PolyM



User Manual

www.xils-lab.com

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1. Introduction

Thank you for choosing the **PolyM**!

The **PolyM** is a virtual instrument based on the architecture of one of the coolest vintage instruments out there.

1. The **PolyM** can bring you back some years ago when sound was so important for the great artists who began the electronic music, such as Keith Emerson, Gary Numan, Herbie Hancock, Kraftwerk …..

But the **PolyM** offers much more than a string machine or Organ like synthesizer. Thanks to its huge modulation possibilities, to the possibility to tweak the internal filter parameters and despite some musical limitations brought by the Top Octave Divider oscillators (see below), it is a full-featured synthesizer while keeping the character of the original machine.

We at **XILS-lab** do our best to create authentic recreations of the great synthesizers we emulate and then take it even further. What can be done with today's computers allows us to take these emulations beyond what was feasible when these products were first created. Our goal is to be true to the original in sound and modulation routings and then add features that were just not previously possible.

If you have not yet developed your skills as a sound designer, we have included a lot of presets from famous sound designers and artists. So you can fuel your synthesizer or robot voices dreams as soon as you load the **PolyM** into your DAW.

Please enjoy this very powerful sound creation tool. We love what we do and we want you to get the most enjoyment you possibly can from our labors. We want to hear from you.

So "like" us on Facebook http://www.facebook.com/XILSLabs and join in the conversation

2. Features

The **PolyM** offers:

- Two finely tweaked and emulated Top Octave Divider oscillators, providing up to 71 voices of polyphony.

- 71 emulated chips for balancing oscillator, filtering and triggering
- One MODE section (8 dedicated specific filters).
- One RES section (3 parametric filter banks).
- One 24db Ladder section (a Voltage Controlled self oscillating 24 db zero-delay filter).
- A simple but nice sounding reverb.
- Analog-like resonant phaser.
- A full featured delay (with tempo synchronization)
- Access to a lot of parameters which were not accessible in the hardware version
- All parameters are MIDI controllable

The **PolyM** is available in the following formats:

- **Mac OSX 10.7 and later**: VST, Audio Unit, AAX
- **Windows 10, 8, 7, XP and Vista**: VST, AAX








AAX

Minimum system requirements: 1 Gigabyte of RAM and a 2 GHz processor.

The **PolyM** is a plug-in and is not available as a standalone application

Notice: The screen resolution must be set at least to 1024 pixels width.

3. Installation

XILS-Lab offers you the choice of using eLicense or iLok. This first section describes the process for authorization for eLicense.

3.1. eLicenser drivers

The PolyM uses an eLicenser dongle. You must have this dongle connected to a USB port on your computer to make the PolyM work.

Important : Please take care of your dongle: you need it to run the PolyM and it carries your license!

Please Note: Even if you have already installed the eLicenser drivers for a previous product, please install the latest version of the eLicenser License Control.

To download the latest eLicenser Control Center (eLC), please go to:

http://www.elicenser.net/en/latest_downloads.html

You need a PolyM Activation Code to load your license onto the dongle:

First, plug your dongle into a USB port of your computer. Then launch the License Control Center. Launch the **Enter authorization code**. Enter your **Activation Code** in the reserved field, and press Next.

Wait for the license to be downloaded and then check to see if the license is correctly loaded on the dongle in the main section of the License Control Center.

3.2. iLok drivers

With the iLok version of the PolyM, you need to plug an iLok USB key into your computer or use the so-called "soft-location", authorizing your computer.

After downloading and installing the latest PACE drivers, please launch it, login with you ilok.com account. Select "License->Redeem Activation Code" and submit your iLok code. Drag and drop the created license onto a destination icon (either your computer or an iLok device)

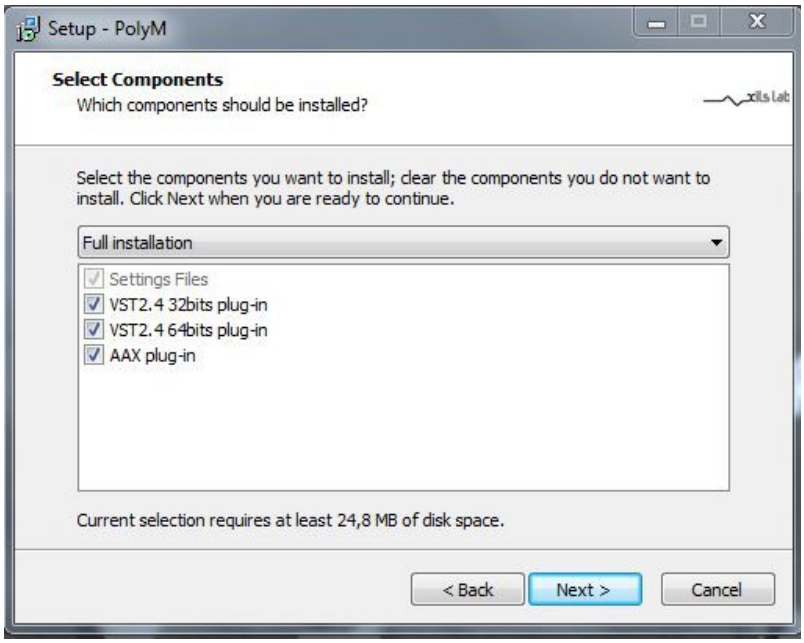
To download the latest PACE drivers, please go to:
http://www.ilok.com/download-ilok-software.html

3.3. Windows (XP, VISTA, Windows 7,8,10)

To install the PolyM on Windows, launch the PolyM installer file Please download the latest version from the XILS-lab website.

https://www.xils-lab.com/products/polym-p-160/download.html

Once you have accepted the license agreement, you will be asked to select the components to be installed :



You can choose the format to be installed between AAX and VST2.4 (32 and 64 bits). Then you will be asked to select various install directories.

A destination directory is provided as a default. Presets and various files, like this manual, used by the PolyM will be stored in this directory. Please note that this location is different from the VST install directory, which you will need to specify in the next step of the installer.

Once the installation directory is specified, you will be asked to select the VST plug-in directory, with a suggested default location. Make sure that the path for the 32 bits plug-in differs than for the 64 bits plug-in (as the default path does)

Important notice : be sure to use a folder write enable and owned by the user (do not use "c:/program files" for instance). Otherwise you will have to run your music application with "administrator rights".

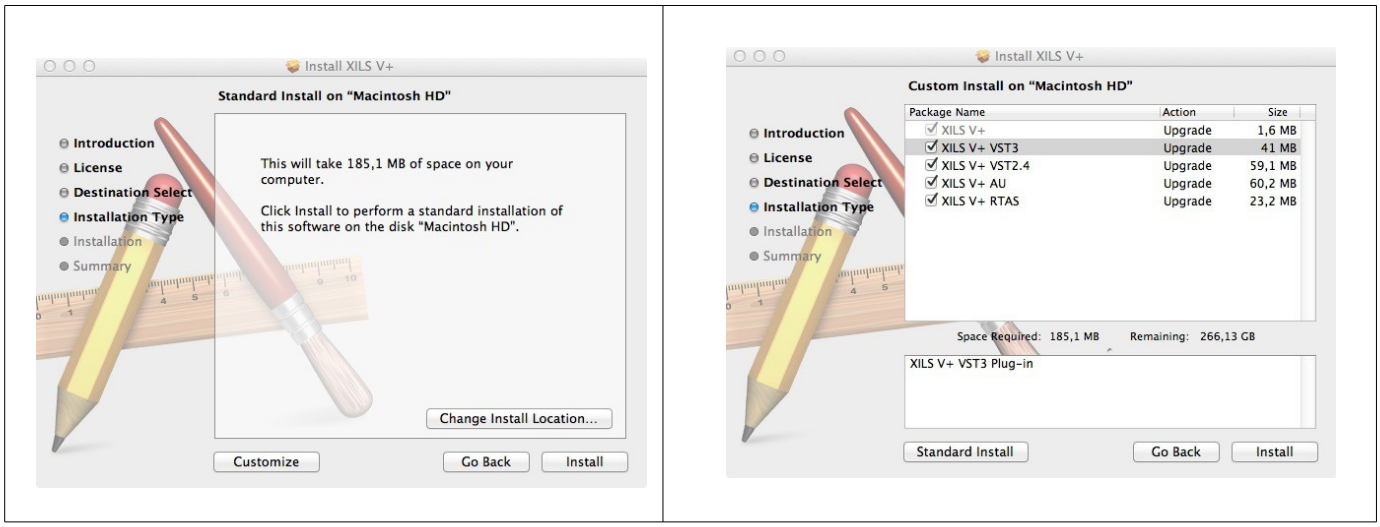
3.4. Mac (OSX 10.7 and later)

To install the PolyM on a computer equipped with Mac OSX 10.7 or later, download the latest version of either the iLok or eLicensor versions from the XILS-lab website to make sure you have the latest version of the software.

https://www.xils-lab.com/products/polym-p-160/download.html

Then launch the install program, PolyM.pkg, and follow the instructions.
Notice: the install program will ask you for your system password.

Just after selecting the drive where the PolyM will be installed, you can choose which components to be copied by clicking on "customize" and selecting or unselecting them :



The various files of the PolyM will be copied into the following directories:

Library/Application Support/XILS-lab/PolyM
Library/Application Support/Digidesign/Plug-Ins
Library/Application Support/Avid/Audio/Plug-Ins
Library/Audio/Plug-Ins/Components
Library/Audio/Plug-Ins/VST
Library/Application Support/Documentation/XILS-lab/PolyM

And for the user preset and various option :

..users/username/Library/Preferences/XILS-lab/PolyM

4. Using the PolyM

4.1. Using the PolyM tools bar



Note: The toolbar at the top of the interface allows you to load or save presets, make a comparison between settings A and B, or modify the options. These functions are described in detail later in this manual.

Click on the **PRESET menu** to show the available presets in the current sorted group. Please note that selecting a new preset without saving your current settings will erase any changes you have made to those settings.

Click on the **sort arrow** button to display the current sorted group and to choose the preset within it.

You can sort presets by: **Author, Feeling, Type, Style, Bank or Projects**.

Please note that the **PolyM** will display presets by instruments categories (Type) by default.

Click on the sorting label over the sorted group name, to sort your preset according to your preferences.

Please note that the PolyM's powerful Preset management is fully detailed in chapter 6 of this manual.

4.2. Adjusting the instruments parameters

On the **PolyM**, the sound parameters are controlled using faders, knobs or switches

To adjust with the mouse, the parameters of the **PolyM** which are controlled by faders, click on the slider of the fader and drag it up to increase the value, of drag it down to decrease it.
To adjust with the mouse, the parameters of the **PolyM** which are controlled by knobs, click inside it and move the move up or right to increase the value, down or left to decrease it.

If you right-click on a parameter, or if you hold shift while clicking, you can adjust the parameter with fine precision (the ? button of the toolbar displays a panel summarizing these shortcuts).

Keyboard shortcuts

In addition we have provided some soft keys combination to perform several very useful tasks:

Windows:

- CTRL+left click: reset parameter to its default value.
- CTRL+right click or CTRL+Shift+left click: initialize the default value of the parameter.
- Win+Alt+CTRL + click: open the MIDI Control panel, with the parameter already selected.

OSX:

- Apple+left click: reset parameter to its default value.
- Apple+Shift+left click: initialise the default value of the parameter
- Apple+Alt+CTRL + click: open the MIDI Control panel, with the parameter already selected.

When a parameter is chosen via a drop down menu, just click on the button or label and select the item.

4.3. Using the PolyM

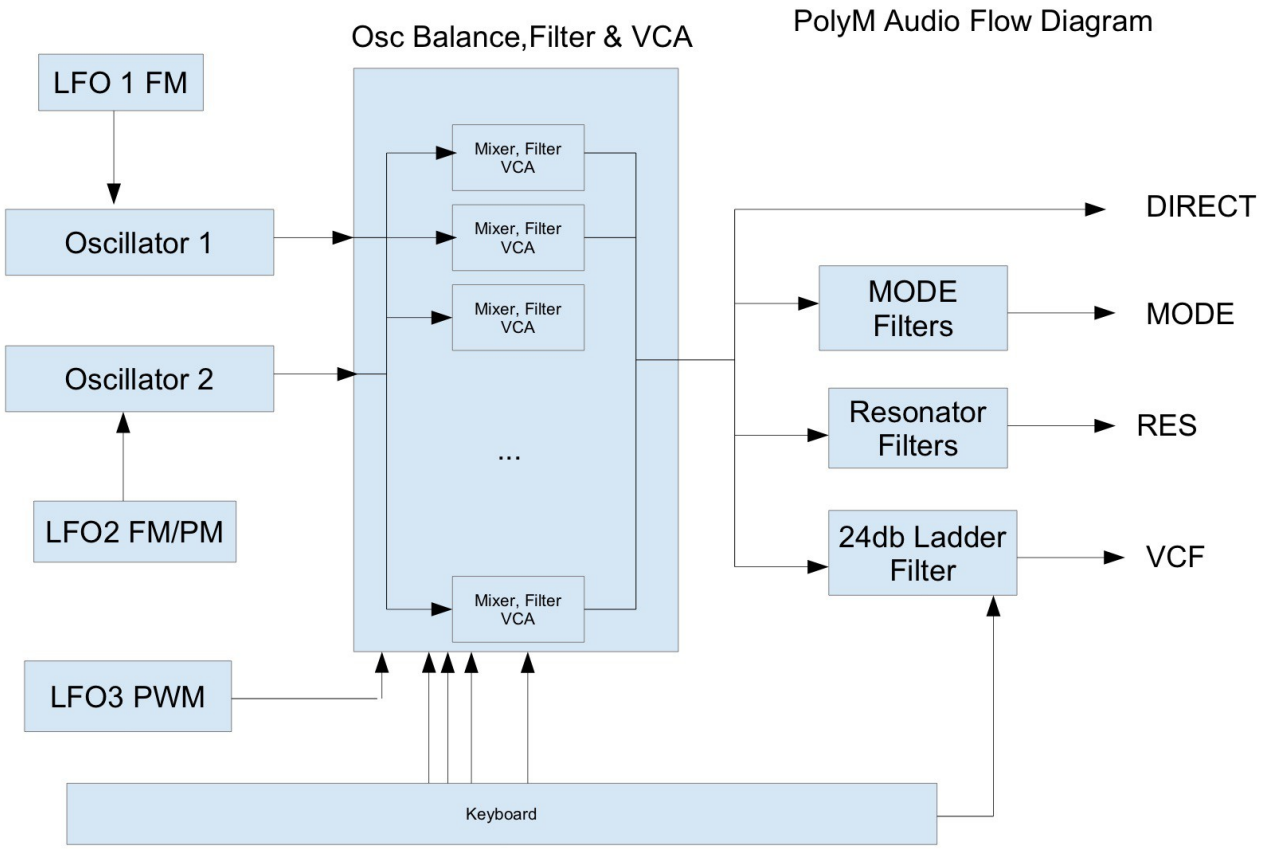
The **PolyM** instrument is a wonderful synthesizer featuring two top octave divider oscillators and three filter banks, for creating amazing strings, voices, brass, basses or other esoteric sounds.

Inserting the **PolyM Inst** or the **PolyM** in your Instrument track will allow you to use these two features.

4.3.1. The PolyM Audio Flow

Having in mind the PolyM audio flow will help you to better understand its parameters, especially those which are affecting each individual note (called polyphonic) and those which are global to all the notes called monophonic)

The PolyM is divided into three sections: the Top Octave Divider oscillators, the Mixer and the Filter banks.



The top octave divider oscillator is generating the corresponding wave form (square or saw) for each played note from a single oscillator. This explains why the pitch can be only controlled globally.

Each note has its own filter, envelope generators (one for the level, the other for the filter), pulse width control and mixer.

Mixing the output of each note gives the so called DIRECT output. This output is then used for feeding the three additional filter sections. Only the 24db Ladder filter, associated with a single envelope generator, can be controlled by the keyboard (in a monophonic mode)

Additional effects (Phaser, Reverb, Delay) are applied after mixing all these audio paths

4.3.2. Keyboard Split and limits

Several of PolyM's features are depending on the keyboard split fader. This fader can be moved along the keyboard and all the notes below are part of the "lower" keyboard, all the notes above are part of the "upper" keyboard.



Some parameters are not dependant upon this split point, but on the octave the note is played (see below the Shape Mod and the Octave Balance) . Hence, the keyboard is divided in three parts, Octave 1-2, Octave 3-4 and Octave 5-6

For reducing the CPU, you can limit the PolyM polyphony.



By default up to 71 notes are available, but changing the lower or the higher limit note, thanks to the two menus below the keyboard can reduce the polyphony, hence the needed CPU.



You can't go below E0 or above E6 which are the limits of the original model.

Any Midi note above or below these limits won't have any effect

4.3.3. The Level Control

Once the PolyM is launched, an init preset "Simple Strings" is selected which you can immediately play with. For adapting the level of the various sections, locate the **MASTER GAIN CONTROLS** section

GEN : This is the general level control. It controls the level of the PolyM at the very end, after all the treatments and effects have been applied.



DIRECT : This parameter controls the level of the DIRECT output, the sound which has not been modified by any of the three filter banks.

MODE : This parameter controls the level of the MODE output, the sound which has been modified by the MODE filter bank (explained hereafter)

RES : This parameter controls the level of the RES output, the sound which has been modified by the RES filter bank (explained hereafter)

VCF : This parameter controls the level of the 24db ladder self-oscillating Filter output.



Clicking on the label will **mute** the corresponding output (see the second picture)

The level of each note can also be adapted per octave thanks to the **OCTAVE BAL** section

These three faders control the level of the octaves 1-2, 3-4 and 5-6 of the available notes. The gain applied to each part is as follow : 10 : +12 db 5 : 0 db 0 : -12 db	

4.3.4. The Pitch Tuning, Oscillator Range, Lock and Frequency Modulation

The PolyM can be tuned thanks to this double knob. Outer ring : Global fine tuning, the two oscillators are kept at theire relative pitch. Inner knob : "Beat" only the oscillator producing the Sawtooth waveform is tuned, giving a phasing effect between the two oscillators, called BEAT. The period of this beat is shown with the red light.	
As for the original, a pitch controller can be used for modifying the global pitch of the PolyM. This controller is also controlled by the standard keyboard Pitch bend	
The Oscillator producing the sawtooth can also be drastically tuned using this fader, from -12 to +12 semi-tone	
Each oscillator has its own octave selector: "8" means standard tune, "4" means one octave above, "16" means one octave below	
This two state button allows the two oscillators to be free or to lock one to the other. In that case, the oscillator producing the square waveform will be locked in phase to the other. This means that fine tuning or coarse tuning the sawtooth oscillator will do the same as tweaking the global tuning outer knob. This lock is done in such a way that the two oscillators are slightly detuned, producing a slow beating effect.	

Each oscillator has its own LFO for modifying the pitch, called Frequency Modulation. You can change its frequency (RATE) or the amount (AMT) of this modulation. When the square oscillator is locked to the sawtooth oscillator, then, the Frequency Modulation is transformed to a Phase Modulation. At the left of the RATE label, a small red light switch allows synchronization of the LFO frequency to the Tempo of your DAW	

4.3.5. Waveform Mixing and Square Shape

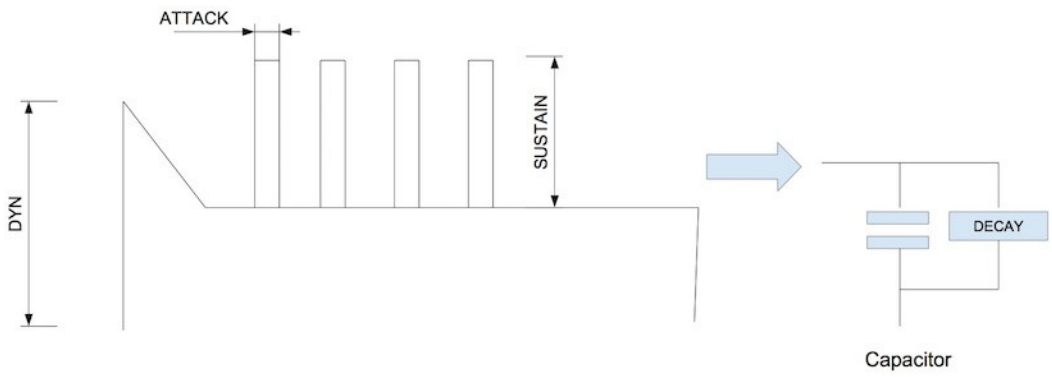
A three state switch allows you to select the waveform for the lower and the upper part of the keyboard (lower and upper depending on the split fader, see above) : Saw, Square or both.	
The level of the sawtooth waveform can be adjusted with the RANK MIX fader for the lower or the upper part of the keyboard. Obviously it is more useful when the two waveforms, sawtooth and square, are mixed together, but it can also be used when only the sawtooth is chosen.	
The square waveform pulse width can be adjusted with the SHAPE fader : From 50% to 5% This pulse width is modulated with an LFO for which the frequency can be changed (RATE) and the amount can be adjusted by the AMT fader. SHAPE and AMT are independent for the octaves 1 to 2 and 3 to 6 At the left of the RATE label, a small red light switch allows you to synchronize the LFO frequency to the Tempo of your DAW	

4.3.6. Loudness Contour

The Loudness contour is the other name of the Voltage Controlled Amplifier Envelope. These envelope parameters are applied to each envelope generator which controls the waveform mixer of every note. There are two modes for these envelopes, the standard ADSR and the Legacy

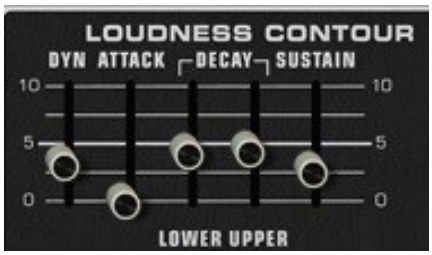
This switch allows you to select the Legacy mode or the ADSR mode used for the VCA envelope generator. This switch allows you to use the Decay parameter as a release time, in LOCK position, or to switch off the note with a small release time (whatever the Decay parameter value) in MAN position. ***Note :*** This switch is only used in the Legacy envelope case.	 

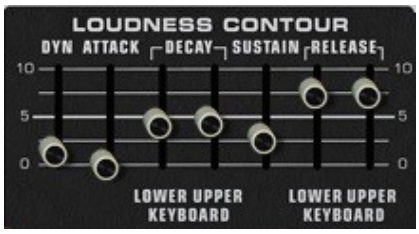
The legacy envelope is a very unusual envelope generator, which is working with a high frequency oscillator and a single capacitor instead of the standard three capacitors ADSR. In this mode, the Decay is always activated, continuously discharging the capacitor. Hence, in some settings, the attack and decay parameter can have an action on the whole level.



Legacy Envelope

For a short explanation : The smaller is the Pulse the longer the capacitor is loaded hence the longer the attack. The Higher the pulse the higher the sustain and finally the higher the Dynamic pulse, the stronger the dynamic effect.
This legacy envelope structure was used for simplifying the hardware design, but it's also fully part of the specific sound which explains why we finally emulated it, even its somehow clumsy results.

In case you select the Legacy Envelope, you will see the following faders : **DYN** : Adjusts how the velocity will change the envelope **ATTACK** : Adjusts the attack time **DECAY** : Adjusts the decay time (independently for the lower and the upper part of the keyboard) **SUSTAIN** : Adjusts the Sustain level	

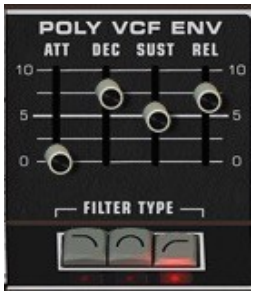
In case you select the ADSR Envelope, you will see the following faders : **DYN** : Adjusts how the velocity will change the envelope **ATTACK** : Adjusts the attack time **DECAY** : Adjusts the decay time (independently for the lower and the upper part of the keyboard) **SUSTAIN** : Adjusts the Sustain level **RELEASE** : Adjusts the release time (independently for the lower and the upper part of the keyboard)	

4.3.7. Polyphonic Filter and Envelope

Each available note has its own filter and corresponding ADSR envelope. Unlike its model, the PolyM offers users access to the filter internal parameters. This filter has a 12db slope and can be a Low Pass, High Pass and Band pass type.

CUT. : Adjust the cutoff frequency of the filter **EMPH.**: Adjust the emphasis (resonance) of the filter **AMT** : Adjust the modulation amount of the dedicated envelope **KB** : Adjust the modulation amount of the Keyboard follower (the higher the key, the higher the modulation) **KEYBOARD :** Allows to enable or disable this filter for a part of the keyboard. This is useful when using the 24db mono filter	

All the parameters of the Filter's dedicated envelope can be adjusted :

ATT : Adjust the Attack time of this envelope **DEC**: Adjust the Decay time of this envelope **SUST**: Adjust the Sustain level of this envelope **REL**: Adjust Release time of this envelope **FILTER TYPE** : select the type of he filter (Low Pass, Band Pass, High Pass)	

4.3.8. 24db Voltage Controlled Filter

The Voltage Controlled filter, a 24db zero-delay self-oscillating ladder filter is a monophonic filter used as an effect applied after all notes are mixed together.

This filter is modulated by an dedicated envelope, a dedicated LFO (running a sine wave and a Sample and hold output) and a monophonic keyboard follower.

This filter can be applied on the lower, upper or all parts of the keyboard according to the **KEYBOARD** switches.

This envelope is monophonic, so must be triggered monophonically. There are two modes for triggering this envelope. The first mode trigs this envelope at the first note played when the keyboard is free. The second mode trigs this envelope every new note. For choosing this mode, engage or disengage the "**KB TRIG MOD**" button you will find in the advanced settings panel.

Used as a monophonic source, the Keyboard follow modulation is calculated from the lower played note.

CUT.: Adjusts the cutoff frequency of this filter.
EMPH:Adjusts the emphasis (resonance) of this filter.
KB: Adjusts the modulation amount of the keyboard follower (the higher the lower key, the higher the modulation).
RATE: Adjusts the frequency of the dedicated LFO. The Red light switch, when engaged, synchronizes this rate to the tempo of the host.
AMT: Adjusts the LFO modulation amount.
S&H: Adjusts the Sample&Hold modulation amount.

AMT: Adjusts the Envelope modulation amount.
ATT: adjusts the attack time of this envelope.
DECAY: adjusts the decay time of this envelope.
SUST: Adjusts the sustain level of this envelope
REL: Adjusts the release time of this envelope.



4.3.9. Resonators

The Resonators section is a three parametric filter bank. These are useful for adding formant to the sound, mimicking voices or acoustics instruments.
These filters can be Low pass, High Pass and band pass, at **6db** or **12db**.

This Resonators section can be applied on the lower, upper or all parts of the keyboard according to the **KEYBOARD** switches. It also can be easily switched **OFF** or **ON.**

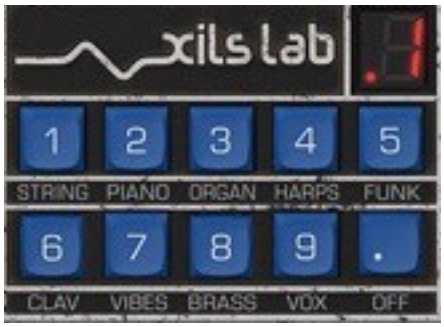
CF: Adjusts the cutoff frequency of a filter.
EMPH:Adjusts the emphasis (resonance) of a filter.
GAIN: Adjusts the Level of a filter.

PASS MOD: Selects the type of the filter, **Low**, **Band** or **High**.



4.3.10. MODE and Predefined presets

Following its model, the PolyM offers 9 predefined sounds you can load thanks to the blue buttons section.



These buttons also select the internal filter of the "**MODE**" filter bank (see below). If you click on one of the buttons, the "MODE" filter bank is chosen accordingly, meaning the "**STRING**" filter for the button1, the "**PIANO**" filter for the button 2 and so on.

The dot button ("**OFF**") must be disengaged for the preset to be loaded. When engaged, only the "**MODE**" filter is changed.

When the dot button is disengaged, clicking on a number will load the corresponding sound, modifying a part of the PolyM : Only the Part producing the "**DIRECT**" sound of the front panel is modified. All the other parts and effects are untouched.

4.4. The Advanced settings panel

Clicking on the "screen" icon would opens the Advance settings panel where you can tweak the Modulation and add effects





4.4.1. Modulations

Opening the advanced settings panel, you will find a part dedicated to the modulations. 3 slots are dedicated to standard keyboard sources (Foot or AfterTouch, Modulation Wheel and Velocity) and 6 modulation nodes.



For each of the 6 modulation nodes and the 3 Keyboard Destinations, you can chose the source by clicking in the source display, the destination, by clicking in the destination display and the amount of the modulation by turning the knob AMNT.

The modulation sources and destinations are grouped in Monophonic and Polyphonic behaviour. A monophonic source can modulate both monophonic and polyphonic destinations. A Polyphonic source can only modulate a Polyphonic destination. A Monophonic destination can be only modulated by a Monophonic source.

So depending on the cases, some choices are enabled or not (More choices will be available in further versions)

Note : "**Foot/After**" and "**Mod. Wheel**" are monophonic sources, "**Velocity**" is a polyphonic source. In the option menu, it is possible to choose only "Foot", only "Aftertouch" or both Midi messages for controlling this source of modulation.

These modulation possibilities offer a wide range of new sounds the original hardware model can't achieve. From tiny changes for giving more vibe to huge effects, the **PolyM** sound possibilities are far away from those you can find in a simple string or organ-like synthesizer machine.

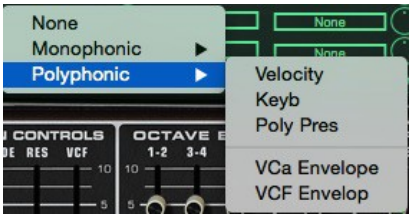
KB TRIG MOD : select how the 24db Ladder mono filter is triggered by the keyboard. When engaged, it's triggered every new note. When disengaged, it will only re-trigger once all keys are released.

VCF DRIVE : Set the input level of the VCF 24db Ladder filter, then adds more distortion and less resonance.

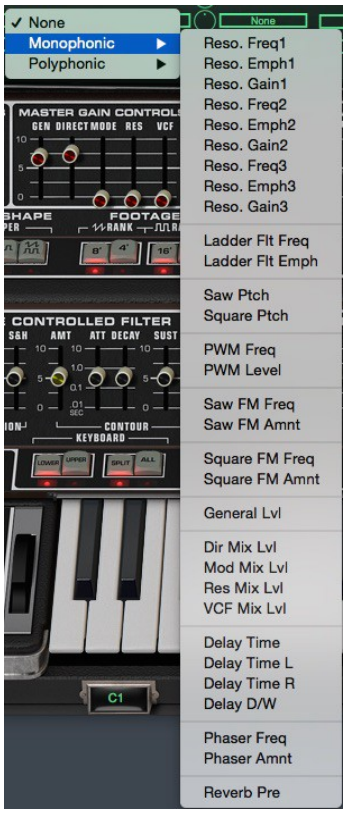
Monophonic sources:



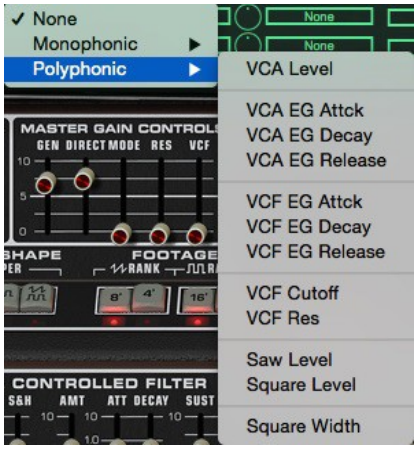
Polyphonic sources:



Monophonic destinations:



Polyphonic destinations:



4.4.2. Reverb

The reverb has three algorithms ("**LG**", "**MD**" and "**SM**" for Large, Medium and Small), which can be chosen with the three-position selector "**Type**". "**TIME**": Adjusts the reverb time. "**LVL**": Adjusts the level of the reverb. "**DAMP**": Adjusts a high frequencies release. "**DEL**": Adjusts the pre-delay before the effect.	

4.4.3. Phaser

The phaser is a fine emulation of an analog phaser, providing all its internal parameters to allow a wide range of sounds.

"**D/W**": Increases or decreases the effect. "**SPEED**": Adjusts the speed of the modulation. "**AMT**": Adjusts the amount of the modulation (the width of the frequency sweep) "**Sweep**": Adjusts the frequency around which the modulation occurs to be set. "**WIDTH**": sets the differences between the left and the right channel. "**RES**": Adjusts the level of the internal feedback, allowing increasing or decreasing the level of the harmonics swept by the phaser. "**BO**": A Boost switch allowing to overload the phaser internal amplifier when engaged.	

4.4.4. Delay

"**D/W**": Increases or decreases the effect. "**TIME**": Adjusts the delay time (left or right). "**FEED**": Adjusts the amount of the feedback (left or right) "**SY**": Synchronizes the time to the host's Tempo.	

5. Preset Management

5.1. Main Toolbar



In the toolbar you can find two buttons, displaying the category name (Bank, Author, Type, Style, Feeling or Project), which open the sort management menus.

The two first text fields show the current sorting group and the third shows the current preset.

Clicking on the arrow on the left of the category or preset names opens the corresponding menus.

Note: When a parameter is modified, the name of the preset is followed by a *****, indicating that the current settings of the PolyM no longer matches the stored preset.

When you want to save a modified preset, click on the **Save or Save As** button.

In order to prevent you from erasing them, the Factory presets cannot be modified. When you edit a Factory preset, the **Save** button will be grayed, and you will have to use the Save As function to save it in another bank.

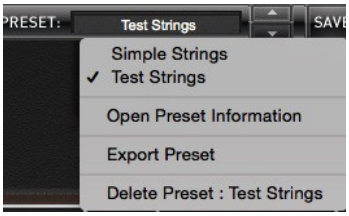
If you edit any other preset than a Factory one, the Save and Save As function will both be available.

The main difference is that the Save function will save the preset under its current name, and with its current tags, overwriting the previous incarnation of the preset, while the Save As function opens a dialog box where you can modify the name of the preset, the bank in which it will be stored, and all its tags

The settings of the PolyM are then saved in the currently displayed preset, and the ***** disappears. Click on the **Save As** button to save this preset with another name and/or to other sorting groups.

5.2. Preset menu

Click the **Preset arrow** button to open the preset menu. Here you can choose and load another preset from the current sort groups into the PolyM.



In this menu, other actions are also available:

Delete Preset: use this to delete the current preset (a popup confirmation window appears). This option is only available if the current preset is not a factory one.
Export Preset: Use this function to export the current preset in an external file (.epsx format). This file can be imported later as a new bank. It always makes sense to back up your presets on external media.

Open preset Information (or click on SAVE AS): opens the following preset information window where the name and all other information related to the current preset can be displayed or changed.



In this window you can modify the **Name** of the preset, specify the **Bank** in which the preset will be saved, and also enter information in the other fields:

- **AUTHOR (**Your name, mostly used by Sound Designers for factory presets**)**,
- **Type** (Category of the instrument like Keys, Leads, Basses, etc.)
- **Style** (Musical Genre),
- **Feeling** (Cold, warm, soft) and finally
- **Project** (My Song, My_Live_Project).

You can also see its creation date and the last update date.

To modify a preset name, click in the preset field and enter the new preset name this will also save all the current settings.

To change presets information, click on the display, this will open a menu where you can select one of the existing items.

Note: You can add a new item in any category, and therefore create custom banks, custom styles, Projects, categories of instruments etc.

To add a new item in any field, select "**New….**". Which appears at the bottom of the list.

Note (You may have to browse until the end of the list in order to select "new" depending on its length.)

A Pop Up window opens when you can enter the new name. The current preset will then be associated to this new item.

Note: Please be aware that creating too many categories can also have its drawbacks, making browsing go from difficult and painful to nearly impossible. Should you create around 200 different custom instrument categories, it would become very difficult to browse the library using the Style sorting.

Once you have filled all the desired/required fields:

SAVE AS: Will save the current preset in the chosen Bank, with its new (or unchanged) Name, and tagged with all the fields you filled in.

SAVE: Allows saving the current preset in another location. This is handy to gather a lot of presets into a single location, or User Bank, which you can export in a single file containing all the presets you created or edited for a given project.

CANCEL: Will just cancel all operations and return to the standard PolyM GUI.

5.3. Sort menus



The sorting menus are unique and a powerful tool. Allowing you to perform sophisticated tasks, such as displaying the preset list organized in a variety of different ways:

- All the Basses of your Sound Library
- All the Basses tagged with a given musical genre
- All the Pads made by given Sound Designers
- All instruments for a musical genre like Electronica, or Funk
- All instruments that were recently imported in a bank (like additional sound-sets from Xils-Lab or 3rd party vendors)

There are indeed a lot of possibilities, and we're confident that you'll find the best way to customize it to your personal needs.

In order to perform such selections, all you have to do is to select an item in the first sort menu. This represents the first and main criteria for the search engine.

- **AUTHOR** (Your name, or a Sound Designer name for factory presets**)**,
- **Type** (Category of the instrument like Keys, Leads, Basses, etc)
- **Style** (Musical Genre),
- **Feeling** (Cold, warm, soft) and finally
- **Project** (My Song, My_Live_Project).
- **ALL** (this item is not used for sorting the preset)

These primary results can then also be filtered according to second criteria. Which can be chosen from a similar list in the secondary sort menu.

Sometimes a picture is better than a lot of text, so you'll find below an example where you can find out how to select all the basses designed by a given Sound Designer.



Please note that, once you are familiar with this system, you can also perform some operations in a single click, by using the Sub Groups to choose a preset:

In the above picture the primary sort menu is used to browse the different banks. Then in a factory bank, the author Xils-Lab is selected, and finally the Preset strings_glide_video. In this example the preset is selected in a single click operation, and the presets available in the preset list will be all the Xils-Lab presets available in the entire Factory Sound Library.

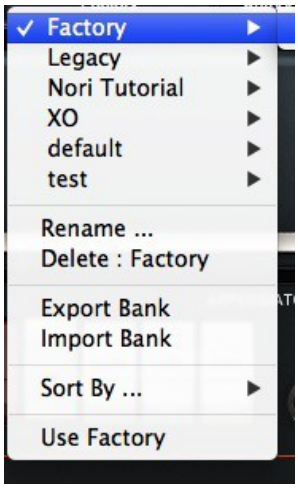
Click on the **row** of the sorting button to open the menu used to manage this sorting group (or sub group). Here you can directly select and load any preset from any group or subgroup.

5.3.1. Sorting Menu: Additional Functions

In this menu, other actions are also available:

Delete: deletes all of the presets of the current group that are not factory ones. IMPORTANT: Use this function with care: If the bank does not contain any factory presets, ALL PRESETS IN THIS BANK WILL BE PERMANENTLY DELETED.

Rename: modifies the current group name. Selecting this choice will open a window where the new name will be entered.





Use Factory: enables or disables the display of factory presets.

Sort By: This function sorts the presets according to bank, author, project, or shows all presets (**Bank Name**, **Author Name**, **Project Name**, **All Presets**). The preset menu will show presets of the same category (same author, same project or same bank).

Export Bank: This function exports a bank in the PolyM's proprietary cross platform format, (Mac and PC). The selected bank (i.e. the bank which contains the currently active preset) will be exported to a user specified location on your hard drive.

Import Bank: This Function allows you to browse your hard drives to select a file and imports a PolyM bank.

These two choices are not available from the second **sort** menu.

This menu provides also the possibility to change the size of the interface. This feature is the same that the one provided in the **Option** menu.

5.4. A/B comparison

You can store two different settings at the same time and instantly switch from one to the other to compare their settings. These two settings are stored in the **A** and **B** memories.

When you launch the PolyM, the default-activated memory is A. When you load or modify a preset, this memory – A- is also modified in real time according to your edits. You can switch to B memory by clicking on the B button.

To copy the current active memory content to the other memory slot, just press the button labeled -> or <-, according to the current active memory.

With this A/B comparison system, you can easily have two settings and compare them in a convenient way.

Note: Please note that by default, the B memory slot, until you copy settings into it or until loading another preset within the other memory slot, contains the same init patch loaded in the A memory when you first launch the PolyM.

6. Option menu

This menu allows you to choose the global settings. These settings are defined for all the instances of the PolyM. Each time an option is changed, the related option file is saved.

6.1. Main

In the toolbar, the **Options** button opens a menu for selecting various options for the PolyM.
This menu shows the following options settings:

PolyM About: displays information about the PolyM (version, build date and credits).

Open MIDI settings panel: Opens a popup where you can assign MIDI controllers for each of the PolyM's parameters. Click on the parameter label to select the parameter you want assign, then enter the MIDI controller number (from 0 to 127), or switch on the learning switch and send a MIDI command with the correct MIDI controller number. The PolyM will memorize it. This setting popup can also be opened by CTRL+ALT+Apple+Left-click (Mac) or CTRL+Win+ALT+Left-click (Win) on the desired PolyM parameter.

6.2. Display

Display low frequency as BPM: Allows displaying the low frequency (LFO, oscillator 2 in low mode, clock rate in BPM instead of Hz)

GUI follows presets: When checked, this option allows the GUI to follow the presets. That means that the special display modules are refreshed following the preset settings. Otherwise it keeps the same view.

Popup On: shows a popup window while modifying the value of a knob.

Popup Over On: shows a popup window when the mouse is over a switch.

Popup Name On: the name of the current modified parameter is displayed.

GUI update: low: slow refresh rate for the GUI. Useful when it is necessary to save CPU power.

GUI update: middle: standard refresh rate for GUI.

GUI update: fast: fast refresh rate for GUI. Useful when it is necessary to precisely follow the sequencer's led for instance.

1200p width: select the 1200p width GUI (relaunch needed)
1400p width: select the 1400p width GUI (relaunch needed)

6.3. Misc

Init settings from current settings: initializes the default values of the PolyM from the current settings. All the new presets will be created from these settings, when the **init settings** choice is selected. These parameters will also be used when setting a control to its default value. (Win: CTRL+click, OSX: ALT+Apple+Click).

Init settings from default: initializes the default values of the PolyM from the default settings. All the new presets will be created from these settings, when the **init settings** choice is selected. These parameters will also be used when setting a control to its default value. (Win: CTRL+click, OSX: ALT+Apple+Click).

Wheel Incr: 0.01: parameter increment of 0.01 when using the mouse wheel.

Wheel Incr: 0.05: parameter increment of 0.05 when using the mouse wheel.

Wheel Incr: 0.1: parameter increment of 0.1 when using the mouse wheel.

Sustain Pedal Close: Select how the sustain pedal must be used, close is activated in this case.
Sustain Pedal Open: Select how the sustain pedal must be used, open is activated in this case.

Only Foot: Select how the Foot/After modulation slot will respond to Midi Message. In this case, it will respond only to Foot (04) Midi messages .
Only After: Select how the Foot/After modulation slot will respond to Midi Message. In this case, it will respond only to Aftertouch (13) Midi messages .
Foot&After: Select how the Foot/After modulation slot will respond to Midi Message. In this case, it will respond to Foot (04) and Aftertouch (13) Midi messages .

7. Special tips

7.1. CPU-Load

As the design of the **PolyM** (T.O.D, filters, effects) has been done to be as close to the original as possible, it can be quite heavy on the CPU.

This is especially true, if you use the **PolyM** on older computers or along with other high-quality plugins.

Here are some tips to make the most of it - in other words: "have your cake and eat it too" ;-)

- Using the "disable device" feature through VST-automation.
  Due to the T.O.D. design, PolyM requires some CPU-resources; even if produces no sound at a certain point in time.
  So it might be worth turning off the device when not needed in a track. You should do so not by only muting the track it 'sits in', but by disabling PolyM itself apart from when it is actually needed.
  This can be done using VST-automation, but the way it works is dependent on how your DAW provides the feature.
  Be sure not to temporarily disable PolyM before any sustaining notes have ended.

- Using PolyM's Limit keyboard
  By using the low and high keyboard limits, you can reduce easily the number of available voices. This way, calculation can be reduced. This is especially useful when using the PolyM as a Bass or lead instrument played around an octave.

7.2. Performance-Tips

- Making a "supersaw"-patch
  In order to get an even broader sound, you may want to use 2 instances of PolyM and detune one slightly by setting the Global pitch amount just a bit up or down to any desired value.
  If you use only the Strings for this you get a kind of sound that sometimes is referred to as "supersaw". The possibility to set one of the PolyM's an octave up or down as well may also come in quite handy here.

8. Credits

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Modules licenses:
The Top Octave Divider Oscillator, the Mode filters, the Resonators Filters, the Analog Legacy Envelope, are licensed by Xavier Oudin to XILS-lab for exclusive use in the PolyM virtual synthesizer.