Syndt

Polyphonic Synthesizer

Welcome!

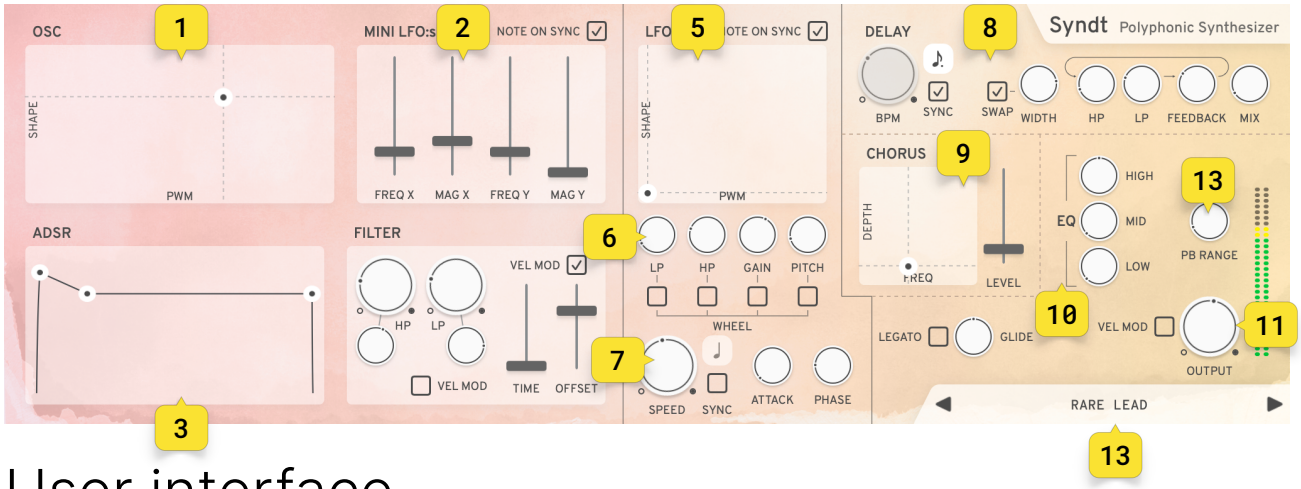
This is the user manual for **Syndt**, a Polyphonic Synthesizer instrument plug-in available for iPad (AUv3 / Standalone) and Mac & Windows (AU/VST3/AAX). It has been designed and developed by Klevgrand, a small studio in Stockholm, Sweden. Syndt (Synd = Sin in Swedish) is a high quality polyphonic synthesizer with a lot of possibilities. The oscillator waveform can be morphed between pure sine to pure square, and supports altering of pulse width. Both the shape and pulse width can be modulated by two independent LFOs. With fine-tuned low pass and high pass filters combined with a separate filter attack setting, (optionally based on velocity) this synth can create some raw and interesting sounds.

LICENSING (DESKTOP ONLY)

Until unlocked, the plug-in will output 1 second of silence now and then. To unlock the full version, click the Demo label (top left corner) and type/paste your license key.

IPHONE VERSION

For screen size reasons, the iPhone version is slightly different than the desktop and iPad version. The controls are distributed over several views, which is switched between using the tab bar menu.



User interface

1. OSCILLATOR

This XY Pad sets the wave shape. The X axis controls the pulse width (left side pure sine, right side very short pulse width). The Y axis morphs the wave between pure sine (bottom) and square (top).

2. MINI LFO:S

These sliders affects the oscillators values. These LFO only output pure sine waves. If the NOTE ON SYNC is ticked, the LFO will be reset on a new note. If not, it will keep on going.

FREQ X, FREQ Y → LFO frequencies

MAG X, MAG Y → How much the two LFOs should affect the OSCILLATOR

3. ADSR

Controls the Attack time, Decay time, Sustain level and Release time of the voice. To alter, just drag the small circles sideways (or the sustain level bar in the middle up/down)

4. FILTER

A LP / HP Filter

Knobs

The upper knobs (HP / LP) sets the frequencies and the lower ones (RESO) sets resonance. If VEL MOD is ticked, the LP filter frequency will be relatively affected by velocity.

Sliders

These sliders affects the initial phase of the LP filter when a new note is played. TIME sets the time it will take to reach the selected frequency (the LP knob) and OFFSET sets the starting frequency (relatively to the LP knob). If the OFFSET slider is below the middle, the starting frequency will be lower than the LP knob value, if it's above the middle it will be set to a higher frequency. If VEL MOD is ticked, the OFFSET value will be modulated by velocity.

5. LFO

The LFO can affect a number of parameters: LP filter frequency, HP filter frequency, Gain and Pitch. It's also possible to set the attack time and phase offset, and it can sync to the host (if the host supports this, which most do..)

This XY Pad sets the wave shape. The X axis controls the pulse width (left side pure sine, right side very short pulse width). The Y axis morphs the wave between pure sine (bottom) and square (top).

6. PARAMETER MAPPERS

Each parameter mapper has a WHEEL ticker below. If that one is set to on, the modulation wheel will modulate the value. If it's set to off, the selected value will be running all the time.

LP	How much the LP Filter (in VOICE TAB) should be affected.
HP	How much the HP Filter (in VOICE TAB) should be affected.
GAIN	How much the volume should be affected (pre effects)
PITCH	How much the voice pitch should be affected.

7. LFO PARAMETERS

SPEED	Sets the LFO frequency (if not in synch with the host)
ATTACK	Attack time
PHASE	Starting phase (assuming NOTEON SYNC is ticked)
SYNC	If ticked, the button to the right will be enabled. Click that one to set the LFO speed based on note value that will be in sync with the host.
NOTE ON SYNC	If ticked, the LFO will be reset when a new note is played. Note! Each voice has its own instance of an LFO, so it won't affect playing notes, only the new one.

8. DELAY

This one is tempo based, and can optionally sync to the host. It also has a HP and LP filter for the wet signal.

BPM	Sets the tempo (when not in sync with the host)
(1/8)	delay time as a note. Click this button to change value.
HP	HP Filter frequency
LP	LP Filter frequency
WIDTH	Stereo width
MIX	Mixes between dry and wet signal
FEEDBACK	Delay line feedback gain
SWAP	Swaps left / right channel on the wet signal
SYNC	If set to on, Syndt will try to sync with the host

9. CHORUS

XY Pad	Sets the speed (FREQ) and DEPTH of the chorus.
LEVEL	Sets how much of the modulated signal should be mixed with the dry one.

10.EQ

A simple three-band EQ. The middle position of the sliders means no change / clean sound.

LOW	**MID**	**HIGH**
Low frequencies gain	Mid frequencies gain	High frequencies gain

11.VOLUME

Main volume knob. If VEL MOD is set, the voice gain will be modulated by velocity.

12.GLIDE / LEGATO

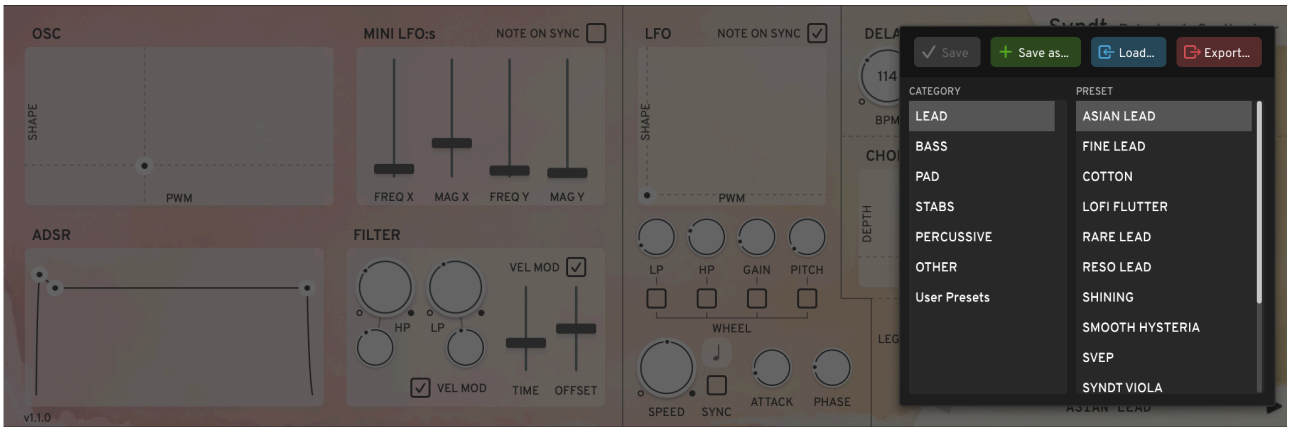
If LEGATO is set, the synth will behave like a monophonic. The GLIDE knob sets the time it should take to reach a new note's frequency (if played legato).

13.PB RANGE

The number of semitones (up/down) the pitch bend wheel can alter the pitch.

14.PRESETS

Click the preset name to open the Preset Manager, which allows for storing and reading user created presets, as well as loading factory presets.



Specifications / System requirements

Mac	**Windows**	**iOS**
64 bit AU/VST/AAX plug-in	64 bit VST/AAX plug-in	AUv3 plug-in / Standalone
macOS 10.10+ OpenGL	Windows 7+ SP1 or higher	iPad Air 2 or better iOS 9.3+

MIDI map

All parameters can be altered via MIDI messages:

CC #	Parameter	CC #	Parameter
7	Main Volume	**37**	LP Filter velocity modulation (on / off)
10	Oscillator Shape (Sine/Square)	**38**	LP Attack offset velocity mod (on / off)
11	Oscillator PWM	**39**	LFO LP Filter mod wheel (on / off)
12	ADSR Attack	**40**	LFO HP Filter mod wheel (on / off)
13	ADSR Decay	**41**	LFO Gain mod wheel (on / off)
14	ADSR Sustain	**42**	LFO Pitch mod wheel (on / off)
15	ADSR Release	**43**	Delay tempo
16	Mini LFO Rotation Frequency PWM	**44**	Delay feedback
17	Mini LFO Rotation Frequency Shape	**45**	Delay width
18	Mini LFO Magnitude PWM	**46**	Delay HP Filter frequency
19	Mini LFO Magnitude Shape	**47**	Delay LP Filter frequency
20	Oscillator key sync (on/off)	**48**	Delay Mix
21	HP Filter Frequency	**49**	Delay swap channels (on / off)
22	HP Filter Resonance	**50**	Chorus Depth
23	LP Filter Frequency	**51**	Chorus Frequency
24	LP Filter Resonance	**52**	Chorus Level
25	LP Filter Attack offset	**53**	EQ low gain
26	LP Filter Attack Time	**54**	EQ mid gain
27	LFO Shape (Sine / Square)	**55**	EQ high gain
28	LFO PWM	**56**	Legato mode (on / off)
29	LFO Frequency	**57**	Legato time
30	LFO Phase offset	**58**	LFO Attack time
31	LFO LP Filter modulation amount	**59**	Pitch bend range
32	LFO HP Filter modulation amount	**60**	LFO Host sync (on / off)
33	LFO Oscillator gain modulation amount	**61**	Delay Host sync (on / off)
34	LFO Oscillator pitch modulation amount	**62**	LFO time/length multiplier
35	LFO Key sync (on / off)	**63**	Delay time multiplier
36	Gain velocity modulation (on / off)		