.

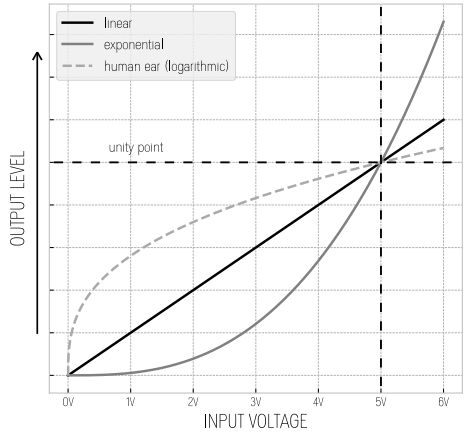
SLOPE CONTROL AND ATTENUATION

The SLOPE control enables you to seamlessly shift between a linear and exponential curve. Our VCA is designed to operate with CV signals of 0V - 5V.

When using a 5V CV signal, the extreme settings of the SLOPE control translate to the same perceived loudness, see 'unity point' in the graph CV Response on the right.

We added attenuators (ATT) on CV Input 1 of Channel A and CV Input 2 of Channel B, to allow the user to adjust the incoming CV level. For instance: when you have a higher CV signal, you can attenuate it down to the appropriate 5V level.

CV RESPONSE



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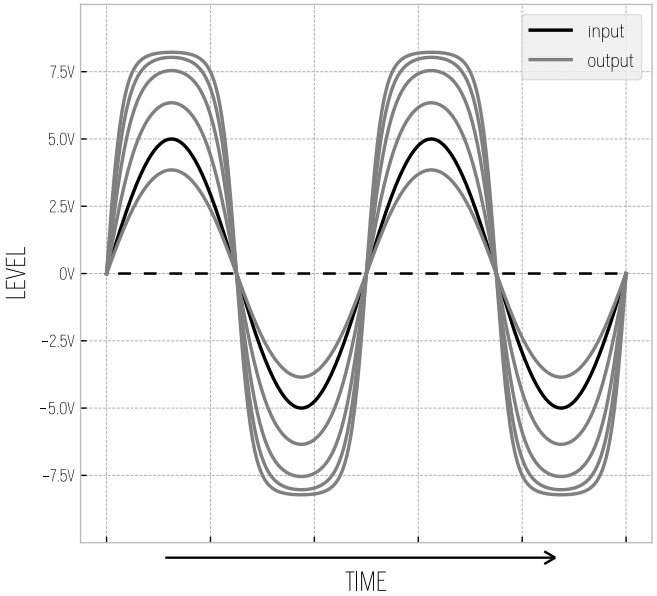
DISTORTION AND SATURATION

To avoid distorting your audio signal, mind the Gain position and start on a lower position. To overdrive your signal, turn the Gain pot further clockwise. See the Saturation Chart for overdrive characteristics.

SATURATION CHART



OUTPUT NORMALIZATION

The output of channel A is by default normalized into the output of channel B, when output A is unpatched. You can break the normalization by patching into the output of channel A.

TECHNICAL SPECIFICATIONS

Width: 10 HP | Power Requirements: 40mA on both rails (+/-12V)
Depth: 37mm | Discrete Design by Otto for quality signals.