

# RANDOM SAMPLING

Congratulations on obtaining your Verbos Electronics Random Sampling. This Euro-Rack format module is a collection of small circuits that allow the introduction of uncertainty into both the modulation and audio paths.

### **Fluctuating Randoms**

The fluctuating randoms are two sources of randomly modulating voltage and an uncorrelated random gate. The rate is controlled from a front panel control and a CV input with a reversing attenuator. Their rate goes from barely perceptable slow changes all the way up to audio rate. These can be used as percussion sounds by sending an envelope into the CV input.

### **Quantized Randoms**

A digital sample and hold grabbing random numbers is the heart of the quantized randoms section. There is panel and CV control of how many bits are in the sample, controlling the number of unique voltages in the set and two outputs with different distributions. Unlike an LFSR as seen in other modules of this type, the selection is truely random and will not repeat a pattern at any time.

## **Analog Shift Register**

An analog shift register is made up of four sample and hold circuits chained together to pass the sample down the line like a bucket brigade. An external control voltage is plugged into the left most CV input and a trigger is sent to the input. This implimentation adds the ability to patch into each of the sample and holds seperately and use it for an unrelated application. Both positive and negative voltages are accepted and bi-colored LEDs indicate positive voltage in green and negative voltage in orange.

#### **Audio Noise Source**

In the lower-right section of the module is a noise source with outputs for WHITE noise which is flat across all frequencies, PINK noise which is flat across all octaves and METALLIC, which is a mixture of detuned square waves similar to the sound source in electronic cymbal circuits such as those in the TR-808 and TR-606.

