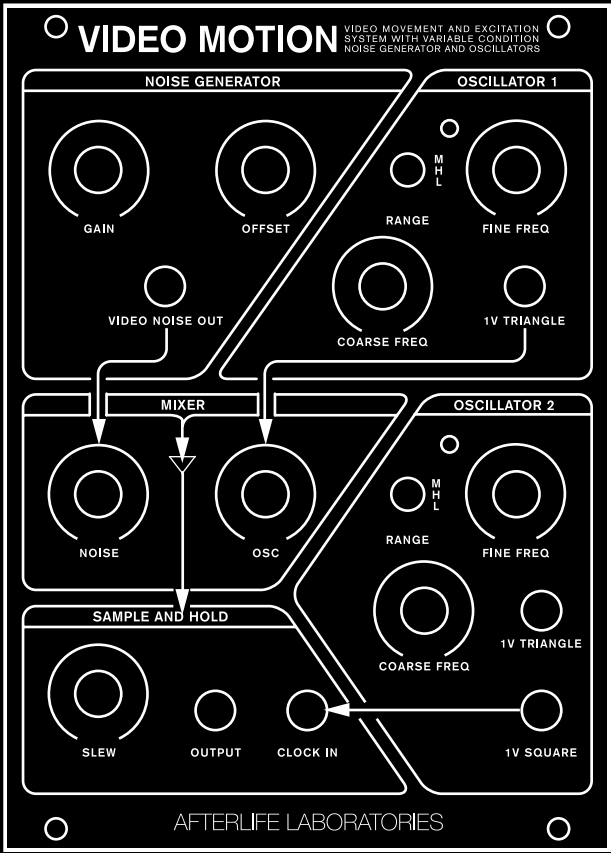
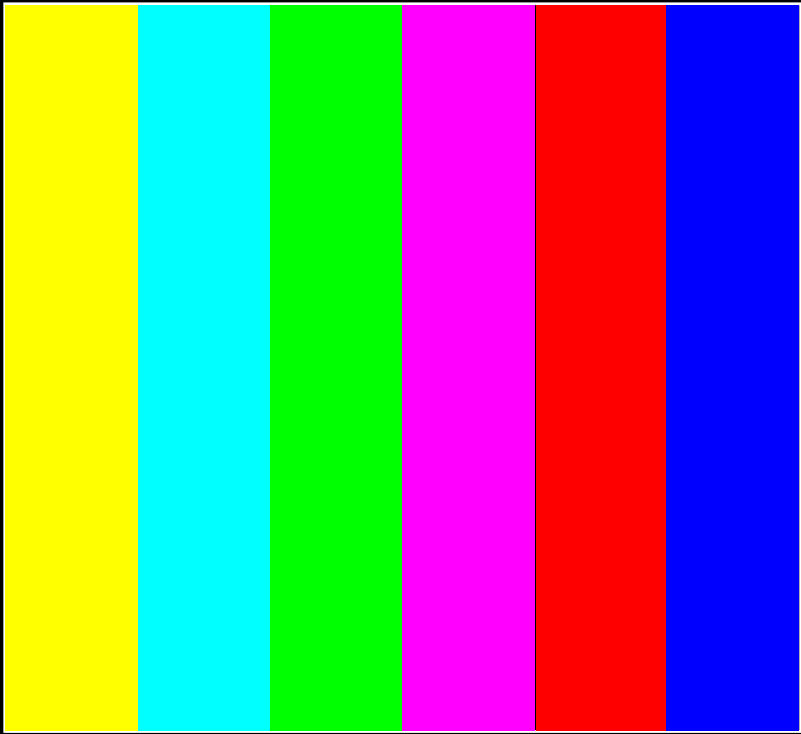


VIDEO MOTION

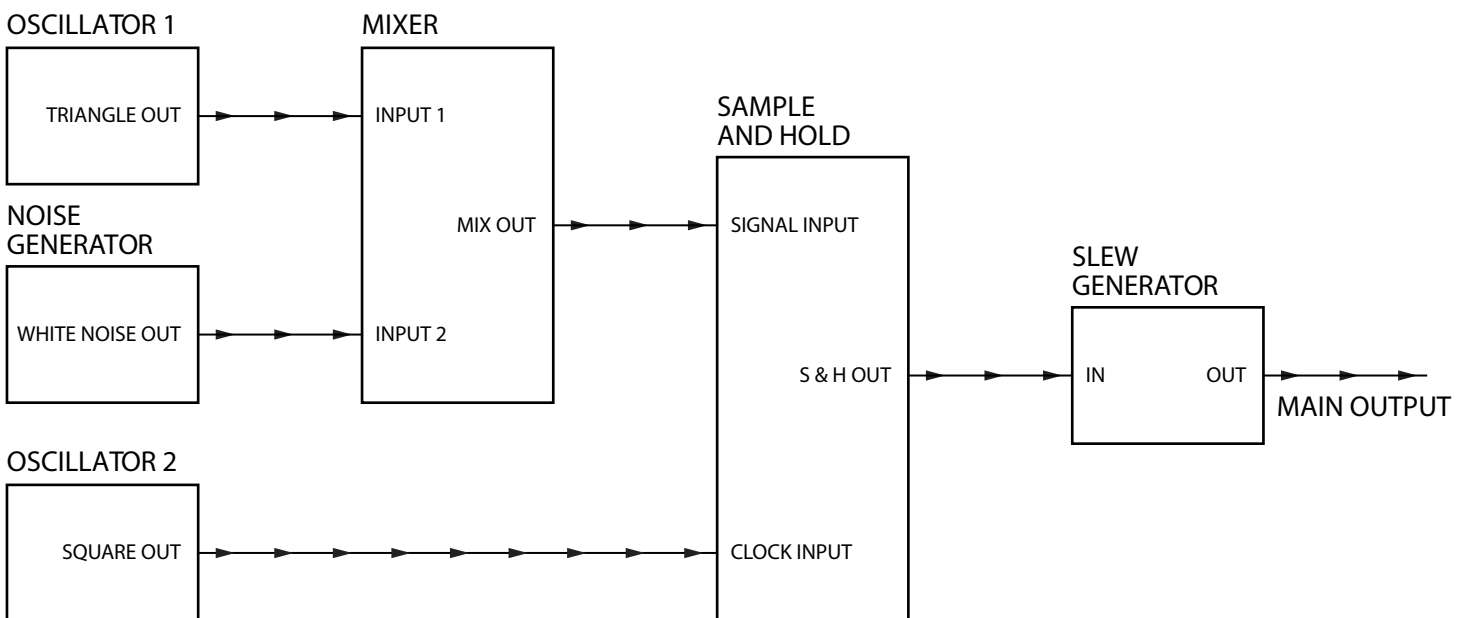
AFTERLIFE LABORATORIES



Introduction_ [

Video Motion is DC voltage generator designed to create degrees of randomization that are customizable and controllable. It can create smooth and stepped voltages that are used to control parameters within the LZX video synthesizer Eurorack format. It can create movements with very natural looking characteristics that range from slow randomized gradients to abrupt starts and stops.

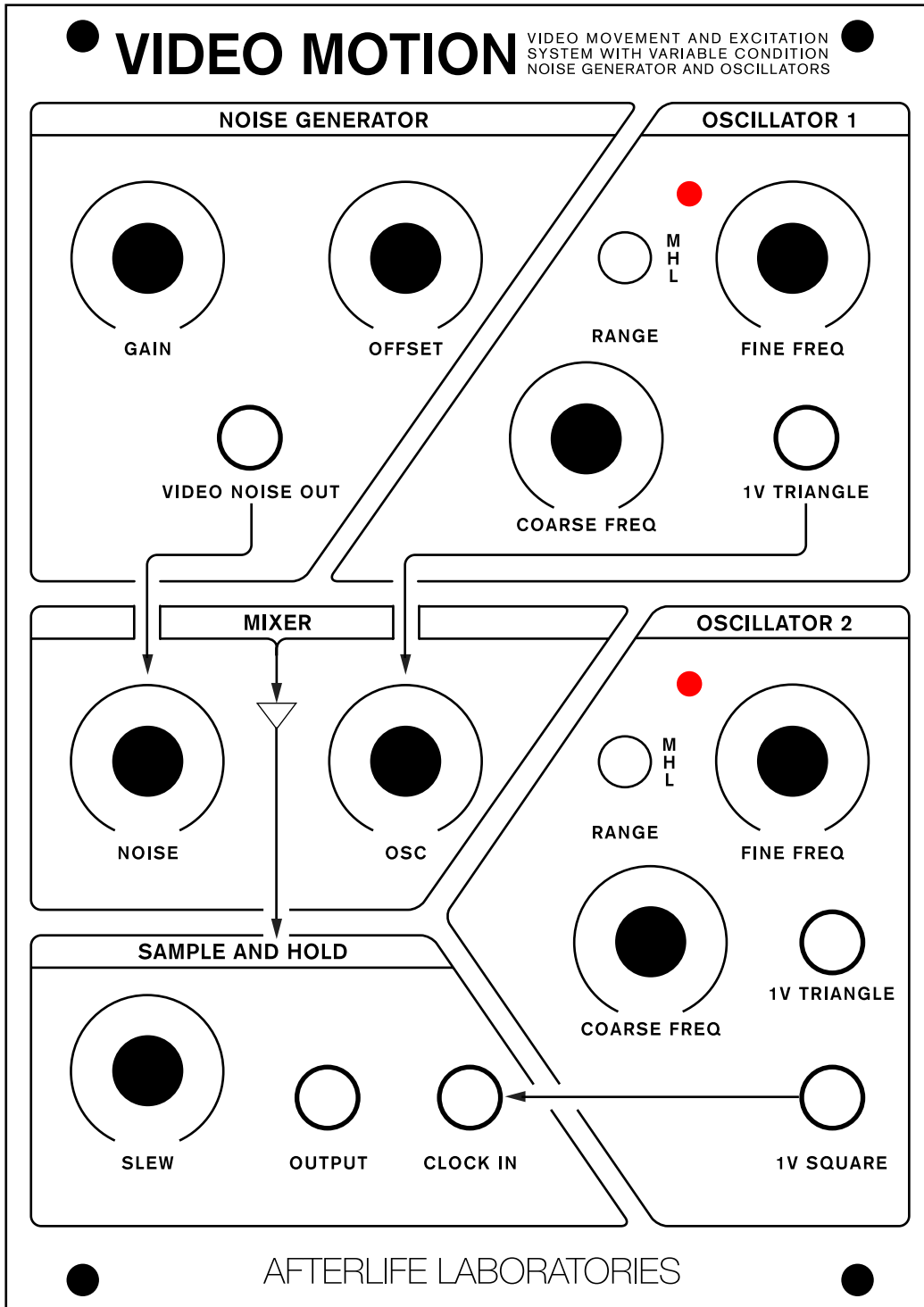
The module is a collection of small building blocks of circuits that are connected internally. A block diagram of the signal flow is shown below:



In addition to being a collection of circuits working together to produce voltage for movement, Video Motion also functions as a utility module. It can be used as a source for video noise providing a wide range of textures, and the two oscillators can be used independently.

Signal Flow |

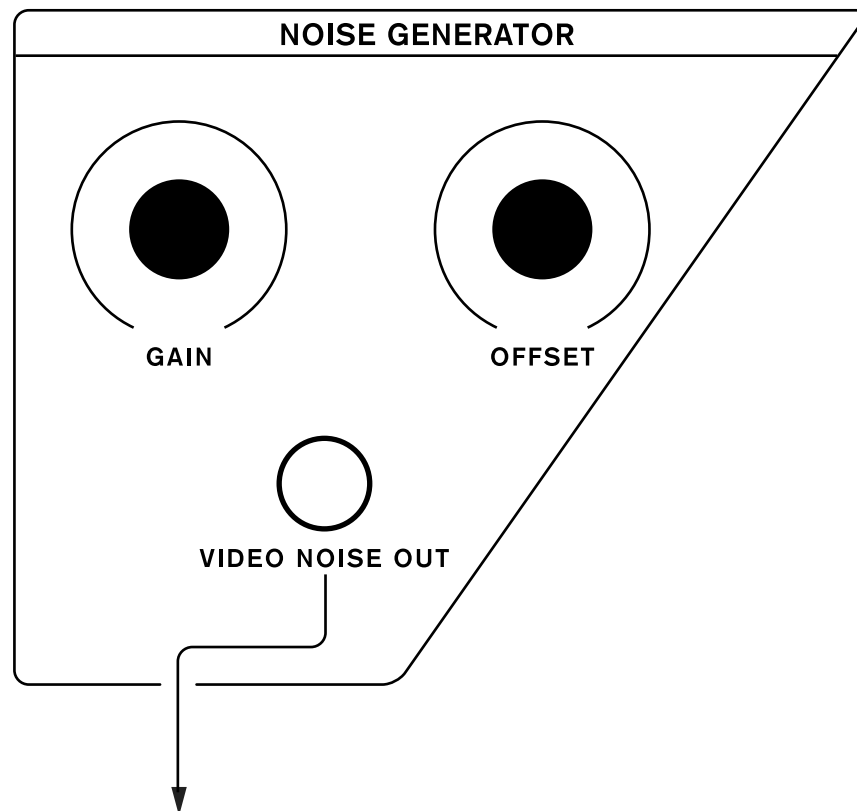
The panel graphic below provides indications of signal flow through the use of arrows shown connecting various circuit blocks.



Functional Blocks |

- Noise Generator.

Video Motion's noise generator is a wideband analog noise source used for creating snow-like textures (available at the video noise output jack). The noise generator is also the primary source of voltage randomization and is hardwired to the sample and hold via the mixer block. The gain and offset controls are applied only to the noise output jack and do not affect the signal sent to the mixer.



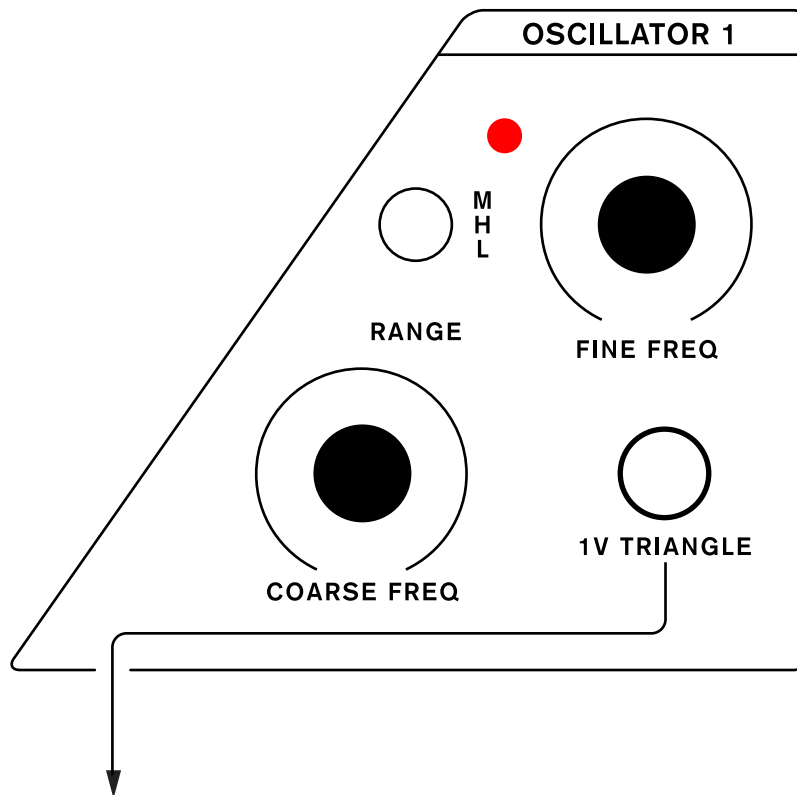
GAIN: Unipolar control that determines the amount of signal present at the "VIDEO NOISE OUT" jack. This control is at unity gain when the knob is 12 o'clock, with gain being added as the control is increased to fully clockwise. This parameter can be viewed as a contrast control.

OFFSET: Bipolar control that adds +/-2V bias to the noise signal. Use this control in combination with the GAIN control to create variations of noise textures. This parameter functions as a brightness control.

VIDEO NOISE OUT: 1V video noise signal output.

- Oscillator 1.

Oscillator 1 provides the triangle waveform sent to the signal input of the sample and hold circuit. It is mixed with the noise signal in the mixer section prior to being applied to the sample and hold. In addition to being hardwired for the mixer/sample and hold functionality, a 1v triangle output is available for use as an independent oscillator.



1V Triangle: Output for 1V triangle waveform.

FINE FREQ: limited range oscillator frequency control for detailed adjustments.

COARSE FREQ: Full range oscillator frequency control.

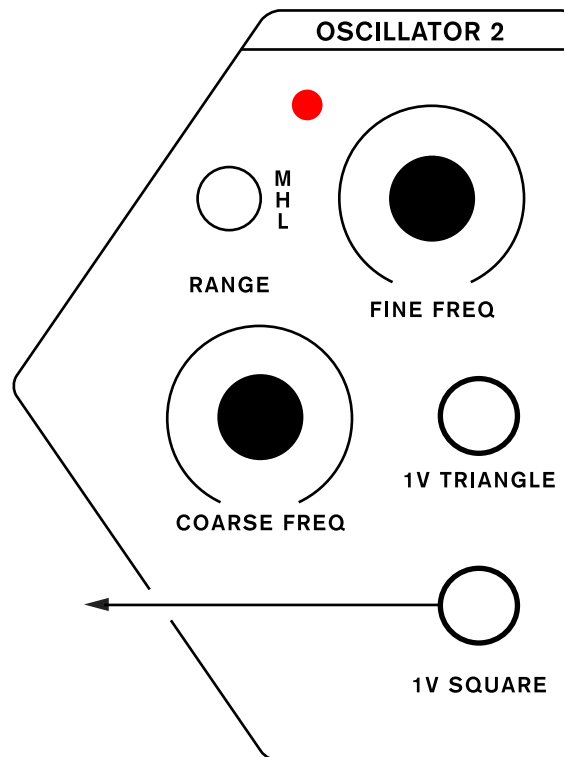
RANGE: Switch determining the frequency range of the oscillator.

Oscillator 1 has the following range:

M= 75Hz - 666Hz
 H= 37Hz - 3.5kHz
 L= 28sec - 4Hz

- Oscillator 2.

Oscillator 2 provides the square waveform sent to the clock input of the sample and hold circuit. In addition to being hardwired for the sample and hold functionality, a 1v square and triangle output are available for use as an independent waveforms.



1V Triangle/square: Output for 1V waveforms.

FINE FREQ: limited range oscillator frequency control for detailed adjustments.

COARSE FREQ: Full range oscillator frequency control.

RANGE: Switch determining the frequency range of the oscillator.

Oscillator 2 has the following range:

M= 75Hz - 666Hz

H= 37Hz - 3.5kHz

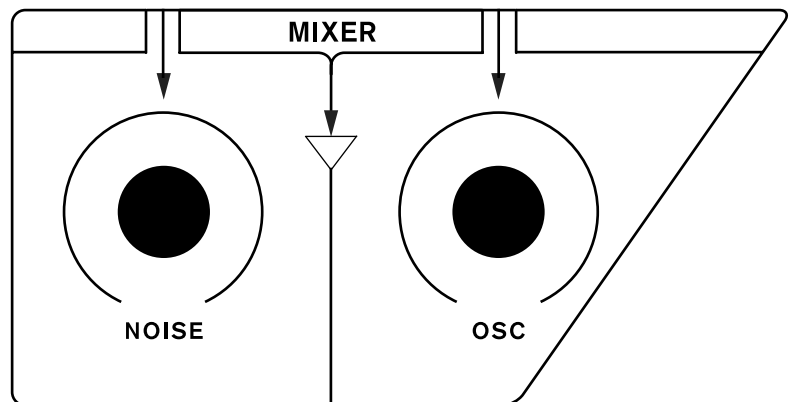
L= 28sec - 4Hz

- Mixer.

The mixer combines the outputs of the noise source and oscillator 1. The output of the mixer is hardwired to the signal input of the sample and hold. Experimenting with different mixes of noise and oscillator is an effective way of achieving fine tuned and nuanced results.

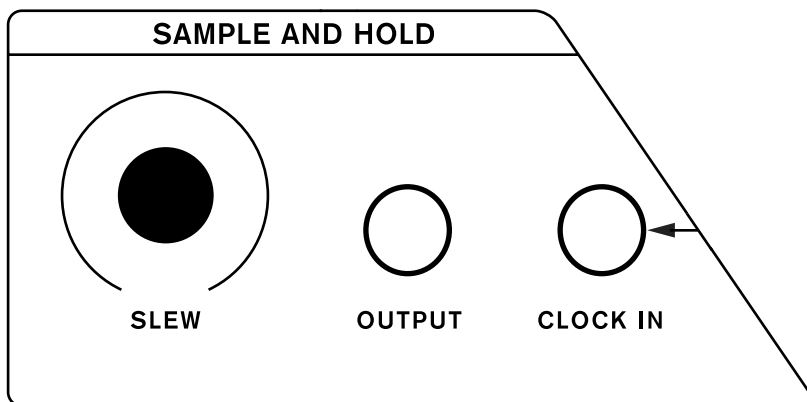
NOISE: Unipolar control for determining the amount of noise into the sample and hold. A knob position of 50% will produce a 1V control signal. Past 50% will achieve wide but interesting voltage swings.

OSC: Unipolar control for determining the amount of LFO into the sample and hold. A knob position of full CW will result 50% will produce a 1V control signal.



- Sample and Hold / Slew.

The mixer combines the outputs of the noise source and oscillator 1. The output of the mixer is hardwired to the input of the sample and hold. Experimenting with different mixes of noise and LFO/ is an effective way of achieving fine tuned and nuanced results.



OUTPUT: Main output Jack.

CLOCK IN: Clock input to the sample and hold. Accepts voltage signals from 1V to 12V.

SLEW: Unipolar control. With knob position at 100% CW, no slew is applied to the signal. 100% CCW equals maximum slew.

Technical Specifications |

Format	LZX Eurorack Modular Synthesizer
Width	18hp
Current Draw	110mA @ +12VDC 100mA @ -12VDC
Depth	37mm
Output Voltage Levels	1VDC
Output Impedance	499Ω