



## Introduction

Hi! Thanks for having purchased this Ctrlr Behringer MS-101 (MS-1) panel!

As you know, the MS-101 is a synth to be played and tweaked rather being used more statically. It doesn't have presets but it is always nice to keep a track of the settings used for a nice sound and it is even nicer to have a track on the ways of using a particular sound.

Therefore, you will have the possibility to map your settings but also to indicate step by step how to use your patch (up to 15 steps). Should this not be enough, you can also automatically listen to a wav file associated to your patch.

The panel is a pure patch mapper as the MS-101 does not support the load/save of programs or the manipulation of its program parameters by Midi NRPN/CC/Sysex messages.

It can thus also be called a "patch mapper".

It will support you in saving and retrieving MS-101 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 has been respected 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 envelope, 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 MS-101 and have fun!

Sunny Synths

## About this v1.0 version

This is the first version of this panel.

## Table of Contents

<b>Introduction.....</b>	<b>2</b>
<b>About this v1.0 version.....</b>	<b>2</b>
<b>Installation and features.....</b>	<b>4</b>
Installation of the Ctrlr panel .....	4
Features .....	5
<b>Way of working.....</b>	<b>6</b>
Using the buttons and modifying parameters .....	6
Quick reset to default value .....	6
Opening and closing the panel .....	7
Top panel area.....	8
Loading a Behringer MS-101 program.....	9
Saving a Behringer MS-101 program .....	10
Program Init.....	11
Program Rename.....	12
Behringer MS-101 tab .....	13
Library and Info tab .....	14
Patch sheet tab.....	17
<b>Installing and using the MS-101 panel as plugin.....</b>	<b>18</b>
Installation.....	18
Tests and identified limitations .....	19
Cubase .....	20
Cakewalk by Bandlab.....	24
Reaper .....	26
Ableton.....	30
Studio One.....	32
Logic Pro X .....	34
<b>The main Ctrlr menus .....</b>	<b>37</b>
<b>Appendix .....</b>	<b>38</b>
Version history .....	38
MS-101 information .....	38
Sysex file documentation .....	38

## Installation and features

### Installation of the Ctrlr panel

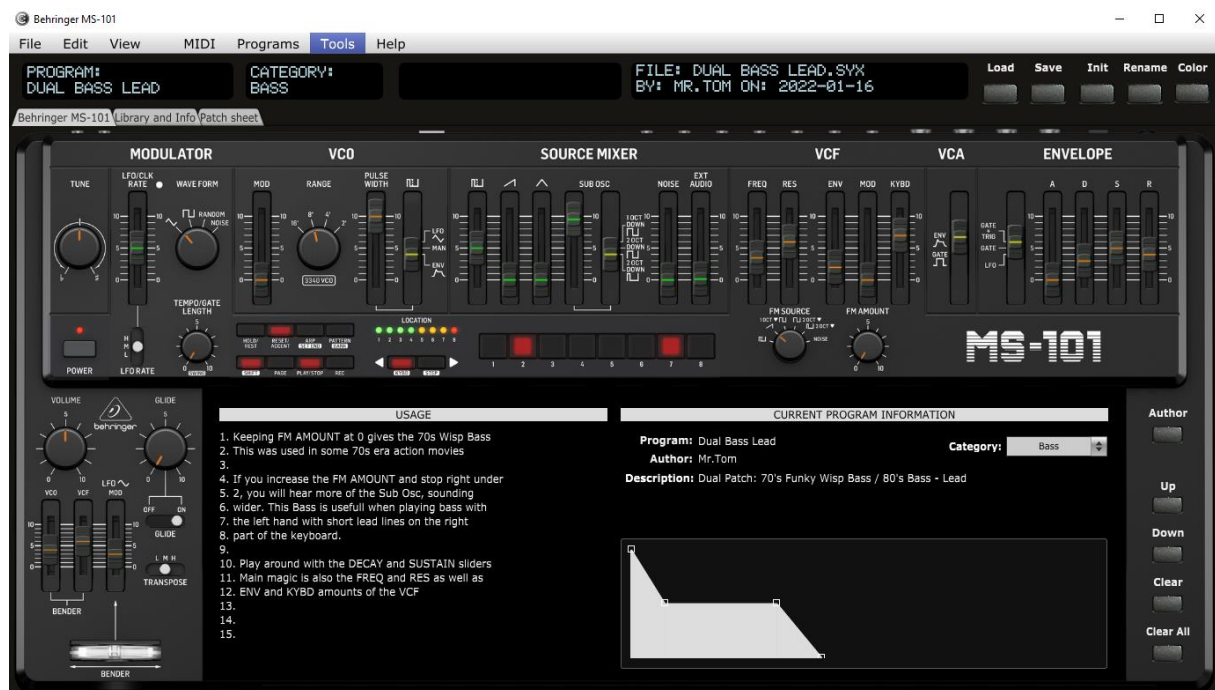
The panel is provided as a compressed .zip file containing:

- the Behringer MS-101 panel as an .exe file on Windows PC
- the Behringer MS-101 panel as an .app file on Mac OS (zip folder to be uncompressed)
- the Behringer MS-101 panel as VST 32 bits and 64 bits for Windows PC
- the Behringer MS-101 panel as VST and AU plugins for Mac OS
- this manual as PDF

For the PC standalone version, decompress the zip file anywhere on your PC then copy the **Behringer MS-101.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 Behringer MS-101.app.zip. You may have to open the **Behringer MS-101.app** file using Ctrl+click as it may not be recognized by the OS.

The program will directly display the Ctrlr window with the MS-101 panel displaying its main tab.



It is possible that the top row buttons are not responding after the initial installation (first try the Init button for ex.). 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 MS-101 panel as plugin on page 18 further in this manual.

## Features

**You will find the following features in the Behringer MS-101 panel:**

- Behringer MS-101 interface with same look as actual synthesizer
- Top row of support “screens” with old look
- Visual feedback by using “LED” ring buttons and indication of the value (on change or on click)
- Envelope graph handled by mouse or the classical ADSR sliders
- Load / Save programs from individual .syx files
- Easy program renaming
- Display and export of program parameters as text file
- 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 with reading of associated wav file if any
- Patch sheet tab with patch sheet for MS-101
- Automatic reading of wav/aif\*/aac\*/mp3\* files associated to a patch (\*MacOS only)
- Manual/Automatic reading of any wav/aif\*/aac\*/mp3\* file (\*MacOS only)

## 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 sliders, buttons and modifying parameters



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

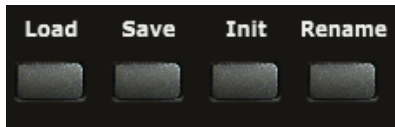
You can also modify any rotary encoder based parameter by hovering the mouse on the button then using the mouse scroll wheel (better precision).

You move sliders up or down with the mouse. However, clicking on a slider moves it directly.

Toggle buttons are modified by simply clicking on them. There is no left/right; up/down effect; just a simple toggle between the two positions

Triple switch buttons are moving between their different positions by each click

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...). They will stay highlighted until the next click.

Parameters presented as pull-downs are modified by opening the pull-down 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 Master Tune encoder.

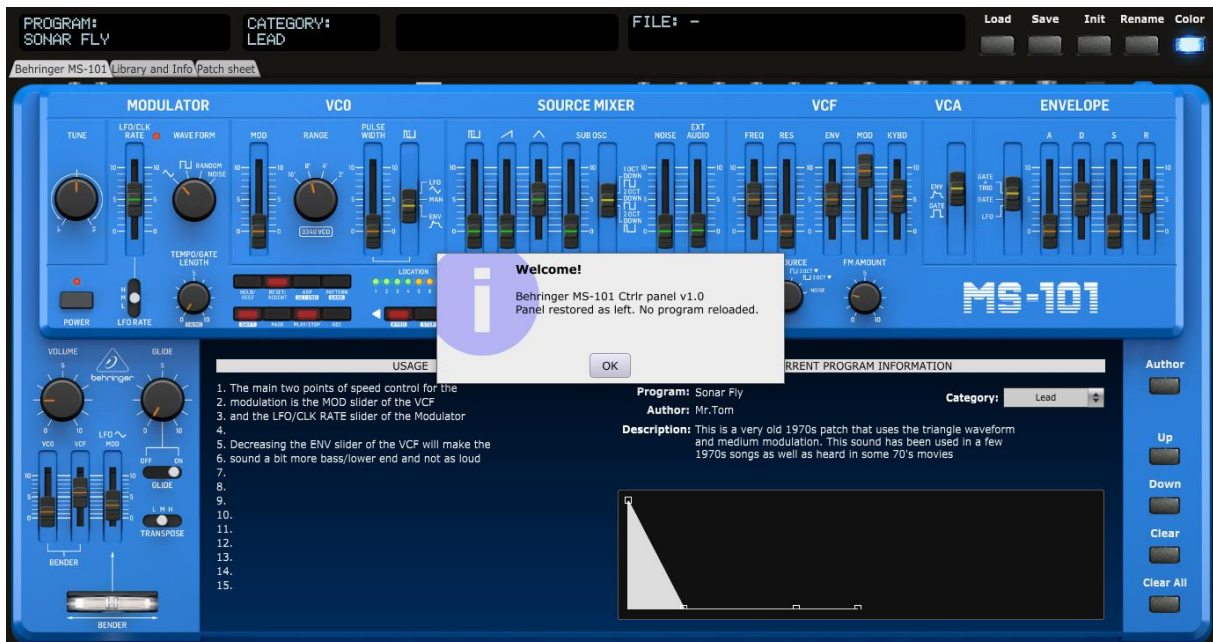


## Opening and closing the panel

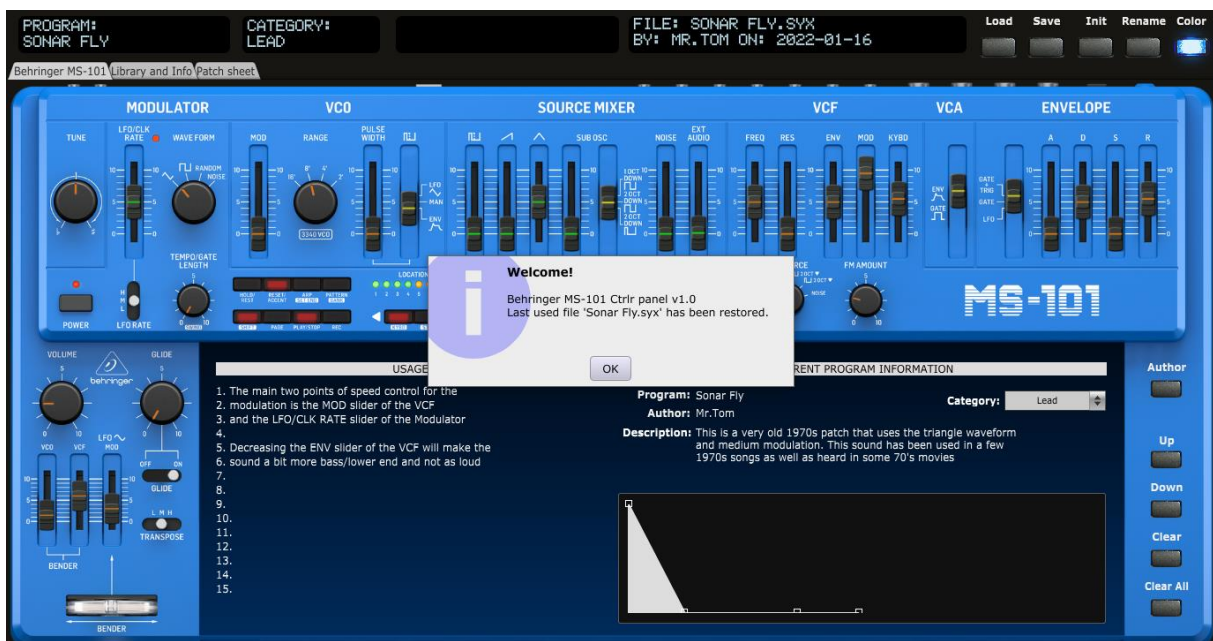
When closing the panel (either by using **File – Quit** or by clicking on the upper right red cross) the file of the last program sheet loaded or saved is stored.

When opening the panel, it is checked if the last file used still exists (could have been renamed or moved or deleted).

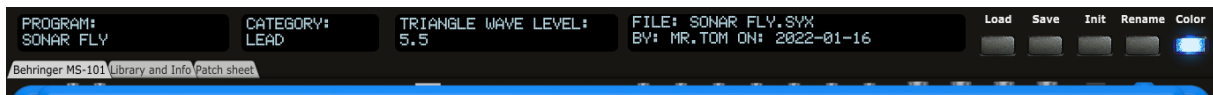
When no file is found, the Init program is loaded (in the same way as when loading the panel for the first time (unless the button **No program load at panel load** in the [Library and Info](#) tab is ON).



When the last saved file is found, the panel is restored so you can continue your work where you saved it (unless the button **No program load at panel load** in the [Library and Info](#) tab is ON).



## Top panel area



In the top panel area you find 4 feedback “screens”, 5 buttons and 3 tabs:

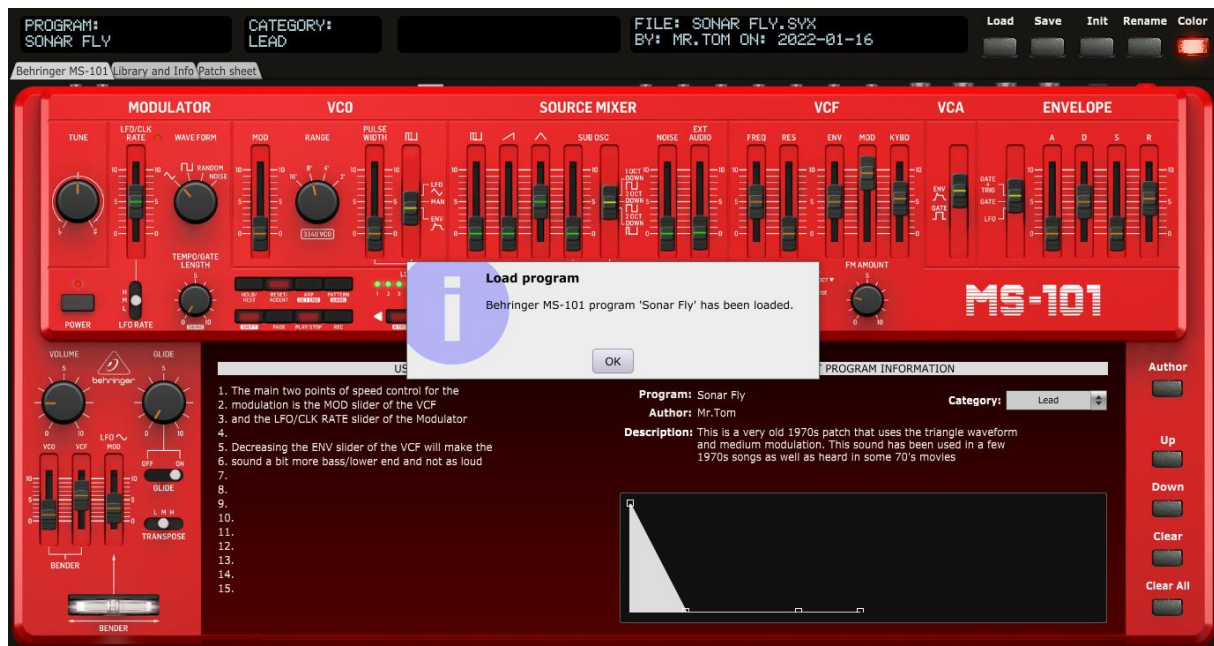
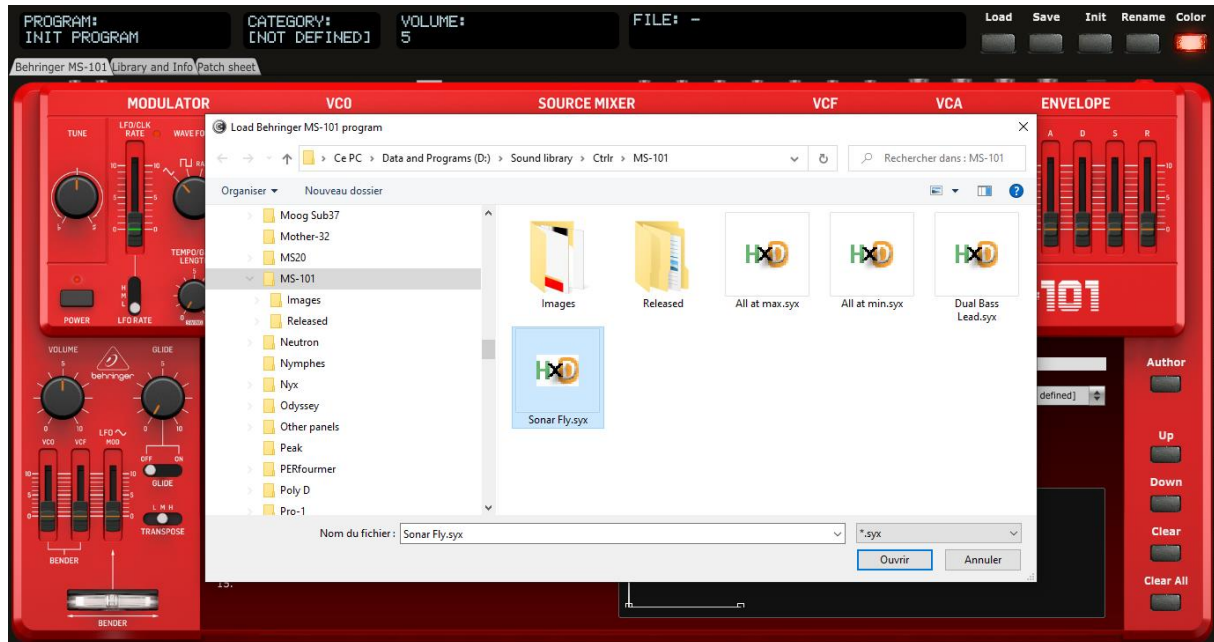
- The first screen displays the **name** of the current program
- The second screen displays the **category** of the current program
- The third one indicates the parameter currently modified and its value
- The fourth one displays the latest sysex file loaded, its author and the save date
- The **Load** 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 you to change the color of the synth
- The **Behringer MS-101** tab displays the synth and its buttons but also the envelope graph. It allows modifying the Category, the Author and the Description of the current program. This is also the place where you can describe the usage of the patch in a step by step way
- 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 the “About info” of the panel. It is also here that you will find the manual panel zoom that is memorized.
- The **Patch sheet** tab displays automatically the Behringer MS-101 patch sheet with all parameter values (as in the manual) but with the addition of author, date and usage steps



## Loading a Behringer MS-101 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 Behringer MS-101 panel. The parameters are loaded, the top screen is showing the name of the file, the author and the saved date and a confirmation dialog is shown.



If you want, you can prevent the display of the Load confirmation message (see [Library and Info](#) tab on p14).

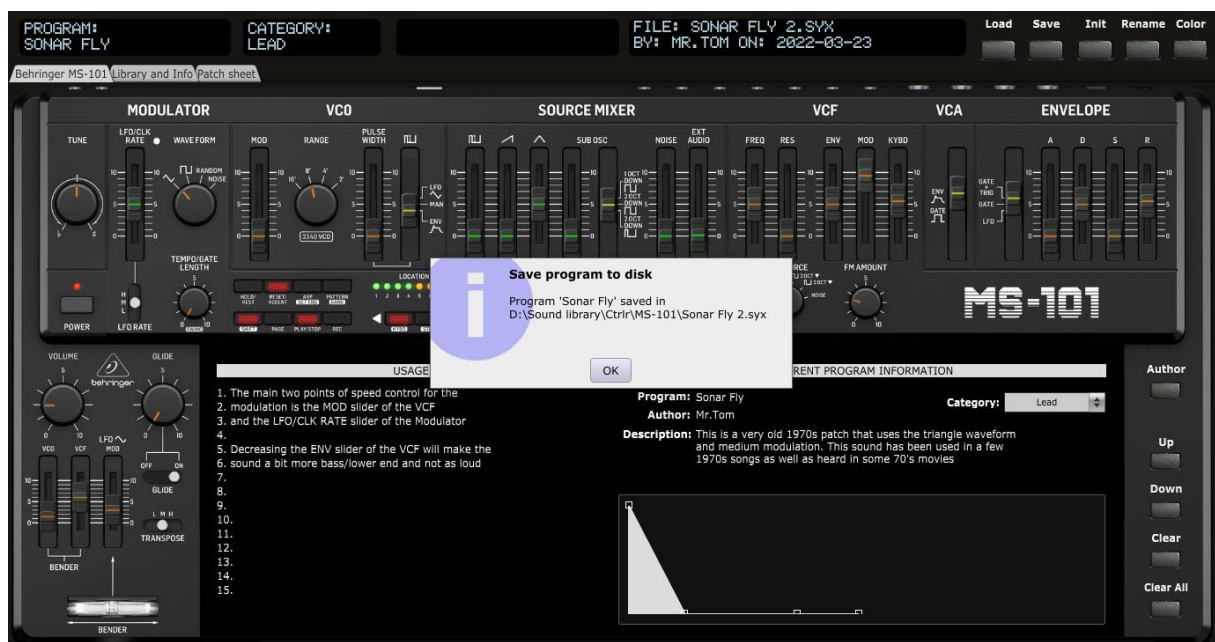
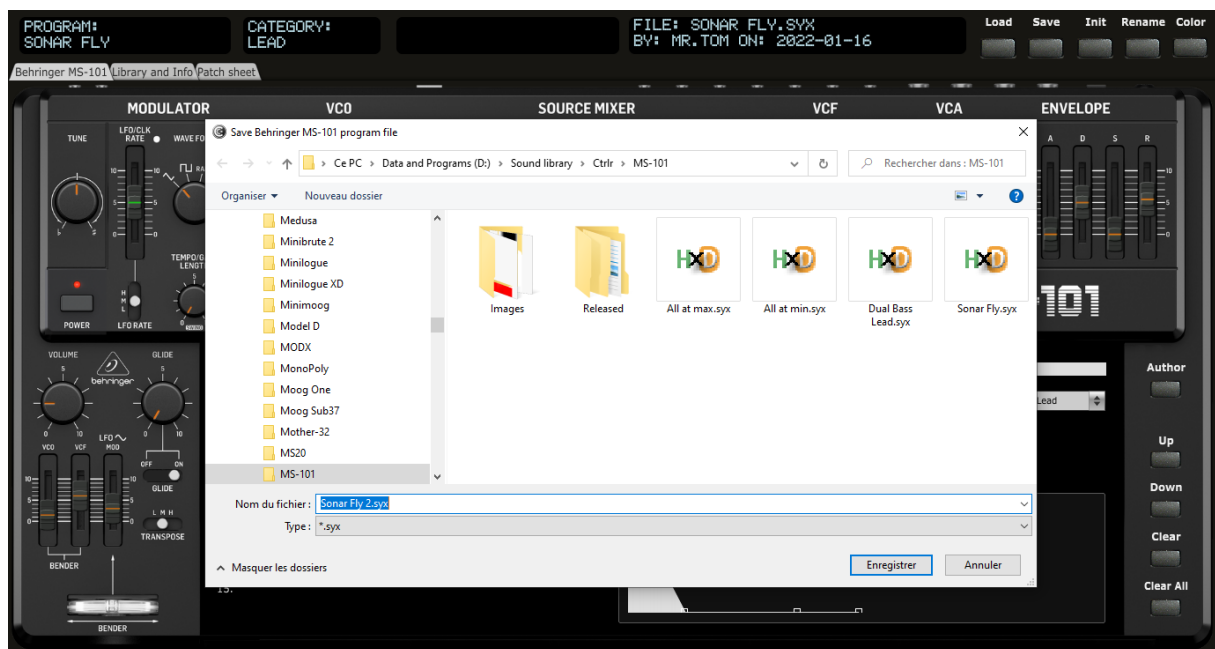
## Saving a Behringer MS-101 program

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

Clicking the **Save** button opens a classical Save file dialog where you can enter the name of the file to save. The last saved filename and path is proposed by default. You will get a confirmation popup if you select an existing file and want to overwrite it.

Once the parameters are saved, the top of the screen displays the name of the file, the author (as set in the main **Behringer MS-101** tab) and the saved date (thus, the current date) in ISO format *yyyy-mm-dd*. A confirmation dialog is also shown.

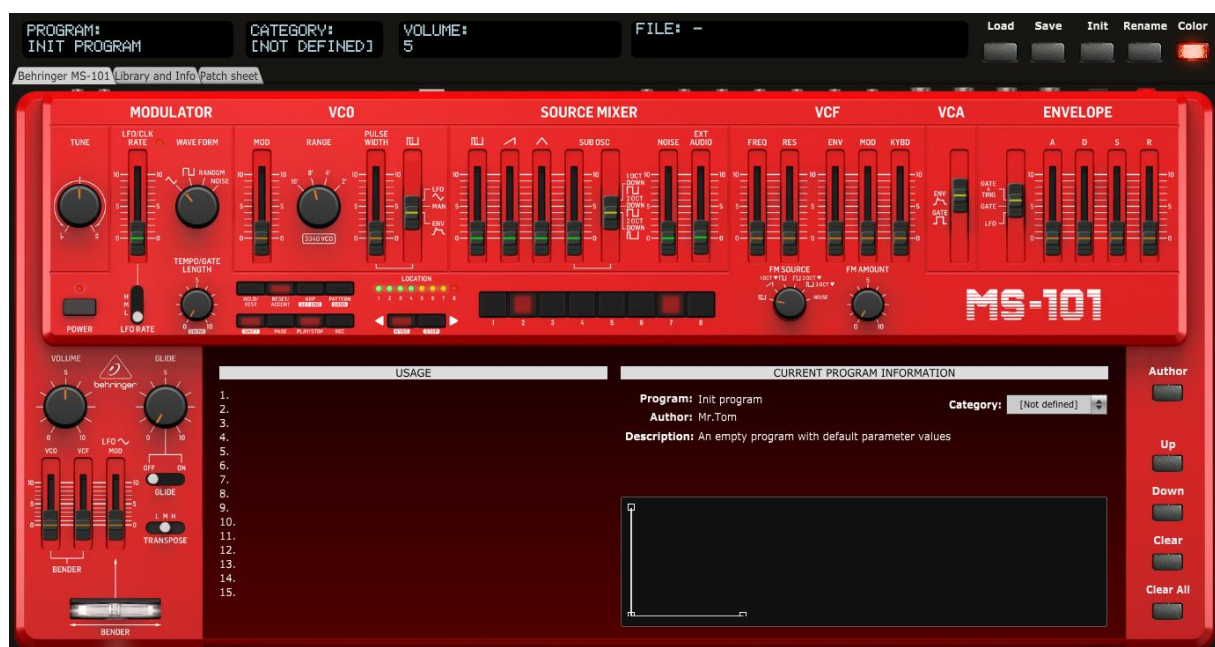
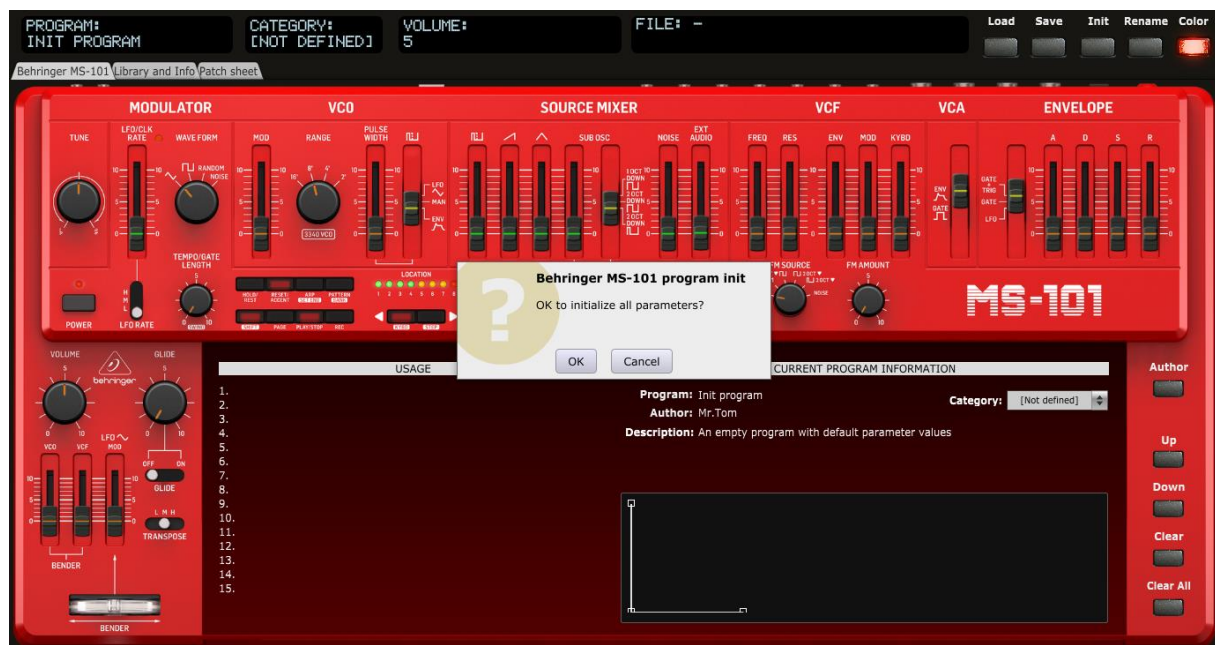
The panel stays on the current tab after a Save is done.



## Program Init

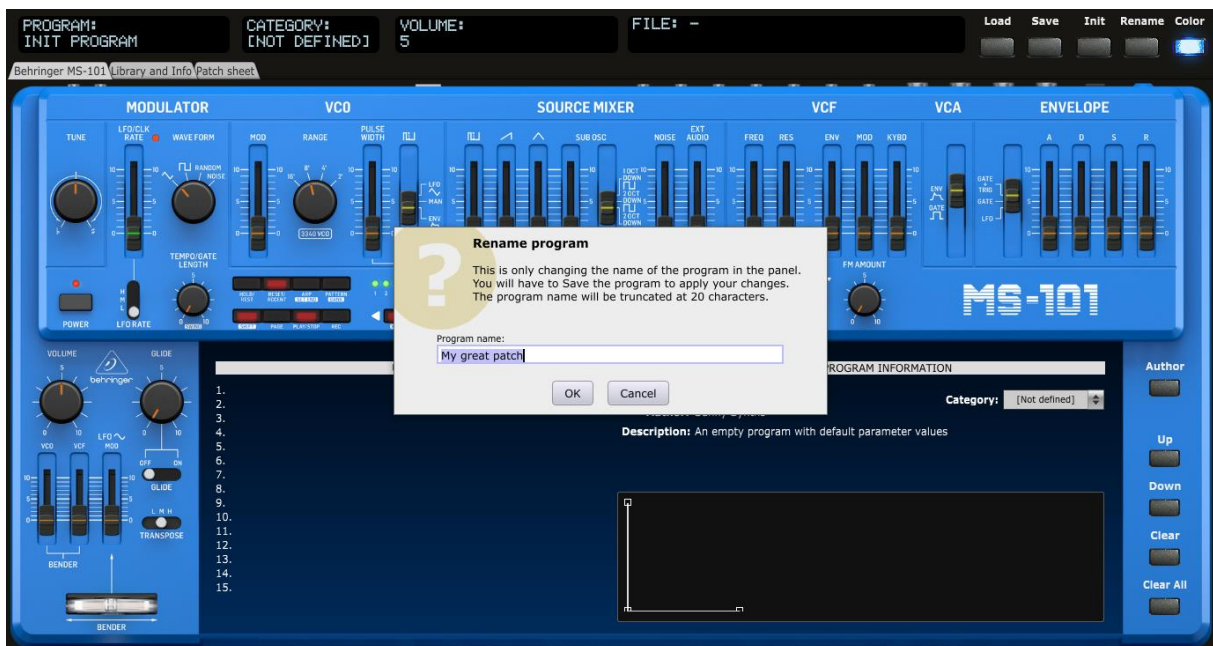
Clicking the **Init** button loads the parameters for a Basic program as follows:

- All parameters at 0 or OFF
- Exceptions:
  - VCO Range: 8'
  - Pulse Width Mod Source: Env
  - Sub Osc: 2 Octaves down
  - VCA Source: Env
  - Envelope Trigger: Gate + Trigger
  - LFO Frequency Range: Low
  - Transpose: Medium



## Program Rename

Clicking the **Rename** button opens a popup window where you can modify the name of the program. The name should be maximum 20 characters long (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.

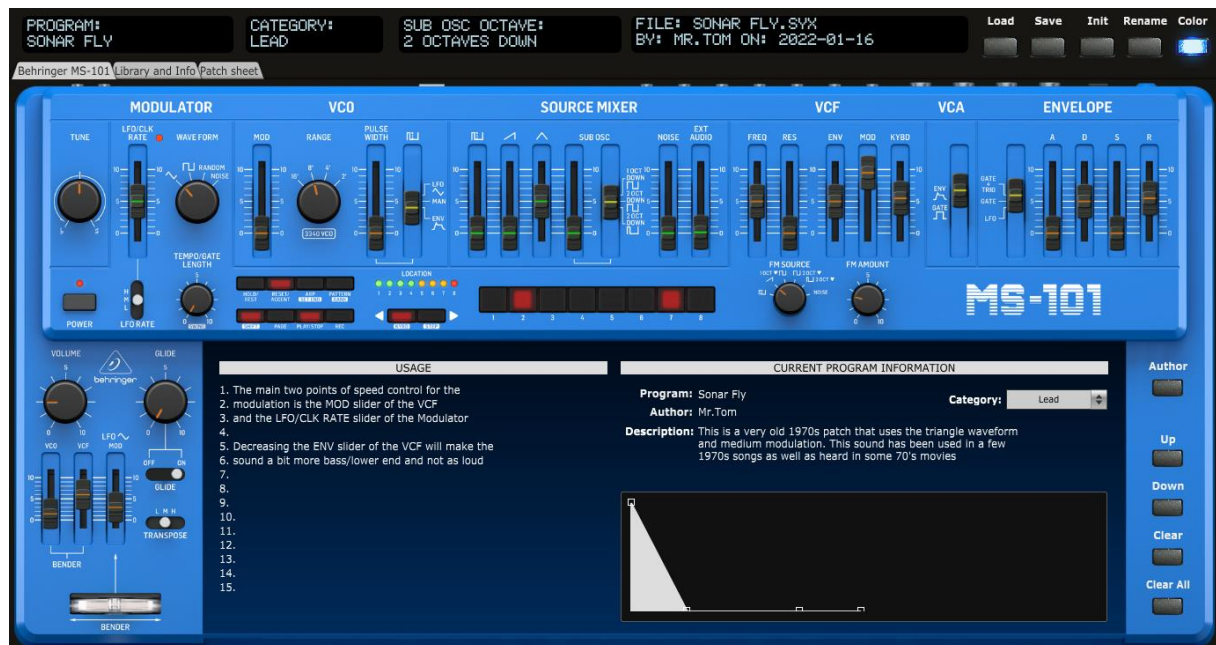


## Behringer MS-101 tab

In the **Behringer MS-101** tab, you have access to the same parameters as on the actual synthesizer but also to the envelope graph and to other info about your current program. Among these: the Category, the Author, the Description of the current program and the usage of the patch in a step by step way.

Please refer to the Behringer MS-101 user manual

(<https://www.behringer.com/Categories/Behringer/Keyboards/Synthesizers-and-Samplers/MS-101/p/PODRK>) for the explanations of each slider/button.



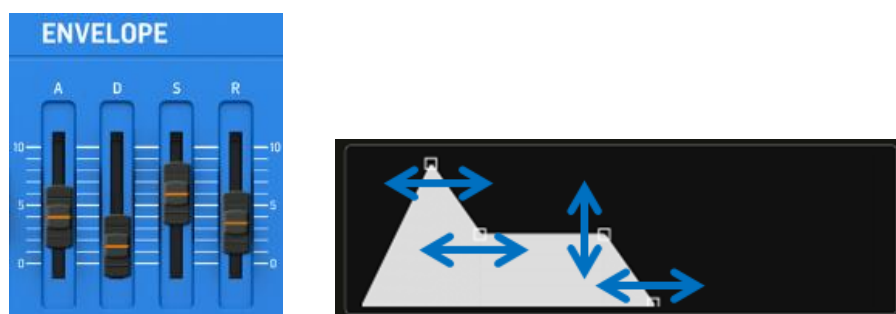
The third top screen is showing the name and the value of the parameter you are modifying.

Doing a single click on any rotary encoder is displaying its name and current value **without that you need to modify it**. However, clicking on sliders and switches will change the value.

Modifying the ADSR sliders will adapt the envelope graph accordingly; modifying the envelope graph will also adapt the ADSR sliders.

### Envelope shape

You can modify the envelope shape by either moving the ADSR sliders or by using the mouse and moving the anchors on the graph either vertically or horizontally.



When moving the anchors, the corresponding ADSR slider will also move and the parameter name and value will be displayed in the screen of the top panel area.

## Library and Info tab

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

- a file browser that gives you directly information about the clicked file without having to load it
- the settings when playing a wav file
- an About screen giving you information about the panel version and the history of changes
- the 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
- panel settings allowing you to change the behavior of the panel



## 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-MS-101 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 MS-101 .syx file will make the corresponding .wav file play automatically as well (if a wav file with the same name as the MS-101.syx file is found)
- **Double-click** on a file to load it (MS-101 .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

### Audio file play settings



WAV files can be played on Windows and MacOS  
AIF, AAC and MP3 can only be played on MacOS

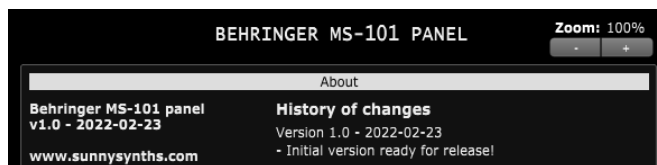
The audio files will be played for the duration set in the **Duration** pulldown (3s, 5s, 10s or Full).

Activating **Auto Play** will automatically trigger the play of the .wav (.aif, .aac, .mp3) files OR trigger playing the .wav file corresponding to the clicked Erebus .syx file (if found). If there is no corresponding .wav (.aif, .aac, .mp3) file then nothing happens.



If some audio files are playing but not others, check that you are not using special characters in the filename. The panel can handle single quotes but not always other characters.

### 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.

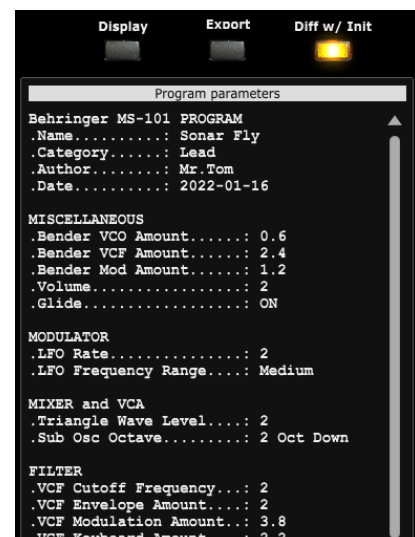
If you are still modifying the zoom using the View menu or the Ctrl + / Ctrl – keys, no worries! The “manual” zoom is reading the current zoom factor on the panel each time one of the main top panel button is used (Load, Save, Init, Rename).

### Display and Export info

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

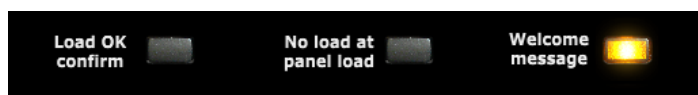
- Use the **Display** button to list the parameters of the current program
- Use the **Export** button to export as a .txt file the parameters of the current program (it is not needed to first display them before exporting)

sunny.synths@gmail.com



- Use the **Diff w/Init** switch to limit the display to only the differences with the Init program

### Panel settings



**Load OK Confirm:** by switching this OFF, there is no confirmation popup shown after loading a program. This avoids clicking on OK.

**No load at panel load:** by switching this ON, when re-opening the panel, the panel will be left as you closed it in the previous session. By switching this OFF, the last saved file is restored if found (or an Init program loaded if not found).

**Welcome message:** displays the Welcome message or not when opening the panel.



## Installing and using the MS-101 panel as plugin

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

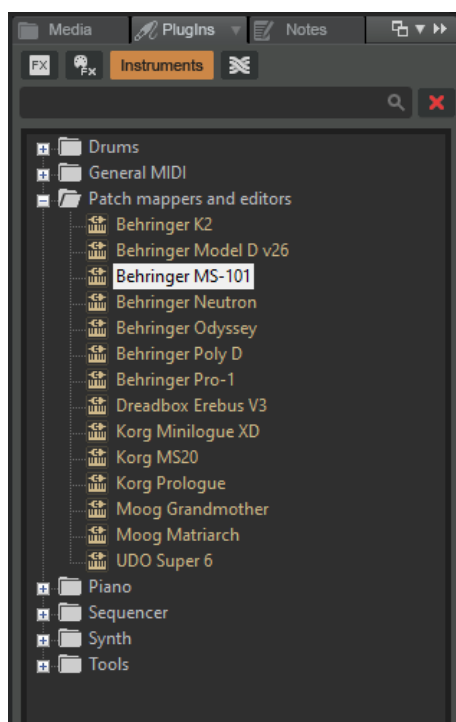
On Windows PC, depending on your DAW version and after unzipping the main file, either copy the **Behringer MS-101.dll** file from the Windows VST 64 bits directory to your 64 bits plugins directory and/or the **Behringer MS-101.dll** file from the Windows VST 32 bits directory to your 32 bits plugins directory (Steinberg hosts often use C:\Program Files\Steinberg\VSTplugins as the default plugin path).

On Mac OS, unzip then copy the **Behringer MS-101.vst** file from the MacOS VST directory to your VST plugin directory (/Library/Audio/Plug-ins/VST) and copy **Behringer MS-101.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.

On MacOS you may also get the message that the “*Component or VST cannot be opened because the developer cannot be verified*”. Go to [System Preferences](#) then [Security and Privacy](#) and click on the [Open anyway](#) button to have the plugin saved as an exception in the security settings.

Start your DAW and check that the plugin directory is rescanned and that the **Behringer MS-101** 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.

### 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



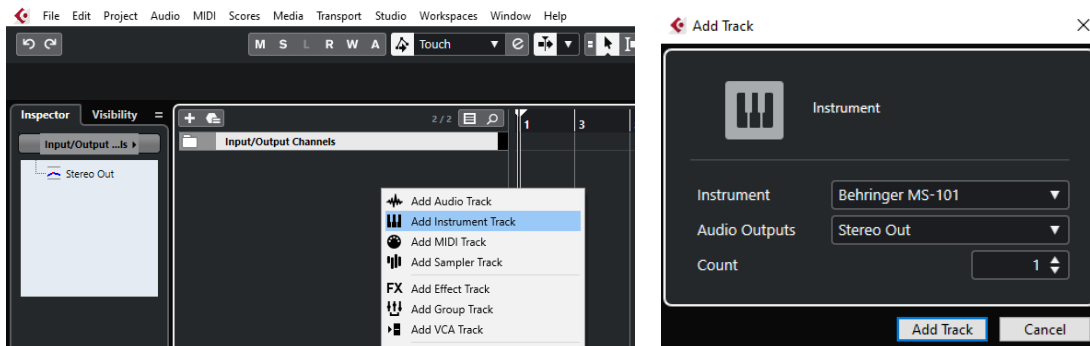
Replacing the DAW preset in a track by another DAW preset is working fine. The only remark is that you may get some popups if you directly switch between freshly created presets (just click Cancel in those popups). Creating a new track with the plugin and switching between existing DAW presets works fine and doesn't display the popups.

	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 Behringer MS-101 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 MS-101 tracks at once

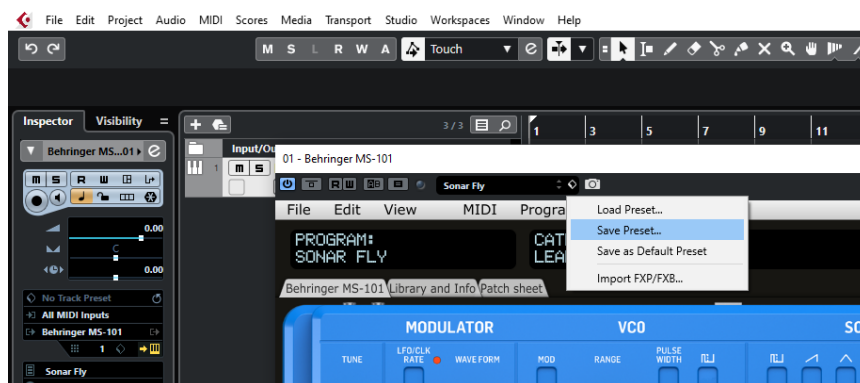
You can associate the panel to several tracks in order to keep track of the different patches used for them. Just drag and drop the plugin two or more times.



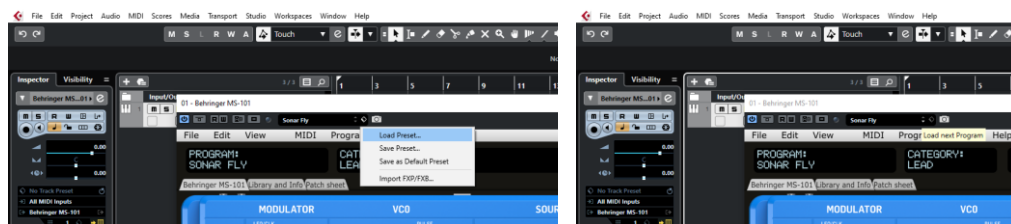
## Saving a patch as a Cubase preset

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.



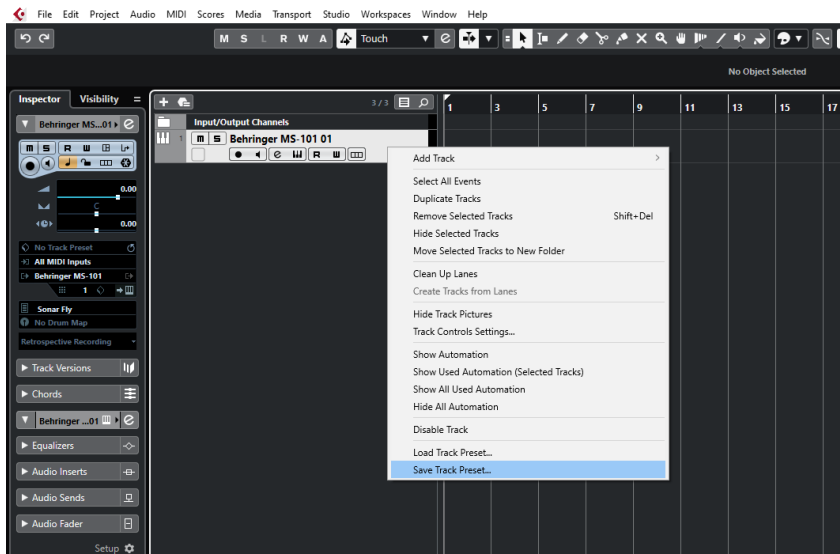
Later on, you can load a preset by using **Load preset** from the same menu or you can navigate through your presets by using the small up and downs triangle buttons.



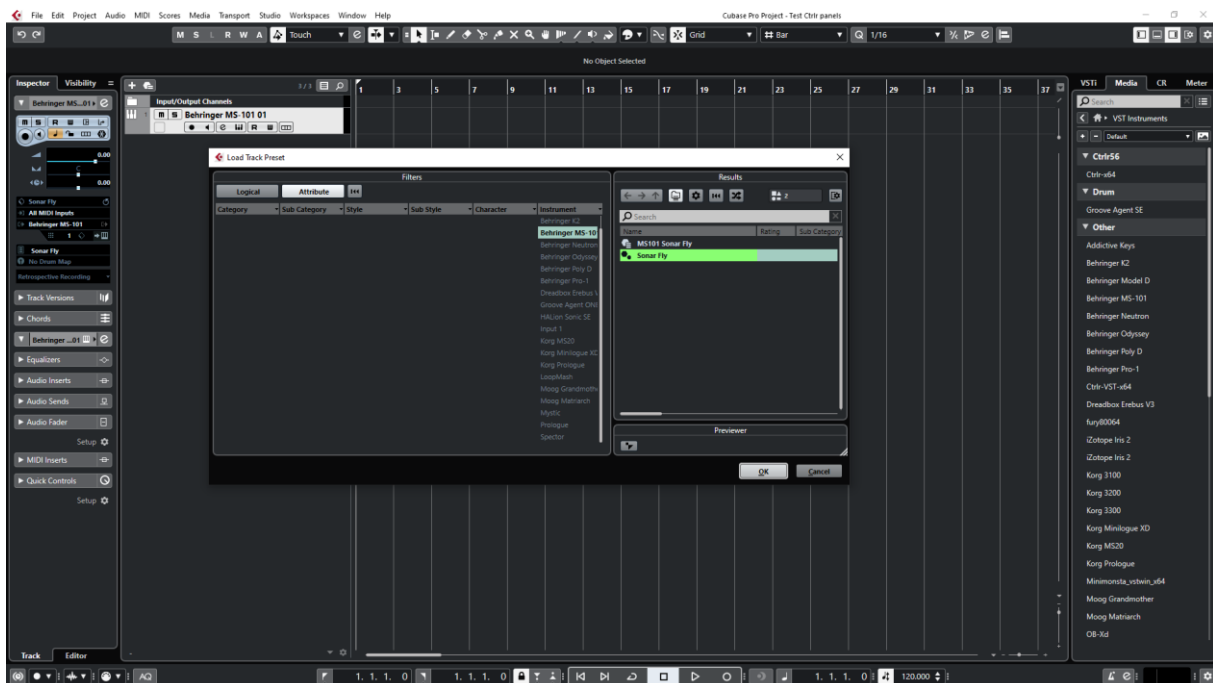
To save as Cubase track preset, select [Save track preset](#) when right clicking on a track.



When closing the panel after Saving the track preset, be sure to set the button **No program load at panel load** to OFF and to close the panel with the upper right red cross to have your buttons positions saved in memory.

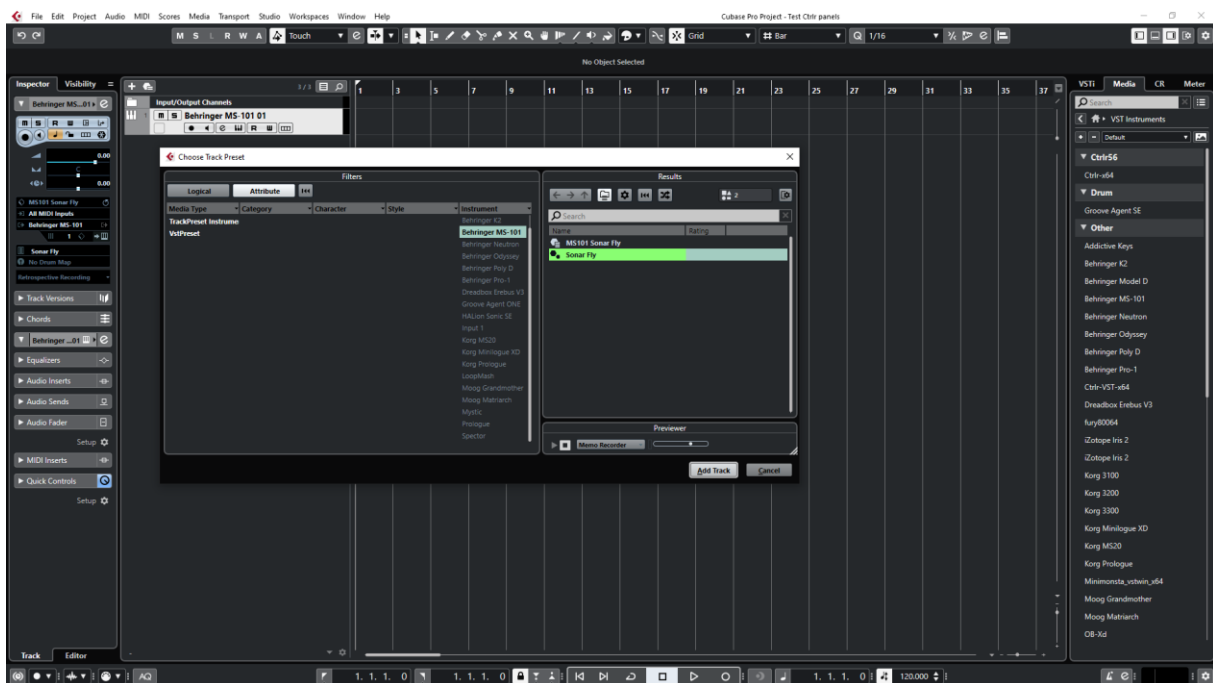
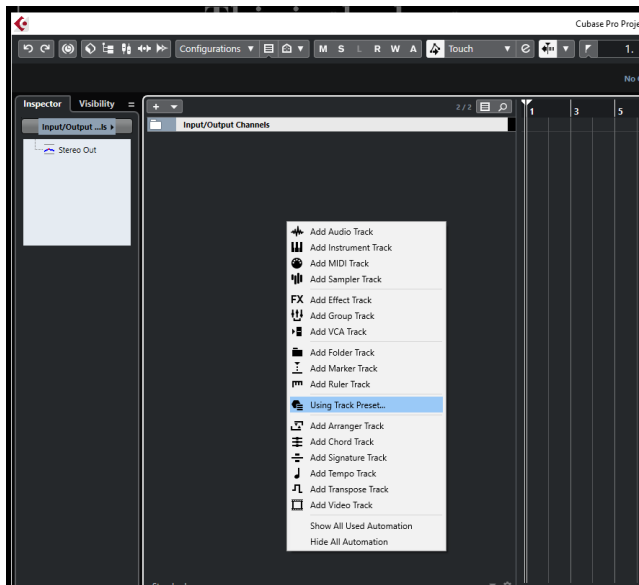


Later on, the content of the panel as is can be restored directly in a new empty track without the need of a Load from the panel by selecting [Load track preset](#) when right clicking on a track.



## Creating a new track from a Cubase track 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

Just 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.

## Cakewalk by Bandlab

### Creating a new track

Drag the MS-101 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 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.

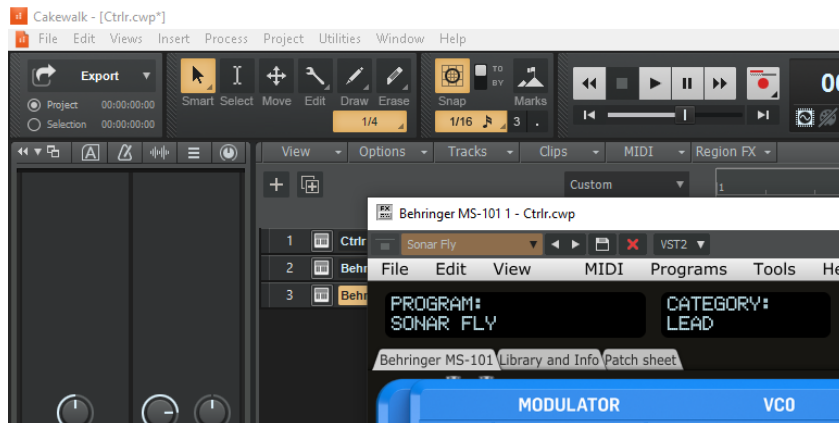
### Using several MS-101 tracks at once

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 “Sonar Fly”) then clicking on the Save button.

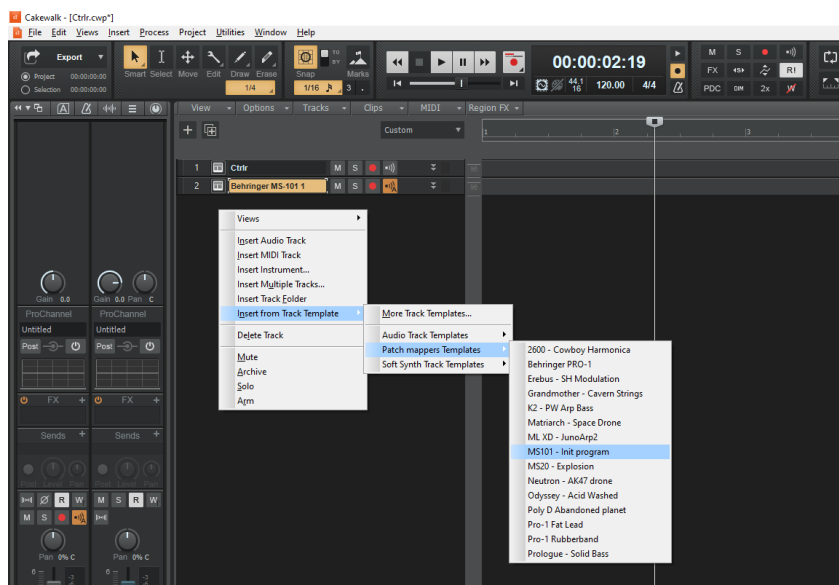


It is also possible to save a complete mixer channel as track template.

## 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.

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

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

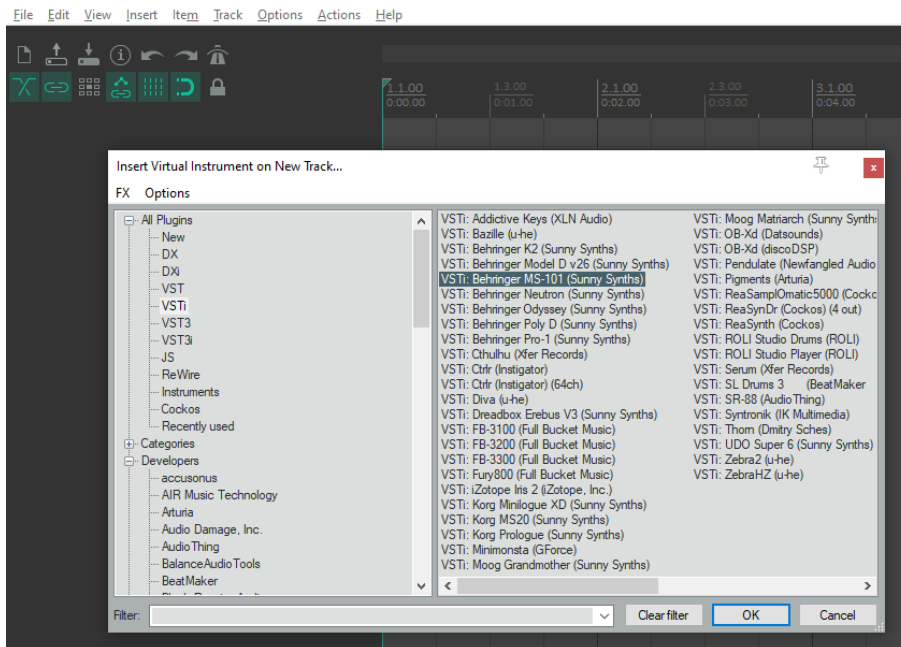


## Reaper

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 Behringer MS-101 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)



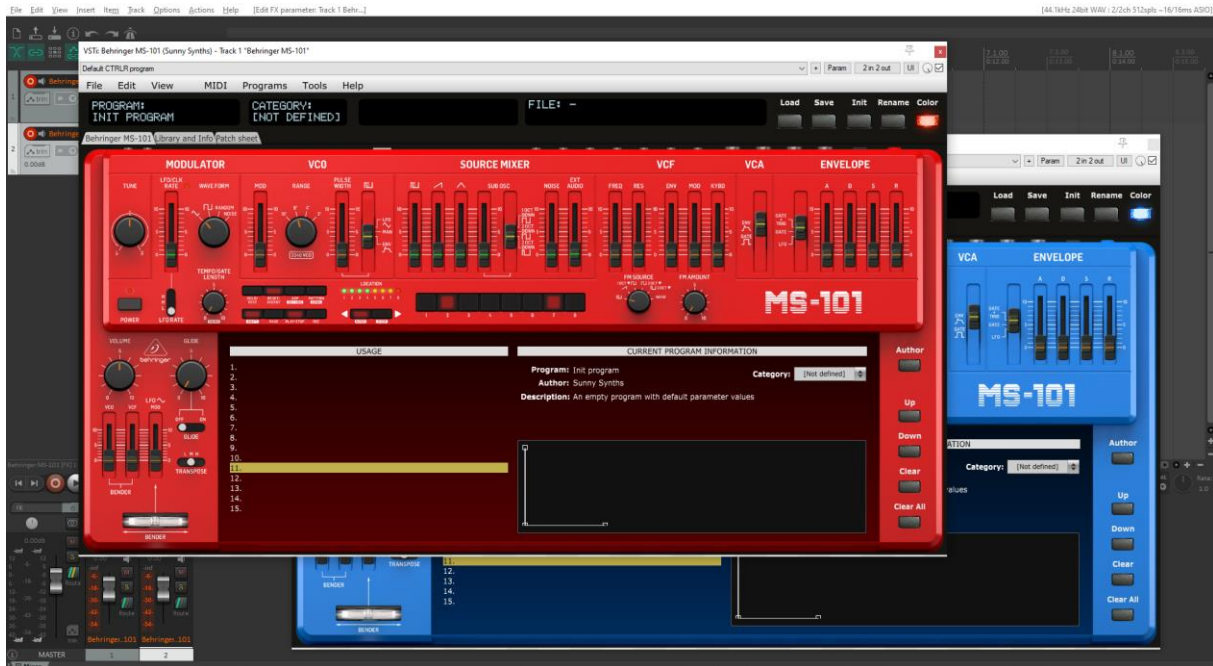
Listening to wav files associated a patch is also working even if ASIO is used as audio driver for Reaper while the wav file player is Windows or MacOS.



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

## Using several MS-101 tracks at once

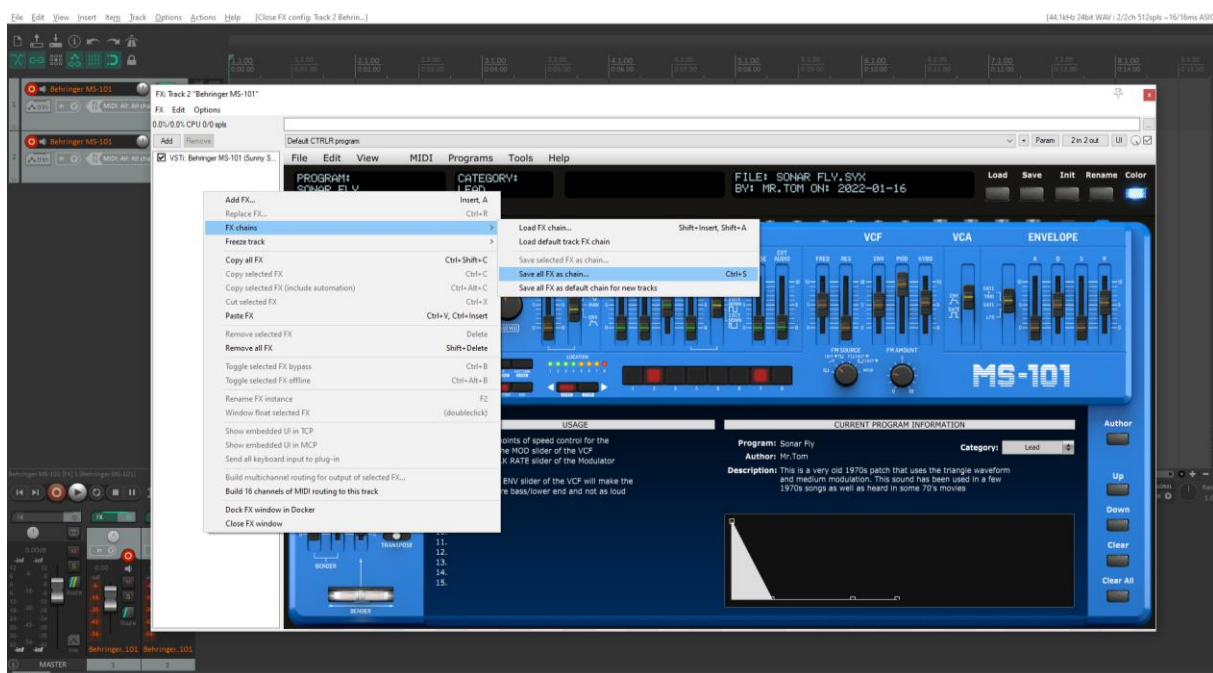
Works fine:

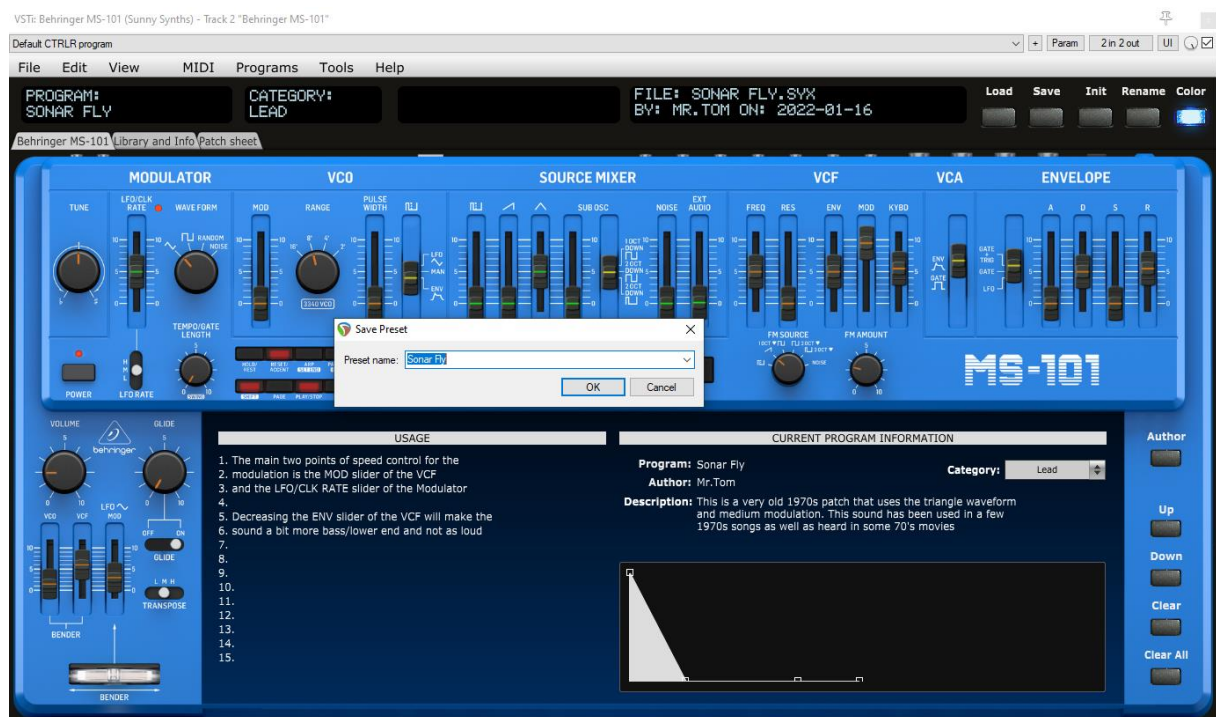


## Saving a patch as a Reaper preset

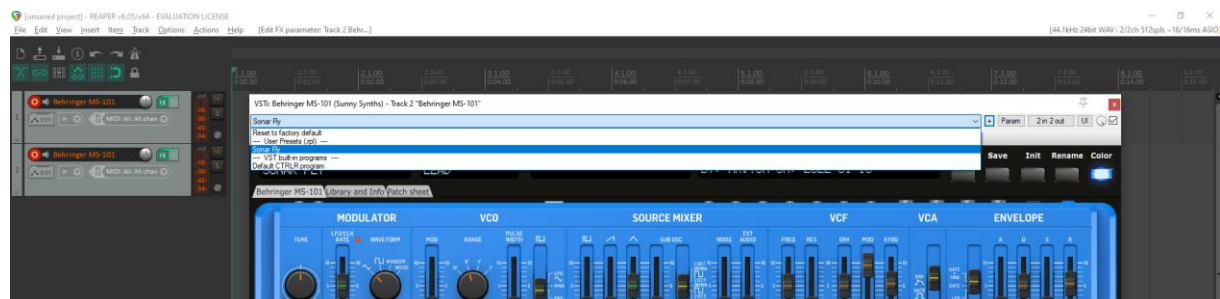
Two different methods are possible:

- 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



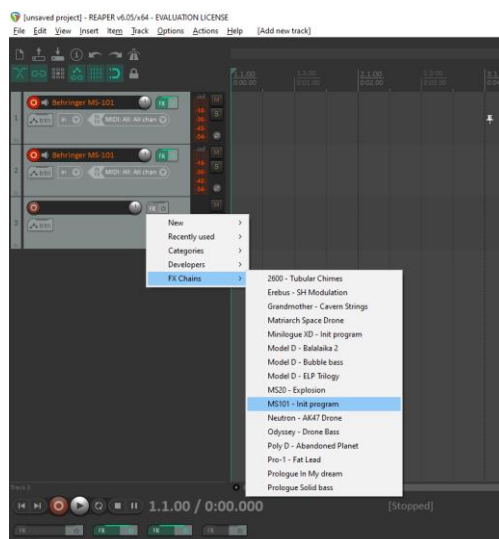


Presets are appearing under User presets



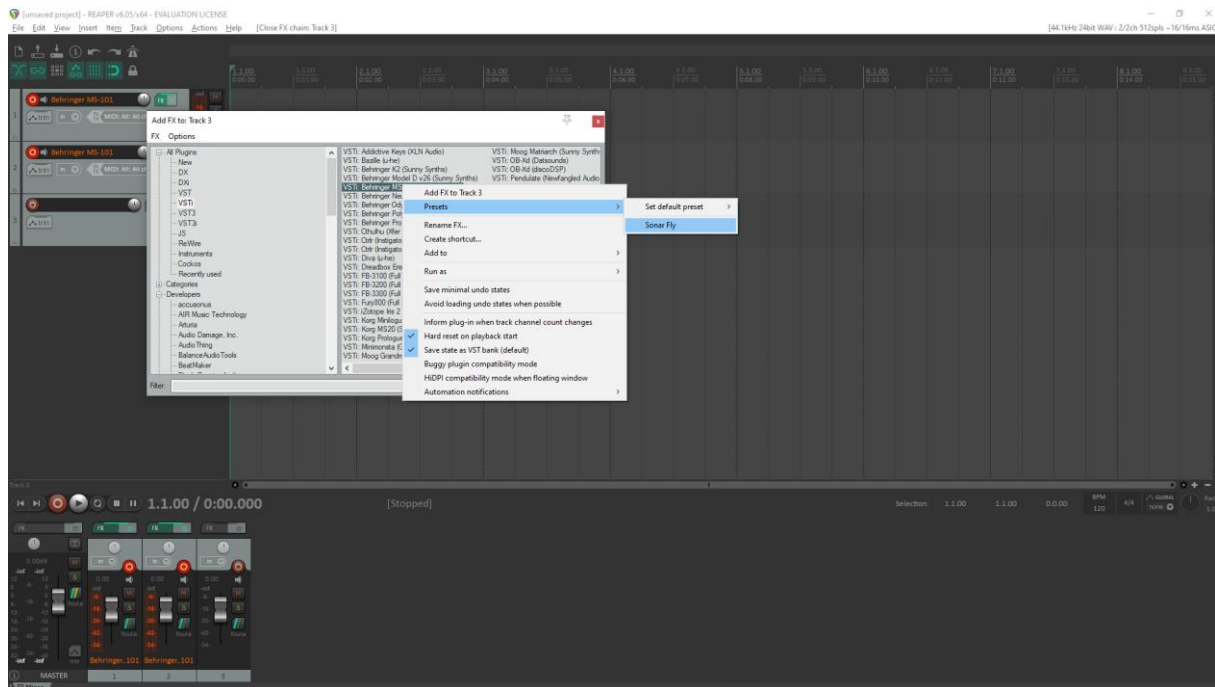
## Creating a new track from a Reaper FX chain preset

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 MS-101 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.

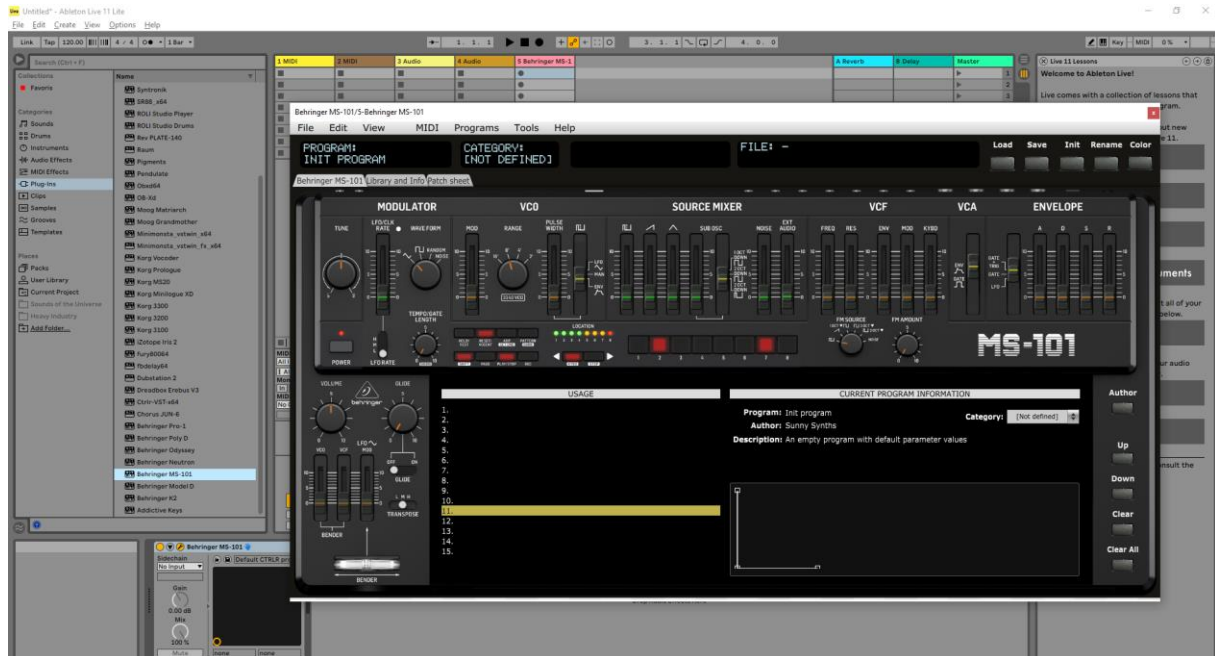
## Ableton

**Status:** This has been tested in Ableton Live Lite 11 and it is thus expected to work fine in the full versions.

### Creating a new track

Drag the MS-101 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.

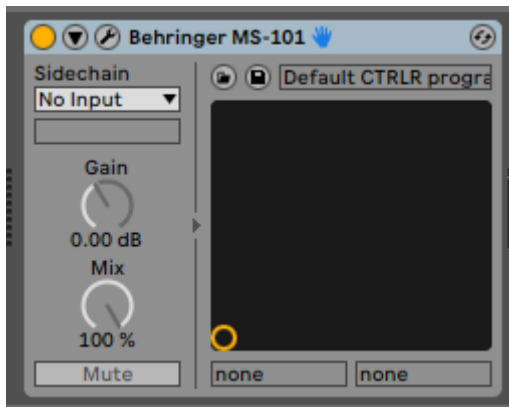
### Using several MS-101 tracks at once

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 as described in next paragraph.

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

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



## 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 MS-101 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.



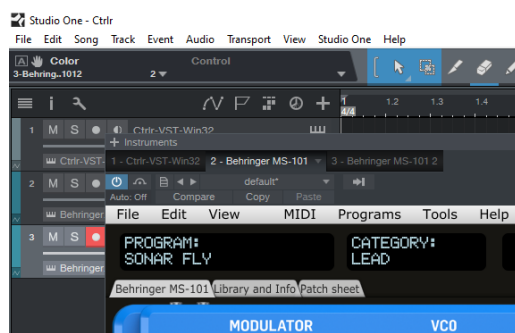
Load a preset from inside the panel and use it as you would do for the standalone version.

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 MS-101 tracks at once

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





### Saving a patch as a MS-101 Studio One preset

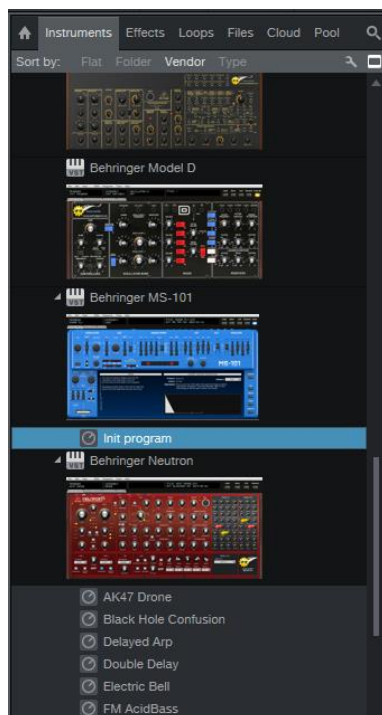
You can save the last patch saved in the panel as a preset in Studio One by selecting Store preset in the plugin window preset menu.

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 MS-101 VST name in the Instruments tab or in the Files tab



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

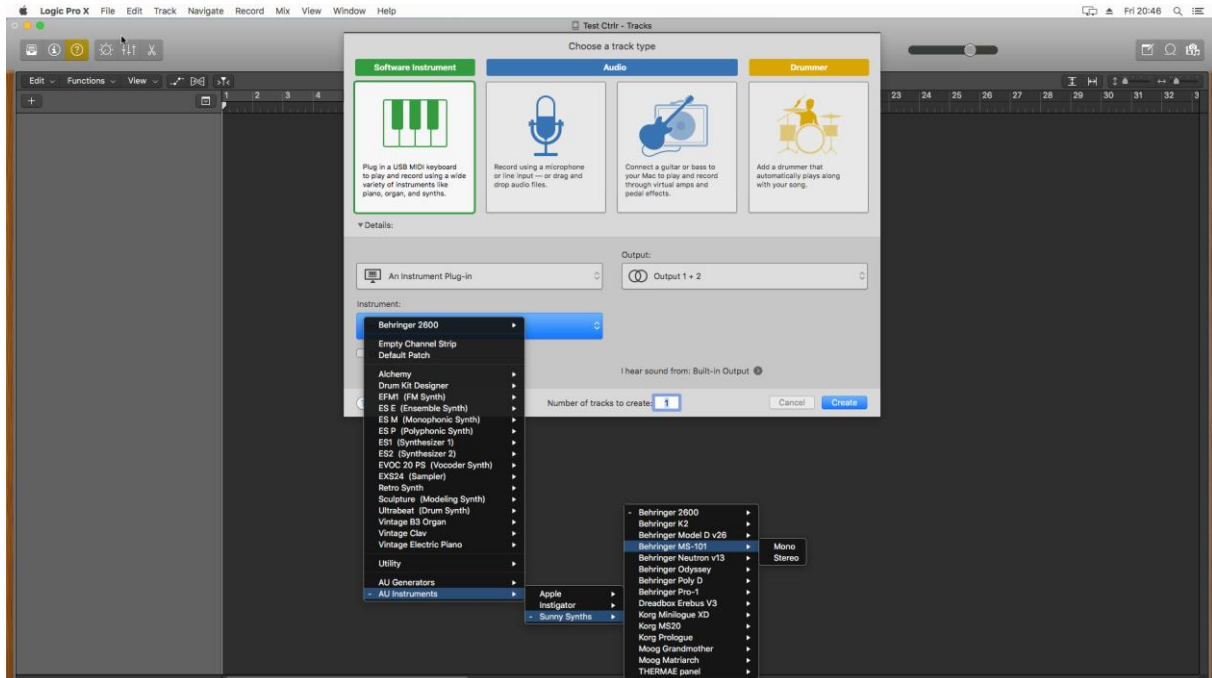
Just select another previously saved preset at the top left of the plugin window or with [Load preset file](#). All buttons will be positioned according to the newly loaded presets.

## 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 Behringer MS-101.component plugin file in your AU plugin directory.

### Creating a new first track

Create a new instrument track and select the Behringer MS-101 plugin for it (under AU instruments) 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.



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.

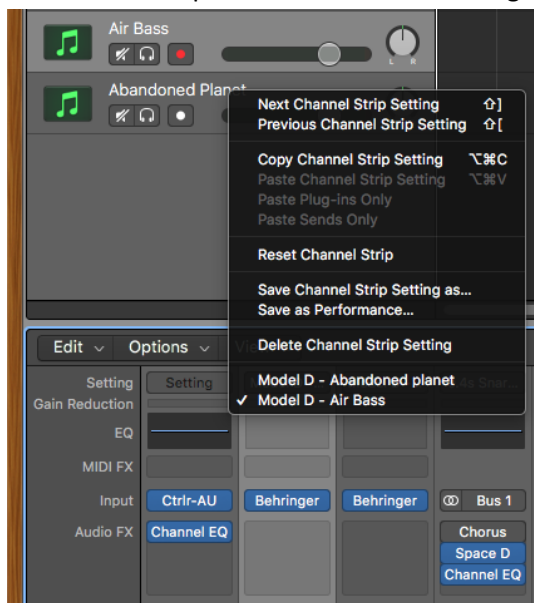
### Using several MS-101 tracks at once

Works fine and can be done by simply creating two tracks with the plugin.



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 will be created based on that Init channel strip and can then be changed afterwards to other patches with the Load button

### Saving a patch as a MS-101 Logic preset

You can save the last patch saved in the panel as a plugin preset in Logic by selecting **Save As** in the pulldown menu of the preset area at the top of the plugin window. An .aupreset file will be created.



### Saving a patch as a MS-101 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 then click on the [Setting](#) button at the top of the channel strip in the mixer and select a previously saved channel strip setting.

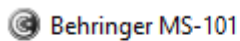
### Replacing the preset on an existing track by another preset

This is working well when selecting a previously saved .aupreset file. Just select another previously saved preset by selecting [Load](#) in the top left menu of the plugin window. All buttons will be positioned according to the newly loaded preset, patch cables and all labels will be restored.



This is also working fine with Channel Strips Settings. When replaced, a popup indicates that the Last file used "xxx" has been restored.

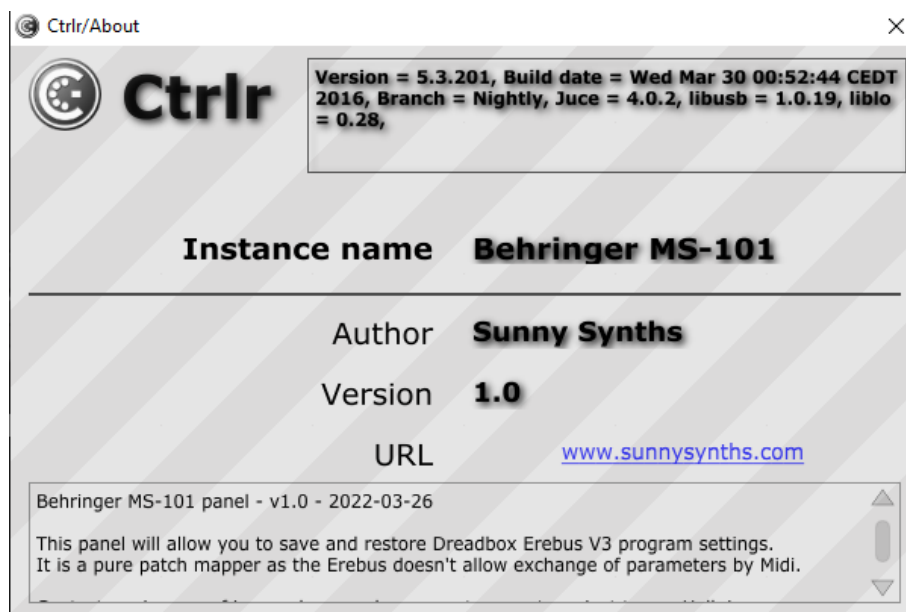
## The main Ctrlr menus



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: not necessary for this panel...
- **Programs** menu: not necessary for this panel...
- **Tools** menu: not necessary for this panel...
- **Help** menu: displays the About info of the panel



## Appendix

### Version history

Date	Version	Description	By
2022-03-26	1.0	First version of this manual	Sunny Synths

### MS-101 / MS-1 information

The Behringer MS-1 product page: <https://www.behringer.com/product.html?modelCode=PODNG>

### Sysex file documentation

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

```
-- // Behringer MS-101 - 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 Dreadbox, just a decision made by me ;- )
-- This data is not transferred by Midi
--
-- 20 = 14
-- 40 = 28
-- 100 = 64
-- 127 = 7F
--
-- Offset      | Byte content
-- -----+-----
-- 0000        | F0          Sysex start
-- 0001-03     | 00 21 35    Behringer ID
-- 0004        | 65          MS-101 (not existing, my choice, 101 = 0x65)
-- 0005        | 01          Sound data
-- 0006        | 00-64       Tune (+- 50 cents)
-- 0007        | 00-03       LFO Rate Level
-- 0008        | 00-14       LFO Rate
-- 0009        | 00-03       LFO Waveform
-- 0010        | 00-14       VCO Modulation Level
-- 0011        | 00-03       VCO Range
-- 0012        | 00-14       VCO PW Level
-- 0013        | 00-02       VCO PW Source
-- 0014        | 00-14       Mixer PW Level
-- 0015        | 00-14       Mixer Saw Level
```



--	0016		00-14	Mixer Triangle Level
--	0017		00-14	Mixer SubOsc Level
--	0018		00-14	Mixer Noise Level
--	0019		00-14	Mixer ExtAudio Level
--	0020		00-02	Mixer SubOsc Octave
--	0021		00-01	VCA Source
--	0022		00-14	Filter Frequency Level
--	0023		00-14	Filter Resonance Level
--	0024		00-14	Filter Envelope Level
--	0025		00-14	Filter VCF Mod Level
--	0026		00-14	Filter Keyboard Level
--	0027		00-05	Filter FM Source
--	0028		00-64	Filter FM Amount
--	0029		00-02	Envelope Trigger
--	0030		00-14	Envelope Attack
--	0031		00-14	Envelope Decay
--	0032		00-14	Envelope Sustain
--	0033		00-14	Envelope Release
--	0034		00-64	Tempo Gate Length
--	0035		00-14	Bender VCO
--	0036		00-14	Bender VCF
--	0037		00-14	Bender Mod
--	0038		00-64	Volume
--	0039		00-64	Glide
--	0040		00-01	Glide On Off
--	0041		00-02	Transpose
--	0042-67			Not used
--	0068-87			Name (20 characters)
--	0088		00-10	Category
--	0089-588			Description (500 characters)
--	0589-603			Author (15 characters)
--	0604-613			Date (10 characters for ISO date yyyy-mm-dd)
--	0614-635			Not used
--	0636-685			Usage line 1
--	0686-735			Usage line 2
--	0736-785			Usage line 3
--	0786-835			Usage line 4
--	0836-885			Usage line 5
--	0886-935			Usage line 6
--	0936-985			Usage line 7
--	0986-1035			Usage line 8
--	1036-1085			Usage line 9
--	1086-1135			Usage line 10
--	1136-1185			Usage line 11
--	1186-1235			Usage line 12
--	1236-1285			Usage line 13

--	1286-1335			Usage line 14
--	1336-1385			Usage line 15
--	1386-1498			Not used
--	1499		F7	End of sysex

