



Eventide SP2016 Reverb Position Control Demo User Guide

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Eventide SP2016 Reverb Position Control Demo



Product Information

- Specifications:

- **Manufacturer:** Eventide Inc.
- **Model:** SP2016 Reverb
- **Part Number:** 141311, Rev 4
- **Trademark:** Eventide is a registered trademark of Eventide Inc.
- **Supported Platforms:** AAX, Pro Tools, Audio Units, macOS, VST
- **Contact Information:** Eventide Inc., One Alsan Way, Little Ferry, NJ 07643, Phone: 201-641-1200, Website: www.eventide.com.

• Welcome

- Welcome to the SP2016 REVERB User Guide. This guide will provide you with detailed information on how to use the SP2016 Reverb.

• About This Product

- The SP2016 Reverb is a high-quality reverb processor designed and manufactured by Eventide Inc. It offers a wide range of reverb effects to enhance your audio recordings and mixes.

• SP2016 Reverb About Reverb

- Reverb is an essential effect in audio production that simulates the natural reverberation of sound in different environments.
- It adds depth and spaciousness to audio signals, making them sound more natural and immersive.

• Control Overview

- **The SP2016 Reverb features various controls and indicators for adjusting and monitoring the reverb effect:**
 - **Status:** Indicates the current status of the reverb effect.
 - **Bypass:** Engages or disengages the reverb effect.
 - **LED Display:** Provides visual feedback on the selected parameters and settings.
 - **Program:** Select the desired reverb program.

• Levels

- **The SP2016 Reverb offers the following level controls:**
 - **Input:** Adjusts the input level of the audio signal.
 - **Output:** Adjusts the output level of the reverb effect.
 - **Kill:** Mutes the reverb effect.
 - **Monitor:** Controls the level of the monitoring signal.
 - **Peak Meters:** Displays the peak levels of the input and output signals.
 - **Limit:** Engages or disengages the limiter to prevent signal clipping.

• Parameters

- **The SP2016 Reverb provides the following adjustable parameters:**
 - **Mix:** Controls the balance between the dry and wet signals.
 - **Pre-delay:** Adjust the delay time before the onset of the reverb.
 - **Decay (rt60):** Sets the duration of the reverberation decay.
 - **Position:** Determines the perceived position of the sound source in the stereo field.
 - **Diffusion:** Controls the density of the reverb reflections.

• EQ

- **The SP2016 Reverb features an EQ section for shaping the reverb effect:**
 - **Low Frequency:** Adjusts the low-frequency response of the reverb.
 - **Low Gain:** Controls the gain of the low-frequency EQ band.

- **High Frequency:** Adjusts the high-frequency response of the reverb.
- **High Gain:** Controls the gain of the high-frequency EQ band.

- **Preset Bar**

- **The Preset Bar allows you to manage and recall presets for the SP2016 Reverb:**
 - **Load/Save:** Loads or saves presets.
 - **Compare:** Compares the current settings with a saved preset.
 - **I/O Lock:** Locks the input and output levels when changing presets.
 - **Mix Lock:** Locks the mix level when changing presets.

- **FAQ**

- **Q:** How do I bypass the reverb effect?
- **A:** To bypass the reverb effect, press the Bypass button on the SP2016 Reverb unit.
- **Q:** What is the purpose of the limiter?
- **A:** The limiter prevents signal clipping by automatically reducing the signal level when it exceeds a certain threshold.
- **Q:** How can I adjust the balance between the dry and wet signals?
- **A:** Use the Mix parameter to control the balance between the dry (unprocessed) and wet (reverberated) signals.
- **Q:** How do I load or save presets?
- **A:** Use the Load/Save button on the Preset Bar to load or save presets for the SP2016 Reverb.
- **Q:** Can I compare my current settings with a saved preset?
- **A:** Yes, you can use the Compare button on the Preset Bar to compare your current settings with a saved preset.
- **Q:** How do I lock the input and output levels when changing presets?
- **A:** Enable the I/O Lock feature on the Preset Bar to lock the input and output levels when changing presets.
- **Q:** Can I lock the mix level when changing presets?
- **A0:** Yes, you can lock the mix level by enabling the Mix Lock feature on the Preset Bar.

About This Product

Thank you for your purchase of the Eventide SP2016 Reverb plug-in. This product contains reverb algorithms from the legendary SP2016 multi-effects unit plug-in format. For over 40 years, innovative effects like these have made Eventide an industry leader, and we are proud that they continue to be in demand today.

SP2016 Reverb features:

- Recreations of the Eventide SP2016 Stereo Room, Room, and Hi-Density Plate algorithms
- Reverb parameter controls including Predelay, Decay, Diffusion, and a unique Position control
- Low and high shelving filters
- Intuitive, easy to use GUI

We'll get into more depth on the product soon but, before you forget, please take a few minutes to register online. This helps us keep you informed of any important software updates and any special offers that may only be available to registered users.

About Reverb

- Creating a reverb algorithm is part art and part science.
- The science bit is all about the naturalness of the sound – whether the simulation convincingly conveys the feel of a real room.
- Some digital reverbs don't have the horsepower to run a sufficiently complex program to achieve naturalness.
- Without enough processing power, the effect will suffer from low echo density or unnatural density growth with time or comb filter effects, etc. As Einstein is alleged to have said “things should be as simple as possible, but no simpler.” This principle certainly applies to reverb algorithms.
- The art of reverb algorithm design begins with simulating a room that sounds good.
- Needless to say, rooms that sound awful exist in the real world. The structure of the reverb algorithm combined with the choices of delay lengths, interconnects, filter placement, early reflections, etc., all contribute to the overall sound.
- The final element of the art of reverb design is the designer's choice of how, and the extent to which, the artist/engineer/producer is permitted to modify the effect. What are the parameters and what do they do?
- The degrees of freedom available to the designer guarantee that no two (sufficiently complex) reverb algorithms will sound the same. Each will be unique.
- There are many popular digital reverberators for good reason. Each has a distinctive sound; each has a particular set of possibilities. The SP2016 reverbs have attracted a loyal user base because of a particular blend of art and science.
- They sound natural. They sound distinctive. And, while they allow the user to vary the effect dramatically, the controls can't be set in a way that will create an unnatural-sounding effect.
- The algorithms naturally simulate every aspect of the sound of a real enclosure – from the complex early reflections to the natural way in which the echo density increases with time, to the smooth Gaussian decay of the reverb tail.
- It's a powerful simulation that lends itself to parametric control.

Control Overview

- Operating the plug-in is simple and intuitive: drag the sliders up and down to adjust the parameters.
- You can hold down the Option (macOS) or Alt (Windows) key before click-dragging the slider to have the slider move more slowly, giving you a finer degree of control over the parameter.
- The parameter value for the control is displayed underneath the slider and is updated in real-time. You can also click on the displayed value and use the keyboard to enter a value.
- The controls are divided into five main sections: Status, Levels, Parameters, EQ, and the Preset Bar.

Status



- **Bypass**
 - Mutes the input and output of the reverb.
- **LED Display**
 - Shows the currently selected algorithm as well as the current value of a slider when dragging.

• Program

- Select the current algorithm. SP2016 Reverb features three reverb algorithms, Stereo Room, Room, and Hi-Density Plate. Each algorithm is available in two versions: Vintage and Modern.
- The Vintage algorithms are modelled on the original SP2016's algorithms and hardware, and feature a lower bit depth than the modern versions. The Modern algorithms are brighter, more diffuse, and use a higher bit-depth.

Levels



Input

- Controls the input level to the plug-in, the range is between $-\infty$ dB and +10 dB. The Input control can be used to attenuate the input so as not to overdrive the reverb and produce distortion.
- Like most audio gear, and digital gear in particular, you want to keep the input gain as high as possible while still keeping the reverb from being overdriven into distortion as indicated by the Limit LEDs at the top of the meters. This control affects the input level for the wet and dry signals.
- Output Controls the output level of the plug-in, the range is between $-\infty$ dB and +10 dB. This parameter sets the signal level after the mix control.

Kill

- The Kill button is a quick way to remove the input from the reverberator so that you can listen to the tail (reflections) caused by your input. The button lights up when it is depressed so that you can tell that the input is interrupted. This button also kills the dry signal to the mix.

Monitor

- Switches the source for the meters and Limit LEDs. The illuminated arrow indicates the active source; the left and right arrows correspond to input and output, respectively.

Peak Meters

- The Peak Meters show the peak level of the signals at the input or output of the plugin.

Limit

- The Limit LEDs illuminate when the peak amplitude of the input or the output has exceeded 0 dBFS (also known as digital clipping or overload) on the Left or Right channels.
- The LEDs will remain lit until you clear them; click either Limit LED to clear the Left and Right channels.
- The Limit LEDs display the overload indicator for the currently selected mode (Input or Output).
- If you are monitoring the input and want to see if the output has clipped, simply toggle the Monitor button.
- If the LEDs illuminate (or stay lit if the input has also clipped), the output has clipped.
- When Output is selected for the monitor, the Limit LEDs also illuminate when the internal reverb “matrix” is overdriven into digital clipping.
- This may—and usually will—occur even if the Peak Meters are nowhere near their maximum level indication.
- Digital clipping will also commonly occur if the Decay slider is at its longest setting, or if you add gain at low frequencies using the Low Gain slider.
- The remedy is simple: lower the input level using the Input slider. This is a normal operating scenario; it is not a defect.

Parameters

Mix

- Controls the mix between the unprocessed input and the reverberated output. This is especially useful when some pre-delay is added. The Mix Lock button in the menubar can be used to keep the level of the Mix slider constant while you browse presets.

Predelay

- Introduces a delay before the reverb effect. If you want to control the delay change more accurately, hold down the command key before you click and drag this slider. The SP2016
- Reverb is capable of long pre-delays, up to 999 milliseconds, and these can be used to create echo effects as well.

Decay (rt60)

- Decay (RT60) sets the time (in seconds) for a full amplitude 1 kHz sine wave to decay by 60 dB. In other words, this control sets the reverb time.

Position

- Position is used to move your “listening position” from the front of the “room” to the rear.
- You’ll find that Position is one of the most useful controls in adjusting the reverb to fit your mix. A simplified explanation: it changes the mix between the early and late reflections; what happens in the algorithm is more complex than this, however.

Diffusion

- Diffusion alters the character of your space – from the sharp reflections of flat, hard surfaces (low) to the

diffused reflections of rough, irregular ones (high).

- The Diffusion control doesn't change the decay time, but it does affect the evident nature of the decay by thickening or thinning its density.
- Note that this can often be a subtle difference and may be difficult to hear with some types of program material and/or with long decay times. The effects of the control will be most apparent with short decays and program material with percussive attacks.

EQ

The EQ (Equalization) section provides controls for high and low shelving filters. These controls affect parameters deep within the feedback structure of the reverberator and the effect may be subtle or dramatic depending on the program material and other reverb settings such as Decay, Position, or Diffusion. In general, the controls will have more pronounced effects at longer decay times and more distant position settings. Additionally, it's usually easier to hear the effect of changes to the high-frequency controls than it is to hear changes to the low-frequency controls. The Kill button can help evaluate how the EQ is affecting the sound.

- **Low Frequency** Sets the corner frequency for the low shelving filter; the range is from 50 to 500 Hz in increments of 50 Hz.
- **Low Gain** Adjustable gain for the low shelving filter, from -8 to +4 dB.
- **High Frequency** Sets the corner frequency for the high shelf filter; the range is from 1000 to 8000 Hz in increments of 500 Hz.
- **High Gain** Adjustable gain for the high shelf filter, from -8 to 0 dB.
 - Boosting the low frequencies when the Decay control is set for a very long decay time can cause the effect to "run away".
 - You can avoid this by lowering either the Decay or the Low Gain.
 - The reverb's internal feedback is also limited to help protect your speakers.
 - Some users, however, may find this type of sustained feedback interesting, and the parameters and EQ can be used to steer the feedback.

Preset Bar



Located at the top of the SP2016 Reverb Plug-In, the Preset Bar lets you load and save presets, along with several other features. When SP2016 Reverb is installed, a library of settings is placed into the /Music/Eventide/SP2016 Reverb/Presets folder (Mac) or the /Documents/Eventide/SP2016 Reverb/Presets folder (Windows). These presets have a .tide extension and can be saved or loaded from the SP2016 Reverb preset bar in any supported DAW. In many DAWs, there is an additional generic preset bar that saves DAW-specific presets to a separate location. We recommend saving your presets using the Eventide preset bar to ensure that your presets will be accessible from any DAW. You can also create sub-folders inside the preset folders if you wish.

Load/Save

- Use these buttons to load and save your presets in .tide format.

Compare

- Click to toggle between two different settings for the plug-in.
- This is useful for making A/B comparisons.

I/O Lock

- I/O Lock allows for flexible preset browsing. When I/O Lock is on, the current input and output gains will be preserved when new presets are loaded.

Mix Lock

- Mix Lock behaves similarly to I/O Lock. When Mix Lock is on, the current Mix value will be preserved as new presets are loaded. This is especially useful on an effect return track where the mix should always be set to 100.

Info

- Click this button to open this manual.

Settings

Opens a drop-down menu with various user interface settings.

- **Scaling** – Sets the overall size of the plugin.
- **Always Show Values** – Set slider values to be displayed at all times. This setting will apply to all instances of the plugin.

Conclusion

- We hope you enjoy the SP2016 Reverb plug-in and put it to good use in all of your mixes.
- Please be sure to check out Eventide's other native plug-in offerings for more unique and interesting effects.

CONTACT

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Documents / Resources

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References

- [E Eventide Audio | Studio Processors, Effects Pedals and Plug-ins](#)
- [User Manual](#)