# Table of Contents

1 **Installation** .................................................................................................................. 3
   1.1 *Installation on Windows* ......................................................................................... 3
   1.2 *Installation on macOS* ......................................................................................... 3
   1.3 *License Activation* ............................................................................................... 3

2 **Backwards Compatibility** ............................................................................................ 4
   2.1 *Reverberate 1/2/3 Session Compatibility Notes* .................................................... 4
   2.2 *Users Upgrading From Reverberate 1, 2, Core, Beat and CM* ................................. 4
   2.3 *Users Upgrading From Reverberate LE* .................................................................. 4

3 **Plug-in Overview** .......................................................................................................... 5
   3.1 *General Layout* ....................................................................................................... 5
   3.2 *Parameter Locks* .................................................................................................... 6
   3.3 *Interactive Assistance* .......................................................................................... 6
   3.4 *Panel Selection* ...................................................................................................... 6

4 **Reverberation** .............................................................................................................. 7
   4.1 *Reverb Topology* .................................................................................................... 7
   4.2 *Loading Impulse Responses* .................................................................................. 8
   4.3 *Reverb Editing Tabs* ............................................................................................. 11
   4.4 *Reverb 1 and Reverb 2 Selection* .......................................................................... 16

5 **Mix** ................................................................................................................................ 16

6 **Routing** ........................................................................................................................ 18

7 **Effects** ........................................................................................................................... 18
   7.1 *Equaliser* .............................................................................................................. 18
   7.2 *Delay* .................................................................................................................... 21
   7.3 *Chorus* .................................................................................................................. 22

8 **Preset Selection** ............................................................................................................ 23
   8.1 *Bank and Preset Browser* ..................................................................................... 23
   8.2 *Bank Creation* ........................................................................................................ 24
   8.3 *Bank and Preset Quick Access* .............................................................................. 24
   8.4 *Preset Selection Automation* ................................................................................ 24

9 **Settings** ......................................................................................................................... 26
   9.1 *Files* ..................................................................................................................... 26
   9.2 *Interface Scale* ...................................................................................................... 27
1 Installation

To install Reverberate an Intel Mac or Windows PC DAW is required. 64-bit DAWs are required. The plug-in is not compatible with 32-bit DAWs.

1.1 Installation on Windows

The install process will request a number of file locations and the type of plug-in you wish to install (VST for most hosts or AAX for Pro-Tools). Select the plug-in formats required.

If you included a VST2 plug-in in your selection(s) you will be asked where those plug-ins should be installed. Typically Windows VST plug-ins are installed in one of the following locations although many options are available so you should select which is most suitable for your system such as:

c:\Program Files\Steinberg\Vstplug-ins

c:\Program Files\Common Files\VST2

AAX and VST3 plug-ins are stored in standard locations, so there is no need for the installer to ask where they should be installed to.

1.2 Installation on macOS

Run the installer progress through it until asked which plug-in formats to install.

If you would like to use your impulse responses from an alternative location, after installation of the plug-in and an expansion packs please move the LiquidSons folder at /Library/Audio/Impulse Responses/LiquidSons to a location of your choosing; next refer to Section 9.1.2 and set up a recursive custom location so that the plug-in is aware of where it should look for them.

1.3 License Activation

The license files used by Reverberate 1 and Reverberate 2 are no longer supported in Reverberate 3. All licenses for Reverberate 3 are managed using iLok.

Install the iLok License Manager version 5 or above available from the http://www.ilok.com website. If the version of license manager is too old it may fail to find a valid activation even if you correctly activate the licenses.

Redeem your Reverberate activation code to your iLok account and select a location to activate to. You may activate to, iLok 2 or 3 USB dongle, a local computer hard drive location or iLok Cloud.

Drag this license on to your iLok or local computer location to activate to a physical location. Or if you wish to use your license with iLok Cloud simply click ‘Open Cloud Session’ from the ‘File’ menu in iLok License Manager once you have redeemed your code.
2 Backwards Compatibility

Reverberate 3 can import bank files from some older versions to ease transition, and has bank and full session compatibility with Reverberate 1 and Reverberate 2. For users upgrading from old or adjacent versions please read the notes below.

2.1 Reverberate 1/2/3 Session Compatibility Notes

Reverberate v1 and v2 saves are backwards compatible with Reverberate 3. This means you can load your old presets and session saves from v1 or v2 in the v3 plug-in.

Reverberate 3 cannot load session saves from other Reverberate versions such as LE or Core.

Reverberate v1 and v2 are not forwards compatible with v3, so if you wish to share saves made with v2 with other users they must be using at least v3, attempting to load with v1 or v2 will result in unexpected behaviour.

Reverberate 1 and 2 bank (FXB) files can be loaded in Reverberate 3, see the next section.

2.2 Users Upgrading From Reverberate 1, 2, Core, Beat and CM

Although Reverberate 3 cannot load sessions saved in Reverberate Core (since it identifies to the host using a unique identifier), Reverberate 1, 2 and Core bank (FXB) files can be imported into Reverberate 3.

Either:

1. For a single bank, import it as follows:
   a. Select the Preset Bank tab
   b. Click the Saved Banks button
   c. Click Load Bank File
   d. The Reverberate 1/2/Core bank will be imported into Reverberate 3

2. For quick access in future to a number of saved banks, place your Reverberate Core banks in the user presets folder for convenient future access:
   a. Select the Preset Bank tab
   b. Click the Options button
   c. Click View User Bank Location
   d. Copy one or more Reverberate 1/2/Core .fxb files to the location of your choosing within the User Presets folder, perhaps with a new folder like “Reverberate Core Banks”

You may re-save the bank in Reverberate 3 format if you wish, or continue to use imported banks.

The promotional issue Reverberate CM and Reverberate Beat plugin bank files can also be imported using this procedure.

2.3 Users Upgrading From Reverberate LE

Reverberate LE bank files are not compatible with Reverberate 3, any LE presets will need to be manually recreated in Reverberate 3. This is because it uses an incompatible bank format that is not derived from the Reverberate 1 bank file format as the other versions were.
3 Plug-in Overview

Reverberate is a dual engine convolution reverb, with extensive modulation capabilities, effects and Fusion-IR support.

3.1 General Layout

Reverberate is split into the following key regions:

1. Bank and preset selection
2. Settings
3. Assistance (tool-tips / manual)
4. Upper editing zone (reverb, effects, mix)
5. Middle visualisation zone (waveform, equalisation, routing, metering)
6. Lower file and preset management zone (browser, bank)
7. Panel selector
3.2 Parameter Locks

Many of the controls can be held (locked) when preset changes occur so that if certain settings are known to be set as desired the presets can be changed without affecting those parameters.

Plug-in locks can be enabled or disabled by clicking the lock icons shown next to parameter names. When locks are not enabled (shown grey) hovering over their location next to the parameter name will cause them to illuminate ready for selection.

To enable locks for all reflections or all reverb parameters, right click any parameter and select from the menu. You may also clear or set all locks using the menu.

3.3 Interactive Assistance

Once the plug-in is loaded help is available within it by clicking the question mark icon and hovering the mouse over a control to view a description of its function.

Below we hover over the crop-end

Using the assistance menu it is also possible to access this manual and to bring up additional information about the plug-in such as the version number.

3.4 Panel Selection

Clicking the panel buttons will show, switch between, or hide the panels. The left most buttons control the central panel and the two right buttons control the lower panel. Clicking already selected button (e.g. IR Waveform or File Browser below) will collapse and hide the panel region.
4 Reverberation

The reverberation tab has the following key areas:

1. Reverb level and signal routing
2. Master dry/wet mix – a reproduction of the dry/wet mix on the mix tab for convenience. This affects the dry/wet mix of the Reverb 1 / Reverb 2 blend
3. Editing subtabs (shape, envelope, etc) – some tabs may not be visible depending on the topology selected
4. Impulse response selection and navigation

4.1 Reverb Topology

The following topologies are available when using impulse responses.

The plug-in will attempt to select an appropriate topology when switching between file types.

- Parallel stereo: A single mono or stereo file is required
- True stereo: A single quad, or two stereo files are required
- Mono to stereo: A single mono or stereo file is required
- Fusion-IR: A single true stereo modulated Fusion-IR file (.fir) is required

The following impulse response file types are supported: wav, aif, flac, fir

The power button indicated below enables or disables the selected Reverb 1 / Reverb 2 engine, and a disabled notice is shown in the waveform view when inactive.
4.2 Loading Impulse Responses

You can load impulse responses through the quick access file strip or from the fully featured file browser.

4.2.1 File Strip

Clicking “Load IR” will open a system file selection box.

You may also drag+drop from Finder / Explorer on to the file name.

The navigation chevrons (< >) will move between impulse responses within the current folder. Clicking the X will remove an impulse response.

Impulse response statistics are visible in the information bar.
4.2.2 File Browser

You may also use the file browser accessed from the panel selector.

Clicking a file will select it into the current container (Reverb 1 / Reverb 2). Specific allocations can be made into containers by clicking the selector icon buttons. Depending on the active topology, you may be able to select one (mono to stereo, true stereo, Fusion-IR) or two files (true stereo).
File Name Filter

To filter the files listed using a string search term click and enter a filter text term. Here ‘urch’ has been entered which shows all of the church variants quickly. Click and delete to remove the filter.

Drive Locations and Bookmarks

To quickly access areas of your system you can click the path selection down arrow icon. This will reveal a list of accessible system drives and common user areas (desktop, home folder, etc).

You can also access the bookmarks system here. If you are currently in a non-bookmarked location you can quickly add the browser’s current position to the bookmarks. If you wish to edit the ordering or remove a bookmark you can edit the saved bookmark locations.

Quick Browser View Navigation

If your current browser position is not focused on the reverb you wish to edit, within the browser click the IR 1 or IR 2 buttons at the top left of the browser to quickly move to the impulse response selected for Reverb 1 and Reverb 2. Although the browser will follow the currently focused reverb container, some views such as the mix tab do not have a focus so this is especially useful then.
4.3 Reverb Editing Tabs

The reverb editing tabs provide access to the full array of impulse response editing capabilities in Reverberate 3.

4.3.1 Shape Tab

The shape tab provides the ability to trim the impulse response as shown below where the final half second of a 1.7 second impulse response has been removed. Note how the reverb is cropped in the waveform view.

The pre-delay can be used to apply extra delay before the onset of the reverb.

Stretch applies a re-sampling to the reverb. Below 100% the reverb will elongate and reduce in pitch.

The width control can increase the perceived width of the reverb, or collapse it down to mono.

The reverb can be reversed using the arrows between the crop start and end.
4.3.2 Envelope Tabs

The envelope provides synthesizer style enveloping which is applied to the loaded impulse response.

- **Attack**: the speed of onset of the impulse response
- **Decay**: the time taken to reach the sustain level
- **Sustain**: a value in dB to which the reverb initially decays
- **Hold**: a period to hold the sustain level
- **Release**: a time taken to decay to silence

Additional envelope shape control can be applied by clicking the button indicated in the right-hand side image. An example of how the envelope shaping can produce more extreme curve shapes is shown.

Introduced in Reverberate 3.1, the dispersion modelling control simulates the natural dispersion effect heard in physical plate reverbs. This presents as the characteristic whip-like onset where low frequencies are delayed relative to high frequencies (this has a very unique time/spectral profile that immediately identifies the response as coming from a physical plate).

Digital hardware plate reverbs tend to do well at providing a pleasingly metallic reverb with high density, but rarely include any dispersion (although some more modern software reverbs do this well). The dispersion control can therefore add an extra realism dimension to your classic digital hardware plate captures in a way never heard before from the original hardware.

Please be aware that although the dispersion tool is presented as part of the envelope shaping facility because it modifies the onset characteristics of the reverb, the processing is not a part of the time-based envelope calculations. It is in fact implemented as a complex cascade of audio filters applied at the very end of the processing chain and as a result does not affect the view in the IR waveform visualisation. This ensures that sharp enveloping and/or cropping do not adversely affect the dispersion simulation.

4.3.3 Fusion-IR Tab

The Fusion-IR tab allows control over the modulation rate of the captures, early/late balance and late offset.

Below shows an extreme example of this by modifying the early / late balance to solo one or the other. This is useful if one wishes to push the reverb further back in the mix by reducing the proportion of the reflections by around 3-6 dB, or alternatively you can pull forward the focus of the reverb by emphasising the reflections relative to the late reverb.
Below we show the effect of offsetting the late reverb component of the Fusion-IR. This can be used to modify the inherent late pre-delay of the capture. The orange box shows the late component has been offset by 110 ms creating a much large pre-delay than originally in the capture but without causing the early reflections to detach from the dry sound.

For captures that contain a large pre-delay, this can be reduced if it is found to be too large using a negative offset. The first image shows the capture with the late in solo to illustrate the large amount of pre-delay. Then 150ms of pre-delay is removed via a negative late offset. Finally, the early reflections are blended back in using the early / late control.

The modulation rate of the reverb can be modified, or stopped entirely using the mod rate control.

4.3.4 Split Modulation Tab

Reverberate allows you to apply two independent modulations to an impulse response, at extremes this produce interesting creative effects and or can be more subtle to bring additional life into the capture without dramatically affecting how will perceive the reverb structurally or tonally.

Two types of modulation are available in the split modulation facility:

- Time modulation with pitched frequency – select the note icon: this will create a clearly audible pitch bending effect, which when combined with the dry signal causes a pleasant chorusing when used subtly
- Time modulation with fixed frequency – select the clock icon: this causes the reverb structurally to modulate in time without pitching effects, very useful for adding life and
movement that is more associated with the perceived liveliness of high end reverb effects processors than an audible effect (higher depth values are recommended with this setting).

Select a split point that corresponds roughly to the division between the reflections and late reverb. In the capture below, this is around 250 milliseconds (we see no more individual reflections peaking above the decaying tail after this point).

Note: the split modulation function split point is disabled for Fusion-IRs because the early/late division is inherently a part of the capture.

To modulate the early reflections using the split-mod facility rather than Fusion-IR modulation, disable early modulation on the Fusion-IR tab and then enable early mod. You may apply split-mod modulation and Fusion-IR modulation concurrently on the late reverb component.

### 4.3.5 Simulated True Stereo Tab

True stereo reverbs pass a contribution of the left signal to the right channel, and vice versa. This is important when creating an enveloping sense of space.
True stereo convolution requires four channel captures:

1: Left to left (direct)
2: Left to right (crossfeed)
3: Right to left (crossfeed)
4: Right to right (direct)

Often the first two are split into a single stereo file, and the second two are another stereo file.

The crossfed channels are usually at a slightly lower level (by around 6dB) and usually offset by a small delay (8-12 ms or so). There may also be some additional filtering involved and the channels will be decorrelated. When using two-channel files, no crossfeed data is available, but using the simulated true stereo facility in Reverberate a viable simulation of the effect can be achieved. This helps to improve the perceived quality of many very old reverbs that did not have any crossfeed, such as old digital units or physical plates.

The following controls are available:

- **Level**: sets the level of the crossfeed signal, recommended between -6 to -3 dB
- **Delay**: sets a time offset for the crossfeed signal, recommended minimum is 10 ms
- **Filter cut and enable**: a low-cut filter
- **Modulation**: time modulation with fixed frequency (as per the split modulation facility) applied only to the crossfeed signals, it is recommended to use this and set to medium/high levels to add extra liveliness to the reverb without structurally compromising the direct channels
- **Mode**: pure is a basic delay plus modulation, dense applies a decorrelation sequence which thickens the crossfed signal (pure is recommended unless audible phasing artefacts are experienced that increasing the delay cannot resolve)
4.4 Reverb 1 and Reverb 2 Selection

Reverberate provides the ability to work with two reverbs at the same time, known as Reverb 1 and Reverb 2. You can select the desired reverb container using the tab selector buttons shown below.

In this example we have soloed the early reflections from an M7 Fusion-IR in Reverb 1 and the late reverb from a different Fusion-IR in Reverb 2. These can be blended in the mix tab, and effects applied independently, as discussed later.

5 Mix

The mix tab allows you to blend Reverb 1 with Reverb 2, control the overall level and panning of the engines, and mix the combined wet reverbs with the dry signal. Use of the metering visualisation tab is ideally suited to mix duties.

The mix tab includes various modulation options:
- Pan modulation for Reverb 1 / Reverb 2
- Phase control for the pan so that each modulated pan position can be set relatively
- Blend modulation for setting the level of the Reverb 1 / Reverb 2 reverb blend
- LFO rate for all of the modulation controls on this tab

The reverb blend modulation can be set to be undertaken before or after the reverb. Typically a slow modulation should be pre-mod to allow the tails to decay naturally, and very a fast modulation post-mod to expose the modulation more clearly.

The reverbs can optionally be enabled or disabled through this tab using the power icons.

The power law used for the reverb blend can be controlled via the drop-down selector which helps to ensure a consistent level across the blend range.

- Decorrelated (-3 dB mid): When reverbs are very different (e.g. they come from completely different reverb devices or the same device but with very different modes or delay values) they are said to be decorrelated. Typically you should select the decorrelated mode in this case so that they sum with a power compensated central lift.
- Correlated (-6 dB mid): When reverbs are essentially the same they are said to be correlated. To ensure they sum to the same level regardless of the blend dial select the correlated option.
6  Routing

Quick access to the status of effects and reverb is available via the routing visualisation panel. Click the selection icons to enable or disable a processing element.

Other facilities are available on the routing tab:

- A serial / parallel button to enable Reverb 1 to be routed through Reverb 2
- Mono / Stereo buttons on the Reverb 1, Reverb 2 and master mix (see overlapping circles)
- Channel left/right flip for Reverb 1 and Reverb 2 (see parallel lines)

7  Effects

Three effects modules are available from the effects tab.

For each effect, a separate module is available for Reverb 1, Reverb 2 and the blended mix of the two reverb.

7.1  Equaliser

The reverb EQs and the master EQs behave slightly differently and so are described here separately.
7.1.1 Reverb Equaliser Variant

The associated equaliser tabs for each of Reverb 1 / 2 provide a 5-band twice-oversampled paragraphic EQ. This is applied to the impulse response (rather than being processed live).

Two views are available:

- 1-5 (Summary view): View all bands at once
- Band view 1 through 5: View a band in more detail

Summary View

The summary view for the reverbs shows the following EQ properties:

- Whether the EQ is enabled overall
- Whether each band is enabled or not
- Core components of the band:
  - Frequency
  - Gain
  - Bandwidth (Q)
  - Type (shelf, cut or bell)

The sheen control provides additional high frequency content to add a glistening to the reverb.
Band View

In high detail view the frequency and gain of each EQ band can be modulated in time independently to apply swept EQ effects to the impulse responses.

When the final frequency and final gain parameters are set fully left no modulation is applied, otherwise the EQ settings applied to the static impulse response will be modulated between the start to end times chosen. No modulation is applied if the end time is less than the start time.

Modulation of the EQ can be useful for applying subtle low pass filtering where the frequency cut-off reduces over time to mimic the natural high frequency roll-off in real spaces, or for more creative purposes. Frequency modulation can be set to a linear or exponential time base using the button between the Start and End titles. Moving filters often sound more natural with an exponential time base as lower frequencies are more pronounced. Gain modulation can be set to linear or half-cosine.

The view control sets the position of the EQ display in time. When set fully left it represents the initial state of the EQ and fully right shows the final state of the EQ. The output of the IR EQ is not affected by the view control, it is provided purely for user convenience to help visualise the effect the modulation has over time.
7.1.2 Master Equaliser Variant

The master EQ is applied as a live post effect, and as such the modulation options differ, these are controlled via LFO. As before there is a summary and detailed view.

**Summary View**

The summary view shown below mirrors the reverb equalisers with the exception that there is no sheen control.

**Band View**

Band view includes the ability modulate each of the band’s frequency and gain using two separate LFOs. The LFOs are shared amongst all bands, but the phase each takes from the LFOs can be modified.

7.2 Delay

The delay module is available to both reverbs and the reverb blend. Delays are set relative to host tempo when the chain icon is lit, and absolute tempo otherwise.

To bring additional life to the delay, the analogue nature of tape delays (where the delay time is not absolutely constant) can be recreated within Reverberate via two independently controllable delays with delay tap line modulation and rate control (see controls mod and rate).
The delays in Reverberate can also be used to create ping-pong type effects using the cross-feed controls (R-Feed / L-Feed). The input to the left and right delay lines can be turned on and off using the power buttons.

If one delay input is on and the other input is off, the cross-feed control can still be used to send audio into the left or right unit without an active input. For example if the L Input is on and R Input is off, using the R-Feed control on the left delay channel will input audio into the right delay unit.

The stereo delay is completely bypassed when both of these input buttons is turned off.

### 7.3 Chorus

The chorus module is available to both reverbs and the reverb blend. The chorus is implemented via a modulated delay line mixed with the module’s input component. All-pass interpolation is used for delay line modulation.

- **Delay**: The amount of time between the dry and modulated delay line
- **Mod / Rate**: The amount of delay time modulation applied to the delay line which affects the strength of the chorusing
- **Feedback**: The amount of feedback applied to the delay line
- **Width**: A measure of the width of chorusing
- **Gain**: The module’s input signal (mix to 0 dB for chorus, reduce to turn this into a more modulated delay line effect)
- **Wet**: The modulated signal (increase to add more chorusing)
8 Preset Selection

Most contemporary LiquidSonics products store each preset in its own file. Categories of presets (such as Halls) are usually kept in a folder.

This is not the case with Reverberate 3 due to its heritage as a Windows VST2 plugin that saved 48 presets in a bank. This was extended to Audio Units and then AAX.

In order to maintain backwards compatibility with Reverberate 2 preset bank files (.fxb) and DAW session saves the bank structure is retained.

8.1 Bank and Preset Browser

The presets browser is shown using the ‘preset bank’ panel selector button. This reveals all presets in the current bank. The options menu allows you to reset presets, copy/paste presets from one location in a bank to another and change the default start-up bank.

You can save and load banks using the ‘saved banks’ menu.
8.2 Bank Creation

You can easily start a new bank from scratch from the preset bank (in the lower region) via the “Options” menu which allows you to reset the current bank which will initialise all presets to an empty state within the bank. Alternatively select a factory default clear bank by loading the “Empty Bank” in the banks menu at the top left corner.

Populate the bank by editing the 1 to 48 presets as required (set up the required impulse responses, choose gain, etc). Next name each of the presets presets by clicking the preset name near the chevrons < > in the “Preset Bank” pane. Then to save the bank simply select “Save Bank File” from the “Saved Banks” menu in the preset browser. Your new bank will be displayed in the user banks area.

Alternatively, you may semi-automatically populate a bank using impulse responses in a folder. Reset the bank as before, then select preset 1. Click “Load-IR” in Reverb 1, select an impulse response (probably the first in a folder), then from the “Options” menu choose “Fill Bank From Current IR”. This will rename your current preset based on the currently loaded impulse response file name, then Reverberate 3 will move to preset 2 and pick the next impulse response in the folder and name it accordingly. It repeats this process until the final impulse response in the sorted folder is reached. You may further populate the bank – suppose you have populated 10 impulse responses and wish to add more to the bank; select preset 11, click “Load-IR”, and then choose another IR from a different folder and repeat the process to populate forwards from preset 11.

8.3 Bank and Preset Quick Access

Banks and presets can be accessed from the upper left corner at all time

1. First select the desired bank
2. Next select a preset from within the bank

Note that any changes you make in presets within the bank will be preserved when moving around the bank. For instance if you change the pre-delay in preset 3, move to preset 2 and make some edits, and then move back to preset 3 the edited pre-delay will have been preserved. To move back to the original values just re-load the bank. This allows you to make quick transitions between sets of presets, as shown in the next section.

8.4 Preset Selection Automation

Convolution reverbs require references to files in your system. These cannot be encoded in numerical parameters, so preset snapshots are typically used.
This can be achieved via the bank, with presets selected out of the bank via DAW automation. This varies host to host, but the general process is as follows.

Set up the control “Preset Number Automation” parameter for automation:

Next write automation into the automated parameter as follows using drawing tools in the DAW:

As you move through the timeline the preset selected will be updated. In the example there is a region of no automation, followed by preset 1, preset 10 (shown yellow) and finally preset 15.

Note that at the very bottom of the range ‘Disabled’ prevents any automation data being read (since the default value for this parameter is its minimum value). To select the first preset, position just above the lower end of the range.
9 Settings

9.1 Files

9.1.1 File Auto Pairing

In true stereo mode, when files are provided in stereo pairs an attempt to match the files is made when this is selected.

9.1.2 Custom File Locations

Custom Search Locations

Set custom search locations can be set so that lost files are automatically sought in one of a number of folders in the system before the user is asked for assistance to locate files.

Each can be set to search recursively.

The order of the search can be determined, the location in position 1 is searched first.

Browser Bookmarks

The browser bookmarks menu tool can also be accessed from this menu.

Resolved File Locations

When a user is asked to supply a location to find lost files, that location is saved for future use. The 10 most recently provided locations are recorded and used for future searches. These can be viewed and edited with the “View Previously Resolved Locations” tool.

If you prefer that this behaviour is not undertaken the “Save/Search Previously Resolved Locations” option can be deselected.
9.2 Interface Scale

The size of the UI presented by the plug-in can be selected in steps between 70% and 130%.

If you change this and find the screen size is now too large and you cannot view important elements needed to change it back, just hold either shift, alt or control (depending on your host some of those may do other things so pick a suitable key) and re-open the plugin to switch back to the 100% default.

9.3 Performance

In order to reduce CPU usage you may optionally select from a number of internal buffer sizes from zero latency up to 8192 samples. Higher buffers reduce CPU consumption.

9.4 Views

*Default Visualisation View*

Determines which middle region view is shown in new instances.

*Default Files / Presets View*

Determines which lower view is shown in new instances.

*Visualisation Behaviour*

When moving between reverb, equaliser, etc the “Follow Upper Tab” option causes the visualization panel to show the most commonly required associated view. For instance, when moving to the equaliser, the middle region will switch to the EQ Graph.

When using “Browser Follows Current Reverb View” the file browser will remain in sync as you move between Reverb 1 and Reverb 2.

*Topology Visibility*

An advanced facility is to show the reverb synthesis views. As well as playback of impulse responses, Reverberate 2 included the ability to generate early reflections and late reverberation. These features are an advanced power user tool, so are not enabled by default. They can be enabled using this option.

10 Advanced Features

Once enabled in the settings, two additional topologies are available for selection.

![Early reflections synthesis](image)

![Late reverb synthesis](image)

You may notice these topologies being occasionally available in some presets without enabling the tools explicitly.
10.1 Early Reflection Synthesis

Accessible from the model selector, the early reflections generation module works in two main modes:

- Diffused delays: individual reflections
- Enhanced bursts: very dense collections of reflections in bursts

The first image shows bursts mode, which is the recommended. The next shows the same reflection pattern in diffused delays mode with increasing levels of diffusion (which will have a more coloured, classic sound in comparison to the more modern burst based reflections of contemporary reverbs).

Allow image diversion will mean the left/right channels can differ in their placement of bursts/delays. This is not recommended as it tends to create a skewed stereo image (but was the default behaviour in Reverberate 2).

Size, distance, position and separation configures properties of the ray-traced reflection engine. Depth controls the number of bounces through the environment are modelled (although hard-limits are imposed to reduce excessive computation which can cause unexpected loss of reflections as parameters are modified).

Distance simulation can be applied which causes the reflections to reduce in level as the sounds propagate through air. An illustration of the difference when enabling this mode is shown below. Note how the reflections hold at a more consistent level throughout their progression.

More precise results can be obtained by disabling this mode and using the envelope shape tools to control the onset and decay of reflections in detail.
It is highly recommended to use the split modulation facility so that reflections can be allowed to sit organically as per other high-end reverberators.

To illustrate the concepts, an example is shown where a set of burst reflections are created without propagation modelling. Low diffusion is used to soften the reflections a little. The onset of the reflections is controlled with the attack, and a gently shaped decay set after zero hold. The split modulation tool has been used to identify a gap early in the onset, a brief period of pitch modulation is applied before the split and time modulation after the split to avoid dramatic chorusing. Roll-off filtering is also applied using the Reverb 1 effects tab with a Q=0.7 and cut of 6 kHz.

The reflection generation tools are considered to be well suited to those that enjoy experimentation with delay-based effects and are ideally suited to pairing with very dense reverb tails, such as those in a soloed M7 reverb tail, plate or in the late reverb synthesis engine described below.
10.2 Late Reverb Synthesis

The late reverb tail synthesis tool simulates a very dense reverb tail, which can then be shaped and subject to diffusion as necessary using the envelope tools.

The exponential decay is modelled down to -120 dB and placed into the impulse response engine for subsequent editing. The value quoted is the RT60, i.e. the time taken to decay to -60 dB. (For reference Reverberate 2 displays the same data as the RT120 time.)

The diffusion parameter controls the reflectivity of the environment, and convergence/model how quickly a low diffusion environment converges to thick reverberation as shown below.

Room tint applies a modelled EQ curve based on measured impulse responses to apply a given character to the tail.

The variant controls the seeding of the algorithm, which will allow different variants of the response to be generated.

Again, it is recommended to use the split-mod facility to liven up the static reverb generated via this method.

Consider placing an early reflections model within Reverb 1. This could be from a very short impulse response, an isolated / soloed early reflection pattern from a Fusion-IR, or a synthetically generated early reflections pattern. Pair this with a late decay in Reverb 2 and then balance the early/late reflections using the level and blend control, then mix into the dry signal for a wealth of reverberant possibilities.