



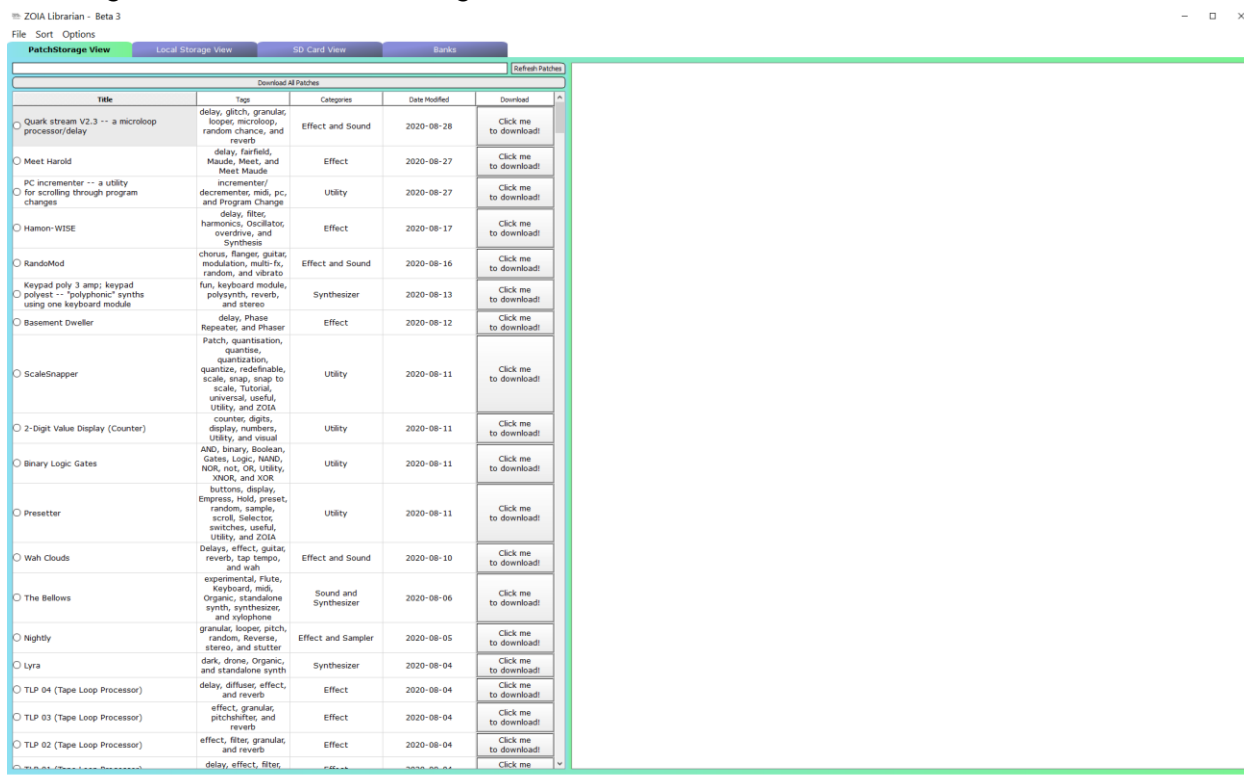
# Librarian

User Manual – Beta 3

## 1.0 Welcome!

Welcome to the ZOIA Librarian! The ZOIA Librarian aims to make your life using ZOIA much easier. Whether you are a major patch creator or general ZOIA user, the ZOIA Librarian has features that can help all levels of users.

The ZOIA Librarian can be launched via a single executable on Windows or a single application file on OSX. Double-clicking on the ZOIALibrarian – Beta 3.exe or ZOIALibrarian – Beta 3.app file will start the app, where after a brief splash screen you will be greeted with the following screen:



Please note, if this is your first time launching the application, the start-up process may take a little longer than usual as patch information is retrieved from PatchStorage. Subsequent start-ups will not need to retrieve as much information, significantly improving the start-up time.

The ZOIA Librarian is separated into 4 main tabs:



The application launches in the PatchStorage View tab. The following sections will each focus on a specific tab and go over the features contained within each.

## 1.1 PatchStorage View

The PatchStorage View 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 notice a table containing useful information about every patch currently available, including the title, tags, categories, and the date the patch was updated at:

Title	Tags	Categories	Date Modified	Download
○ The Bellows	experimental, Flute, Keyboard, midi, Organic, standalone synth, synthesizer, and xylophone	Sound and Synthesizer	2020-08-06	Click me to download!

Clicking on the circle to the left of a patch title will populate the right side of the screen with additional information about the patch. This shows off the author, licence, the like, view, and download count, and can even include a clickable preview link (if the patch author has included one):

### The Bellows

**Author:** WZ  
**Likes:** 1  
**Downloads:** 49  
**Views:** 193  
**License:** Do What The F\*ck You Want To Public License  
**Preview:** [Click here](#)

**Patch Notes:**  
The Bellows, a strange sound engine capable of organic sounds ranging from flute-like overtones and breathing noises, to metallic xylophone plucks and rattling sounds. It's playable by MIDI or on-board keyboard, and it's monophonic but up to three voices can ring out at once.

This started as my first attempt at that 'pinged bandpass filter' sound - which is surprisingly easy! - but an accidental feedback connection caused strange 'breath-like' overtones in the noise-source that excites the filters. Happy accident! I explored further, sculpted it, and spent (quite!) some time to tame it (still pretty wild), but the result is quite unique; wanna play a panflute-synth via MIDI with ZOIA? Well now you can!

This was also the first time I took the plunge with MIDI-modules; a monophonic MIDI Notes In module was used, and while MIDI notes are always accepted, the on-board keyboard can be played at the same time (it takes priority). Despite monophonic tracking, there are 3 voices that can ring out so sounds can overlap. The Trigger output cycles through the 3 voices, but the Gate allows the last note to be held, and Velocity affects sustain level.

NOTE: Due to the nature of this thing (high feedback, highly resonant filters, etc), there's plenty of settings where it'll overdrive the filters and start screaming. I did my best to mitigate this and tame it, but beware it's still highly experimental and you might need to adjust your settings. I might update it in the future, if I can find ways to stabilize it some more. The note range on the keyboard also matters a lot; if it screams, try an octave lower.

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[OVERVIEW]  
-Input: It's a synth (well.. doesn't really sound like "a synth", but okay), so no audio input needed. Dry sound goes through unaffected (L-input to stereo output).  
-Output: Stereo (or mono, but then you're missing out!)  
-CPU load: Around 99%, so shouldn't clip.  
-Build: Initial version built with firmware 1.10, tested with 1.12  
-MIDI channel: default (so that's nr1?)

[PATCH STRUCTURE]  
It all starts with a Noise module going into a Sample Rate Reducer which colors the noise, and creates some pretty interesting side-effects (a neat trick I saw recently in a video of another pinged bandpass patch!). This is called "STRIKE" and it's the exciter source for the 3 voices.

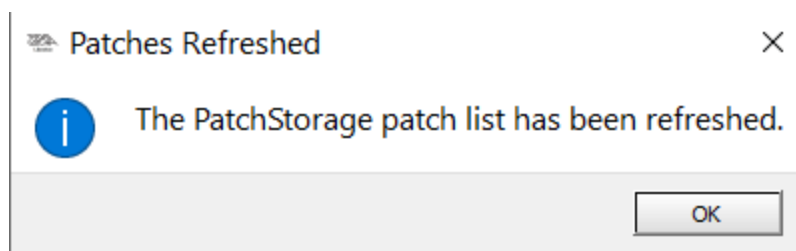
Per voice, the noise goes through a first bandpass filter (which determines the "COLOR") and then a set of VCAs. The first VCA feeds into a second bandpass filter of which the resonance ("REZ") can be turned up high enough for a ringing 'ping' to be formed when the VCA is opened briefly. The other VCA feeds back into the first bandpass filter and can create some weird disharmonic overtones. Each voice has one ADSR going into a few Multipliers that open the VCAs.

The sounds this thing produces vary greatly in volume at different settings (due to high resonance, feedback loops, etc) so in order to reign in the peak levels a lot of the front page controls have (negative) feedback connections to reduce/boost the VCA levels at

Above the table on the left there is a search bar. You can search for patches by title, tag, category, and date in the PatchStorage View tab. The Local Storage View tab allows you to also search by patch author. To initiate a search, enter what you want to search for and hit “Enter” or “Return”. For example, if you wanted to find all the patches that have “game” in its title, tags, or category:

game				Refresh Patches
Title	Tags	Categories	Date Modified	Download
<input type="radio"/> PONG	game and pong	Game	2019-10-28	Click me to download!
<input type="radio"/> Game of Life	simulation	Game and Other	2020-04-17	Click me to download!
<input type="radio"/> Exquisite ZOIA Corpse -- a collaborative patch with meanmedia and Mitch Lantz	collaborative patching, happy birthday!, and ZOIA games	Composition	2020-04-15	Click me to download!

To the right of the search bar, there is a button that will allow you to refresh the patch list. It is a good idea to click this if you think you patch list has become out of sync with the patches on PatchStorage. Once it has finished, a pop-up will let you know:



The main reason to use this tab is to explore and download patches you have an interest in! Fortunately, downloading patches is as easy as hitting the download button to the right of the patch you want to download:

<input type="radio"/> The Bellows	experimental, Flute, Keyboard, midi, Organic, standalone synth, synthesizer, and xylophone	Sound and Synthesizer	2020-08-06	Click me to download!
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Once downloading has completed, the button will disappear. This is to make sure 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 ZOIA Librarian, no button will exist:

<input type="radio"/> The Bellows	experimental, Flute, Keyboard, midi, Organic, standalone synth, synthesizer, and xylophone	Sound and Synthesizer	2020-08-06	Downloaded!
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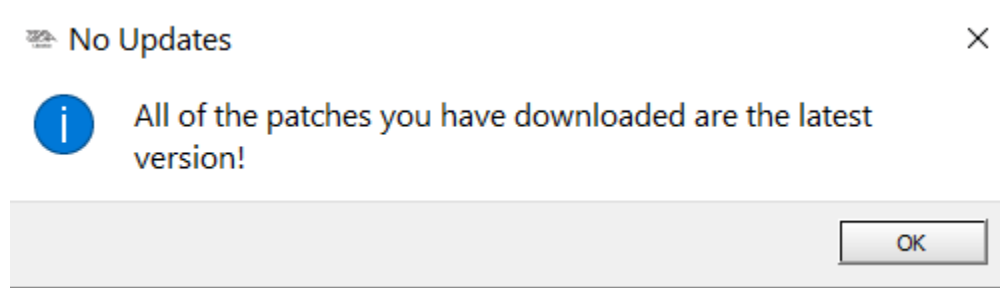
You can view all the patches you have downloaded by switching to the Local Storage View tab, which will be covered in the next section.

## 1.2 Local Storage View

At first glance, the Local Storage View tab will look very similar to the PatchStorage View. However, there are many additional options to explore. Searching behaves just the same as it does in the PatchStorage View, except you can now also search for patches by author. Additionally, there are two new buttons to the left and right of the search bar. A “Back” button and a “Check for updates” button:



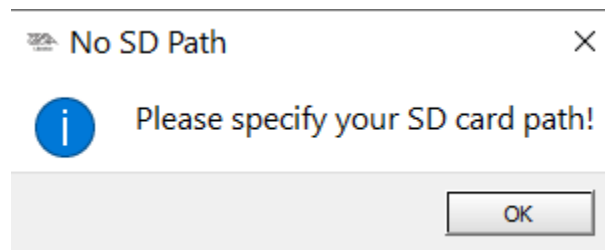
The “Check for updates” buttons will automatically check all the patches you have within the ZOIA Librarian to see if they have been updated on PatchStorage. If they have, updates will automatically be retrieved and saved. Most of the time however, this is the message you will get when clicking the button:



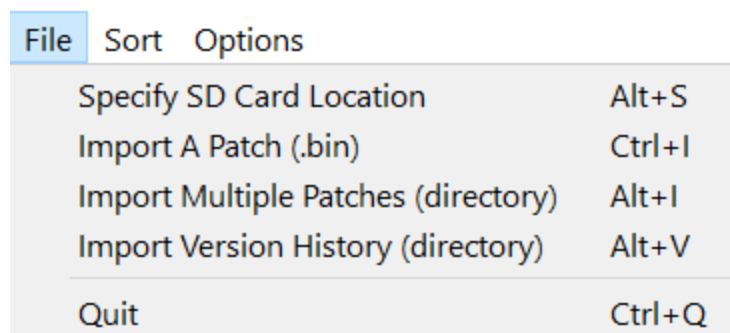
The “Back” button will initially be grayed out. Within the patch table, there are two new buttons to replace the Download button: An Export button and a Delete Button:

Title	Tags	Categories	Date Modified	Export	Delete
<input type="radio"/> TLP 04 (Tape Loop Processor)	delay, diffuser, effect, and reverb	Effect	2020-08-04	Click me to export!	X

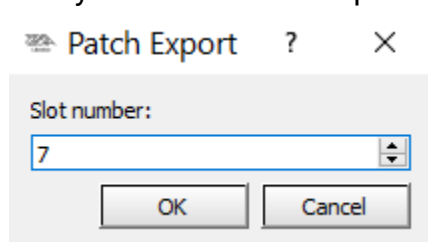
Deleting a patch from the ZOIA Librarian is as quick and easy as clicking on the “X” button for that specific patch. As for exporting, this is most likely what you will see when you click on the Export button for the first time:



Upon clicking “OK”, you will be able to select your SD card. Alternatively, to specify your SD Card location, look for the “File” option towards the top left of the screen, click it, and then click “Specify SD Card Location”:



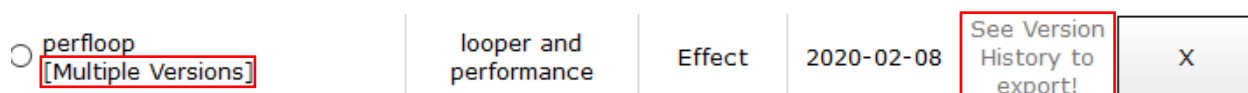
After you have selected your SD card, you can now export patches. Please note that exporting from the Local Storage View tab will export to a folder called “to\_zoia” by default. Clicking on the Export button again should now show the following window, where you can specify which slot you would like to export the patch to:



You will be warned if you are trying to export to a slot that is already occupied by another patch. Otherwise, the export will take place and you will be able to find the patch in the directory named “to\_zoia” on your SD card.

Now that you have some patches exported, you may wish to move them around on your SD card. This is where the SD Card View comes into play, which will be discussed in the next section.

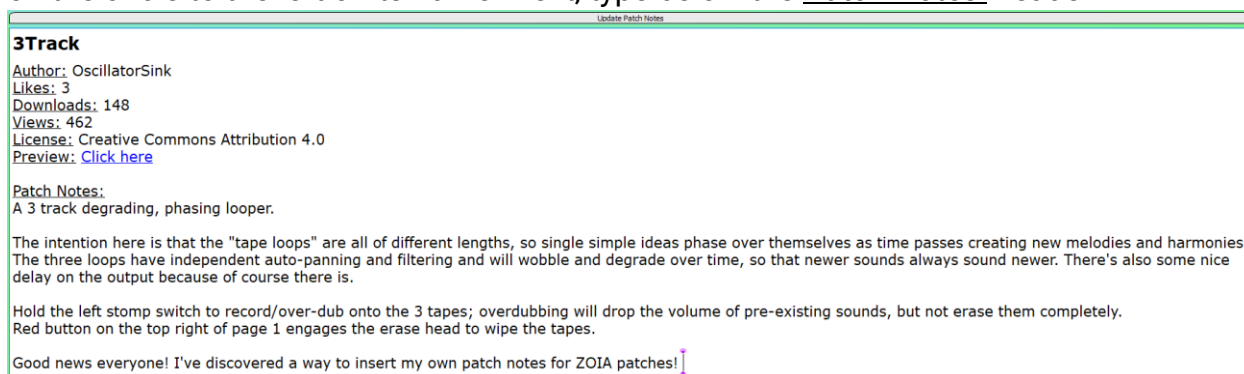
You may notice that some patches have their Export buttons grayed out. This is because these patches were zip files and contained multiple patch files within them. The ZOIA Librarian automatically unzips these when they are downloaded. To access the Version History view, click on the circle to the left of any patch that has “[Multiple versions]” in its title:



Upon entering the Version History view for a patch, you can individually export specific versions and delete them. Additionally, the “Back” button will no longer be grayed out, so whenever you want to exit the Version History view, just click the “Back” button.

On top of the features already mentioned, there are some options to edit the tags, categories, and patch notes of patches within the Local Storage View. To edit the tags or categories of a patch, simply double-click on the cell you wish to edit. Tags and categories are separated by commas. Once you have finished, simply click off the cell or hit Enter/Return.

To update patch notes, first select a patch on the left-hand side of the screen by clicking on the circle to the left of its name. Next, type below the Patch Notes: header:



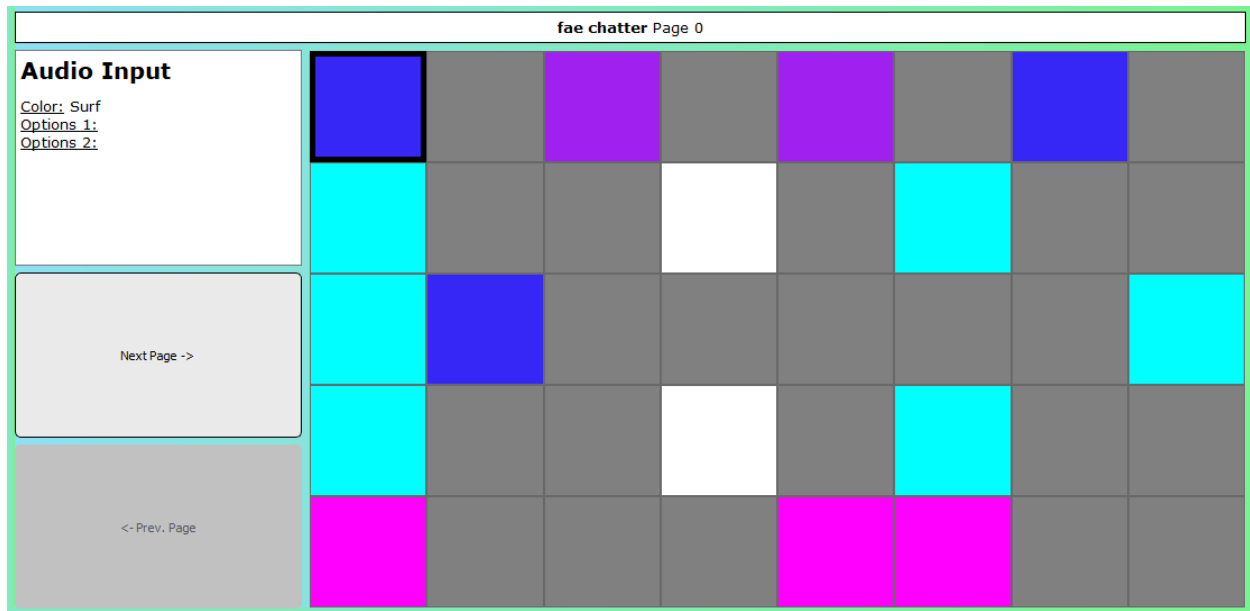
The screenshot shows a web interface for editing patch notes. At the top, there's a header bar with the text "Update Patch Notes" on the right. Below this, the patch name "3Track" is displayed. Underneath, there's a list of metadata: "Author: OscillatorSink", "Likes: 3", "Downloads: 148", "Views: 462", "License: Creative Commons Attribution 4.0", and a "Preview: [Click here](#)" link. The "Patch Notes:" section is highlighted, showing the text: "A 3 track degrading, phasing looper." Below this, there's a paragraph explaining the intention of the patch: "The intention here is that the 'tape loops' are all of different lengths, so single simple ideas phase over themselves as time passes creating new melodies and harmonies. The three loops have independent auto-panning and filtering and will wobble and degrade over time, so that newer sounds always sound newer. There's also some nice delay on the output because of course there is." Another paragraph follows: "Hold the left stomp switch to record/over-dub onto the 3 tapes; overdubbing will drop the volume of pre-existing sounds, but not erase them completely. Red button on the top right of page 1 engages the erase head to wipe the tapes." At the bottom, there's a note: "Good news everyone! I've discovered a way to insert my own patch notes for ZOIA patches!" with a small purple icon.

Once you are done, be sure to save your changes by clicking the “Update Patch Notes” button on top of the right-hand side of the screen.

Please note, anything written above the Patch Notes: header will not be saved. There are plans to change this in future Beta builds of the ZOIA Librarian. Additionally, tags and categories cannot be mass modified for patches that contain multiple versions, but each version can have their tags and categories individually modified. Finally, deleting a patch with multiple versions will delete all the versions unless you are in the Version History for said patch, at which point you can delete each individual patch contained within.

The last major feature in the Local Storage View is the patch visualizer. Located below the patch notes preview on the right side of the screen, this visualizer can determine the locations of modules present in each patch.

You can click on a module to see the type, along with the color:



Additional features, such as being able to see a list of connections and the names of starred parameters are planned for future release.

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

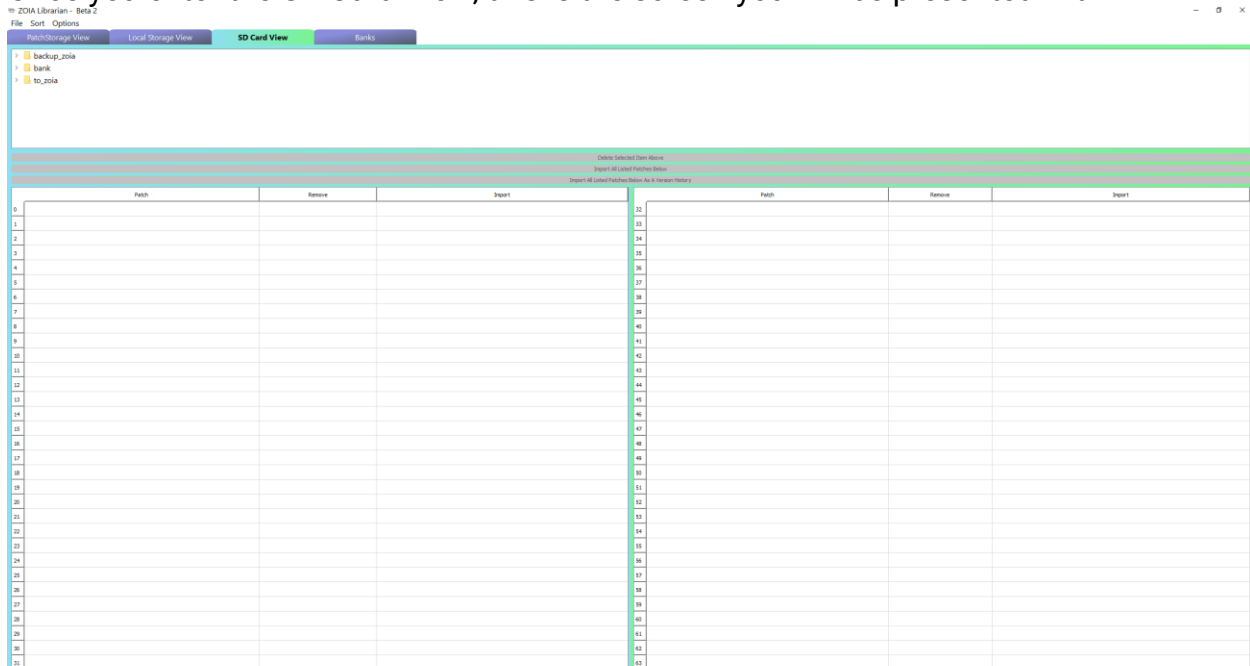


## 1.3 SD Card View

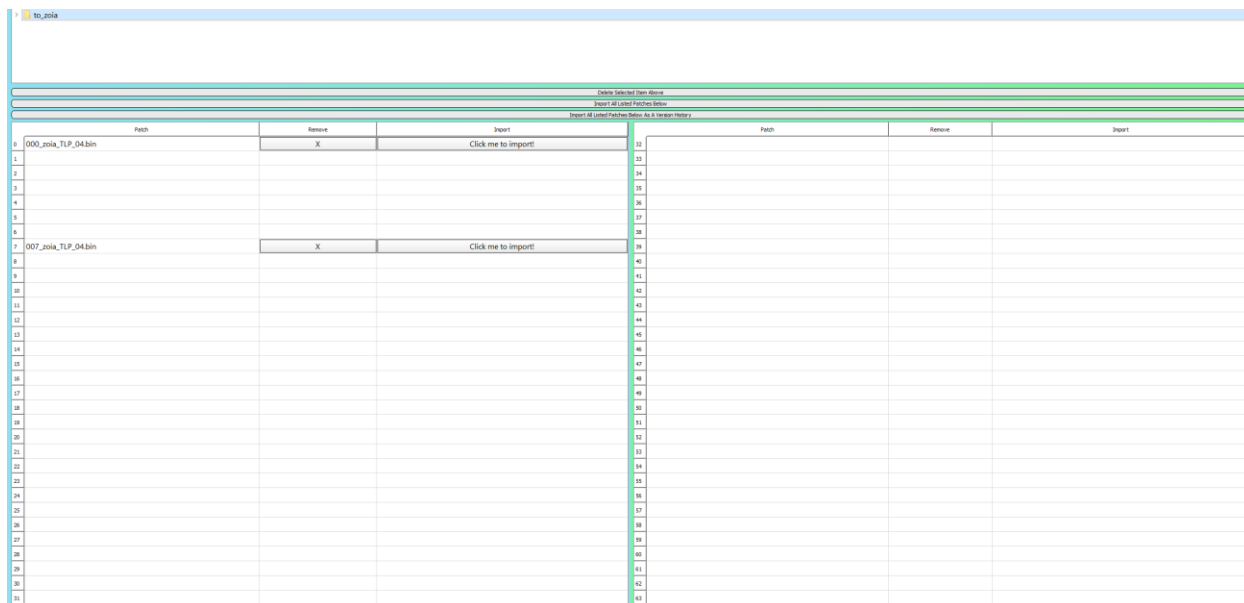
The SD Card View gives you a look into the directories located on an SD card you have specified. In case you have not specified your SD card yet, look for the “File” option towards the top left of the screen, click it, and then click “Specify SD Card Location”:

File	Sort	Options
Specify SD Card Location		Alt+S
Import A Patch (.bin)		Ctrl+I
Import Multiple Patches (directory)		Alt+I
Import Version History (directory)		Alt+V
Quit		Ctrl+Q

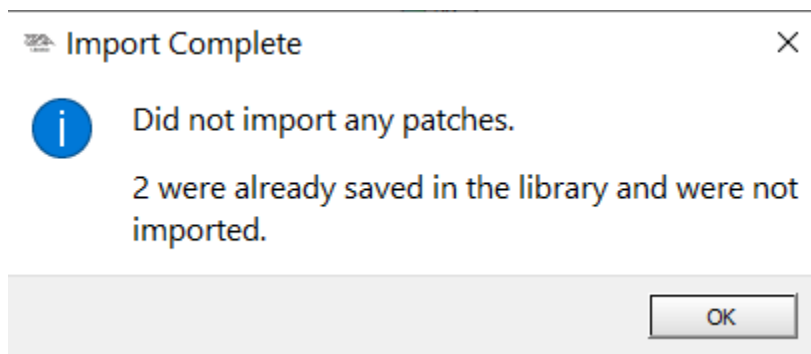
Once you enter the SD Card View, this is the screen you will be presented with:



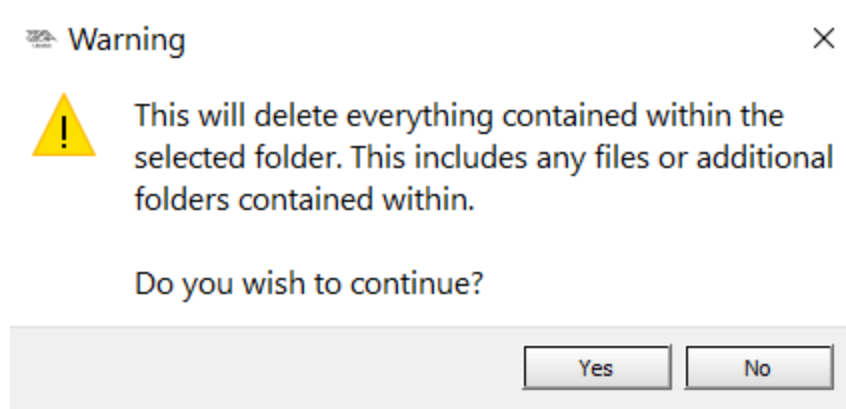
The section of the screen gives you a view of all the folders located on the SD card you specified. You can expand these folders if need be by clicking on the arrow to the left of each folder. However, if you want to have the patches contained within a folder fill the bottom half of the screen, simply left click on the folder you want to view:



You can now move patches by dragging and dropping them into different slots on the SD card. You can also remove a patch from your SD card, or if it is a new patch, you can import it using the Import button. You can also mass import all patches by using the “Import All Listed Patches Below” button. Please note, if you already have the patches saved in the ZOLA Librarian, the following message will appear:



Additionally, there are two other buttons. The “Delete Selected Item Above” button will delete the currently highlighted item from the top view. If this item is a folder, the following warning will be displayed:

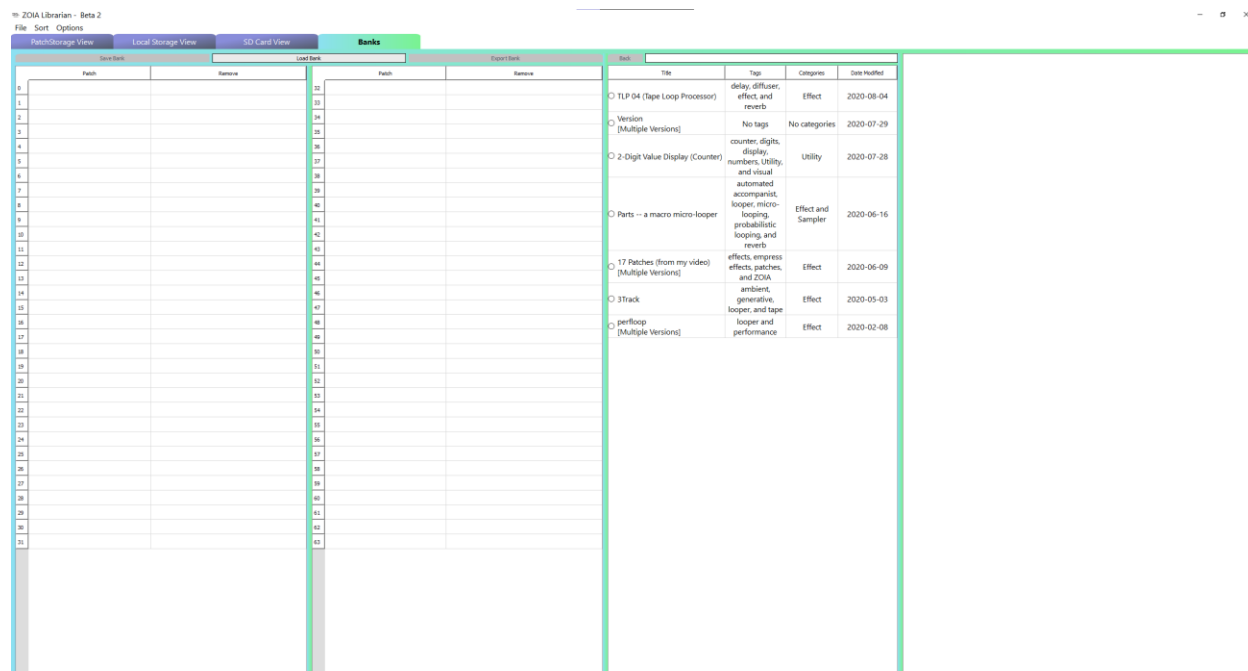


The third and final button “Import All Listed Patched Below As A Version History” allows you to import the entire directory as a Version History to the ZOIA Librarian. This is useful to keep versions of patches grouped together for quick access within the Local Storage View tab and Banks tab.

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

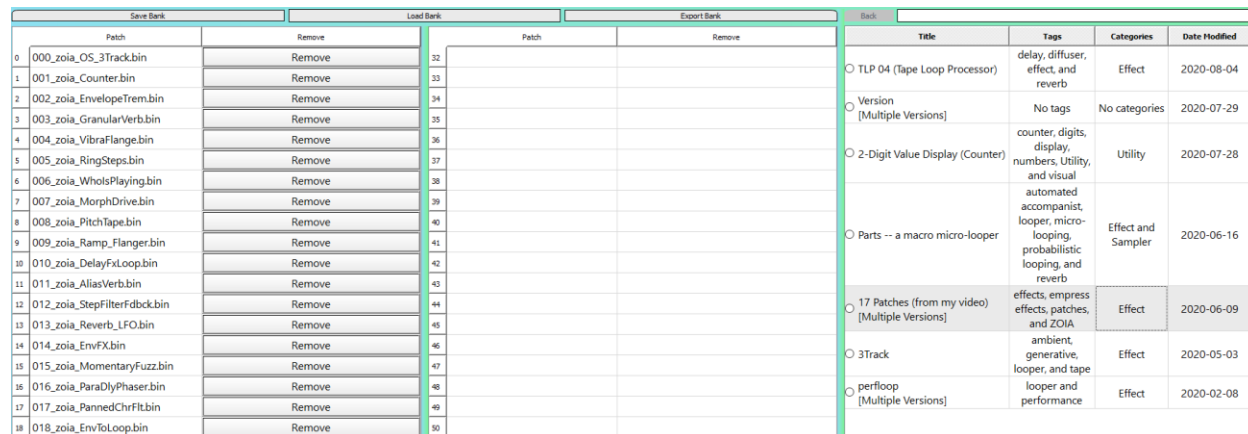
## 1.4 Banks

Upon navigating to the Banks tab, you will be presented with the following screen:



In the center of the screen, you can view patches saved within the ZOLA Librarian. You can not modify their tags, categories, or patch notes in this view, nor can you delete them. To do so, you will need to go back to the Local Storage View tab. You can still view additional patch information and enter the Version History for patches in the Banks tab. You can also search for patch just as you can in the Local Storage View.

To get started created a bank, select a patch, and drag it over to a slot in one of the two tables of the left-hand side of the screen:

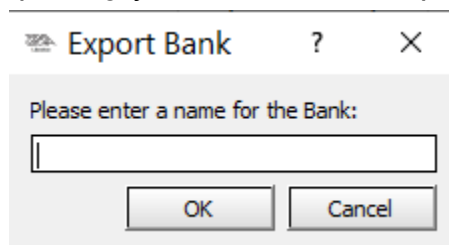


From here, you can move these patches around as you could in the SD Card View. If you drag over a patch that has multiple versions contained within it, it will automatically populate the table with all the patches contained within:

40	040_zoia_EnvelopeTrem.bin	Remove	○ Parts -- a macro micro-looper	looper, micro-looping, probabilistic looping, and reverb	Effect and Sampler	2020-06-16
41	041_zoia_GranularVerb.bin	Remove				
42	042_zoia_VibraFlange.bin	Remove				
43	043_zoia_RingSteps.bin	Remove				
44	044_zoia_WholsPlaying.bin	Remove	○ 17 Patches (from my video) [Multiple Versions]	effects, empress effects, patches, and ZOIA	Effect	2020-06-09
45	045_zoia_MorphDrive.bin	Remove				
46	046_zoia_PitchTape.bin	Remove	○ 3Track	ambient, generative, looper, and tape	Effect	2020-05-03
47	047_zoia_Ramp_Flanger.bin	Remove				
48	048_zoia_DelayFxLoop.bin	Remove	○ perfloop [Multiple Versions]	looper and performance	Effect	2020-02-08
49	049_zoia_AliasVerb.bin	Remove				
50	050_zoia_StepFilterFdbck.bin	Remove				
51	051_zoia_Reverb_LFO.bin	Remove				
52	052_zoia_EnvFX.bin	Remove				
53	053_zoia_MomentaryFuzz.bin	Remove				
54	054_zoia_ParaDlyPhaser.bin	Remove				
55	055_zoia_PannedChrFlt.bin	Remove				
56	056_zoia_EnvToLoop.bin	Remove				

Once you are finished making your Bank, you can either save it using the “Save Bank” button, or export it using the “Export Bank” button. Please note exporting can not occur unless you have specified your SD card.

Whether you are saving or exporting, you will be asked to provide a name for your Bank:



You will be warned if a folder on your SD card is already using the name you provided. Otherwise, you will be able to find your patch Bank in a new folder on the root of your SD card.

## 1.5 Additional Features

There are some additional features that are available in the ZOIA Librarian, such as patch importing options, sorting options, table row inversion option, font options, and even a dark mode! We hope these features makes using the ZOIA Librarian even easier for you.

## 1.6 Future Plans

Beta 3 introduce some important optimizations to make the application feel a lot more responsive. The app still has a lot of potential for additional features! These include:

- Added more features to the patch visualizer.
- 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!

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!

A handwritten signature in black ink, appearing to read 'John Breton', with a stylized flourish at the end.

John Breton