

SonicProjects  
**OP-X Free**

**MANUAL**



[www.sonicprojects.ch](http://www.sonicprojects.ch)

## Introduction

Congratulations on the OP-X Free!

The OP-X Free has got the same basic engine and sound as the full OP-X while the available presets are limited to a few chosen ones and the GUI only gives access to a few parameters. The OP-X Free can't load the patches and banks of the full version and there's no vst automation or midi cc control.

However there's an extremely cheap way to get access to the complete OP-X sound library and full automation: upgrade to „OP-X Player“!

OP-X Player has the same look as OP-X Free, but is able to load any OP-X patch with identical sound as in OP-X. It comes with the full OP-X library (500 patches!) and there's automation and midi cc remote control.

If you also want to get access to all parameters and create your own sounds, then you can upgrade again for a cheap price to the full OP-X, which gives instant access to all 83 parameters on a huge and classy interface. All these parameters can be automated and remote controlled with midi CC.

Separate Voice Design (SVD):

The technical structure of this synth is quite unique. The engine is based on six totally independent voices which correspond to the voice boards of the original godfather. There's no voice cloning to achieve polyphony as it is normally the case in VST instruments. Each voice is a separate mono synth with completely independent signal path and slightly different sound as it is the case too in real analog polysynths. These imperfections are one of the main reasons for the organic and lively character of the old faithful original.

The original only offered an „Auto Tune“ function which tuned the oscillators of the voice boards. The warm up drift did detune the oscillators again after some time and the „Auto Tune“ had to be repeated. When filters and envelopes were detuned, then they had to be tuned with a screwdriver in the inside of the device by tweaking a lot of trimpots on the voice boards.

The OP-X makes this easier. It offers four global buttons which let you tune or again detune oscillators, filters, filter envelopes and portamento times on the fly. The oscillators' tuning additionally can be altered continuously with the „spread“ knob which also works in polyphonic mode. Everything can be mixed up in any combination of course. So there are a lot of options to achieve the right sound with the wished amount of analog dirt.

The filters of OP-X are meticulously modeled after the legendary analog counterparts which never sound thin even in high resonance settings. Those filters are unbeatable for lively and fat sweeps and pads.

More infos on the OP-X engine:

<http://www.sonicprojects.ch/obx/separatevoicedesign.html>

## Installation

 OP-X FREE 1.0 Installer

2'830 KB Application

Doubleclick the installer and follow the instructions.

The installer will search for the shared vst plugins folder. You can also browse your computer for the vst plugins folder manually. The plugin will be installed in a subfolder named „SonicProjects“.

The installer will also create a folder named „SonicProjects“ in your start menu. You will find here the pdf manual and the uninstaller.

Note: You will need a vst host to run the plugin. Have a look at the „Hosting“ section right below for further information.

Remove the plugin:

Use the uninstaller in the „SonicProjects“ folder in the start menu.



## License and copyright

The OP-X Free is free and can be shared without any limitations. It's not allowed however to make any changes, involve it in other software projects or make money by selling it. It's allowed however to use it in commercial music productions and live events. All rights are owned by SonicProjects.

## Hosting

The OP-X Free can't be run in standalone mode. It needs a vst host to run. If you don't have a one then have a look at our dedicated site where we have listed some tested and recommended free vst hosts including short guides and a lot of additional information:

<http://www.sonicprojects.ch/obx/freevsthost.html>

## The voice LEDs



These LEDs indicate voice activity. Each voice has its appropriate LED. That means, when a voice is receiving trigger data to play, its appropriate LED shines. In unisono mode, all six LEDs are glowing at the same time. The original has these LEDs too, but mounted on the individual voice boards in the inside of the device. With their help, you could see that a voice was working correctly.

## The TUNER section:



### **VOLUME**

Master volume. Its setting is stored with the preset.

### **TUNER**

The individually and slightly detuned voices can be tuned here. Read the intro for comprehensive info on the voice tuning.

### **OSC**

Tunes the oscillators. In released state, each voice is slightly and individually detuned as it would be on startup in the original.

### **FILT**

Tunes the filters. In released state, the filter cutoff of every voice is slightly different, as it is the case in every original device that is not freshly serviced.

### **ENV**

Tunes the attack and decay times of the filter envelopes. In released mode, the attack and release time of every voices' filter envelope is slightly different. This gives organic life to pad and sweep sounds.

A further tunable parameter are the portamento times. The portamento times can be tuned in the „CONTROL“ section, see below.

## The CONTROL section



### PORTAMENTO

Also called "glide" sometimes. Makes the pitch change continuously between the notes. Short settings in unisono sounds makes the sound "squeak". The function also works in polyphonic mode. The portamento can be detuned with "Porta DET" in the additional functions section (beyond filters section). In released "Porta DET" mode, the portamento times of each voice are equal. In pushed mode the times vary from voice to voice which was typical for the original. The sonic result in solo sound is a special sort of "depth" while gliding.

### DET

Portamento tuner. In released mode, the portamento times of each voice are equal for snappy "squeek". In pressed mode, the times vary slightly from voice to voice which was typical in the original. The sonic result in solo sound is a special sort of "depth" or „smear“ while gliding.

## The FILTER / MANUAL section



A specially designed 12db Filter tries to do its best to emulate the famous SEM sound. The SEM filters got famous with the beige SEM-Modules and the SEM based Four- and Eightvoice. The OB-X was the last Ob. synth that was equipped with this discrete design. Later models, beginning with the OB-Xa, got the standard Curtis Chips. One of the special things of the SEM filters is that in high resonance settings the sound remains as fat as in zero resonance settings. This is a wonderful thing for pads and sweeps. The old SEM filters had no self oscillation, so you won't find it here too.

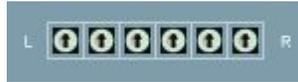
### CUTOFF

Regulates the filter cutoff frequency.

### SPREAD

Spreads the oscillator tuning of the voices - good for fattening up unisono sounds, but it also works in polyphonic mode for continuously controlled detuning of the oscillators to emulate slightly „pissed-off“ tuning.

## The VOICE PANS section



### The voice pans:

This was a very popular feature amongst old analog synths. In contrast to many old synths, the controls can be accessed on the surface and also can be stored with the preset. The panpots can also be automated. In the original device, these pots were on a board in the inner device. The voice pans allow to place each voice independently in the stereo field.

The individual pan trimpots from the left to the right correspond to the voices 1 to 6 whose activity is shown with the corresponding voice LEDs (see above).

## The LEVERS section



### A - Animation

The keyboard and the levers of the OP-X react to the computer mouse. They also react to midi data. The keyboard response to midi data can be switched off with the A (Animation) button.

The midi data response of the keyboard can cause interference noises in some situations, especially in stacked solo sounds. Switch off the keyboard midi response (top button) in that case.

### L - Legato

The lower L button switches on and off legato mode for unisino patches. In legato mode the pitch returns to the hold note and notes are only retriggered when all keys are released like in old analog polysynths. In released mode notes are retriggered everytime which can be more suitable for bass sounds in unisino mode.



A speciality of old ob synths was that they had two vertically working levers instead of the popular wheels invented by moog. The **modulation lever** is on the left side. In the original it only worked downwise. In the OP-X, it can be used up- or downwise. Upwise, the modulation is inverted (hearable only in a realtive time context). The **pitch lever** is on the right side. It reacts vice versa than a popular wheel. Downwise movement highers pitch, upwise movement lowers pich.

### **Os2**

Oscillator 2 only. When switched on, the pitchwheel (or whatever it is called) does change the pitch of oscillator 2 only. This is great for controlling sync sounds. Try the preset "SyncSolo Wheel" to explore this.

### **+12**

This button serves for switching the pitchwheel interval from a third (standard) to an octave (12 semitones).

### **Oct.**

Switches the keyboard octave (three octave range). Be careful handling it in vst automation mode because of the "radio button" switch mode.

### **Tun.**

Master tune. This trimpot lets you adjust the master tuning of the synth to fit acoustic instruments with deviating tuning.

## **Why six voices?**

The original godfather of this project has six voices too. The original could be purchased with 4, 6 or 8 voices. Every device had sockets for eight voice boards. So the voices could be expanded by mounting further voiceboards.

The OP-X Free is built almost exactly the same as the real analog original, so there's a limited number of individual and completely independent voices with slightly different but tunable sound instead of a lot of digitally cloned ones. The result is a rich and orgainic sound.

## VST automation

OP-X FREE does not provide vst automation. Upgrade to OP-X PLAYER using the „Get More Sounds“ button to make this feature available. With vst automation you will be able to record and play back the movements of all available knobs and buttons. So you can e.g. automate the cutoff knob for tremendous filter performances.

## MIDI CC Implementation

This feature is not available in the OP-X FREE. Upgrade to OP-X PLAYER using the „Get More Sounds“ button to make this feature available. OP-X PLAYER will let you remote control all knobs and buttons using midi cc messages. The implementation follows the popular Pro53 standard which means you can load this preset and all important parameters (e.g. filter cutoff) will already be ready to tweak.

While the OP-X Free and OP-X Player only give access to a few chosen parameters, the full version allows Midi Remote Control for all 83 parameters with CC numbers leant on the popular Pro53 standard.

Upgrade to OP-X PLAYER: Click on blue button (Get More Sounds)

### Available in OP-X PLAYER:

Parameters available for vst automation and midi cc remote control in OP-X PLAYER (upgrade of OP-X FREE):

Volume	Pan1	Master Tune
Portamento	Pan2	Oct Low
Cutoff	Pan3	Oct Mid
Spread	Pan4	Oct High
OscTune	Pan5	Pitch Lever
FiltTune	Pan6	Modulation Lever
EnvTune	Key Ani	Osc2
Port Detune	Legato	+12

Have a look at the following page for an overview of all available parameters for programming, vst automation and midi cc remote control in the full version OP-X (which can be bought directly or as an upgrade of OP-X PLAYER).

Available in the full OP-X:

**sorted by cc number**

Pitch Lever	Arp On
Modulation Lever	Velocity
Portamento	Spread
Oct Low	Master Tune
Oct Mid	ENV
Oct High	O2o
LFO Freq Depth	OM neg.
LFO PW Depth	P1o
OscTune	PM neg.
FiltTune	LFO Osc Phase
EnvTune	PW-FILT Phase
Port Detune	Pulse Osc1
LFO Rate	Pulse Width
LFO Sine	Sync
LFO Square	Osc1 On
LFO S/H	Osc2 Full
LFO Sync	Noise Full
III Arp LFO	Arp Speed
Arp Sync	Arp Steps
PM	Pitch Osc2
OM	Osc2 Detune
LFO to Osc1	Saw Osc2
LFO to Osc2	Osc2 only
LFO to PW1	Pulse Osc2
LFO to PW2	X-Mod Depth
LFO to Filter	X-Mod
Pitch Osc1	Ring
Saw Osc1	Unisono
Resonance	Cutoff
Env Amt	W-LFO 1/2
Key Track	Key Ani
Osc2 Half	Lever Ani
A Filter	W-LFO Rate
D Filter	A.Touch Vib.
S Filter	A.Touch Filt.
R Filter	Pan1
Noise Half	Pan2
A Amp	Pan3
D Amp	Pan4
S Amp	Pan5
R Amp	Pan6
+12	Volume

more infos on:

<http://www.sonicprojects.ch/>

## GET FULL VERSION

GET MORE SOUNDS

This button opens your browser and directly leads you to the upgrade site.

Upgrade options:

OP-X Free ⇒ OP-X Player

Get access to the full OP-X library containing more than 500 patches! The OP-X Player is fully compatible to the full OP-X and can load every sound created on the OP-X and vice versa. It provides vst automation and midi cc remote control for all available knobs and buttons too.

OP-X Player ⇒ OP-X

Upgrade to the full version and get access to all parameters on a huge graphical user interface with all options for automation and midi cc remote control.

OP-X ⇒ OP-X PRO

Not enough? Then have a look at the OP-X PRO. Continuously controllable multimode filters, tuning trimpots for custom tunings and a lot of added modulation routings make this a super OP-X!

More infos on all products here:

<http://www.sonicprojects.ch/>

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# Chapters

Introduction.....	2
Installation.....	3
License and copyright.....	3
The voice LEDs.....	4
The TUNER section:.....	4
VOLUME.....	4
TUNER.....	4
OSC.....	4
FILT.....	4
ENV.....	4
The CONTROL section.....	5
PORTAMENTO.....	5
DET.....	5
The FILTER / MANUAL section.....	5
CUTOFF.....	5
SPREAD.....	5
The VOICE PANS section.....	6
The voice pans.....	6
The LEVERS section.....	6
A.....	6
L.....	6
Levers.....	7
Os2.....	7
+12.....	7
Tun.....	6
Oct.....	7
Voice info.....	7
VST automation.....	8
MIDI CC Implementation.....	8
OP-X PLAYER.....	8
OP-X.....	9
Upgrade to full version.....	10
Impressum.....	11
Chapters.....	12
Index.....	13

## Index

- +12 7, 8
- A 6
- Auto Tune 2
- automation 8
- CONTROL 5
- Cutoff 8
- CUTOFF 5
- DET 5
- detune 2
- ENV 4
- EnvTune 8
- FILT 4
- filter 2, 4f.
- FILTER 5
- FiltTune 8
- full version 8
- glide 5
- Installation 3
- interference noises 6
- L 6
- LEDs 4
- Legato 6
- LEVERS 6
- load 2
- Master Tune 7
- MIDI CC 8
- modulation lever 7
- Modulation Wheel 8
- multimode filters 10
- Oct High 8
- Oct Low 8
- Oct Mid 8
- Oct. 7
- OP-X 10
- OP-X Free 10
- OP-X Player 10
- OP-X PRO 10
- Os2 7
- OSC 4
- Osc2 8
- OscTune 8
- Pan1 8
- Pan2 8
- Pan3 8
- Pan4 8
- Pan5 8
- Pan6 8
- pitch lever 7
- Pitch Lever 8
- Port Detune 8
- PORTAMENTO 5
- Portamento 2
- Pulse Width 9
- retrigger 6
- Separate Voice Design 2
- Spread 8
- SPREAD 5
- Spread 8
- SVD 2
- Tun. 7
- TUNER 4
- tuning 4f.
- uninstall 3
- Upgrade options 10
- voice LEDs 4
- voice pans 6
- voices 2, 4f., 7
- VOLUME 4
- VST 3
- VST automation 8
- vst host 3
- wheels 7