

# **PolyGrab Synthesizer**

# **Reference Manual v1.0**

## For Windows and Mac

Reference Manual By Techtronix

**Techtronix**

plugins, packs, kits, sounds and other resources for computer based audio production

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This book has been inspired by the Ableton Live Reference Manual, with the aim of making it easier for Ableton Live users to read.

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# Main Information

## 1.1 Plugin Overview

Thank you for purchasing PolyGrab.

PolyGrab is a 16 Voice Polyphonic Synthesizer, Made For Ableton and Ableton Push Standalone.

Featuring 3 Oscillators with 5 shapes - Sine, Triangle, Saw, Square and Noise.

Each oscillator can be finely detuned from eachother as well as detuned by semitones to create chords. Each Oscillator has its own gain control, allowing for a thick oscillator sound that just cant be achieved with 2 oscillator synthesizers.

There are two envelopes, one is dedicated to the main amp “volume” and the other is for the filter.

Both envelopes feature five second attack, decay and release times. This gives you ability to do massive chord stacks, or have notes ring out and cascade with ease.

Polygrab features Frequency Modulation “FM” on all oscillators with a speed and depth knob, as well as Pulse Width Modulation “PWM” when square waves are selected.

Featuring a fully polyphonic state variable filter offering Lowpass, HighPass, Bandpass and Notch filters. All Filters have a resonance knob as well as the filter cutoff.

Featuring a lush chorus with depth and rate knobs, allowing for a thick warm sound on a single oscillator. There is also a digital clip distortion knob with a gain compensated circuit to stop the volume rising too much.

PolyGrab is fully responsive to velocity, pitch bend and vibrato accessible by a modwheel or automation.

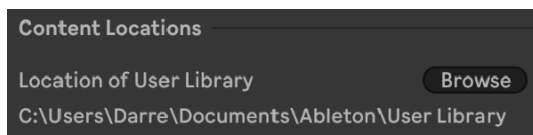
## 1.2 System requirements

- . Live version: 11 /12
- . Operating system: Windows, Mac

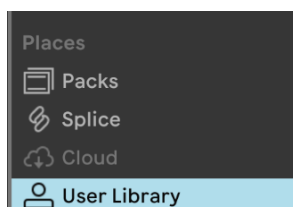
## 1.3 Installation instructions

Unzip the ZIP file and copy the plugin AMXD file to your User Library folder. There are two ways to find where your User Library is located:

Go to Preferences – Library – Location of User Library



Or [right-click] on the User Library in the Browser – Show in Explorer



## Controls

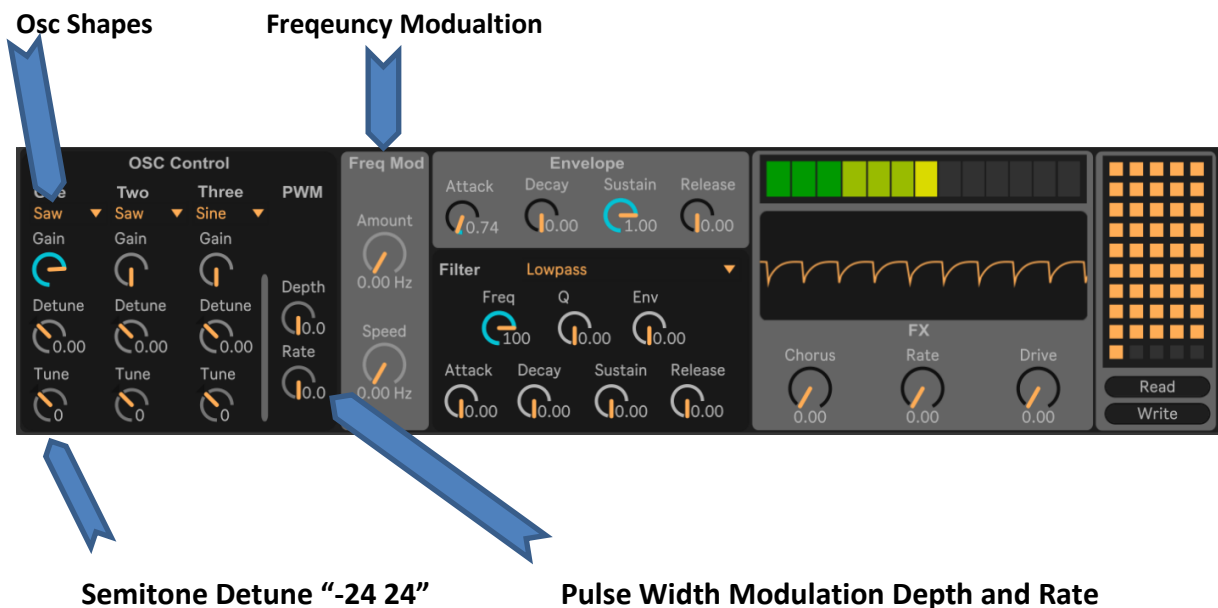
### 2.1 Oscillators

Featuring 3 Oscillators with 5 shapes - Sine, Triangle, Saw, Square and Noise.

Each oscillator can be finely detuned from each other and has its own gain control, allowing for a thick oscillator sound that just cant be achieved with 2 oscillator synths.

Polygrab Also has a feature to detune the oscillators by semitones. Up to two octaves up and down which can be used to create chords from one key press or to have sub oscillators.

There is also PWM “Pulse Width Modulation” on the squares if selected and an FM Speed and amount knob, which will add subtle to harsh FM sound to all oscillators



## 2.2 Envelopes

PolyGrab features two envelopes

**Amp Envelope**



**Filter Envelope**

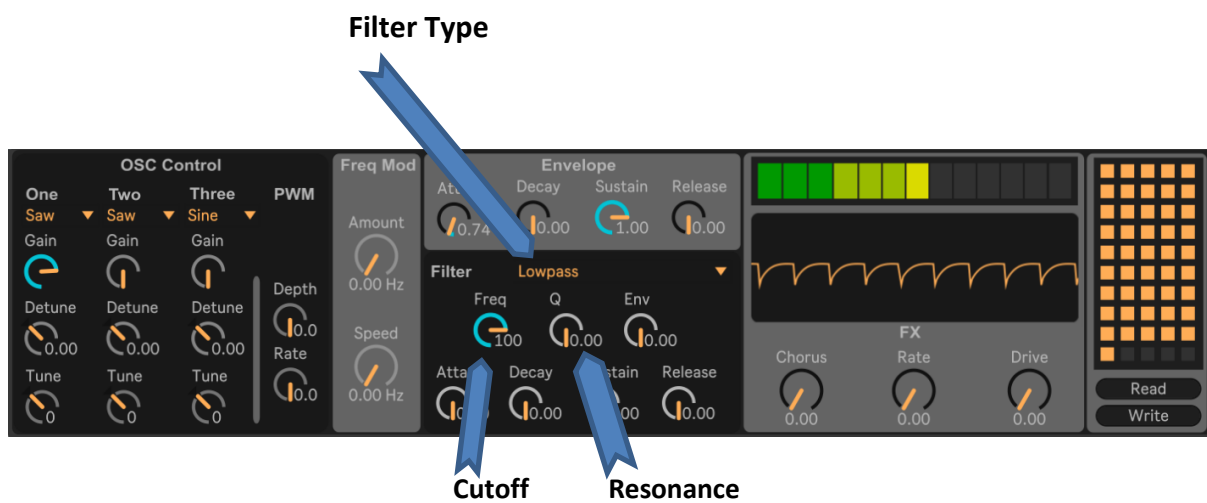
There are two envelopes, one is dedicated to the main amp “volume” and the other is for the filter.

PolyGrab Features a fully Polyphonic Variable state filter with an envelope depth control.

Both envelopes feature five second attack, decay and release times. This gives you ability to do massive chord stacks, or have notes ring out and cascade with ease.

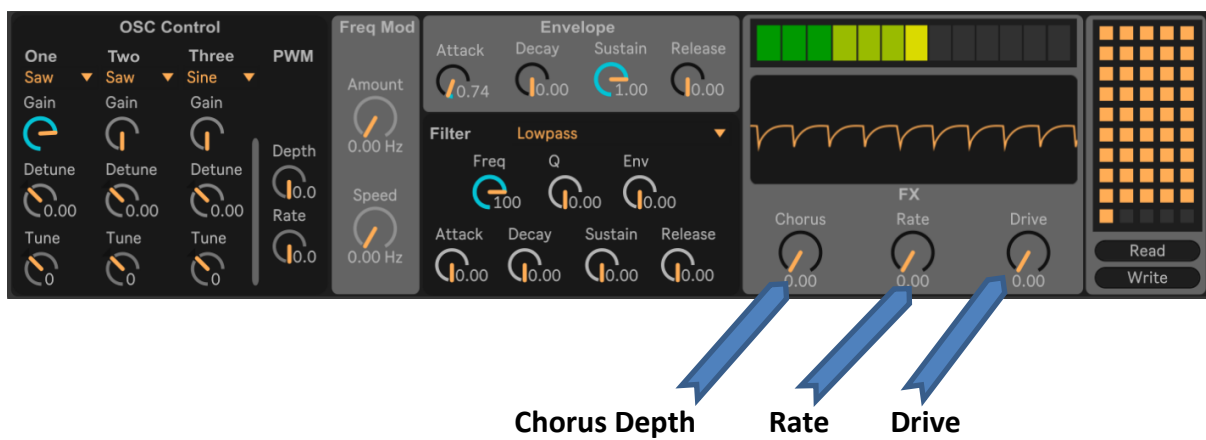
## 2.3 Filter

Polygrab features a fully polyphonic state variable filter offering Lowpass, HighPass, Bandpass and Notch filters. All Filters have a resonance knob aswell as the filter cutoff, and there is a filter depth knob for the filter envelope.



## 2.4 Effects

Featuring a lush chorus with depth and rate knobs, allowing for a thick warm sound on a single oscillator. There is also a digital clip distortion knob with a gain compensated circuit to stop the volume rising too much.



## 2.5 Velocity Pitchbend/Modwheel

PolyGrab is Fully Velocity Sensitive.

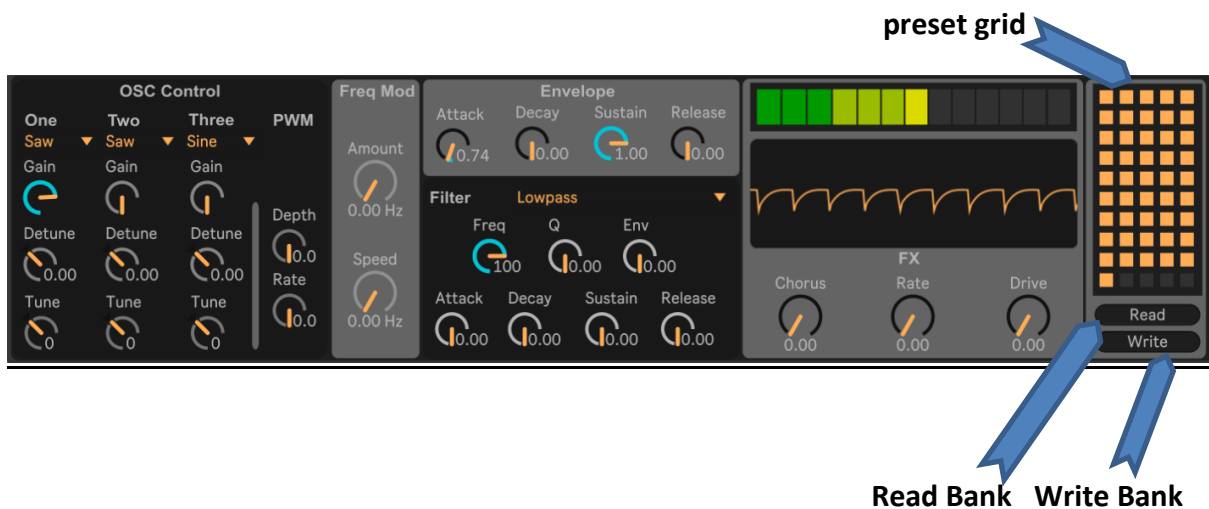
Pitchbend goes up and down two semitones for bass playing.

Modwheel is set to vibrato for all voices.

## 2.6 Preset Operations

Polygrab Features a fully usable Preset System and comes with a bank of 45 presets to get you started, along with the ability to make and load your own banks.

Note. On Push standalone there is a number box for you to be able to change presets, this is not there on the Ableton version as it is not needed. Simply click a preset box and the sound will change.



### Load Preset

Click a box to select a preset. It will instantly load and you can tweak away....

### Save Preset

Hold Shift and press a box you wish to save to

### Clear a Slot

Hold Alt and Shift

### Loading Banks

In order to load a bank, simply click the load button and select your file.

In order to write a bank, simply click the write button and chose a place to save the file.

## 2.7 Push Banks

Bank 1	Bank 2	Bank 3	Bank 4
1 Filter Cutoff	1 Osc 1 Gain	1 Osc 1 Detune	1 Osc 1 SemiTune
2 Filter Res	2 Osc 2 Gain	2 Osc 2 Detune	2 Osc 2 SemiTune
3 Filter Env	3 Osc 3 Gain	3 Osc 3 Detune	3 Osc 3 SemiTune
4 Filter Type	4 Distortion	4 Osc 1 Shape	4 Fm Speed
5 Filter Attack	5 Amp Attack	5 Osc 2 Shape	5 Fm Amount
6 Filter Decay	6 Amp Decay	6 Osc 3 Shape	6 Fm Depth
7 Filter Sustain	7 Amp Sustain	7 Chorus Amount	7 Pwm Depth
8 Filter Release	8 Amp Release	8 Chorus Rate	8 Pwm Rate

## 2.8 Notes

PolyGrab will remember anything you do within a project including automation.

There is also a full undo history baked in so you can use it like you would any other native Ableton instrument and press command or control z at anytime to undo and redo things. It operates in the same way native Ableton devices do.

Featuring a very high end no compromise sound. PolyGrab has been highly optimized to work well with push 3 standalone and seamlessly on the computer. However due to the amount of calculations needed for a 16 voice synthesizer, I have provided an 8 Voice version. This can be hotswapped without losing your sound, if need be.

There is also a project included that contains a example song using multiple instances of PolyGrab.

PolyGrab uses complete float maths, all of its calculations are to decimal point accuracy. This makes sure there is no compromise in sound. There is no downsampling going on or anything that would degrade the sound in any way.

Made for lush chord stacks overlapping notes with intelligent voice management. Along with Monster Bass Patches, Strong leads and one note chords. Polygrab is highly versatile when it comes to sound design and is laid out in a way to make it intuitive to use.

You will also find Polygrab to be a monster when it comes to bass patches. Try detuning a couple of saws to make a reese sound turning up that clip!

Thanks again for the purchase of Polygrab, alot of time and care went into making this into what it is, without compromising on sound or workflow.