OrilRiver

algorithmic reverb

License Agreement
and
short user Manual
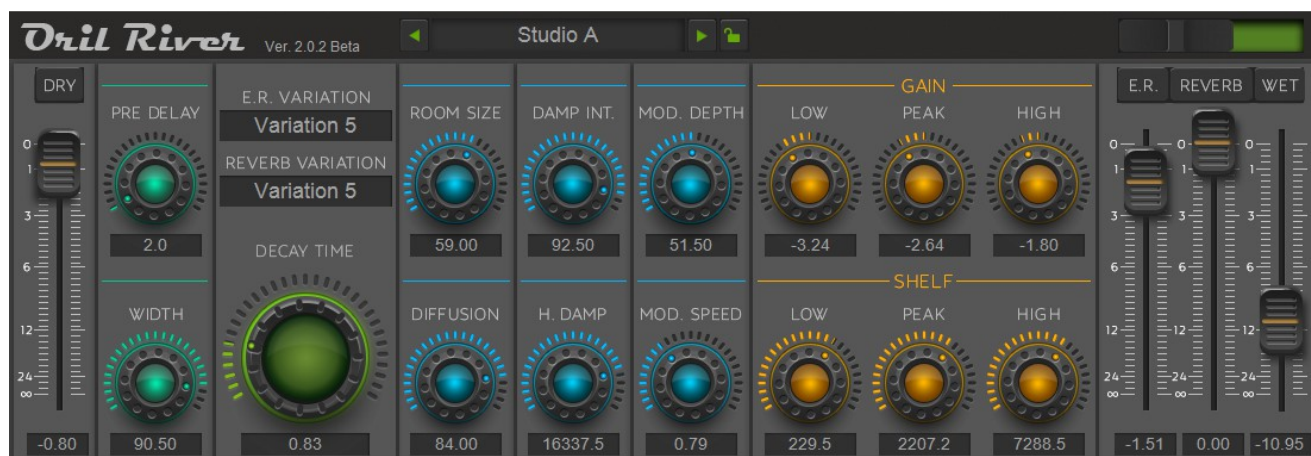
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1. License Agreement.

By downloading or using this software or accompanying documentation you agree to the following terms and conditions.

No Warranties. The plugin "OrilRiver" is provided on an "AS IS" basis and to the maximum extent permitted by applicable law, this material is provided AS IS AND WITH ALL FAULTS, and the authors and developers of this material hereby disclaim all other warranties and conditions, either express, implied or statutory, including, but not limited to, any (if any) implied warranties, duties or conditions of merchantability, of fitness for a particular purpose, of accuracy or completeness of responses, of results, of workmanlike effort, of lack of viruses, and of lack of negligence.

2. Introduction

OrilRiver is a free algorithmic stereo reverb that can rival the quality of commercial reverbs. With this plugin it is possible to simulate the reverberation of a small room and great hall. OrilRiver has an intuitive interface thanks to which the user can quickly adjust the desired reverb sound.

This plugin was developed with using VST3 SDK by Steinberg Media Technologies GmbH and implemented in VST2, VST3 formats. For developing VST2 format was using wrapper that was provided by the VST3 SDK.

Features OrilRiver:
- 12 variations of the early reflections.
- 5 variations of the reverb tail.
- 3-band equalizer for the wet signal, which helps to create different shades of the virtual space.
- Internal signal processing: 64 bit floating point.
- Sample Rate: from 44100 to 192000 Hz.
- Two graphical interfaces.
- Reverb algorithm is written in assembly language (only for Windows).

3. Supported platforms.

- VST2 hosts (32/64 bit)
- VST3 hosts (32/64 bit)
- Mac Intel OSX 10.8 or higher
- Windows 7 (32/64 bit) or higher

4. Item installation

To install OrilRiver VST2 plugin on Microsoft Windows operating system copy OrilRiver.dll file from zip-format setup archive to VstPlugins directory (c:\VstPlugins, c:\Program Files\Steinberg\VstPlugins, or another).

To install OrilRiver VST3 plugin on Microsoft Windows operating system copy OrilRiver.vst3 file from zip-format setup archive to VST3 directory (C:\Program Files\Common Files\VST3, C:\Program Files(x86)\Common Files\VST3).

To install OrilRiver VST2 plugin on Mac OS X operating system just copy OrilRiver.vst directory from zip-format setup archive to /Library/Audio/Plug-Ins/VST directory on system drive.

To install OrilRiver VST3 plugin on Mac OS X operating system copy OrilRiver.vst3 directory from zip-format setup archive to /Library/Audio/Plug-Ins/VST3 directory on system drive.

5. Controllers

OrilRiver has two graphic user interfaces (GUI).

GUI 1 created by Vitaliy Litovchenko:

GUI 2 created by Crimson Merry:

Both interfaces have a similar controller layout, and their description is represented below.

Dry button – turns on /off the dry signal. This parameter allows hearing only the wet signal for more own detailed setup. Also it allows using the OrilRiver like a send FX.

Dry slider - controls output level of dry signal.
Range: from -∞ to 0.0 dB.

Pre delay - determines the amount of time before the reverb begins.
Range: from 0.0 to 200.0 milliseconds.

Width – determinates the amount of the stereo width of the wet signal.
Range: from 0.0 to 100.0 percents.
At the parameter value 0.0% the wet signal sounds in mono, at the parameter value 100.0% as stereo.

E.R Variation – this parameter includes 12 variants of early reflections' emulations. The block of early reflection consists of ten stereo delay lines (ten per channel). Each E.R. variation has a different duration and a different level of the delay lines. These variations were not taken from real premises and only make an imitation of them. For more convenient choice variations, the user can turn off the reverb tail (see Reverb button) and to hear only Early Reflections.

Reverb Variation - this parameter includes 5 variation of reverb tail. Each variation has a different density of the delays networks and has different resonant frequencies. When processing a signal whose spectrum is close to noise (for example drum section, snare, hats), unpleasant resonances may appear. User can change the variation to eliminate resonances. Also note that Variation1, Variation5, is suitable for emulation of small space. Variation 2, Variation 4, is suitable for the medium-sized premises emulation and the Variation 3 for very large premises.

Decay time – this parameter sets decay time of the reverb tail.
Range: from 0.2 to 20.0 seconds.

Room size – sets the size of the selected early reflection variation and reverb variation.
Range: from 0.0 to 100.0 percent.

Diffusion – sets the reverb tail density. Higher values lead to more diffusion and the smoother sound, lower values lead to a cleaner sound of the reverb tail.
Range: from 0.0 to 100.0 percent.

H. damp. – controls the knee of where the high frequency damping begins.
Range: from 4000.0 to 22020.0 Hz.

Damp. int. – controls the intensity of the high frequency damping.
When the value of the controller is set to 0.0 then damping of high frequencies in the reverb tail does not occur.
Range: from 0.0 to 100.0 percent.

Mod. speed – controls the speed modulation of the reverb tail. Here uses the sinus oscillator.
Range: from 0.0 to 20.0 Hz.

Mod. depth – sets the depth of the modulation of the reverb tail.
Range: from 0.0 to 100.0 percent.

Low Freq. shelf– controls the knee of the wet signal low equalization.
Range: from 20.0 to 1000.0 Hz.

Low Gain – Simple gain control of the low shelving EQ.
Range: from -24 to +12 dB. (When equal to –24.0, the filter becomes a High Pass Filter.)

Peak Freq. – controls the peak frequency equalization of the wet signal.
Range: from 30.0 to 22000.0 Hz.

Peak Gain – simple gain control of the peak equalization.
Range: from -24 to +12 dB.

High Freq. shelf – controls the knee of the wet signal high equalization.
Range: from 1000.0 to 22000.0 Hz.

High Gain – simple gain control of the high shelving equalization.
Range: from -24 to +12 dB. (When equal to –24.0, the filter becomes a Low Pass Filter.)

E.R. button – turns on /off the early reflections signal. This parameter allows hearing a signal processing early reflections.

E.R. slider – controls output level of early reflections.
Range: from -∞ to 0.0 dB.

Reverb button – turns on /off the reverb tail signal. The parameter allows hearing a signal processing without the reverb tail.

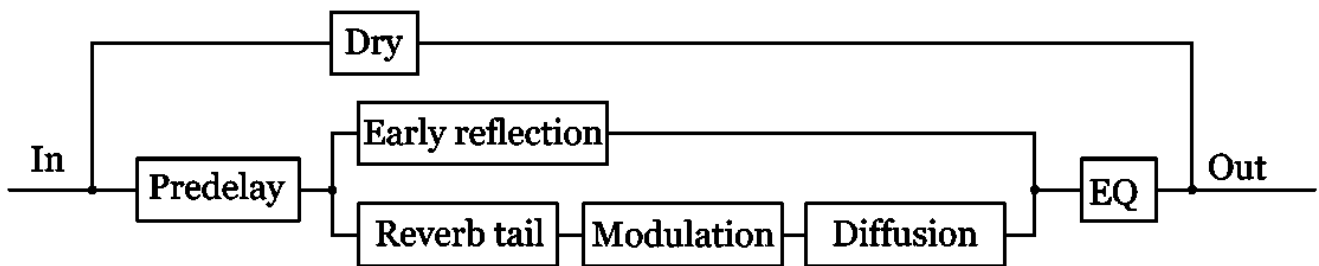**Reverb slider** – controls output level of reverb tail.
Range: from -∞ to 0.0 dB.

Wet button – turns on /off the wet signal. Use this button for hearing difference of the dry signal and signal processing.

WET slider - controls output level of wet signal (early reflections + reverb tail).
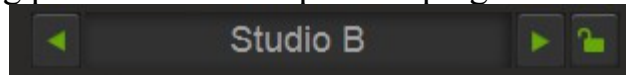Range: from -∞ to 0.0 dB.

6. Audio processing circuitry

7. Switching presets.

OrilRiver has a small number of factory presets, which will help the user to quickly adjust the desired sound.

The panel for switching presets is at the top of the plugin window.

Button that has a lock image is designed to lock the Dry/Wet controllers when switching presets.

8. Switching the GUI

To switch the interface, it is necessary to click the left mouse button on the area located above the section of the equalizer.

When switching the graphic interfaces in the "Documents" system folder the host should create the "OrilRiver" folder with the configuration file that stores the number of the graphical interface. If the host could not create the configuration file so "Documents" folder is protected by administrator for creating the folders and files. About the administrator rights please read in the user's guide your system.