

# STEPOCEA 1.5

POLYPHONIC POLYARP SYNTHESIZER



## REFERENCE MANUAL



# Contents

ABOUT	3
END USER LICENSE AGREEMENT	4
OSCILLATORS	6
FILTERS	8
POLYARP STEP SEQUENCER	10
MIXER	10



## ABOUT STEPOCEA

StepoceA is a polyphonic stereo synthesizer tuned for spatial, massive leads and pads that evolves in counterpoint.

### Features:

- Four fat sounding oscillators with pan.
- Supports custom single-cycle waveforms.
- Individual convolution reverb per oscillator
- Dual amp envelope and mod envelope.
- Dual multitype filters/effects with envelope and LFO.
- Individual arpeggiators for each oscillator.
- Oscilloscope and spectrum meter.

## SYSTEM REQUIREMENTS

Microsoft Windows 8.1 or later.

[Microsoft Visual C++ Redistributable Package \(2015 Version\)](#).

A legally acquired host supporting 64-bit VST3

## THANKS TO

This software was made possible by the generous work of several skilled people and credits goes to:

- Lee Louque for the RoyTech Roy Mpack Ltd.
- Elena Design (Elena Novaretti) for the ED Modules and ED Spectral Domain.
- Andrew Allen Ainslie for TD Modules.
- Sasha for Sasha Modules.
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## STEPOCEA DEVELOPER

*Flandersh Tech*

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- Sasha for Sasha Modules.
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# OSCILLATORS

Stepocea features two oscillator sections, A and B, with dual oscillators. Each oscillator features 42 different waveshapes, four additional detuned oscillators for fat sounds and individual reverb (choice between algorithmic and convolution). Each oscillator section features an AHDSR amp envelope with knee and an ADSR mod envelope.



## Bank:

The Bank parameter let you select one of seven oscillator banks for the oscillator: Pure, Saw, Square, Phon (phonetic waveshapes), Choir, Instr (instrument waveshapes) and custom (load your own single-cycle waveform).

## Shape:

The Shape parameter let you choose the waveshape inside the selected oscillator bank.

## Octave:

The Octave parameter controls the octave of the oscillator.

## Drive:

The Drive parameter amplify and saturate the oscillator signal. Use with care!

## FM:

The FM parameter controls the amount of frequency modulation applied by oscillator 1 to oscillator 2.

## Detune:

The Detune parameter controls the amount of detune applied to the oscillator when the mix parameter is at another value than zero.

## Mix:

The Mix parameter controls the balance between the single oscillator and the detuned oscillators. It ranges from the single oscillator alone to the detuned oscillator alone.

## O, C, E, A Labels:

The O, C, E, and A labels make it easy to understand which arp in the step editor section is connected to the oscillators, but it also works as a power button of the oscillators.

## Reverb Mode:

The reverb mode is selected by the algorithmic/convolution selector placed over Size and Reverb. In algorithmic mode, a simple hall reverb is applied. In convolution mode, impulse responses has to be loaded for the reverb to work. This can be utilized to multi mic setup in the room for realistic spatialization of the oscillators.



TIP: The Stepoccea comes with four impulse responses in a standard SATB setup for a start. To utilize it, load the S in the first oscillator of Osc A, A in the second, T in the first oscillator of Osc B, and B in the second. Use it together with the Pan parameters.

### **Size (Algorithmic):**

The Size parameter controls the decay of the reverb.

### **Impulse (Convolution):**

The Impulse parameter let you load an impulse response wav file.

### **Reverb (Algorithmic and Convolution):**

The Reverb parameter works as a dry/wet control and controls the balance between the dry signal and the reverbed signal.

### **Knee:**

The knee controls the shape of the envelope, from hard edges to soft edges.

### **Attack, Decay, Release:**

The Attack, Decay, and Release parameters controls the attack time, decay time and release time of the amp envelope.

### **Hold:**

The Hold parameter controls how long the envelope stays at full volume before decaying.

### **Sustain:**

The Sustain parameter controls the level of the amp envelope before release.

### **A:**

The A, D, and R parameters controls the attack time, decay time and release time of the mod envelope.

### **S:**

The S parameter controls the level of the mod envelope before release.

### **Depth:**

The Depth parameter controls the amount of envelope modulation applied to the destination source.

### **Dest:**

The Dest parameter let you select what to modulate with the envelope. You can select between none (-), pitch (PM), and P2 (Filter). Using it on the pitch may be used together with Attack to make sounds that rise slowly in pitch.

### **Scope/Spectrum:**

The Scope/Spectrum selector controls the view of the screen. This is an analysis modules which display the A and B oscillators separately and in sum/difference and Left and Right out after all processing separately, and in sum/difference. In the scope the waveshape of the sum is visualized and in spectrum the frequency content of the sum is displayed.



# FILTERS AND EFFECTS

Stepoceea features two filter/effects sections, A and B, with multitype filters and effects. Each filter section can be controlled by an envelope generator, keytrack, and LFO.



## Filter/FX selector:

The Filter/FX selector switch between the Filter layout and the effects layout. \*The filter is always fed into the effects section.

## Filter type:

The Filter type selector let you select between SV (State-Variable Filter) LP, SV HP, SV BP, SV BR (Notch), OTA-style LP, Ladder LP, and Diode ladder LP.

## FX type:

The FX type selector let you select between AP (allpass filter), Comb (comb filter), Delay, Phaser, Flanger, Degrader (bit and samplerate reduction), Ringmod, Air (8kHz peak shelf EQ), Autopan, Noise (addition of reverbed noise), and None.

## Freq|P1:

The Freq|P1 parameter controls the cutoff frequency of the filters and the P1 parameter of the different effects.

## Res|P2:

The Res|P2 parameter controls the resonance of the filters and the P2 parameter of the different effects.

	P1	P2
AP	Freq	Resonance
Comb Filter	Delay	Feedback
Delay	Beat	Feedback
Phaser	Rate	Feedback
Flanger	Rate	Feedback
Degrader	Samplerate	Bits
Ringmod	Modulator Rate	Mix
Air	Gain	Q
Autopan	Rate	Phase
Noise	Noise level	Reverb amount



**Env:**

The Env parameter controls the amount of envelope modulation applied to the filter/effects.

**Keytrk:**

The Keytrk parameter connects the Freq|P1 to the MIDI note number - The higher amount applied the stronger the connection.

**Attack, Decay, Release:**

The Attack, Decay, Release parameter controls the attack time, decay time, and release time of the filter/effects envelope.

**Sustain:**

The Sustain parameter controls the level of the filter/effects envelope before release.

**LFO Type:**

The LFO Type parameter controls the shape of the LFO.

**Rate:**

The Rate parameter controls the beat time of the LFO.

**Depth:**

The Depth parameter controls the amount of LFO applied to the destination parameter.

**P1/P2:**

The P1/P2 parameter let you choose the destination of the LFO modulation as either Freq|P1 or Res|P2.



# POLYARP STEP SEQ

Stepoceia features a 12-step arpeggiator for each of the four oscillators. This may be used for chordlines, four voice counterpoint melodies, single oscillator arp combined with pad sounds and more.



## Power:

The Power button activates the step sequencer for each oscillator.

## The Steps:

Each Step may be set to a number between -12 and 12, representing the semitones over two octaves.

## Step:

The Step parameter controls the length of the step sequencer, from 1 step to 12 step.

## Beat:

The Beat parameter controls the beat of the step sequencer.

\*Individual musical patterns are made when the values of the steps and beats are different. Experimenting is the key.

# MIXER



## Pan O, C, E, A:

The Pan parameters controls the pan of the four oscillators. Great for the stereo image.

## Level O, C, E, A:

The Level parameters controls the level of the four oscillators. Zero is silence.