

Reverence User's Guide

Audio Damage, Inc.

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Credits

Software Design and Construction, Documentation

Chris Randall

Adam Schabtach

Field Testing

Wade Alin

Dean Dunakin

Mike Fisher

Kim Gaboury

Steve Hamann

Made Possible By

Tracie Bork

Lisa Randall

Fuzzy Logic

Alex

Chica

Fatty

Pablo

Widget

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Introduction

Thank you for purchasing Reverence, Audio Damage's plate reverb emulation. With Reverence we have created a reverb not intended to reproduce any particular physical space, but to enhance and flatter instruments and voices. Reverence is particularly effective for use with synthesizers, guitars, and vocals.

Reverence was inspired by the digital reverbs of yesteryear, and faithfully recreates their thick, lush sound and their hands-on, easy-to-use front panels. Rather than confusing you with a dizzying array of parameters, we have provided a small but effective range of controls so that you can readily tailor Reverence's carefully tuned sound to fit your music.

System Requirements

To use Discord, you'll need a Steinberg VST-compatible host application which conforms to the VST 2.0 specifications, and a computer capable of running it. For the AudioUnit version of Discord, you'll need an application capable of hosting AudioUnit plug-ins, and a computer capable of running it. The following specifications represent minimum requirements.

For use with Microsoft Windows:

- Windows NT, 2000, or XP
- 512 MB RAM
- Pentium III 600 MHz CPU
- High Color S-VGA Display

For use with Apple Macintosh:

- Mac OS X version 10.3.9 or newer
- 512 MB RAM
- Motorola G4 or Intel CPU
- Display capable of "thousands of colors"

Installation

Double-click the Reverence Installer icon, and follow the instructions. During the installation process the installer will ask you to enter your registration code. Your registration code uniquely identifies your purchase, and you will need it if you need to reinstall your plug-in (for example, after upgrading to a new computer). Keep a copy of the code in a safe location and please don't share it with your friends. We're delighted if you like our products so much that you want to share them, but please ask your friends to buy their own copy so that we can keep making new products.

To un-install from OS X, simply delete the plug-in from your VST folder, which is usually located at `/Library/Audio/Plug-Ins/VST/`, and your AudioUnits folder, which is located at `/Library/Audio/Plug-Ins/Components/`. To un-install from Windows, use the included un-installer application.

Operation

If you've already used a hardware or software reverb, you'll find that Reverence works as you expect. There are no menus or hidden pages; all of the parameters have controls in Reverence's window. The controls use familiar terms, so we encourage you to boot up your host application and start playing. Come back to this manual if you find that you'd like a little explanation for any of Reverence's controls.

Reverence can be used in a mono or stereo context. Like most older (and many newer) hardware reverbs, Reverence sums its input channels before sending the signal through the reverberators. The reverberators create a stereo output signal, even if the input signal is mono. The dry signal is passed through without summing.

Reverence provides a number of presets to help you find settings appropriate for different instruments. These presets are grouped for use as send effects or insert effects, as reflected by the word "Send" or "Insert" at the beginning of their names. Of course you can use a "Send" preset as an insert effect and vice-versa, but you'll want to change the **OUTPUT MIX** slider when you do so.

Below this screenshot are descriptions of each of Reverence's controls.



1. Pre-Delay

The pre-delay simply delays the incoming signal before it reaches the reverberators, and hence how long the reverberant sound will be delayed relative to the dry signal. Typically pre-delay is added to a reverb effect to increase the perceived size of the simulated reverberant space: the bigger the space, the longer it takes the reflected sound to reach the ears of the listener. Pre-delay also has creative applications. If the processed signal is delayed enough, relative to the original signal, it becomes a separate sonic element. This works particularly well with percussive sounds if the **REVERB TIME** is set fairly short.

Reverence's pre-delay has a range of zero to 200msec, or 0.2 seconds.

2. Reverb Time

The **REVERB TIME** knob controls how long it takes for the reverberated sound to fade out. This control has the greatest influence on the overall sound of the effect. The range of this control is 0.1 to 9.9 seconds, which is approximately the amount of time that it takes the reverb sound generated by a full-volume signal to fade to silence.

Long reverb times are associated with large acoustic spaces, e.g., a large concert hall has a longer reverb time than your bathroom. Usually you will not want to combine a long **REVERB TIME** setting with a small **SIZE** setting (see below). You may even find that some combinations of extreme settings will create oddly resonant, feedback-like noises. While most plug-ins will reduce the ranges of parameter values to prevent odd behavior, we at Audio Damage strive to provide creative options to our users rather than limiting their choices for the sake of safety and predictability.

3. Size

The **SIZE** knob varies the apparent size of the simulated acoustic space. Its name is a bit of a misnomer since Reverence is a digital simulation of a plate reverb, and plates can't change size.¹ However, as will be evident when you listen to it, rotating the **SIZE** knob changes the "bigness" of the reverberated sound. The range of this control is 1-99 meters, although this is a somewhat arbitrary scale.

¹ Some plate reverbs do provide a means to physically move the transducers towards or away from the edge of the plate, a process which is in some sense similar to the changes within Reverence's signal-processing code when you adjust its **SIZE** knob.

4. Diffusion

The **DIFFUSION** button controls how much the sound is diffused, or spread apart, as it recirculates in the reverberators. The amount of diffusion is also adjusted automatically by the reverb time control; greater diffusion is inherent in longer reverb times. The **DIFFUSION** button lets you adjust the amount of diffusion to suit your musical context. A higher diffusion setting will usually make the reverberant sound more full or lush.

5. Reverb Time Contour

The **REVERB TIME (RT) CONTOUR** buttons change the frequency response of the reverberators and hence the tonal quality of the reverb tail. The **LOW RT CONTOUR** setting determines whether frequencies below about 1kHz are boosted or attenuated. If the X1 LED is illuminated, the low frequencies are not altered. If the X1.5 LED is illuminated, low frequencies are boosted relative to the overall frequency content of the reverb signal. If the X.5 LED is illuminated, low frequencies are reduced or attenuated. The **HIGH RT CONTOUR** setting works in a similar manner, but operates on frequencies above about 10kHz, and only provides settings for attenuation. Click the **LOW** and **HIGH** buttons to cycle the **RT CONTOUR** LEDs through the different settings.

The **RT CONTOUR** controls let you tailor the sound of the reverb to make it fit tonally with your music. You can also use them to make the reverb less boomy (or more), and less bright and sizzly.

6. Rolloff

The **ROLLOFF** control reduces (or rolls off) high frequencies as they recirculate in the reverberators. Like the **HIGH RT CONTOUR** control, it lets you make the reverberant signal less bright and obtrusive. The low setting produces the greatest reduction of high frequencies. Click the button to cycle the LEDs through the different settings.

7. Level Controls

The **INPUT LEVEL** slider adjusts the amplitude (loudness) of the signal entering the plug-in. You can use it to amplify a weak signal or attenuate a loud one. The slider has a range of -60dB (nearly silent) to +3dB (a mild amount of boost). When the slider is positioned near seven on the printed scale the input signal is passed with unity gain.

The simulated LED meters to the left of the **INPUT LEVEL** slider show the approximate peak levels of the input signal. The meters reflect the level of the signal after it has been attenuated or boosted as determined by the **INPUT LEVEL** slider, so watch them as you adjust this slider. Ideally the loudest signal peaks should cause the 0dB LED to illuminate briefly, and the +3dB LED should never light up.

The **OUTPUT MIX** slider adjusts the relative loudness of the processed signal and the original signal. If you set it at zero, you'll hear only the original, unprocessed signal. If you set it at ten, you'll hear only the reverberation. You can probably guess what happens if you set it somewhere in between, right?

Where you should set the **OUTPUT MIX** slider depends upon how you're using the plug-in within your host program. If you're using it as a send effect, set the slider to ten so that only the processed signal is present in the output since the dry signal is already entering your host's mixer. If you're using it as an insert effect on an instrument channel, usually you'll want to position it approximately in the middle of its range so that you hear more or less equal amounts of the instrument's signal and the reverberation. Let your ears be your guide, as always.

8. Mute Buttons

The **INPUT MUTE** button silences the input signal altogether. It does not silence the reverb tail, if one is present. Use it to temporarily silence the reverb if you're using it as a send effect, or for special effects such as unmuting the input just for certain hits in a drum pattern.

The **REVERB STOP** button silences the reverberated output signal. It does not silence the dry signal. It has applications similar to the input mute button: a handy way to turn the reverb effect on and off, and a means for creating unusual effects.

MIDI Controllers

The VST version of Reverence responds to MIDI continuous controller messages. You can use hardware MIDI controllers, such as MIDI slider boxes or the knobs found on some MIDI keyboards, to adjust Reverence's parameters.

The VST version of Reverence has a simple "MIDI Learn" mode for assigning its knobs to MIDI controllers. To assign a knob to a MIDI controller:

1. Hold down the **SHIFT** and **CTRL** keys on your PC's keyboard, or **SHIFT** and **CMD** keys if you're using a Mac, and click once on the knob. A white box will be drawn around the control to indicate that it is ready to learn which MIDI controller it will be assigned to.
2. Move the MIDI controller to send a continuous controller message—turn the knob, press the button, move the slider, whatever is appropriate.

3. The white square will disappear. Now the knob will move when you manipulate the MIDI controller.

Reverence waits until it has received two consecutive continuous controller messages with the same controller number before it makes an assignment. This filters out extraneous data sent by some MIDI controllers. If you are assigning a button or switch on a MIDI controller, you may have to press or move the switch twice before Reverence recognizes the controller and assigns it to the desired knob.

- To assign a different MIDI controller to a control, repeat the same procedure using a different controller.
- To cancel MIDI Learn mode without assigning a controller, hold down the `SHIFT` and `CTRL` keys (`SHIFT` and `COMMAND` keys on a Mac) and click in any empty area in Reverence's window (i.e., don't click on another control). The white box will disappear.
- To remove a MIDI controller assignment from a control, `SHIFT` and `CTRL` keys, (`SHIFT` and `COMMAND` keys on a Mac) click on the control once so that the white box appears, then click again on the same control.

Reverence's MIDI controller assignments are stored with the plug-in's preset data. If you use MIDI controllers frequently, you may find it helpful to store a template preset that contains the controller assignments that you usually use. Use this template preset as a starting point when making new presets so that you do not have to reassign the MIDI controllers every time.

The AudioUnit version does not provide the same MIDI assignment features as the VST version. Almost all AudioUnit hosts provide their own mechanism for assigning MIDI controllers to parameters, so it would be redundant to implement MIDI controller assignments in the plug-in itself. Consult the documentation for your AudioUnit host to learn how to use its MIDI features.

And Finally...

Thanks again for purchasing Reverence. We make every effort to ensure your satisfaction with our products, and want you to be happy with your purchase. Please write support@audiodamage.com if you have any questions or comments.