

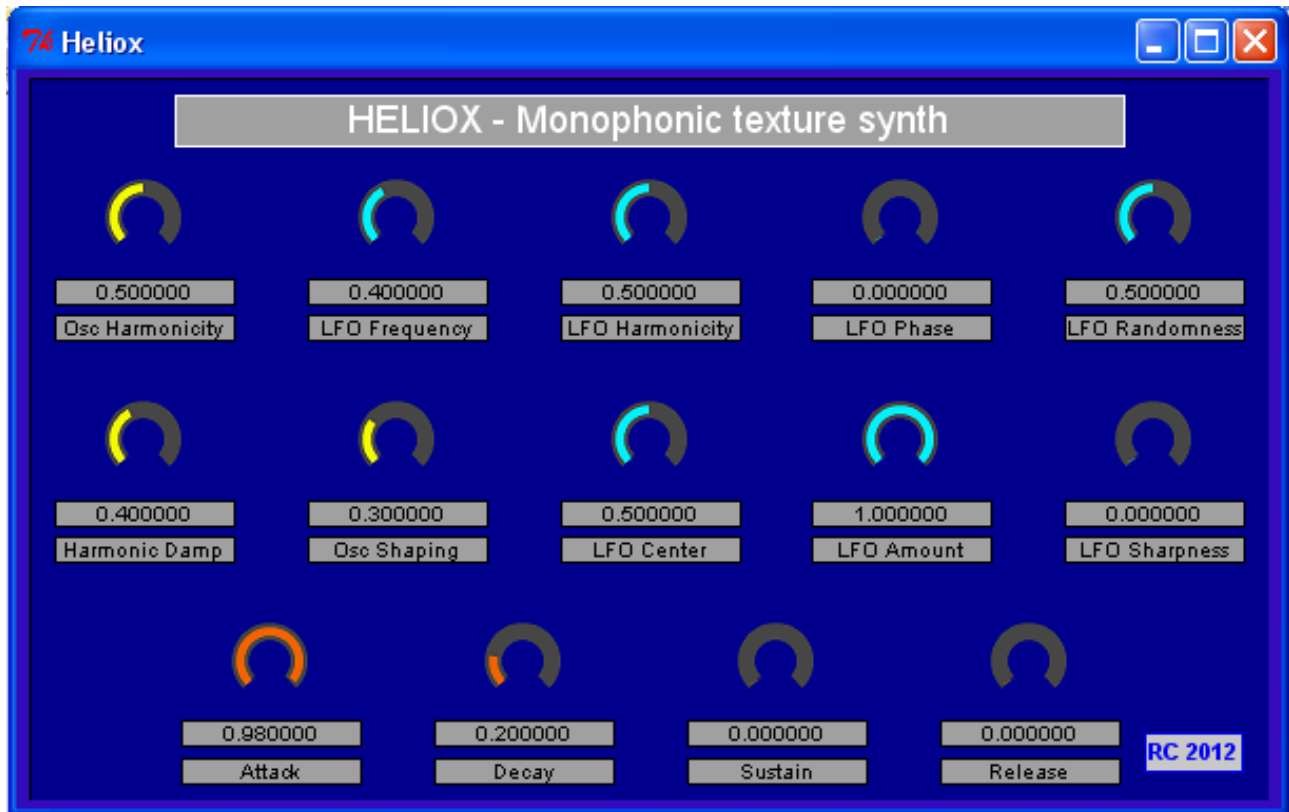
HELIOX

VSTi plugin

User Manual

Introduction

Heliox is a rather simple experimental synthesizer, capable of "weird" textures and noises, as well as "ordinary" sounds, like pads, leads and basses.



Main features are:

- monophonic, with 30 oscillators bank
- adjustable oscillators' frequencies, ranging from single frequency to harmonic and non-harmonic series
- oscillators can be purely sinusoidal, or "shaped" by an adjustable parameter
- adjustable attenuation factor between successive oscillators
- 30 LFOs , each modulating amplitude of corresponding oscillator
- adjustable LFOs' frequencies, similarly to oscillators
- LFOs can be purely sinusoidal ("bell-like") or "shaped" by 2 adjustable parameters: center and sharpness
- phase shift between successive LFOs is adjustable
- LFOs can be periodic or randomly intermittent, with adjustable "density"
- ADSR envelope

In the next section, each parameter is explained in detail.

OSC Harmonicity



Determines the distribution of the oscillators' frequencies.

- = 0 all frequencies are the same (equal to the base frequency)
- < 0.5 frequencies are non-harmonically distributed (narrower than harmonic series)
- = 0.5 frequencies are integer multiples of the base frequency (harmonic series)
- > 0.5 frequencies are non-harmonically distributed (wider than harmonic series)

Harmonic Damping



Determines the attenuation factor between successive oscillators.

- = 0 all oscillators have maximum amplitude
- > 0 each oscillator's amplitude is less than the previous

OSC Shaping



Determines the shape of the oscillators:

- = 0 oscillators are perfectly sinusoidal
- > 0 oscillators are distorted

LFO Frequency



This is the base frequency of the LFOs (to calculate the frequency in Hz, simply multiply by 10 the normalized value displayed)

LFO Harmonicity



Determines the distribution of the LFOs' frequencies, similar to the OSC Harmonicity:

- < 0.5 first LFOs have greater frequencies
- = 0.5 all frequencies are the same (equal to the base frequency)
- > 0.5 last LFOs have greater frequencies

LFO Phase



Phase increment of LFOs

- = 0 all LFOs are in phase
- > 0 each LFO have a phase increment equal to the control value times 360°

LFO Center



Determines the peak position of the LFOs:

- < 0.5 peak is positioned at the first half of the cycle (fast attack)
- = 0.5 peak is exactly centered ("bell-like" shape)
- > 0.5 peak is positioned at the second half of the cycle (slow attack)

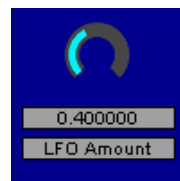
LFO Sharpness



Determines the shape of the LFOs:

- = 0 LFOs are perfectly sinusoidal ("bell-like" shape)
- > 0 LFOs are distorted, with sharper curves

LFO Amount



This is the amount of LFO modulation (0 = no modulation, 1 = max modulation)

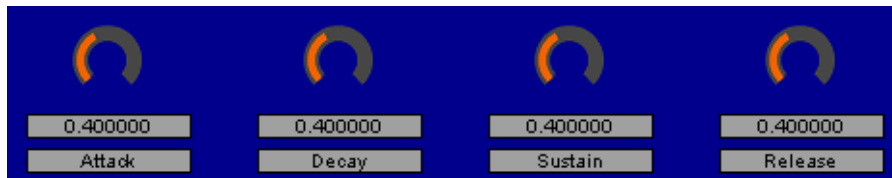
LFO Randomness



LFOs can be periodic, or randomly intermittent, i.e. each LFO cycle can be multiplied by 1 or 0, depending on this parameter:

- = 0 all LFO cycles are present (periodic LFOs)
- > 0 some LFO cycles are not present (randomly)

Attack, Decay, Sustain, Release



Traditional four-segments envelope.