

# smart:reverb manual

The source-adaptive reverb

The screenshot displays the smart:reverb interface with the following elements:

- Header:** smart:reverb logo, reset, bypass, A/B, copy, default buttons.
- Mode:** Universal (selected), with a small icon to the right.
- Style Selector:** A grid with 'natural' at the top, 'artificial' at the bottom, 'intimate' on the left, and 'rich' on the right. A white circle is positioned in the lower-right quadrant.
- Parameters:** Width: 50, Color: 0, Clarity: 0.
- Reverb Time:** A circular gauge showing 1.85s.
- Pre-Delay:** A circular gauge showing 0ms.
- Visualizations:** A large 3D scatter plot of grey spheres and a 2D frequency response graph with a shaded area and a control knob.
- Bottom Controls:** dry 100 ↔ 75 wet, freeze, infinite, and a frequency filter set to 100 Hz 0.0dB.

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# Welcome to smart:reverb

smart:reverb is a source-adaptive reverb plug-in. It delivers custom-tailored reverb by adjusting its processing to the individual characteristics of the input material. In addition, smart:reverb creates an intuitively navigable reverb matrix for quickly finding the right sound.

Because no two audio tracks are the same, smart:reverb's processing focuses on the individuality of each signal. With a single click, the plug-in quickly analyzes the source material to create each reverb from scratch. By custom-fitting the reverb to the spectral and temporal characteristics of the input signal, typical problems such as disturbing resonances or muddy reverb tails are avoided from the very beginning.

Simultaneously, smart:reverb computes a matrix that provides a range of styles for the reverb at hand—each of them tailored to the input signal. Guided by descriptive properties, users can quickly find the style that best suits their creative visions without having to search through hundreds of presets.

For maximum control, the plug-in provides an interactive view of the reverb's anatomy. A detailed interface makes it easy to manipulate the deep-structure of the reverb by modifying its frequency and time-dependent decay rate as well as the reverb's spread or density evolution over time.

# Install

## System requirements

<b>CPU</b>	Intel Core Duo, i5
<b>RAM</b>	2GB
<b>Operating systems</b>	Windows 10 (64 bit) Mac OSX 10.7+



You will need admin privileges to successfully install the smart:reverb plug-in.



Please note that smart:reverb requires the **PACE iLok License Manager**. Download the software from **www.ilok.com** and install it on your system. You don't need an iLok or an iLok account. This application allows us to ensure the integrity of our products for a better user experience.

## Windows

To start the installation process, extract the downloaded zip-file **sonible\_smartreverb.zip** onto your hard disk and run the installer.

The installer will now guide you through the necessary steps to install smart:reverb on your computer.

During installation, you can select which version(s) of smart:reverb you want installed. You can also select custom installation folders for the VST version or simply use the default folder suggested by the installer.

The VST3 and AAX versions of the plug-in will be automatically installed in their respective default folders.

### Default folders:

#### VST3 (on a 64 bit operating system):

```
..\Program Files\Common Files\VST3\  
..\Program Files(x86)\Common Files\VST3\
```

#### AAX (on a 64 bit operating system)

```
..\Program Files\Common Files\Avid\Audio\Plug-Ins  
..\Program Files(x86)\Common Files\Avid\Audio\  
Plug-Ins
```

## Mac OSX

To start the installation process, please open the disk image **sonible\_smartreverb.dmg**. This will mount the image and open a finder window showing the content of the installation package.

To install smart:reverb on your system, run the installation file **smartreverb\_installer.pkg**.

The installer will now guide you through the necessary steps to install smart:reverb on your computer. smart:reverb will automatically be installed in the default locations for audio plug-ins.

### Default folders:

#### Audio Unit

```
/Library/Audio/Plug-Ins/Components/
```

#### VST

```
/Library/Audio/Plug-Ins/VST/
```

# Authorization

## Licensing system

You can select between two licensing systems: machine-based or iLok (USB dongle).

By creating a user account on [www.sonible.com](http://www.sonible.com) and registering your products – if they are not already visible in your Dashboard – you can manage your plug-in activations.

### Machine-based

Each license key allows you to install smart:reverb on two computers with unique system IDs. These system IDs are registered during license activation.

The same license can be used by multiple users, but each user has to individually unlock the full version of smart:reverb under their account.

In the case of a system-ID being changed (e.g. replacement of the hard drive), you can revoke/activate the plug-in next to the respective system-ID in the Dashboard of your sonible user account.

### iLok

If you want to transfer one activation to your iLok, first make sure the plug-in is registered in your sonible user account. Click on the button "transfer to iLok" next to the plug-in in your Dashboard and follow the instructions.

Note: 1st gen iLok dongles and the iLok Cloud are currently not supported.

## Unlocking

If you purchased a license for smart:reverb online, you will receive your license key via email.

### Machine-based unlocking

When opening smart:reverb for the first time, a notification window will be displayed asking you to unlock smart:reverb with a valid license key.

Please make sure that your computer is connected to the internet before starting the registration process.

Enter your license key and click "register." The plug-in will now communicate with our server to check if the license is valid. If it is – enjoy!

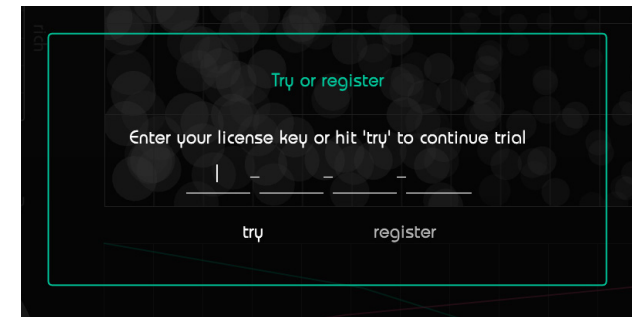
### iLok

If you transferred your license to an iLok, simply attach the iLok to your computer. The plug-in will then be automatically registered – enjoy!

## Trial version

To run smart:reverb in demo-mode, simply click "try" and you will then be able to use smart:reverb for a couple of days without any limitations. (Please refer to our website to find out more about the current demo period of smart:reverb)

When the demo period expires, you will need to purchase a full license in order to continue using the plug-in.



### My Licenses

[Register license key](#)
[Need help?](#)

Product	License Key	Type	Description	Status	Date	Action
smart:reverb <a href="#" style="color: #4a90e2; text-decoration: none;">Download</a>	xxxx-xxxx-xxxx-xxxx	PC	xxxxxx	active	2000-00-00	<a href="#" style="background-color: #2e8b57; color: white; padding: 2px 5px; border-radius: 3px;">revoke</a>
				not activated		<a href="#" style="background-color: #2e8b57; color: white; padding: 2px 5px; border-radius: 3px;">transfer to iLok</a>

# User Interface

## Learning section

Learn and recall a tailored reverb for your track.

## Reverb Matrix

To intuitively browse through different reverb styles use the reverb matrix as an XY pad.

## Reverb Character

Manually fine-tune the width, clarity and color of your reverb.

## State handling

Save different states of parameter settings for easy A/B comparison or to store personal presets.

## Settings

Access the settings page.

## Particle Display

Monitor the reverb's anatomy and its current activity in different frequency bands. Once the learning process is finished, you can also freely adjust the decay rates in different bands using the interactive spectral shaper grid.

## Temporal Shaper

Monitor the reverb's decay, spread and density evolvment over time. Once the learning process is finished, you can freely adjust the temporal behavior using the interactive shaper lines.



## Reverb Control

Set the reverb time and pre-delay.

## Effects

Freeze the current reverb tail or enable an infinite reverb time to create sound layers.

## Filter Section

Apply a pre-filter EQ to quickly adapt the spectral shape of your signal.

# Global Reverb Controls

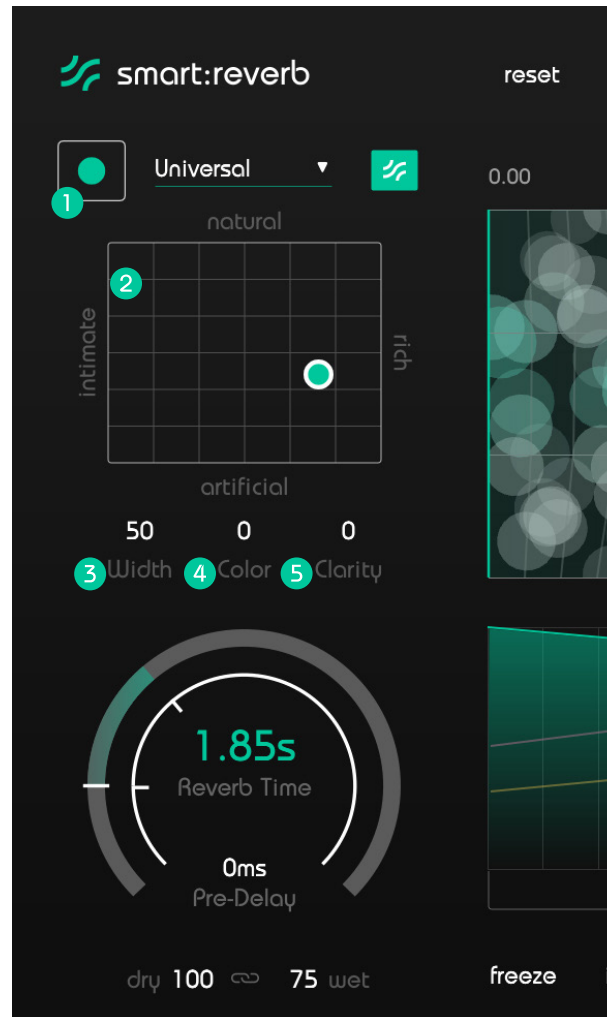
The left-hand section of the user interface provides you with all the necessary controls to start the learning process for a new reverb and to modify all global reverb parameters.

## 1 Profile & Learning

Although smart:reverb can be used without applying its source-adaptive features, it's highly recommended to always start off with the learning process. This adapts the processing of smart:reverb to your audio material and enables all detailed reverb controls. Please refer to page 9 for more details on the learning process.

## 2 Reverb Matrix

The Reverb Matrix is a parameter space covering different reverb styles. Guided by the semantic descriptors, you can easily navigate via the XY pad. By moving across the XY pad, you can see how the reverb's anatomy inside the Particle Display (see page 11) and the Temporal Shaper (see page 12) changes in real-time. Please refer to page 10 for more details on the Reverb Matrix.



## 3 Width

Limit or expand the perceived width of the reverb effect within the stereo field.

## 4 Color

Determine if the reverb should have a darker or brighter sound.

## 5 Clarity

Unmask direct signal components to increase the transparency of the reverb effect.

# Global Reverb Controls

## 5 Reverb Time

Set the reverberation time. This is the length of time over which the reverb tail has decayed by 60dB. Please note, changing the reverberation time will scale (extend or shorten) your current reverb effect and its internal temporal and spectral structure accordingly.

## 6 Pre-Delay

Set a pre-delay. The pre-delay refers to the length of time between the original dry sound and the audible onset of early reflections.

## 7 Dry / Wet

Mix the dry (direct) and wet (reverberated) signal. When using smart:reverb as an insert effect, you typically want to use a mix of both signals. When using smart:reverb as a send effect, you may stick to 100% wet signal since the output will later be mixed with the dry signal inside the mixer of your DAW.

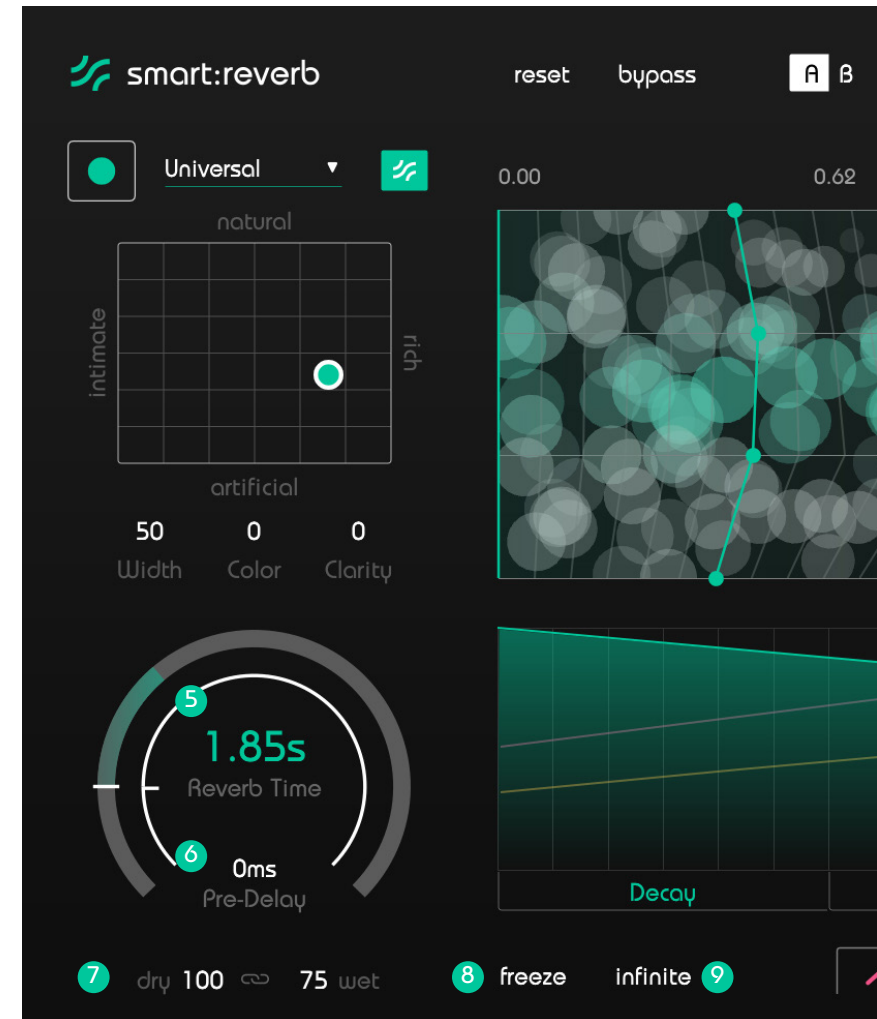
If you want to change the two parameters proportionately (so that they always sum up to 100%), enable the chain symbol.

## 8 Freeze

Click on Freeze to capture the current reverb tail. This will create a layered sound of the reverb effect.

## 9 Infinite

Click on Infinite for an infinite reverb time. This setting will overrule the current settings of the reverberation time. Disable to return to your previously set reverberation time.





# Custom-tailored Reverb

Although it's simply impossible to automatically generate something as subjective as a perfectly sounding reverb effect, the intelligent processing of smart:reverb ensures that every reverb computed by the plug-in fits to the spectral and temporal characteristics of your input signal. This way, problems such as disturbing resonances, muddy reverb tails or reverbs that just don't fit are avoided right from the start.

## 1. Select a Profile

A profile calibrates the processing of smart:reverb to a specific sound source. You can always start the learning process with the "Universal" profile and switch to a more specific profile later.

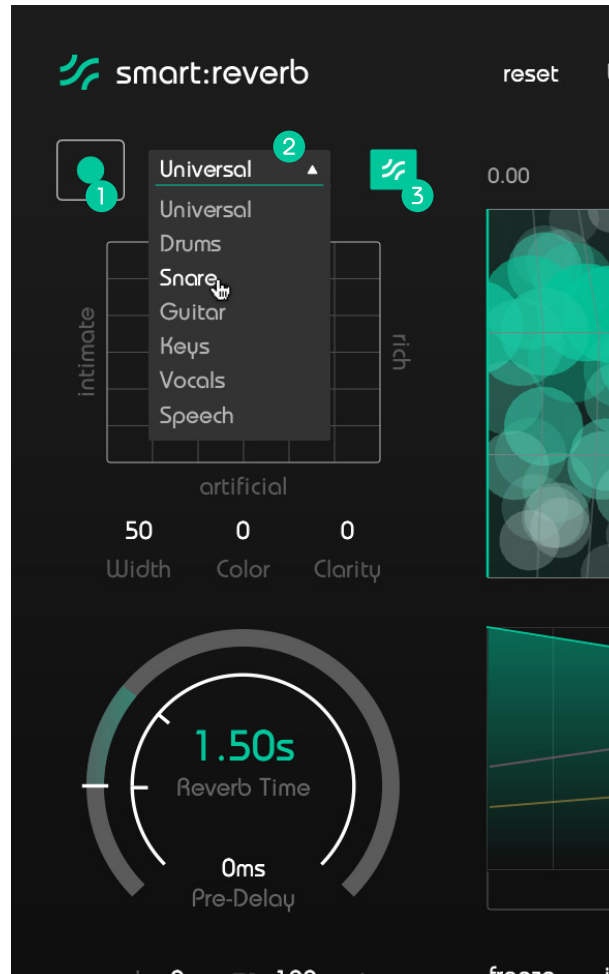
## 2. Start the audio playback & begin learning

smart:reverb needs incoming audio material for the learning process. Once the playback started, click the green record button. A pulsating pause icon and a progress bar inside the profile dropdown indicate that smart:reverb is actively analyzing.

## 3. Done!

When the learning process is finished, smart:reverb will automatically set all learned parameters, the Reverb Matrix is adjusted to your signal (see) and the Spectral Shaper Grid (see) as well as the Temporal Shaper (see) are enabled.

With the learning process complete, the thumb of the Reverb Matrix and the smart state button will turn green. This indicates that the current reverb settings lie within the custom parameter space computed for your signal.



## 1 Learning

Click the record button to start or pause learning. While learning, a pause symbol will be displayed instead of the record button.

## 2 Profile dropdown

Expand the dropdown menu to select a profile that best matches your audio material.

## 3 Smart State button

This button indicates whether you are currently in a smart state (the button is GREEN) or if one or multiple parameters have been manually modified (the button turns BLACK).

# The Reverb Matrix

Finding the right reverb for a track can be a time-consuming and challenging task and often involves searching through dozens of presets. To keep you in the creative flow, smart:reverb comes with a new way of finding the right style of reverb: the Reverb Matrix.

The Reverb Matrix is a parameter space covering different reverb styles. Using XY pad functionality and semantic descriptors, it can be easily and efficiently explored to find the reverb style that matches your creative vision.

## Intimate

An intimate reverb gives your sound a warm and personal touch. It's great if you work with soft vocals or solo instruments, since it makes your signal sound like it's been recorded at a relatively small, slightly homey location.

## Rich

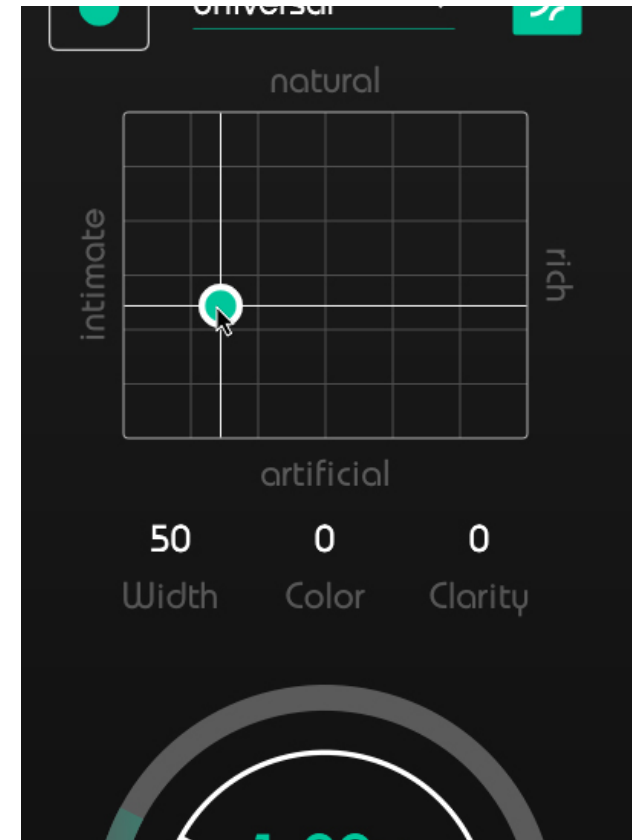
A rich reverb creates a full and multi-layered sound. Go for rich if you want to fully immerse your signal in a dense and vibrant reverb, for example when working with synth pads or orchestral sounds.

## Natural

A natural reverb sounds as if the reverberated signal was recorded in a real environment as the reverb effect is very cohesive and unobtrusive. This reverb will give your signal finishing touches without changing its character too much. It works very well when working with acoustic instruments or clean vocals.

## Artificial

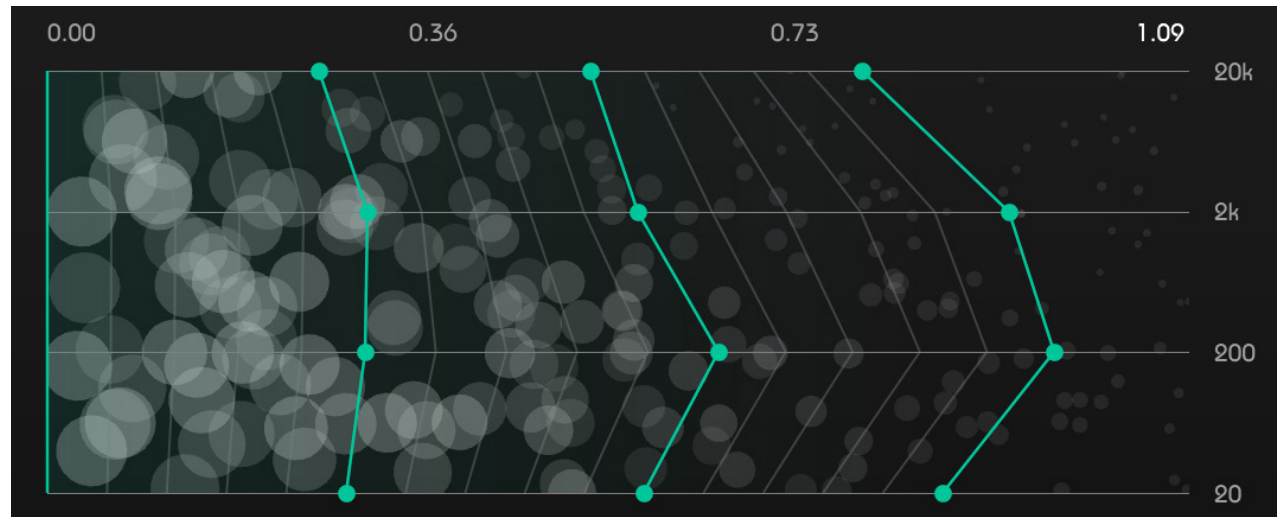
An artificial reverb does not try to simulate an actual room but rather plays with different reverb characteristics. Use an artificial sounding reverb if you want to intentionally change the character of a signal and make the reverb audible as a distinct creative effect.



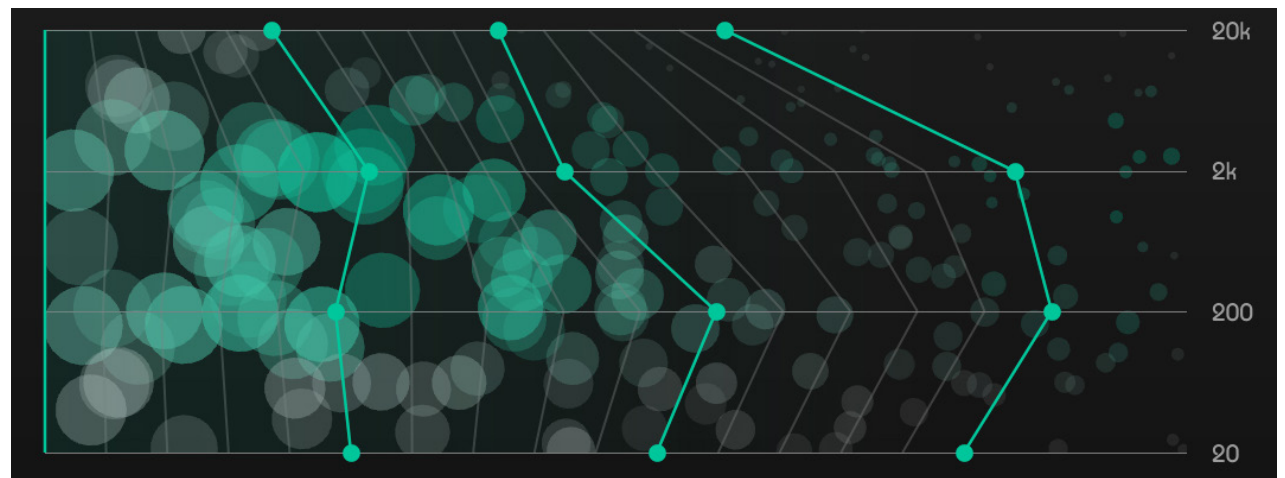
# The Particle Display

The Particle Display shows your reverb's anatomy and the current reverb activity in different frequency bands. The reverb particles indicate the energy, density and structure of the reverb. The horizontal axis represents the reverb time (the right end of this axis shows the current reverb time) while the vertical axis represents different frequency bands:

When there is no audio playback, the Particle Display shows the static structure of the reverb. Large, opaque particles indicate a lot of potential reverb energy while small, more transparent particles indicate low reverb levels.



When a signal is running through, the reverb particles are triggered by the incoming signal. The level and size of the particles show the dynamic spectral behavior of the reverb components.

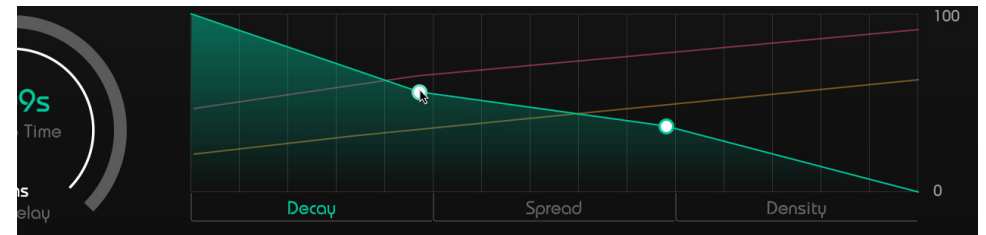


# The Temporal Shaper

The Temporal Shaper allows you to monitor the temporal evolution of your reverb's Decay (green), Spread (yellow) and Density (pink). Once smart:reverb has created a custom Reverb Matrix for the current signal, you can freely shape the three temporal curves using interactive thumbs and lines.

## Decay

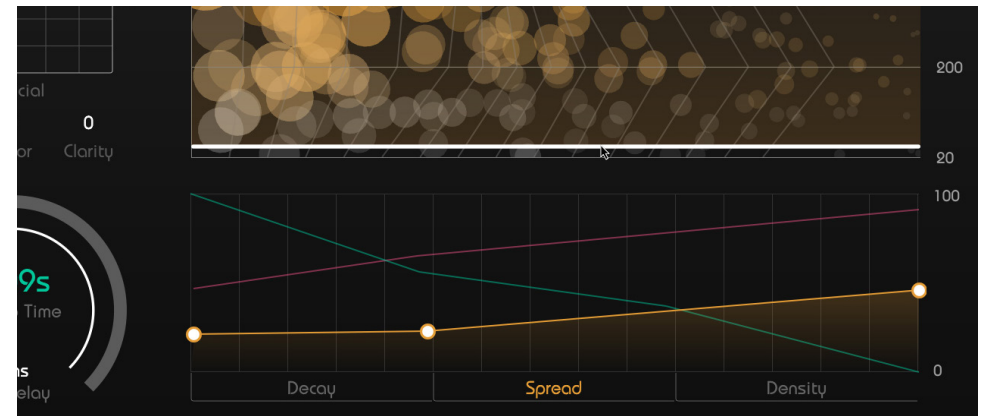
The Decay curve shows how the reverb's energy decreases or increases over time.



## Spread

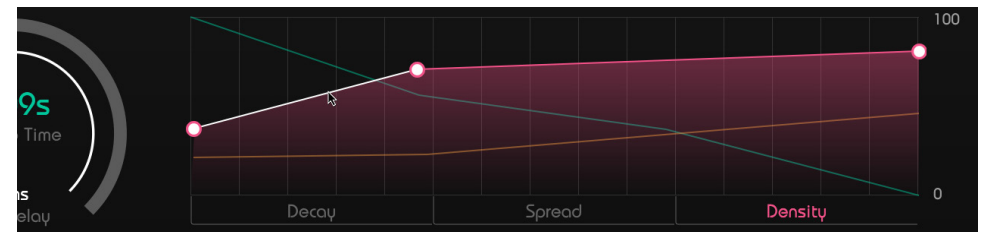
The Spread curve shows the reverb's stereo spread over time. This parameter is similar to the global Width parameter, but allows control of the spread's temporal progression.

You can restrict the affected frequency range by dragging the line inside the spectral display.



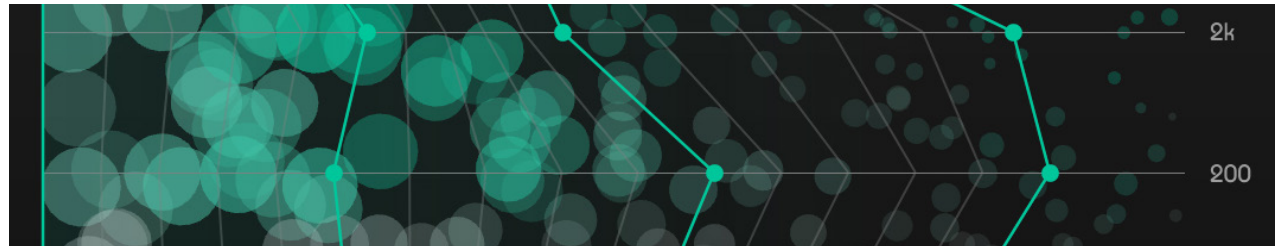
## Density

The Density curve shows the density evolution of the reverb.

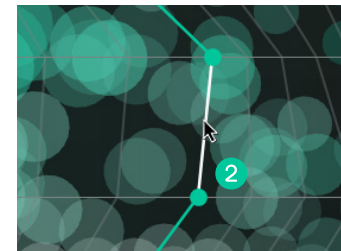
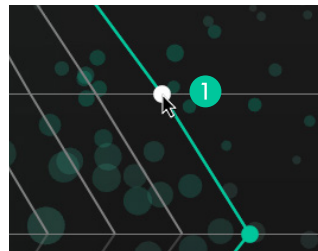


# The Spectral Shaper Grid

Once smart:reverb has generated a custom Reverb Matrix for the current signal (see page 9), the Spectral Shaper Grid is enabled. This grid lets you control the decay shape of the reverb over frequency ranges and time using interactive thumbs and lines.

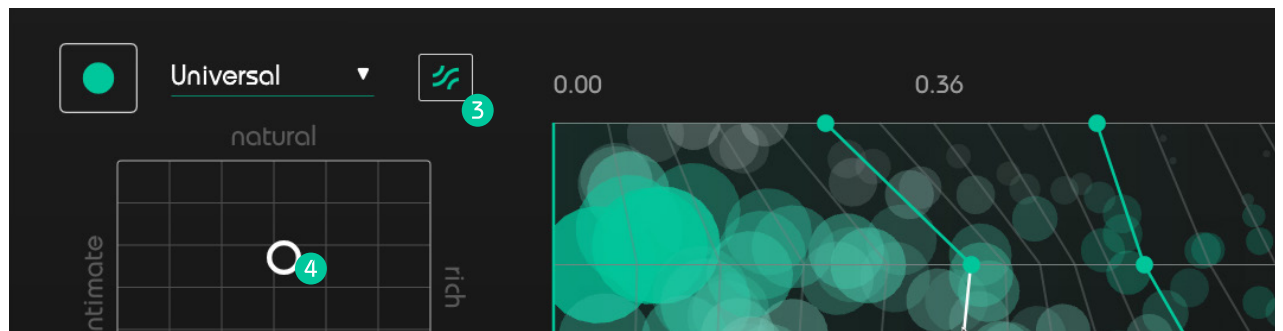


Moving a thumb ① to the left decreases the decay time of the reverb within the respective time frame and frequency band. You can also select the decay line ② between two points to move both frequency bands.



While changing the Decay lines, you will also see how the reverb's anatomy (Particle Plot) is changing.

If you manually change the reverb's anatomy by using the Spectral Shaper Grid or the Temporal Shaper, you leave the computed parameter space: the thumb inside the Reverb Matrix ④ then changes into a white circle and the smart state button ③ turns black.



To return to the automatically generated reverb settings you can simply click on the smart state button or move the thumb inside the Reverb Matrix.

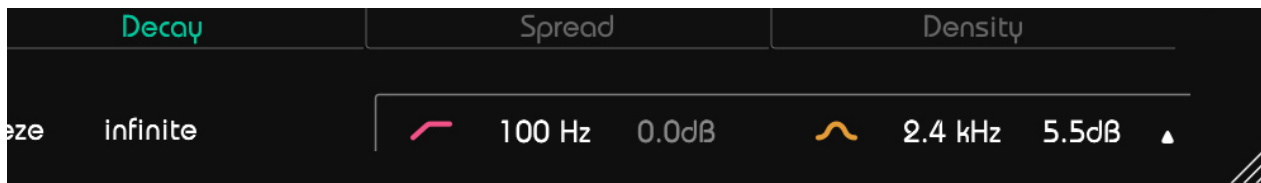
# Pre-filter EQ

post-filter eq



The Pre-Filter EQ, allows you to shape the wet signal using two thumbs. Choose from five filter types (bell, high and low pass, high and low shelf). Set the frequency and gain by dragging the thumbs or entering a precise value in the text box. You can change the Q value by scrolling or holding ALT while dragging vertically. Deactivate a filter by clicking on the pink and yellow icon.

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You can also change frequency and gain values as well as turn filters on or off when the filter is collapsed.

# Settings

To visit the settings page, click the little cogwheel in the upper right corner of the plug-in.

## 1 Use 100% wet signal per default

Enable if you want to change the default balance of dry/wet to 0/100.

## 2 Show tooltips

Disable to hide show tooltips when hovering over selected control elements.

## 3 Use OpenGL:

Enable for GPU powered graphics processing. It is recommended to only disable this switch in case of graphics problems, since the system load may significantly increase without OpenGL.

## 4 Share anonymous user data:

Enable to share fully anonymous user data with sonible and help us improve smart:reverb.

All of these parameters are global settings. This means that they will be applied to ALL instances of smart:reverb (in all your projects).



## 5 Plug-in information

Here you can find the name and version of your plug-in. You can start the welcome tour by clicking on "show tutorial".

## 6 Update notice

When a new release of the plug-in is available, you'll receive a notification on the smart:reverb settings page. Click on the blue label to download the latest version of the plug-in.

## 7 License information

This will display your license state and number (when not licensed via iLok).



# smart:reverb

[www.sonible.com/smartreverb](http://www.sonible.com/smartreverb)

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