

Kaleidoskopy

Exotic Impulse Responses for Electronic Musicians



User's Guide

Version 1.0



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I. Introduction

Thank you for purchasing Kaleidoscopy. This is a unique set of convolution impulse response files that is designed for electronic musicians, as well as any other musician looking to create distinctive sounds. The intent of this collection is to bring the use of IR-based DSP filtering closer to mainstream genres, such as club-oriented music, pop, rock, or even acoustic genres. Because of this, most of the impulse responses in this collection are of relatively short duration.

These impulse responses were made using a variety of digital signal processing techniques, including custom processors proprietary to Spirit Canyon Audio. All impulse responses are royalty-free for use within your music. Please consult the license agreement below for more details.

WARNING: please take care to moderate the output volume when using this or any other convolution product. By its nature, convolution can result in resonances that amplify the source material significantly. Spirit Canyon Audio cannot accept responsibility if you blow some speakers, or worse, your ear drums!

II. License

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- If the product is soundware, any music or sound you produce using this product is, of course, free from licensing or royalty restrictions, so long as the resultant sound is materially different from the original impulse response files used.
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- The product is licensed to the authorized user(s) "AS IS" AND WITHOUT WARRANTIES AS TO PERFORMANCE OF MERCHANTABILITY OR FITNESS OR SUITABILITY FOR ANY PURPOSE, OR ANY OTHER WARRANTIES, WHETHER EXPRESSED OR IMPLIED. The authorized user(s) assume all risk of using the product. If there are issues, the sole remedy is the refund of the license purchase price, to be exercised at my sole discretion.
- This agreement constitutes the final, complete, and exclusive statement of the terms of this agreement between the parties and supersedes all prior and contemporaneous understandings or agreements of the parties.
- Any dispute arising in regard to the terms of this agreement, will be settled in accordance with the law prevailing in the state of Texas, United States of America.
- If any term, provision or condition of this agreement is held by a court of competent jurisdiction to be unlawful, illegal or in violation of law, the parties will confer in an effort to agree upon suitable substitution. It is agreed that the invalidation through operation of law of any provision of this Agreement shall not affect any of the other provisions.
- If any of the terms/conditions mentioned or implied from the above are contrary to local laws where the product may be used or sold, then such local laws might apply.

Please support independent software and soundware vendors, such as Spirit Canyon Audio, by abiding by the terms of this license. Piracy of intellectual property hurts small developers even more than it hurts the big corporation.

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III. Installation

Installation of this product could not be much simpler. You have two main choices:

1. Copy To Hard Drive

Find the location on your hard drive or network drive where you store other impulse response files, and ensure you have at least 700MB free space in that location.

Using the file explorer of your choice, drag/drop the full contents of the CDROM to that location. The contents will thus be copied to your preferred location.

2. Use Directly From CDROM

Alternatively, if you wish to save space on your hard drive, you can use Kaleidoscopy directly from the CDROM. This requires no installation at all.

The only downside to this approach is that most CDROM drives are slower than hard drives, and so loading impulse responses into your convolution engine may be slower using this technique.

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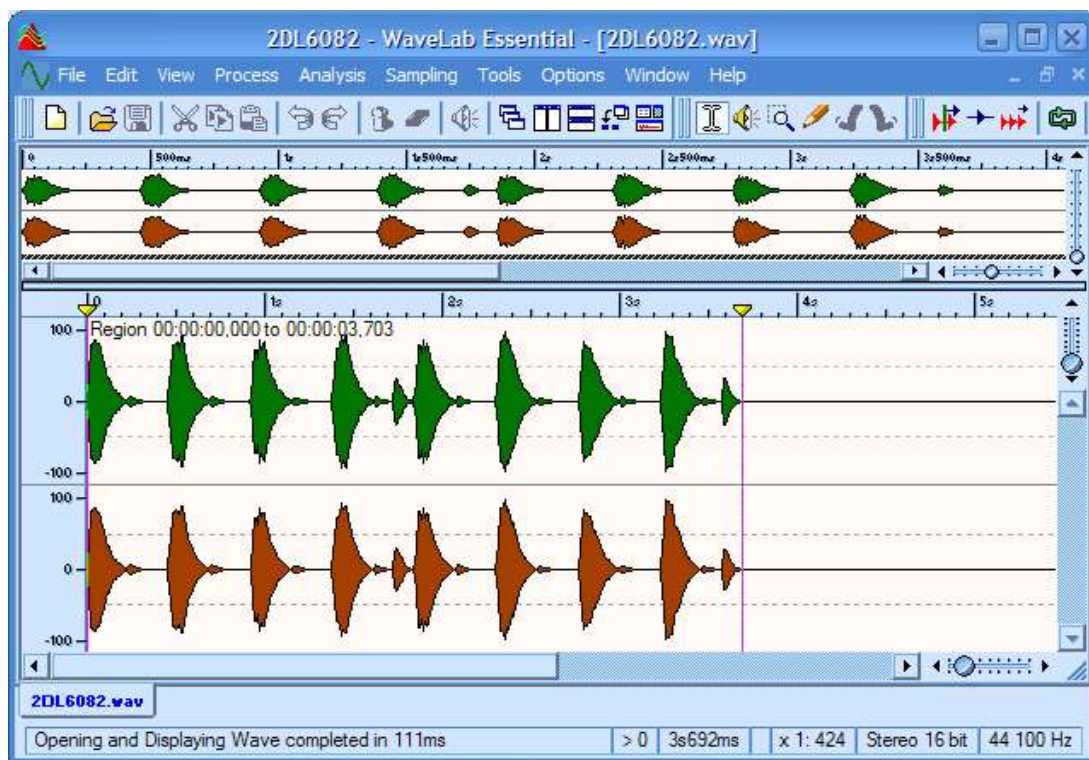
IV. Example Usage

How you use Kaleidoskopy is completely dependent upon the convolution engine of your choice. Please consult the user's manual for that product for details on how to import or use WAV files as impulse responses for convolution. All Kaleidoskopy impulse responses are in stereo 24-bit WAV format, at a constant sample rate of 44.1KHz.

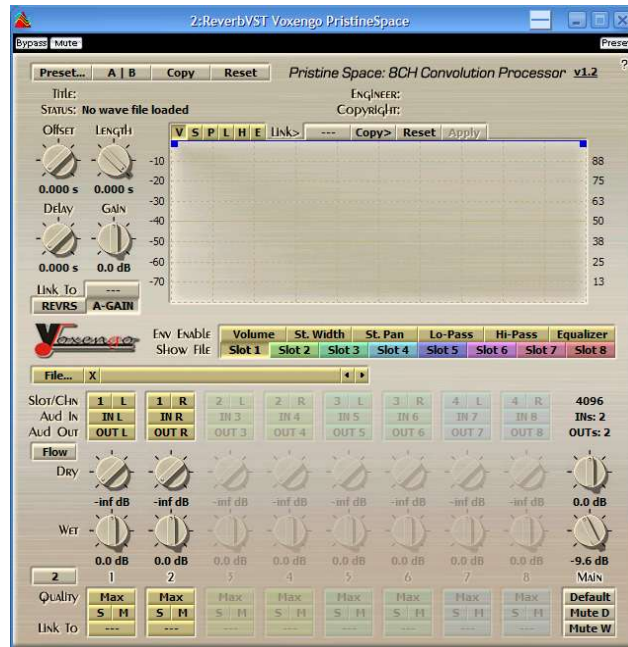
1. For Windows Users

The following example session shows how Kaleidoskopy might be used with Voxengo Pristine Space (a popular commercial convolution engine for the Windows/VST platform), within the Steinberg Wavelab program. This example is provided for customers who may not be familiar with the convolution process.

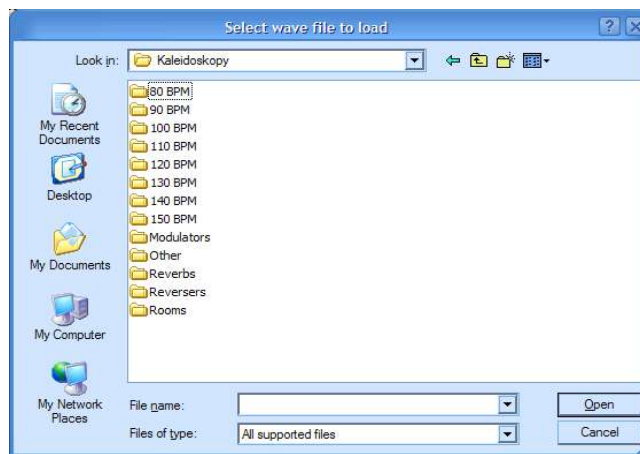
First, load in the sound file that you wish to process:



Next, from the master section choose Voxengo Pristine Space as a VST plugin to apply to this sound file; the effect window will then appear:

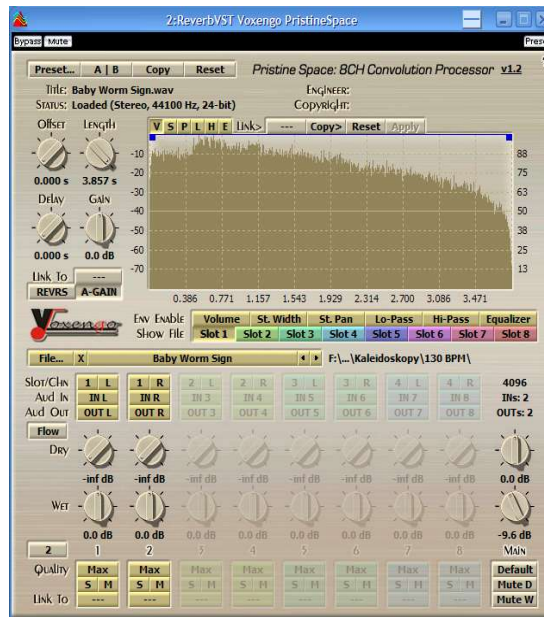


Click the “File...” button in Pristine Space and navigate to the folder or CDROM drive where Kaleidoskopy is located:

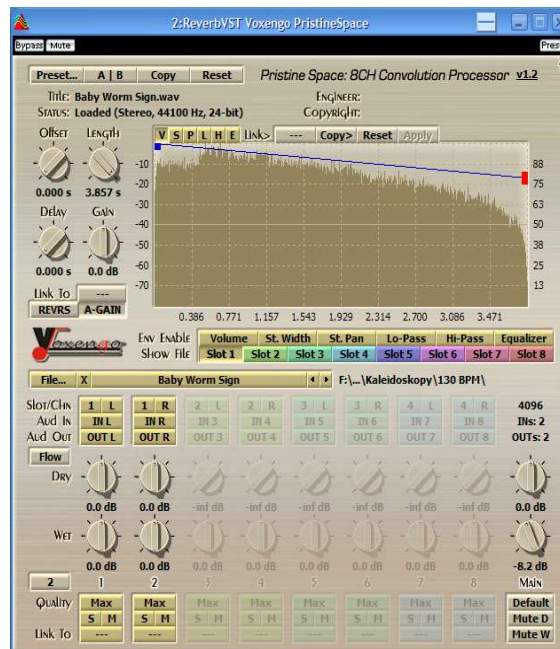


Navigate into one of the Kaleidoskopy folders to choose specific impulse response. In this example, we will navigate into 130 BPM.

Now choose one of the WAV files and press Open:



The impulse response file is thus loaded into Pristine Space. Now adjust the mix parameters to your preferences:

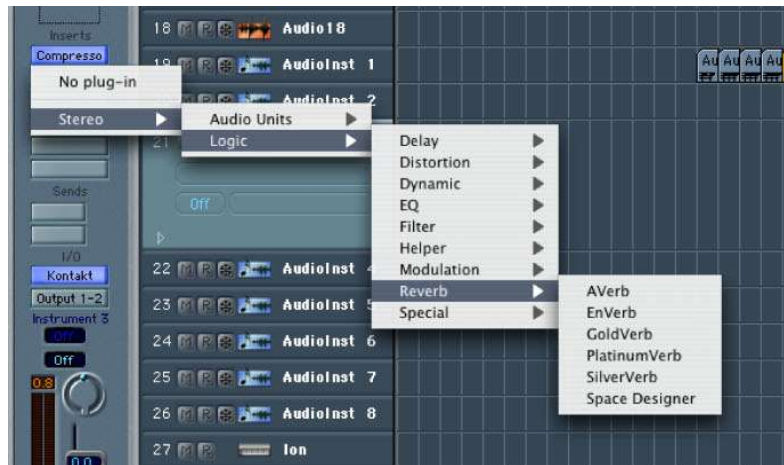


At this point, Pristine Space is ready to process the file in real time.

2. For Macintosh Users

The following example session shows how Kaleidoscopy might be used with Emagic Logic (a popular commercial DAW product for the Macintosh platform). This example is provided for customers who may not be familiar with the convolution process.

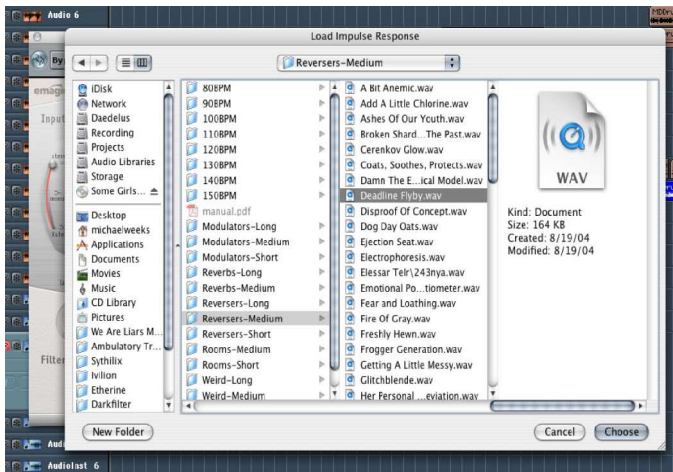
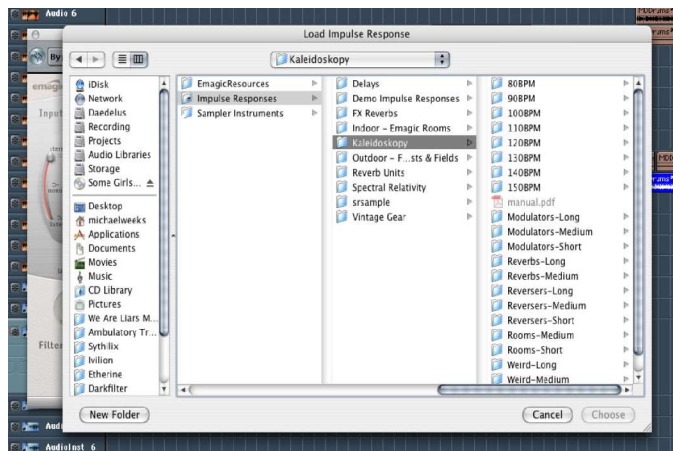
First, load Space Designer, the Emagic Logic convolution engine:



Space Designer will appear on your screen:



Now load an impulse response into Space Designer:



And finally, the Space Designer loads the IR. At this point, you are ready to begin convolving your audio:



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V. Tips

Kaleidoscopy is a set of unique DSP filters that musicians should use however desired to create novel sounds and textures. There is no right way or wrong way to use the library. In fact, even the categorizations of impulse responses should be considered to be broad guidelines. There is no reason to assume, for example, that a particular IR in the Rooms folder won't perform well as a Modulator on some signals.

In addition, some of these tips may be useful:

- **Be careful with the output volume.** By its nature, convolution can cause resonances to occur around specific frequencies that match up in both the source material and the impulse response. These resonances can add volume to a signal, well beyond the maximum volume present. Many convolution engines offer no protection against digital clipping, so it is up to you to ensure the signal volume never exceeds the maximum.
- **The BPM impulse responses are designed to work well with rhythmic music.** If you are working on a track that has a fixed tempo, then use the IRs from the matching BPM folder.
- **Feel free to stretch or shrink the BPM IRs as needed.** If you are working on a song that is, for example, 133 BPM, you may find that the 130 BPM impulse responses are unacceptably out of sync with the tempo. In this situation, simply make a copy of the 130 BPM IR you wish to use and edit it in your favorite audio editor. Most audio editors offer a time stretch/time compression feature. Some convolution engines also allow you to stretch/shrink IRs directly. Don't hesitate to use it to adapt Kaleidoscopy IRs to fit the specific tempo of your songs.
- **Any particular impulse response might affect sound differently depending upon the source material being processed.** Therefore it is difficult to classify impulse responses by what the end result might sound like. If a particular favorite file isn't producing the result it usually does, experiment with others.
- **The shorter the impulse response, the less it will modify the input signal.** For this reason, the one-shot impulse responses are all grouped into Short, Medium, and Long categories. The shorter IRs are useful for less dramatic changes to input signals, and might even be good with the convolution engine set to 100% wet. The longer IRs are useful for “spreading out” an input signal, and typically will be useful when used like a more standard reverb IR; for example, 80% dry, 20% wet.
- **Use your convolution engine's full capabilities.** Most convolution engines nowadays offer such features as IR stretch/shrink, attack/release envelopes, overall volume curves, early fade, simple EQ, etc. If you use these capabilities to the fullest, you may

be able to adapt a Kaleidoscopy IR that is “close but not quite right” for your audio, to be something that is perfectly suited to your purposes.

- **Try stacking impulses.** Particularly in the tempo-synced IRs. Stacking two or more IRs with the same tempo as your song can result in wild rhythmic sequences.
- **Adjust the dry/wet mix creatively.** Sometimes very stunning effects can be made by including varying amounts of the source material in with the convolved output signal.
- **Share your Kaleidoscopy tips.** The Spirit Canyon Audio web site includes an online forum where users can share tips and techniques. Be sure to participate!

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VI. Impulse Response Guide

The following table describes each category of impulse response in the Kaleidoscopy library, along with a high level description of each. Please note, however, that an impulse response by nature can have significantly different results when convolved with differing source material. Therefore, these descriptions are at best a loose guide, and you should feel free to use impulse responses in any particular category for any purpose.

Category	Intended Use	Amount of Smear	Amount of Effect	Description
80 BPM	aux or insert	varies	varies	Tempo-synced impulse responses, intended to be used for processing the audio of the indicated BPM, or of a BPM that is a multiple or a divisor of it. For example, 80 BPM impulses can be used to effectively process 40, 80, 160, or 320 BPM signals.
90 BPM	aux or insert	varies	varies	
100 BPM	aux or insert	varies	varies	
110 BPM	aux or insert	varies	varies	
120 BPM	aux or insert	varies	varies	
130 BPM	aux or insert	varies	varies	
140 BPM	aux or insert	varies	varies	
150 BPM	aux or insert	varies	varies	
Modulators – Short	insert	lighter	lighter	Impulse responses that can be viewed as digital filters.
Modulators – Medium	insert	moderate	moderate	
Modulators – Long	insert	heavier	heavier	
Reverbs – Medium	aux	n/a	moderate tails	Impulse responses that are vaguely reverb-like.
Reverbs – Long	aux	n/a	longer tails	
Reversers – Short	insert	lighter	lighter	Time-bending or time reversing impulse responses.
Reversers – Medium	insert	moderate	moderate	
Reversers – Long	insert	heavier	heavier	
Rooms – Short	aux	n/a	very short tails	Vaguely room-like impulse responses. Similar to reverbs but without such a pronounced tail.
Rooms – Medium	aux	n/a	short tails	
Weird – Short	insert	lighter	lighter	Insert effects, similar to modulators, but with more extreme results. Includes many more pitch shifting effects. Less smear than other weird IRs, but with slightly less modulation.
Weird – Medium	insert	moderate	moderate	
Weird – Long	insert	heavier	heavier	

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VII. Convolution Engines

Nearly all convolution engines support the use of 24-bit 44.1KHz stereo WAV files as impulse responses. Because the music software market changes so quickly, however, you should obtain the most up to date compatibility list here:

<http://www.spiritcanyonaudio.com/convolvers.php>

Note that vendors are free to change their products at any time, so we can assume no responsibility if your favorite product drops support for WAV file impulse responses or introduces a change that causes their product to no longer be compatible.

Also, see the following notes regarding specific convolution engines for tips on how to best use Kaleidoscopy with them:

Convolver	Notes
Audioease Altiverb	To import WAV files into Altiverb, you must first convert all stereo WAV files into L and R Sound Designer II files before they can be used. Most any Mac DAW software should be able to perform this conversion, including Bias Peak, Digital Performer, Logic, etc.
Bias Peak	Some users have reported that WAV files must be converted to AIFF before use in ImpulseVerb. If you encounter problems loading a Kaleidoscopy IR in ImpulseVerb, you should try converting it to AIFF and see if the problem is resolved.
Delaydots SpectrumWorx	SpectrumWorx is fully compatible with Kaleidoscopy. However, be aware that SpectrumWorx processes signals monophonically. SpectrumWorx gives you the option to load the L or the R channel, or a mix of both, whichever gives you the rendering of the IR you prefer.
Prosoniq Rayverb	Rayverb is fully compatible with Kaleidoscopy. However, bear in mind that Rayverb is not technically a convolution engine. Instead, it builds an internal model of an impulse response by analyzing the IR and performing some sophisticated DSP calculations. Therefore, the results you get with a particular Kaleidoscopy IR in Rayverb are likely to be very different than results you would get in a more conventional convolver.
Steinberg Nuendo	The convolution engine included in Nuendo, called Acoustic Stamp, has a 12 second maximum IR limit. While all of Kaleidoscopy will work within this limit, be aware that if you time-stretch any Kaleidoscopy impulse responses it is possible to bump up against this limitation.

Convolver	Notes
Waves IR-1	IR-1 limits impulse responses to a maximum of six seconds, therefore all of Kaleidoskopy will work with IR-1. If you alter or stretch any Kaleidoskopy impulse responses, however, you may bump up against this limit.

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VIII. Support

If you need support for your Spirit Canyon Audio product, please visit the Spirit Canyon Audio home page at:

<http://www.spiritcanyonaudio.com>

Support there may be found in several forms:

- Online FAQs or other Help – some information is available directly from the website regarding the product
- User's Forum – there is a support forum where users can ask questions and receive support from other users
- Contact Form – finally, you can email me directly via the contact form

Direct support is available via email only; sorry, no telephone support is offered. In general, we will try to respond to a support request within one business day (usually much faster), but exceptions may occur. Business days are Monday through Friday, excluding any holidays.

Bottom line: we believe strongly that software and soundware authors should provide good support for their products, and we will support you to the best of our abilities; but we do go on vacation from time to time like everyone else. We want your experience with Spirit Canyon Audio products to be a positive one, and we will do our best to ensure that happens.

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