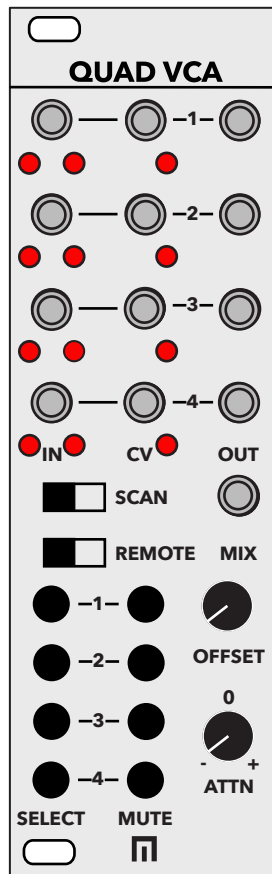


# QUAD VCA MANUAL V.1



**MALEKKO**

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## SPECIFICATIONS

FORMAT:  
EURORACK

DIMENSIONS:  
8HP, 23mm deep

INTERNAL AND EXTERNAL SIGNALS (3.5mm jacks):  
+/-5

MAX CURRENT:  
97mA +12  
50mA -12  
0mA +5V



## INSTALLATION

Remove module from packaging.

Power down your modular synthesizer and disconnect the power cable from the wall outlet.

Attach the included power cable to the module's power connector and connect the other end to the power distribution bus in your EuroRack synthesizer case.

Position the module on the mounting rails in your EuroRack case and screw down mounting screws. Power up! If your case does not turn on properly then you have installed the module incorrectly. Simply power down and make sure to follow the diagram when reconnecting the module.

CONNECT POWER CABLE WITH  
RED STRIPE TO WHITE LINE





## DESCRIPTION

Quad VCA is a 4-channel, advanced voltage controlled amplifier with an analog signal path that can either be used stand-alone, or in tandem with the Varigate 4+ and 8+ for multiple preset recall over the power bus.

Input channels 2-4 are normalled to 1 and Scan Mode allows for complex level and modulation routing. Each channel includes a mute function and all outputs are summed to a mix output. To adjust level and CV modulation per channel, use the Select Channel buttons and then adjust the Offset and Attenuverter controls.

Scan Mode includes two functions. Scan: Insert 4 inputs, 1 CV and monitor Mix output for 4:1 scanning. Pan: Insert an input into Ch 1 and Ch 1 CV will route input to up to 4 different outputs. Offset and Attenuation can be adjusted to control how incoming CV is applied.

The Remote switch allows you to access saved presets when paired with Varigate 8+ (100 presets) or Varigate 4+ (16 presets). In stand-alone mode, all settings are auto-saved.

Quad VCA is a complete 4-channel VCA and mixing solution with preset recall capability, all in 8hp.

Features include:

- 4 individual inputs (audio and CV) and outputs and 1 mix output
- 4 bi-polar CV inputs, accepting up to +/- 10V
- Scan Mode (4:1 scanning and panning)
- Offset and Attenuvert controls per channel
- Remote switch on/off for saving multiple Quad VCA presets along with your Varigate 4+ and Varigate 8+ or stand-alone mode
- Mute buttons per channel output
- 8hp



# ROUTING

## INPUT CHANNELS 1-4:

Patch Audio or CV from external sources to these inputs. Accepts +/-5V.

## BI-POLAR CV INPUT CHANNELS 1-4:

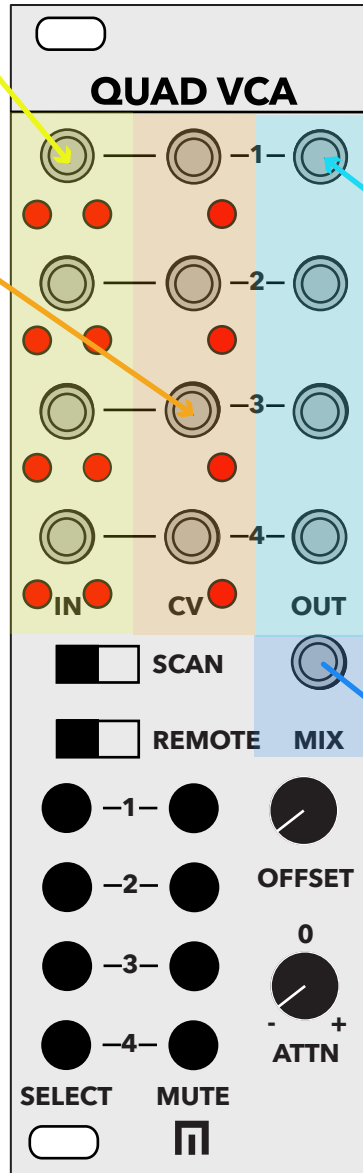
CV inputs 1-4. All channels accept up to +/-10V. LEDs indicate CV input amount for each channel.

## CHANNEL OUTPUTS 1-4

Audio or CV individual outputs.

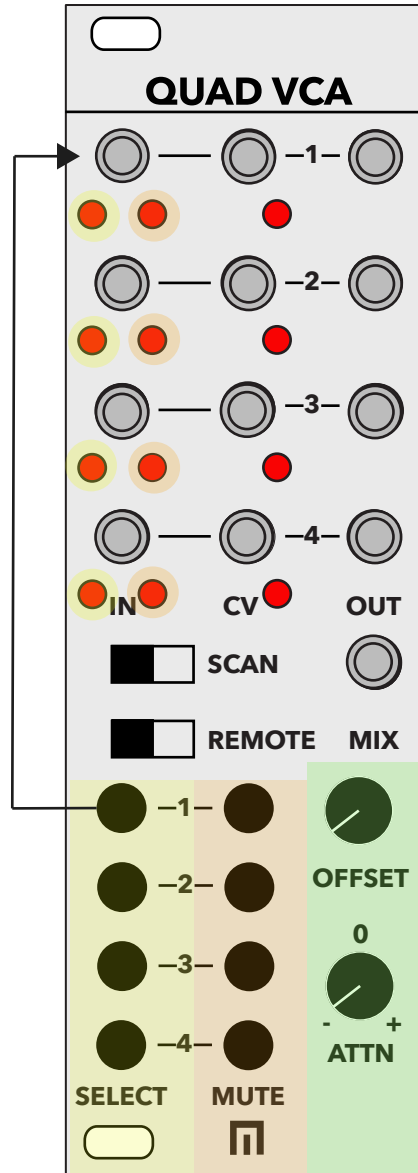
## MIX OUTPUT:

Mixed output of channel outputs 1-4.





## SELECT, MUTE, OFFSET AND ATTENUATION PER CHANNEL



### CHANNEL SELECT 1-4:

Press the SELECT buttons 1-4 to then edit Offset and Attenuation for channels 1-4.

The red LED on the left of the channel inputs indicate the channel selected for editing.

### MUTE CHANNELS 1-4:

Press the MUTE buttons 1-4 to mute a channel. The mutes are popless.

LEDs to the right of the Input channels indicate mute status.

### OFFSET:

Once a channel is selected, adjusts the DC offset of the CV input for that channel. Center the control to use bipolar CV controls like LFOs. With no CV inputs signal, Offset acts like a volume control.

### ATTENUATION/ATTENUVERTER:

Adjusts the amount of gain controlled by voltage at the CV input. Turn CCW to invert the response of the incoming CV signal. CV signal fully attenuates at the center of the control.



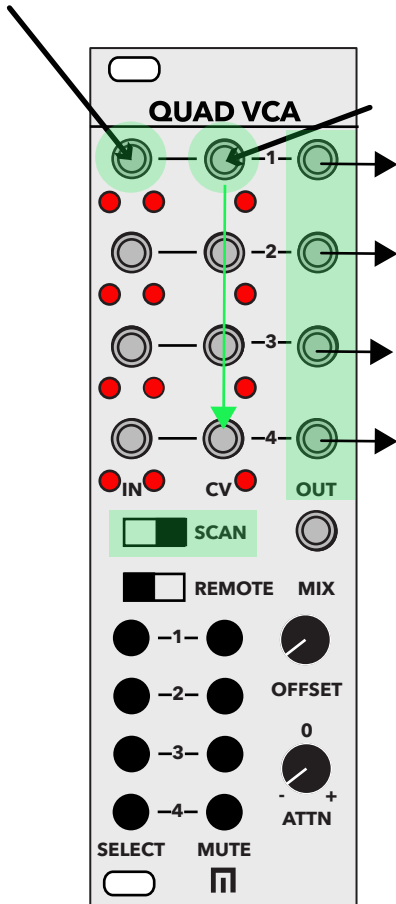
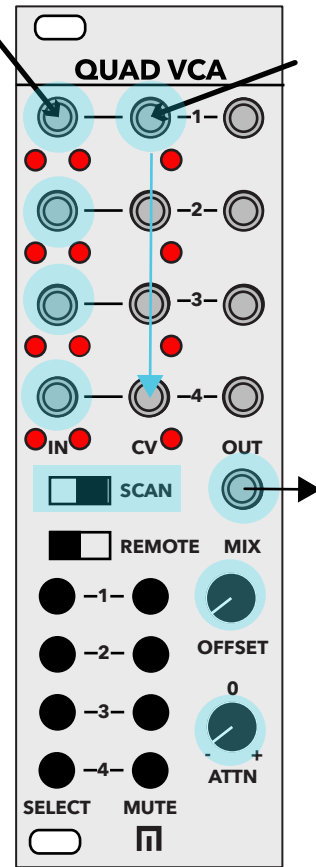
## SCAN MODES

Switch to the right turns on Scan/Pan Mode.

SCAN - Insert Audio or CV into inputs 1-4, CV on CV Ch.1 and monitor Mix output for 4:1 scanning. You can also patch from the individual outputs 1-4.

Offset and Attenuation can be adjusted to control how incoming CV is applied to scanning.

Without CV in on CV Ch.1, you can also simply adjust the OFFSET control to scan channels.



PAN - Insert an input into Ch. 1 and Ch. 1 CV will route input to up to 4 different outputs.

Offset and Attenuation can be adjusted to control which of the outputs input signal will be routed to.

You can create a stereo panning patch by inserting audio into CV Ch.1, CV into CV Ch.1 and then send the outputs of Ch. 1 and 2 to a mixer that has the ability to set channels to pan hard left and right. Adjust the Attenuverter control so that panning occurs only between outputs 1 and 2. You may need to increase the Offset control if you are using an LFO or other bipolar signal.





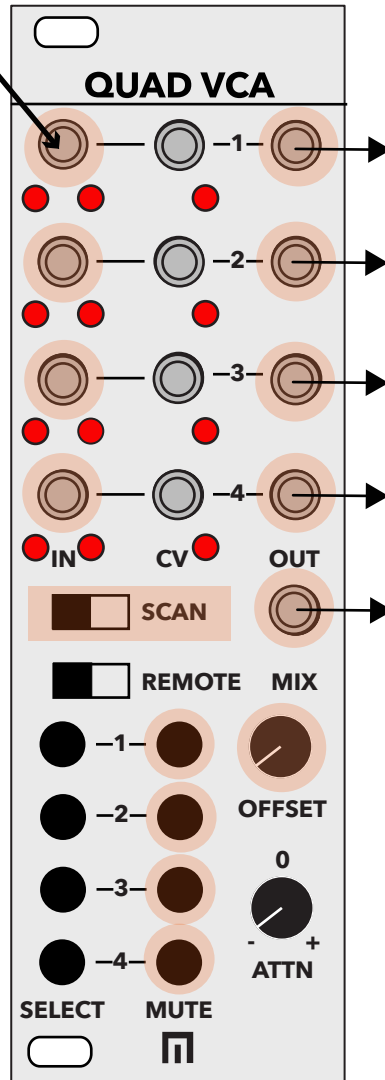
## GENERAL MIXING

To do general mixing with the Quad VCA, turn the SCAN switch to the left.

Input channel levels can be manually adjusted by first selecting the channel you want to edit and then turning the OFFSET knob to the right.

You can also insert CV into CV channels 1-4 and adjust the ATTN knob to control the amount of CV added or subtracted from the OFFSET amount.

Don't forget you can MUTE channels as well.





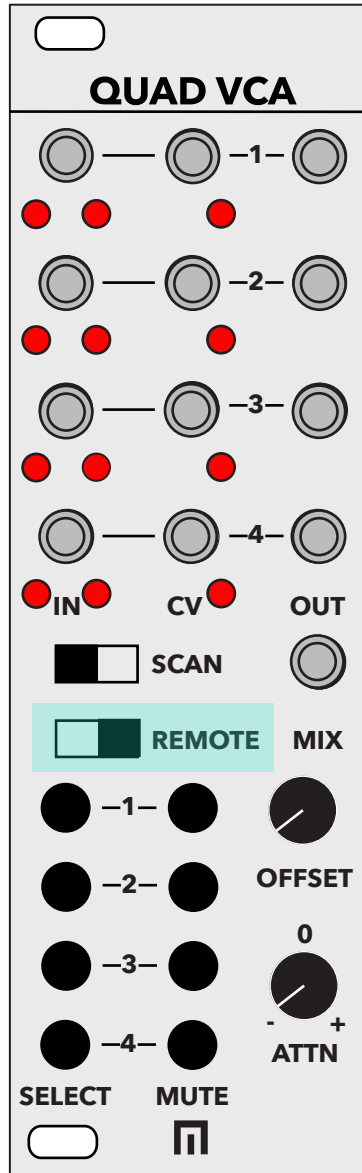
# SAVING PRESETS

Your last settings will be saved on power cycle.

If you have a VARIGATE 8+ or VARIGATE 4+, you can save/recall multiple Quad VCA presets. ALL settings with the exception of the Scan Mode switch position are saved.

Set the REMOTE switch to the right. You must be in REMOTE mode to save and recall presets with a VG4+ (16 presets) or a VG8+ (100 presets)

If you don't have a V8+ or V4+, just set the REMOTE switch to the left.



# WARRANTY

**This product is covered by the Malekko Heavy Industry warranty, for one year following the date of purchase. This warranty covers any defect in the manufacturing of this product. This warranty does not cover any damage or malfunction caused by incorrect use such as, but not limited to, power cables connected backwards, excessive voltage levels, or exposure to extreme temperature or moisture levels. The warranty covers replacement or repair, as decided by Malekko Heavy Industry. Please visit our website [malekkoheavyindustry.com](http://malekkoheavyindustry.com) to obtain full warranty information and to register your product for coverage.**