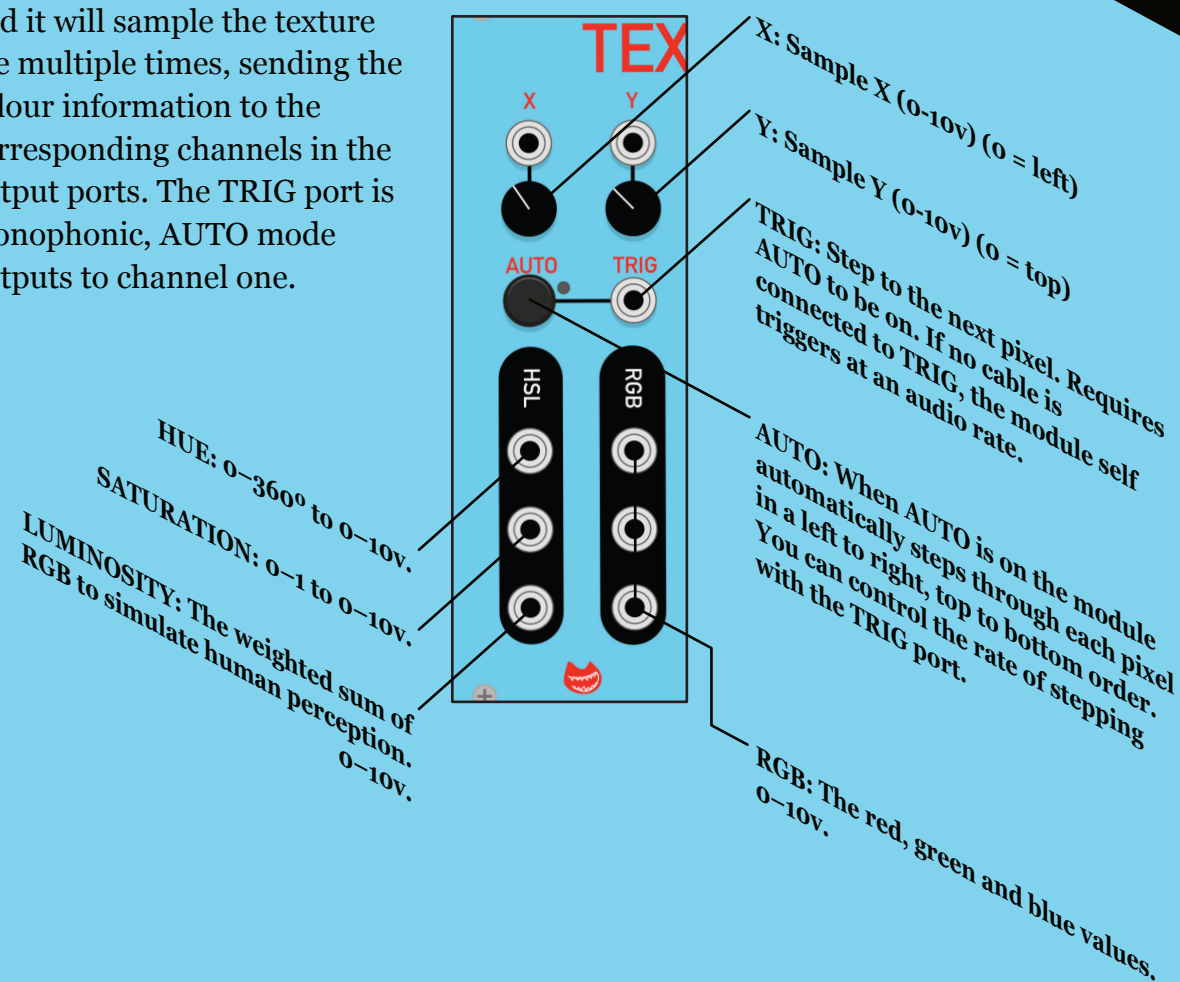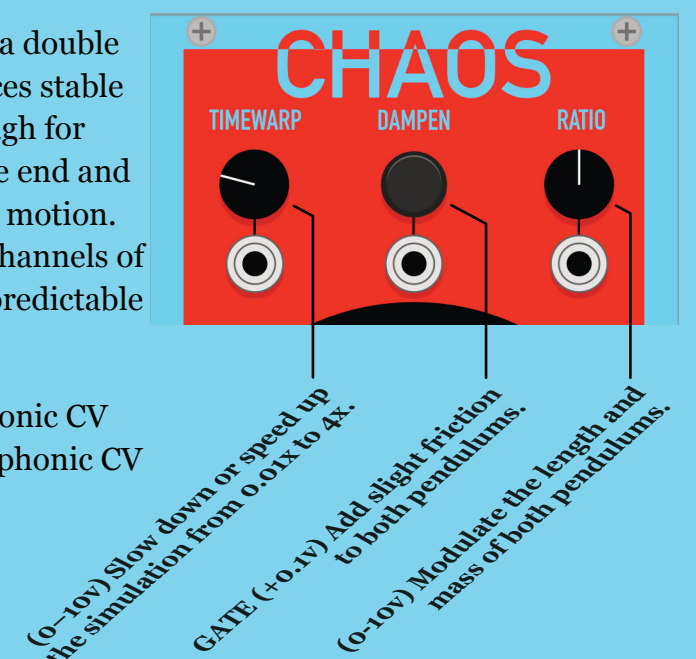# LOCO MODULES

A guide by Luke Perkin

TEX

A texture sampler that can be used as an LFO or an audio rate oscillator. Open TEX's context menu to load a PNG file. The image will be cropped to 256 by 256 pixels from the top left corner.

TEX is polyphonic which means you can connect a polyphonic cable to X and Y and it will sample the texture the multiple times, sending the colour information to the corresponding channels in the output ports. The TRIG port is monophonic, AUTO mode outputs to channel one.

X: Sample X (0-10v) (0 = left)

Y: Sample Y (0-10v) (0 = top)

TRIG: Step to the next pixel. Requires AUTO to be on. If no cable is connected to TRIG, the module self triggers at an audio rate.

AUTO: When AUTO is on the module automatically steps through each pixel in a left to right, top to bottom order. You can control the rate of stepping with the TRIG port.

HUE: 0~360º to 0~10v.

SATURATION: 0~1 to 0~10v.

LUMINOSITY: The weighted sum of RGB to simulate human perception. 0~10v.

RGB: The red, green and blue values. 0~10v.

CHAOS

A chaotic LFO driven by a double pendulum. A single pendulum produces stable and predictable behaviour, good enough for clocks. Stick another pendulum on the end and all hell breaks loose: beautiful chaotic motion. CHAOS is polyphonic and outputs 7 channels of undulating voltages driven by the unpredictable motion of the two pendulums.

CHAOS has four monophonic CV inputs and one polyphonic CV output.

(0~10v) Slow down or speed up the simulation from 0.01x to 4x.

GATE (+0.1v) Add slight friction to both pendulums.

(0~10v) Modulate the length and mass of both pendulums.

In the context menu there are 2 integration modes: Runge Kutta and Euler. Runge Kutta provides a more accurate physical simulation but is more costly on the CPU. You can also specify if KICK keeps or removes the current velocity.

TRIGGER (+0.1v) Give the pendulums a kick to get the ball rolling.

POLYPHONIC (-5 to +5v) (origin = center)
CHANNEL 1: Blue pendulum X
CHANNEL 2: Blue pendulum Y
CHANNEL 3: Red pendulum angle
CHANNEL 4: Blue pendulum angle
CHANNEL 5: Red pendulum velocity
CHANNEL 6: Blue pendulum velocity
CHANNEL 7: Blue penduum distance