

Using Hybrid Reverb 2 in a VTPO

Overview

Hybrid Reverb 2 is a true stereo convolution reverb that recreates the acoustic space of various rooms and halls. It is simple to use and comes complete with an assortment of presets that are well suited for VTPO use. It is free for home usage and is available for Windows, Mac and Linux users. It can be used for multiple audio channels. The files can be downloaded from:

http://www.kvraudio.com/kvr-developer-challenge/2009/#dc09_27

Convolution reverberation uses wave samples called impulse responses (IR) and process the sound according to the samples of actual rooms. Hybrid Reverb 2 uses four monophonic IRs to create true stereo convolution reverberation. As a bonus, rear channel IRs are included for surround sound.

Requirements

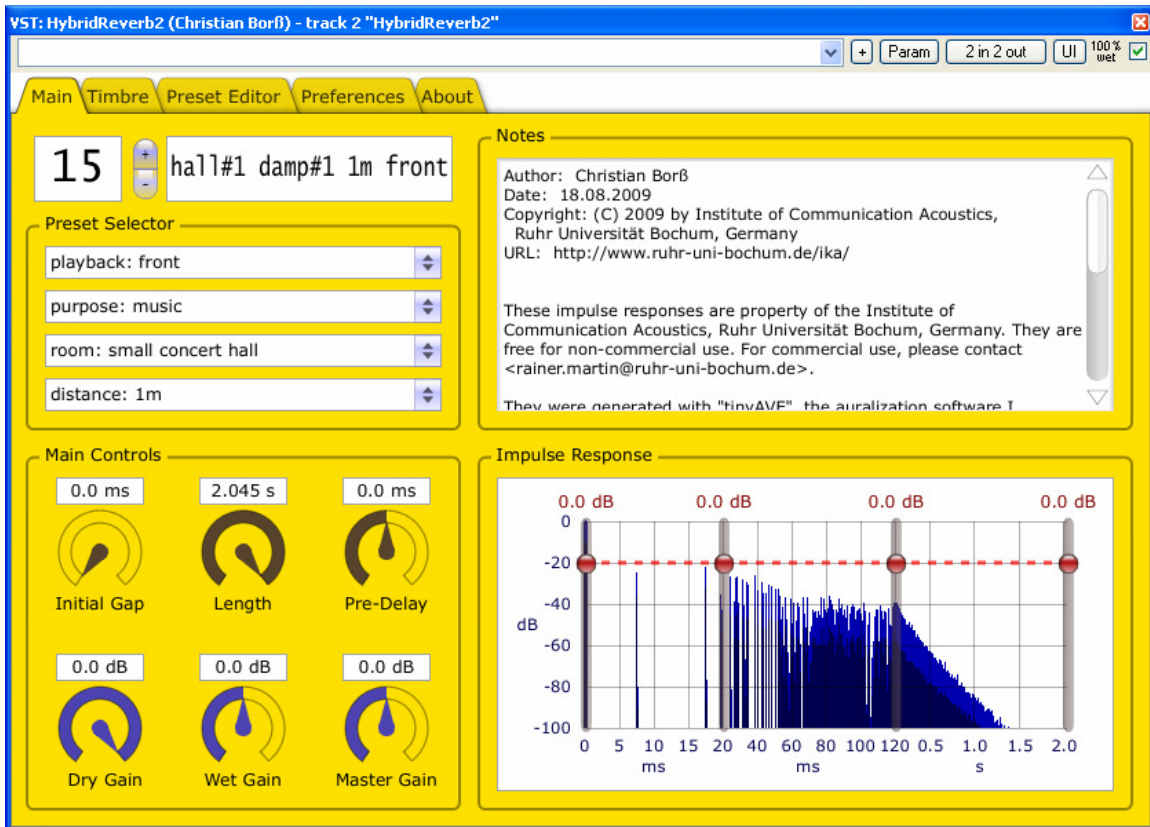
Hybrid Reverb2 is an effect that requires host software. It is not a standalone application. Common Windows host software programs are: Freeware - VSTHost, Reaper. Commercial – Cantabile, Plogue Bidule.

Windows Installation

Click on the downloaded file to install. Use the default folders. An audio system analysis program will also launch. When it is finished scroll scroll down to the bottom to see the latency calculations.

Using the Effect

Using your host software add the effect and open it. You might see two listings. Use either. See note in the MISC section at the end of this document. For multiple channels simply use additional instances set to the same preset. For rear surround channels add another instance, set the playback (see below) to rear and the room the same as the front channel. Route the audio to the rear amps and speaker in the hosting software.



Playback: Click on the double arrow box to select either front or rear.

Purpose: Music is default. Click on the double arrow box to change or restore.

Room: Select the room using the double arrow box. For Paramount series try the Large Concert Hall.

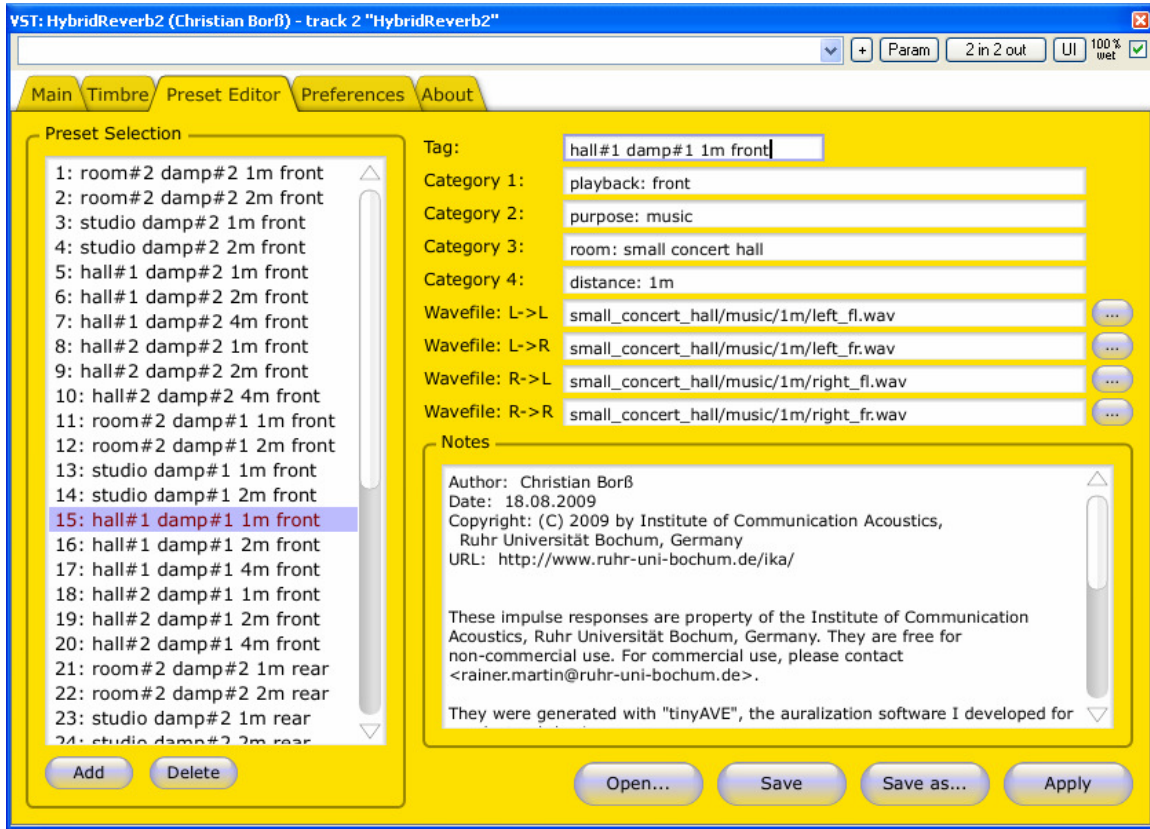
Distance: This is the distance from the audio source, i.e., the chambers in a VTPO, that the mics were placed. For front speakers use 1m or 2m as selected by using the arrow box.

There are 6 rotary controls and 4 red dots on the IR graph that can be altered to finely tailor the sound. This probably won't be necessary. However, if you do alter any of these 10 controls, note that you must release the mouse before you will hear the change. Further, these changes will not be stored unless you manually do it. See the Preset Editor page below. The most often used changes will involve the three Gain controls:

Dry Gain – Adjusts the non-reverberated portion of the “mix”.

Wet Gain – Adjusts the reverberated part of the “mix”.

Master Gain – Adjusts the overall volume output of the effect. Use this to restore the volume to its' proper level.

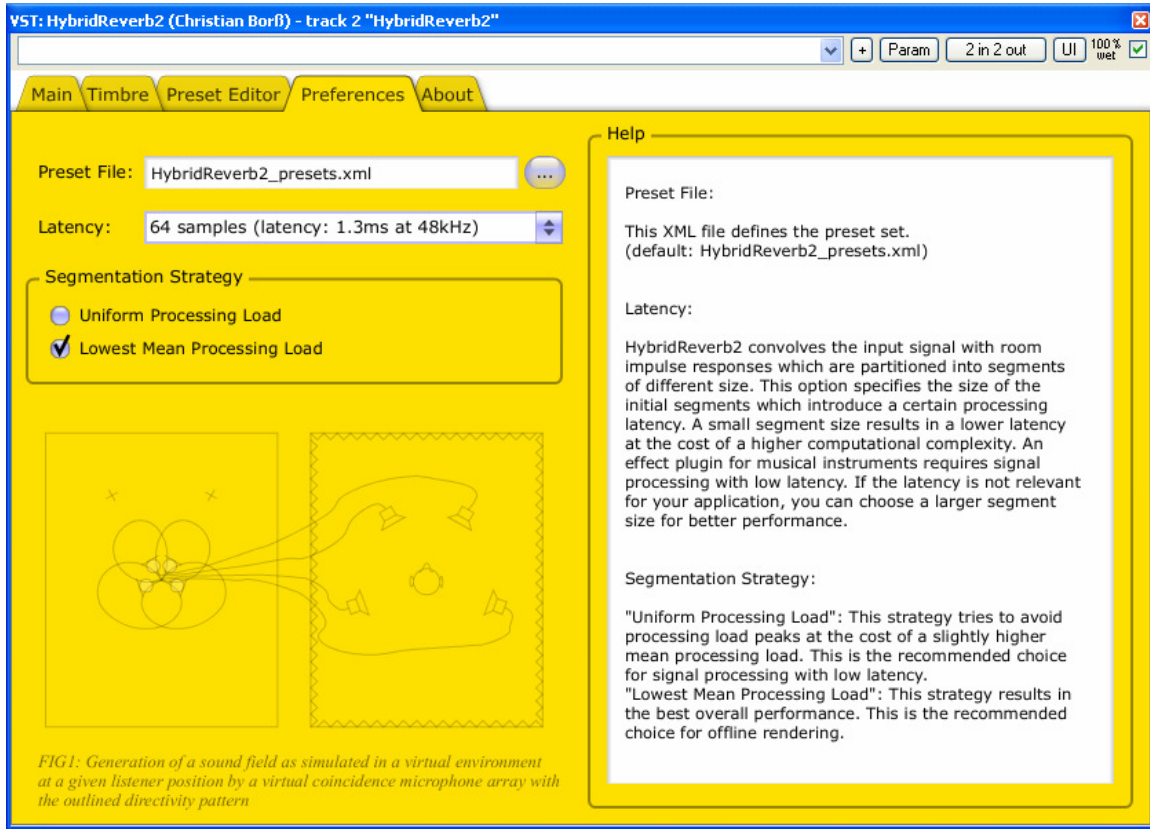


Clicking on a Preset Selection will display on the right side the files in use and the set up associated with that preset number. There are 40 standard presets. The "Add" button allows you to create your own preset using the supplied files or others you might have. The best way to add is to scroll down to the preset labeled "Empty", then click Add.

The other four buttons, i.e, Open, Save, Save As, Apply refer to the complete set of 40 presets. If you click "Save As", you will have the option to make a copy of the current presets. Similarly, clicking on "Open" will allow you to load a different or saved set of presets.

If you make any changes to a preset, i.e., the rotary controls, on the Main screen and want to save them, clicking "Apply"(as in apply the changes) first then "Save" will do that.

Important note: If your host software doesn't automatically save your last used setup and even if it does do this, I recommend that you manually save your configuration. If there is an option to save it as the default, do it, otherwise you'll have to manually re-load each time you boot your system. This is done from the VST/AU, etc., program not Hybrid Reverb2.



Preset File: The default 40 preset master file. If you saved it as a different name and want to use that file select it here.

Latency: If you experience any crackling, increase the latency. I use 128 samples, which is $\frac{1}{4}$ of my ASIO sample rate of 512, a ratio that works. The ASIO setting of 512 purposely introduces a slight delay to simulate that of a real Theatre Organ.

Segmentation Strategy: Set it to Uniform Processing Load.

Misc

There is an additional set of IR samples available. These add some more rooms and longer distances. I have not found better IRs for VTPO than those in the original distribution.

There is an updated version of the program, the .dll file.

"Some users reported loud noise bursts when they switched the preset. The problem should be fixed in HybridReverb2-2.0.3. You can get the latest (Windows only!) version from my web server:

<http://www.borss.name/HybridReverb2/HybridReverb2-2.0.3.dll>

Please give it a try and tell me, if it is working as expected.
To do so, remove the old dlls,

-> c:\Program Files (x86)\Steinberg\Vstplugins\HybridReverb2.dll

-> c:\Program Files (x86)\Steinberg\Vstplugins\HybridReverb2_OpenMP.dll

replace them by the new version, and do a re-scan for new VST plugins in your VST host. "