



# Moog Matriarch Ctrlr panel documentation and instructions

V1.0- 2021-05-30



## Introduction

Hi! Thanks for having purchased this Ctrlr Moog Matriarch panel!

The panel is only a patch loader/saver on computer as the Moog Matriarch does not support the load/save of programs by sysex dump exchange. It supports the manipulation of some program parameters by Midi CC messages but far from all parameters are covered (only the ones described on pages 18 and 19 of the Matriarch v1.2.3 Firmware update manual).

It is also possible to exchange sysex messages for the Global parameters and this is also available in the panel.

The panel will thus allow you to save and retrieve Matriarch patches on your PC but gives you also the possibility to exchange them with other users as they are stored as sysex files.

The look and feel is respected (as well as the selection between the classical colored and dark series layout) but of course it would be stupid to not benefit of the computer possibilities. Therefore, you also get a display of the current parameters value, a graphic display of the envelopes, the ability to store and indicate the input/output patches, etc...

Despite careful testing it is possible that some bugs remain. Please contact [sunny.synths@gmail.com](mailto:sunny.synths@gmail.com) if you find one so they can be corrected as soon as possible.

In the same spirit, contact [sunny.synths@gmail.com](mailto:sunny.synths@gmail.com) as well if you would like some enhancement on the panel.

By that, please have a look on this manual to have an idea of the way of using it and its features. Enjoy making music with your Moog Matriarch and have fun!

Sunny Synths

## About this v1.0 version

This is the first version of this panel and of the manual.

## Table of Contents

<b>Introduction</b> .....	<b>2</b>
<b>About this v1.x version</b> .....	<b>2</b>
<b>Installation and features</b> .....	<b>5</b>
Installation of the Ctrlr panel .....	5
Features .....	7
<b>Communication with your Moog Matriarch synth</b> .....	<b>8</b>
Preliminary info .....	8
Setting the Midi connection .....	8
Testing the Midi connection.....	9
<b>Way of working</b> .....	<b>11</b>
Using the buttons and modifying parameters .....	11
Quick reset to default value .....	11
Color and Dark Series layout .....	12
Opening and closing the panel .....	13
Top panel area.....	15
Loading a Moog Matriarch program.....	16
Saving a Moog Matriarch program.....	17
Program Init.....	18
Program Rename.....	19
Moog Matriarch tab .....	20
Program settings and Patches tab .....	21
Library and Info tab .....	26
Patch sheet tab.....	29
<b>Installing and using the Matriarch panel as plugin</b> .....	<b>30</b>
Installation.....	30
Tests and identified limitations .....	30
Cubase .....	32
Cakewalk by Bandlab.....	36
Reaper .....	38
Ableton.....	42
Studio One.....	44
Logic Pro X.....	46

**Using a controller to move the buttons ..... 49**

**The main Ctrlr menus ..... 50**

**Appendix ..... 51**

Version history .....51

Moog Matriarch information .....51

Sysex file documentation .....51

## Installation and features

### Installation of the Ctrlr panel

The panel is provided as a compressed .zip file containing:

- the Moog Matriarch panel as an .exe file on Windows PC
- the Moog Matriarch panel as an .app file on Mac OS (zip folder to be uncompressed)
- the Moog Matriarch panel as VST 32 bits and 64 bits for Windows PC
- the Moog Matriarch panel as VST and AU plugins for Mac OS
- this manual as PDF
- a folder containing programs from the Moog Matriarch user manual

For the PC standalone version, decompress the zip file anywhere on your PC then copy the **Moog Matriarch.exe** file in some directory and launch it. The file may be scanned by your antivirus program (Avast on my computer) and should return no issue. If any, they are false and probably due to the fact that the program is not officially referenced.

For the Mac OS standalone version, decompress the zip file anywhere on your Mac then decompress the Moog Matriarch.app.zip. You may have to open the **Moog Matriarch.app** file using Ctrl+click as it may not be recognized by the OS.

The program will directly display the Ctrlr window with the Moog Matriarch panel displaying its main tab.





It is possible that the top row buttons are not responding after the initial installation. Simply close the program and restart it. The issue should be solved.

For the installation of the plugins, please refer to Installing and using the Matriarch panel as plugin on page 30 further in this manual.

## Features

### **You will find the following features in the Moog Matriarch panel:**

- Moog Matriarch interface with same look as actual synthesizer
- Displays all patch points from the main synth panel but also all outputs from the rear
- Button to switch the layout between the colored and the Dark editions
- Bidirectional communication with actual Matriarch synthesizer for all parameters supporting CC# Midi communication (pages 18 and 19 of the Matriarch v1.2.3 Firmware update manual)
- Top row of support “screens” with old look
- Visual feedback by using “LED” ring buttons and indication of the parameter value
- Envelope graphs handled by mouse or classical ADSR rotary encoders
- Load / Save programs from individual .syx files
- Automatic change of all CC# parameters on actual synthesizer at program load
- Program settings management (a selection of Global settings but stored at program level)
- Global settings management (receive all then individual update)
- Easy program renaming
- Display and export of program parameters as text file
- Ability to describe 15 input/output colored patch cables with different sources/destinations
- Programs have a name, author, save date and description. They can be associated to a category
- Ability to describe the usage of each program in a step by step mode (up to 15 steps)
- Browser of the files on the disk
- Patch sheet tab with patch sheet for Matriarch and other gear
- Patch cables (15 colors)
- Author and save date
- External synths and FX chain
- Display of current precise parameter value when clicking on rotary encoders
- Memorized panel zoom
- Automatic reading of wav files associated to a patch
- Manual/Automatic reading of any wav file
- Extras Midi CC controller number for the buttons without a Moog assigned number so you can adjust them from a hardware controller (still no impact on the synth of course and unfortunately).

## Communication with your Moog Matriarch synth



If you don't want to manage the parameters manageable by Midi CC# or if your Moog Matriarch is not connected by USB or Midi to your PC then you can skip this section.

### Preliminary info

As mentioned in the introduction of this manual, the Moog Matriarch does not support the load/save of programs by sysex messages but allows the manipulation of some program parameters by Midi CC messages.

The panel is working in a bidirectional fashion for those parameters managed by CC#: modifying a knob on the panel changes the corresponding parameter value on the synth while changing on the synth is making the corresponding button turn on the panel with the associated value displayed.

You can also manage all global parameters by sysex. This has been included in the panel and you will need to setup the bidirectional communication to get that possibility.

### Setting the Midi connection

You will access the Midi settings by going to the Midi menu where you will have to set the Midi Input and Midi Output channels:

- Connect the Moog Matriarch by USB to your PC or Midi Din (Output from your interface to Input on the Moog Matriarch AND Input from your interface to Output on the Moog Matriarch)
- Power the Moog Matriarch On
- Start the Moog Matriarch panel
- In the **Midi** menu, select **Input – Device Moog Matriarch**
- In the **Midi** menu, select **Input – Channel 1** (set this to the Midi channel of your Moog Matriarch)
- In the **Midi** menu, **Controller – Device** should normally stay to -- None
- In the **Midi** menu, select **Output – Device Moog Matriarch**
- In the **Midi** menu, select **Output – Channel 1** (set this to the Midi channel of your Moog Matriarch )



(picture showing the Grandmother – to be replaced)

## Testing the Midi connection



To secure a good bidirectional communication between the synth and the panel, **always start your Moog Matriarch first** then open the panel. If issues, close the panel and restart it.

We can now test the Midi connection:

- In the **Tools** menu, select **Midi monitor** and in the new monitor popup check **On Monitor input** and **Monitor Output** in the **View** menu



- Play a note on the synth to hear the sound
- Turn the Modulation Rate (CC 3) or one of the Oscillator Frequency (CC 16-18) buttons on the panel and listen how it affects the sound. You can also turn Arp/Seq Rate (CC 8) but then with a running arp or sequence.
- The Midi Monitor panel should show the CC# messages that are exchanged in the top Output part
- Turn the Modulation Rate or Oscillator 2 Frequency buttons on the synthesizer and checks that the corresponding button is turning on the panel and that the top screen shows the value changing
- The Midi Monitor panel should show the CC# messages that are exchanged in the bottom Input part
- You can also try with the triple position switches 😊



## Way of working

As you will discover by yourself, the usage of the panel is pretty straightforward but there are anyway different specific things you should know... ☺

### Using the buttons and modifying parameters

You modify parameters using rotary encoders by clicking on the button then moving the mouse cursor vertically up or down.



You can also modify any rotary encoder based parameter by doing a mouse hover on the button then using the mouse scroll wheel.



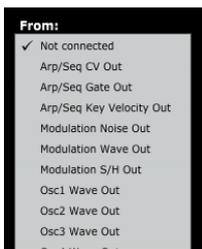
Switches are modified by simply clicking on them. They will go through the three positions as the actual switch on your synth



Momentary push buttons are activated by simply clicking on them (what a surprise...). They will momentary flash.



Permanent toggle buttons are activated by simply clicking on them (what a surprise...). Some are displayed in some kind of recessed way as Legato Glide in this picture; others are just staying lit as the Color button



Parameters presented as pulldowns are modified by opening the pulldown and selecting one of the pull-down items.

### Quick reset to default value

Most of the rotary encoders have default values set and you can quickly revert to this preset default value by **double-clicking on the button**. Try with the Arp/Seq Rate or Attenuators encoders for example.

### Color and Dark Series layout

In 2020 Moog introduced the Dark Series and thus for the ones of you having only the initial colored version, you can now benefit from it in the virtual world ;-)

To switch layout it is simply needed to toggle the **Color** button in the upper right side of the panel. The main panel is changed but also the buttons.



### Opening and closing the panel

When closing the panel (either by using **File – Quit** or by clicking on the upper right red cross) the file of the last program loaded or saved is stored.

When opening the panel, it is checked if the last file used still exists (could have been renamed or moved or deleted). If not found, the Init program is loaded (in the same way as when loading the panel for the first time). The last program is restored if it is found so you can continue your work where you left it.

This behavior can be prevented by setting the **No load at panel load** button to ON in **Library and Info** tab.



When loading the last program used at panel load, it can be that your Matriarch synth will freeze. It may be due to a problem with the Midi buffer. If this is happening several times, it is better to set the switch ON to not load the last program and use the panel as it was left.

**With No load at panel load set to OFF:** the last used file is restored

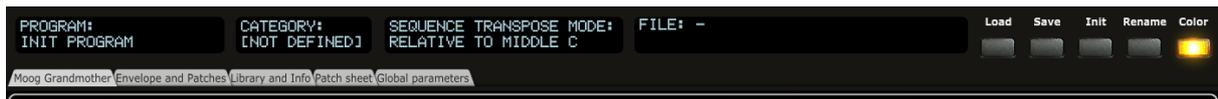


**With No load at panel load set to ON:** the panel is restored as you left it (all buttons in same position but as you can see the LCD screens are reset)



The same is done with the root folder of the File browser (see [Library and Info tab](#) on p20).

## Top panel area



In the top panel area you find 4 feedback “screens”, 5 buttons and 5 tabs:

- The first screen displays the **name** of the current program
- The second screen displays the **category** of the current program
- The third one indicates the parameter currently modified and its value
- The fourth one displays the latest sysex file loaded, its author and the save date
- The **Load** button allows loading a sysex file from disk
- The **Save** button saves the current program to a sysex file on disk
- The **Init** button reset all parameters to *a Basic program*
- The **Rename** button allows renaming the current program
- The **Color** button allows switching between the colored and the Dark Series layout
- The **Moog Matriarch** tab displays the synth
- The **Program settings and Patches** tab displays Program settings (a selection of Global settings saved at Program level) and Arp/Seq parameters. It also allows the registration of 15 different input/output patches, the identification of two external synths and one FX chain. In this tab you can modify the Category, the Author, the Description and enter a step by step usage of the current program. You will also be able to modify some Global settings
- The **Library and Info** tab provides the file browser that allows the selection of sysex files or the ability to listen to wav files, the display and the export of the parameters of the current program as text file and gives About info of the panel. It is also here that you will find the manual panel zoom that is memorized. In this tab you can also manage all the Global settings besides the Arp/Seq related ones.
- The **Patch sheet** tab displays automatically the Moog Matriarch patch sheet with all parameter values but with the addition of author, date, external synths and FX chain names , the Program and Glide settings and 12 external input/output connections

### Loading a Moog Matriarch program

The panel loads and saves the program parameters as a 1500 bytes sysex file (.syx) from/to your computer.

Clicking the **Load** button opens a classical Open file dialog where you can select the file to load. An internal check is done to verify that the file is compatible with the Moog Matriarch panel. The parameters are loaded, the top screen is showing the name of the file, the author and the saved date (in this panel, the confirmation dialog is not shown).

The panel will send the CC# parameters' values to your Moog Matriarch synth at program load. Nothing will happen if your synth is not connected by Midi/USB or if your synth is on another Midi channel than the one set in the MIDI menu of the panel.



### Saving a Moog Matriarch program

The panel loads and saves the program parameters as a 1500 bytes sysex file (.syx) from/to your computer. All buttons, patches, metadata and program settings are saved.

Clicking the **Save** button opens a classical Save file dialog where you can enter the name of the file to save. At this stage it is needed to select an existing file if you want to overwrite it. In that case, you will get a confirmation message.

Once the parameters are saved, the top of the screen displays the name of the file, the author (as set in the [Program settings and Patches](#) tab) and the saved date (thus, the current date) in ISO format *yyyy-mm-dd*. A confirmation dialog is also shown.

The panel stays on the current tab after a Save is done.



### Program Init

Clicking the **Init** button loads the parameters for an Init program that has the following characteristics:

- All parameters at 0 or OFF
- Pitch Mod Assign set to All
- Arp/Seq rate at 5
- Program settings at their default value



## Program Rename

Clicking the **Rename** button opens a popup window where you can modify the name of the program. The maximum number of characters for the program name is 20 (it will be truncated if longer).



Please note that the program name can (of course) be different than the file name the program is saved in.

### Moog Matriarch tab

In the **Moog Matriarch tab**, you have access to the same parameters as on the actual synthesizer but in a slightly different layout in order to fit nicely on a computer screen but also to some additions:

- Rear panels output patch points
- A series of 12 external input / patch points representing some external gear
- The Glide related parameters

Please refer to the Moog Matriarch user manual

([https://api.moogmusic.com/sites/default/files/2019-09/Moog\\_Matriarch\\_Manual.pdf](https://api.moogmusic.com/sites/default/files/2019-09/Moog_Matriarch_Manual.pdf)) for the explanations of each encoder/button.



The third top screen is showing the name and the value of the parameter you are modifying.

Doing a single click on any rotary encoder is displaying its name and current value **without that you need to modify it**.

### Envelopes shape

You can modify the envelopes shape by either turning the ADSR encoders or by using the mouse and moving the anchors on the graphs either vertically or horizontally.



When moving the anchors, the corresponding ADSR encoders will also turn and the parameter name and value are displayed in the screen of the top panel area.

### Program settings and Patches tab

In the **Program settings and Patches** tab, you can:

- adjust all Arp/Seq parameters (either the ones at program level and handled by CC or the ones handled as Global settings by sysex)
- set/indicate up to 15 from/to patches
- adapt the name of the external synths and FX chain that could be connected to your Matriarch
- adapt the current program category, author and description (click on the current description to edit it)
- manage a step by step usage description of the program
- manage Program settings (some Global settings saved as part of a Matriarch program):



### Arp/Seq settings

Arp/Seq Program settings are the 4 parameters handled by CC and saved as part of each program.



Arp/Seq Global settings are the less accessible settings for the Arp/Sequencer.

**Patch points**

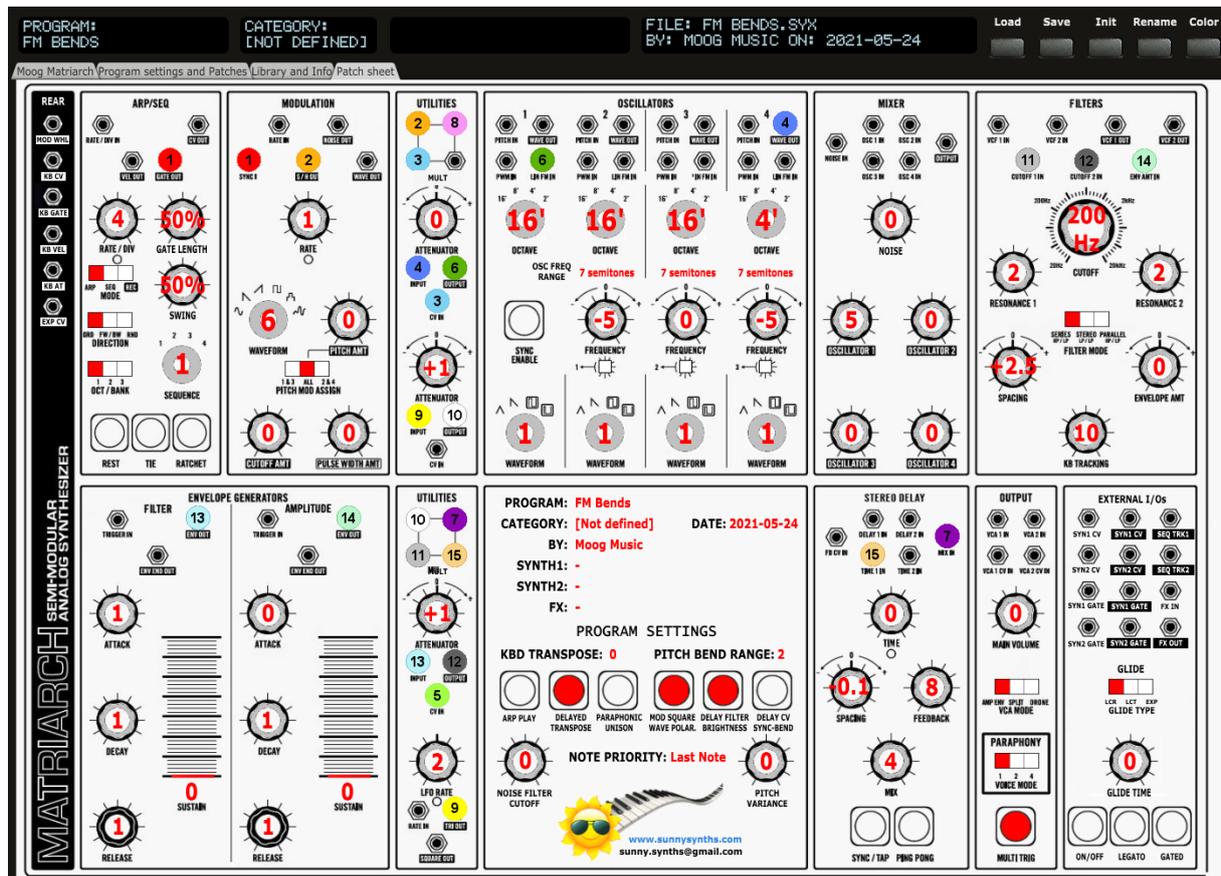
You modify the from/to patches as follows:

	From (Output)	To (Input)
Patch 1	Arp/Seq Gate Out	Modulation Sync In
Patch 2	Modulation S/H Out	Mult 1
Patch 3	Mult 3	Attenuator 1 CV In
Patch 4	Osc4 Wave Out	Attenuator 1 In
Patch 5	Mult 2	Attenuator 3 CV In
Patch 6	Attenuator 1 Out	Osc1 Linear FM In
Patch 7	Mult 6	Delay Mix In
Patch 8	Attenuator 3 Out	Mult 2
Patch 9	LFO Triangle Out	Attenuator 2 In
Patch 10	Attenuator 2 Out	Mult 5
Patch 11	Mult 7	Cutoff 1 In
Patch 12	Attenuator 3 Out	Cutoff 2 In
Patch 13	Env 1 Out	Attenuator 3 In
Patch 14	Env 2 Out	Filter Env Amount In
Patch 15	Mult 8	Delay Time 1 In

Clicking anywhere on a patch line (label, input, output, blank space) will select the patch to be modified and display its values in the pull-downs. You modify the **From** source and/or **To** destination and press the **Proceed** button to make the change.

You can also directly select a patch in the Patch pull-down then modify the From/To and press Proceed.

Patches are numbered 1 to 15 and have a color assigned to them. When a from/to patch is set in the **Program settings and Patches** tab, corresponding patch cables are displayed on the main Moog Matriarch tab and corresponding colored numbered circles are displayed on the patch sheet.



Numbered circles are used to help colorblind people.

**Available “From” sources** are the output patch points of the synthesizer’s main panel, the ones from the rear panel and a few additional external ones: "Not connected", "Synth1 CV output", "Synth2 CV output", "Synth1 Gate output", "Synth2 Gate output", "Sequencer track 1", "Sequencer track 2", "FX Out"

**Available “To” destinations** are the input patch points of the synthesizer plus a few additional external ones: "Not connected", "Synth1 CV input", "Synth2 CV input", "Synth1 Gate input", "Synth2 Gate input", "FX In"



As described in the manual, the “Mult x” patches can serve as input or as output.

Clicking the **Synth1**, **Synth2** or **FX** buttons opens a popup window where you can modify the name of a synth or FX connected to your Moog Matriarch. The maximum number of characters for those fields is 11 (it will be truncated if longer). If you leave the name empty then a “-” is displayed.



### Program settings

In this tab, you can manage twelve Moog Matriarch global settings related to your patch:

- Keyboard Octave Transpose
- Pitch Bend Range
- Oscillator 2-4 Frequency Knob Range
- Delayed Transpose
- Paraphonic Unison
- Noise Filter Cutoff
- Pitch Variance
- Delay Filter Brightness
- Delay CV Sync-Bend
- Mod Square Wave Polarity

These settings are saved in each program sysex file and thus loaded with them.

### Current program

Clicking the **Author** button opens a popup window where you can modify the name of the author of the patch. The maximum number of characters for Author is 15 (it will be truncated if longer). If you leave the Author name empty then a “?” is displayed.

You modify the Category of the program by using the Category pulldown.



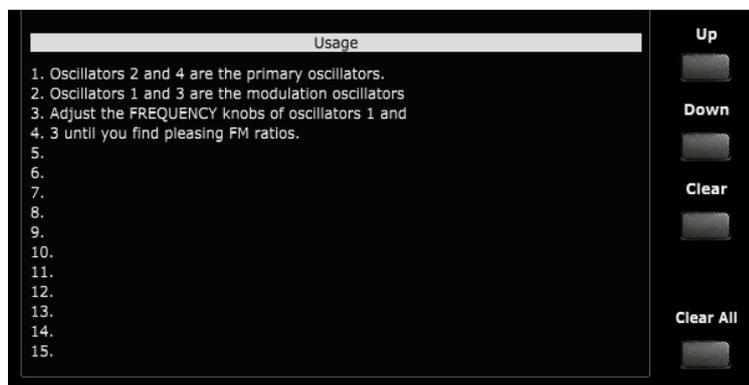
To modify the Description, you need to click on it, modify the text and **not forget to press Enter** before clicking outside the text box.



Both Category and Description are also saved in each program's sysex file.

### Step by step usage of the current program

You can manage the description of the usage of the current program by using up to 15 usage steps. For example: gradually increase Resonance, adjust FREQUENCY knobs of oscillators 1 and 4. The idea is to be able to illustrate the usage of your sound in a more live environment.



The actions to use the usage steps are:

- double-click on a step line to input or modify a step (max 50 characters by line)
- Use **Up** and **Down** buttons to move a step around
- Use **Clear** or the Delete key to erase a step

## Library and Info tab

In the **Library and Info** tab, you have access to:

- the **File Browser** that gives you directly information about the clicked file without having to load it
- the settings when playing a wav file
- the **About** screen giving you information about the panel version and the history of changes
- Panel zoom buttons keeping the zoom factor in memory till next usage of the panel
- the **Display** of all program parameters as a text file with the possibility to export it
- all **Global settings** of the Matriarch except the ones related to the Arp/Seq
- the **No load at panel load button** deciding to have the last saved program restored and loaded at next panel load or not



## File browser

The **File browser** allows you to navigate on your disk and browse through presets. It works as follows:

- **Click** on any file to display some info (name, category, author, saved date, description) about it in the Quick info window. If you click on a non- Moog Matriarch or .wav file then it will be indicated. When Auto Play is activated, clicking on a .wav file will play it automatically for the chosen duration and clicking on an Moog Matriarch .syx file will make the corresponding .wav file play automatically as well (if a wav file with the same name as the Moog Matriarch .syx file is found)
- **Double-click** on a file to load it (Moog Matriarch .syx file) or play it (.wav file) directly. A popup will be displayed if you do this on a not recognized file type

- Use the **Set Root** button to select the folder where your presets are (at this stage, the patch saver doesn't remember the location after you quit it). Note that you must at least have one file in the selected directory in order to have **Set root** functioning.

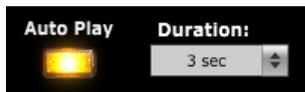


Sometimes the Set Root doesn't work (displays nothing or stays on the currently selected root directory). I have still not found the reason (thought it was due to no file being present in the folder; only subfolders but seems not to be always the case).

Temporary workaround: just select one level higher. Sorry...

- Use the **Refresh** button to refresh the list after having saved several files or added files outside the patch save
- Use the **Load** button to load the selected file and display its parameters
- Use the **Play** button to manually start playing a .wav file

### Wav file play settings



Wav files will be played for the duration set in the **Duration** pulldown (3s, 5s, 10s or Full).

Activating **Auto Play** will automatically trigger the play of the .wav files OR trigger playing the .wav file corresponding to the clicked Matriarch .syx file (if found). If there is no corresponding .wav file then nothing happens.

### Panel zoom



The panel can be zoomed by using the Ctrl + or Ctrl – keys combinations. This is also available from the **View** menu.

Using that method is incrementing/decrementing the zoom factor by 10% steps but the main issue (for some users) is that the zoom factor is not memorized and thus at next usage the zoom is back at 100%.

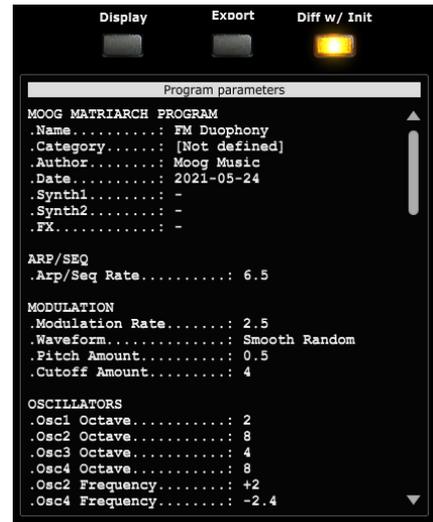
This is the reason of the implementation of this “manual” zoom. Modifying the zoom factor using those buttons is changing the zoom by 5% steps and will make it keep the zoom factor for next usage.

If you are still modifying the zoom using the View menu or the Ctrl + / Ctrl – keys, no worries! The “manual” zoom is reading the current zoom factor on the panel each time one of the main top panel button is used (Load, Save, Init, Rename).

### Display and Export info

On the right side of the panel, you have access to Program parameters:

- Use the **Display** button to list the parameters of the current program
- Use the **Export** button to export as a .txt file the parameters of the current program (it is not needed to first display them before exporting)
- Use the **Diff w/Init** switch to limit the display to only the differences with the Init program



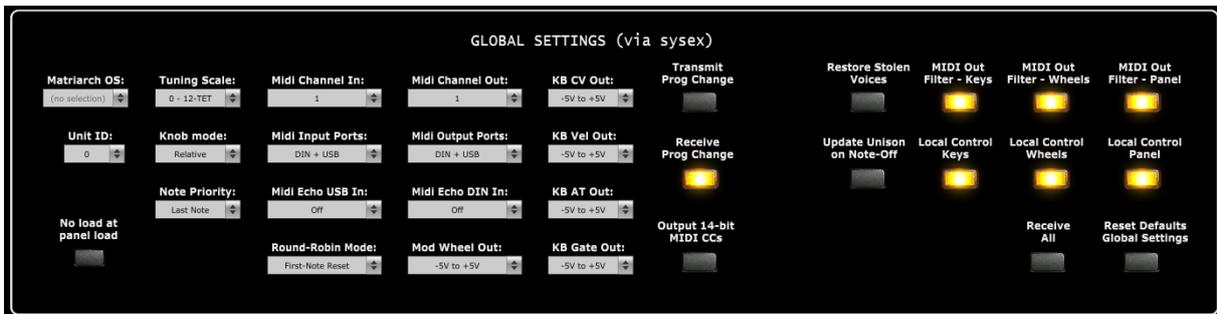
### No program load at panel load

By default (button **No load at panel load** is OFF) the panel will load the last program saved (or the Init program if the last program is not found).

Loading a program is also sending all sysex based parameters to the synth.

Setting the **No load at panel load** button to ON will prevent this load and thus the send and changes to the synthesizer when opening the panel.

### Global settings



For the moment the Matriarch OS pulldown is not used. It may be used in a coming version of the panel if Moog is doing changes to the Global settings.

Use the **Receive All** button to request all the global parameters from the Matriarch. A request parameter Midi message is sent for each parameter separately one after the other and each reply interpreted one by one to display the value of the parameter.

From there you can modify the parameters individually one by one.

Use the **Reset Defaults** button to reset all values according to their default values (except Unit ID and the midi channels)



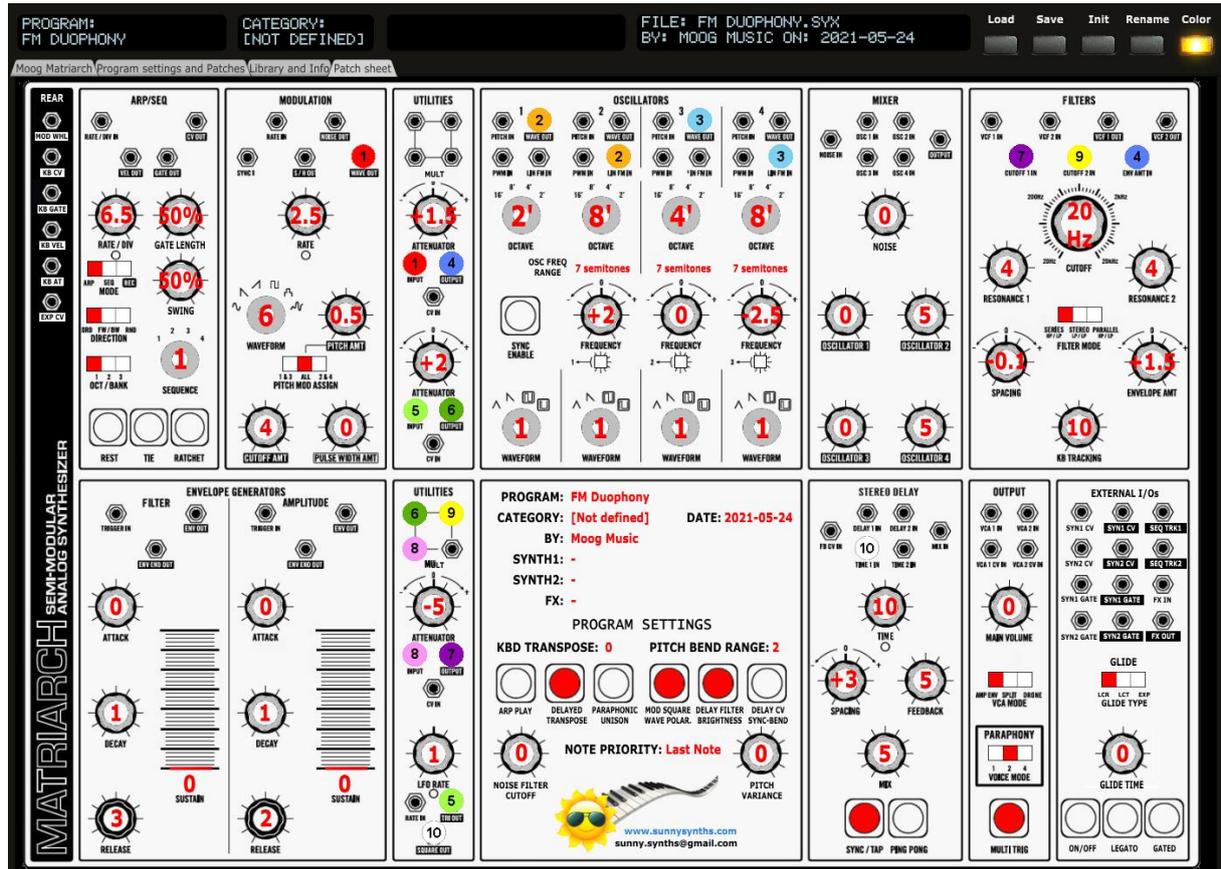
Pay attention when changing the Midi channel as it is not changing the Midi settings of the panel.

You should set the Unit ID to 1 unless you changed it to another value (even if Moog indicates 0 as default value – *confirmation requested to Moog Support but no answer yet*).

Patch sheet tab

In the **Patch sheet** tab, you have access to:

- A one shot view of the values of all parameters, patch cable connections and program info



The content of this tab is adapted automatically. Directly ready for a screenshot!

## Installing and using the Matriarch panel as plugin

First of all, thanks to all people that have made some tests and provided feedback from using the plugin with their DAW.

The following paragraphs will provide info on how to install the plugin version of the panel but also describe the way to use it and the known limitations for each DAW.



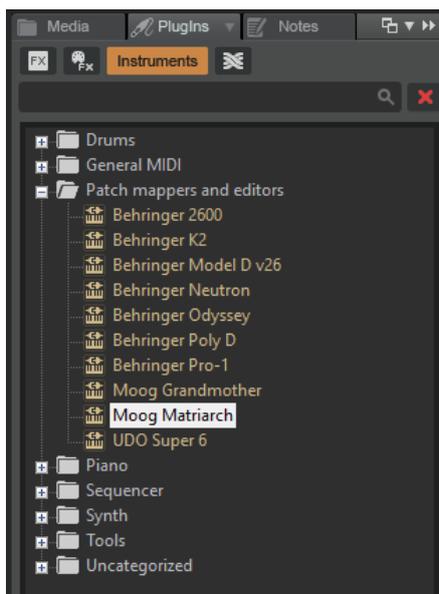
If your DAW is not listed, please perform some tests as described and send me the equivalent of text and screenshots. I'll add those in the next version of the manual.

### Installation

On Windows PC, depending on your DAW version and after unzipping the main file, either copy the **Moog Matriarch.dll** file from the Windows VST 64 bits directory to your 64 bits plugins directory and/or the **Moog Matriarch.dll** file from the Windows VST 32 bits directory to your 32 bits plugins directory (Steinberg hosts often use C:\Program Files\Steinberg\VSTplugins as the default plugin path).

On Mac OS, unzip then copy the **Moog Matriarch.vst** file from the MacOS VST directory to your VST plugin directory (/Library/Audio/Plug-ins/VST) and copy **Moog Matriarch.component** file from the MacOS AU directory to your plugin directory (/Library/Audio/Plug-ins/Component). You will most probably need administrator rights to perform those copies.

Start your DAW and check that the plugin directory is rescanned and that the **Moog Matriarch** panel is visible in your list of plugins. Here is an example in Cakewalk (a light blue scanning popup is displayed as soon as a file is added or modified in the identified 64 bits VST plugins folder):



### Tests and identified limitations

Different DAWs have been tested and some way of working presented here.



Don't hesitate to send a mail to [sunny.synths@gmail.com](mailto:sunny.synths@gmail.com) if you see errors or identify ways of doing things in your DAWs. They will be mentioned in the next version of the manual.

**The following actions are checked:**

- Creating a track using the plugin
- Displaying the instrument and checking all controls are working fine including Load/Save...
- Playing a wav file from the file browser. The DAW is often using ASIO while the wav files are played with the Windows or MacOs native player
- Saving and opening a project in the DAW. This is checking that the last patch saved is restored correctly. As in standalone mode, the last patch used is restored (not the last position of the knobs!)
- Creating a second track with the plugin
- Saving and opening a project in the DAW. This is checking that there can be different tracks using the plugin with each of their last patch saved restored correctly.
- Creating a preset in the DAW. Each DAW has different ways to do this. Creating presets can also be done by saving full channel strips that are including the VST instrument setup (Cakewalk, Reaper, Logic)
- Creating a track by selecting a DAW preset instead of selecting the plugin. Checks if the correct patch is restored. When working, this is done by loading a saved channel strip.
- Replacing a DAW preset by another DAW preset



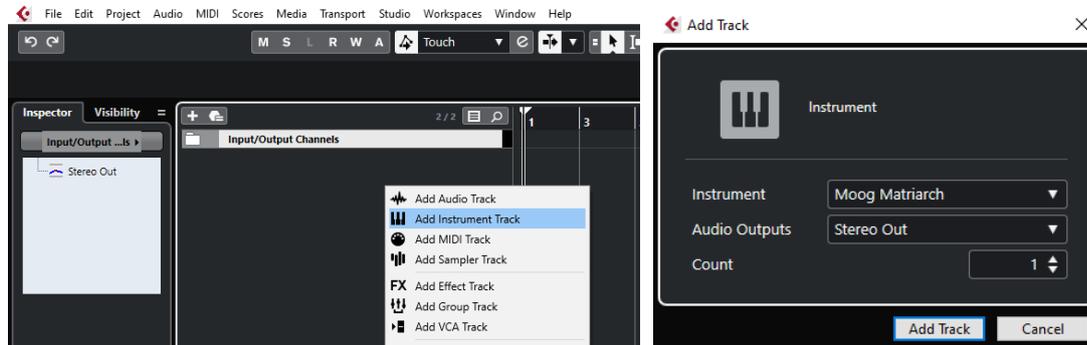
Replacing the DAW preset in a track by another DAW preset is working. However it is still better to use the LOAD and SAVE buttons from the Matriarch panel itself as the displays in the panel will not show the correct preset name and file even if all buttons will be positioned correctly.

	Cubase	Cakewalk	Reaper	Ableton	Studio 1	Logic
Create track	✓	✓	✓	✓	✓	✓
Using the plugin	✓	✓	✓	✓	✓	✓
Play wav	✓	✓	✓	✓	✗	✓
Save and restore project in DAW	✓	✓	✓	✓	✓	✓
Save and restore project with 2 tracks	✓	✓	✓	✓	✓	✓
Create DAW preset	✓	✓	✓	✓	✓	✓
Create track based on DAW preset (saved channel strip)	✓	✓	✓	✗	✓	✓
Replace DAW preset by another DAW preset	🌀	🌀	✓	🌀	🌀	✓

## Cubase

### Creating a new track

Add an Instrument track by using the Add track menu displayed when right clicking in the middle of the workspace then select the Moog Matriarch VST. Click on the Instrument button to display the panel and use it as you would do for the standalone version.



...or by dragging and dropping from the VSTi panel (easier).



Listening to wav files associated a patch is also working even if ASIO is used as audio driver for Cubase while the wav file player is Windows.

When saving the Cubase project, the panel is saved as well. It will be restored with the last patch used and saved.

### Using several Matriarch tracks at once

You can associate the panel to several tracks in order to keep track of the different patches used for them



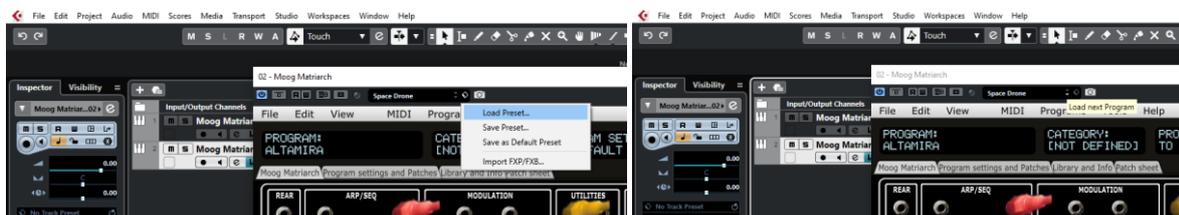
### Saving a patch as a Cubase preset

You should save your patches using the Save button **inside** the panel but in addition to that you can also save them as *Cubase preset* or *Cubase track preset*.

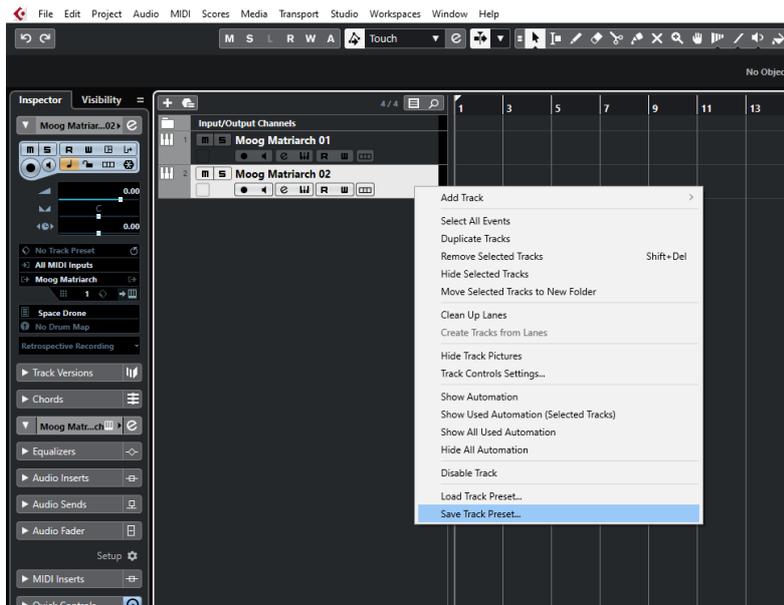
To save as Cubase preset, click on the small diamond to the left of the small camera icon at the top of the plugin window, select **Save preset...** then give a name to your preset.



Later on, you can load a preset by using **Load preset** from the same menu or you can navigate through your presets by using the small up and downs triangle buttons.

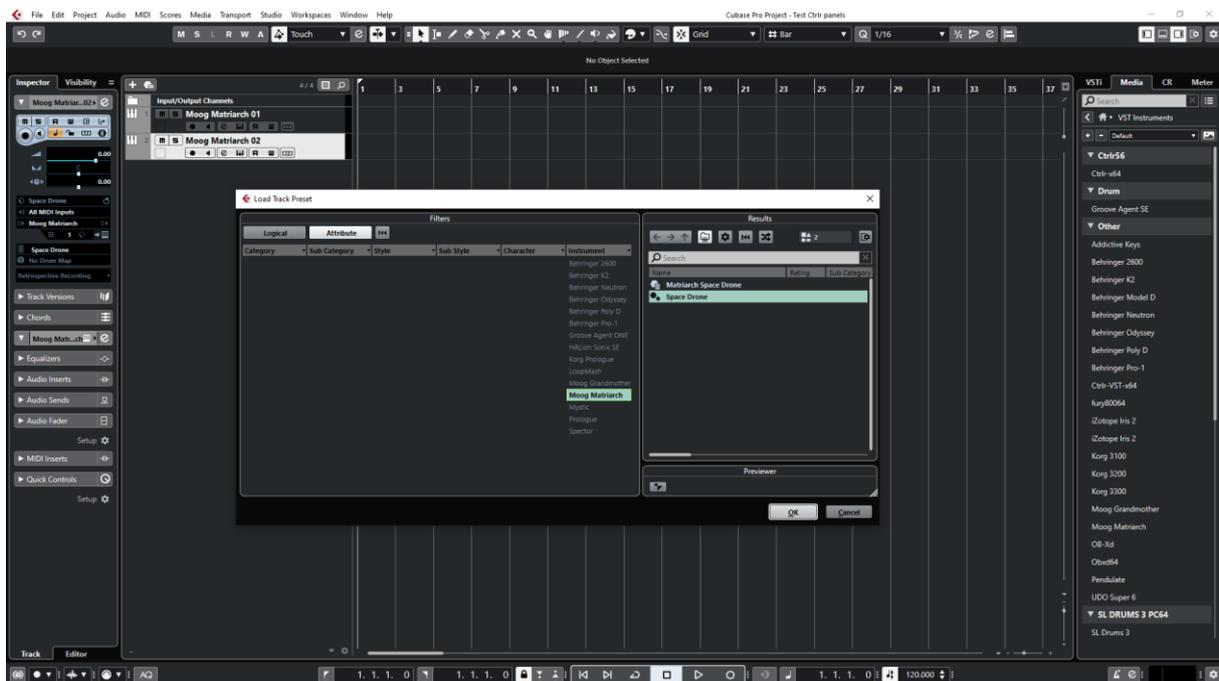


To save as Cubase track preset, select **Save track preset** when right clicking on a track.



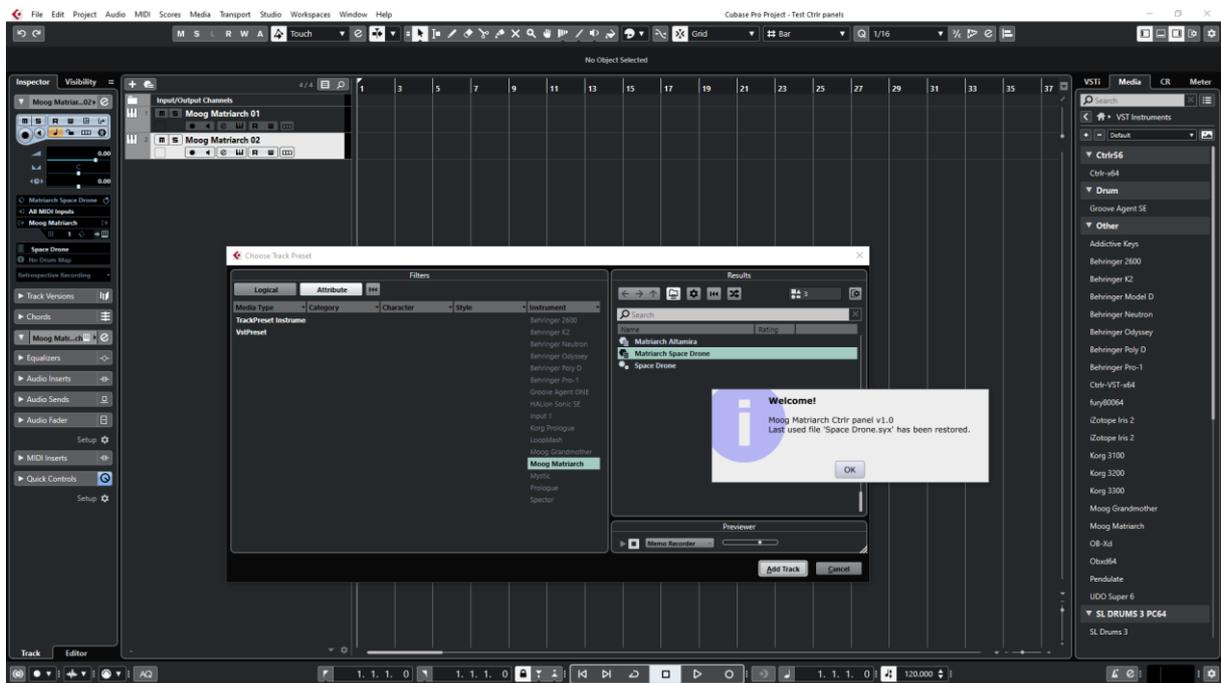
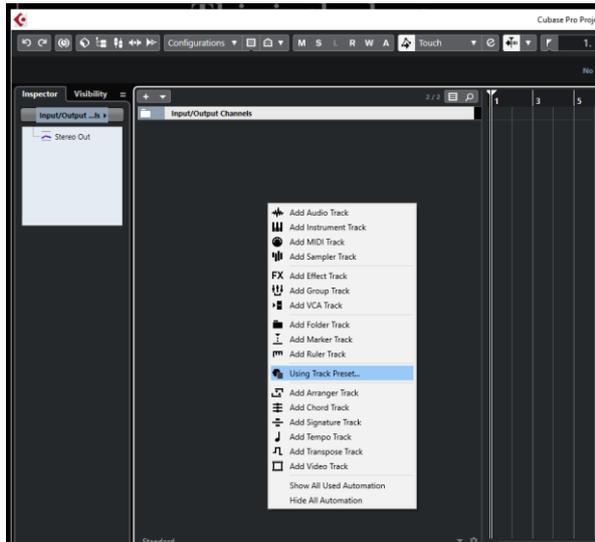
Before saving as track preset, verify that the button **No load at panel load** is set to OFF in the Library and info tab (Global settings) to secure having the preset restored.

Later on, the content of the panel as is can be restored directly in a new empty track without the need of a Load from the panel by selecting **Load track preset** when right clicking on a track.



### Creating a new track from a Cubase preset

When creating a new track you can directly pick [Using track preset](#) from the menu. The patch will appear in the panel on a new track without the need of a using Load from the panel



### Replacing the preset on an existing track by another preset

Select another previously saved preset at the top left of the plugin window. All buttons will be positioned according to the newly loaded presets.

You can also scroll through the presets with the small up/down buttons.



At this stage, it is still better to use the LOAD and SAVE buttons from the Matriarch panel itself as the displays in the panel will not show the correct preset name and file even if all buttons will be positioned correctly.

## Cakewalk by Bandlab

### Creating a new track

Drag the Matriarch plugin from the Instruments plugin window (Synths) and drop it on the main window to create a new track.

Click on the instrument icon near the track name to display the panel.



Load a preset from inside the panel and use it as you would do for the standalone version.

Listening to wav files associated with a patch is also working even if ASIO is used as audio driver for Cakewalk while the wav file player is Windows or MacOs.

When saving the Cakewalk project, the panel is saved as well. It will be restored with the last patch used and saved.

### Using several Matriarch tracks at once

Works fine. To keep several plugin windows opened at once you need to pin them first (pin icon on top right of a plugin window). Patches and windows are restored when re-opening the project.



### Saving a patch as a Cakewalk preset

It is possible to save the current patch as a Cakewalk preset by changing the name at the top of the plugin window (here “Cavern Strings”) then clicking on the Save button.

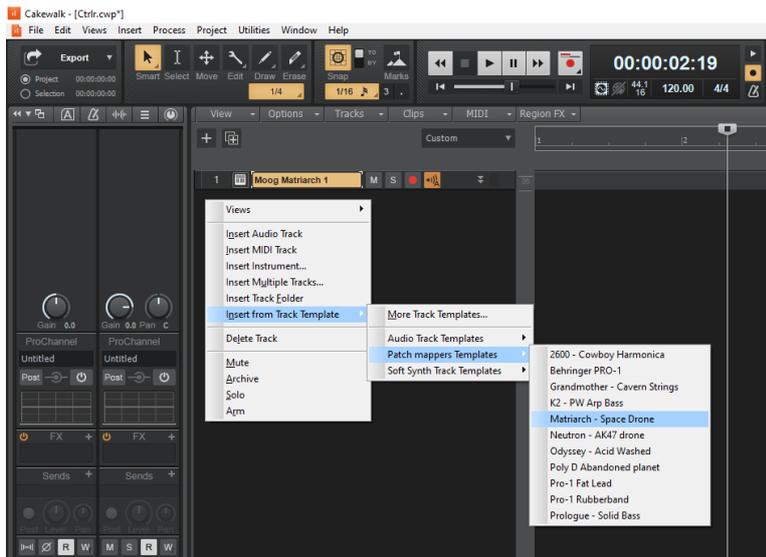


It is also possible to save a complete mixer channel as track template.

### Creating a new track from a Cakewalk preset

Not found... It seems it is always needed to first create a track with the instrument plugin and then to select a preset (but this doesn't work – see next paragraph).

Another possibility would be to save each preset as a separate track template then to create the track from those track template “presets”.



### Replacing the preset on an existing track by another preset

Select another previously saved preset at the top left of the plugin window. All buttons will be positioned according to the newly loaded presets.



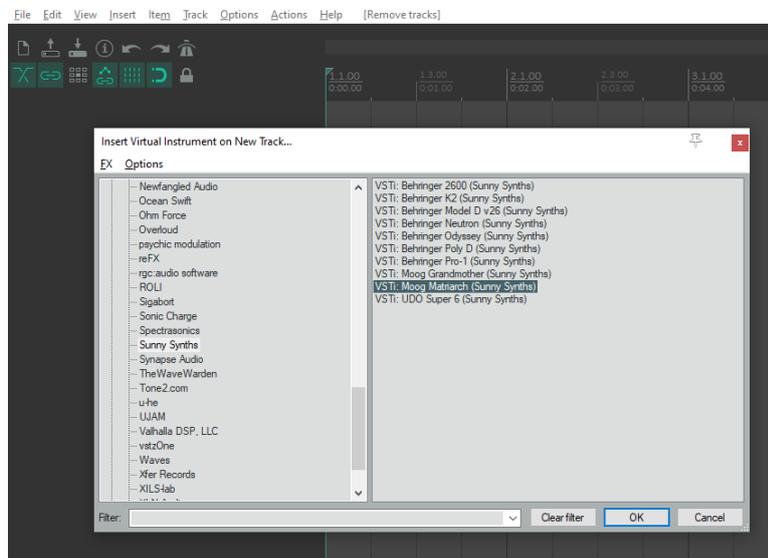
At this stage, it is still better to use the LOAD and SAVE buttons from the Matriarch panel itself as the displays in the panel will not show the correct preset name and file even if all buttons will be positioned correctly.

## Reaper

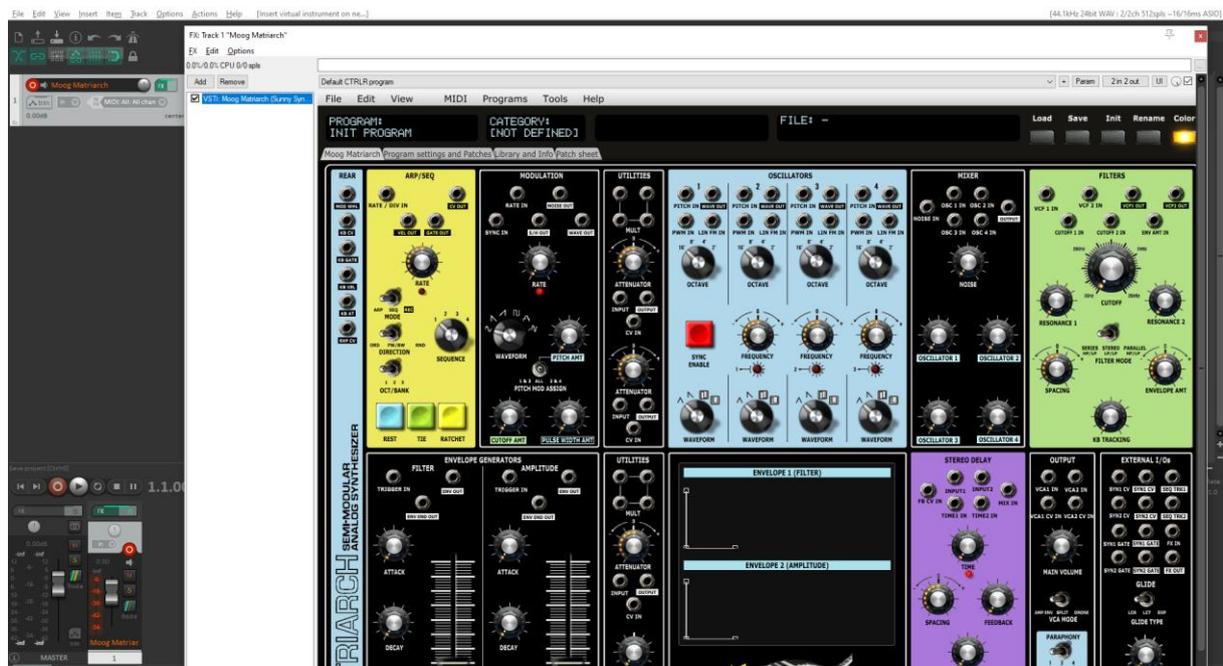
Reaper is available on Windows and MacOS. On MacOS, Reaper is supporting both VST and AU plugin versions.

### Creating a new track

Select [Insert virtual instrument on new track](#) in the Track menu then select the Moog Matriarch VST from the VSTi category



Click on the [FX](#) button to display the panel and use it as you would do for the standalone version (right-clicking instead of direct click gives only the plugin window without the blank side area)



Listening to wav files associated a patch is also working even if ASIO is used as audio driver for Reaper while the wav file player is Windows or MacOs.

When saving the Reaper project, the panel is saved as well. It will be restored with the last patch used and saved.

### Using several Matriarch tracks at once

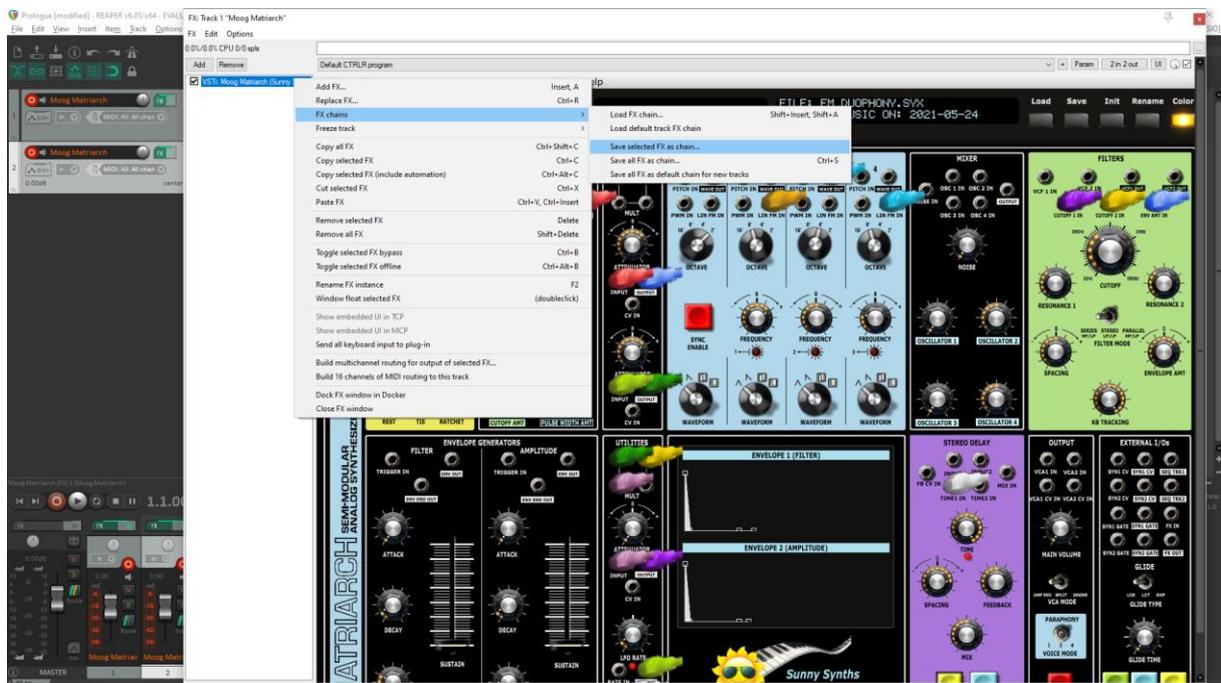
Works fine:



### Saving a patch as a Reaper preset

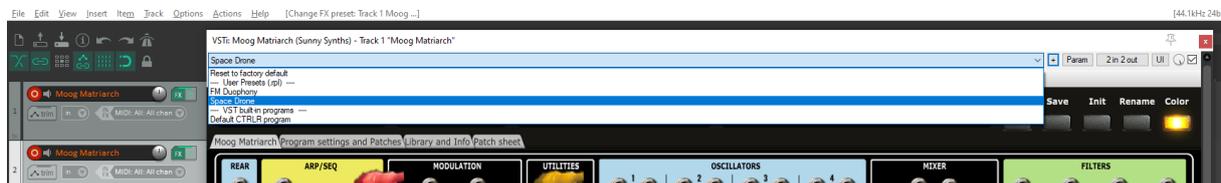
Two different methods are possible:

- Save FX chain - Right click on VST name in white area of plugin window then select **FX chain**
- Save preset - Click on the **+** button in the plugin window then name the preset





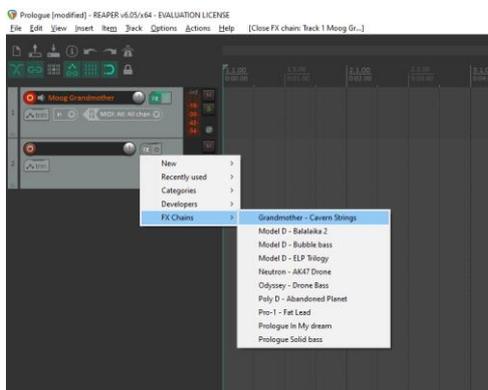
Presets are appearing under User presets



Before saving as track preset, verify that the button **No load at panel load** is set to OFF in the Library and info tab (Global settings) to secure having the preset restored.

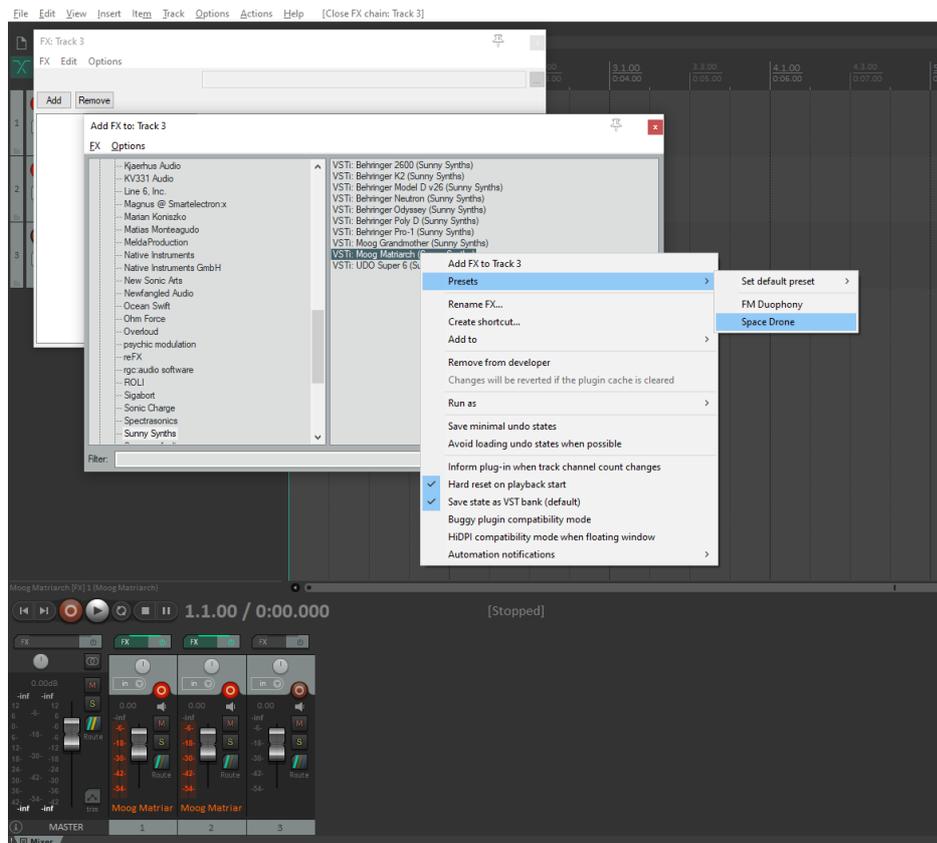
### Creating a new track from a Reaper FX chain preset

Create an empty track then right click on grey **FX** button to select a saved FX chain



### Creating a new track from a Reaper preset

This is not possible directly but well in two steps. First, create an empty track then click on grey **FX** button to display the Track FX window with the VST plugins list. Then, right click on the Matriarch plugin and select a saved preset under **Presets**



### Replacing the preset on an existing track by another preset

Click on the green **FX button** then in the FX track window, select the FX and press the **Remove button**.

Add the new one as described above.

## Ableton

**Status:** This has been tested in Ableton Live Lite 10 and it is thus expected to work fine in the full versions.

### Creating a new track

Drag the Matriarch plugin from the plugin browser and drop it on the main window to create a new track.

The panel should open automatically. If not, click on the small wrench icon in the small window at the bottom.



Load a preset from inside the panel and use it as you would do for the standalone version.

Listening to wav files associated a patch is also working even if ASIO is used as audio driver for Ableton while the wav file player is Windows or MacOs.

When saving the Ableton project, the panel is saved as well. It will be restored with the last patch used and saved.

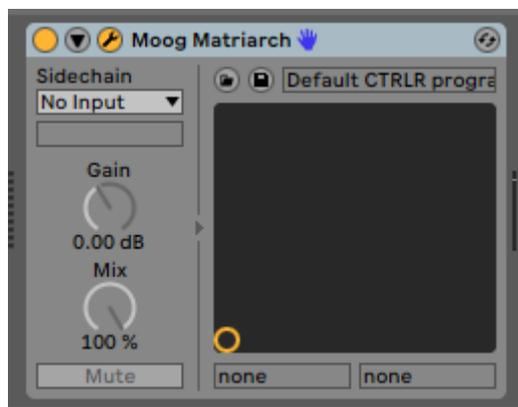
### Using several Matriarch tracks at once

Works fine. To keep several plugin windows opened at once you need to change the masking of plugin setup in Preferences. Patches and windows are restored when re-opening the project.



### Saving a patch as an Ableton preset

It is possible to save the current patch as an Ableton .fxp preset by clicking on the Save button in the small instrument window at the bottom.



### Creating a new track from an Ableton preset

Not found... It seems it is always needed to first create a track with the instrument plugin and then to select a preset (but this doesn't work – see next paragraph).

### Replacing the preset on an existing track by another preset

Select another previously saved preset at the top left of the plugin window. All buttons will be positioned according to the newly loaded presets.



At this stage, it is still better to use the LOAD and SAVE buttons from the Matriarch panel itself as the displays in the panel will not show the correct preset name and file even if all buttons will be positioned correctly.

## Studio One

**Status:** This has been tested in Studio One 3.5 32 bits and 4.6 64 bits version.

Playing the wav file associated to a patch seems not working.

### Creating a new track

Drag the Matriarch plugin from the plugin browser and drop it on the main window to create a new track.

The panel should open automatically. If not, click on the small Instrument editor icon on the right side of the track name.



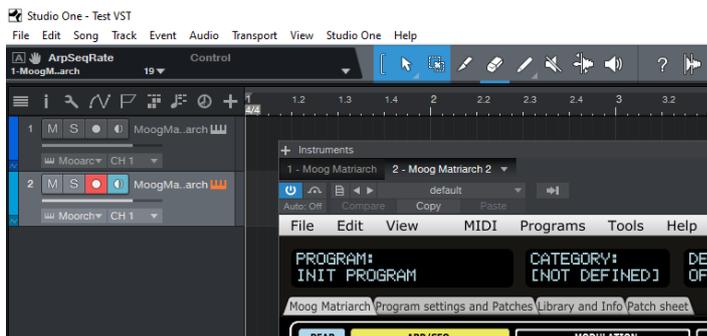
Load a preset from inside the panel and use it as you would do for the standalone version.

Listening to wav files associated a patch is not working even if ASIO is used as audio driver for Studio One while the wav file player is Windows or MacOs.

When saving the Studio One song, the panel is saved as well. It will be restored with the last patch used and saved.

### Using several Matriarch tracks at once

Works fine. The instrument editor is showing one tab by track:



### Saving a patch as a Matriarch Studio One preset

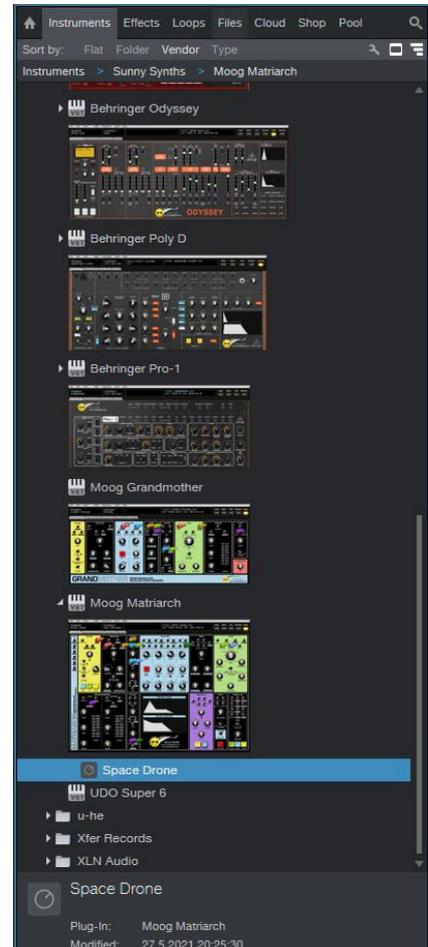
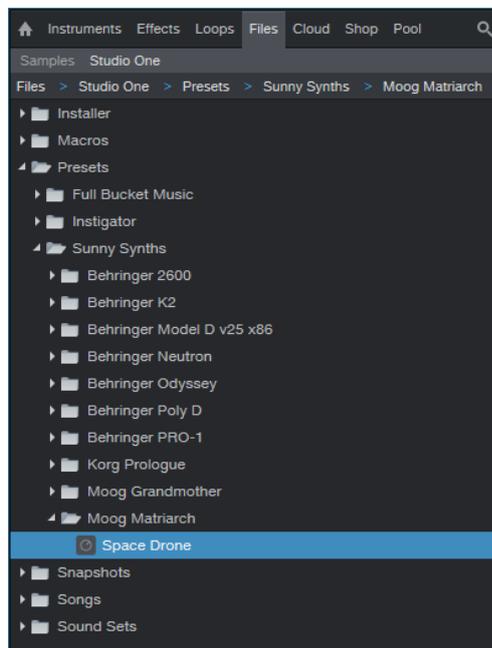
You can save the last patch saved in the panel as a preset in Studio One by selecting **Store preset** in the plugin window preset menu.

In the popup menu, input the name of a Subfolder corresponding for example to the sound category.



### Creating a new track from a Studio One preset

The presets and their subfolders created with the above method are appearing directly in the browser under the Matriarch VST name in the Instruments tab or in the Files tab



### Replacing the preset on an existing track by another preset

Select another previously saved preset at the top left of the plugin window. All buttons will be positioned according to the newly loaded presets.



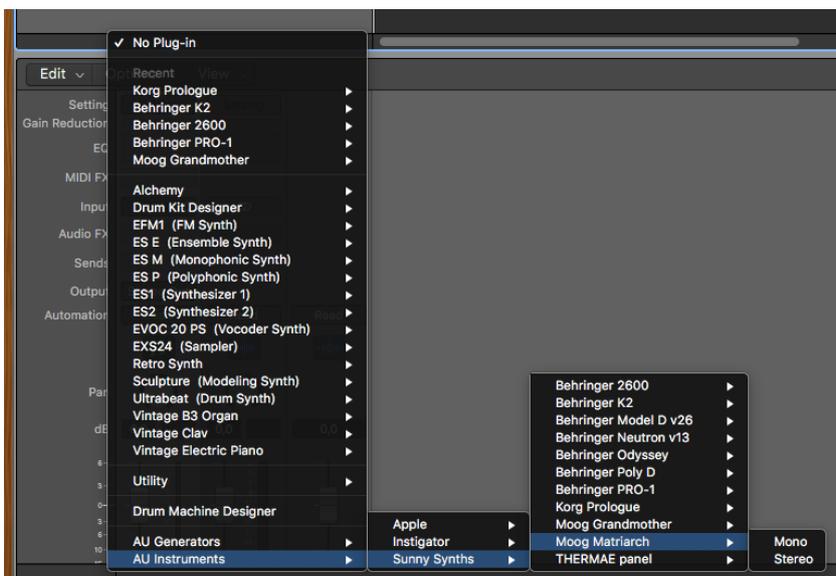
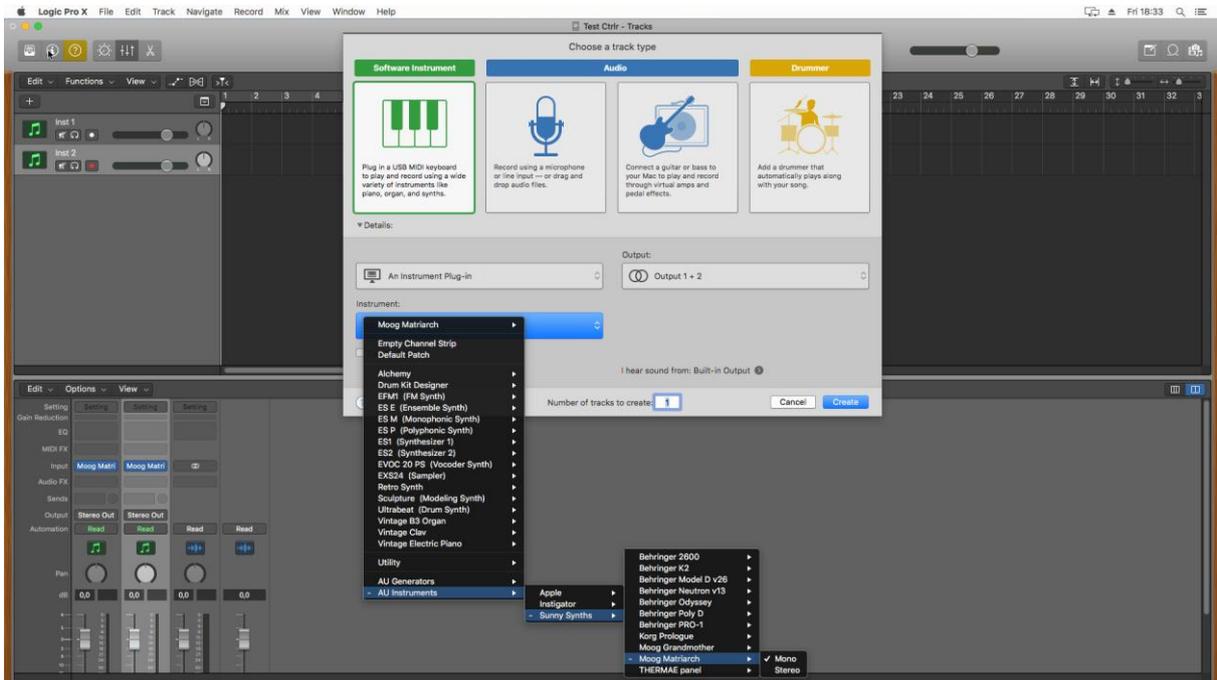
At this stage, it is still better to use the LOAD and SAVE buttons from the Matriarch panel itself as the displays in the panel will not show the correct preset name and file even if all buttons will be positioned correctly.

## Logic Pro X

Logic Pro X is only available on MacOS and handles only the AU plugin version so you must secure to have the Moog Matriarch.component plugin file in your AU plugin directory.

### Creating a new first track

Create a new instrument track and select the Moog Matriarch plugin for it (under AU instruments) either from the main [Choose a track type](#) window or from an empty track by clicking on the small Instrument editor icon on the right side of the track [Input](#).



Click in the middle of the track Input to open the panel (if it doesn't open automatically)



Load a preset from inside the panel and use it as you would do for the standalone version.

Listening to wav files associated a patch is also working even if ASIO is used as audio driver for Logic while the wav file player is MacOs.

When saving the Logic project, the panel is saved as well. It will be restored with the last patch used and saved.

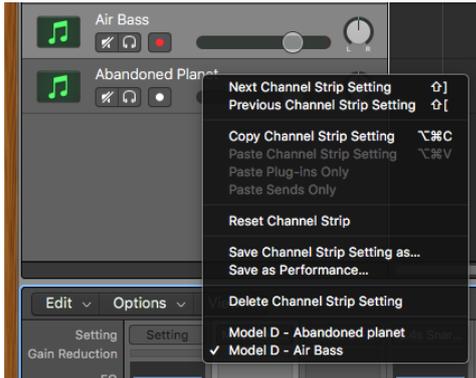
### Using several Matriarch tracks at once

Works fine and can be done by simply creating two tracks with the plugin (you may need to zoom)



If wished, one can also create a channel strip:

- Save the Init patch as a channel strip preset in Logic by clicking on the **Setting** button at the top of the channel strip in the mixer and selecting **Save Channel Strip Setting as...**



- New tracks can be created based on that Init channel strip (see after) and can then be changed afterwards to other patches with the Load button

### Saving a patch as a Matriarch Logic channel strip preset

You can save the last patch saved in the panel as a channel strip preset in Logic by clicking on the **Setting** button at the top of the channel strip in the mixer and selecting **Save Channel Strip Setting as...** Note that this is different than saving a plugin preset.

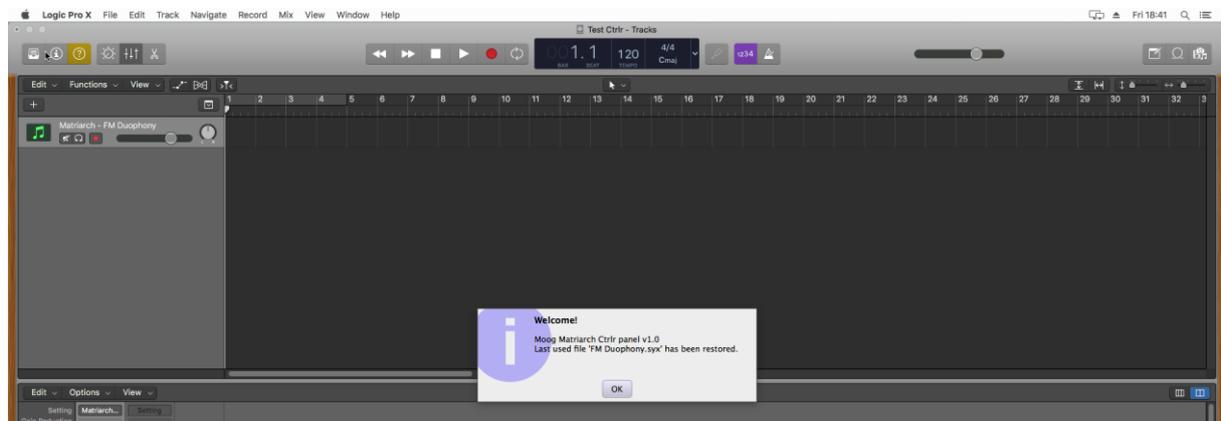
### Creating a new track from a Logic channel strip setting

This is not possible directly but well in two steps. First, create a new Software Instrument track with an *Empty track channel* then click on the **Setting** button at the top of the channel strip in the mixer and select a previously saved channel strip setting.

### Replacing the preset on an existing track by another preset

This is working well with Channel Strips Settings.

When replaced, a popup indicates that the Last file used “xxx” has been restored.



Select another previously saved preset at the top left of the plugin window. All buttons will be positioned according to the newly loaded presets.



At this stage, it is still better to use the LOAD and SAVE buttons from the Matriarch panel itself as the displays in the panel will not show the correct preset name and file even if all buttons will be positioned correctly.

## Using a controller to move the buttons

If you connected a controller like the Novation SL MkII then you can benefit from moving all knobs of the panel from your controller.

This has been achieved by assigning extra Midi CC controller numbers to the knobs not assigned by Moog. **Of course**, as nothing is changed in the hardware, moving those knobs from your controller will not affect the sound as such.

Connect your controller as on following picture:



Controller numbers are the following (in blue the ones assigned by Moog and affecting the synthesizer, in red the extra ones without effect on the synth and only used to handle the panel):

Matriarch SEMI-MODULAR ANALOG SYNTHESIZER	ARP/SEQ RATE / DIV 8 91 92 93 19 20 21 57 22 23 REST TIE RATCHET ENVELOPE GENERATORS ATTACK 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	MODULATOR RATE IN RATE OUT 3 20 21 57 22 23 ENVELOPE GENERATORS ATTACK 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	UTILITIES MULTI ATTENUATOR 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	OSCILLATORS 1 2 3 4 74 75 76 77 80 16 17 18 81 82 83 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	MIXER OSC 1 IN OSC 2 IN OSC 3 IN OSC 4 IN 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	FILTERS VCF 1 IN VCF 2 IN VCF 3 IN VCF 4 IN 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
	ENVELOPE GENERATORS ATTACK 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	UTILITIES MULTI ATTENUATOR 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	ARP/SEQ Play 73 Hold 69 Swing 14 Gate Length 15 OTHERS 9 Noise Filter Cutoff 12 13 52 53 89 88 SYNC / TAP PING PONG MAIN VOLUME 54 55 PARAPHONY 94 VOICE MODE 56 MULTI TRIG GLIDE 85 Type 5 Glide Time 65 87 86 On/Off Legato Gated	STEREO DELAY DELAY 1 IN DELAY 2 IN TIME 1 IN TIME 2 IN 12 13 52 53 89 88 SYNC / TAP PING PONG MAIN VOLUME 54 55 PARAPHONY 94 VOICE MODE 56 MULTI TRIG GLIDE 85 Type 5 Glide Time 65 87 86 On/Off Legato Gated	OUTPUT VCA 1 IN VCA 2 IN VCA 3 IN VCA 4 IN 54 55 PARAPHONY 94 VOICE MODE 56 MULTI TRIG GLIDE 85 Type 5 Glide Time 65 87 86 On/Off Legato Gated	

## The main Ctrlr menus

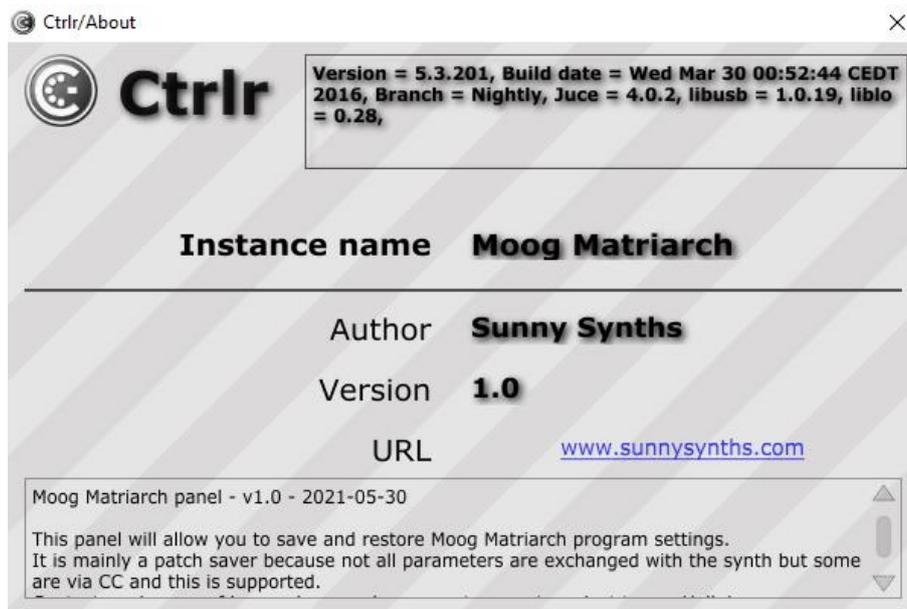
Moog Grandmother



Actually, not so much is used from the Ctrlr menus...

What you can use is:

- **File** menu: Quit is the only option
- **View** menu: allows zooming the panel in and out by 10% steps
- **Midi** menu: to select your Moog Matriarch as Input Midi device and as Output Midi device. Sets the Midi channel
- **Tools** menu: use the Midi monitor popup to verify the messages between the panel and the synth
- **Help** menu: displays the About info of the panel



## Appendix

### Version history

Date	Version	Description	By
2021-05-30	1.0	First version of this manual	Sunny Synths

### Moog Matriarch information

The Moog Matriarch product page: <https://www.moogmusic.com/products/Matriarch>

### Sysex file documentation

Here is the documentation of the sysex file used to store the parameters. It is 1500 bytes long.

```
-- // Moog Matriarch - Sound data sysex structure - Size=1500 bytes v1.0 //
--
-- Offset is what is displayed with HxD Hexadecimal analyser
-- getByte() is also using the Offset to retrieve Bytes from sysex dump
--
-- This is just a structure used to save the data on the computer
-- Nothing official or unofficial from Moog, just a decision made by me ;- )
-- This data is not transferred by Midi

-- 100 = 64
-- 127 = 7F

--      Offset      | Byte content
--      +-----+
--      0000      | F0   Sysex start
--      0001      | 04   Moog Music ID
--      0002      | AB   Matriarch (not existing, my choice)
--      0003      | 01   Sound data
--      0004      | 00-01 Glide On/Off
--      0005      | 00-7F Glide Time
--      0006      | 00-02 Glide Type
--      0007      | 00-01 Legato Glide On/Off
--      0008      | 00-01 Gated Glide On/Off
--      0009      | 00-64 Fine Tune (32=0) - At back of Matriarch. Not stored atm
--      0010-13   | 00-03 Osc Octave
--      0014      | 00-01 Osc Sync Enable
--      0015-17   | 00-7F Osc Frequency (40=0)
--      0018-21   | 00-03 Osc Waveform
--      0022-26   | 00-64 Volume (Osc1-4, Noise)
--      0027      | 00-64 Filter Cutoff
```

--	0028-29		00-64	Filter Resonance
--	0030		00-7F	Filter Spacing (3F=0)
--	0031		00-64	Filter Envelope Amount (32=0)
--	0032		00-02	Keyboard Tracking
--	0033		00-02	Filter Mode
--	0034-35		00-64	Envelope Attack
--	0036-37		00-64	Envelope Decay
--	0038-39		00-23	Envelope Sustain (0-35)
--	0040-41		00-64	Envelope Release
--	0042		00-64	Main Volume
--	0043		00-02	VCA Mode
--	0044		00-02	Voice Mode
--	0045		00-01	Multi Trig
--	0046		00-7F	Delay Time
--	0047		00-7F	Delay Spacing (3F=0)
--	0048		00-64	Delay Feedback
--	0049		00-64	Delay Mix
--	0050		00-01	Sync / Tap
--	0051		00-01	Ping Pong
--	0052		00-7F	Mod Rate
--	0053		00-05	Mod Waveform
--	0054		00-64	Mod Pitch Amount
--	0055		00-02	Mod Pitch Mod Assign
--	0056		00-64	Mod Cutoff Amount
--	0057		00-64	Mod Pulse Width Amount
--	0058-60		00-64	Attenuator 1-3 (32=0)
--	0061		00-64	LFO Rate
--	0062		00-7F	Arp/Seq Rate
--	0063		00-02	Arp/Seq Mode
--	0064		00-02	Arp/Seq Direction
--	0065		00-02	Arp Range / Seq Bank
--	0066		00-03	Sequence
--	0067		00-7F	Arp/Seq Swing
--	0068		00-7F	Arp/Seq Gate Length
--	0069		00-01	Arp/Seq Play
--	0070		00-01	Arp/Seq Hold
--	0071		00-04	Keyboard Octave Transpose
--	0072		00-01	Delayed Transpose
--	0073		00-02	Note priority
--	0074		00-0C	Pitch Bend Range
--	0075		00-01	Paraphonic Unison
--	0076-8		00-18	Oscillator Frequency Knob Range
--	0079		00-01	Mod Square Wave Polarity
--	0080		00-7F	Noise Filter Cutoff
--	0081		00-01	Delay Filter Brightness
--	0082		00-01	Delay Sync CV Bend

--	0083-85		00-01	Osc 2-4 Sync
--	0086-87		0000-0190	Pitch Variance (0-400 2 bytes)
--	0078-89			Not used
--	0090-104		00-28	Patch sources
--	0105-109			Not used
--	0110-124		00-39	Patch destinations
--	0125-129			Not used
--	0130-149			Name (20 characters)
--	0150		00-10	Category
--	0151-650			Description (499 characters)
--	0651-665			Author (15 characters)
--	0666-675			Date (10 characters for ISO date yyyy-mm-dd)
--	0676-678			Not used
--	0679-689			Synth1 (11 characters)
--	0690-700			Synth2 (11 characters)
--	0701-711			FX (11 characters)
--	0712-730			Not used
--	0731-780			Usage line 1
--	0781-830			Usage line 2
--	0831-880			Usage line 3
--	0881-930			Usage line 4
--	0931-980			Usage line 5
--	0981-1030			Usage line 6
--	1031-1080			Usage line 7
--	1081-1130			Usage line 8
--	1131-1180			Usage line 9
--	1181-1230			Usage line 10
--	1231-1280			Usage line 11
--	1281-1330			Usage line 12
--	1331-1380			Usage line 13
--	1381-1430			Usage line 14
--	1431-1480			Usage line 15
--	1481-1498			Not used
--	1499		F7	End of sysex

