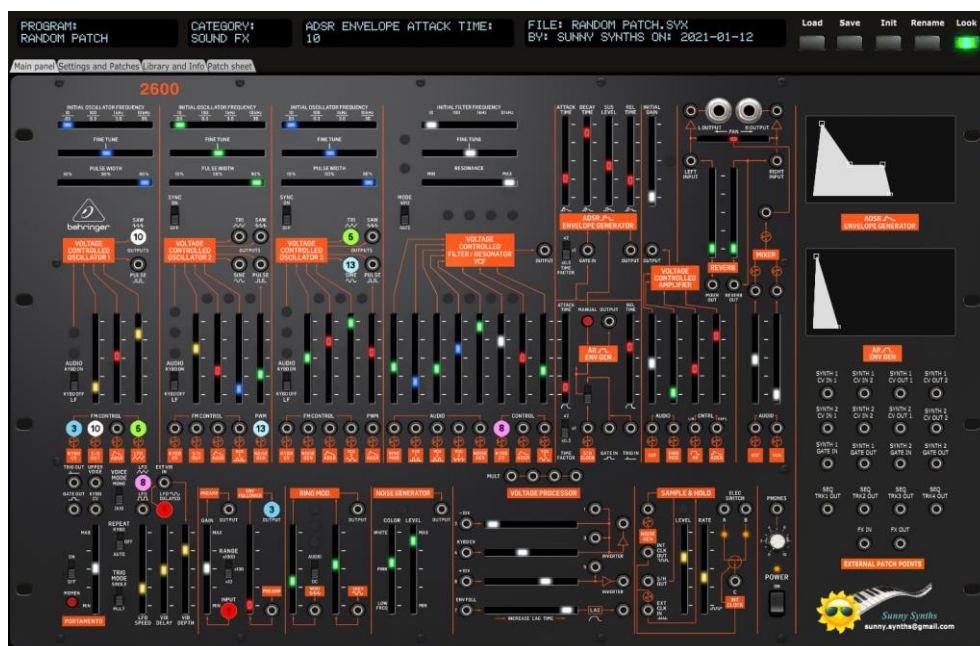# Ctrlr

Behringer 2600 Ctrlr panel documentation and instructions

V1.4 – 2022-02-13

Sunny Synths

Introduction

Hi! Thanks for having purchased this Ctrlr based Behringer 2600 panel!

The panel is only a patch loader/saver on computer as the Behringer 2600 does not support the load/save of programs or the manipulation of program parameters by Midi NRPN/CC messages.
It can thus also be called a "patch mapper".

It will support you in saving and retrieving 2600 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 envelopes, the ability to store and indicate the input/output patches, etc… You will also be able to change the look of the cursors but also enjoy the Blue Marvin and Gray Meanie looks.

Despite careful testing it is possible that some bugs remain. Please contact 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 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 2600 and have fun!

Sunny Synths

About this v1.4 version

This 1.4 version provides the following changes to the panel:

– Added Blue Marvin and Gray Meanie looks

The 1.3 version did the following changes to the panel:

– Added Welcome message switch
– Added ability to play AIFF, AAC and MP3 files on MacOS
– LEDs setup verified at panel startup
– Keep previous Author when loading Init program
– All labels (Name, LCDs, Synth1/2, FX...) are now restored when user selects No load at panel load
– Consequence of this correction/adaptation: you can now change presets in DAW with correct Name, Description, LCDs, cables... which was not working previously ☺

Information for the users of a previous version

As some images have been added in v1.4, **you need to delete the existing temporary "Behringer 2600" folder so that it will be replaced by the new one**.

You may have to redo your Midi settings so take note of them before deleting the folder (or copy the Behringer 2600.settings file to a safe place and put it back when the temp directory is recreated).

On Windows, the temporary folder **Behringer 2600** is located in the normally hidden directory **C:\Users\your_username\AppData\Roaming**. You can display the AppData folder by selecting to display the hidden elements in the Windows Explorer ribbon under Display.

On MacOS, the temporary folder **Behringer 2600** is located in your personal Library/Preferences folder. This is also a hidden folder that you can see/reach by using the Finder and clicking on Go while pressing the Option (Alt) key.

Table of Contents

Installation and features

Installation of the Ctrlr panel

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

– the Behringer 2600 panel as an .exe file on Windows PC
– the Behringer 2600 panel as an .app file on Mac OS (zip folder to be uncompressed)
– the Behringer 2600 panel as VST 32 bits and 64 bits for Windows PC
– the Behringer 2600 panel as VST and AU plugins for Mac OS
– this manual as PDF
– a folder containing programs from the ARP 2600 patch book
– a chart with the CC mapping in order to use the panel with a controller

For the PC standalone version, decompress the zip file anywhere on your PC then copy the **Behringer 2600.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 2600.app.zip. You may have to open the **Behringer 2600.app** file using Ctrl+click as it may not be recognized by the OS.

The program will directly display the Ctrlr window with the 2600 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 2600 panel as plugin on page 26 further in this manual.

Features

You will find the following features in the Behringer 2600 panel:
– Behringer 2600 interface with same look as actual synthesizer
– Top row of support "screens" with old look
– Selection between the classic, Blue Marvin or Gray Meanie look
– Simple sliders without LED or sliders with LED (all white or colored)
– Envelopes graphs handled by mouse or the AR/ADSR sliders
– Load / Save programs from individual .syx files
– Easy program renaming
– Display and export of program parameters as text file
– Display of only the modified parameters / buttons in comparison to an Init patch
– 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 with playing of associated wav file if any
– Patch sheet tab with patch sheet for 2600 and other gear (external synths/sequencer/FX)
– 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)

The panel doesn't exchange data with the synth.

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 sliders by directly clicking on a certain position or by keeping the left mouse pressed and moving the mouse up/down or left/right.

You can also modify any slider by doing a mouse hover on the cursor then using the mouse scroll wheel.

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

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

Permanent toggle buttons (like the "Look" one) are activated by simply clicking on them (what a surprise…). They will stay highlighted until the next click.

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

Quick reset to default value

Sliders have default values set and you can quickly revert to this preset default value by double-clicking on the slider/button. Try with the VCO's Fine Tune for example.

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).

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 Settings and Patches tab is ON).
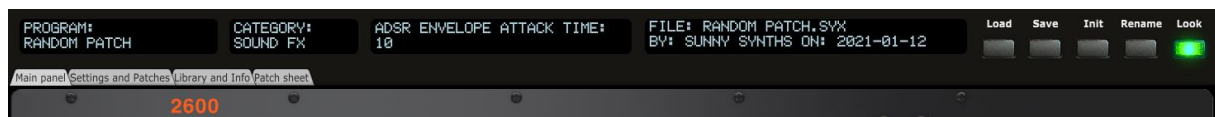

When the last saved file is found, the panel is restored so you can continue your work where you saved it (unless the button **No program load at panel load** in the Settings and Patches tab is ON).
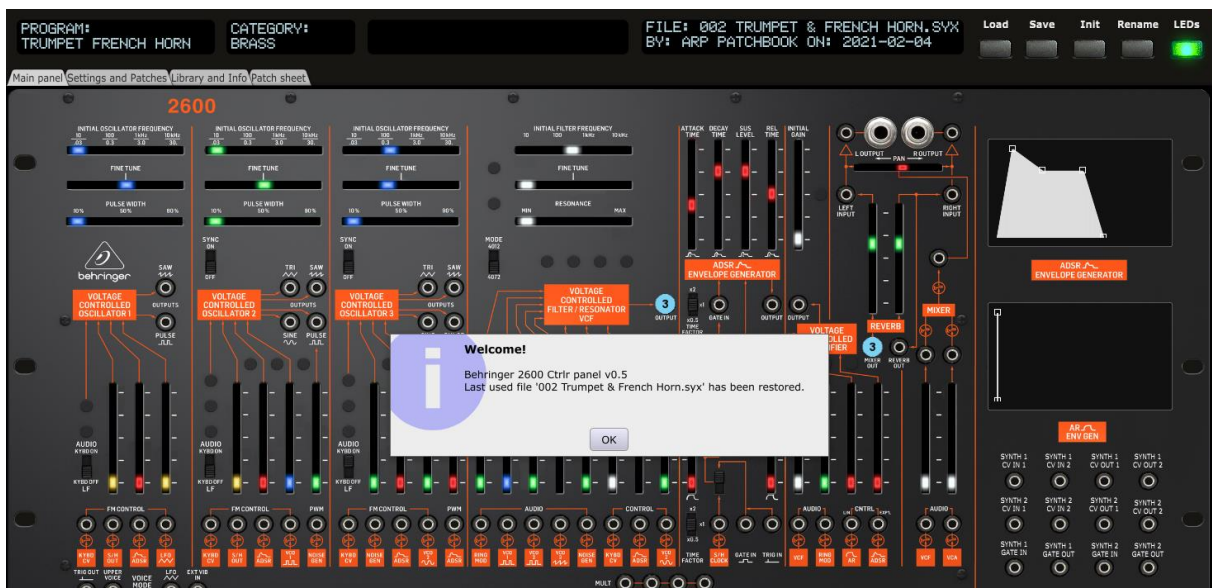
If you want, you can prevent the display of the Welcome message (see Settings and Patches tab on p18).

Top panel area

In the top panel area you find 4 feedback "screens", 5 buttons and 4 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 *an Init program*
– The **Rename** button allows renaming the current program
– The **Look** button (multiple switch) allows switching between the different looks of the panel
– The **Main panel** tab displays the synth
– The **Settings and Patches** tab is used to manage some panel settings, allows the registration of 15 different input/output patches, the identification of two external synths and FX. It also allows modifying the category, the author, the description and a step by step usage of the current program. You find also the About info of the panel in this tab.
– The **Library and Info** tab provides the file browser that allows the selection of sysex files or the ability to listen to wav and aiff files, the display and the export of the parameters of the current program as text file. It is also here that you will find the manual panel zoom that is memorized.
– The **Patch sheet** tab displays automatically the Behringer 2600 patch sheet with all parameter values (as in the manual) but with the addition of author, date, external synths and FX names and 18 external input/output connections
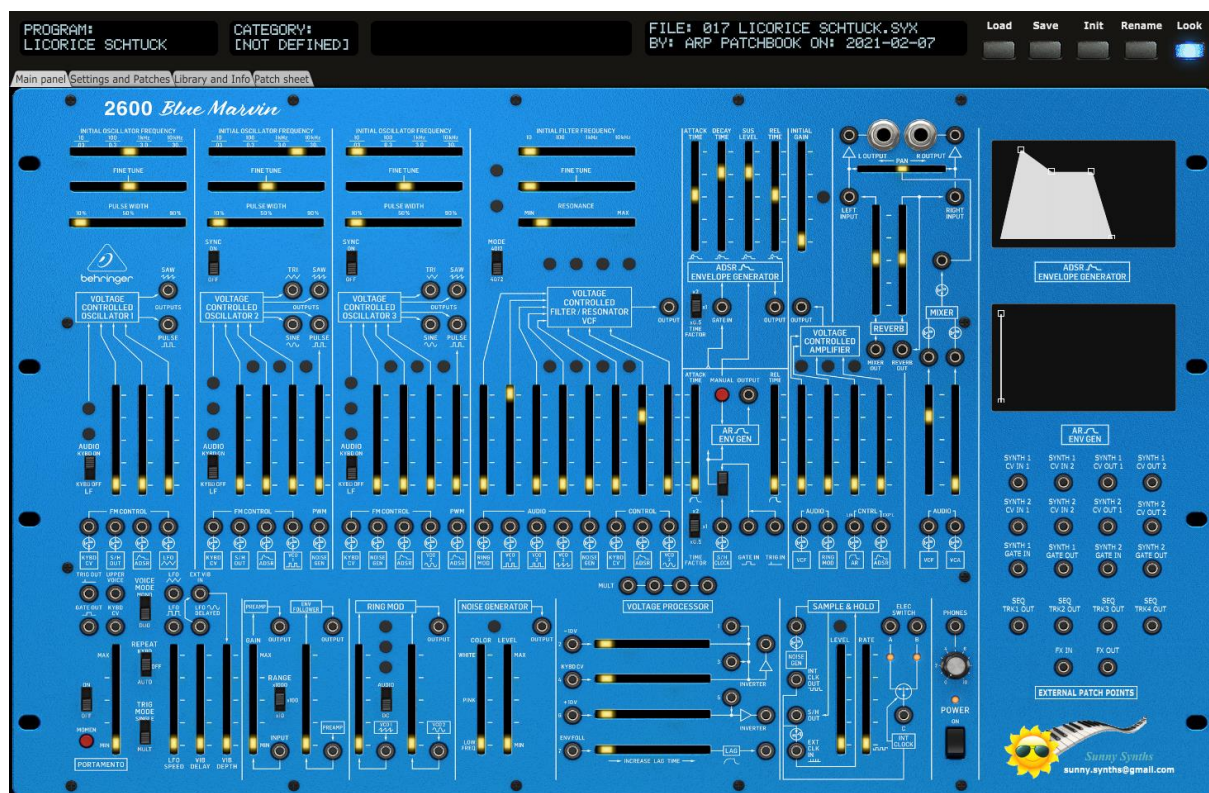
The different looks

By clicking on the **Look** button several times, you can use the look you prefer:
– Classic look with sliders without LED
– Classic look with sliders with white LEDs
– Classic look with sliders with colored LEDs
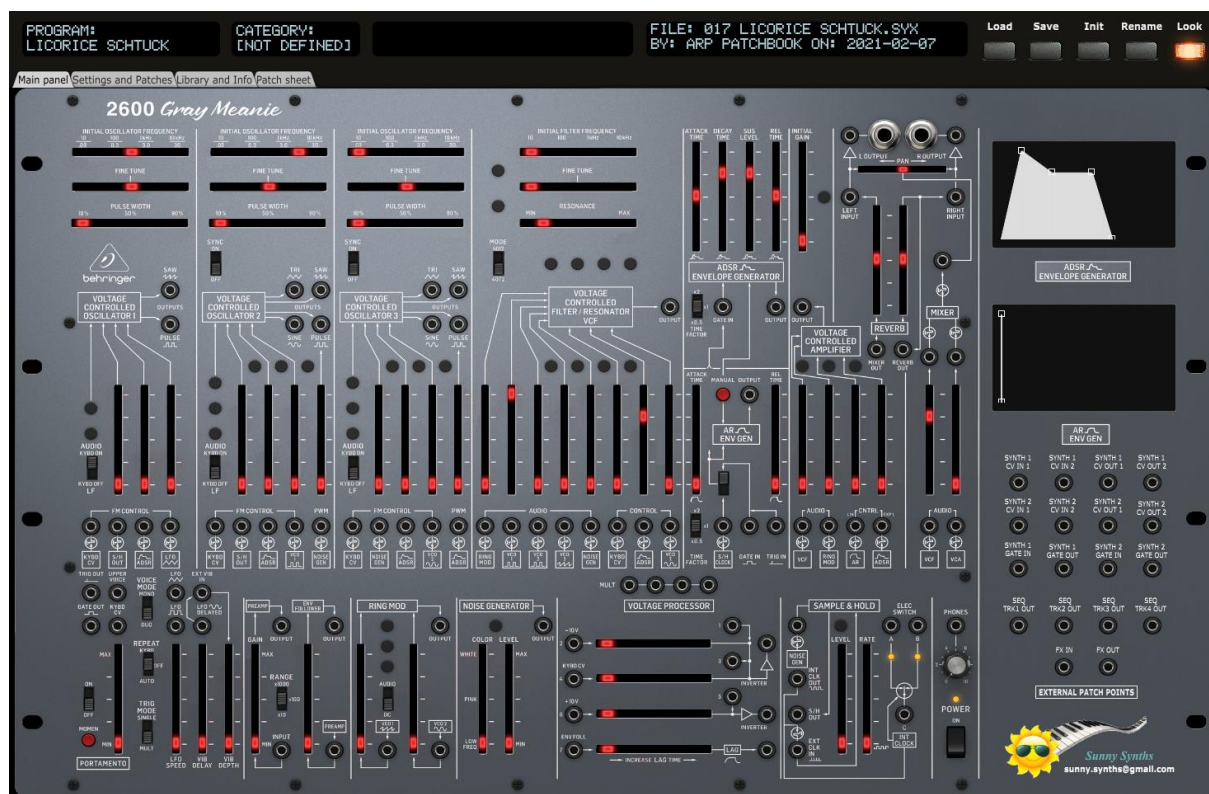– Blue Marvin look
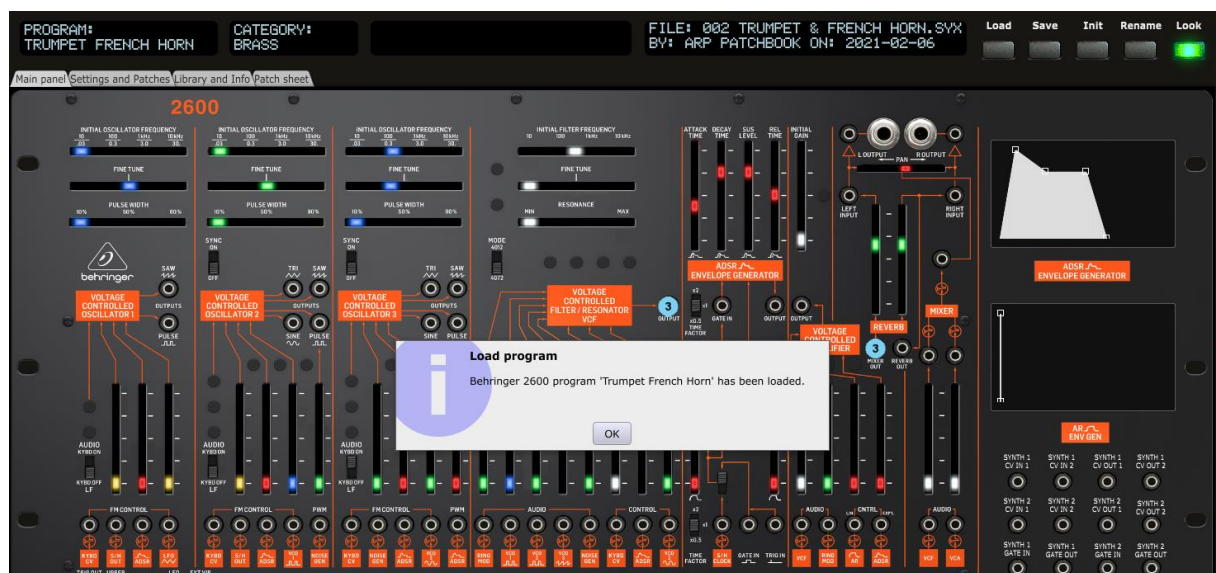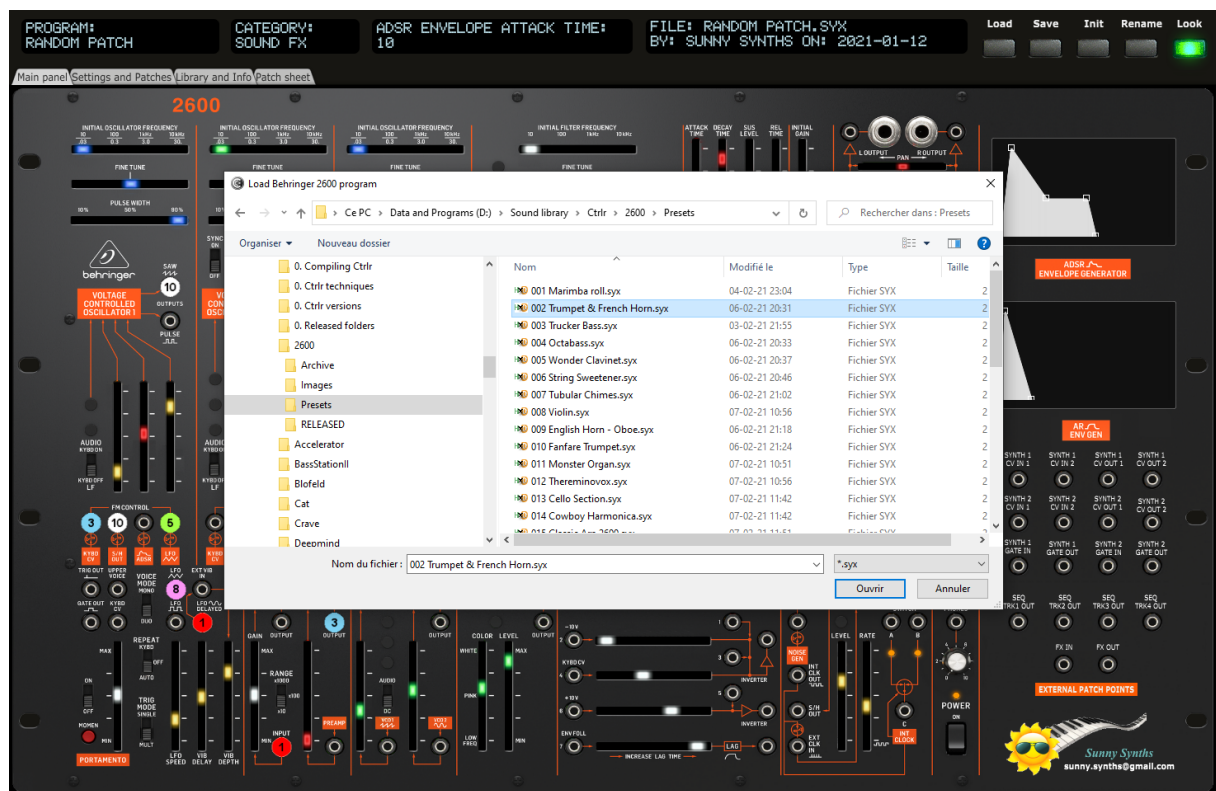– Gray Meanie look

Classic look:
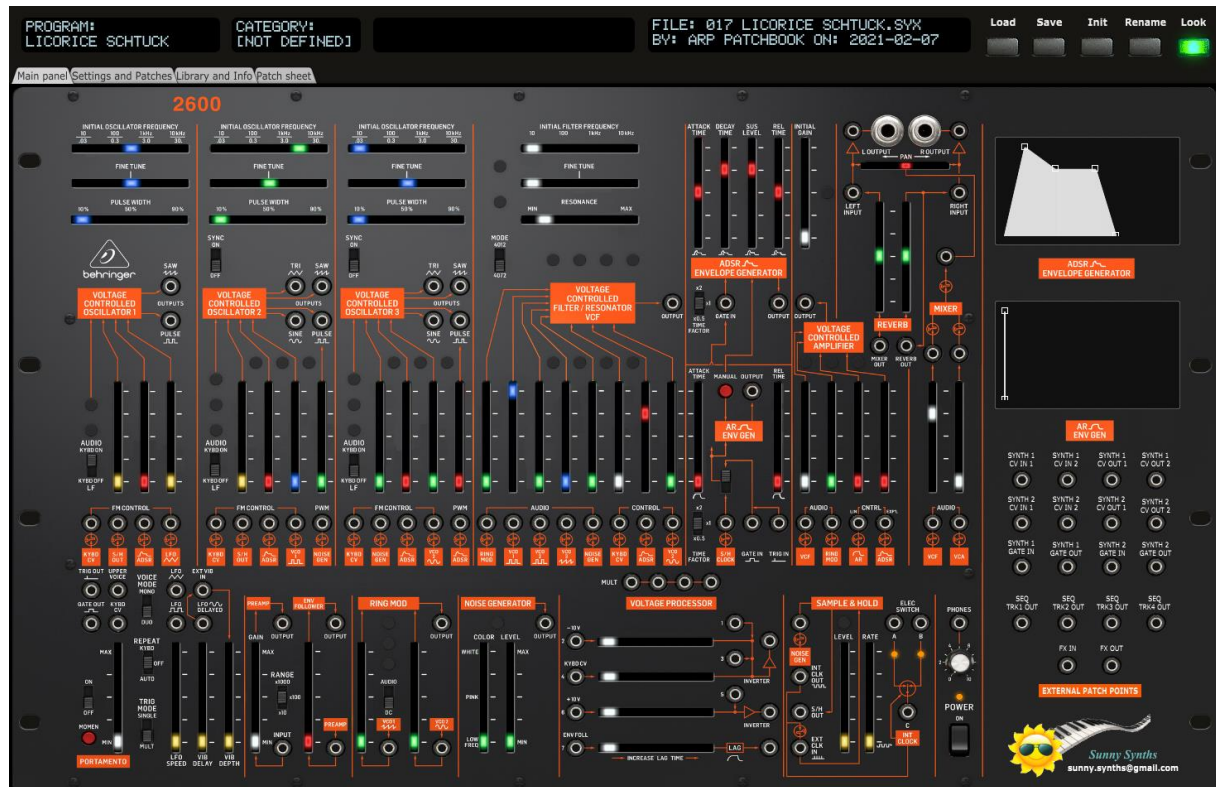
Blue Marvin look :

Gray Meanie look :

Loading a Behringer 2600 program

The panel loads and saves the program parameters as a 1370 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 2600 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 Settings and Patches tab on p18).

Saving a Behringer 2600 program

The panel loads and saves the program parameters as a 1370 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 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.
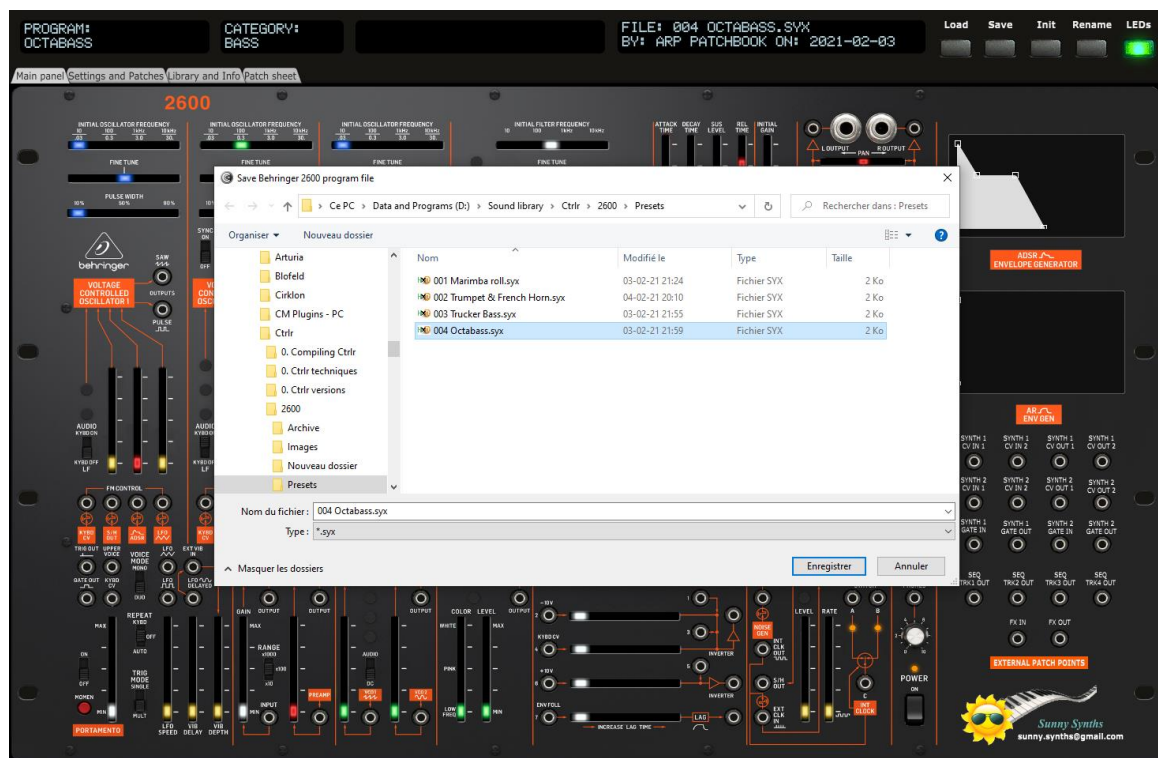
The panel remembers the last file saved path and name so it is used by default at next Save.
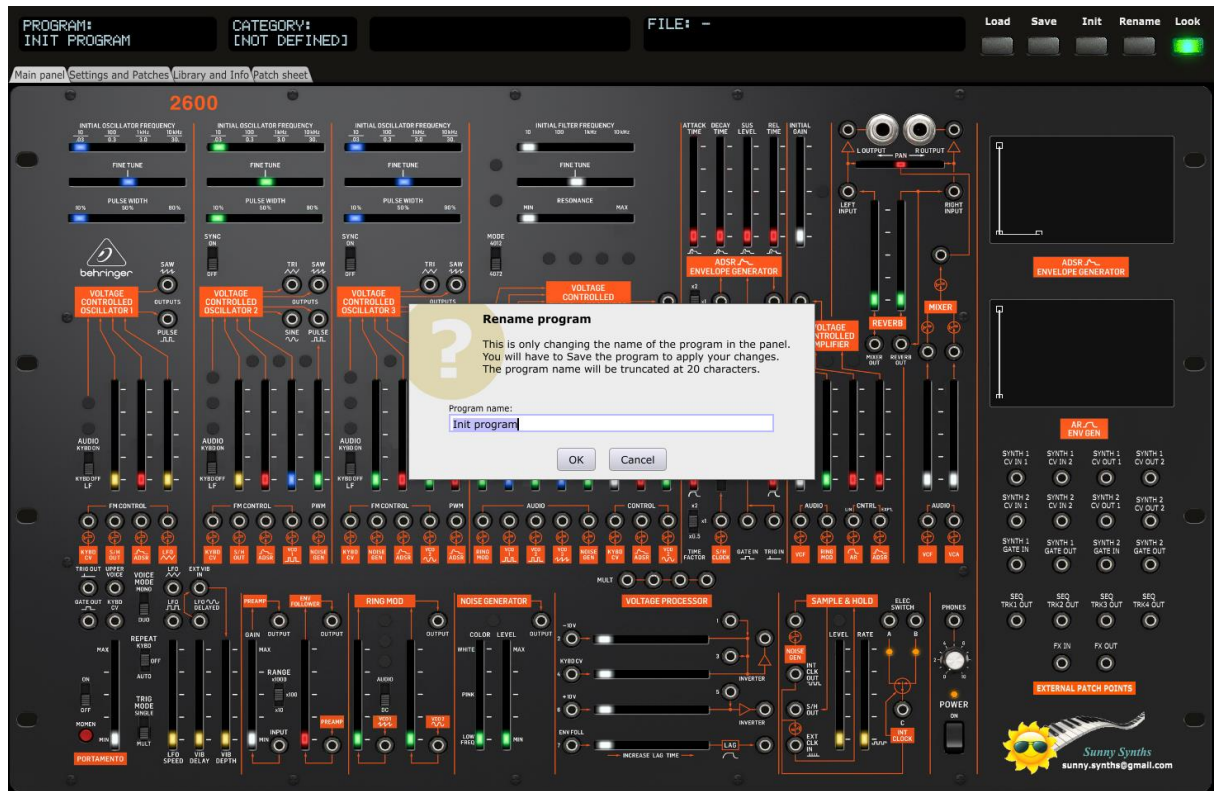
Program Init

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

– VCO's Fine tune and Pan sliders in center position
– All other sliders at minimum positions
– Routing switch on Gate In
– Filter type on 4072 mode
– ADSR and AR time factor on 1
– VCO's on Low Frequency
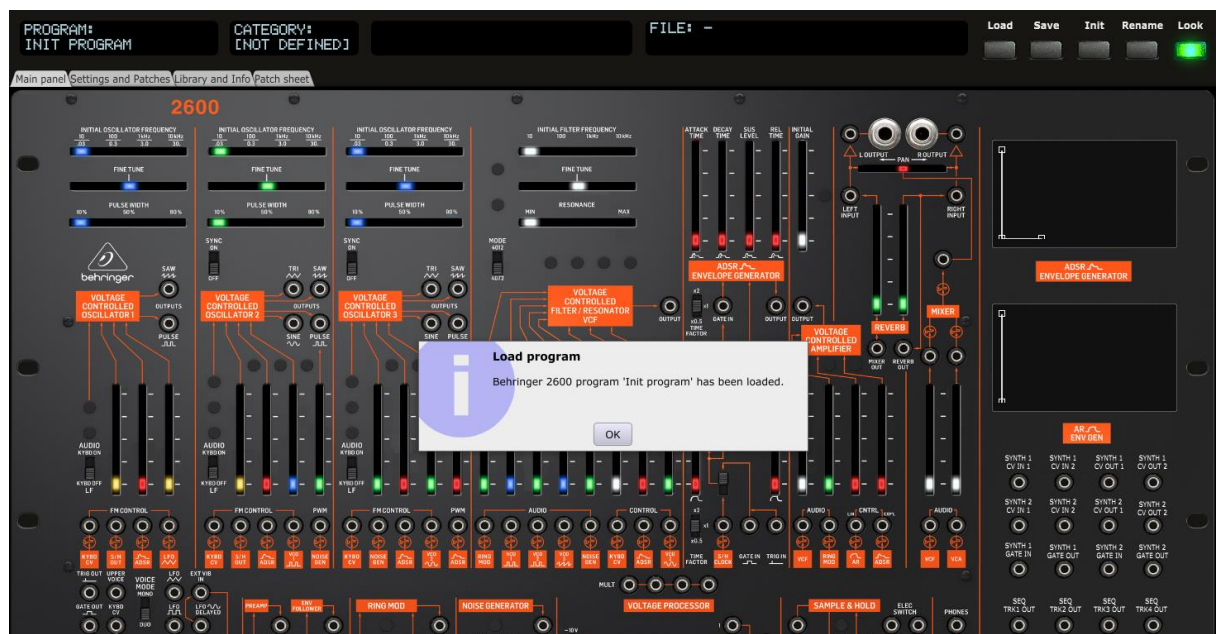
Program Rename

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

Main panel tab

In the **Main panel**, you have access to the same parameters as on the actual synthesizer but have also the possibility to visualize AR and ADSR envelopes and to adjust them by moving the anchors of the graphs.

Please refer to the Behringer 2600 user manual (https://mediadl.musictribe.com/media/PLM/data/docs/P0DNJ/2600_QSG_EN.pdf) for the explanations of each slider/button.

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

Envelope shapes

You can modify the envelope shapes by either moving the AR/ADSR sliders or by using the mouse and moving the anchors on the graphs either vertically or horizontally.

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

Settings and Patches tab

In the **Settings and Patches** tab, you can:

– set/indicate up to 15 from/to patches
– adapt the name of the external synths and FX that could be connected to your 2600
– 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
– request the display on the Main panel tab of only the differences in comparisons to an Init patch
– adjust some panel settings
– look at the About screen giving you information about the panel version and history of changes
– use the Panel zoom buttons to keep the zoom factor in memory till next usage of the panel
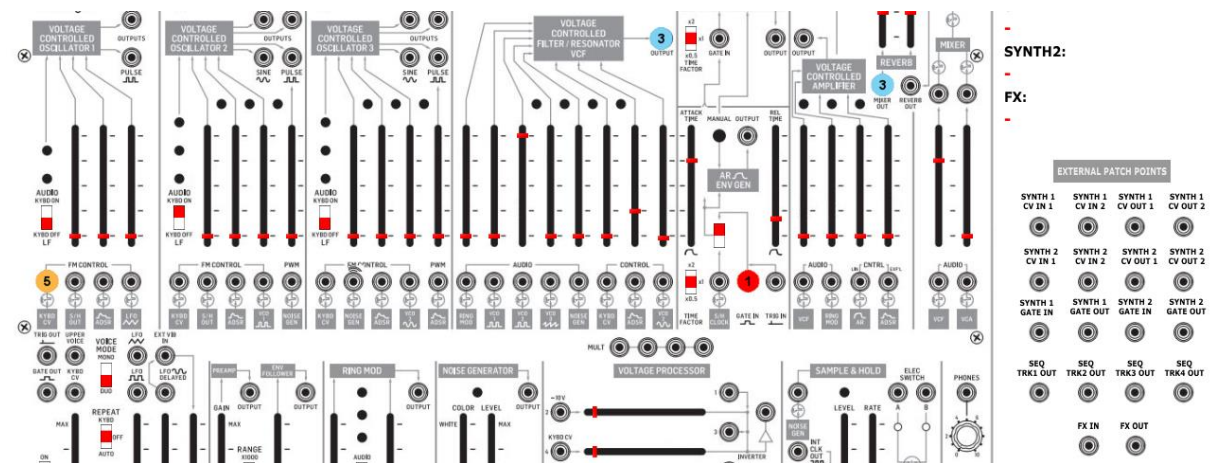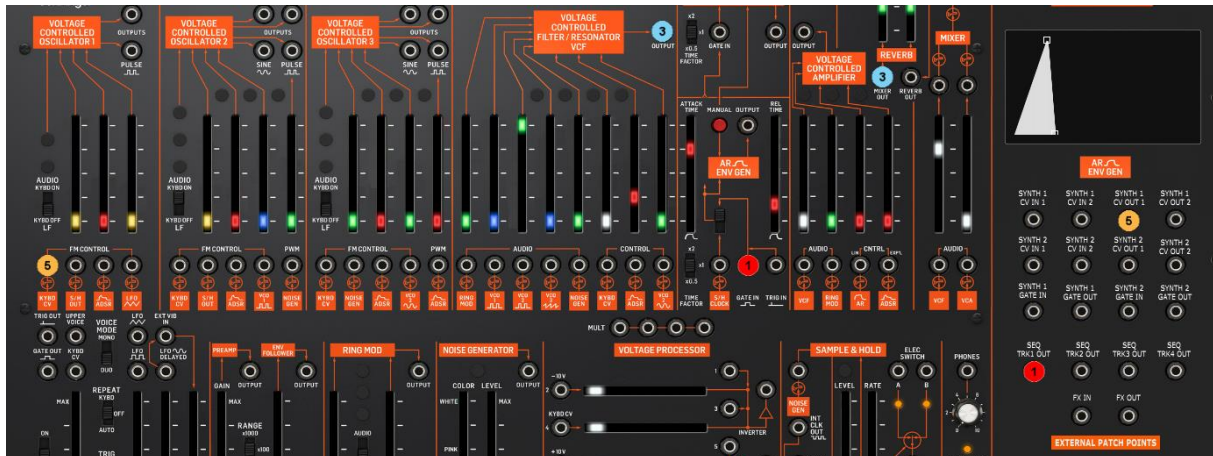

Patch points

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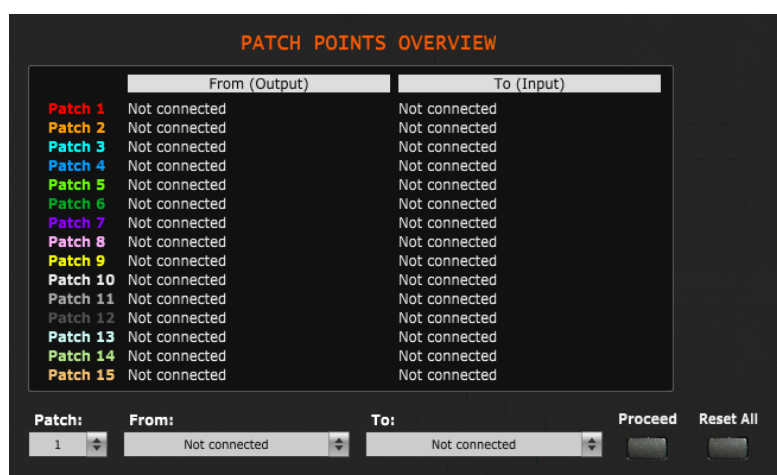
Clicking anywhere on a patch line (label, input, output, blank space) will select the patch to be modified and display its values in the pull-downs. You modify the "From" source and/or "To" destination and press the Proceed button to make the change.

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 Settings and Patches tab, corresponding patch cables are displayed on the main 2600 tab and corresponding colored numbered circles are displayed on the patch sheet.



Numbered circles are used to help colorblind people.

💡 Some of the patch points are both output and input even if marked as "output" on the synth panel. A typical example is "Mixer Out" which is also "Reverb Input"

Clicking the **Author** button opens a popup window where you can modify the name of the author of the patch. The name should be 15 characters long at max (will be truncated if longer). If you leave the Author name empty then a "?" is displayed.

When loading the Init program, the previous Author used is kept.

Clicking the **Synth1** button opens a popup window where you can modify the name of a synth connected to your 2600. The name should be 11 characters long at max (will be truncated if longer). If you leave the Synth1 name empty then a "-" is displayed.
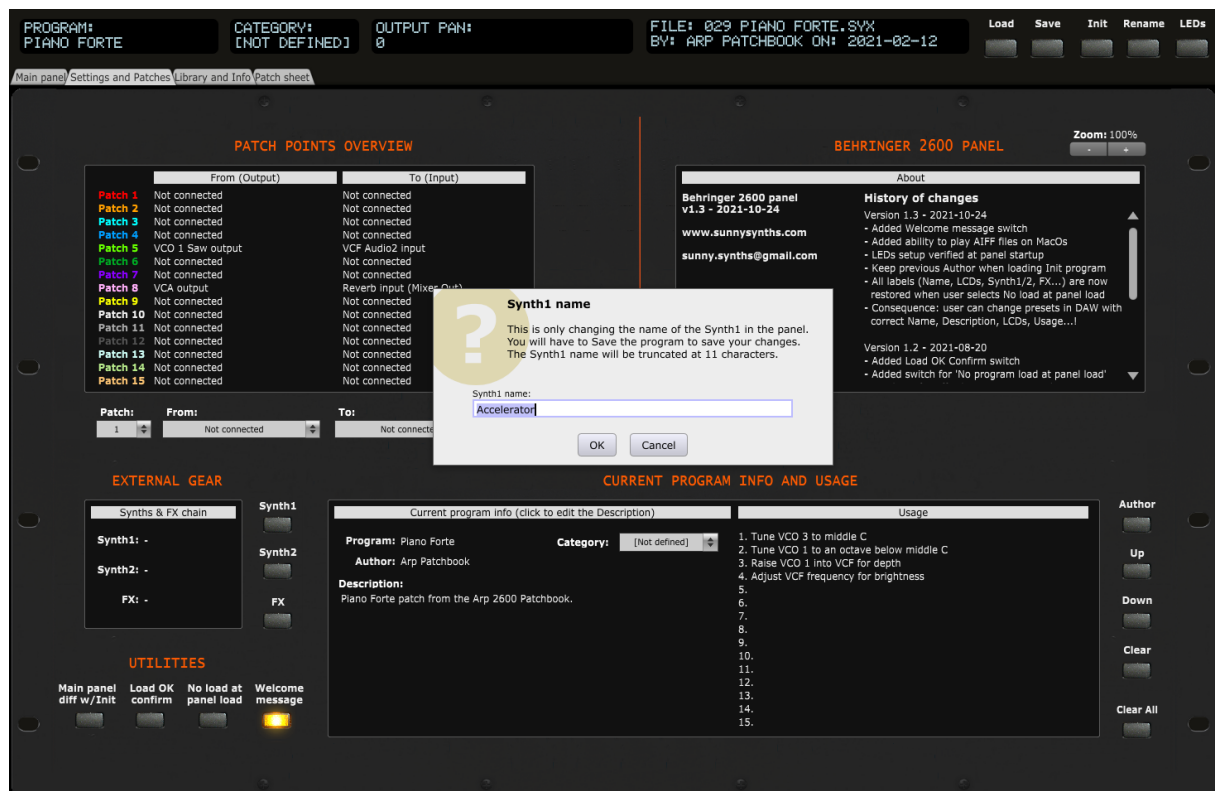
Clicking the **Synth2** button opens a popup window where you can modify the name of a second synth connected to your 2600. The name should be 11 characters long at max (will be truncated if longer). If you leave the Synth2 name empty then a "-" is displayed.

Clicking the **FX** button opens a popup window where you can modify the name of a FX chain connected to your 2600. The name should be 15 characters long at max (will be truncated if longer). If you leave the FX name empty then a "-" is displayed.

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; increase echo time; increase amp release; decrease cutoff… The idea is to be able to illustrate the usage of your sound in a more live environment.
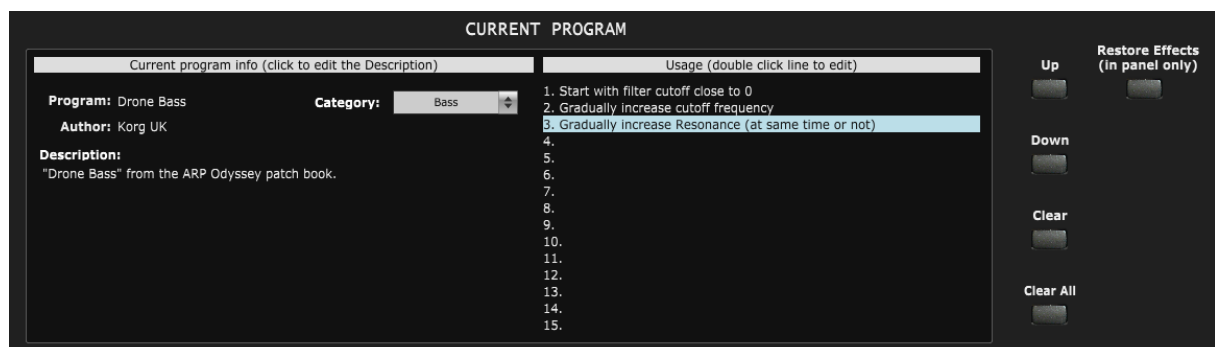

The actions to use the usage steps are:
− double-click on a step line to input or modify a step (max 50 characters by line)
− Use **Up** and **Down** buttons to move a step around
− Use **Clear** or the Delete key to erase a step

– Use **Clear All** to erase all steps

Only displaying differences with Init program

Pressing the **Diff w/ Init** button highlights the main panel with the differences against an Init patch (mix of LED sliders from current program and sliders without LED for Init program)
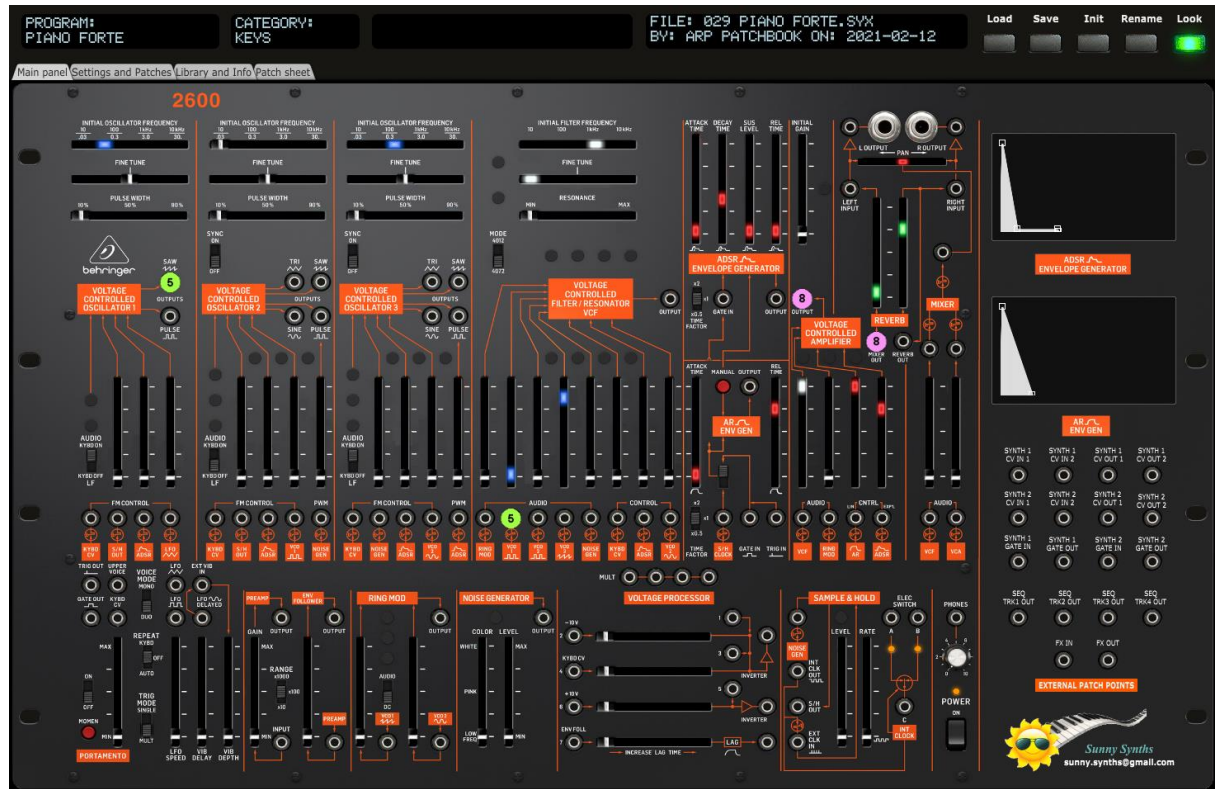
Panel settings

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: activate or disable the Welcome message at next panel opening. When disabled you may not see that a previously used file has been reloaded.

Panel zoom

The panel can be zoomed by using the Ctrl + or Ctrl – keys combinations. This is also available from the **View** menu.
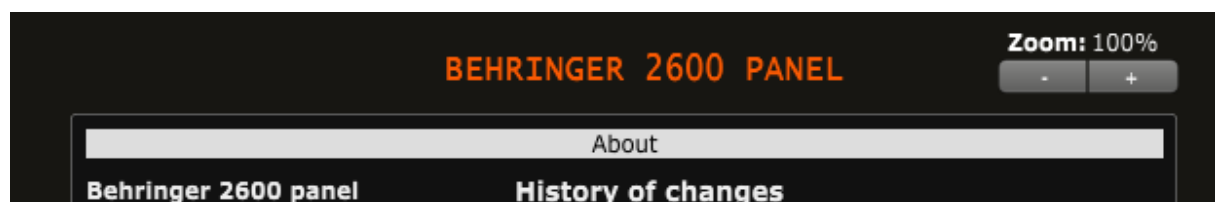
Using that method is incrementing/decrementing the zoom factor by 10% steps but the main issue (for some users) is that the zoom factor is not memorized and thus at next usage the zoom is back at 100%.

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 Ctrlr + / Ctrlr – 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).

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 (Windows, MacOS) and aac, aif, mp3 (MacOS only)
– the display of all program parameters as a text file with the possibility to export it
– the display of the parameters changed in comparison to an Init patch
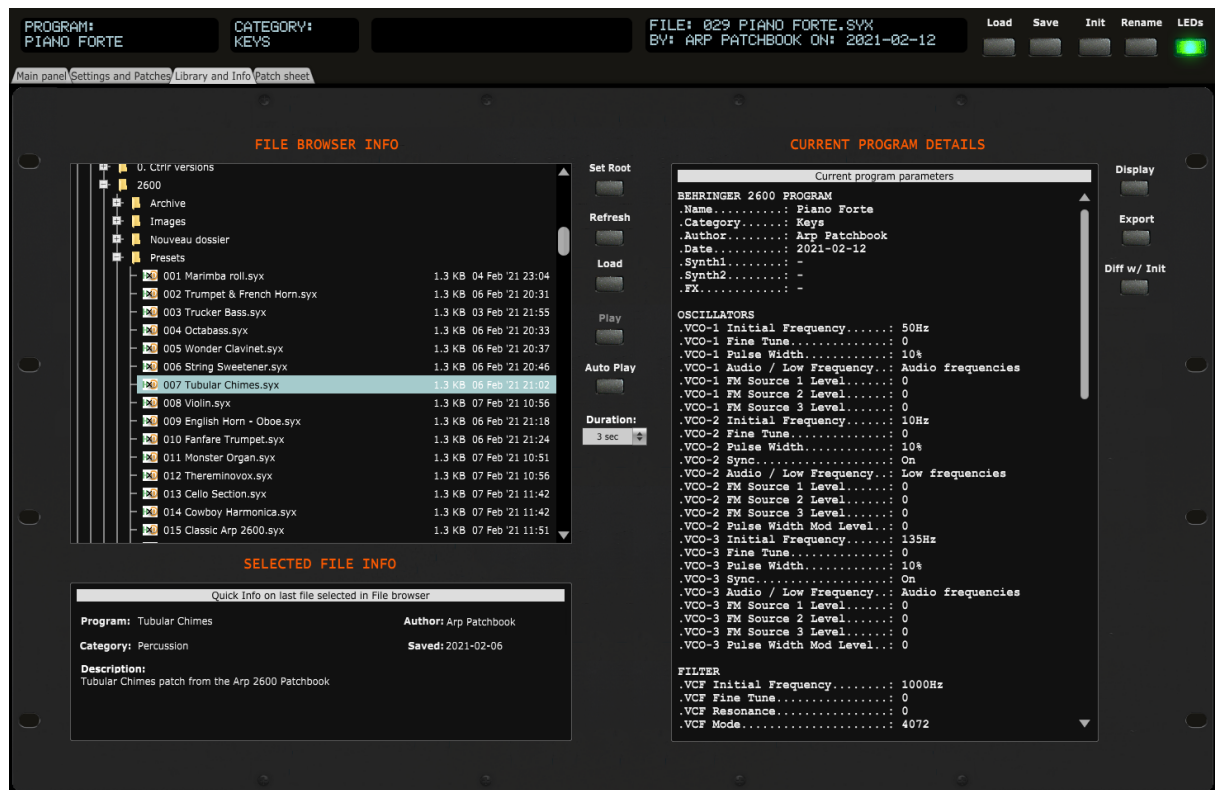
File browser

The **File browser** allows you to navigate on your disk and browse through presets. You can:

– **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-2600 or .wav or .aiff file then it will be indicated. When Auto Play is activated, clicking on a .wav or .aiff file will play it automatically for the chosen duration and clicking on an 2600 .syx file will make the corresponding .wav or .aiff file play automatically as well (if a wav or aiff file with the same name as the 2600.syx file is found)
– **Double-click** on a file to load it (2600 .syx file) or play it (.wav or .aiff 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 or .aiff/.aac/.mp3 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 2600 .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.

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** toggle switch list the differences in comparison with an Init patch

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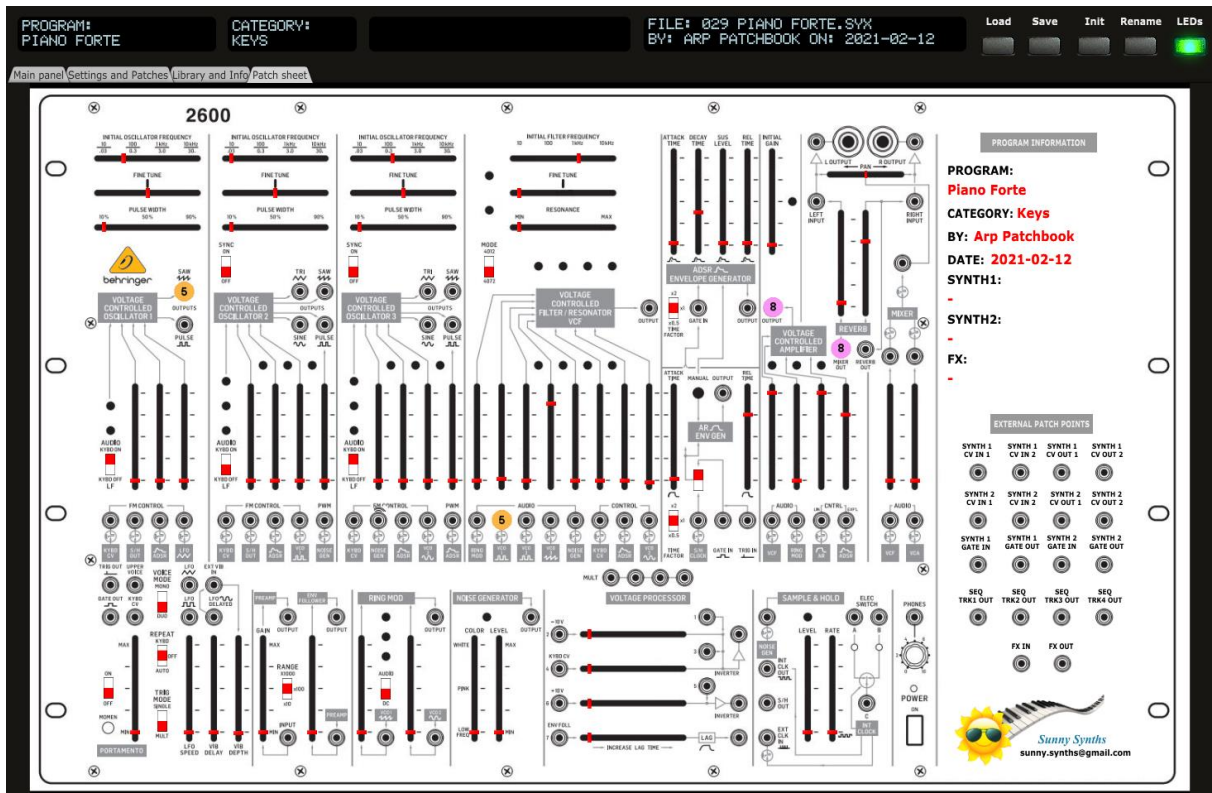
The content of this tab is adapted automatically. Directly ready for a screenshot!

Installing and using the 2600 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 **Behringer 2600.dll** file from the Windows VST 64 bits directory to your 64 bits plugins directory and/or the **Behringer 2600.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 2600.vst** file from the MacOS VST directory to your VST plugin directory (/Library/Audio/Plug-ins/VST) and copy **Behringer 2600.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 2600** 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):
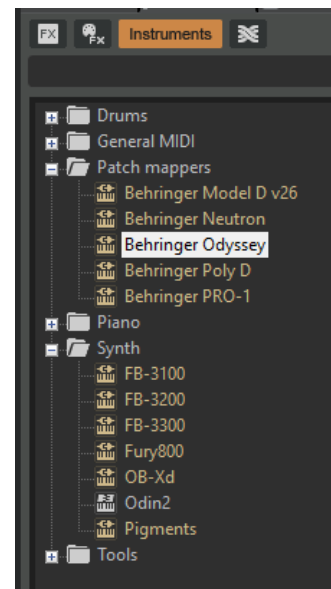
Tests and identified limitations

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

💡 Don't hesitate to send a mail to sunny.synths@gmail.com 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 now working fine in all DAWs from the v1.3 of the panel.
> 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 2600 VST. Click on the Instrument button to display the panel and use it as you would do for the standalone version.
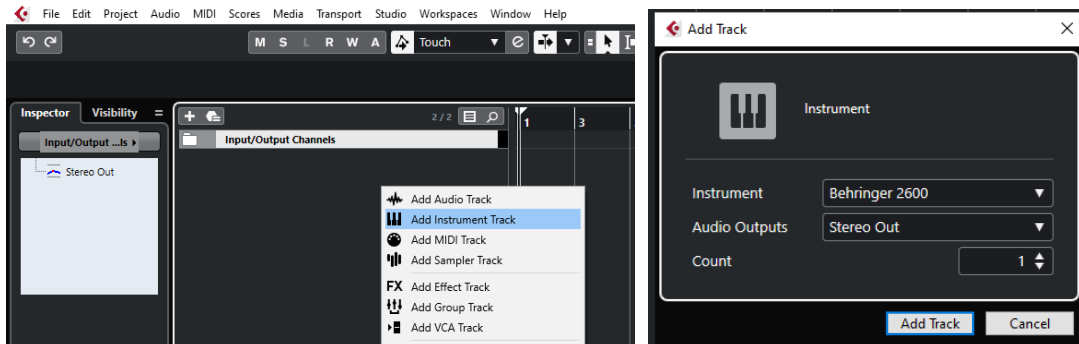
…or by dragging and dropping from the VSTi panel (easier).

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 2600 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.
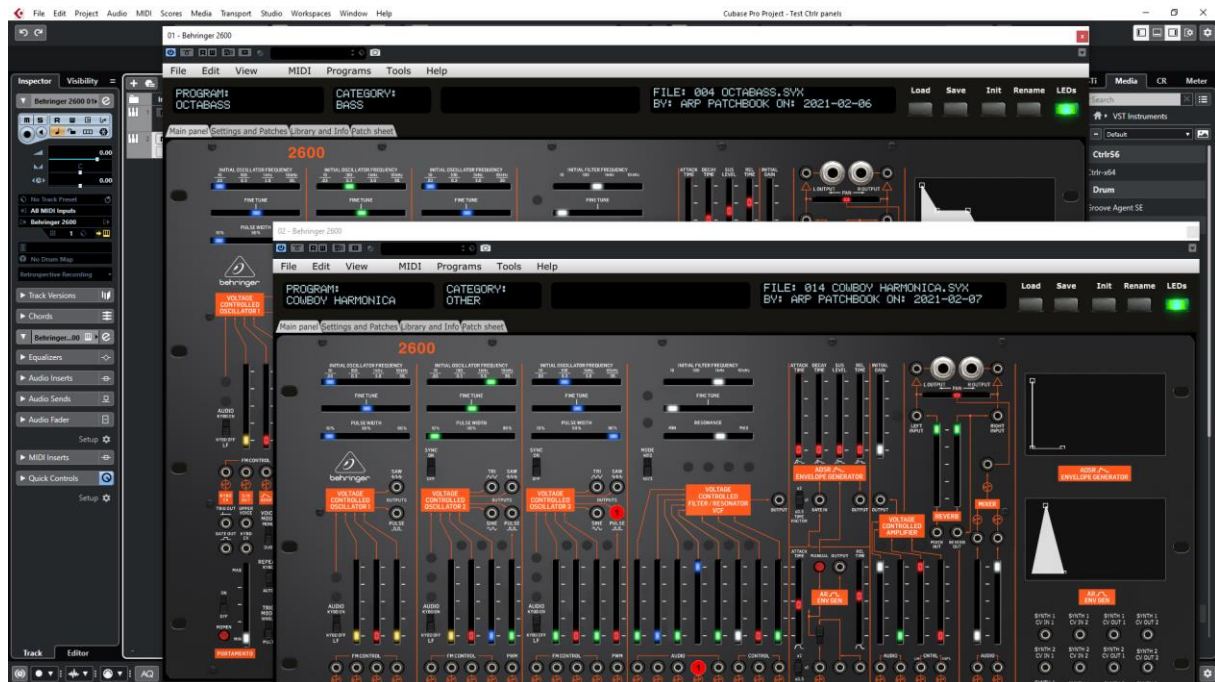
Saving a patch as a Cubase preset

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.
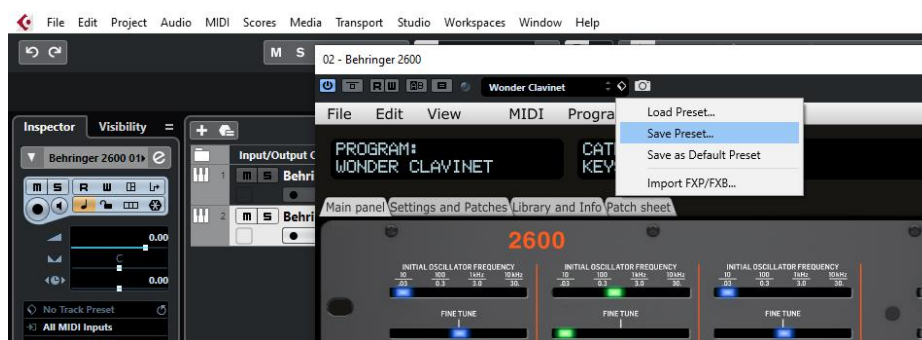
Later on, you can load a preset by using Load preset from the same menu or you can navigate through your presets by using the small up and downs triangle buttons.
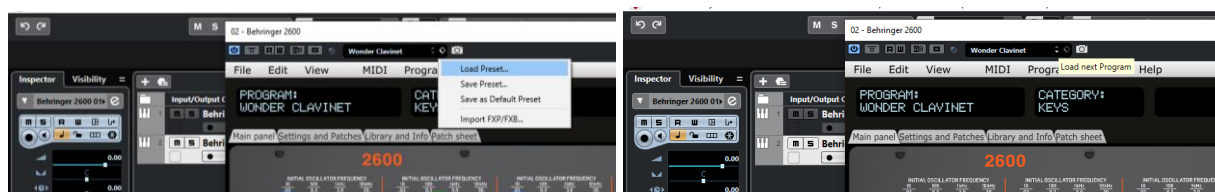
To save as Cubase track preset, select Save track preset when right clicking on a track.

💡 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.
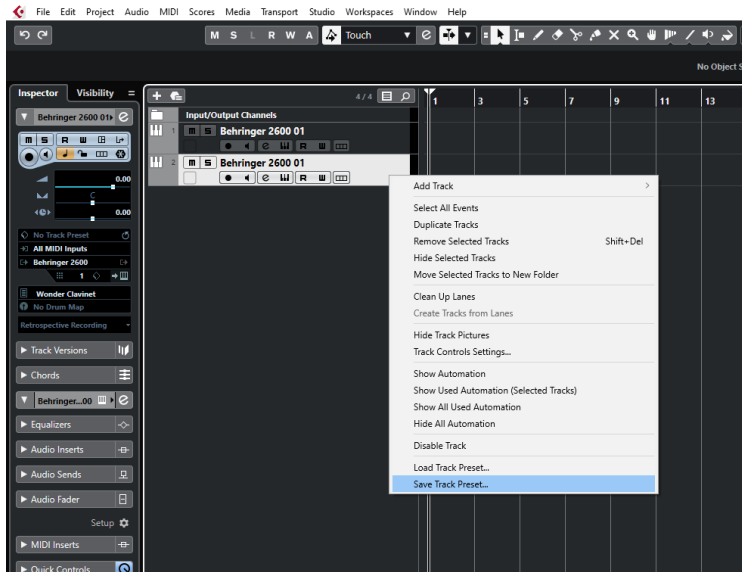
Later on, the content of the panel as is can be restored directly in a new empty track without the need of a Load from the panel by using Load track preset
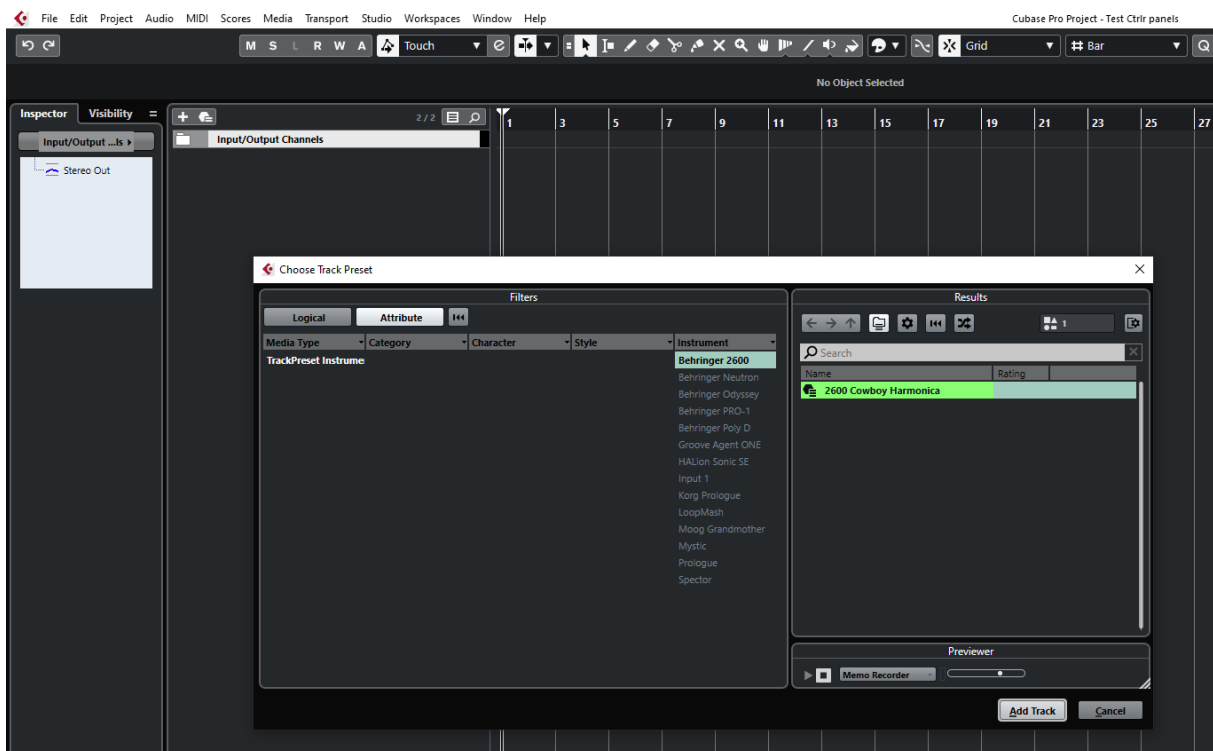
Creating a new track from a Cubase track preset

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
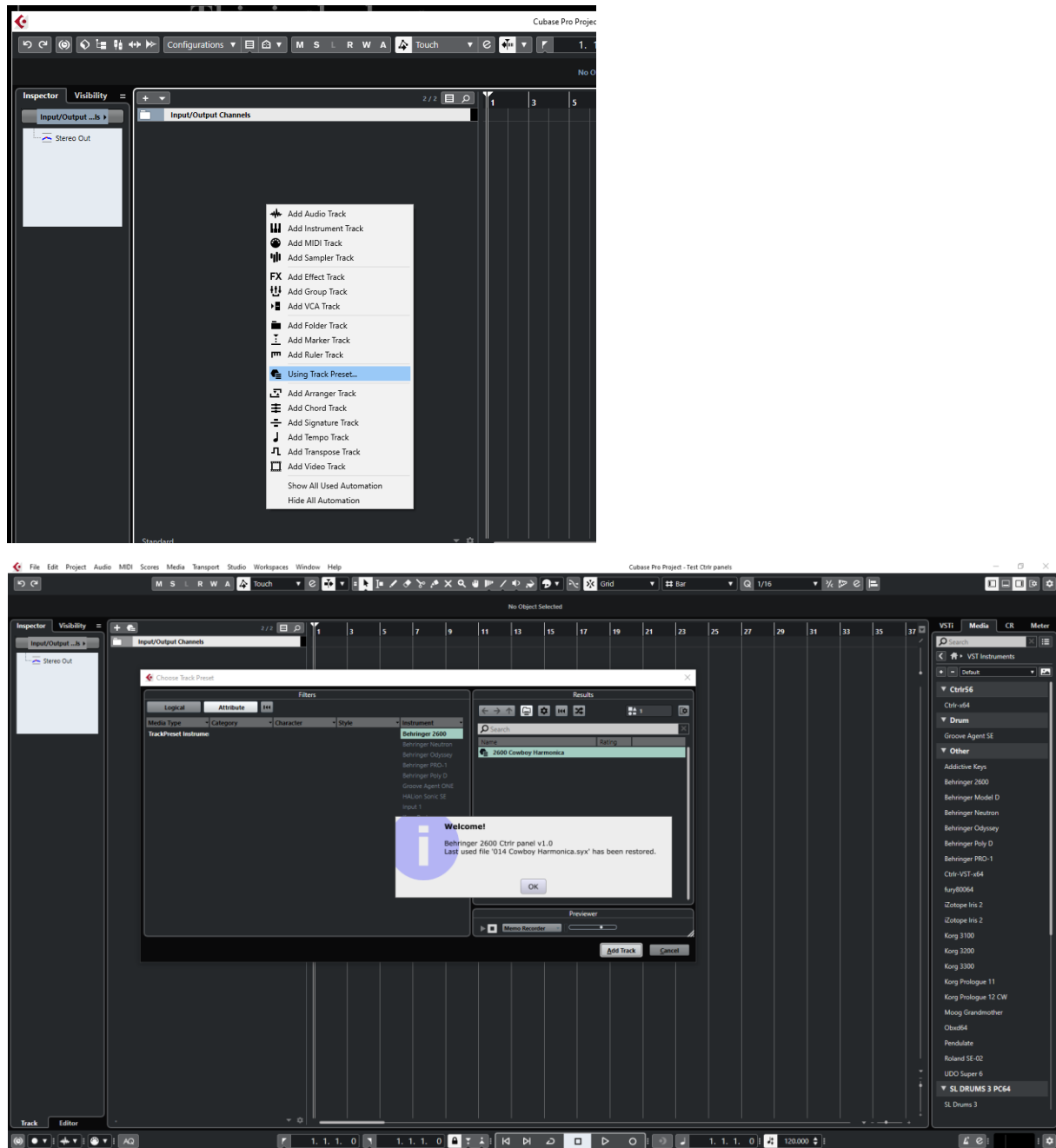
Replacing the preset on an existing track by another preset

Works fine. Just select another previously saved preset at the top left of the plugin window. All buttons will be positioned according to the newly loaded preset; patch cables and all labels will be restored.

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

Cakewalk by Bandlab

Creating a new track

Drag the 2600 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.
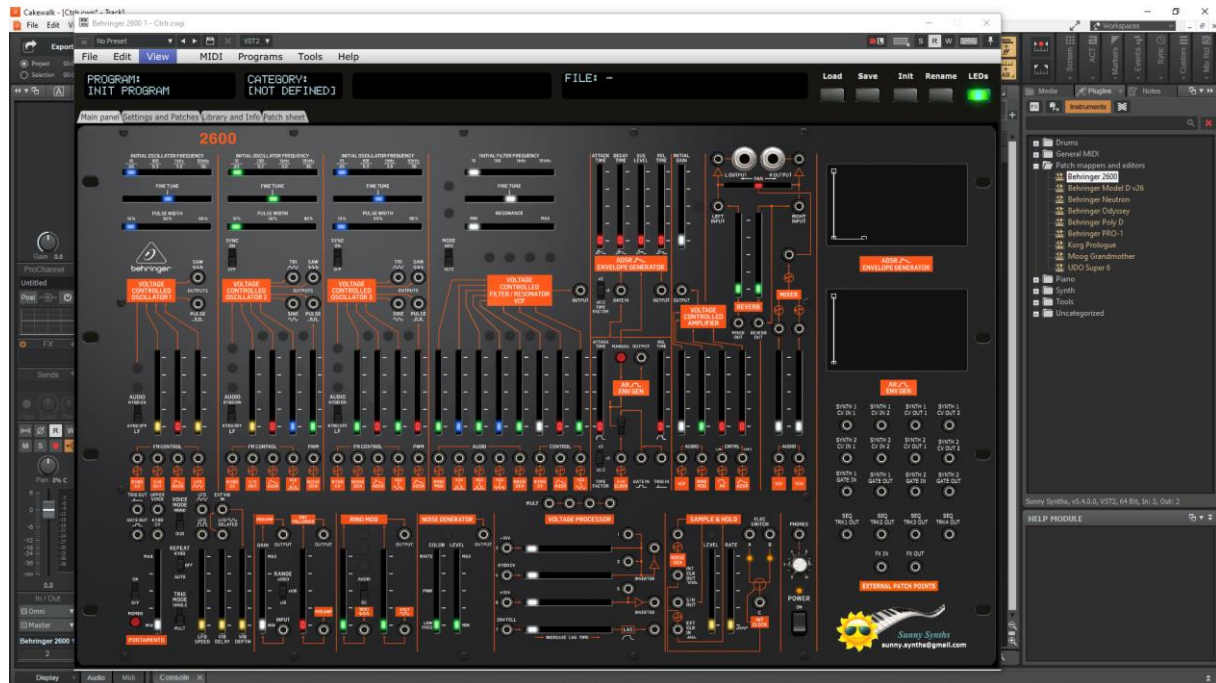
Load a preset from inside the panel and use it as you would do for the standalone version.

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 2600 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 "Cowboy Harmonica") then clicking on the Save button.
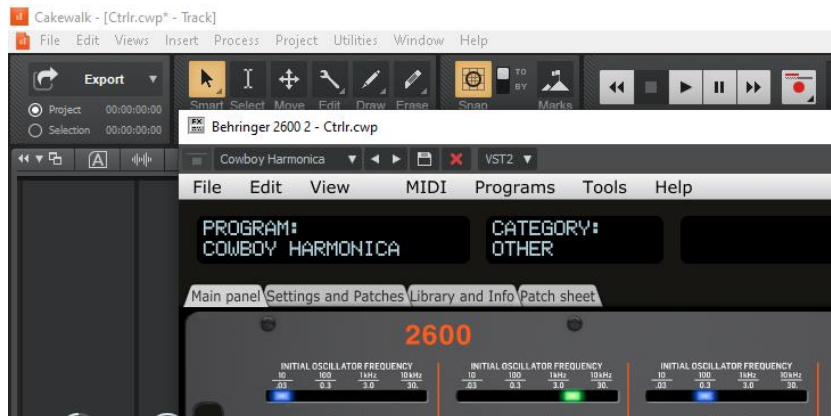
It is also possible to save a complete mixer channel as track template.

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". To perform this, right click on a track then select **Save as track template** in the menu.

Later on, you can directly insert a new track based on that preset by using **Insert from track template** as indicated in this picture:
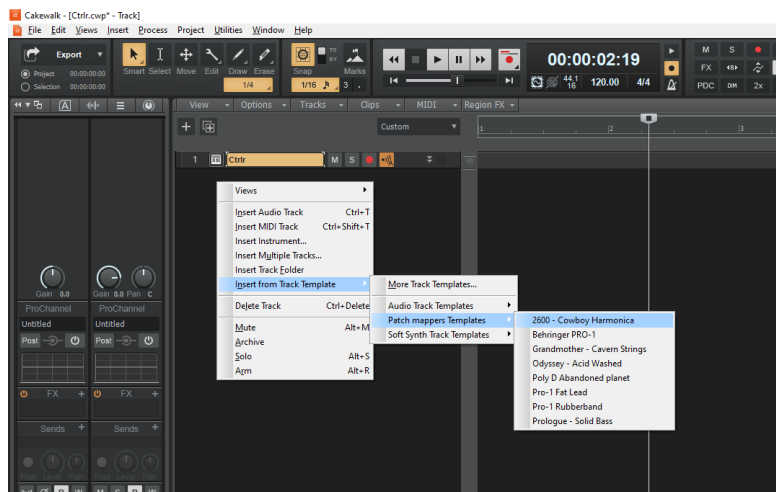
Replacing the preset on an existing track by another preset

Works fine. Just select another previously saved preset at the top left of the plugin window. All buttons will be positioned according to the newly loaded preset, patch cables and all labels will be restored.

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 2600 VST from the VSTi category
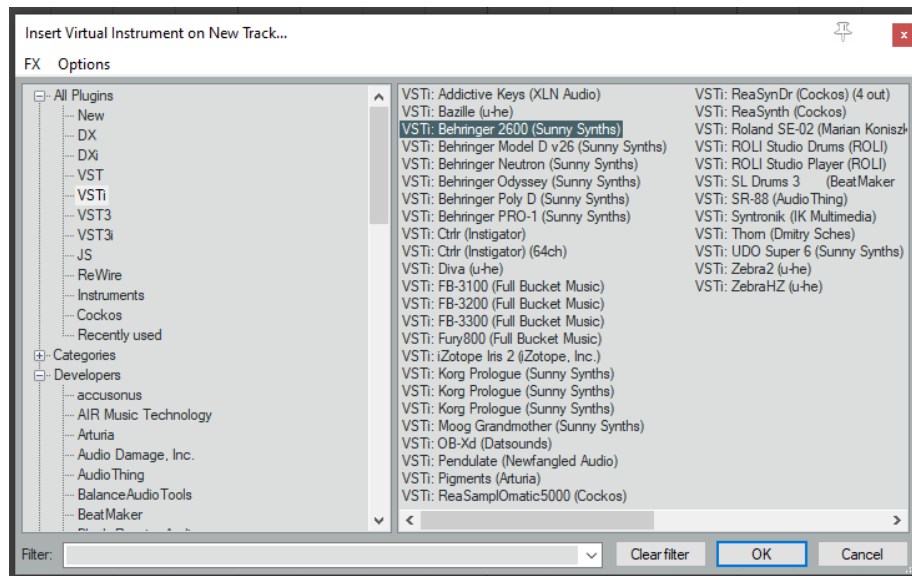
Click on the FX button to display the panel and use it as you would do for the standalone version (right-clicking instead of direct click gives only the plugin window without the blank side area)
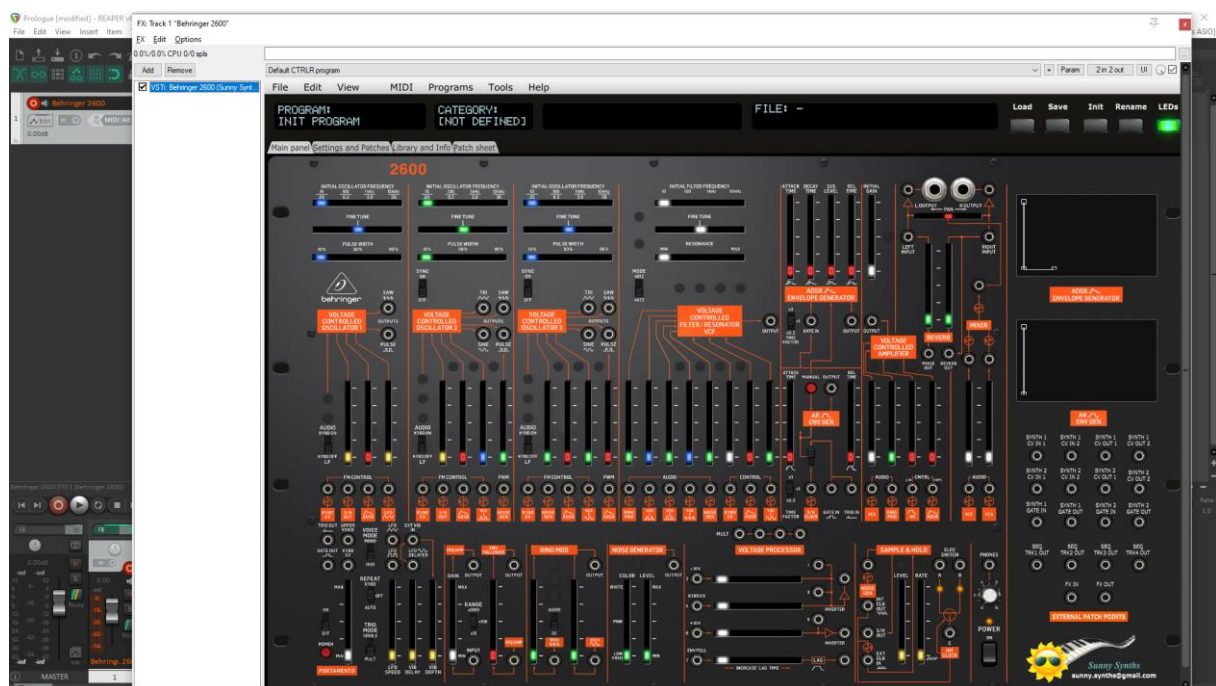
Listening to wav files associated a patch is also working even if ASIO is used as audio driver for Reaper while the wav file player is Windows or MacOs.

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

Using several 2600 tracks at once
Works fine:
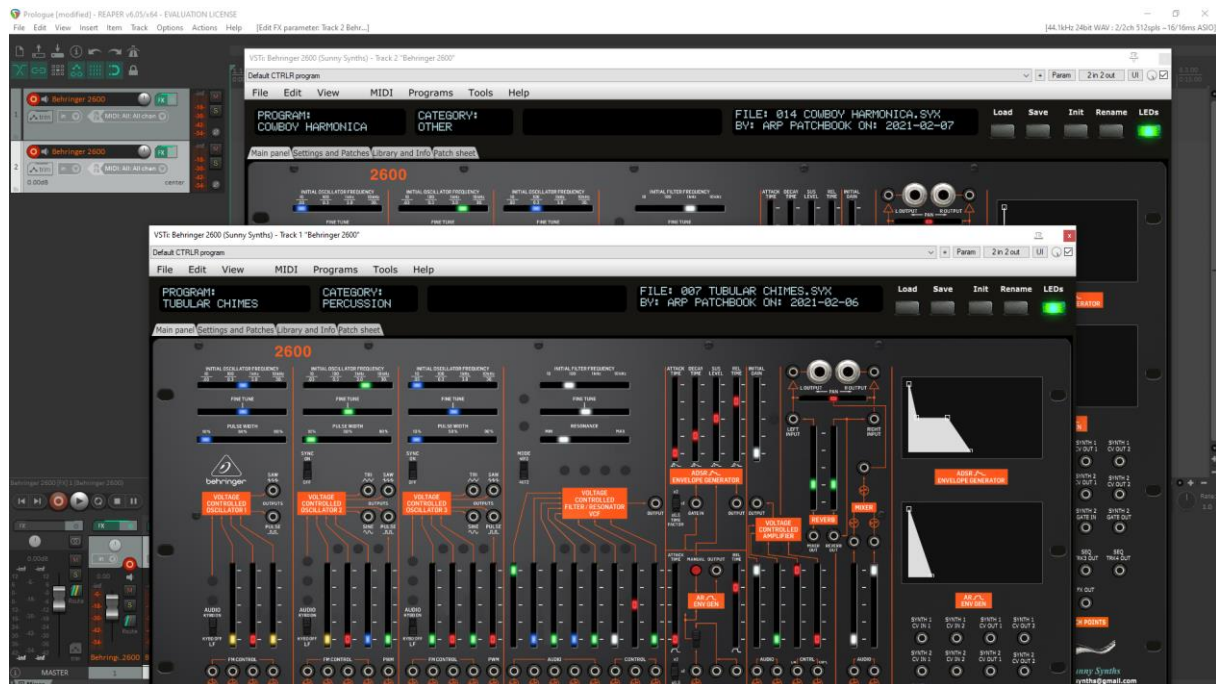
Saving a patch as a Reaper preset
Two different methods are possible:
– Save FX chain – Right click on VST name in white area of plugin window then select FX chain
– Save preset - Click on the + button in the plugin window then name the preset
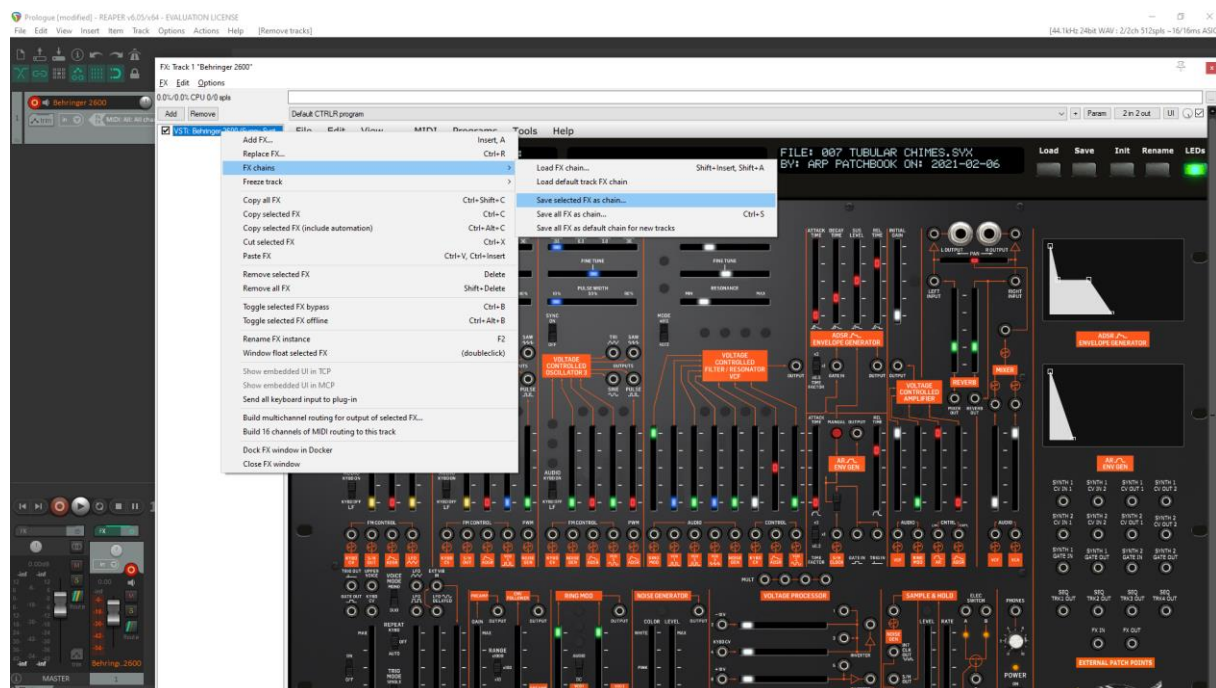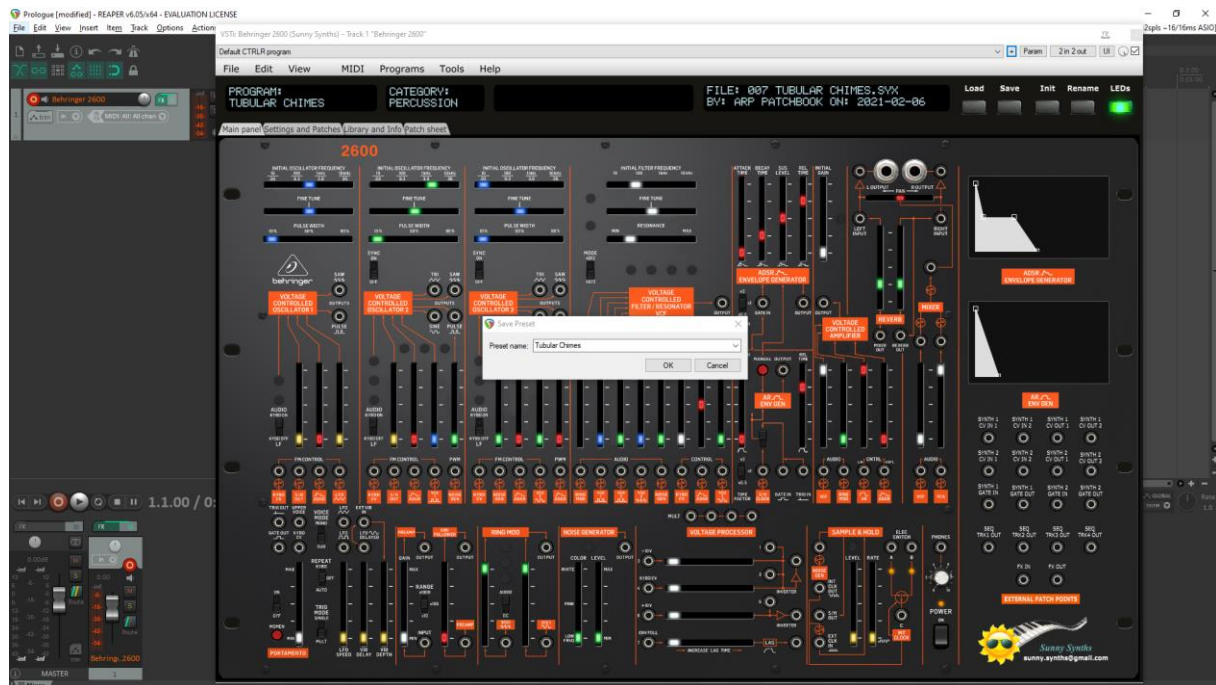
Presets are appearing under User presets

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
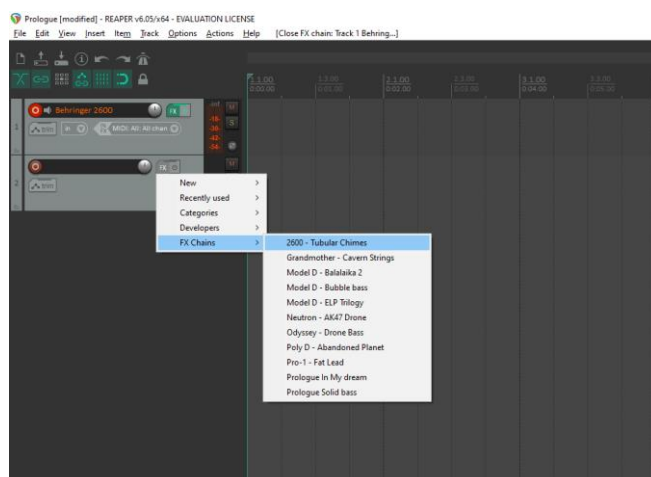
Creating a new track from a Reaper preset

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 2600 plugin and select a saved preset under Presets
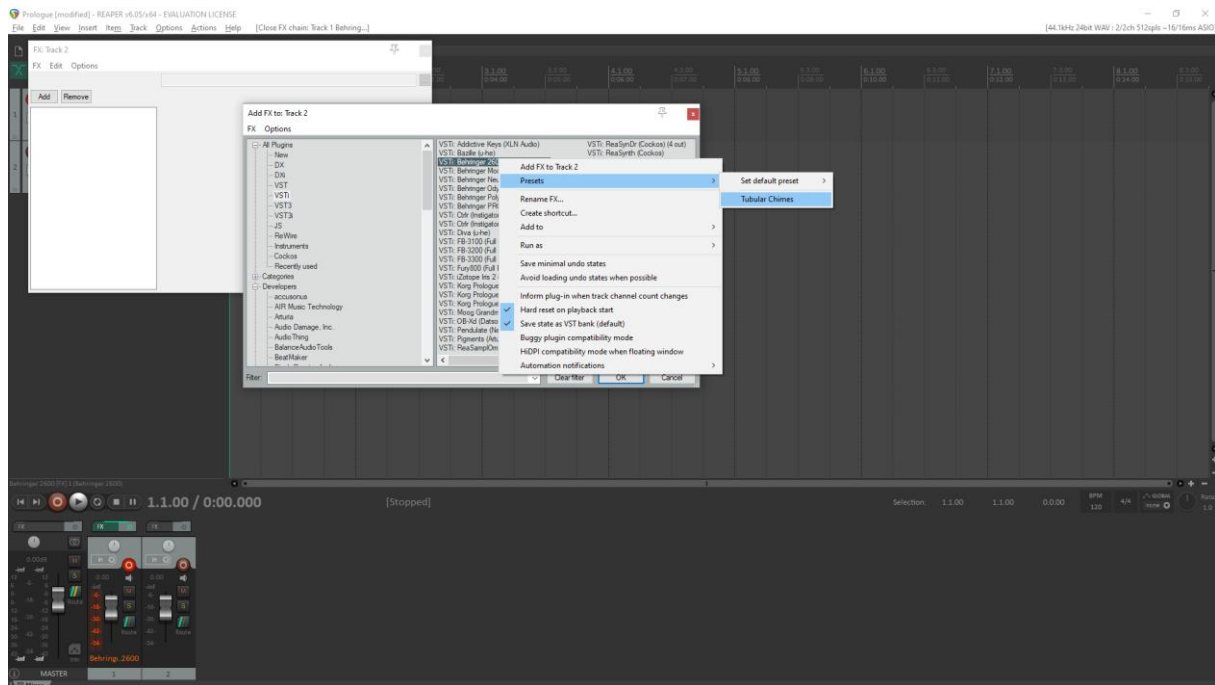
Replacing the preset on an existing track by another preset

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 2600 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 2600 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.
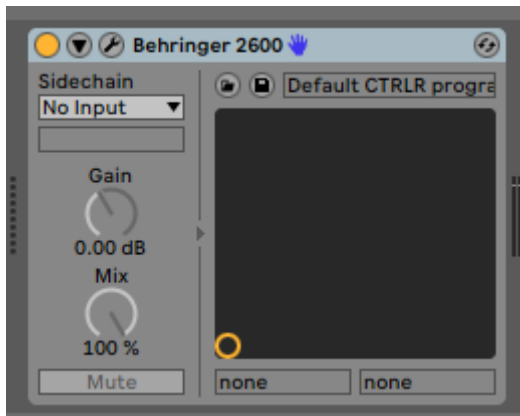
Creating a new track from an Ableton preset

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

Works fine. Just select another previously saved preset by clicking on the Load button in the small instrument window at the bottom. All buttons will be positioned according to the newly loaded preset, patch cables and all labels will be restored.

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 2600 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 2600 tracks at once

Works fine in Studio One 3.5 32 bits and in the 4.6 64 bits version. The instrument editor is showing one tab by track or it is also possible to have two windows at the same time.

Saving a patch as a 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.
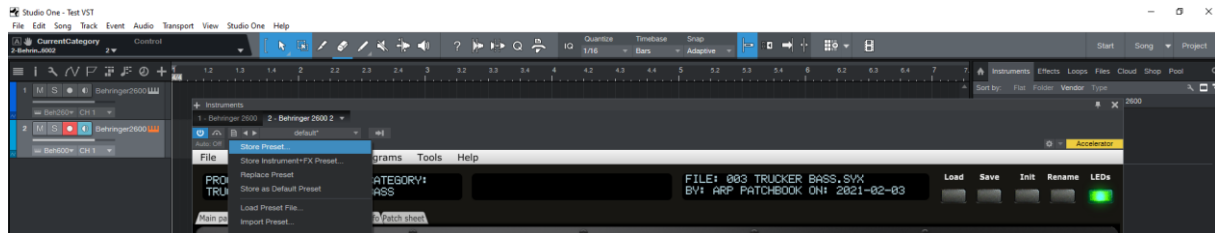
Creating a new track from a Studio One preset

The presets and their subfolders created with the above method are appearing directly in the browser under the 2600 VST name in the Instruments tab or in the Files tab
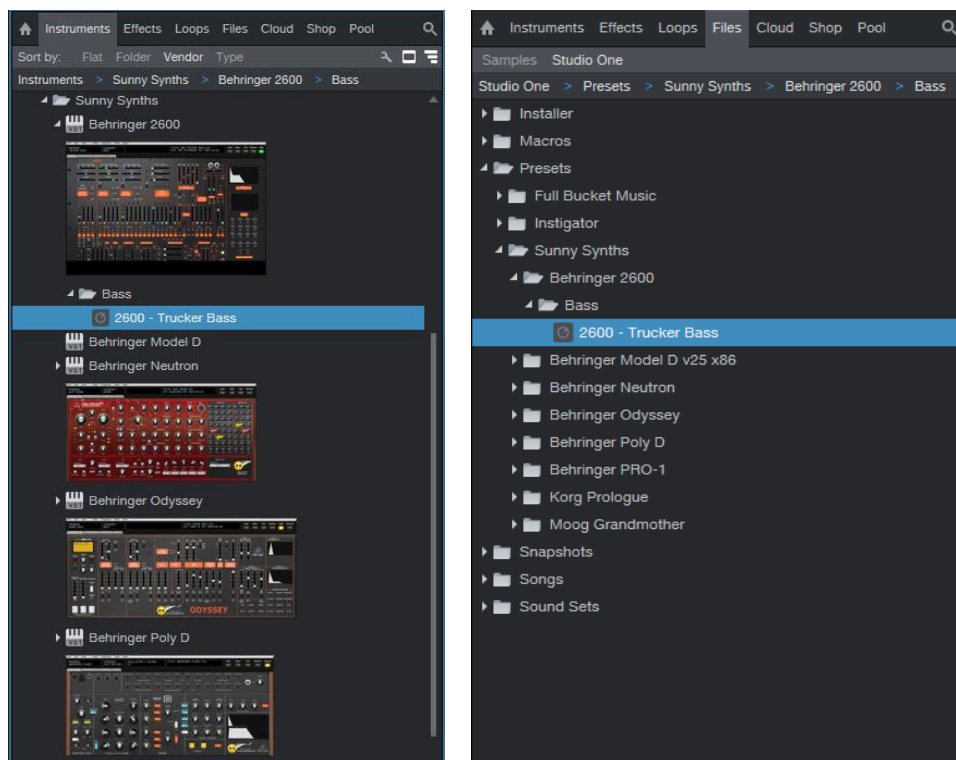
Replacing the preset on an existing track by another preset

Works fine. Just select another previously saved preset with the pulldown at the top left of the plugin window or with Load preset file. All buttons will be positioned according to the newly loaded preset, patch cables and all labels will be restored.

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 2600.component plugin file in your AU plugin directory.

Creating a new first track

Create a new instrument track and select the Behringer 2600 plugin for it (under AU instruments):
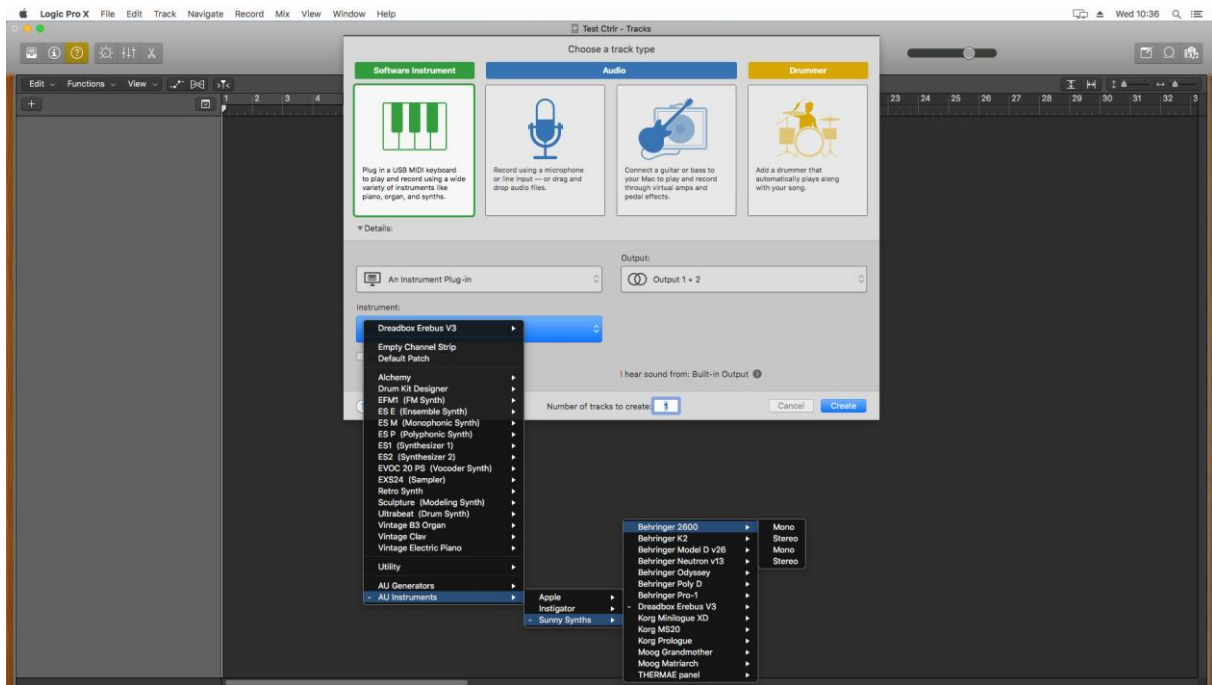
Click in the middle of the track Input to open the panel.

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

Listening to wav or aiff files associated a patch is also working even if ASIO is used as audio driver for Logic while the wav/aiff 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 2600 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…
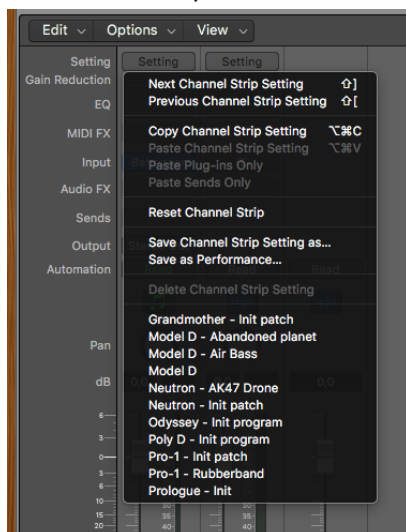
– New tracks can be created based on that Init channel strip (see after) and can then be changed afterwards to other patches with the Load button

Saving a patch as a 2600 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 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 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
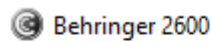
Actually, not so much is used from the Ctrlr menus…

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: to select your 2600 as Output Midi device and to set its Midi channel; to set the Midi Thru (Input->Output)…
- **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
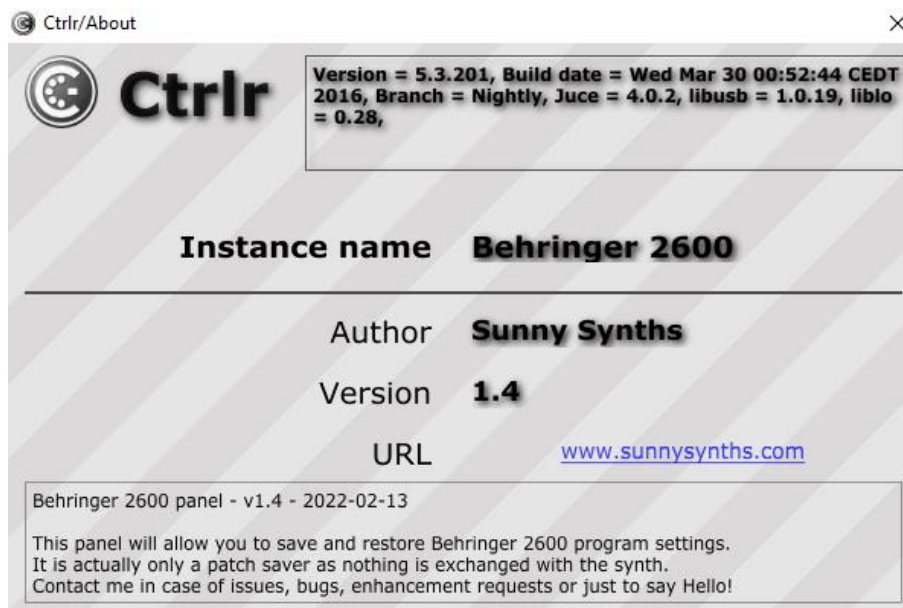
Appendix

Version history

Date	Version	Description	By
2021-02-14	1.0	First version of this manual	Sunny Synths
2021-03-14	1.1	Possibility to replace presets in DAW	Sunny Synths
2021-08-20	1.2	Added panel settings.	Sunny Synths
2021-11-03	1.3	Restoring presets in DAW is OK. Author kept when loading Init program. AIFF, AAC and MP3 audio files	Sunny Synths
2020—02-13	1.4	Added Blue Marvin and Gray Meanie looks	Sunny Synths

2600 information

The Behringer 2600 product page: https://www.behringer.com/product.html?modelCode=P0DNJ

Sysex file documentation

Here is the documentation of the sysex file used to store the parameters. It is 1350 bytes long.

```
-- // Behringer 2600 - Sound data sysex structure - Size=1350 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 Behringer, just a decision made by me ;-)
-- This data is not transferred by Midi


-- 40 = 28
-- 100 = 64
-- 140 = 4C


--     Offset          | Byte content
-- -------------+---------------------------
--     0000         |       F0            Sysex start
--     0001-3       |       00 20 32      Behringer ID
--     0004-6       |       00 01 03      2600
--     0007         |       01            Sound data
--     0008         |       00-64         FX program
--     0009-011     |       00-xx         FX parameters value
--     0012         |       00-64         FX Send
--     0013         |       00-01         FX On/Off
--     0014         |       00-28         Tempo Gate Length
--     0015         |       00-28         Portamento
--     0016         |       00-02         Transpose
--     0017-18      |       00-28         VCO Frequency Coarse
```

--	0019-20	|	00-28	VCO Frequency Fine
--	0021-22	|	00-28	VCO FM Source 1 Level
--	0023-24	|	00-01	VCO FM Source 1 On/Off
--	0025-26	|	00-28	VCO FM Source 2 Level
--	0027-28	|	00-01	VCO FM Source 2 On/Off
--	0029-30	|	00-28	VCO PW
--	0031-32	|	00-28	VCO PWM Level
--	0033-34	|	00-28	VCO PWM Source
--	0035	|	00-01	VCO-1 Audio Keyboard On/Off
--	0036	|	00-01	VCO-2 Sync
--	0037	|	00-28	LFO Frequency
--	0038	|	00-28	S/H Mixer Source 1 Level
--	0039	|	00-01	S/H Mixer Source 1 On/Off
--	0040	|	00-28	S/H Mixer Source 2 Level
--	0041	|	00-01	S/H Mixer Source 2 On/Off
--	0042	|	00-01	S/H Trigger On/Off
--	0043	|	00-28	S/H Output Lag Level
--	0044	|	00-01	Noise Generator Pink/White
--	0045	|	00-28	VCF Frequency
--	0046	|	00-28	VCF Resonance
--	0047	|	00-02	VCF Mode
--	0048	|	00-28	HPF Cutoff Frequency
--	0049	|	00-28	Mixer Noise/Ring Level
--	0050	|	00-01	Mixer Noise/Ring
--	0051	|	00-28	Mixer VCO-1 Saw/Pulse Level
--	0052	|	00-01	Mixer VCO-1 Saw/Pulse
--	0053	|	00-28	Mixer VCO-2 Saw/Pulse Level
--	0054	|	00-01	Mixer VCO-2 Saw/Pulse
--	0055	|	00-28	VCF Effect Source 1 Level
--	0056	|	00-01	VCF Effect Source 1
--	0057	|	00-28	VCF Effect Source 2 Level
--	0058	|	00-01	VCF Effect Source 2
--	0059	|	00-28	VCF Envelope Effect Level
--	0060	|	00-01	VCF Envelope Source
--	0061	|	00-01	Drive On/Off
--	0062	|	00-28	VCA Gain
--	0063	|	00-28	VCA Envelope Effect Level
--	0064	|	00-01	VCA Envelope Source
--	0065	|	00-28	AR Envelope Attack
--	0066	|	00-28	AR Envelope Release
--	0067	|	00-28	ADSR Envelope Attack
--	0068	|	00-28	ADSR Envelope Decay
--	0069	|	00-28	ADSR Envelope Sustain
--	0070	|	00-28	ADSR Envelope Release
--	0071-073	|	00-28	Keyboard LFO Repeat
--	0074	|	00-0C	Pitch Bend Range

--	0075	|	00-7F	Velocity Note On
--	0076	|	00-7F	Velocity Note Off
--	0077	|	00-02	Velocity Curve
--	0078-083	|		Not used
--	0084-103	|		Name (20 characters)
--	0104	|	00-10	Category
--	0105-400	|		Description (296 characters)
--	0401-415	|		Author (15 characters)
--	0416-425	|		Date (10 characters for ISO date yyyy-mm-dd)
--	0426-436	|		Synth1 (11 characters)
--	0437-447	|		Synth2 (11 characters)
--	0448-458	|		FX (11 characters)
--	0459	|		Not used
--	0460-509	|		Usage line 1 (50 characters)
--	0510-559	|		Usage line 2
--	0560-609	|		Usage line 3
--	0610-659	|		Usage line 4
--	0660-709	|		Usage line 5
--	0710-759	|		Usage line 6
--	0760-809	|		Usage line 7
--	0810-859	|		Usage line 8
--	0860-909	|		Usage line 9
--	0910-959	|		Usage line 10
--	0960-1109	|		Usage line 11
--	1110-1159	|		Usage line 12
--	1160-1209	|		Usage line 13
--	1210-1259	|		Usage line 14
--	1260-1309	|		Usage line 15
--	1310	|	00-18	** Not implemented ** Glide Time
--	1311-1319	|	00-xx	Patch source (1-9)
--	1320-1330	|		Not used
--	1331-1339	|	00-xx	Patch destination (1-9)
--	1340-1348	|		Not used
--	1349	|	F7	End of sysex