DIGITAL VCA MKIII

Non Traditional Fully Featured VCA

Thank you for purchasing the MKIII version of my classic Digital VCA. This is a design I'm super fond of for how it works behind the panel, and for its creative potential in many patches. This module combines several tools into a small package and will become a staple in your system. Thank you for supporting WMD! - William Mathewson

BIAS: sets the baseline level of the VCA. In unipolar mode, CCW is fully closed. In Bipolar Mode, noon is fully closed.

LED: Shows the current state of the VCA. If it's off, the VCA is closed. Brighter is more open. If it's not changing, it's probably because you're in ZCD or TR mode.

ZCD/TR/INST SWITCH: Controls when the VCA level is updated.

INST - continuous, like a normal VCA.

TR - Trigger Mode. Updates the VCA on a rising edge (trigger or gate) into the UPD jack. The threshold for updating is +3.3V.

ZCD - Zero Crossing Detector mode. The signal on IN is analyzed, and every time it crosses 0V a trigger is sent to the VCA allowing it to update. This allows for fast changes in amplitude that don't click. This mode applies an amount of latency to the VCA that is at maximum ½ of a period of the fundamental frequency.

CV: Jack and attenuator for CV. CCW is off, CW is full open. 5V with fully CW will open the VCA completely.

OUT A+B: This output mixes the A and B outputs at unity gain.

BIPOLAR VCA / VCA SWITCH:
VCA - normal unipolar VCA mode, like other VCAs.

BIPOLAR VCA - negative CV inverts the output signal, aka ring modulator mode. This mode moves the off point of BIAS to noon.

NORMALING:
CV A has a noise source normaled to the jack. This makes the Digital VCA a Sample & Hole module in TR mode.

IN A has 5V normaled to it for use as S&H with just the TR in.

CV B can have Noise or the A CV input normaled to the jack by flipping the horizontal toggle.

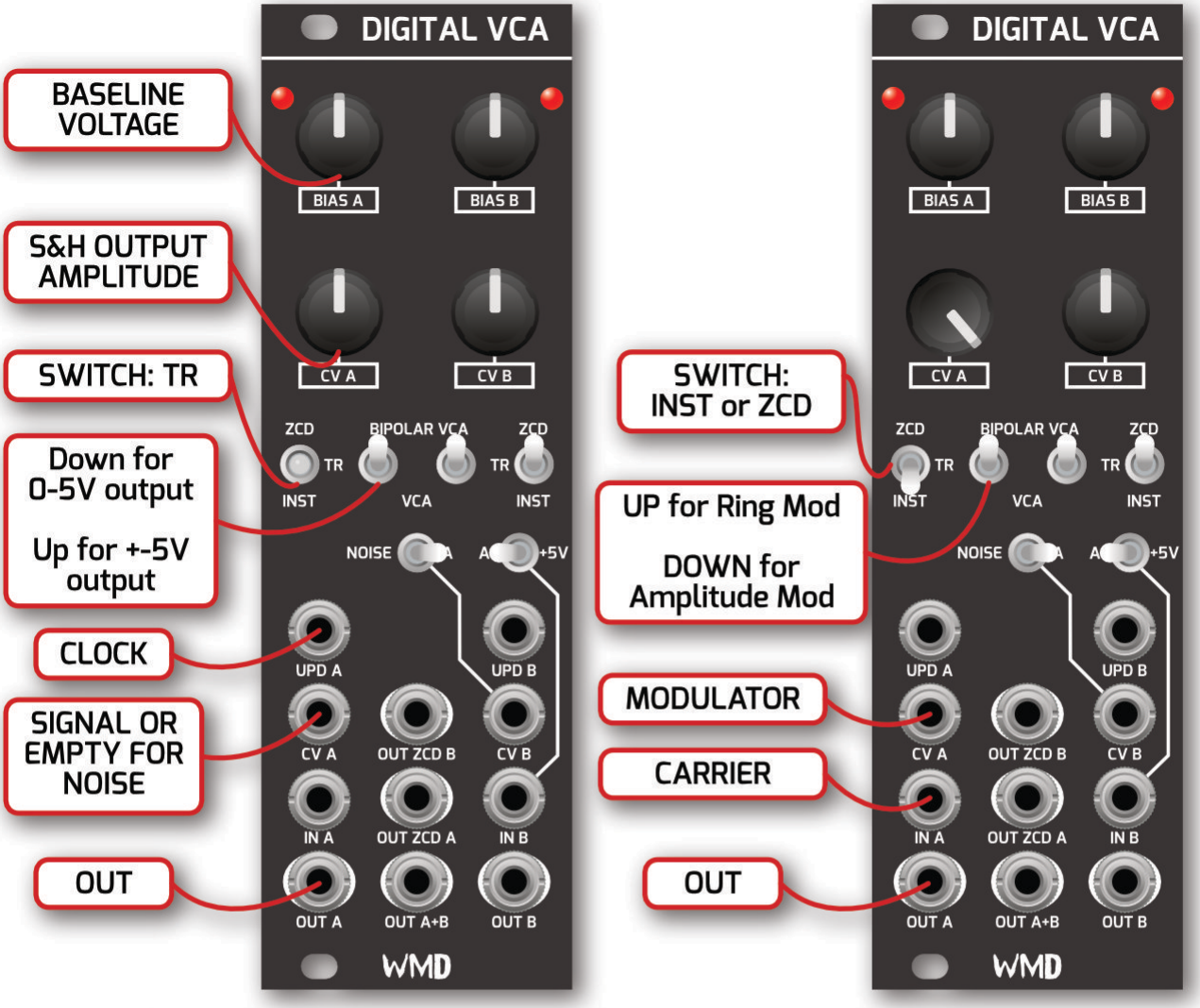
IN B can have OUT A or +5V Normaled to it by flipping the horizontal toggle.

CV B's Noise source is different than CV A's, so you can have two independent S&H circuits.

SPECS:
Size: 8hp
Depth: 35mm(with cables)
Board Height: 112mm
Power: +12V: 65mA, -12V: 45mA

Inputs: 100k ohm impedance
3.3V Threshold for UPD
CV Range: 0-5V for full opening

All Outputs:
1k ohm impedance/20Vpp range



SAMPLE & HOLD PATCH:

Connect your clock source to UPD.

CV input is the signal to be sampled. Leave unpatched for internal noise.

Turn Bias to select the baseline voltage of the output.

Turn CV to control the range of the output.

RING MOD PATCH:

Connect your modulator to CV

Connect your carrier to IN

Turn Bias to 12 o clock

Turn CV fully Clockwise

Experiment with ZCD or INST modes.

Set 2nd switch to Bipolar VCA

Check out our Youtube for in depth videos and patch examples:

http://youtube.com/wmdevices