



Synclavier³ Windows And Features Reference

Version 1.00

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## What Is Synclavier<sup>3</sup>

Synclavier<sup>3</sup> is a modern Macintosh® application that takes advantage of the very latest Macintosh® Operating System technology.

Synclavier<sup>3</sup> is built using the latest Mac OS development platform (XCode 6.1) and requires Mac OS 10.8.5 or later.

### *Mac OS Versions*

*Synclavier<sup>3</sup> has been tested with Mac OS 10.10 "Yosemite" as well as Mac OS 10.9 "Mavericks".*

*Both the hardware and software have been designed to allow operation on Mac OS 10.8 "Mountain Lion". however we do not have access to hardware that lets us test that configuration. There may be unexpected problems that show up with the earlier OS.*



## Synclavier<sup>3</sup> At A Glance

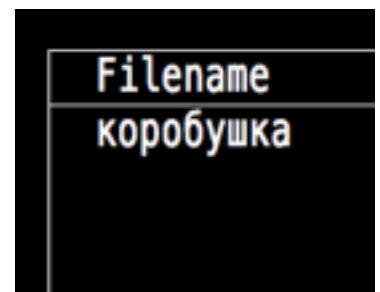
Synclavier<sup>3</sup> includes all the basic features you would expect in a modern Macintosh application. Multiple Asset Library Windows and Button Panel Windows can be shown, moved around, resized and zoomed as needed.

The Sound File Import Window and the Asset Library Window are brand-new to Synclavier<sup>3</sup>; each is covered in depth below.

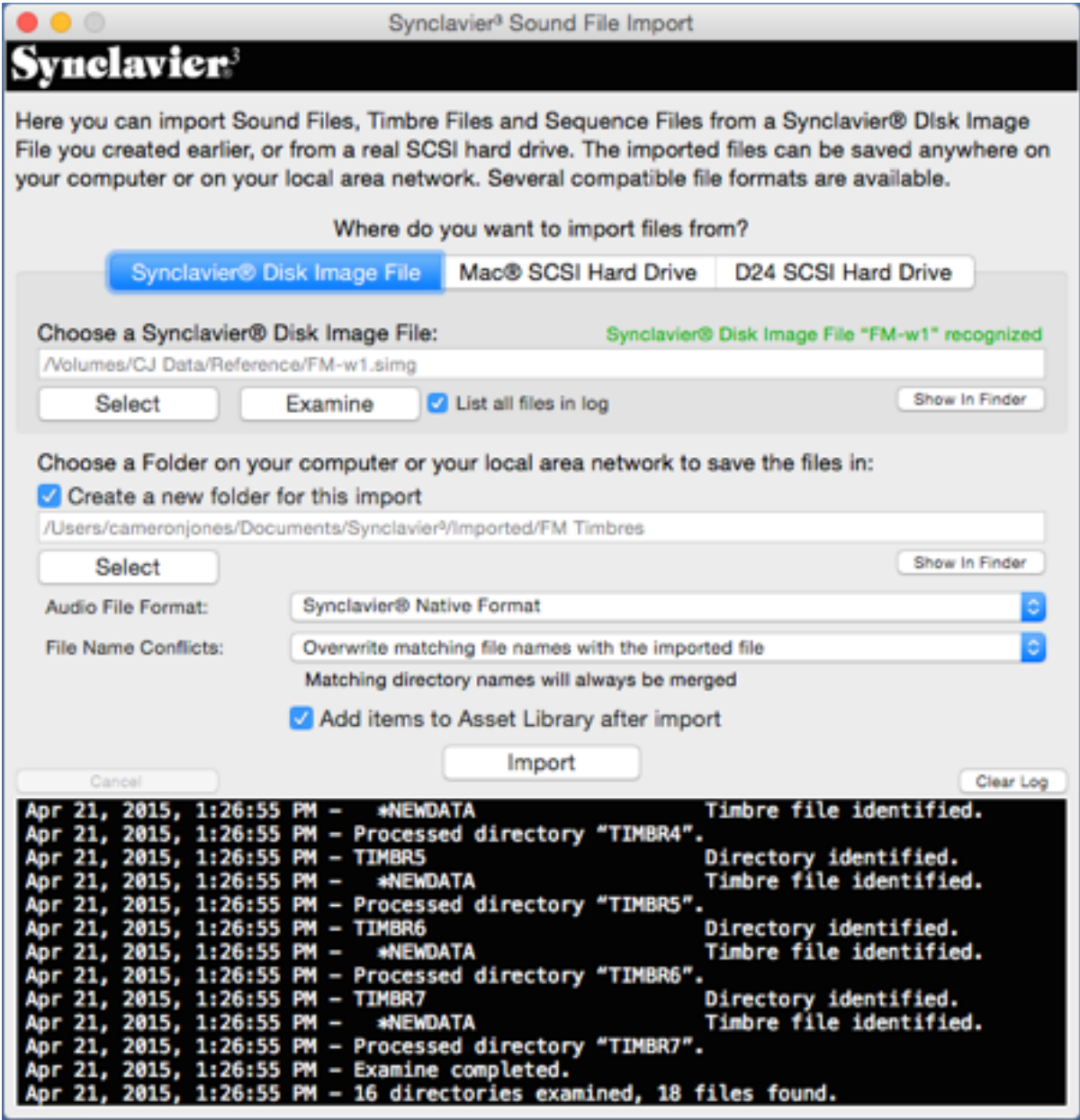
The Terminal and Button Panel Windows are familiar to all Synclavier® users.

Synclavier<sup>3</sup> introduces support for long (up to 127 characters) and Unicode filenames.

Most importantly, Synclavier<sup>3</sup> uses its Asset Library to located and call up sound files, timbre files and sequences stored anywhere on your computer or your local area networks. The need for “subcatalogs” is eliminated their use is discouraged.



# Sound File Import Window



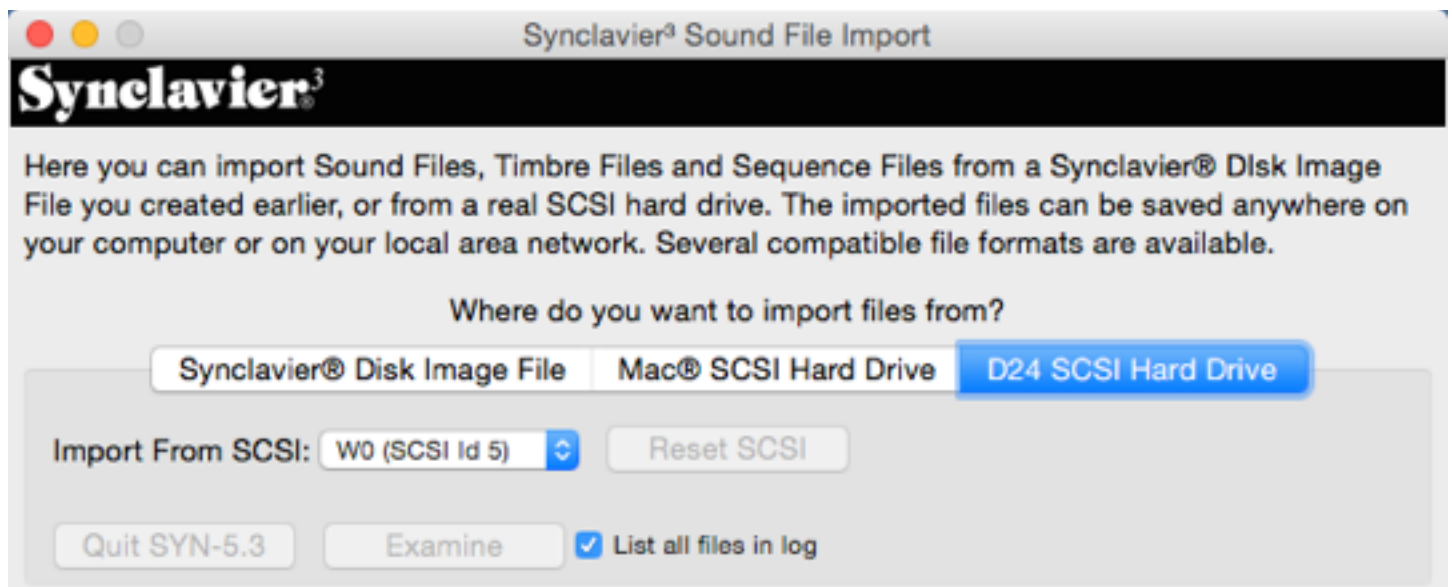
The Synclavier<sup>3</sup> Sound File Import Window is used to “import” Synclavier® sound files, sequence files and timbre files from a legacy hardware device or “disk image” file. The imported files are converted to any one of several modern file formats and can be stored anywhere on your computer or your local area network.

If you are upgrading from Synclavier® PowerPC™ or from SynclavierX you probably have your sound files, sequence files and timbre files stored in “Synclavier® Disk Image Files” stored somewhere on your computer. Synclavier<sup>3</sup> can import these files to a hierarchy of folders and files stored on your Mac. Sound files can be converted to AIFF, CAF or WAV format so they can easily be used or edited in other applications.

### *Asset Library*

*In Synclavier<sup>3</sup> your various sound files, timbre files and sequence files are referred to as “Assets”. Your Asset Library is the entire collection of assets that are available to the Real Time Software.*

*Advanced search and sort options in the Asset Library Window provide a great deal of flexibility in how you set up and organize your sound files.*



If you are still using Synclavier® hardware with physical W0: and W1: SCSI drives, Synclavier<sup>3</sup> will import from these physical devices using the BTB-1 Buss Transceiver and the D24 SCSI card. Importing from physical SCSI devices is extremely slow, however - about 11 seconds per megabyte, or 3 hours per gigabyte. Importing a fully-loaded 9-gig hard drive can take upwards of 24 hours.

Fortunately, once the import is completed the sound files can be located and loaded extremely quickly. The Asset Library Window (described below) is used to catalog sound files, sequence files and timbre files stored on your Mac. A single mouse-click can call up a sound file, sequence file or timbre file, or can be used to “enter” a sequence workspace.

If you have a third-party library of sound files (such as one by Prosonus) stored on your computer you do not need to do any “importing”. The Asset Library can call up sound files stored anywhere on your computer without the need for conversion.

The “Mac® SCSI Hard Drive” tab is not implemented in this release of Synclavier<sup>3</sup>. If you have a SCSI drive physically connected to your computer you may be able to import the contents of the SCSI drive into a Synclavier® Disk Image File using InterChangeX. Importing sound files via this mechanism would be much faster than using the BTB-1 and D24 SCSI card. At this writing a test platform was not available for this configuration.

### **.SMAP-7 and Other Data Files**

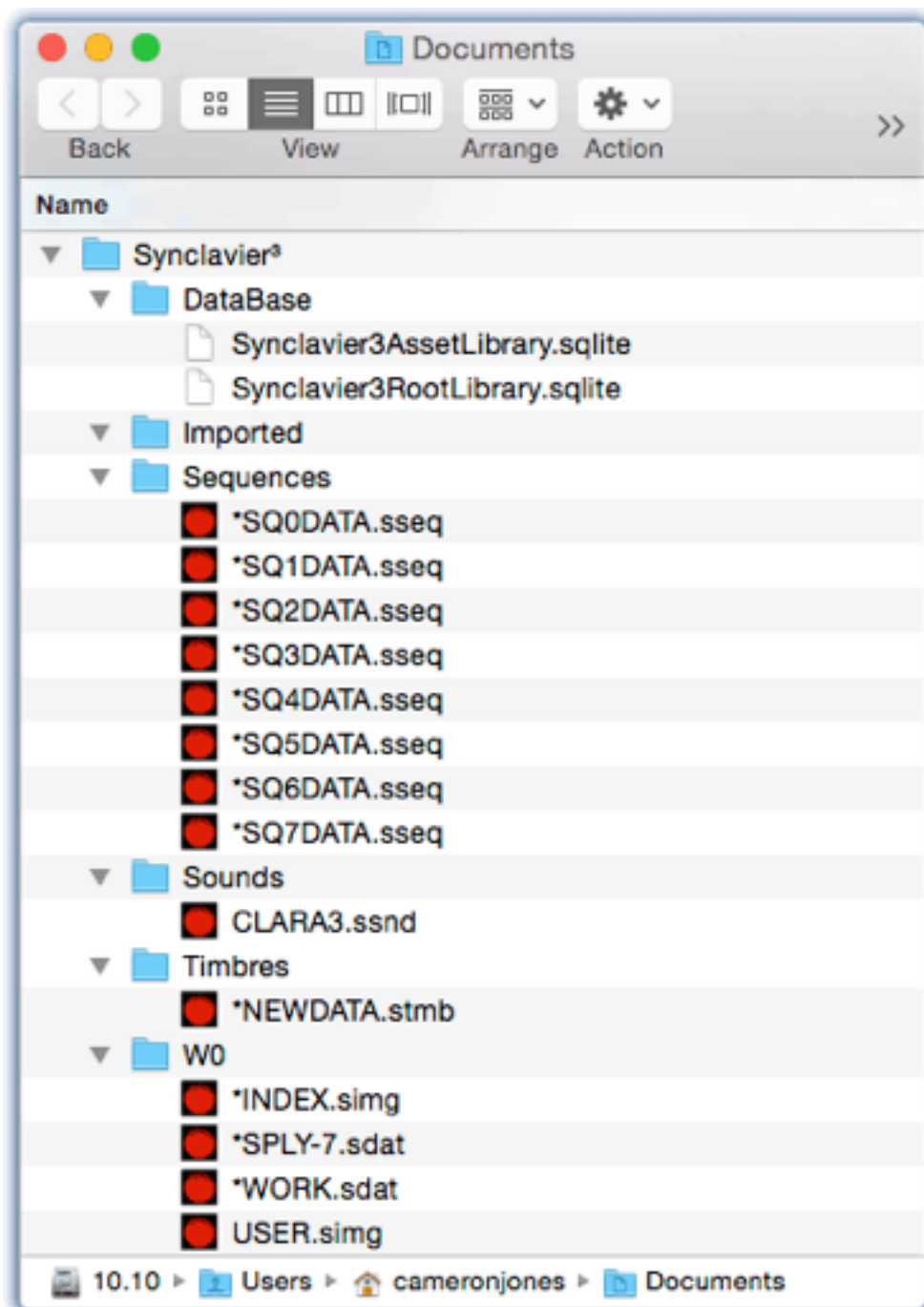
The latest build of Synclavier<sup>3</sup> imports special-purpose data files such as the .SMAP-7 file that is used to calibrate the velocity keyboard. The files must be moved into the W0 folder (~/Documents/Synclavier<sup>3</sup>/W0/) to be effective.

## Files and Folders

Synclavier<sup>3</sup> sets up a hierarchy of default folders in your user Documents directory. The default folders can be used or not used depending on your own workflow.

If you have a large library of sound files stored on a network file server, the entire sound library can be added to the Asset Library in one quick step.

You may wish to manually make backups of the .sqlite files; the current software does not have a mechanism for automatic backups. The .sqlite files can get corrupted if your Mac locks up during a power failure for example.

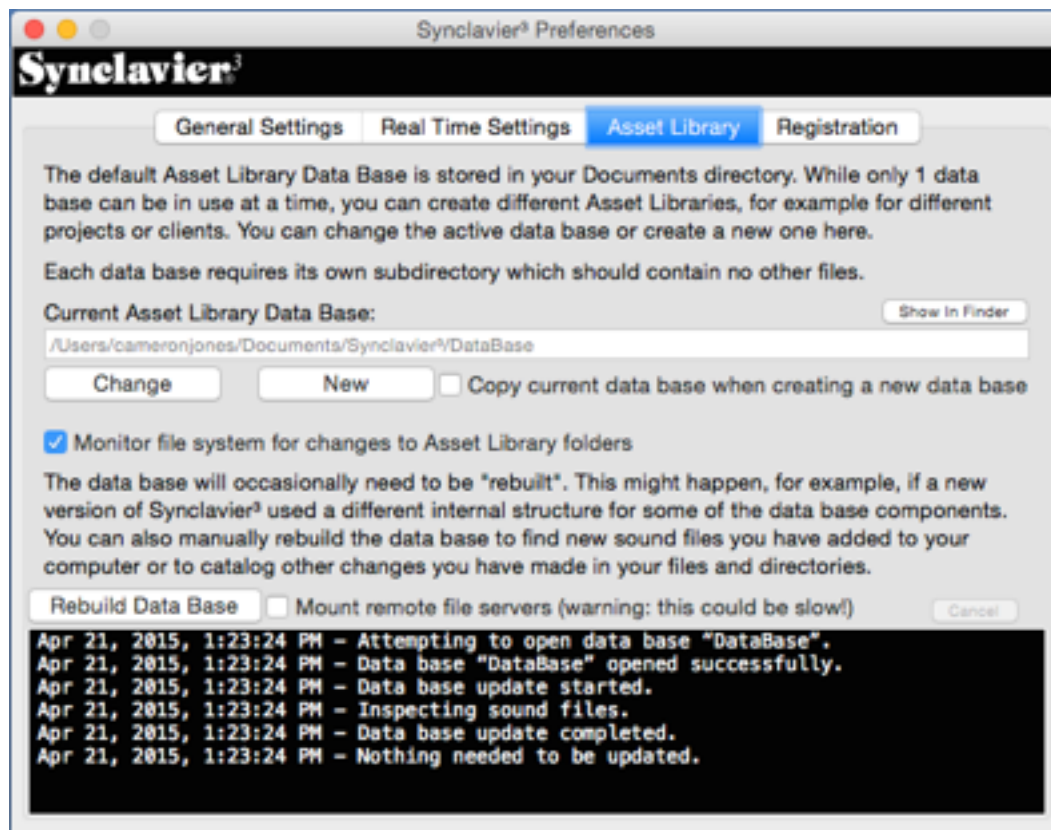




## Synclavier<sup>3</sup> Asset Library Data Base

Two special files are used to store the index of your Asset Library. The "Synclavier3AssetLibrary.sqlite" and "Synclavier3RootLibrary.sqlite" files are created by the Synclavier<sup>3</sup> Core Data Manager.

If you have a sound file library with several hundred thousand sound files it may take several hours to index and catalog your sound library. Synclavier<sup>3</sup> does not yet contain a facility to make automatic backups of your data base files. You may wish to manually make backup copies of the data base files. The Asset Library tab of the Synclavier<sup>3</sup> Preferences Window can be used to change between different data base files.



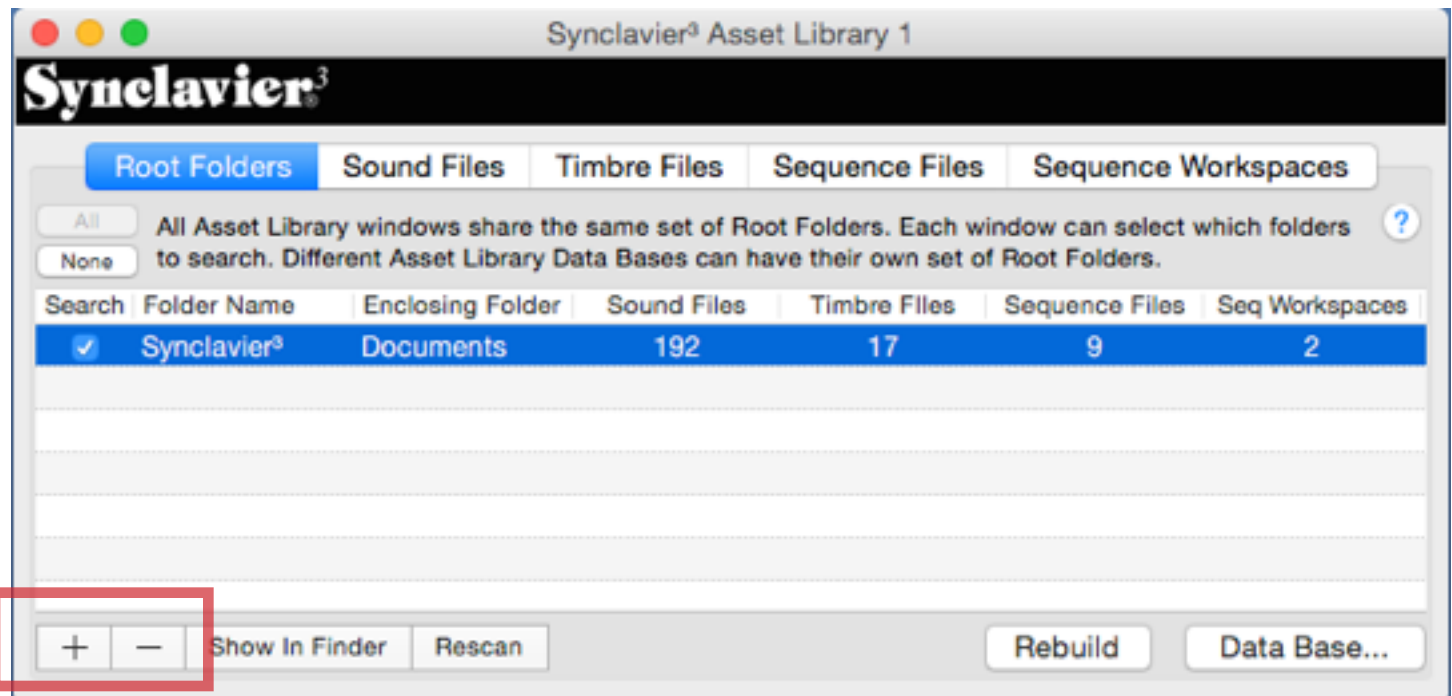
## Synclavier<sup>3</sup> Asset Library

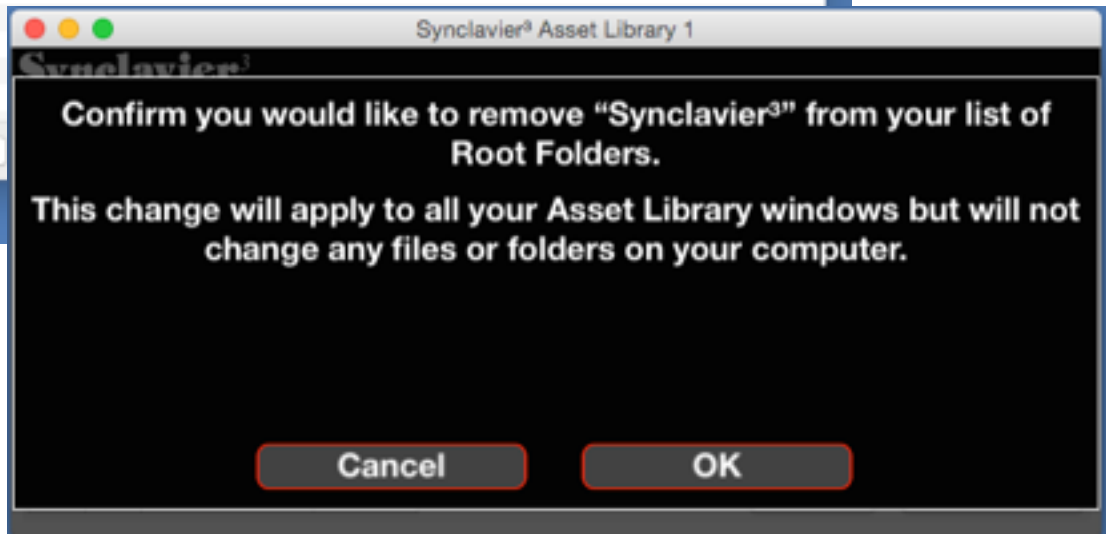
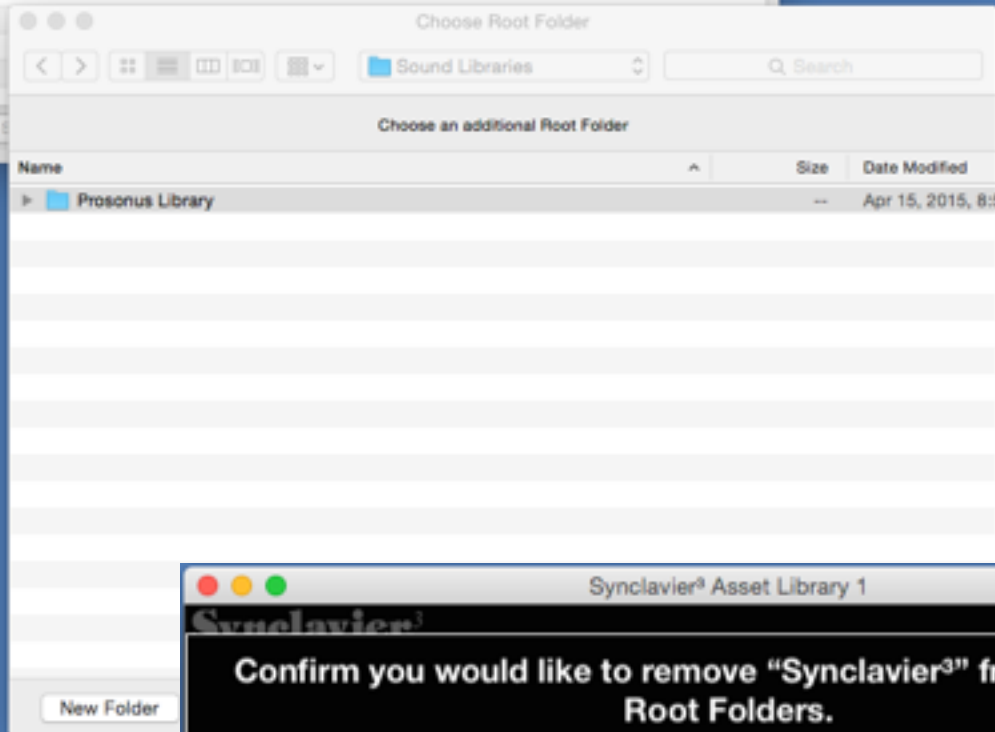
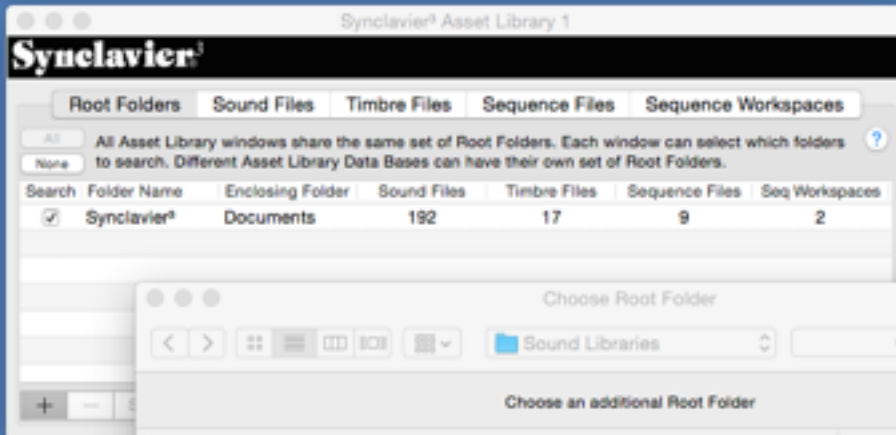
The Asset Library Window provides a comprehensive mechanism for accessing and calling up sound files, timbre files and sequence files into the Real Time Software. "Sequence Workspaces" allow the Sequence Save and Recall buttons on the VK to directly access sequence files stored on your Mac®.

The Synclavier<sup>3</sup> folder in your Documents directory is automatically installed in your list of Root Folders during software installation. If you will not be using the Synclavier<sup>3</sup> for your workflow, you can remove it from the list of root folders with the "-" button.

You can choose additional root folders with the "+" button.

You can open multiple Asset Library Windows using the "Add Asset Library" command from the Window menu.



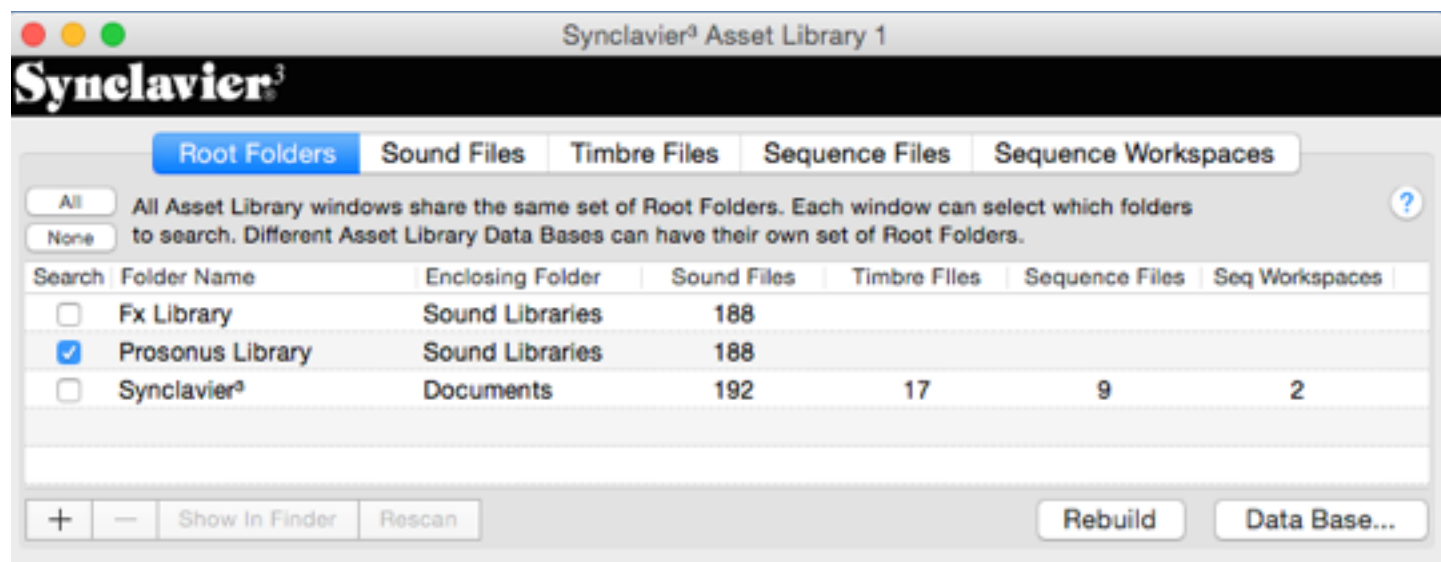


## Multiple Root Folders

If you set up your Asset Library with multiple root folders you can select which root folders are searched for assets on the other tabs.

All Asset Library Windows share the same set of root folders. Each Asset Library Window, however, can have a unique selection of which folders are being searched at any one time.

Advanced users may wish to have multiple .sqlite data base files for different clients or projects. The currently-active data base files can be changed with the “Data Base...” button.

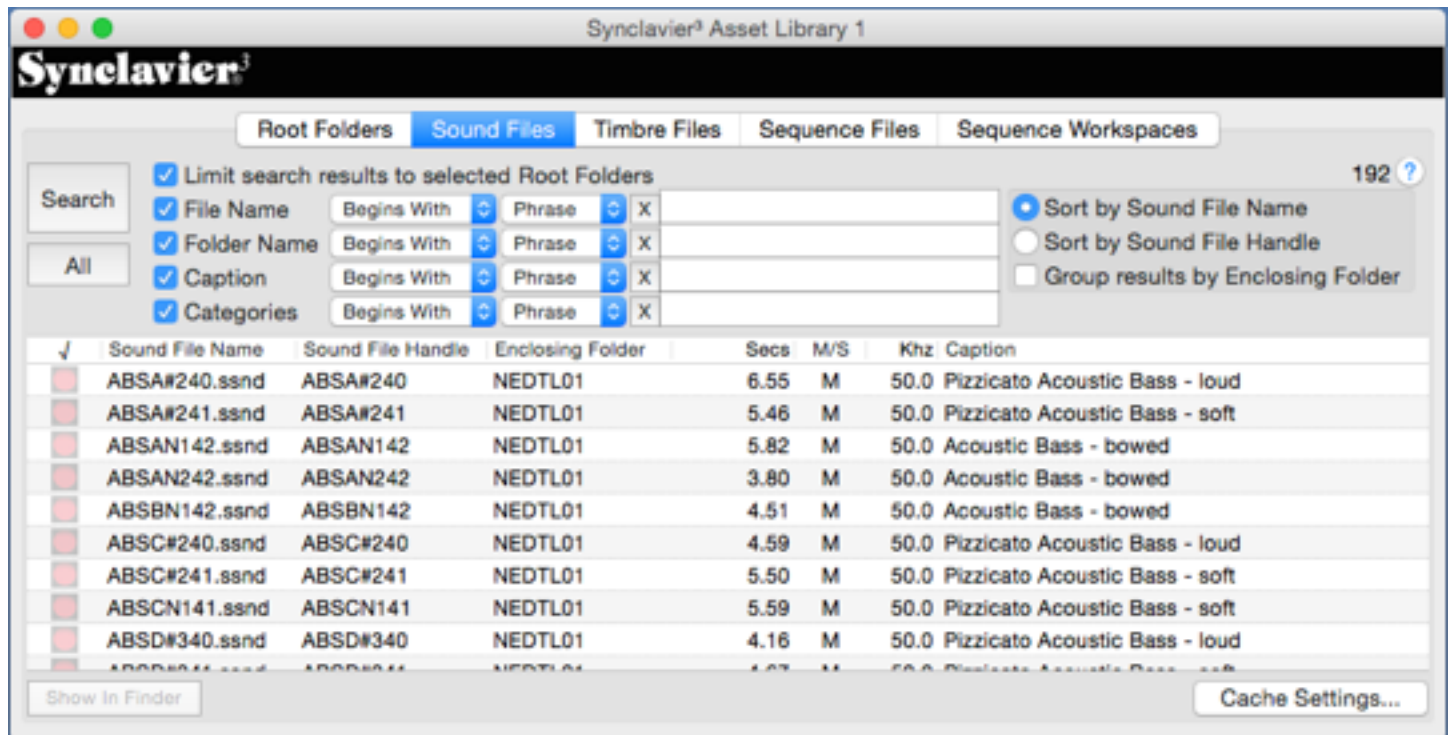


## Sound Files and “Sound File Handles”

All of the sound files in your Asset Library are available on the “Sound Files” tab. Advanced search and sort options are available.

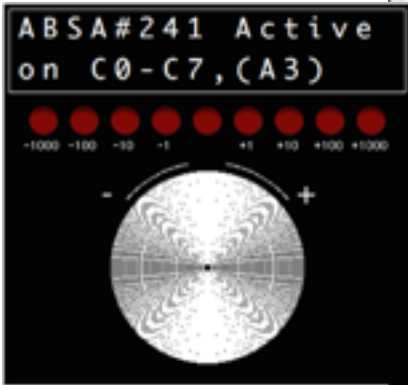
“Sound File Handles” are an important concept. The sound file handle is the 8-character file name that was used to store the file on actual Synclavier® hardware systems. Timbres (“patches”) stored in the timbre files reference specific sound files using their original 8-character name. Similarly, sequence tracks often refer to a sound file by name.

The sound file handle is memorized within the sound file itself when it is imported to your computer. The name of the file on your computer can be changed.



# Calling up a Sound File

Sound files can be directly called up to the keyboard with the  $\sqrt{\phantom{x}}$  button.



If your Asset Library contains sound files in non-Synclavier® formats (AIFF, CAF, WAV) they are converted into 16-bit samples automatically when the sound file is called up; no extra step is required.

Synclavier® Asset Library 1

Synclavier®

Root FoldersSound FilesTimbre FilesSequence FilesSequence Workspaces

Search

Limit search results to selected Root Folders

File Name

Folder Name

Caption

Categories

Begins With

Begins With

Begins With

Begins With

Phrase

Phrase

Phrase

Phrase

X

X

X

X

Sort by Sound File Name

Sort by Sound File Handle

Group results by Enclosing Folder

192 ?

✓	Sound File Name	Sound File Handle	Enclosing Folder	Secs	M/S	KHz	Caption
<input type="checkbox"/>	ABSA#240.ssnd	ABSA#240	NEDTL01	6.55	M	50.0	Pizzicato Acoustic Bass - loud
<input type="checkbox"/>	ABSA#241.ssnd	ABSA#241	NEDTL01	5.46	M	50.0	Pizzicato Acoustic Bass - soft
<input type="checkbox"/>	ABSAN142.ssnd	ABSAN142	NEDTL01	5.82	M	50.0	Acoustic Bass - bowed
<input type="checkbox"/>	ABSAN242.ssnd	ABSAN242	NEDTL01	3.80	M	50.0	Acoustic Bass - bowed
<input type="checkbox"/>	ABSBN142.ssnd	ABSBN142	NEDTL01	4.51	M	50.0	Acoustic Bass - bowed
<input type="checkbox"/>	ABSC#240.ssnd	ABSC#240	NEDTL01	4.59	M	50.0	Pizzicato Acoustic Bass - loud
<input checked="" type="checkbox"/>	ABSC#241.ssnd	ABSC#241	NEDTL01	5.50	M	50.0	Pizzicato Acoustic Bass - soft
<input type="checkbox"/>	ABSCN141.ssnd	ABSCN141	NEDTL01	5.59	M	50.0	Pizzicato Acoustic Bass - soft
<input type="checkbox"/>	ABSD#340.ssnd	ABSD#340	NEDTL01	4.16	M	50.0	Pizzicato Acoustic Bass - loud
<input type="checkbox"/>	ABSD#341.ssnd	ABSD#341	NEDTL01	4.67	M	50.0	Pizzicato Acoustic Bass - soft

Show in FinderCache Settings...

Synclavier® Terminal

| SOUND FILE "PATCH" DISPLAY |

1. Use this screen to create Patch Lists. Press ? for more instructions.  
2. Select Partial Timbre from button panel or by pressing space bar.  
3. Press <CTRL-C> to view directory of Sound Files in Current Catalog.  
<CTRL-E> to enter a different Subcatalog.  
<CTRL-N> to view long file names.  
<RETURN> to view Keyboard Display.  
<ENTER> when done with this screen.

Keyboard Timbre: 1-1-1: "ABSC#241"  
Current Catalog: W0:

Partial # 1:Memory Left: 99.5 Megabytes

File	Start	End	Volume	Transpose	Tuning	Total Length	Loop Length
1. ABSC#241	C0	C7	100.0	(A3)	0.00	0.000 000	0.000 000



## Sound File Contextual Menu

A contextual menu is available by control-clicking or right-clicking on the "Activate" button. This contextual menu is linked to the Sound File Patch Display ("I" Screen) and provides several efficient mechanisms for quickly creating sound file patches.

Additionally, the contextual menu can be used to check and set defaults that are used in many cases when a sound file is called up to the keyboard.

## "Activate" Buttons

*I use the term "Activate" to describe the action that takes place when the red-black-Synclavier®-looking-button-thing is clicked.*

*Activating a sound file simply means calling it up to the keyboard. Each asset type (sound file, timbre file, sequence file, sequence workspace) has a different meaning to the term "Activate"; read on!*

The screenshot shows a software interface with a table of sound files and an open context menu. The table has columns: Sound File Name, Sound File Handle, Enclosing Folder, Secs, M/S, Khz, and C. The context menu is open over the first row, showing options like 'Recall Sound File', 'Add To Partial', and 'Recall To Partial 1-4'. A sub-menu 'Recall To...' is also open, showing 'Timbre' and 'Partial 1-4'. A further sub-menu is open for 'C0-B0', showing a list of partials from C0 to B0.

Sound File Name	Sound File Handle	Enclosing Folder	Secs	M/S	Khz	C
ABSEN142.caf	ABSEN142	NEDTL01	6.55	M	50.0	P
ABSEN242.caf	ABSEN242	NEDTL01	5.45	M	50.0	P
ABSF#142.caf	ABSF#142	NEDTL01	5.82	M	50.0	A
ABSFN240.caf	ABSFN240	NEDTL01	3.80	M	50.0	A
ABSFN241.caf	ABSFN241	NEDTL01	4.50	M	50.0	A
ABSG#140.caf	ABSG#140	NEDTL01	4.59	M	50.0	P
		NEDTL01	5.50	M	50.0	P
		NEDTL01	5.58	M	50.0	P
		NEDTL01			50.0	P
		NEDTL01			50.0	P
		NEDTL01			50.0	A
		NEDTL01			50.0	A
		NEDTL01			50.0	A
		NEDTL01			50.0	A
		NEDTL01			50.0	P
		NEDTL01			50.0	P

Context Menu Options:

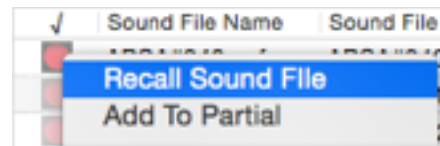
- Recall Sound File
- Add To Partial
- Recall To Partial 1
- Recall To Partial 2
- Recall To Partial 3
- Recall To Partial 4
- Recall To...
  - Timbre
    - C0-C7
    - C0-B0
    - C1-B1
    - C2-B2
    - C3-B3
    - C4-B4
    - C5-B5
    - C6-B6
    - C7
  - Partial 1
  - Partial 2
  - Partial 3
  - Partial 4
- Show In Finder
- Open In External Editor
- Set...

Show In Finder button: Show In Finder

## 4 Uses of the Sound File "Activate" Button

The activate button on the Sound File Tab operates slightly differently depending upon modifier keys (shift and option keys) and which screen of the Real Time Software is displayed. 4 modes are available.

1. Recall Sound File - The basic activate operation erases the keyboard timbre and assigns the sound file to the entire span of the keyboard. Middle A triggers the sound file at its original pitch.



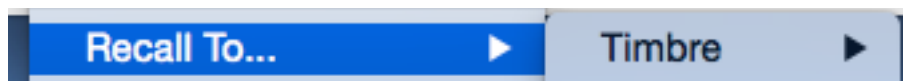
2. If you are on the Sound File Patch Display ("I" Screen) the sound file is

Partial # 1:					
File	Start	End	Volume	Memory Le	Transpose
1. ABSA#241	C0	B0	100.0	G0	
2. ABSAN142	C1	B1	100.0	G1	
3. ABSAN242	C2	B2	100.0	G2	
4. ABSBN142	C3	B3	100.0	G3	

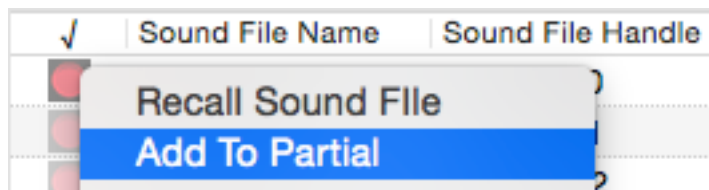
Categories			
Begins With		Ph	
Sound File Name	Sound File Handle	Enck	
ABSA#240.caf	ABSA#240	NED	
Recall Sound File To Partial 1 Line 3			
Add To Partial 1			

called up to the current line. In this case the start and end keys and transpose values are not changed; the file name is merely substituted.

3. If you are holding the option key the most recent "Recall To..." operation is repeated (described below).



4. If your are holding the shift key the sound file s added to the current patch using the most recent recall settings.





## The “Recall To...” Submenu

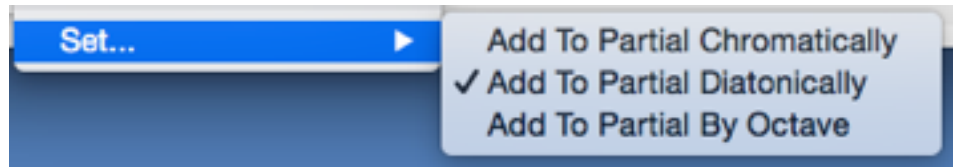
The “**Recall To...**” submenu provides a powerful mechanism for quickly creating sound file patches. For example, a single menu selection can -

- direct the sound file to the entire timbre or just 1 partial; and



- specify the entire keyboard, an octave, or a diatonic or chromatic range.

Additionally, the most recent recall command is memorized. The “**Set...**” submenu both shows and changes the settings.



## The “Add To Partial” Command

“**Add To Partial**” performs context-aware addition of the chosen sound file into the current keyboard timbre. The sound file is appended to the end of the currently-selected partial. The appropriate chromatic, diatonic or by-octave range is chosen.

## Suggested Patch Design Workflow

The implementation of the various Sound File Recall options recommends the following patch design methodology:

1. Begin by using the search and sort functions on the Sound File Tab to identify appropriate sound file candidates for the patch. Use the space bar to turn on audition. Sound files can be auditioned out your computer audio connection with a single click.
2. Use “**Recall To...**” submenu to recall the first sound file to the appropriate range on the keyboard. When the sound file is assigned to an octave, the G is chosen to play back the sound file at its original pitch.
3. If you prefer to work with just the white keys of the keyboard (diatonically), use the **Set...** menu to select **Add To Partial Diatonically**.
4. Then use a **Shift-Click** to add additional sound files to the patch. The sound files will be added up the keyboard using the chosen chromatic, diatonic or by-octave selection. You could also use the arrow keys and **Enter** from the keyboard to activate a sound file (**Enter** recalls the sound file - **Shift-Enter** adds the sound file to the patch).
5. To start over use an **Option-Click** to repeat the **Recall To...** command with a different sound file. The timbre or partial is cleared and the sound file is assigned to the starting range.

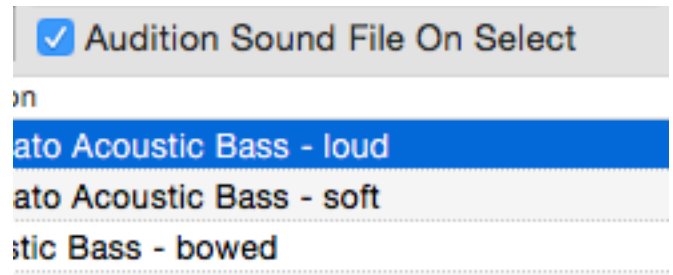
## Sound File Audition

The space bar can be used to start and stop the audition of sound files using your computer's system sound output. Once audition is turned on each sound file is played as soon as it is selected.

Note that "selecting" a sound file is accomplished by clicking in the text columns of the Asset Library Window (Sound File Name, Sound File Handle, etc.).

"Activating" a sound file is accomplished by clicking on the "Synclavier®" button in the left ("√") column.

At this writing the Sound File Tab in the Asset Library Window does not provide for multiple selections.

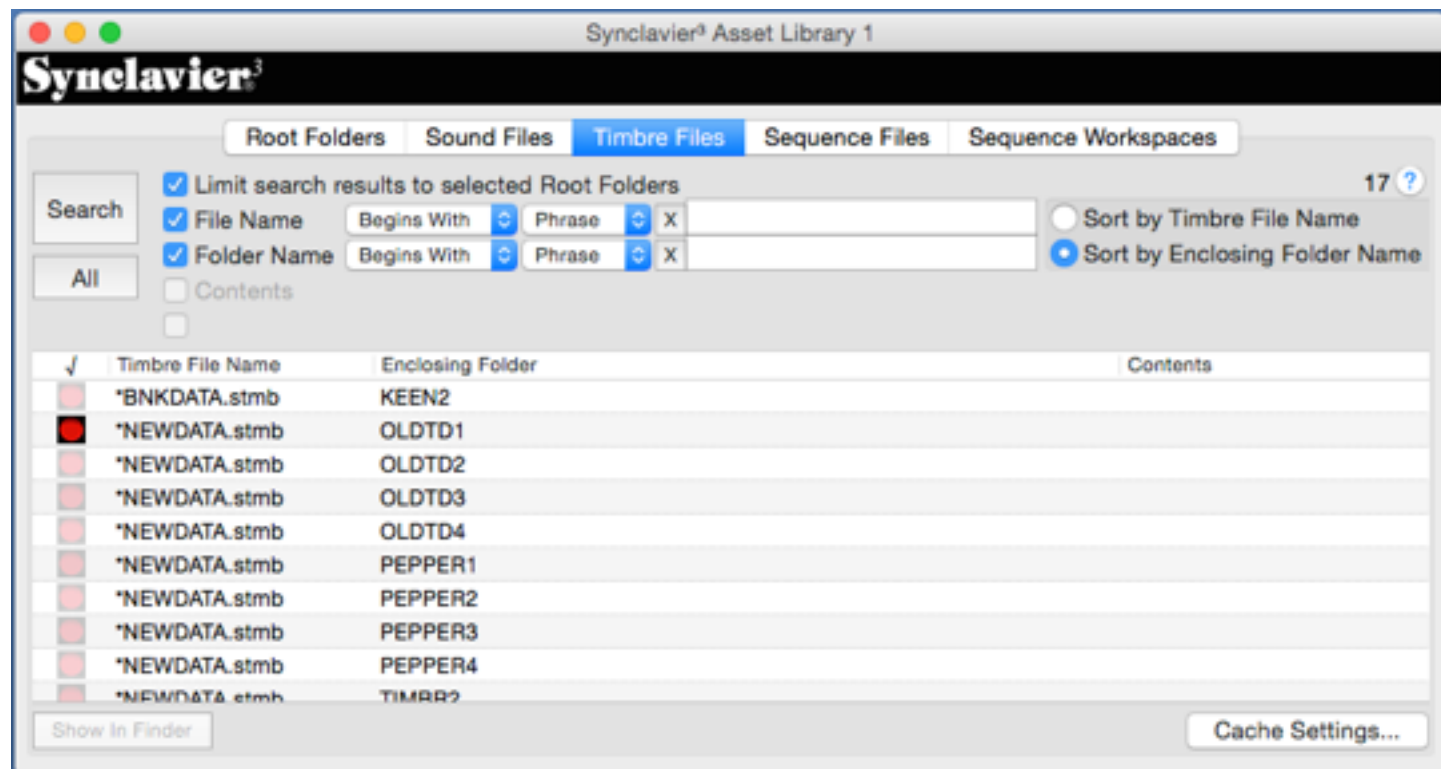


## Timbre Files

Synclavier® timbre files were historically named “.NEWDATA” or “.PATDATA”. Timbre files stored on your computer can have any name but should carry the .stmb file name extension.

The Asset Library automatically finds any timbre files stored in any of the root folders on your computer or network. The Asset Library Window lets you search and sort the timbre file list in many ways.

Using the name of the enclosing folder is perhaps the best way to organize your timbre files if they are all called ‘.NEWDATA’.

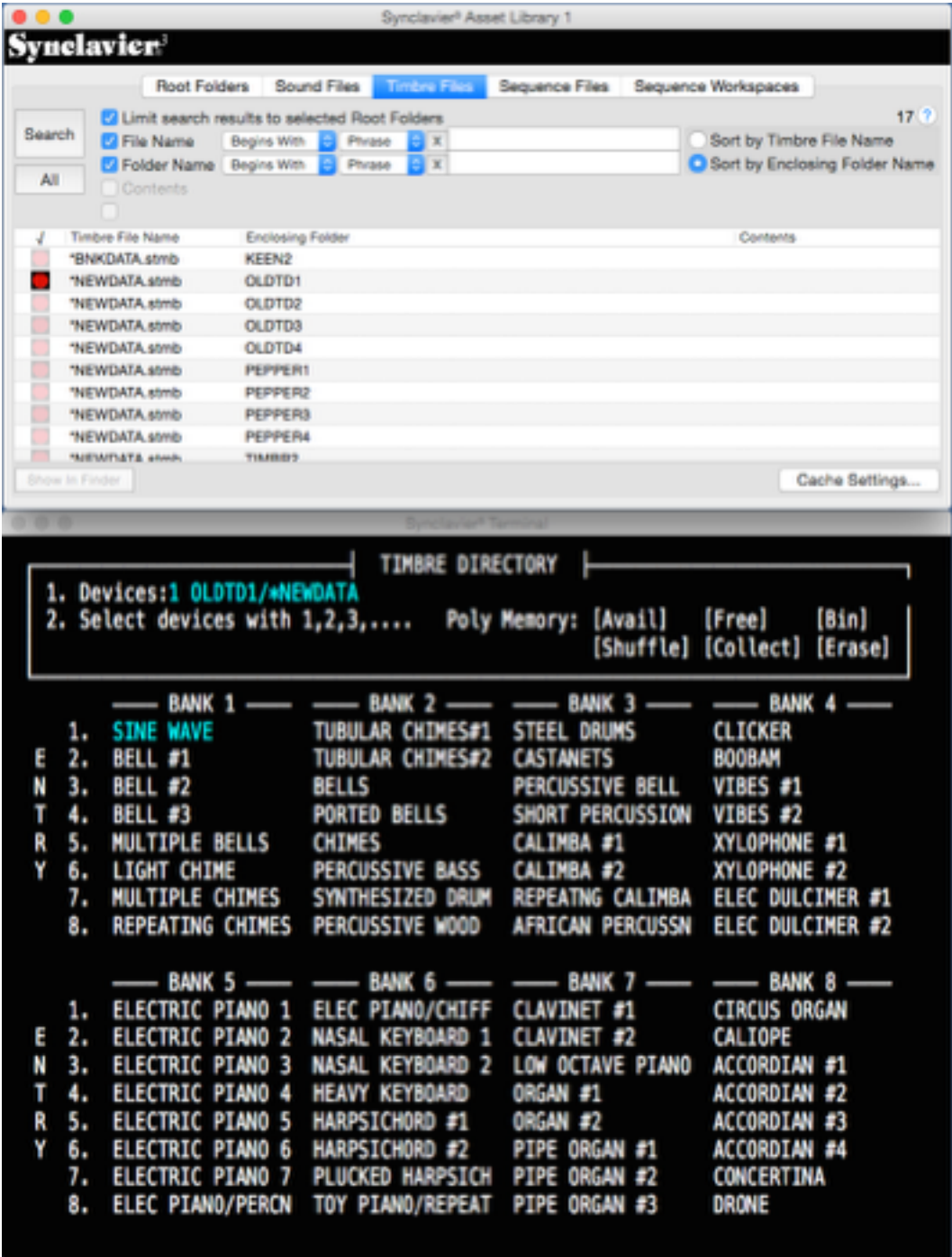


Activating a Timbre File

Timbre files can be activated with the ✓ button.

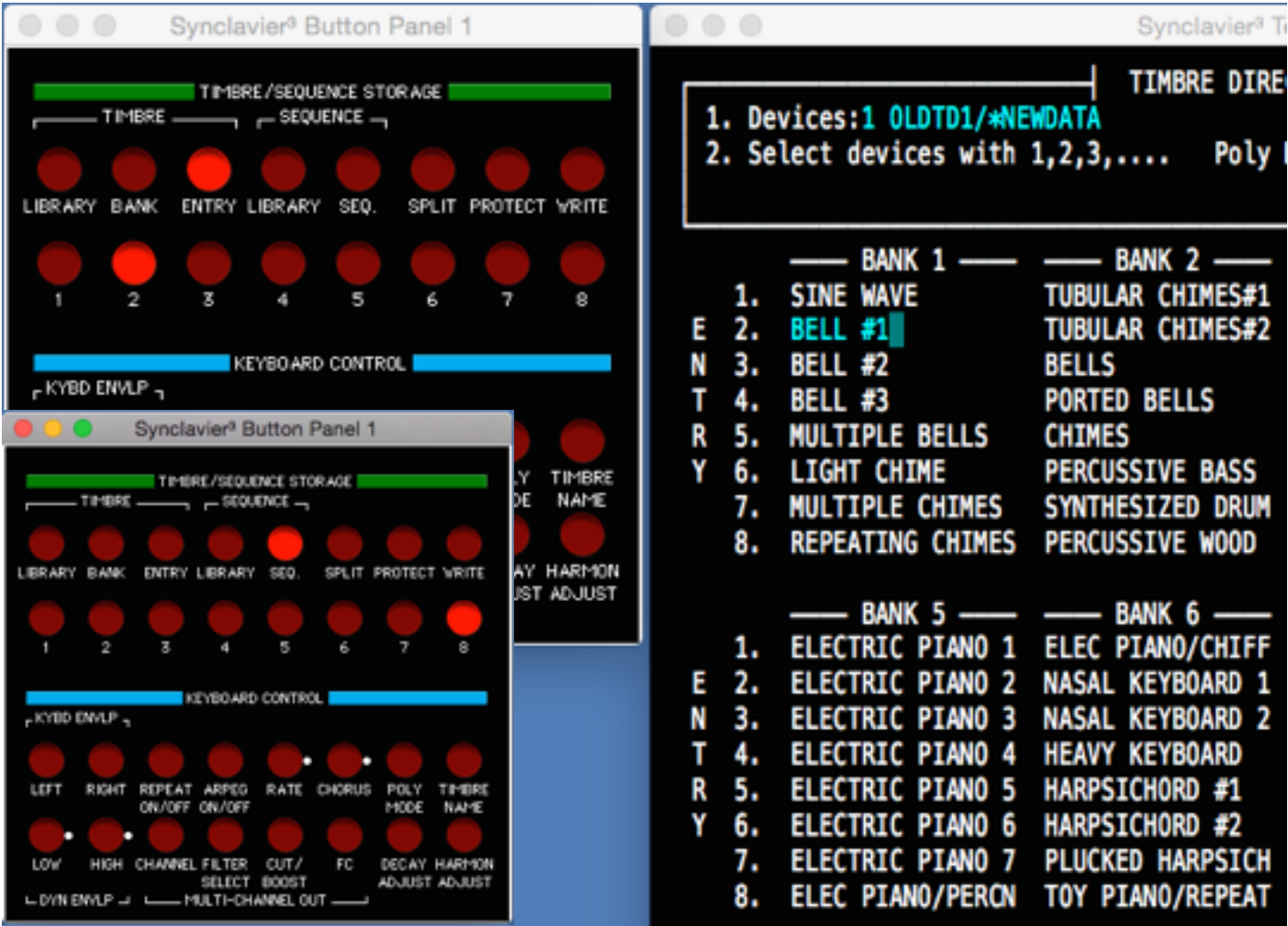
When a timbre file is activated it becomes “linked” to the A screen Timbre Directory.

The Timbre Directory refreshes automatically when a new timbre file is activated.



# Accessing a Timbre File from the Button Panel

The currently-active timbre file can be directly accessed from the bank and entry buttons of the VK.



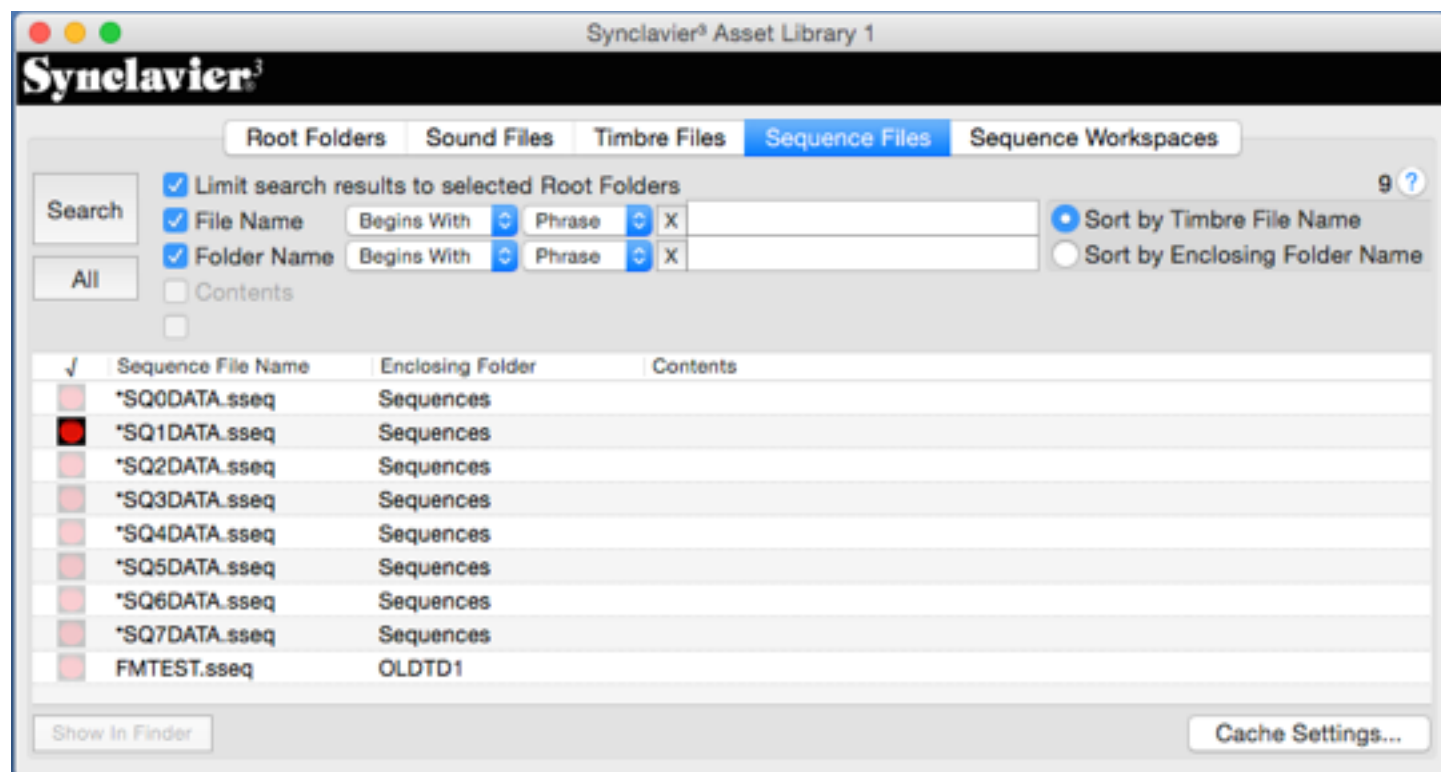
## Sequence Files

Synclavier® sequence files were historically named ".SQ0DATA", ".SQ1DATA", etc. Once the sequence files are imported to your computer they can be renamed at will; the .sseq file name extension should be preserved.

Calling up a sequence is accomplished with the √ button.

### *Calling up a Sequence*

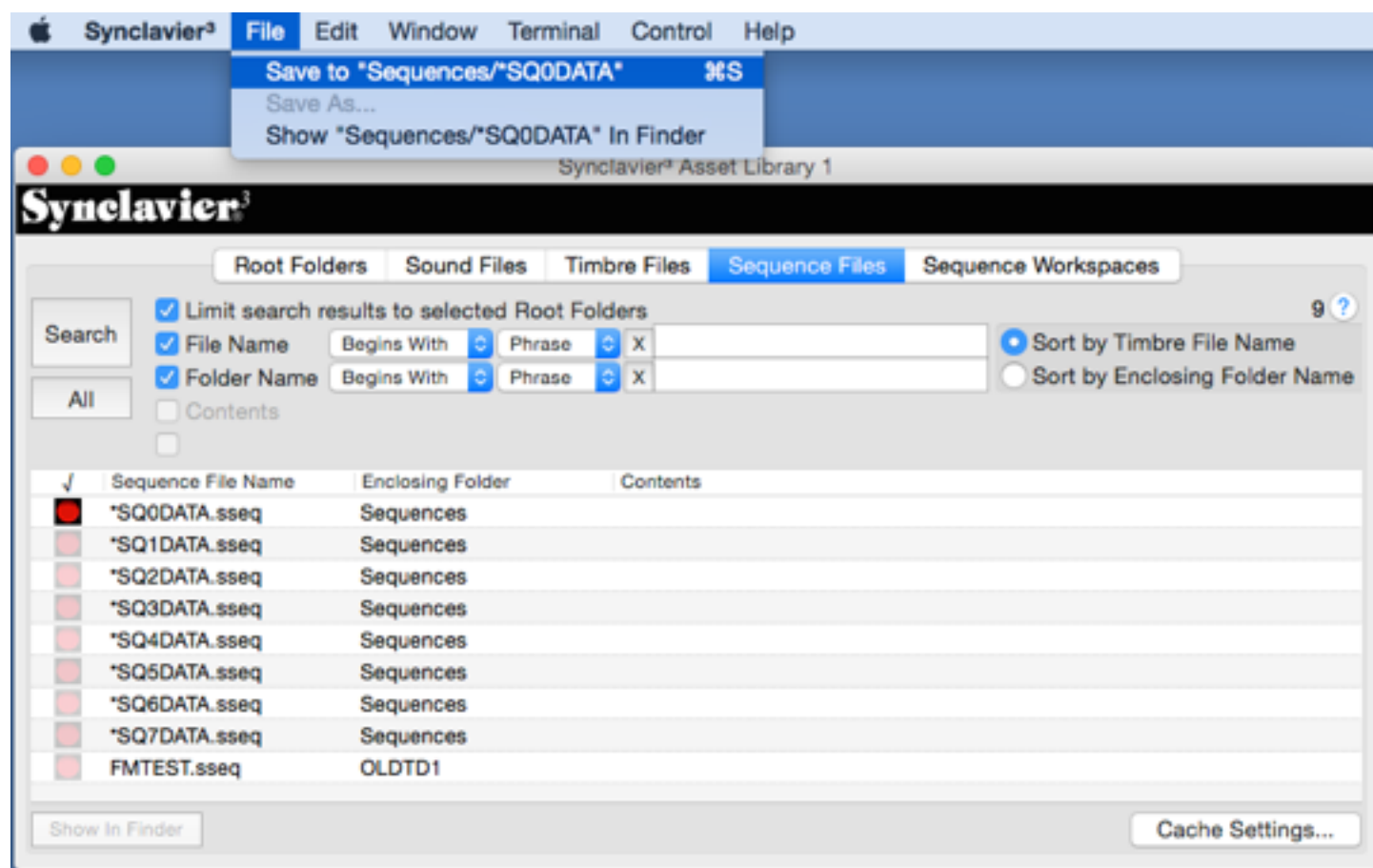
*Clicking on an activate on the Sequence Files tab will immediately call the sequence up into memory. There is no interlock to prevent you from accidentally erasing the sequence that is in memory.*



## Saving a Sequence

Once a sequence has been called up (either from the Asset Library Window or directly from the Button Panel) it may be saved to disk with cmd-S. "Show In Finder" lets you quickly verify which file is being written to.

The "Save As..." menu item is not yet implemented.

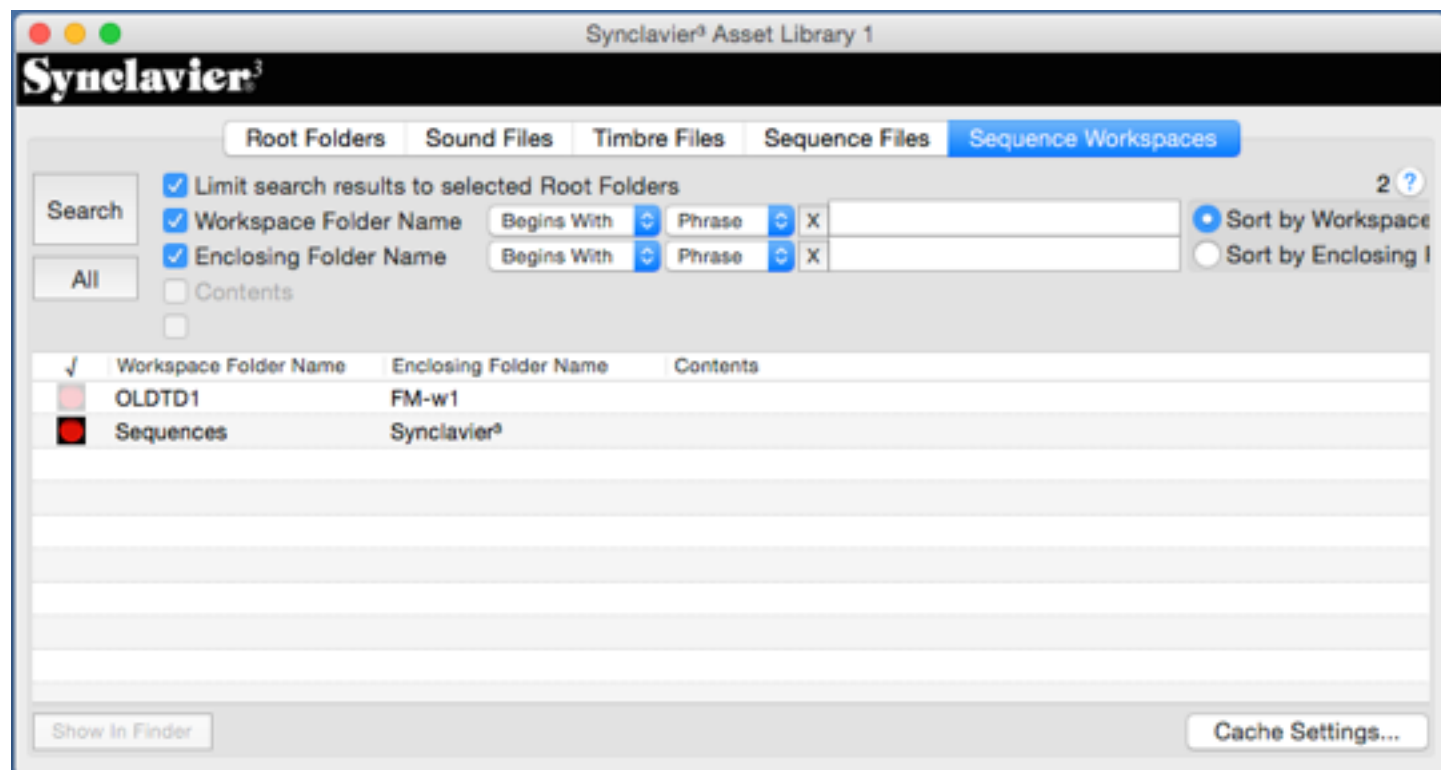




## Sequence Workspaces

A "Sequence Workspace" is a folder on your computer that is used to store Synclavier® sequence files. Sequence files stored in a sequence workspace are directly accessible from the sequence save and recall buttons on the VK.

A Sequence Workspace folder is any folder within your root folder hierarchy that is either A) an empty folder, or B) contains existing sequence files (\*SQ0DATA, \*SQ1DATA, etc..).



The currently-active sequence workspace is automatically linked to the C Screen “Sequence Directory” and also to the button panel.

