



# Librarian

User Manual - Version 2.0

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## Acknowledgements

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And lastly, a huge appreciation to the entire Empress Effects team for the support and assistance in developing this application!

## EULA

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## Welcome

Welcome to the ZOIA Librarian! The Librarian aims to make using ZOIA much easier. Whether you are a major patch creator or a general ZOIA user, the ZOIA Librarian has features that can help anyone organize and manage their patches.

After you have downloaded and installed the ZOIA Librarian, the application can be launched from an executable on Windows or application file on OSX. Double-clicking on ZOIALibrarian.2.0.exe or ZOIALibrarian.2.0.app file will start the app. You will be greeted with a brief splash screen as the application loads.

*If this is your first time launching the application, the start-up process will take longer than usual, as all patch information is retrieved from PatchStorage. Subsequent start-ups will not need to retrieve as much information, significantly lowering the load time.*

The application is split into 4 main tabs.



These tabs allow you to navigate between different features of the Librarian. The following sections of this manual will focus on each tab and explain the features specific to that tab:

- **PatchStorage** is where you quickly browse and search through all ZOIA patches that are currently hosted on PatchStorage. All patch notes and meta-data from the site are included, giving you a convenient way to explore and download interesting patches along the way.
- **Local Storage** is where you can view and edit all of the patches in your local library. Update the tag information for patches, explore groups of patches that were saved together as Version Histories, and see the details of each patch as if you were using your ZOIA with the Patch Visualizer and Patch Expander.
- **SD Card** is where you manage the folders and patches on your SD card. Reorder the patches within each SD card folder without hassle and import multiple patches at once for simplicity.
- **Folders** is where you can easily create folders of patches, ready to be exported to the SD card. Drag-and-drop multiple patches at once from your local library, move them around, and save for a dynamic way to handle multiple SD folders.

## PatchStorage

The PatchStorage tab is where you quickly browse and search through all ZOIA patches currently hosted on PatchStorage. On the left side of the screen, you will find a table containing information about every patch currently available on Patchstorage, including the title, user tags, categories, and the date the patch was uploaded or last updated.

Title	Tags	Categories	Date Modified	Download
Glamour Years - a surprisingly accurate version of the subminiature tube distortion/filter unit	bit-crusher, distortion, filter, fm, fuzz, overdrive, pretty-years, sag, smallsound-bigsound, and vcf	Effect	2021-09-17	<a href="#">Download Patch</a>

When you select a patch by clicking on the circle beside the patch title, the right side of the screen will populate with additional information about the patch, similar to what you'd find on the PatchStorage site. A new addition is the artwork preview.

[\*\*Glamour Years - a surprisingly accurate version of the subminiature tube distortion/filter unit\*\*](#)

The artwork for the patch "Glamour Years" features a dark background with a colorful, abstract graphic in the center. The text "SMALLSOUND BIGSOUND" is at the top, and "PRETTY YEARS" is at the bottom, with "Pretty Years" written vertically between them.

**Author:** meanmedianmoge  
**Likes:** 93  
**Downloads:** 5872  
**Views:** 6167  
**License:** GNU General Public License family  
**Preview:** [Click here](#)

**Patch Notes:**

The creation of this patch got me back into making patches. And the impetus for that was the arrival of the SSBS Pretty Years, a rare distortion/filter unit that uses sub mini tubes and some wild routing.

Basic idea: overdrive/distortion/fuzz pedal on the surface with 4 gain stages and passive EQ. Underneath is this complex routing that comes about when you introduce the voltage-controlled filter section. There are 4 insert points for the VCF (between each gain stage). Here's a quick guide on what a single activated insert looks like at each separate stage:

INPUT – PREGAIN – VCF – T1 – T2 – T3 – EQ – OUTPUT (1)  
INPUT – PREGAIN – T1 – VCF – T2 – T3 – EQ – OUTPUT (2)  
INPUT – PREGAIN – T1 – T2 – VCF – T3 – EQ – OUTPUT (3)

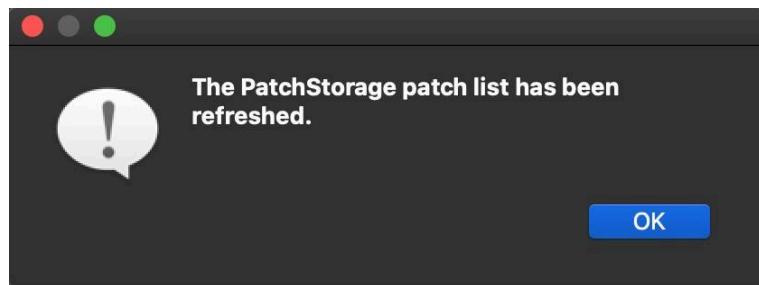
Above the table on the left, there is a search bar. You can search for patches by author, title, tag, category, and date in the PatchStorage tab. To initiate a search, enter the query you want to search for and hit Enter/Return.

Download All Patches				Refresh Patches
Title	Tags	Categories	Date Modified	Download
Glamour Years - a surprisingly accurate version of the subminiature tube distortion/filter unit	bit-crusher, distortion, filter, fm, fuzz, overdrive, pretty-years, sag, smallsound-bigsound, and vcf	Effect	2021-09-17	Download Patch
No Memory	delay, modulated-delay, no memory, and smallsound-bigsound	Effect	2019-05-24	Download Patch

Downloading patches is as easy as hitting the download button to the right of the patch you want to download. Once the download is complete, this button will disappear so that you do not accidentally download the same patch twice. Even on subsequent launches of the application, if you have previously downloaded a patch and it still exists within a Librarian, the button will not appear.

Title	Tags	Categories	Date Modified	Download
Glamour Years - a surprisingly accurate version of the subminiature tube distortion/filter unit	bit-crusher, distortion, filter, fm, fuzz, overdrive, pretty-years, sag, smallsound-bigsound, and vcf	Effect	2021-09-17	Downloaded

To the right of the search bar, there is a “Refresh Patches” button that will allow you to refresh the patch list to reflect the patches currently available on Patchstorage. The app also updates this list each time it is opened. If you refresh the list, a pop-up will let you know when it has finished.

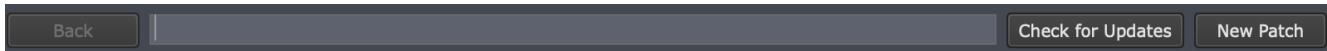


Above the table is the “Download All Patches” button, which will download all currently hosted patches from PatchStorage. Note that this download process is very time-consuming.

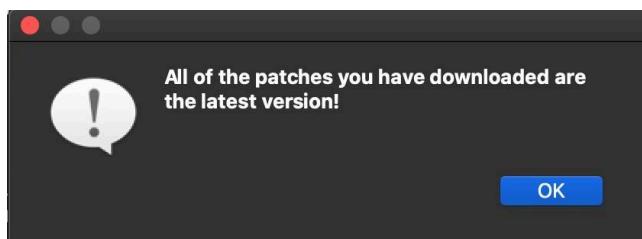
You can view all the patches you have downloaded by switching to the Local Storage tab, which will be covered in the next section.

## Local Storage

At first glance, the Local Storage tab will look very similar to the previous tab. However, there are many additional options to explore. Searching behaves the same as it does in the PatchStorage tab. Additionally, there are new buttons to the left and right of the search bar: “Back”, “Check for Updates” and “New Patch”. The “Back” button will initially be inaccessible.



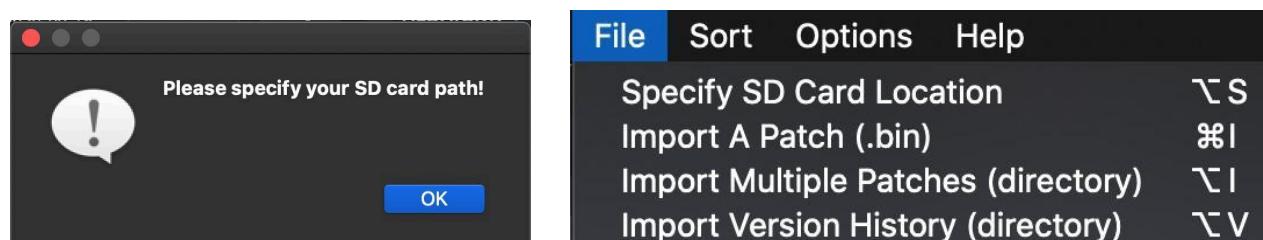
The “Check for Updates” button will automatically check all the patches you have within the Librarian to see if they have been updated on PatchStorage. If the patches have been changed, these updates will automatically be retrieved and saved. Most of the time, however, this is the message you will get when clicking the button.



Within the patch table, there are two additional options (Export and Delete) and a ticker (Rating). To delete a patch from the Librarian, click the “X” button beside the patch.

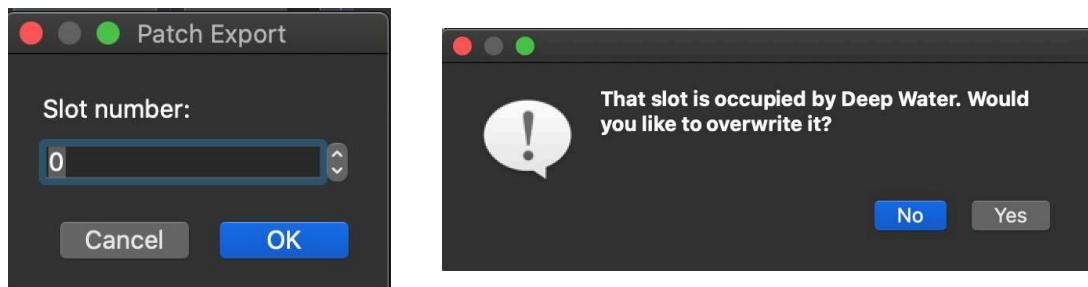
Title	Tags	Categories	Date Modified	Rating	Export	Delete
Glamour Years - a surprisingly accurate version of the subminiature tube distortion/filter unit [Multiple Versions]	bit-crusher, distortion, filter, fm, fuzz, overdrive, pretty-years, sag, smallsound-bigsound, and vcf	Effect	2021-09-17	0	Export Patches	

When you click on the export button for the first time, the message below is most likely what you will see. If you click “OK”, you will be able to select the SD card used for patch transfer. Alternatively, to select your SD Card location, look for the “File” option on the taskbar at the top of the screen, click it, and then click “Specify SD Card Location”.



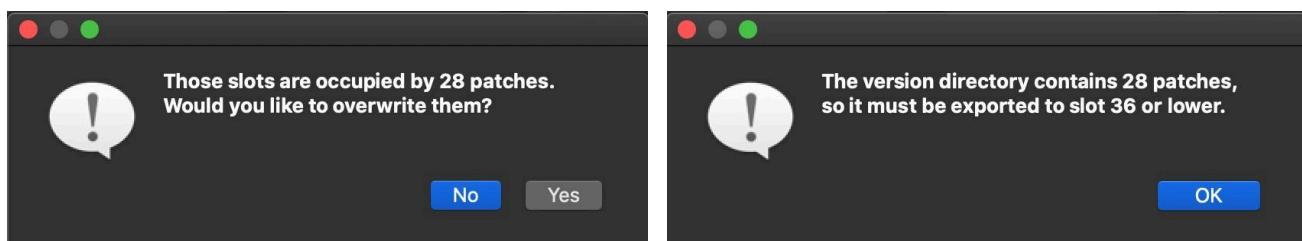
By default, exporting from the Local Storage tab will export patches to a folder called “to\_zoia”. You can choose a different directory location and view the exported patches in the SD Card tab.

When you export a patch, the application will detect if there are patches in the directory already and initialize the window selection with the next-available slot number. You will be warned by a pop-up if you try to overwrite an existing patch.



Certain patches are labeled as “[Multiple Versions]” - these originated as a collection of multiple patches, either downloaded from PatchStorage or mass-imported from the SD card. Instead of requiring a unique patch id, the Librarian groups these patches together, each one as a different version. You can export an entire version history by clicking “Export Patches”, or delete all patches within by clicking “X” on the row.

Exporting an entire Version History to the SD card may require a lot of overwriting of patches, or it may not fit all of them without altering the slot number.



To access the Version History view, click on any patch that has “[Multiple versions]” in its name. Upon entering the Version History view for a patch, you can individually rate, export, and/or delete specific versions. To exit this view, click the “Back” button.

Title	Tags	Categories	Date Modified	Rating	Export	Delete
Glamour Years	bit-crusher, distortion, filter, fm, fuzz, overdrive, pretty-years, sag, smallsound-bigsound, and vcf	Effect	2021-09-17	0	Export Patch	X
Glamour Years zebu	bit-crusher, distortion, filter, fm, fuzz, overdrive, pretty-years, sag, smallsound-bigsound, and vcf	Effect	2021-09-17	0	Export Patch	X

There are a number of editing features available, from simple categorization and patch note edits to a complete modification of your patch!

Each patch can be labeled with your own tags, which are searchable too. Double click anywhere in the tags to make changes and press “Enter” to commit them.

Title	Tags	Categories	Date Modified	Rating	Export	Delete
Glamour Years	bit-crusher, distortion, filter, fm, fuzz, overdrive, pretty-years, sag, smallsound-bigsound, and vcf					

Patches can also be rated on a scale from 0 to 5. Use the up/down arrows or double-click the box to enter your rating. Ratings can be applied for an entire version history as well as individual patches.

Title	Tags	Categories	Date Modified	Rating	Export	Delete
Glamour Years	bit-crusher, distortion, filter, fm, fuzz, overdrive, pretty-years, sag, smallsound-bigsound, and vcf	Effect	2021-09-17	5	Export Patch	X

The right-side upper panel displays the patch metadata, which can also be edited. To do so, first select a patch on the left-hand side of the screen by clicking on the circle to the left of its name, then make the edits you wish to add or remove.

Update Patch Notes      Edit Patch      Upload to PatchStorage

**Glamour Years - a surprisingly accurate version of the subminiature tube distortion/filter unit**

**Author:** meanmedianmoge  
**Likes:** 93  
**Downloads:** 5872  
**Views:** 6168  
**License:** GNU General Public License family  
**Preview:** [Click here](#)

**Patch Notes:**

->>> MAKE EDITS HERE <<<-

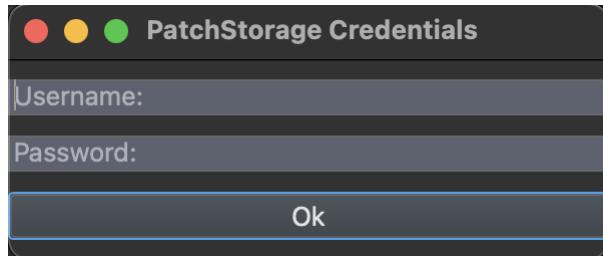
The creation of this patch got me back into making patches. And the impetus for that was the arrival of the SSBS Pretty Years, a rare distortion/filter unit that uses sub mini tubes

Once you are done, click the “Update Patch Notes” above to save these changes. Two notes about making edits to patch notes or information:

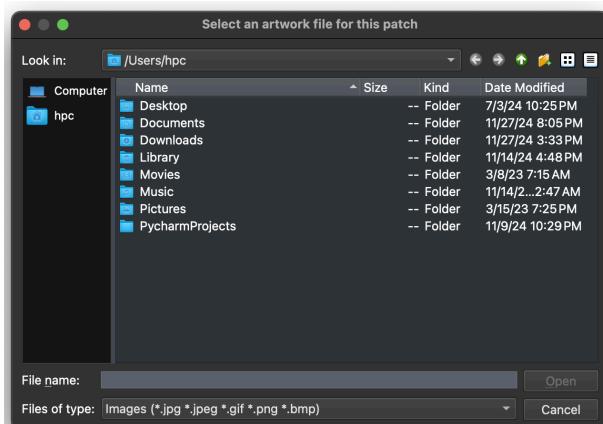
- Headers cannot be modified, only the section under “Patch Notes”.
- Tags and categories cannot be mass modified for patches that contain multiple versions, however each version can have their tags and categories individually modified.

Click “Upload to PatchStorage” to start the process an upload/update. This process will send the patch to PatchStorage either as a new patch or an update to one of your own. It requires a couple steps of user-input to function properly.

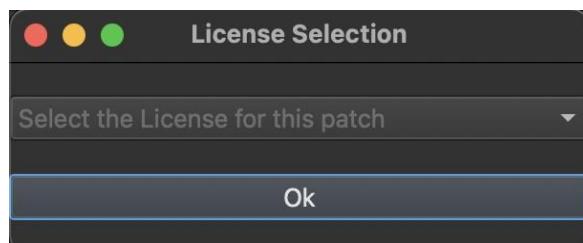
First is the authentication stage - by entering your PS account credentials, the PS API will generate a unique token that is submitted with each request. Usernames and passwords are not stored or saved in any manner, and are only necessary to provide a method to acquire that token.



Next is an artwork file, which can be any of these formats: png, jpg, bmp, or gif. For updates, the app will use the existing image, otherwise it will prompt for a new file.



Finally there is the license selection - this assigns a license to the patch which governs how you'd wish it to be shared. Choose one from the drop-down menu and click “Ok”.



Once submitted, and assuming no errors, the patch will appear on the PS site. In addition, the patch metadata will be updated to PS standards.

The process for patch updates is similar, except there is a validation check to ensure that you are the same user who uploaded the original patch - this is to avoid your hard work being overwritten by anyone else! You will see this message if you attempt to update a patch that wasn't yours.



Otherwise, the same steps will be taken as the upload function. Currently, the update function only works with single-version patches.

Located in the right-side lower panel is the Patch Visualizer, which offers a way to explore the layout and routing of a patch before loading it onto your ZOIA. There are two primary types of information present in the visualizer:

- Patch - displays the patch name, estimated CPU (not including connections or dynamics), I/O, MIDI channels, stomp-switches used, cport connections used, the number of pages, and the number of starred parameters.

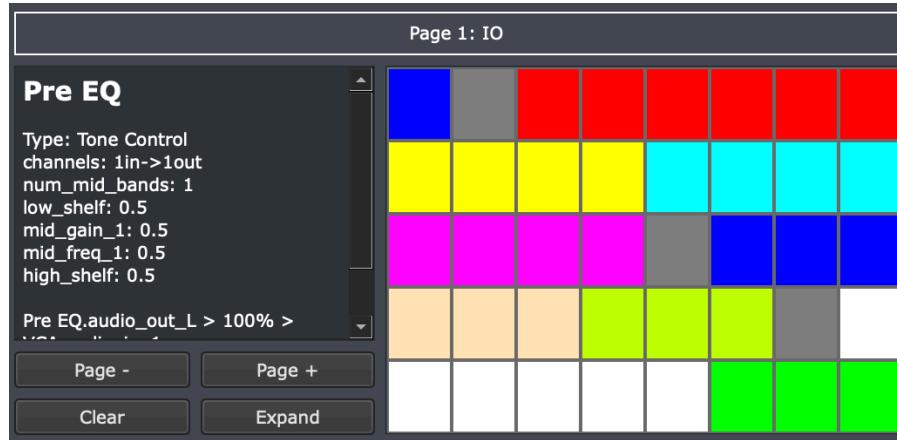
Page 0: Controls

**Glamour Years**

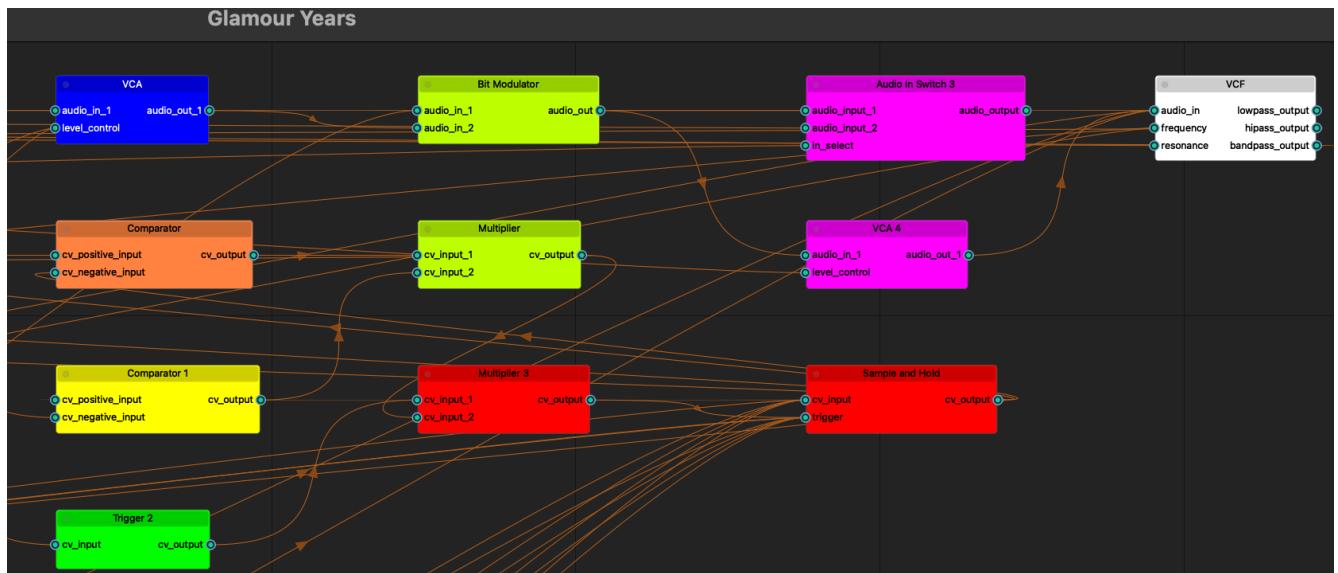
Est CPU: 67.33  
Inputs: Left  
Outputs: Stereo  
Stompswitches: [Left, Middle, Right]  
Cport: None  
MIDI Channels: None  
Number of Pages: 7  
Number of Starred Params: 11

Page - Page +  
Clear Expand

- Module - displays the module name, type, options chosen, parameter values, starred parameters (plus the MIDI CC if assigned), and outgoing connections.



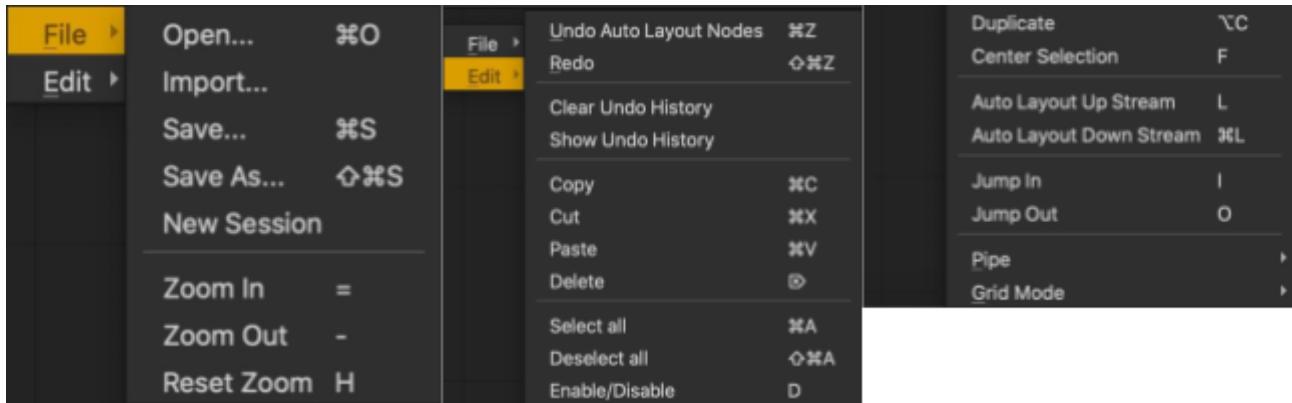
Within the visualizer is a new button, “Expand”. Clicking this will construct an expanded view of the patch in a separate window, using a node-graph representation (for our purpose, modules = nodes and connections = edges). Nodes are color-coded to match the grid color used for the module on ZOIA and edges flow from left to right using arrows, aligning with the routing of the patch. There are a number of controls and display options available, which we’ll explore in detail next.



The main interactions with this feature are done by moving, dragging, and zooming. By default, the zoom is minimized to show all the nodes in the graph, but can be adjusted by the scroll-wheel or with the +/- keys (F resets).

Every node and edge is highlighted to start, so clicking and holding your mouse will move the entire graph around the window. You can deselect by clicking anywhere else in the window, or Alt + click-and-drag to highlight a group of nodes and edges.

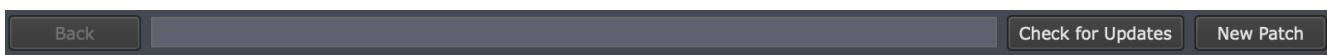
Right-clicking anywhere in the window will bring up the options menu, which features 2 tabs: File and Edit. These show a set of shortcuts and other useful tools to save and edit the graph. In particular, the auto-layout features may be of interest for different ways to view the same routing.



*Please note that certain patches may fail to display in the Visualizer and Expander panels - this is likely due to them being saved on deprecated ZOIA firmware. If you find a patch that doesn't display a visualization as-is, an easy fix is to load it onto your ZOIA, save with a more recent firmware, and re-import the patch (deleting the old version in the process).*

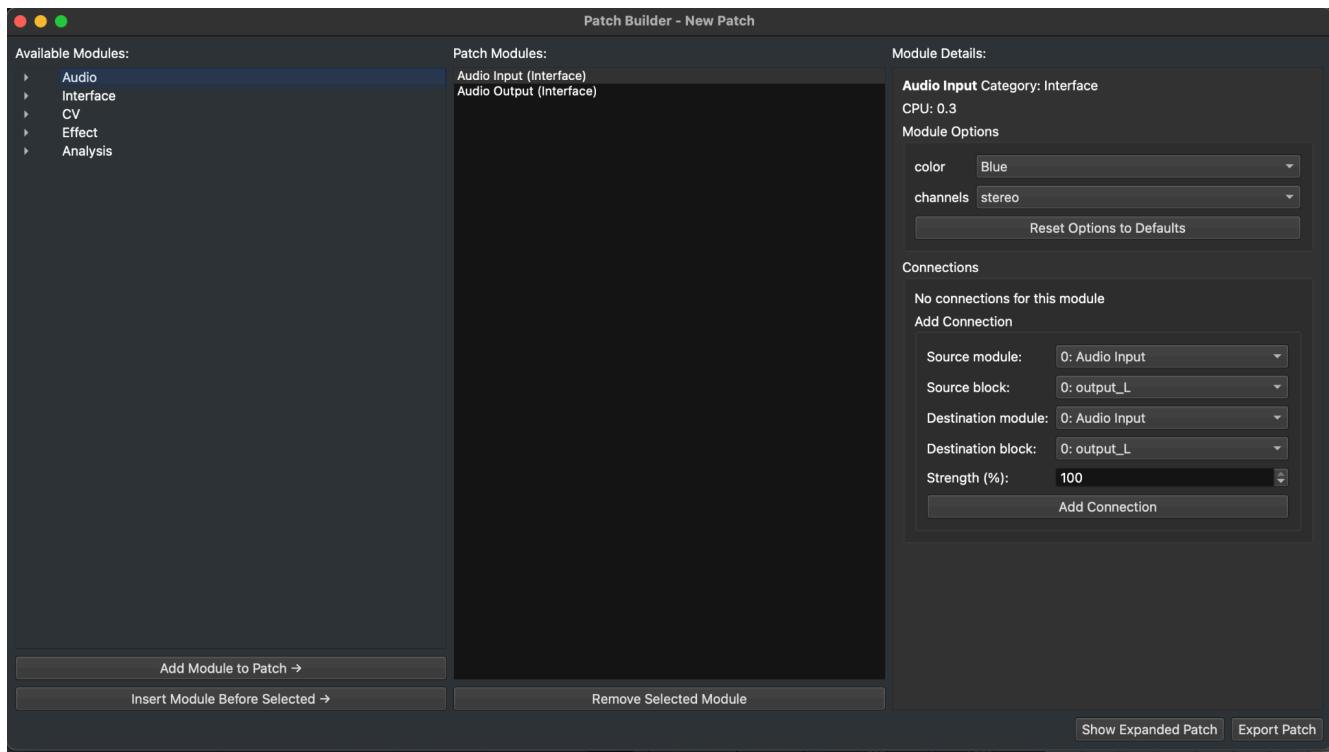
You may have noticed we skipped over a couple buttons, namely “New Patch” from the search bar section and “Edit Patch” above the patch notes. Your patience has been rewarded. After a long wait, it is now possible to create and edit patches straight from the Librarian!! This is huge, and is why this update truly deserves the “version 2.0” label.

Clicking the “New Patch” button next to the search bar will open up the Patch Builder. This UI is the same for editing patches, but there are some minor differences which we’ll cover afterward.



There are three visible panes in the Builder UI (and one that toggles to the far right):

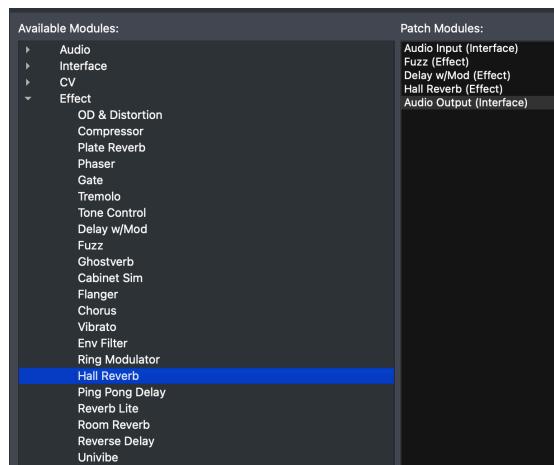
- Available Modules - lists all the modules, by category, similar to what you’d see on a ZOIA when placing a new module down on a block
- Patch Modules - lists all the modules currently in the patch
- Module Details - shows the options, parameters, and connections for each module in the patch, all of which are editable
- Expander - click “Show Expanded Patch” to open the Patch Expander



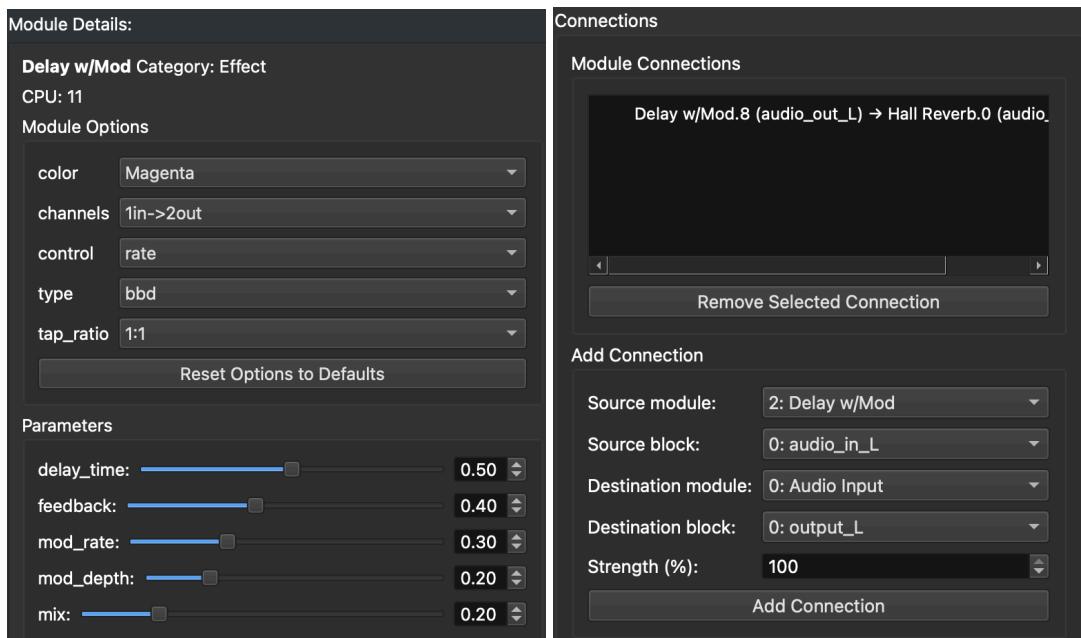
To make things a little easier, every new patch will initialize with an unconnected Audio Input and Output pair. A future version of the application may contain things like default patterns or recallable recipes..

The basic workflow from here is as follows: add modules to the list as you see fit, changing the options and params as desired, then connect everything together. There's no need to think about block positions or even pages, the app will handle that for you. Of course, you won't be able to *hear* the results until you export and load it onto your ZOIA, so keep that in mind.

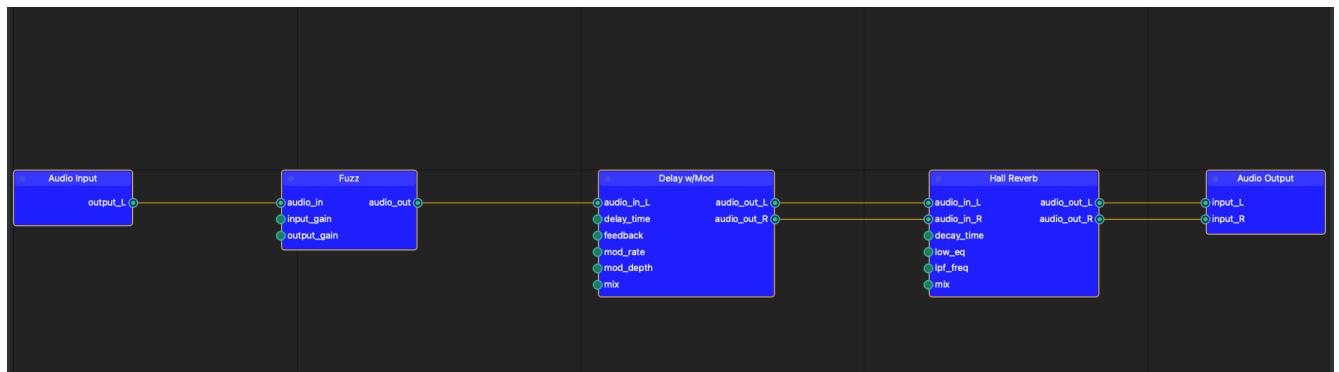
Let's go through a quick example of a multi-effects patch, with a Fuzz, Delay w/Mod, and Hall Reverb. After adding those to the list, it would look like the below image.



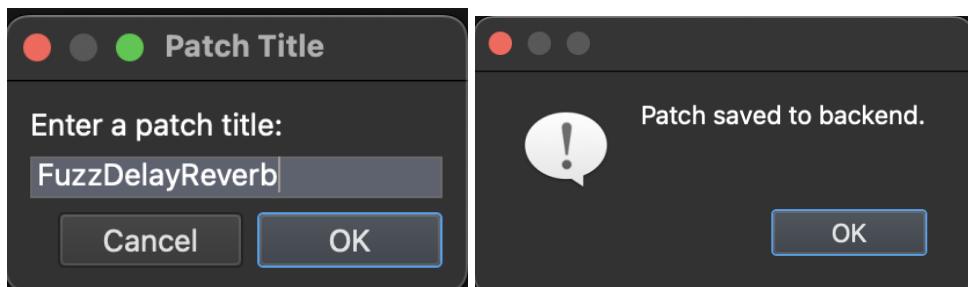
Next, we can adjust the options, params, and connection details. These examples show changing the Delay w/Mod channels, parameters adjusted, and a connection to the Reverb left input placed.



Once everything is placed (Input -> Fuzz -> Delay -> Reverb -> Output), we can inspect the routing with the Expander view.

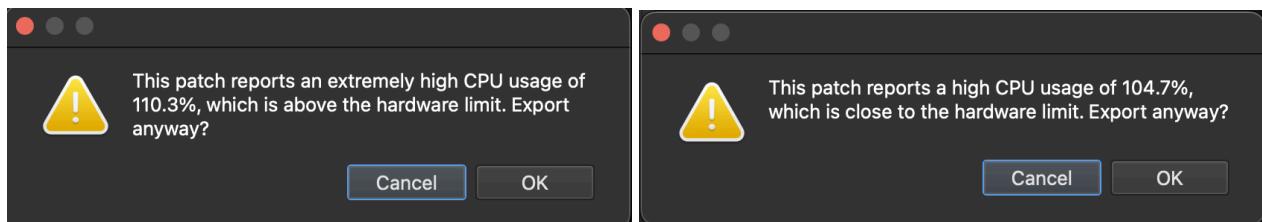


Clicking “Export Patch” on the bottom right will prompt for a patch name to save. Upon a successful export, the patch will automatically show up in the Local Storage tab.



Title	Tags	Categories	Date Modified	Rating	Export	Delete
FuzzDelayReverb	No tags	No categories	2026-01-21	0	Export Patch	X

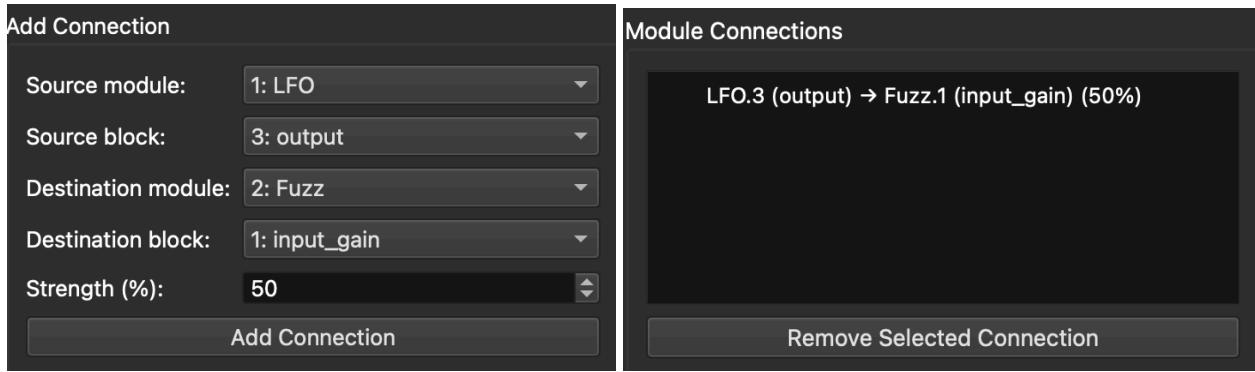
If the patch comes close to or exceeds the hardware limit of 105%, a warning message will be displayed. Note that these numbers are based on the average CPU from the current module index (which may not reflect reality) and dynamically modulated modules (such as the Tone Control or Multi Filter) can cause CPU spikes not calculated here.



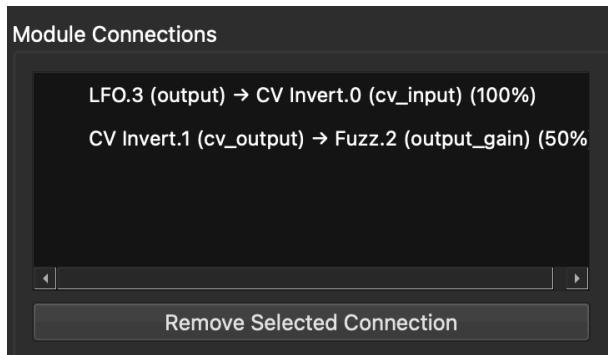
Editing patches works in a similar way, so let's go through a quick example of modifying the FuzzDelayReverb we just made. Click the “Edit Patch” button to open the Patch Builder again.

Let's add an LFO to modulate the fuzz gain parameters.

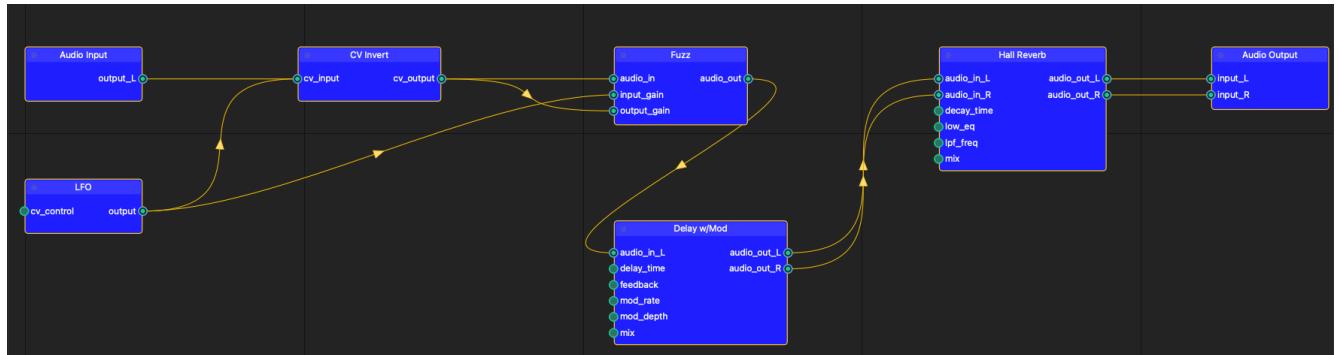
The default settings seem fine, so let's connect it to the input gain with 50% strength.



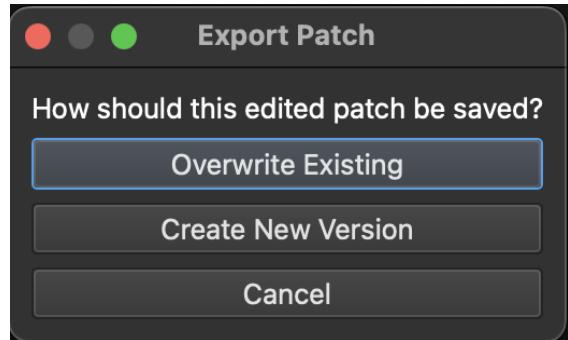
Let's offset this volume increase by inverting the LFO and sending that modulation to the fuzz output gain. For that, we'll need a CV Invert module.



Below is the current Expanded view of the patch. You can see the LFO modulation on the Fuzz and the audio path clearly.



Attempting to export the patch will now display two options, Overwrite Existing or Create New Version. The first option will save the new patch in place of the old one and the second will create a version history with the newest patch being the first in the list. The same CPU warning messages will pop up in the event that the new version comes close to or exceeds the hardware limit.



The Patch Builder is an exciting feature that allows the user to create and modify patches even without having their ZOIA available. However, due to dynamic DSP usage, there is no guarantee that all edits will translate to a working patch. Caution is therefore advised. Future updates to this feature will be coming soon!

Now that we have explored the Local Storage tab, it's time to move on the SD Card tab.

## SD Card

The SD Card tab allows you to inspect the directories located on the SD card you have specified. In case you have not specified your SD card yet, look for the “File” option towards the top left of the screen, click it, and then click “Specify SD Card Location”. After selecting your SD card location, this is the screen you will be presented with.

The screenshot shows the SD Card tab interface. At the top, there's a tree view of the SD card's contents:

- backup\_zola
  - backup\_zola
  - backup\_zola\_000
  - backup\_zola\_001
  - backup\_zola\_002
  - backup\_zola\_003
  - backup\_zola\_004
  - backup\_zola\_005
  - backup\_zola\_006
- bank1
- bank2
- bank3

Below the tree view are four buttons: "Delete Selected Item Above", "Set Export Directory", "Import All Listed Patches Below", and "Import All Listed Patches Below as a Version History".

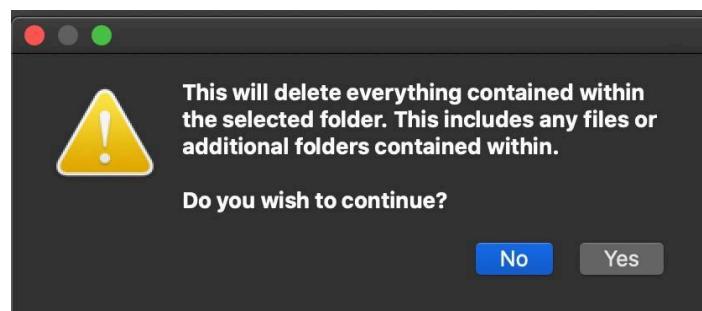
Two tables below the buttons list patches:

Patch	Import	Remove
0 000_zola_Dimension_Z.bin	Import patch	X
1 001_zola_lofi_vibrato.bin	Import patch	X
2 002_zola_ThoughtsInLoops.bin	Import patch	X
3 003_zola_Tape_Landscape.bin	Import patch	X
4 004_zola_Mr_Foxtrst.bin	Import patch	X
5 005_zola_SynthFilterVerb.bin	Import patch	X
6 006_zola_tape_degrade.bin	Import patch	X
7 007_zola_Wizard.bin	Import patch	X
8 008_zola_Dsstr_Rcvr.bin	Import patch	X
9 009_zola_Synthotron.bin	Import patch	X

Patch	Import	Remove
32 032_zola_Disintegration.bin	Import patch	X
33 033_zola_Swollen_Sky.bin	Import patch	X
34 034_zola_JohannLooper.bin	Import patch	X
35 035_zola_ShimWoW.bin	Import patch	X
36 036_zola_Panning_Looper.bin	Import patch	X
37 037_zola_anagramophone.bin	Import patch	X
38 038_zola_Freeze.bin	Import patch	X
39 039_zola_We_Come_In_Peac.bin	Import patch	X
40 040_zola_Not_So_Swell.bin	Import patch	X
41 041_zola_Fading_Dream.bin	Import patch	X

The upper portion of the screen lists all the folders located on the SD card. You can expand any of these folders by clicking on the arrow to the left of each folder. Clicking a folder will populate the table below with patches.

You can move patches within the folder by dragging and dropping them into different slots on the SD card. Multiple selections can be made with Shift or Ctrl/Cmd macros. You can also remove a patch from your SD card by clicking the “X” button in each row, or completely remove a directory from your SD card by selecting “Delete Selected Item Above”. This button will trigger a confirmation window.

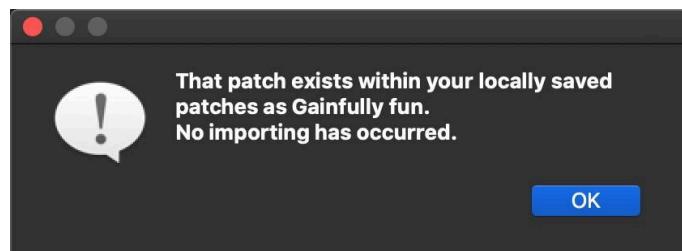


The most useful features in the SD Card tab relate to importing patches into Local Storage. There are three options available. The first is achieved by clicking “Import Patch” next to a patch in the above table. The second and third options apply to importing multiple patches at once. Multiple patches can be mass-imported in one of two ways: as individual patches, which simplifies the steps to import every patch in a given SD Card folder, or as a Version History, for a group of similar patches or ones you wish to treat as a collection.

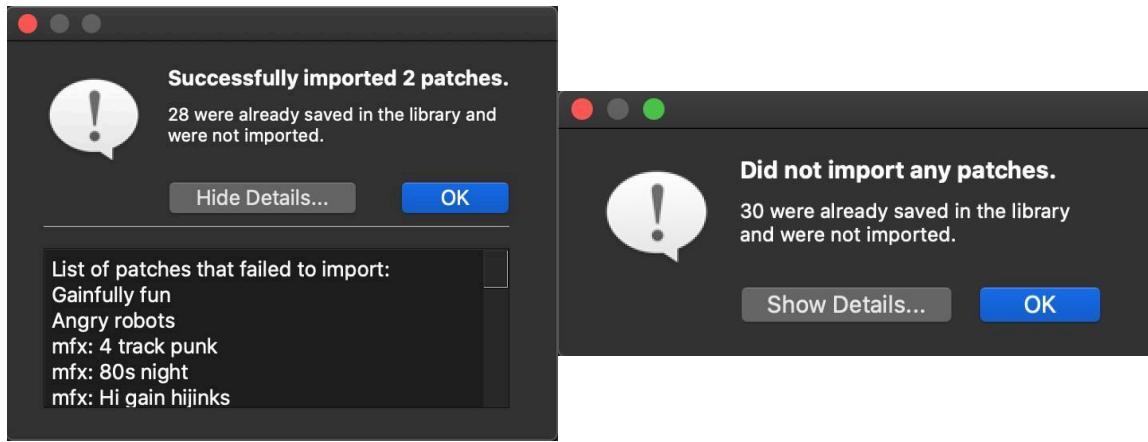
When the Librarian imports patches, it will attempt to merge patches with the same name as the patches that you have in your Local Storage or ones currently hosted on PatchStorage. This process has two benefits:

- If the imported patch differs from the version in Local Storage, it creates a Version History with the original and new version(s) so you can compare them.
- If the imported patch is one you received from PatchStorage but haven’t downloaded yet through the Librarian, it will copy over the patch notes metadata from the site, saving you from having to manually enter that information.

If an exact copy of a single imported patch already exists in your Local Storage, it will not be imported, since there is nothing new to save.

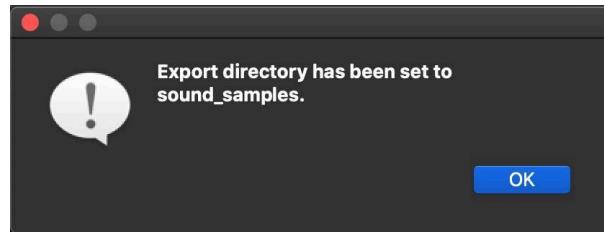


For individual multiples, the import process will save anything without duplicates, and the pop-up will display the number of successes and failures. Clicking “Show Details” will list off the names and locations of the exact copies using a [Version History: Patch] naming scheme. If a patch you’re attempting to import does not exist within a version history, it will just have the patch name by itself.



For version imports, the process is a little different. This function serves a way to load in entire ZOIA folders at once and quickly modify them with the Folder tab, so it treats all patches in the SD folder independent of any other patch in PS or your Local storage. Basically, you can think of this functionality as the “Patches to SD” equivalent, where patches from the unit go into a folder to be used later.

Finally, there is “Set Export Directory”, which sets the patch export destination directory for the SD Card used by Local Storage. By default this is set to “to\_zoia”. It will bring up a directory select window and then confirm the decision.



The SD Card tab gives you a quick way to mass import patches from your SD card into the Librarian, but what about mass exporting? That is where the Folders tab comes into play, which will be discussed in the next section.

## Folders

The Folders tab offers a way to work with folders, or collections of patches, both on and off of the SD card.

	Patch	Remove		Patch	Remove		Title	Tags	Categories	Rating	Add to Folder
0	000_zolia_Pretty_Years.bin	X		32			NINYL VOISE	crackle, glitch, noise, pops, record, ui, and vinyl	Effect and Sound	0	Move patch to folder
1	001_zolia_Keypad_poly_4.bin	X		33			mfx [Multiple Versions]	No tags	No categories	0	Move patches to folder
2	002_zolia_for_Keith_Barr.bin	X		34			cuckoo [Multiple Versions]	No tags	No categories	0	Move patches to folder
3	003_zolia_Remote_4.bin	X		35			ben Jordan [Multiple Versions]	No tags	No categories	0	Move patches to folder
4	004_zolia_DirtyVerb.bin	X		36			Keypad poly 4 -- a polyphonic keyboard module synth (and looper)	five-voice, keypad-playable, looper, and reverb	Composition and Synthesizer	0	Move patch to folder
5	005_zolia_Abyss_Water.bin	X		37			Groove -- a quasi-generative groovebox	drum, generative, groovebox, programmable, self-contained, and synth	Composition, Sequencer, and Synthesizer	0	Move patch to folder
6	006_zolia_Groove.bin	X		38			Abyss Water - a single droplet takes us to the depths	fairfield, k-field, lofi, low-pass-gate, shallow-water, and vibrato	Effect	0	Move patch to folder
7	007_zolia_NINYL_VOISE-1.bin	X		39			FM keys -- a six-voice FM synth for dusty sounds [Multiple Versions]	dusty, fm, keys, mellow, and midi-playable	Sound and Synthesizer	0	Move patches to folder
8				40			For Keith Barr -- a reverb/delay inspired by a legendary developer's design [Multiple Versions]	algorithmic, ambient, delay, reverb, smeared, and soundscape	Effect	0	Move patches to folder
9				41			Remote 4 - a utility patch for multi-button controllers and bread-and-butter audio	bread-and-butter, comparator, looper, midi, remote4, and stompswitches	Effect and Utility	0	Move patch to folder
10				42			DirtyVerb	Delay w/mod, Env Follower, Ghostverb, OD, Pitch Detector, Stompswitch, vibrato, and zola	Effect	0	Move patch to folder
11				43			Pretty Years - a surprisingly accurate version of the subminiature	fm, fuzz, pretty years, smallsound/bigsound,	Effect	0	Move patch to folder
12				44							Move patch to folder
13				45							Move patch to folder
14				46							Move patch to folder
15				47							Move patch to folder
16				48							Move patch to folder
17				49							Move patch to folder
18				50							Move patch to folder

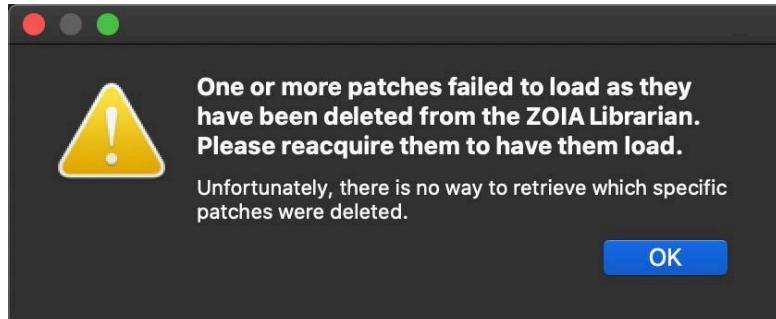
The right side of the screen displays the patches saved within the Librarian. Unlike the Local Storage tab, you cannot modify the patch tags, categories, rating, or patch notes in this view, nor can you delete them. You can, however, still view additional patch information and enter the Version History for patches in the Folders tab. You can also search for patches just as you can in the Local Storage View.

To get started, select a patch from the Local table, and either drag it over to a slot in one of the two folder tables, or click the “Move patch(es) to folder” button for the patch. Once you have patches in the folder tables, you can move them around in the same way as the SD Card tables. If you add a patch to the folder that has multiple versions contained within it, it will automatically populate the table with all the patches contained within.

When you finish making your folder, you can save it using the “Save Folder” button, and/or export it using the “Export Folder” button. Please note exporting cannot occur unless you have specified a SD card location. Whether you are saving or exporting, you will be asked to provide a name for your folder, with an extra confirmation window if the name you select already exists as a folder.



Once your folder(s) are saved, you can use the “Load Folder” button to populate the folder tables with those patches. If you remove patches from your Local Storage that are within a saved folder, they will not load, as they no longer exist on your computer.



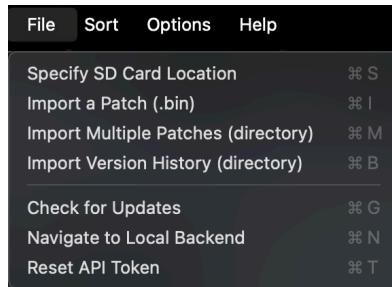
Finally, there is a “Clear Folder” button, which will quickly clear the folder completely (alternatively, you can remove patches from a folder by clicking the “X” button in each row).

That concludes the main functionality within the ZOIA Librarian. The final couple of sections will discuss additional features and what to expect in future versions.

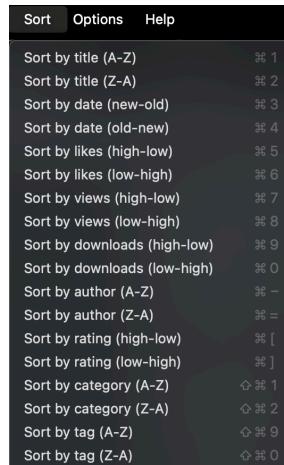
## Additional Features

There are some additional features that are available in the Librarian which can apply to multiple tabs. You'll find these in the menu actions.

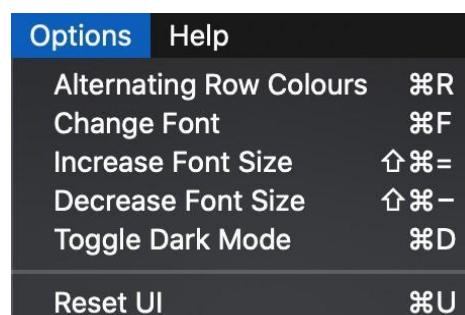
The File menu has been discussed previously, in the context of your SD card location. The other items are for when you'd like to import patch files that exist on your local filesystem. Each one is analogous to the functionality in the SD Card tab. Lastly, there are some shortcut features: navigate to the app's local backend directory, reset the API tokens, and to check for app updates from GitHub.



The sort menu offers ways to sort the various tables in each tab of the Librarian, except for the SD tab. The default sorting option is Date (new-old).



The Options menu is for altering the look and feel of the Librarian, including row inversion, font style and size, dark mode toggle (always on, of course), and a way to reset the UI panels and tables to their defaults.



The Help menu is where you'll find documentation for the Librarian and resources for using the ZOIA. This information will display in the PatchStorage tab on the right-side panel where the patch notes would show. The FAQ is provided below as an example.

The screenshot shows the ZOIA software's Help menu open. The menu includes a search bar and links to Documentation, FAQ, Changelog, Module Index, and Tips and Tricks, each with a corresponding keyboard shortcut. Below the menu, the 'General' section of the FAQ is displayed, containing three questions and their answers:

- What is ZOIA?**
  - ZOIA is a modular synthesizer in a pedal designed by Empress Effects in Canada. - A modular synthesizer uses modules as components in a larger system. Each module has a specific function, and these functions can be combined in a multitude of ways to create just about anything you can dream up! This means ZOIA can be used as a straight guitar pedal with the built-in FX modules, or to create a synthesizer/sequencer, or to control other effects as a Midi controller or to make an entire pedalboard in one patch. And more!
  - The major drawback of this sort of flexibility is that the devil is in the details. Modular creation requires a level of detail that surpasses the traditional guitar pedal, so expect to spend lots of time tweaking your patches. Of course, you can rely on others to do the work for you by exploring the Patchstorage site and this subreddit. The goal is to embrace collaboration and to make the ZOIA as easy to use as possible.
- When will [insert feature here] be added?**
  - When it's ready, and not a moment sooner
- What power supply does ZOIA require? Does the unit come with a power supply?**
  - ZOIA requires at least 300 mA at 9v, delivered by center negative plug. A list of compatible power supplies can be found [here](#). Other power supplies not found on the list may also work with ZOIA, provided they supply the necessary power requirements listed above (e.g., Strymon power supplies).
  - ZOIA does not come with a [power supply](#)

## Local Backend

All files that are downloaded from PatchStorage or imported to the application can be found in the Local Backend, which differs by platform. A shortcut to find this location is available in the File options menu (Navigate to Local Backend).

The structure of this data is organized as follows:

- Individual patch folders, each with a unique patch ID.
  - Inside you'll find two types of files, binaries and json. Binaries are the actual ZOIA patch file, while each JSON holds a set of metadata for that patch.
  - Different views on the Local Storage tab expose the patch and metadata information.
  - Patches with multiple versions will display as v1, v2, and so on. These are what we've referred to as a "Version History".
- A JSON object which stores and caches the current (as of the last time you opened the application) set of PatchStorage patches.
  - This is *the* core component of the application and should not be tampered with.
  - It is automatically updated each time you open the app, fetching new data from the PS API.
- An artwork cache directory for storing the patch images of PS patches.
- A directory which saves the set of folders you can generate and export to the ZOIA.
- Another JSON object to store your saved preferences.
  - These are a set of options for determining the UI sizes, SD locations, and API authentication tokens.
- Lastly, a directory of Samples which holds wav files.
  - They are also categorized by unique patch ID and will be exported to the SD card at the same time you export a patch that has samples attached.

Unique patch IDs are generated from two sources: ones downloaded from PatchStorage share the same ID they use, and ones imported into the app have their own set. 6-digit IDs will always come from PS and 5-digit ones will always be for imported files.

Please do not add new files or directories into this path - this will cause errors in the application.

## Changelog

App version 2.0 is an incredible milestone release for the ZOIA Librarian. It finally realizes a major feature that so many were desperate to have: patch editing!!! Additionally, there are some rather helpful QOL features and bug fixes as well.

### New Features

- Patches can now be edited and created in the app!!! This feature is offered in a beta state. Without having the unit on hand to measure dynamic CPU loads, there is no guarantee that patches edited with the app will run smoothly on ZOIA.
- Updated the module index for block defaults and descriptions. Also, reflected the 5.3 change to Granular modules (new max grain size option).
- Importing a ZOIA folder as a Version History will now automatically create a Folder list with those patches. This is to aid in quick import-export functions.
- Added images to the patch preview/notes pane. Artwork is locally cached for faster subsequent loads.
- Updated drag and drop behavior to insert between slots instead of swapping slots.
- Overhauled unit tests and added Github actions CI/CD for smoother deployments and testing.
- Included developer build tools for quicker environment and app bundling.

### Fixes

- Resolved the patch encoder-decoder round trip logic, which allowed for patch editing to exist!
- Expander now has better handling for feedback loops.
- Fixed a bug where imported patches that merged with PS patches would get deleted upon app restart.
- Fixed a bug in the Version History import where it would falsely flag non-duplicate folder names.
- Fixed a bug where Zebu patches would show as having 128 pages.
- Fixed tab switching UI size logic.
- Fixed menu import threads on Mac.
- When only one version remains in a version history after manual deletion, the local view will go back to the full list.
- Deleting a duplicate patch from the Folder list will no longer delete the first entry instead of the one chosen.

## Future Plans

- Patch Editor optimizations, recipes, default options... lots to explore here.
- Ongoing OS support and bug fixes. Note: support for Intel Macs will continue, but those versions won't have been tested on original hardware.

We encourage you to provide feedback on things you want to see changed or features you would like to see added. Thank you for being an awesome member of the ZOIA community!