Denver, CO
http://wmdevices.com
303-545-9205
sales@wmdevices.com

# The WMD Geiger Counter in eurorack

Thank you for purchasing the Geiger Counter.
Welcome to the world of digital distruction.

**INSTALLATION.** Use a 16 pin to 10 pin ribbon cable for installation. 12 volts is towards the top of the module. The Geiger Counter uses up to 60mA at +-12 volts. Plug in the ribbon cable and then secure the module using four M3x6 mm screws. Be careful not to reverse the polarity of the power cable, damage or total destruction of the module could happen.
The cable should have the red stripe pointing down on both the module and on standard Doepfer style racks.

**2. GAIN.** Low settings provide clean tones with no distortion at all, while high settings will breakwall your signal for great sustain. Use the Gain control as a course setting for getting the desired tone from the selected wave table.

**1. INPUT** to the preamp section

**6. LEVEL.** This control attenuates the level coming out of the preamp to add or remove hard clipping going into the digital section of the Geiger Counter.

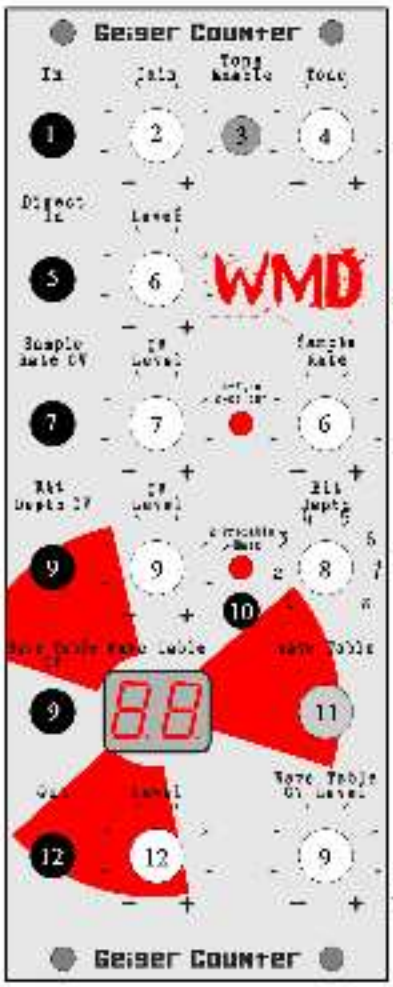
**5. DIRECT INPUT** bypassing the preamp
The Geiger is DC coupled from this point on.

**7. SAMPLE RATE CV.** The input and level controls take standard control voltages to modulate the Sample Rate of the Geiger Counter. When a cable is inserted, the Sample Rate control on the right is used to set the center frequency about which the CV signal modulates. When the LED is GREEN, the CV signal is logically ANDed to the Sample Rate knob setting.

**9. BIT DEPTH and WAVE TABLE CV.** The input and level controls take standard control voltages to modulate the Bit Depth and the Wave Table controls. When a cable is inserted the Bit Depth and Wave Table knobs control the center frequency at which the CV modulates around.

**10. CV BIAS ADJUSTMENT.** This trim pot sets the CV bias voltage. To set, set the Wave Table to 80, turn the WaveTable CV level, and the Output Level knobs down. Plug a patch cable between the Wave Table CV and the Output. Turn the trimpot until the WaveTable reads 80. This is calibrated at the factory.

**12. OUT and LEVEL.** Outputs the final signal at +-5Vpp. The Level control reduces the volume of the Output.




**4. TONE.** The Geiger Counter's tone control blends muffled low-mids with chimey and clear upper mids and highs providing a very large range of sounds in junction with the Gain. All the way down and the sound is muffled and grungy with little upper harmonic content. The middle range is smooth and full bodied. The top range cuts the lows completely for only upper harmonic content. Use the Tone to fine tune the sound of the wave table.

**6. SAMPLE RATE.** Controls the length of the samples your signal is converted into. Full up and the Geiger Counter samples faster than a CD. Dial it down a little and you'll lower the fidelity and frequency response, adding overtones and difference frequencies. Down a little produces some very nice chimey clean tones. Down more and higher notes disappear into chaos, all the way down to 240Hz. The LED when RED indicates that the range is reduced to the upper part.

**8. BIT DEPTH.** Reduces the vertical fidelity of your signal. This introduces quantization errors that create distortion. When the LED is GREEN, your signal MASKed by the Bit Depth setting, this creats vertical gaps in the signal, introducing uneven quantization errors, adds lots of distortion, but can be used to clean up noise and tone shape. When the LED is RED, the Bit Depth operation occurs before the Wave Table modulation. This allows you to tone shape the response of the Wave Table.

**11. WAVE TABLE.** The display and rotary encoder knob control the wave table setting. The Wave Table is like high-school algebra applied to your signal, running it through a math function adding distortion, gain, harmonics and mayhem. Consult the chart for images of each Wave Table, the more vertical action, the more harmonics are produced. The signal is at rest in the middle, horizontally on each image.

**Output Bias Adj.** On the back of the Geiger near the power connector is a blue trim pot. This adjusts the DC offset of the output stage. It should be set AFTER the input bias pot, with no signal, Direct In level all down, and output level all up, to 0.00VDC. This is calibrated at the factory.

**WARRANTY.** All WMD products are protected against defects for 1 year from date of purchase. Please call or e-mail us with problems and concerns.