RELAB DEVELOPMENT

Sonsig Rev-A

User Manual

SONSIG REV A

English

Legal

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Sonsig Rev-A - MANUAL
Version 1.04

01 Introduction

"It allows anyone to easily and quickly get a specific sound within a very wide range, while maintaining optimal sound quality in any situation. This ease of use, which is made possible by meticulous adjustments of complex algorithms that are made "behind the scenes" is never compromised by limited functionality"

Sonsig Rev-A is the ultimate classic algorithmic reverb of the modern age. By blending the strengths of the high-end reverbs that pioneered the digital age with the strengths of uncompromising, modern processing and design, it achieves unparalleled euphonious sound, versatility, and ease of use.

Rev-A enables a level of accessibility never before seen in a high-end algorithmic reverb. It allows anyone to easily and quickly get a specific sound within a very wide range, while maintaining optimal sound quality in any situation. This ease of use, which is made possible by meticulous adjustments of complex algorithms that are made "behind the scenes" is never compromised by limited functionality - A vast range of distinct reverb characters, along with unique, true in-reverb ensemble chorus, Freeze, and Tilt EQ functions, are what makes Rev-A a great-sounding, user-friendly reverb unlike any other.

Rev-A's vivid, stompbox-style user interface lays out all of the reverb's features logically. There are no hidden settings or menu diving necessary. All of the available parameters' current settings are visible right in front of you, which results in an intuitive workflow with quicker and better adjustments.

Rev-A includes an array of high quality presets that covers a wide range of musical and sound design applications. You will find recognizable sounds with a quality that you have yet to experience, sounds that place you within real and unreal spaces with a new level of lucidity, and sounds that redefine the meaning of "lush reverb".

This Manual

This manual covers the essential information you need to install and operate your Sonsig Rev-A plugin, but also delves into subsidiary subjects, with general discussion and advice to help you get the best out of the plugin:

» **Reverberation:** What is reverb? How do reverbs work, and what features do different reverbs possess?

» **Sonsig Rev-A Interface:** of the Sonsig Rev-A interface, including an explanation of the parameters.

02 Installation

Download

You can download the latest build of Sonsig Rev-A Reverb from the Relab website, at https://relabdevelopment.com. The file you download is a simple ZIP file containing the setup program file, which is all you need.

Installation

You will need to visit Relab website at https://relabdevelopment.com if you have not already done so, in order to get a demo key.

You will also need to register the iLok account if you have not already done so, and install the iLok License Manager on any computer you want to use the plugin on. Once you have installed the License Manager:

iLok: Demo activation

Use this procedure to get a 10-day FREE trial license of the Sonsig Rev-A plugin.

1: Log into your iLok account
2: Click on the “Redeem key”
3: Enter the following key: 9162-6163-5011-3601-6813-6970-5732-75
4: Activate the new key to your machine or an iLok key
5: Download and install the Sonsig Rev-A plugin

Mac - Supports	
Sonsig Rev-A	VST/AU/AAX (32-bit, 64-bit)

PC - Supports	
Sonsig Rev-A	VST/AAX (32-bit, 64-bit)

Mac - Requirements	
Sonsig Rev-A	OS X (10.9 or higher), Intel processor, 1024MB, Any VST, AU or AAX compatible host application, iLok account and the latest Pace drivers (no iLok usb key is needed)

PC - Requirements	
Sonsig Rev-A	Windows Vista or higher, Core 2 or higher, 1024MB, Any VST or AAX compatible host application, iLok account and the latest Pace drivers (no iLok usb key is needed)

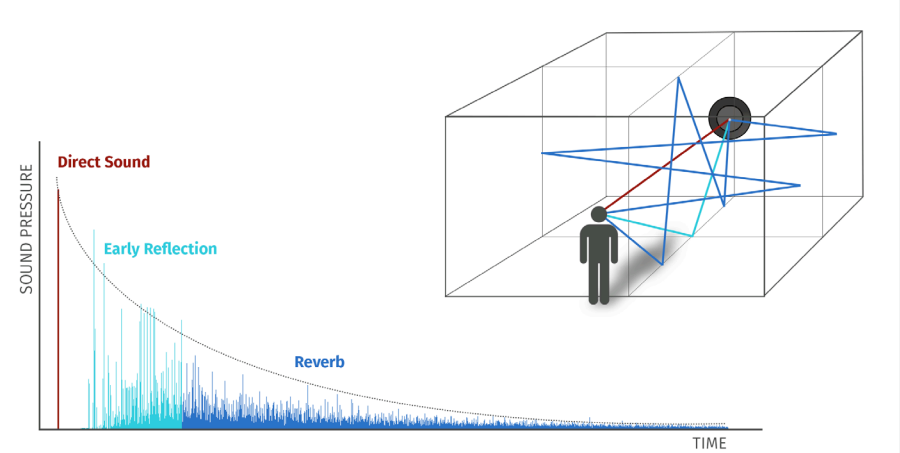
03 Reverberation

"Humans are very adept at deducing information about the surroundings of a sound source by listening to its reverberation, and the qualities of reverberation (or reverb as it is more commonly known) form an intrinsic part of our appreciation of sound and music."

While reverb may have begun life as a means of simulating the sound reflections of an actual acoustic space, it quickly gained a broader brief as a creative tool. Why? Because its effects are wide-ranging:

» **Blending:** to various degrees, enabling different sound sources to sit well together (and possibly to be placed in specific spatial relationships with each other).
» **Creating space:** changing or adding ambient space to whatever the original recordings were made with.
» **Spread:** In most cases, spreading instruments across the mix, and possibly widening as well.
» **Sustain:** Filling gaps to increase sustain, but also adjusting the tonal properties of the reverberation (and the sustain) to artistic effect.

This section covers some general principles of reverb, along with a little bit of the history, to place in context the use to which reverb can be put.



Visual representation of how reverb is formed during a sound's path to a listener's ears

Natural ambience

Natural reverberation is present everywhere there is sound, with the very particular exception of an anechoic chamber. Reverberation is formed of the decaying echoes of sound. The sound that reaches a listener's ears – say, the sound of a handclap – will be a combination of the sound that travels direct to them, along with echoes from nearby or far-away surfaces, echoes of those echoes, and so on until their energy has decayed to zero.

The character of these echoes will depend upon the positioning and reflective qualities of these surfaces, as well as on the frequency content of the original sound. The medium through which the sound travels – most commonly air – also has an effect on the nature of the sound reaching the listener (air will absorb high-frequency noise). More particularly, reverberation is the term for the "halo" of echoes that are perceived as a unified whole by humans, rather than as distinct, individual echoes.

Humans are very adept at deducing information about the surroundings of a sound source by listening to its reverberation, and the qualities of reverberation (or reverb as it is more commonly known) form an intrinsic part of our appreciation of sound and music. Over time humanity has developed its design of interior spaces partly in response to the reverberative qualities of shapes, surfaces and building materials, from the Neolithic chambered cairn of Maes Howe to the most modern concert hall design.

Artificial ambience

"The "two-dimensional" behaviour of a plate produced a more realistic result than spring reverb, with a dense, smooth tone that was more musically useful, and became particularly widely used on vocals and drums."

The arrival of sound recording brought with it a specific difficulty regarding reverb. Not only were early microphones, recording media and loudspeakers limited in their frequency response, the whole process also telescoped down the natural reverb cues, leading to a distinctive "recorded" quality that was very far from the natural "live" sound. As recording techniques evolved to include multi-tracking, isolation booths and entirely electronic sound sources, a great need arose for techniques that would enable the sense of acoustic space to be added to a recording in which it was now partially or entirely missing.

Chambers

Initial efforts to capture reverb focused on providing good-sounding spaces in which to record music, and these techniques have developed and are still in use today:

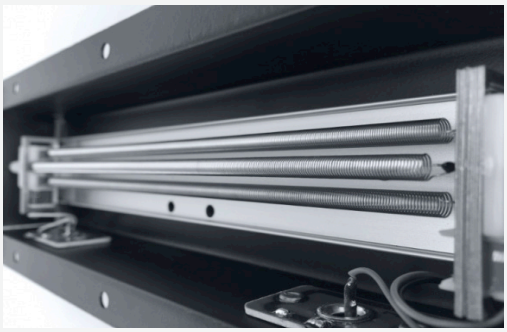
» re-recording a signal played back through loudspeakers in a different space to the one in which it was recorded
» recording instruments using multiple mic positions to allow ambience to be mixed in using various methods
» using tailor-made recording spaces, from drum rooms to concert halls to Hollywood recording stages, combined with multiple mic positions.

Clearly, such techniques require access to suitable spaces to record in, and lack flexibility.

Springs

The first electromechanical solution to the reverb problem was conceived in the 1930s, developed in the 1940s and became a staple of guitar and organ amps in the 1960s and 70s.

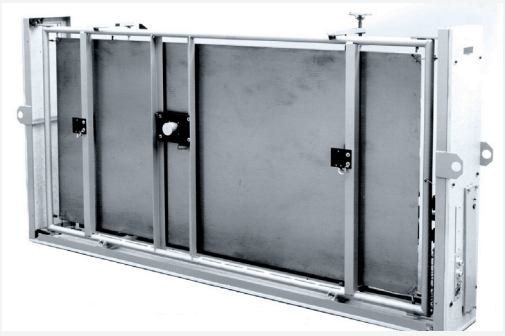
It employed transducers and springs to simulate the bouncing of reflected sound between two facing surfaces. Although such devices were theoretically "one-dimensional", the inherent complexities of the materials involved led to a distinctive, complex sound, though not a particularly natural reverb, especially when fed with transient-rich material.



Plates

Plate reverbs were first produced in the 1950s by the German manufacturer, EMT. Plate reverb units also used transducers to physically alter sound, in this case by passing it through a metal plate suspended in a box, rather than through a set of springs.

The "two-dimensional" behaviour of a plate produced a more realistic result than spring reverb, with a dense, smooth tone that was more musically useful, and became particularly widely used on vocals and drums. However, plate reverbs, though less expensive than purpose-building a recording space, were still large, cumbersome items, and the amount of adjustment to the sound that was possible was limited to adjusting the dampening on the plate.



Digital reverb simulations

The first attempts to use digital signal processing to provide a reverb system date back to the 1960s, but it took till 1976 for the first digital reverb to reach the market, partly because of the complexity of the theory that needed to be solved, but largely because of the limitations, in terms of both performance and cost, of early DSP chips.

Algorithmic

The earliest units, such as the EMT 250, employed relatively uncomplicated algorithms with a limited number of parameters for sculpting the effect, such as pre-delay and delay time, though they betrayed their more all-purpose nature by offering other effects besides reverb. As processing power increased, the level of complexity of the algorithms employed increased greatly, as did the number of editable parameters, and digital reverb units became capable of enormously flexible and subtle audio manipulation.

Lexicon 480L

TC System 6000

EMT 250

Convolution

Another method of creating digital reverberation was also being considered in the 1970s, but at that time the processing power was not available to put into action: convolution. This involves taking a “snapshot” of an acoustic space by recording a carefully defined sound being played in it.

This snapshot can then be analyzed, removing the original “impulse” sound to produce an impulse response (IR). The IR is then used to process an audio signal by a process known as convolution. The result is often remarkably natural, although it can often be altered very little compared to an algorithmic reverb. Convolution can be a good solution for certain areas of post-production, but its inflexibility can make it less helpful in a mixing situation.

04 Sonsig Rev-A Interface

Interface TIP -
Interface can be resized - click on top right Sonsig logo and switch between three sizes.

This is the “stompbox-style” interface of the plugin, and provides access to all reverb parameters. Interface lays out all of the reverb's parameters logically. The interface contain following parameters:

- » TIME
- » FREEZE
- » SIZE
- » CHARACTER
- » ENSEMBLE
- » PREDELAY
- » BRIGTHNESS
- » HI DECAY
- » DIFFUSION
- » TILT
- » LOW TILT
- » IN
- » OUT
- » Render Mode (QRS, 224, Rev-A)

Details of the operation of these controls are given in the sections below. The dials all respond to up-down dragging to change their values. Switches can be moved left or right. Screen above VU input and output meters is used to display selected parameter values. LED glowing selectors can be set to ON/OFF.

Controls

Interface TIP -
The small button above the Predelay knob allows to synchronize the predelay time to the project's tempo.

Time, Freeze and Size

TIME

This is the time it takes for the reverb's sound to decay by 60 decibels.

The minimum and maximum time vary depending on the currently selected Size parameter.

SIZE

This is the size of the virtual listening space.

Rev-A has 10 reverb sizes.

Each size is clearly bigger or smaller than the adjacent size, and has distinct attributes.

FREEZE

This button allows to freeze the last fragment of reverberation indefinitely, until the button is released. The frozen reverberation is a unique, dynamic snapshot, with a constant volume and an uncompromised reverberant sound.

Character

This parameter controls the build-up of the reverb sound.

Character 1 has a rapid, natural build-up.

Character 2 has a slower build-up with an accentuated, enveloping sound.

Character 3 has a clearly audible, gradual, slow build-up.

These 3 characters allow for a very wide range of reverb sounds.

Ensemble

This is an ensemble effect that originates from within the core structure that makes up the reverb effect. It modulates the pitch of the incoming sound, with a depth that increases throughout the duration of the reverb.

Being a true, in-reverb effect, it can add richness to the sound without compromising the reverb's spaciousness or clarity. At level "0" the Ensemble effect is off. At levels 1 to 5, it's on, and at levels 6 to 10, it's on with an additional modulation stage that creates an even more distinct sound.

Predelay (with Tempo Sync button), Brightness and Hi Decay

PREDELAY - This is the time between the input signal and the start of the reverb sound. Rev-A provides a predelay time range from 0 to 800 milliseconds.

TEMPO SYNC - The small button above the Predelay knob allows to synchronize the predelay time to the project's tempo, with a time signature based on full, triplet or dotted beats. Presets are saved with both the normal and tempo sync modes' predelay values.

BRIGHTNESS - This parameter adjusts the audio frequency at which a static low-pass filter is applied. It has an important role in simulating the properties of different listening spaces. Rev-A's high quality processing ensures that at level 10, the reverb's sound is pellucid, with high frequencies unattenuated.

HI DECAY - This parameter simulates the natural phenomena of more rapid absorption of the high frequency components in a reverb's sound. Lower levels allow a quicker decay of high frequencies, and higher levels allow a slower decay. Rev-A's high quality processing ensures optimal sound quality with each setting, and at level 10, it eliminates any perceptible absorption of high frequencies throughout the entire duration of the reverb.

Diffusion, Tilt and Low Tilt

DIFFUSION - This knob controls the density of the reverb effect. When set to 0, the diffusion is off. When the diffusion is off or set to a low level, the reverberation can sound sparse and the individual echoes that make up the reverb effect may be perceptible. At higher levels, the reverberation can sound denser or smoother, and individual echoes are imperceptible.

TILT - This knob tilts the reverb's entire frequency response around a central frequency point, without impacting the definition of the reverb's sound. Negative values make the sound darker and positive values make it brighter. It allows to tune the reverb's sound to match the natural properties of different types of spaces, or the character of a specific sound source or mix. The exceptional processing quality ensures that the sound remains natural and clear.

LOW TILT - This knob controls the reverb's low frequency response. Positive values attenuate the low frequencies in a limpid, natural manner, and negative values extend the duration of the decay of the reverb's low frequency components. This allows to simulate the reverb characteristics of natural spaces, as well as adjust the reverb to better blend with the sound source or within a mix. For example, a positive value may be used to tune the reverb to unobtrusively blend with a vocal sound, and a negative value may be used to simulate the longer decay of low frequencies in a large hall.

Controls

Interface TIP -
Double-click the Time, Predelay, Width, In and Out values in the LCD to manually type in an exact value.

Width and Dry-Wet (Blend Mix)

WIDTH

This parameter adjusts the stereo width of the reverb sound. At 100%, the reverb's sound completely surrounds the listener and has an even balance between perceptible width and depth.

Rev-A is capable of creating an extremely euphonious, exceptional quality stereo image. Since Rev-A does not employ any external process that artificially widens the stereo image, it sounds natural and unfatiguing at any Width level, and lower levels allow a greater sensation of depth in the reverb without reducing its sound quality.

BLEND (MIX)

This parameter adjusts the volume of the input ("dry") signal and the effected ("wet") signal in relation to each other.

The "Dry" and "Wet" settings have no signal blend. When Rev-A is used as a Send effect, the level should be set to "Wet" and the Blend parameter should be locked. See "Parameter Lock" section.

Parameter Lock

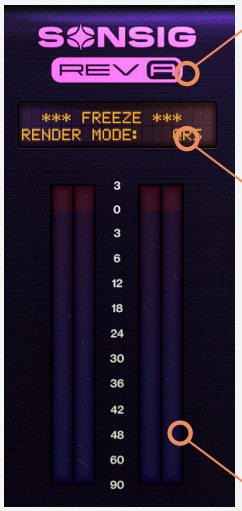
HOW TO USE "PARAMETER LOCK" FUNCTION

Clicking on a parameter's name changes the text's color from white to orange and allows to lock the parameter's current setting, so that when a different preset is loaded, the locked parameter's setting stays the same regardless of the setting that the preset was saved with.

For example, when the plugin is used as a send effect, it's especially useful to lock the Blend parameter to the "Wet" setting, because mixing the dry sound in a send effect, as opposed to an insert effect, is usually unwanted.

Locking Tilt and Low Tilt may be useful to maintain a desired frequency response, and locking other parameters could also be useful in specific cases. However, note that the included presets' specific settings greatly depend on each other to produce the intended result, so locking any parameter other than Blend is not generally recommended.

Sonsig logo, VU meters, In /Out, and Render Mode (QRS, 224, Rev-A)



SONSIG LOGO

Clicking on the Sonsig logo brings up a menu that allows to choose between 3 graphical user interface sizes, and displays the plugin's version number.

In case resizing doesn't happen automatically, simply close and re-open the the GUI

LCD

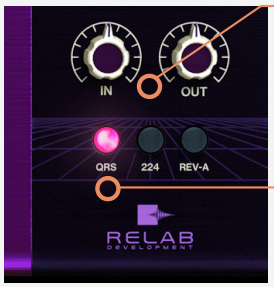
The LCD panel displays the current Time value in the top column. The bottom column displays either the Predelay, Width, Blend, In, Out, or Render Mode value.

Pointing the mouse cursor at one of those parameters switches the current displayed value.

It's possible to double-click the Time, Predelay, Width, In and Out values in the LCD to manually type in an exact value.

VU METERS

The input and output volume unit meters have a range of -90dB to +3dB.



IN / OUT

The In knob adjusts the level of the dry, input audio signal. The Out knob adjusts the level of the processed, output audio signal.

It's possible to reset the In or Out knob's setting to 0dB by double-clicking it.

RENDER MODE (QRS, 224, Rev-A)

These three render modes apply different processing accuracy and filtering, changing the reverb's overall character.

The **QRS** mode has a low-fi, desirable character with a steep high frequency cutoff.

The **224** mode has a characteristic spaciousness and texture, and a relatively mild high frequency cutoff.

The **Rev-A** mode has pristine sound, with no processes influencing the reverb's spaciousness or frequency response.

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