Dreadbox Nyx V2 Ctrlr panel documentation and instructions

V1.0– 2019-09-29

Introduction

Hi! Thanks for having purchased this Ctrlr Dreadbox Nyx V2 panel!

As you know, the Nyx V2 (as the original Nyx or the Erebus) are synths to be played and tweaked rather being used more statically. They don'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 Dreadbox Nyx V2 does not support the load/save of programs or the manipulation of its program parameters by Midi NRPN/CC/Sysex messages.

It will support you in saving and retrieving Nyx V2 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 philosophy has been respected as much as possible.

Of course it would also be stupid to not benefit of the computer possibilities. Therefore, you also get a display of the current parameters value, a graphic display of the envelopes, the ability to store and indicate the input/output patches, etc…

Despite careful testing it is possible that some bugs remain. Please contact sunny.synths@gmail.com 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 Nyx V2 and have fun!

Sunny Synths

Table of Contents

Installation and features

Installation of the Ctrlr panel

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

– the Dreadbox Nyx V2 panel as an .exe file on Windows PC
– the Dreadbox Nyx V2 panel as an .app file on Mac OS (zip folder to be uncompressed)
– this manual as PDF
– a folder containing some presets and wav files found on internet

Decompress the zip file anywhere on your PC then launch the **Dreadbox Nyx V2 v10** program. 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.

The program will directly display the Ctrlr window with the Nyx V2 panel displaying its main tab.

⚠️ The panel will most probably not be responding after the initial installation. Simply close the program and restart it to solve the issue.

Features

You will find the following features in the Dreadbox Nyx V2 panel:

– Dreadbox Nyx V2 interface with similar way of working 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)
– Envelopes graphs handled by mouse or sliders
– Load / Save programs from individual .syx files
– Easy program renaming
– Display and export of program parameters as text file

– Ability to describe 9 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
– Browser of the files on the disk
– Patch sheet tab with patch sheet for Nyx V2 and other gear (external synths/sequencers)
– Automatic reading of wav files associated to a patch
– Manual/Automatic reading of any wav file

Way of working

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

Using the buttons and modifying parameters

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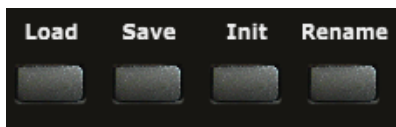

You can also modify any rotary encoder based parameter by hovering the mouse on the button then using the mouse scroll wheel.

Switches are handled by clicking on them. They will take successive positions as actual switches.

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

Parameters presented as pulldowns are modified by opening the pulldown and selecting one of the pull-down items.
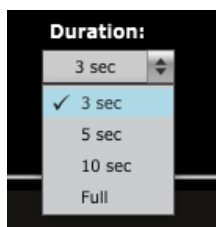
Quick reset to default value

Most of the rotary encoders have default values set and you can quickly revert to this preset default value by double-clicking on the button.

Opening and closing the panel

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

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

The same is done with the root folder of the File browser (see).

Top panel area

In the top panel area you find 4 feedback "screens", 4 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 *a Basic program*
– The **Rename** button allows renaming the current program
– The **Dreadbox Nyx** tab displays the synth main panel
– The **Envelopes and Patches** tab displays the envelopes as graphs, allows the registration of 9 different input/output patches, the identification of two external synths and allows modifying the Category, the Author and the Description of the current program. It is also there that you will find the step by step usage of a patch.
– The **Library and Info** tab provides the file browser that allows the selection of sysex files or the ability to listen to wav files, the display and the export of the parameters of the current program as text file and gives About info of the panel. It is also here that you will find the manual panel zoom that is memorized.
– The **Patch sheet** tab displays automatically the Dreadbox Nyx V2 patch sheet with all parameter values (as in the manual) but with the addition of author, date, external synths names and 12 external input/output connections

Loading a Dreadbox Nyx V2 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 Dreadbox Nyx V2 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.
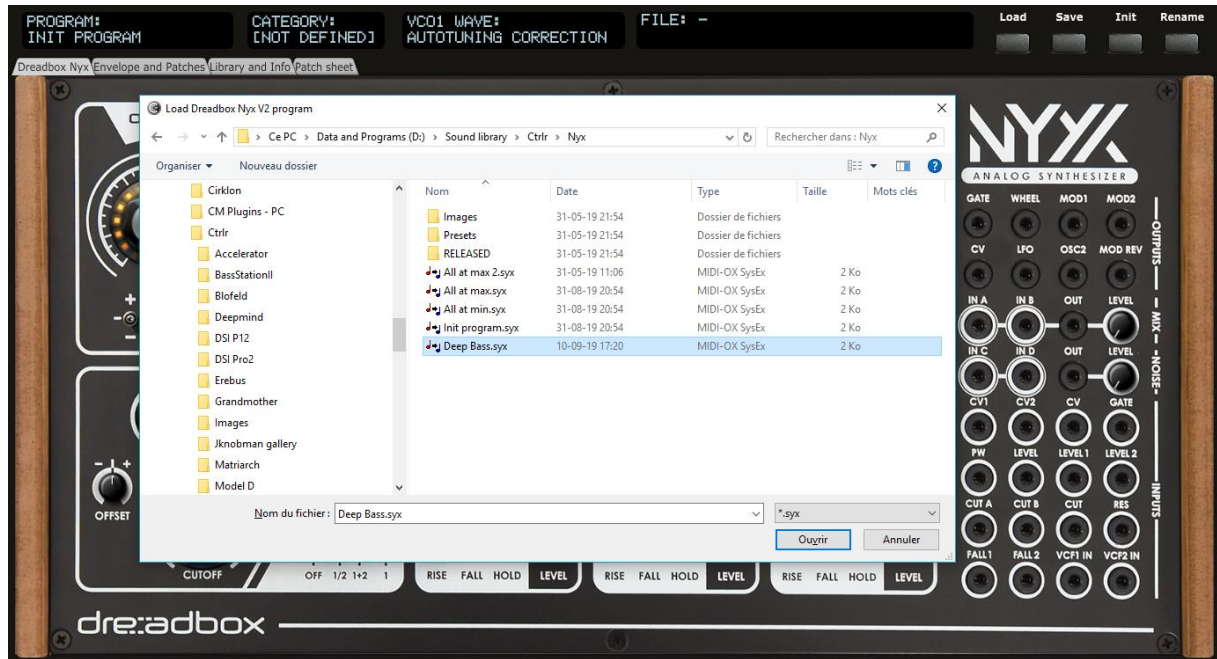
Saving a Dreadbox Nyx V2 program

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. At this stage it is needed to select an existing file if you want to overwrite it. In that case, you will get a confirmation message.

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

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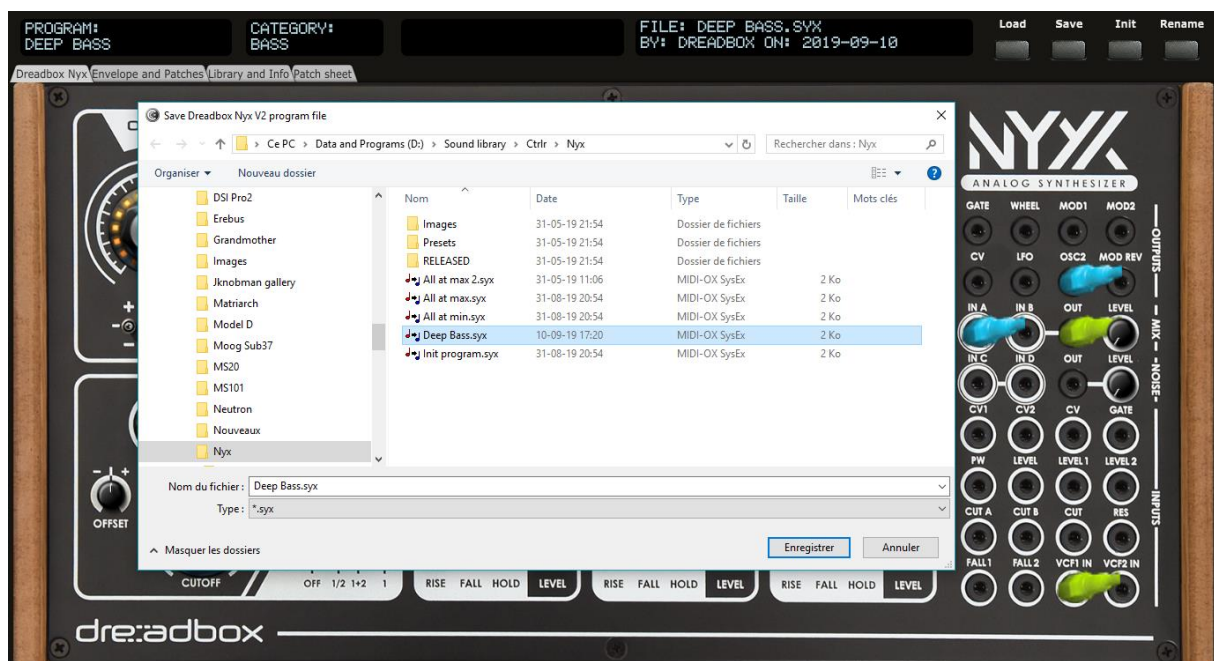
Program Init

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

- All parameters at 0 or OFF except
  - VCO routing = HALF (VCO1 and VCO2 routed to VCF2)
  - VCF routing = PAR (VCF1 Low pass routed to VCA and VCF2 Low pass routed to VCA)
  - Osc1 and Osc2 Tune = 0 semitones
  - VCF2 offset = 0
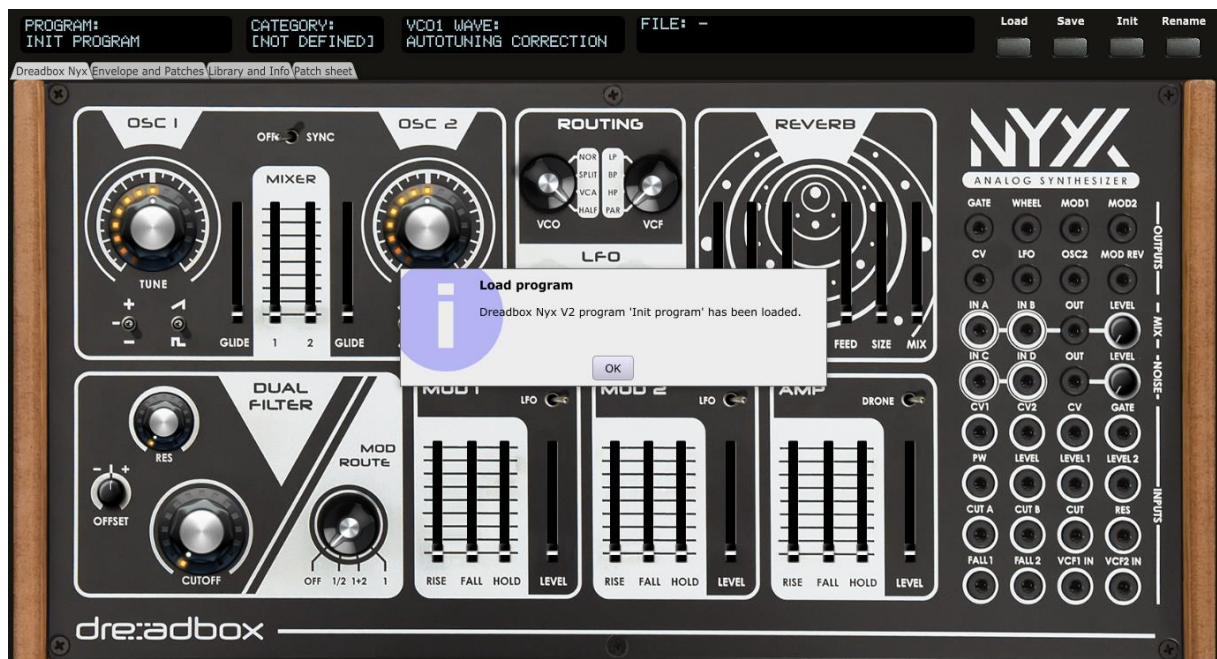
Program Rename

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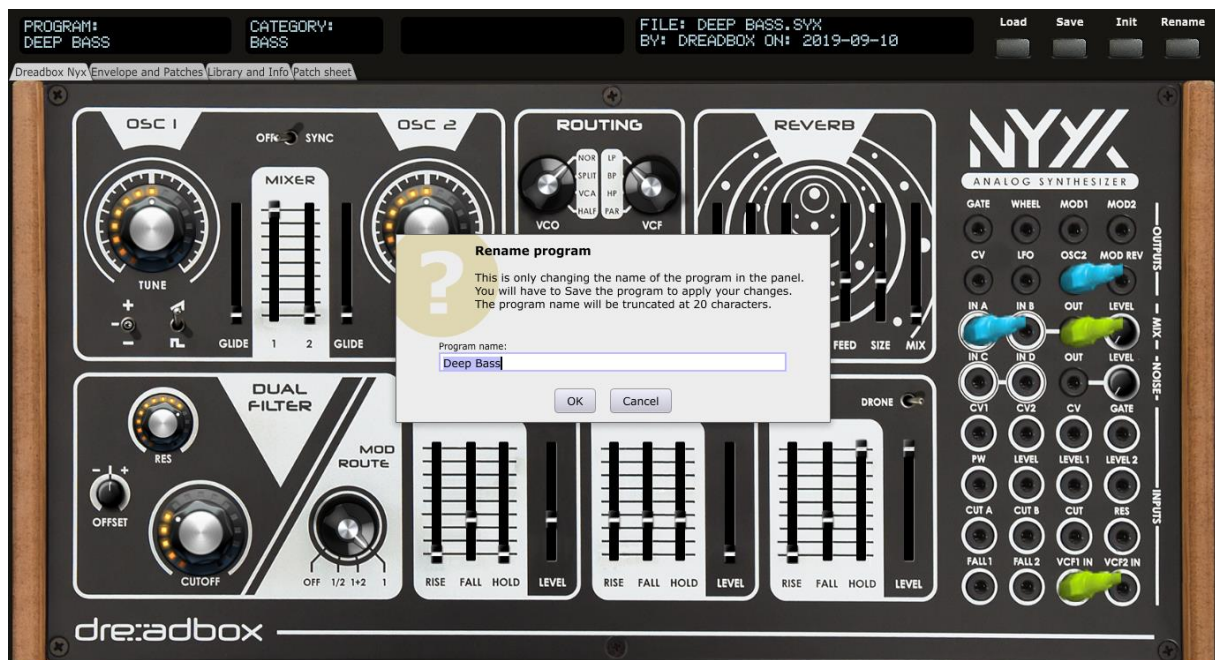
Please note that the program name can (of course) be different than the file name the program is saved in.

Dreadbox Nyx V2 tab

In the **Dreadbox Nyx V2** tab, you have access to the same parameters as on the actual synthesizer.

Please refer to the Dreadbox Nyx V2 user manual (https://www.dreadbox-fx.com/nyx2/) for the explanations of each encoder/button.

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

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

Clicking on a slider position is directly moving the slider to that position.

Modifying the Rise, Fall, Hold encoders of the envelopes is setting identical encoders/buttons in the Envelopes and Patches tab and adapting the corresponding envelope graph accordingly.

Envelopes and Patches tab

In the **Envelopes and Patches** tab, you can:
– adjust the envelopes either with encoders or by moving the anchors of the graphs
– set/indicate up to 9 from/to patches
– adapt the name of the external synths that could be connected to your Nyx
– adapt the current program category, author and description (click on the current description to edit it)
– manage the step by step usage description
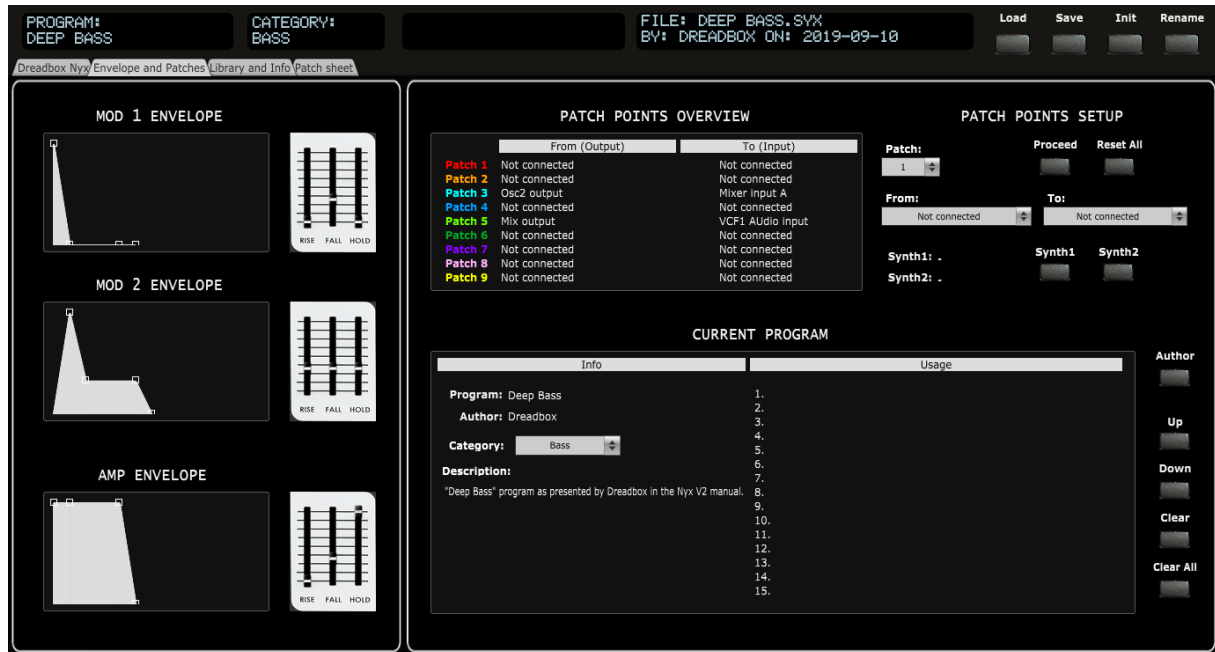
Envelope shapes

You can modify the envelope shape by either moving the Rise, Fall, Hold sliders or by using the mouse and moving the anchors on the graphs either vertically or horizontally.
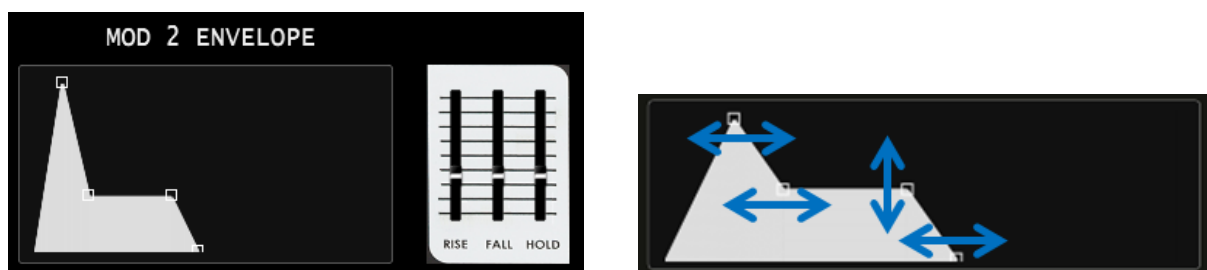
When moving the anchors, the corresponding Rise, Fall, Hold sliders will also move and the parameter name and value will be displayed in the screen of the top panel area.

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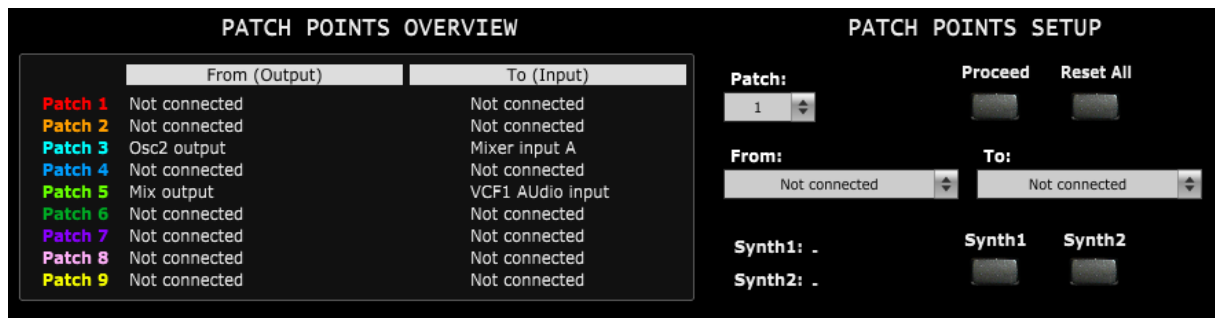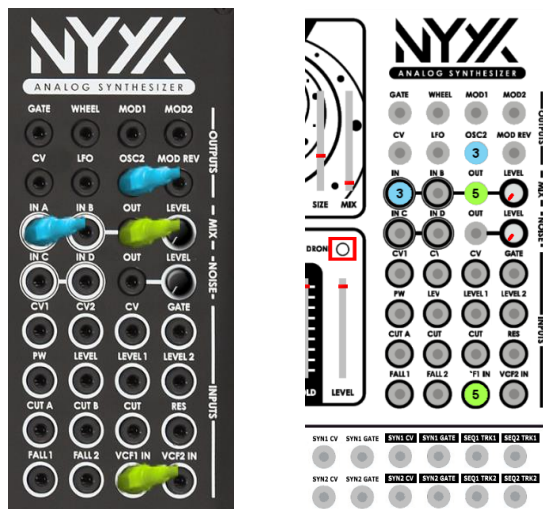
You can also directly select a patch in the Patch pull-down then modify the From/To and press Proceed.

Patches are numbered 1 to 9 and have a color assigned to them. When a from/to patch is set in the **Envelopes and Patches** tab, corresponding patch cables are displayed on the main Neutron tab and corresponding colored numbered circles are displayed on the patch sheet.

Numbered circles are used to help colorblind people.

Available "From" sources are the output patch points of the synthesizer plus a few additional external ones: "Not connected", "Gate output", "Mod Wheel output", "Modulator 1 output", "Modulator 2 output", "CV output", "LFO output", "Osc2 output", "Reverb Mod output", "Mix output", "Noise output", "Synth1 CV output", "Synth2 CV output", "Synth1 Gate output", "Synth2 Gate output", "Sequencer1 track 1", "Sequencer1 track 2", "Sequencer2 track 1", "Sequencer2 track 2"

Available "To" destinations are the input patch points of the synthesizer plus a few additional external ones: "Not connected", "Osc1 CV input", "Osc2 CV input", "Osc1+Osc2 CV input", "Gate input", "Osc1 PW input", "Osc1+Osc2 Level input", "Osc1 Level input", "Osc2 Level input", "Filter1 Cutoff input", "Filter2 Cutoff input", "Filter1+2 Cutoff input", "Resonance input", "Modulator 1 Fall

input", "Modulator 2 Fall input", "VCF1 Audio input", "VCF2 Audio input", "Mixer input A", "Mixer input B", "Mixer input C", "Mixer input D", "Synth1 CV input", "Synth2 CV input", "Synth1 Gate input", "Synth2 Gate input"

Current Program

Clicking the **Author** button opens a popup window where you can modify the name of the author of the patch. The name should be maximum 15 characters long (will be truncated if longer). If you leave the Author name empty then a "?" is displayed.
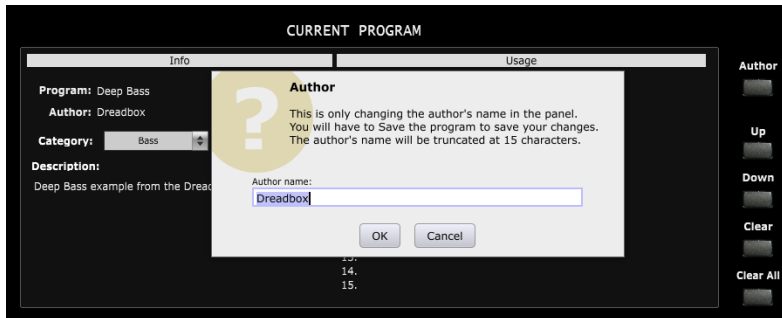
Clicking the **Synth1** button opens a popup window where you can modify the name of a synth connected to your Neutron. The name should be maximum 11 characters long (will be truncated if longer). If you leave the Synth1 name empty then a "-" is displayed.

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

Usage steps

You can manage describe the usage of the 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.
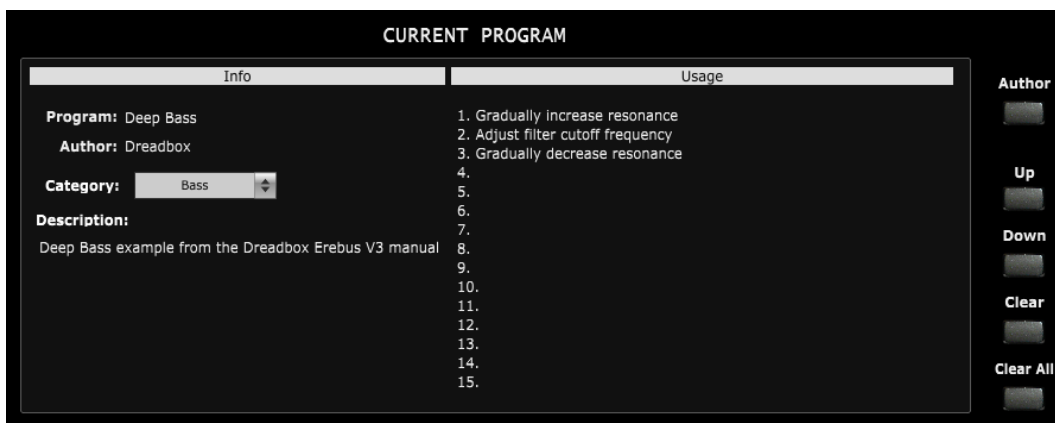
The actions to use the usage steps are:
– double-click on a step line to input or modify a step
– Use Up and Down buttons to move a step around
– Use Clear or the Delete key to erase a step
– Use Clear all to erase all steps

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

File browser

The **File browser** allows you to navigate on your disk and browse through presets and wav files. 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-Nyx 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 Nyx .syx file will make the corresponding .wav file play automatically as well (if a wav file with the same name as the Nyx .syx file is found)
– **Double-click** on a file to load it (Nyx .syx file) or play it (.wav file) directly. A popup will be displayed if you do this on a not recognized file type
– Use the **Set Root** button to select the folder where your presets are (at this stage, the patch saver doesn't remember the location after you quit it). Note that you must at least have one file in the selected directory in order to have **Set Root** functioning.

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

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

Wav file play settings

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

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

Panel zoom

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

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

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

If you are still modifying the zoom using the View menu or the 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).

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)
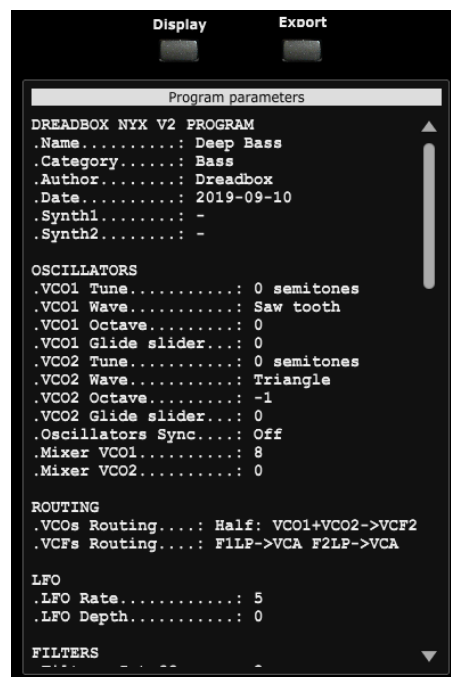
Patch sheet tab

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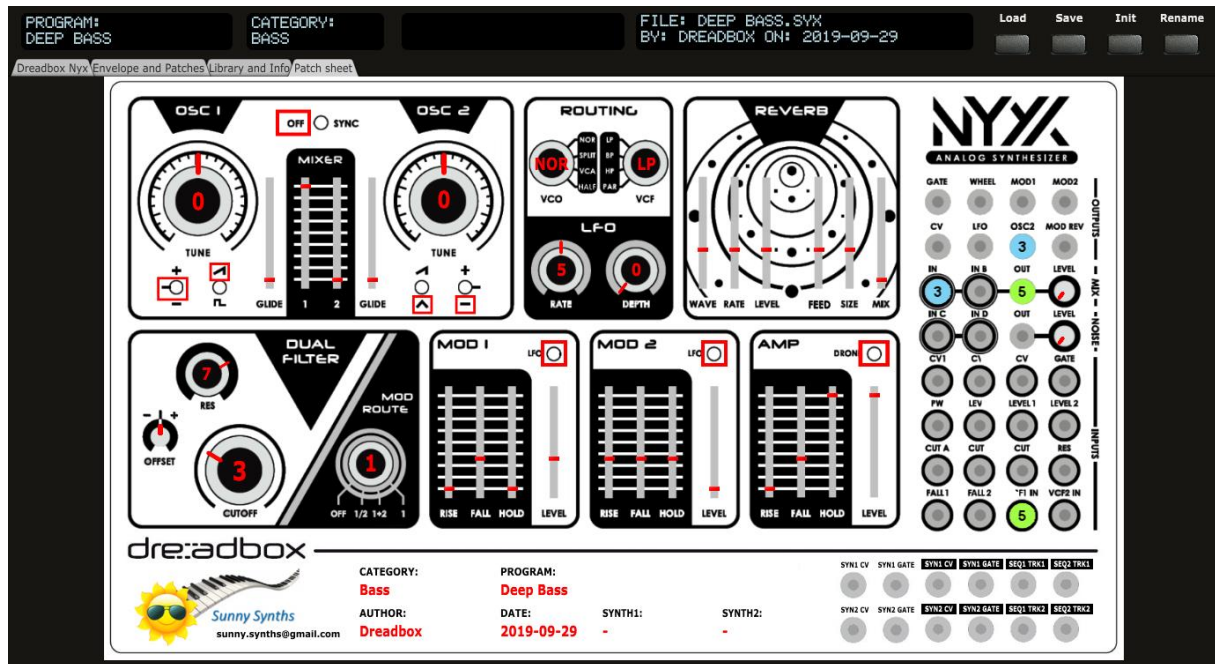
The content of this tab is adapted automatically. Directly ready for a screenshot!

The main Ctrlr menus
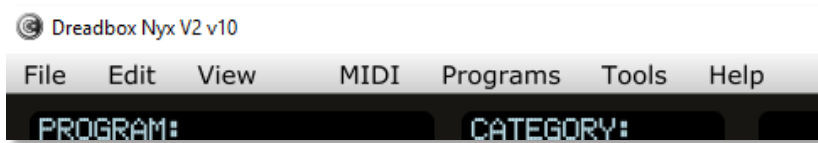
Actually, not so much is used from the Ctrlr menus…

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 used as the Nyx is not transmitting CC, NRPN or Sysex
- **Tools** menu: not used as the Nyx is not transmitting CC, NRPN or Sysex
- **Help** menu: displays the About info of the panel
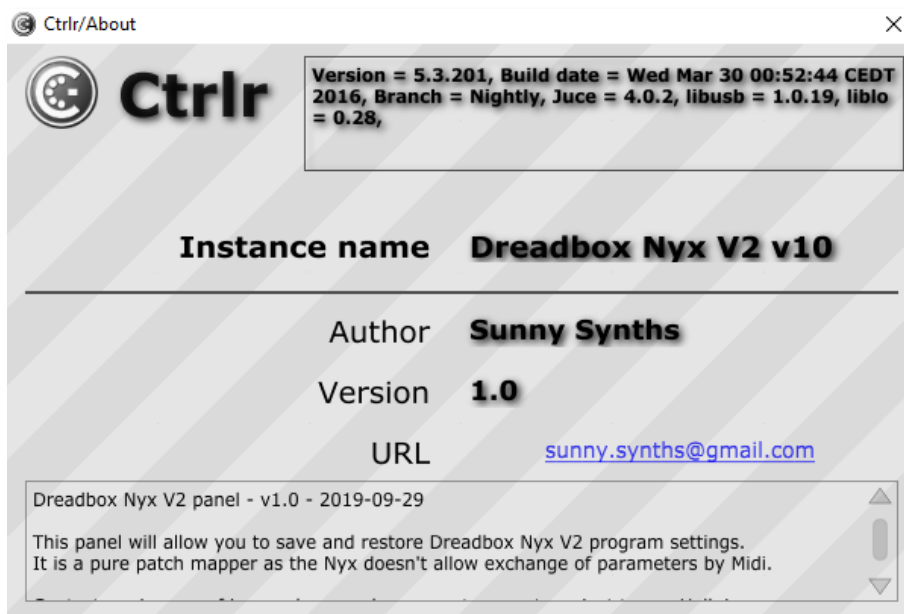
Appendix

Version history

Date	Version	Description	By
2019-09-29	1.0	First version of this manual	Sunny Synths

Nyx V2 information

The Dreadbox Nyx V2 product page: https://www.dreadbox-fx.com/nyx2/

Sysex file documentation

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

```
-- // Dreadbox Nyx V2 - 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


-- 40 = 28
-- 100 = 64
-- 127 = 7F


--      Offset          | Byte content
-- -------------+---------------------------
--      0000            |       F0              Sysex start
--      0001-03         |       00 21 35        Dreadbox ID
--      0004            |       02              Nyx V2 (not existing, my choice)
--      0005            |       01              Sound data
--      0006-07         |       00-48           Osc1-2 Tune (-12 to + 12 semitones in 0.5 steps)
--      0008-09         |       00-03           Osc1-2 Waveform
--      0010-11         |       00-03           Osc1-2 Octave
--      0012-13         |       00-28           Osc1-2 Glide (slider 0 to 8 in 0.2 increments)
--      0014            |       00-28           Osc Sync
--      0015-16         |       00-28           Osc1-2 Mixer (slider 0 to 8 in 0.2 increments)
--      0017            |       00-28           LFO Rate (slider 0 to 8 in 0.2 increments)
--      0018            |       00-28           LFO Depth (slider 0 to 8 in 0.2 increments)
--      0019            |       00-64           Filters Cutoff
--      0020            |       00-64           Filters Resonance
--      0021            |       00-64           VCF2 Offset
--      0022            |       00-03           Filter Mod Route (Off - 1/2 - 1+2 - 1)
--      0023            |       00-28           Mod 1 Rise (slider 0 to 8 in 0.2 increments)
--      0024            |       00-28           Mod 1 Fall (slider 0 to 8 in 0.2 increments)
--      0025            |       00-28           Mod 1 Hold (slider 0 to 8 in 0.2 increments)
--      0026            |       00-28           Mod 1 Level (slider 0 to 8 in 0.2 increments)
--      0027            |       00-01           Mod 1 LFO (01 is OFF)
--      0028            |       00-28           Mod 2 Rise (slider 0 to 8 in 0.2 increments)
--      0029            |       00-28           Mod 2 Fall (slider 0 to 8 in 0.2 increments)
--      0030            |       00-28           Mod 2 Hold (slider 0 to 8 in 0.2 increments)
--      0031            |       00-28           Mod 2 Level (slider 0 to 8 in 0.2 increments)
--      0032            |       00-01           Mod 2 LFO (01 is OFF)
```

--	0033	00-28	Amp Envelope Rise (slider 0 to 8 in 0.2 increments)
--	0034	00-28	Amp Envelope Fall (slider 0 to 8 in 0.2 increments)
--	0035	00-28	Amp Envelope Hold (slider 0 to 8 in 0.2 increments)
--	0036	00-28	Amp Envelope Level (slider 0 to 8 in 0.2 increments)
--	0037	00-01	Amp Envelope Drone mode (01 is OFF)
--	0038	00-28	Reverb Wave (slider 0 to 8 in 0.2 increments)
--	0039	00-28	Reverb Rate (slider 0 to 8 in 0.2 increments)
--	0040	00-28	Reverb Level (slider 0 to 8 in 0.2 increments)
--	0041	00-28	Reverb Feed (slider 0 to 8 in 0.2 increments)
--	0042	00-28	Reverb Size (slider 0 to 8 in 0.2 increments)
--	0043	00-28	Reverb Mix (slider 0 to 8 in 0.2 increments)
--	0044	00-64	Mix Level
--	0045	00-64	Noise Level
--	0046	00-03	VCO Routing
--	0047	00-03	VCF Routing
--	0048-49		Not used
--	0050-58		Patch source (1-9)
--	0059-67		Patch destination (1-9)
--	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)
--	0614-624		Synth1 (11 characters)
--	0625-635		Synth2 (11 characters)
--	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