REFLECT The Algorithmic Reverb



Operation manual

VirSyn Software Synthesizer Harry Gohs

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1 Introduction

1.1 Welcome to REFLECT

Congratulations and thank you for purchasing REFLECT !

Back to the future! REFLECT is an algorithmic reverberation plugin which combines the flexibility of vintage algorithmic reverbs with the sonic quality of convolution based reverbs.

The creation of high quality needs a realistic simulation of the important early reflections together with a smooth and colorless reverberation tail.

The early reflections are the most important clue for the human ear to get a feeling about the dimension and character of a room. Most algorithmic reverbs offer a number of different algorithms to simulate different natural rooms like chamber, halls or artificial ones like plates. REFLECT uses impulse responses from real acoustic spaces and classical reverb algorithms to emulate their acoustical properties.

1.2 Installation PC

For proper operation of REFLECT the PC system requirements are:

- Sentium III/IV, Athlon XP with min. 1GHz
- S Microsoft Windows XP.
- 🖉 min. 512 MB RAM.
- 8 20 MB free space on your hard disk.
- S VST2.4 / RTAS compatible host sequencer.

To install REFLECT, insert the installation CD into your CD-ROM drive. The installation program starts automatically after inserting the CD-ROM. If for some reason it does not do so, you can start the installation program manually by opening the CD-ROM with the explorer and starting "setup.exe". The installation program leads you through the rest of the installation.

For the download version of this product please follow the instructions that are part of the download delivery mail.

This product requires registration on our website <u>www.virsyn.com</u> within 10 days or 20 hours of usage.

INTRODUCTION

1.3 Installation Mac

For proper operation of REFLECT the Mac system requirements are:

- Second States Second States Second Se
- S Mac OS X 10.4 Universal binary
- 🖉 min. 512 MB RAM
- s min. screen resolution 1024X768
- 8 20 MB free space on your hard disk.
- Solution States of AudioUnit compatible host sequencer.

To install REFLECT, insert the installation CD into your CD-ROM drive. Start the installation by double clicking the REFLECT icon. The installation program leads you through the rest of the installation. The Installer will install all versions: VST 2.4, AudioUnit and RTAS version of REFLECT.

Then start the installation program for the copy protection device (dongle) by double clicking the SyncrosoftLicenseControl icon.

This product requires registration on our website <u>www.virsyn.com</u> within 10 days or 20 hours of usage.

1.4 Screen layout

This is REFLECT's main screen shown here for explaining the terms used for each user interface element:



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1.5 Preset management

1.5.1 Browser

The preset browser gives you a structured access to the factory presets and your own room creations. The reverb presets are divided into the following categories:



Ambience

Add space or "air" to instruments or vocals. Mostly without reverberant tail.

Chambers

Classical acoustical chambers for instruments, drums and chamber music.

Halls Real concert halls and large, natural acoustical

spaces. Plates

Simulation of analog metal plate reverbs.

Post production

Various special room types useful for post production.

Rooms Smaller natural acoustical spaces.

Spaces Unnatural large spaces.

The name of the selected preset is shown in the black window above the browser. If you want to save your own creation for later reuse you can change the name here and click on the "Save" button to the right of the preset name.

1.5.2 Preset file locations

The factory and user presets are stored in files with the extension ".fxp" in the following locations:

Mac OS X

Factory presets:

/Library/Application Support/VirSyn Software Synthesizer/REFLECT/Presets

User presets:

/Users/Library/Application Support/VirSyn Software Synthesizer/REFLECT/Presets

Windows

Factory presets:

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User presets:

\Document and Settings\All Users\Application Data\VirSyn Software Synthesizer\REFLECT\Data\Presets

2 REFLECT inside

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- 2.1 Reverb parameters
- 2.1.1 Input section



Input meter

The input meter shows the peak level of the input signal before the Gain control.

Gain

Adjust the gain of the input signal in the range of +/- 20 dB.

Delay

Sets the amount of time that elapses between the direct sound and the reverberation tail. This time correlates with the perceived size of the simulated room. The adjustable range is from 0 ms to 300 ms.

2.1.2 Early reflections

The early reflections are the most important clue for the human ear to get a feeling about the dimension and character of a room. Most algorithmic reverbs offer a number of different algorithms to simulate different natural (chamber, hall, ...) or artificial (plate) room types. REFLECT uses impulse responses from real acoustic spaces and classical reverb algorithms to emulate their acoustical properties.



Load IR

Imports a impulse response file and extracts the early reflection pattern for use in REFLECT.



RealIR

With RealIR set, REFLECT uses convolution for the early reflections instead of resynthesis.

Size

The distance of the single echoes of the early reflections determine the perceived size of the reverberant room. The size parameter modifies the echo distances in the range of 10% to 100%.

Damping

The damping parameter simulates the different absorption of high frequencies by the wall material.

Stereo

Adjusts the stereo image width of the early reflections.

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2.1.3 Tail



Time

The time the reverb takes to die away by 60dB after the end of the initial sound. This parameter correlates with the perceived size of the simulated room. The adjustable range is from 50 ms to 100 seconds.

Size

The room size parameter sets the average distance between the reflecting walls.

Absorption

The Absorption parameter simulates the surface and air absorption of high frequencies. The adjustable range is from 0% to 100%. Due to absorption the reverberation time is shorter for high frequencies than for low frequencies. With higher absorption high frequencies will decay much faster.

Diffusion

The Diffusion parameter controls the echo density of the resulting reverberant sound. The adjustable range is from 0% to 100%. A higher value corresponds to a higher echo density which is in most cases more natural sounding.

Modulation

With the modulation parameter the room size is slightly modified over time. This can help in preventing the build-up of unpleasant resonances. Use this with care – with some sounds, especially long held piano notes, a slight pitch modulation can be audible.

Stereo

Adjusts the stereo image width of the reverberation tail.

2.1.4 Equalizer

The Equalizer controls the frequency content of the early reflections and the reverberation tail and can be used to "colour" a room. It does not filter the direct signal.



LF - Low shelving filter

Low-pass filter with shelving characteristic.

LMF - Low mid peaking band filter

Peaking band filter to enhance or suppress frequency content ranging from 200 Hz to 1 kHz.

HMF - Hi mid peaking filter

Peaking band filter to enhance or suppress frequency content ranging from 1kHz to 8 kHz.

HF – High shelving filter HF

High-pass filter with shelving characteristic.

Bypass

Switches the EQ section off,

Pink

Special filter for darkening the reverberation tail.

2.1.5 Output section



Dry/Wet

Balance between the dry and reverberant part of the output signal. If the "Insert" button is deactivated this control has no effect, the output signal is always 100% wet.

Tail/Early

Balances the relative amount of energy in the reverberant tail and the early reflections. Use high values for ambience reverb types.

Insert

Activate this button if the plugin is used as an insert effect. Then you can control the effect amount with the dry/wet parameter above.