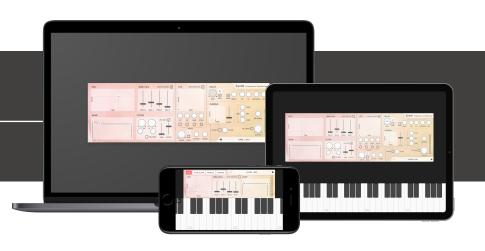
## Syndt

Polyphonic Synthesizer



## Welcome!

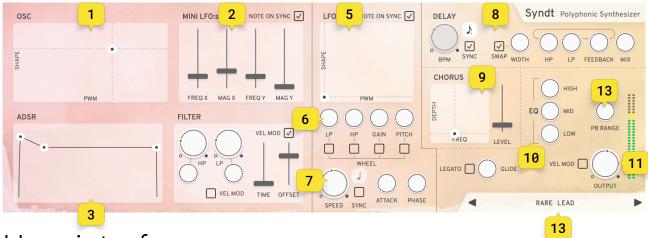
This is the user manual for **Syndt**, a Polyphonic Synthesizer instrument plug-in available for iPad (AUv3 / Standalone) and Mac & Windows (AU/VST3/AAX). It has been designed and developed by Klevgrand, a small studio in Stockholm, Sweden. Syndt (Synd = Sin in Swedish) is a high quality polyphonic synthesizer 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**  $\rightarrow$  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.

ВРМ	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	C 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

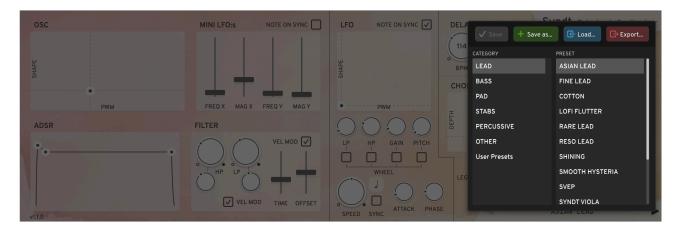
If LEGATO is set, the synth will behave like a monophonic. The GLIDE knob sets the time it should take to reach a new note's frequency (if played legato).

#### 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

Мас	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:

7Main Volume37L P Filter velocity modulation (on / off)10Oscillator Shape (Sine/Square)38L P Attack offset velocity mod (on / off)11Oscillator PWM39L FO L P Filter mod wheel (on / off)12ADSR Attack40L FO HP Filter mod wheel (on / off)13ADSR Decay41L FO Gain mod wheel (on / off)14ADSR Sustain42L FO Pitch mod wheel (on / off)15ADSR Release43Delay tempo16Mini L FO Rotation Frequency PWM44Delay feedback17Mini L FO Rotation Frequency Shape45Delay width18Mini L FO Magnitude PWM46Delay HP Filter frequency19Mini L FO Magnitude PWM46Delay L F Filter frequency20Oscillator key sync (on/off)48Delay LP Filter frequency21HP Filter Frequency49Delay Swap channels (on / off)22HP Filter Resonance50Chorus Depth23LP Filter Retack offset51Chorus Level24LP Filter Attack offset53EQ low gain26LP Filter Attack Time54EQ mid gain27LFO Shape (Sine / Square)55EQ high gain28LFO PWM56Legato mode (on / off)29LFO Frequency57Legato time30LFO Phase offset58LFO Attack time31LFO LP Filter modulation amount59Pitch bend range32LFO HP Filter modulation am	CC#	Parameter	CC#	Parameter
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 swap channels (on / off) 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	7	Main Volume	37	LP Filter velocity modulation (on / off)
ADSR Attack ADSR Decay AT LFO Pitter mod wheel (on / off) LFO HP Filter mod wheel (on / off) LFO ADSR Sustain ADSR Release ADSR Sustain	10	Oscillator Shape (Sine/Square)	38	LP Attack offset velocity mod (on / off)
ADSR Decay  ADSR Sustain  ADSR Release  ADSR Perbord  ADSR	11	Oscillator PWM	39	LFO LP Filter mod wheel (on / off)
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) 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 59 Pitch bend range 32 LFO HP Filter modulation amount 34 LFO Oscillator gain modulation amount 35 LFO Stime/length multiplier 36 LFO Key sync (on / off) 57 Legato time/length multiplier	12	ADSR Attack	40	LFO HP Filter mod wheel (on / off)
15 ADSR Release 16 Mini LFO Rotation Frequency PWM 17 Mini LFO Rotation Frequency Shape 18 Mini LFO Magnitude PWM 18 Mini LFO Magnitude PWM 19 Mini LFO Magnitude Shape 20 Oscillator key sync (on/off) 21 HP Filter Frequency 22 HP Filter Frequency 23 LP Filter Frequency 24 LP Filter Resonance 25 Chorus Level 26 LP Filter Attack offset 27 LFO Shape (Sine / Square) 28 LFO PWM 29 LFO Prequency 30 LFO Phase offset 31 LFO LP Filter modulation amount 31 LFO Oscillator pitch modulation amount 32 LFO Oscillator pitch modulation amount 34 LFO Oscillator pitch modulation amount 35 LFO Key sync (on / off) 36 Delay time polary width 37 Delay tempo 48 Delay width 48 Delay HP Filter frequency 49 Delay Swap channels (on / off) 48 Delay Mix 49 Delay Swap channels (on / off) 40 Chorus Depth 40 Chorus Depth 41 Chorus Frequency 42 LP Filter Resonance 43 EQ low gain 44 EQ mid gain 45 EQ high gain 46 Legato mode (on / off) 47 Legato time 48 LFO PWM 49 Pitch bend range 40 LFO Host sync (on / off) 40 Delay Host sync (on / off) 41 Delay Host sync (on / off) 42 LFO time/length multiplier 45 LFO Key sync (on / off) 46 Delay time multiplier	13	ADSR Decay	41	LFO Gain mod wheel (on / off)
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LP Filter Attack offset  LP Filter Attack Time  LFO Shape (Sine / Square)  LFO PWM  LFO Frequency  LFO Phase offset  LFO LP Filter modulation amount  LFO HP Filter modulation amount  LFO HP Filter modulation amount  LFO Oscillator gain modulation amount  LFO Oscillator pitch modulation amount  LFO Key sync (on / off)  EQ low gain  EQ low gain  EQ low gain  EQ low gain  EQ mid gain  Legato mode (on / off)  Legato time  SHO Legato time  Filter modulation  LFO Attack time  Pitch bend range  LFO Host sync (on / off)  Delay Host sync (on / off)  LFO Oscillator pitch modulation amount  Delay Host sync (on / off)  LFO Key sync (on / off)  Delay time multiplier	23	LP Filter Frequency	51	Chorus Frequency
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Gain velocity modulation (on / off)	35	LFO Key sync (on / off)	63	Delay time multiplier
	36	Gain velocity modulation (on / off)		

