

REVERB



Reverb and Multi-Effects
Plug-in for Digidesign® Pro Tools®

User Guide

Eventide®

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Introduction

Welcome, and thank you for your purchase of the Eventide Reverb plug-in designed exclusively for Digidesign Pro Tools. Reverb harnesses the power of TDM by bringing you our best reverb effects from our most prestigious hardware products and combines these with full multi-effect capabilities all within a single plug-in.

Eventide Reverb features:

- Nine Reverb effects including Hall 1 & 2, Chamber 1 & 2, Room 1 & 2, Plate 1 & 2 and Ambience
- Built-in reverb Randomizer based on the popular H949 Harmonizer™ Random pitch setting
- Dual delays for echo effects
- Pre-EQ and post-EQ – Independent, three band parametric equalizers for shaping the audio before and after the reverb and delays
- Movable Compressor provides dynamics before or after the reverb
- Lo-fi effect
- Unique Snapshots allow you to quickly store, recall, and automate up to 32 presets
- Graphical EQ interface for intuitive tone shaping
- Complete automation support and MIDI Program Change for Snapshots

About This Manual

We're very confident you'll be able to use your new plug-in without reading this manual, but we urge you to have a quick look. There are several unique features and interesting options presented in Reverb and a cursory glance will help streamline your efficiency. We'll try to keep it all relevant and highlight any tips or cool tricks for you.

We also won't cover much at all about the operation of Pro Tools or the Macintosh environments, as their owner's manuals or online help should provide you with the answers you need. We've made every attempt to integrate the controls and features that you're familiar with as a Pro Tools user into our Reverb plug-in so that you don't have to learn anything new.

If you find the need to get more information from us than this manual can provide, please visit our support forum available via our website (www.eventide.com).

Don't Forget to Register

Before you go any further, please take a moment to register your product. You can either mail in the enclosed card or click on the Register Now link provided on this CD and [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.

Chapter 1 – Installation

Read Me

Please be sure to have a look at the Read Me document on the installation CD for any important last minute updates from us.

Installation

Eventide Reverb comes in one tidy installer that contains all the necessary files for use under Mac OS 9 or OS X. Boot into the Mac OS that you want to install under before beginning this installation. If you use Pro Tools 5.x, then you'll need to boot into OS 9. Pro Tools 6.x users will want to be running Mac OS X before beginning the installation. Then run the Eventide Reverb Installer directly from the Application CD that came with the product. Follow the instructions on-screen to complete the installation.

Please refer to www.eventide.com for the latest on supported operating systems and Pro Tools platforms.

Allocating Memory

If you are running OS9, plug-ins with extensive graphics, such as Eventide Reverb, may require increasing your DAE memory allocation to run optimally.

Authorizing with the iLok USB Smart Key

Because Eventide Reverb utilizes the Pace Interlock copy protection system, you'll need to have your iLok smart key handy. After you've completed the installation, pop the little rectangular piece out of the license card provided in the product carton. Insert it as shown below into the key. Connect the key to any free USB port on the Pro Tools system where you installed Reverb. Launch Pro Tools and follow the authorization window's instructions.



Removing an Authorization

Should you have to remove the authorization from your iLok key, be sure to put it back onto the original license card. To do this, start Pro Tools. Hold Option+Space Bar while inserting Reverb into a channel. Then, follow the instructions on-screen.

Chapter 2 - Using Eventide Reverb

This chapter details the overall operation of the plug-in as well as what each of the parameters do. You'll also find information on how Snapshots work and a signal flow diagram to help you understand the path the audio takes as it flows through Reverb.

Please take some time to familiarize yourself with what each parameter does and be sure to read the section on Snapshots. Snapshots are a new and unique part of the product and may take a little getting used to in order to utilize them fully.

I/O Formats

Eventide Reverb is available for use on either mono or stereo channels. When using it to process stereo audio sources, it is a true stereo effect and will preserve the stereo image. When processing a mono audio source, the channel will be converted to a stereo channel and provide you with a stereo effect. Wet/dry mix settings will always preserve the balance of the source as well.

Please refer to the signal flow diagram on the following pages for more details.

Using the Controls

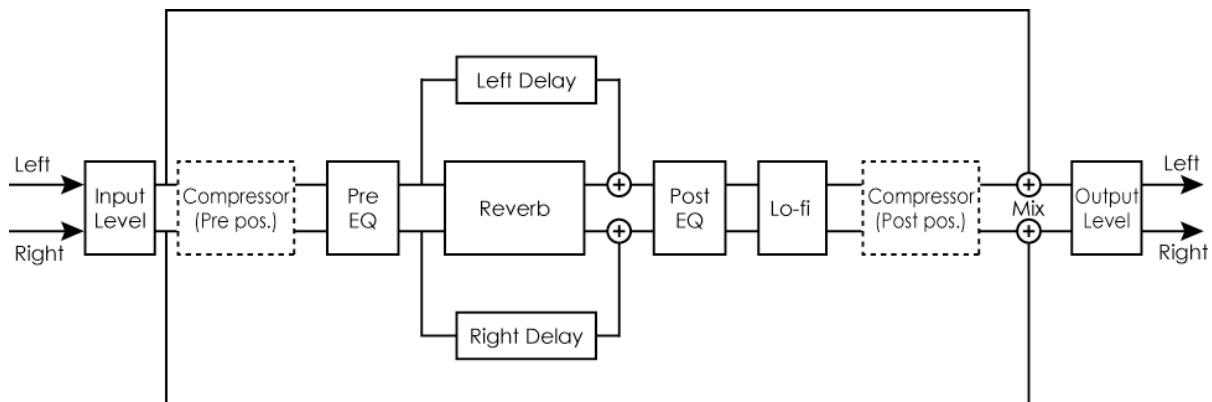
The control set offered by Reverb consists mainly of faders and number boxes. These controls have been designed to work in the most intuitive way, allowing you to quickly and easily adjust parameters or type in values.

To adjust a parameter, simply click on its fader and move it in the direction it is headed. In other words, if the fader moves left to right, click and drag the mouse left and right. If it's a vertical fader, click and drag up and down. You can also click directly in the number box associated with every parameter and drag the mouse up or down to increase or decrease the parameter's value.

Most parameters allow you to drag the mouse a convenient distance to cover the parameter's full value range. However, you can hold the Command key on the Macintosh keyboard while setting values and gain fine resolution control over that parameter values.

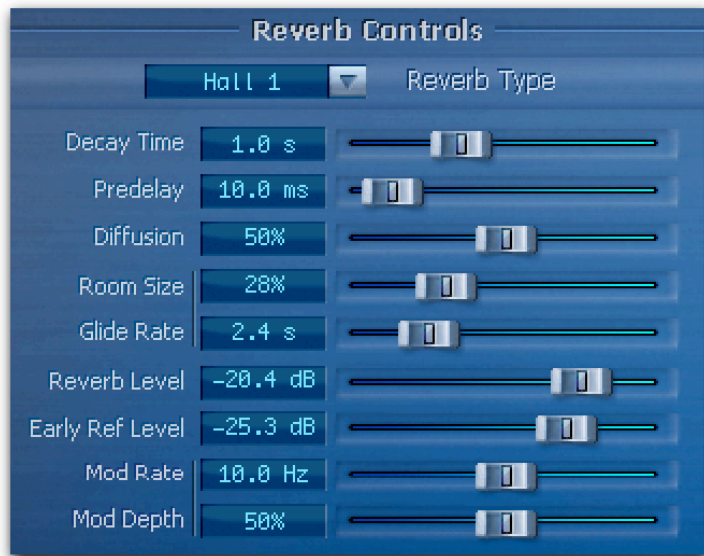
Every number box also allows you to type values directly in to immediately set the parameter value. Simply click once in the number box and release the mouse button without moving it. The box will become highlighted and ready for typing. Try to type in values that correspond to the parameter; IE 8kHz would be typed as 8000.

Signal Flow Diagram



Reverb Controls

Derived from such flagship effects processors as the Orville™ and Eclipse, Reverb produces the highest quality reverb effects available from Eventide. An extensive set of useful parameters is offered to give you the freedom to create the sound you need, quickly. Each of these parameters is detailed below.



Reverb Type

This pull down menu allows you to select among the various types of reverb algorithms available. When each reverb effect loads, the current settings are automatically applied.

Decay Time

The overall reverb decay time can be set using this slider. Also referred to as RT60, the decay time is the time it takes the reverberated sound to decay to a level 60dB down from its original level.

Predelay

Predelay affects the amount of delay, in milliseconds, until the onset of the reverb is heard.

Diffusion

The Diffusion parameter sets the overall reflectivity of the chosen space. Higher Diffusion settings will cause the reverb to sound more dense, and lower settings will give the perception of more discreet reflections.

Room Size

The overall perceived size of the reverberant space is affected by this parameter. Due to the structure of our reverb algorithms, a pitch change can be heard when manipulating this control. The amount of shift is determined by how long the Decay Time is as well as the setting of the Glide Rate control. You can use this control as a special effect by automating it and varying its values swiftly.

Glide Rate

This is the time it takes the Room Size to glide to its new setting. When used with Room Size, a pitch gliding effect can be created, and even automated as part of the music.

Reverb Level

This sets the overall level of the reverb decay.

Early Ref Level

This sets the overall level of the early reflections portion of the reverb algorithm.

Mod Rate

When used in conjunction with Mod Depth, Mod Rate sets the speed of reverb modulation. Reverb modulation effectively adds a slight detuning to the sound, causing it to sound different every time a sound is passed through.

Mod Depth

This parameter controls the amount, or level, of reverb modulation that is present.

EQ Controls

Eventide Reverb comes complete with two independent and fully parametric equalizers, referred to as Pre-EQ and Post-EQ. There are also shelving filters available for the reverberator as well as the dual delay lines. All four of these stereo filters have their controls conveniently grouped within a single graphical interface with editable parameters as described below.



Because these four groups of equalizers are available simultaneously, they are also displayed together in the EQ Controls section. To edit one of these groups of EQ, simply select it for editing by clicking the button next to the text under the "Graph shows:" heading. As each is selected, its EQ curve is given focus by highlighting the associated colored line, bringing it to the foreground. To change the filter settings, use the number boxes below the graph.

Note that some EQ parameters are not available all the time. The reverb and delays do not offer a Mid filter section, nor do they have adjustments for bandwidth as they are high and low shelving filters.

Graph Shows

Use these four buttons to select one of the four EQ sections for editing.

High

This row of parameters affect the high band filter section.

Mid

This row of parameters affect the mid band filter section. Not available for the reverb or Delay filters.

Low

This row of parameters affect the low band filter section.

Frequency

Use these parameters to set each band's center frequency.

Gain

Use these parameters to set the gain or attenuation that occurs at each band's center frequency.

Bandwidth (Q)

These parameters determine the range of frequencies that are affected by each band, effectively setting the shape of the filter. The bandwidth is equal to the frequency setting divided by Q. Therefore, higher values create a more “notched” filter while lower values affect a broader range of frequencies. To set the Pre- and Post-EQ’s Low and High bands to a shelving function, set the parameter to its minimum value.

Lo-fi

The Bit Reducer is provided as a special effect, offering that sought-after “vintage digital” sound. The higher the number, the grungier it gets.

Levels Section

This section offers the necessary wet/dry balance controls as well as the ability to add up to 24 dB of gain through the product.



Input

This parameter allows you to adjust the signal level into this plug-in. The mark in the meter display indicates -12dBfs of signal while the clip indicators will come on at -0.2dBfs . Up to 12 dB of gain is provided to recover low-level signals.

Output

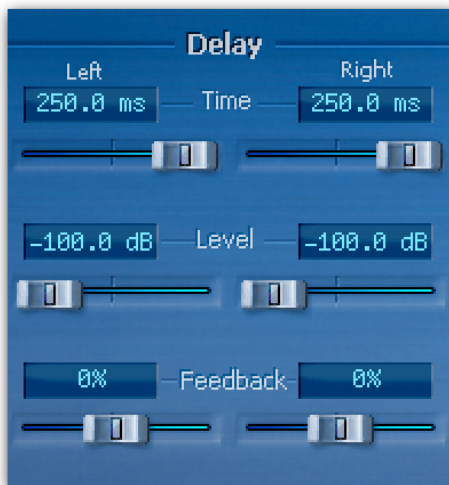
This parameter sets the final output level of the plug-in. The mark in the meter display indicates -12dBfs of signal while the clip indicators will come on at -0.2dBfs . Up to 12 dB of gain is available.

Mix

This parameter sets the overall balance of wet (effected) signal to dry (original) signal.

Delay Section

As mentioned previously, this plug-in offers two independent delay lines with filtering. Use them as straight delays or add filtering for use as echo effects. The 6 parameters are defined below in groups of two (left and right) to reduce redundancy.



Time

These two parameters set the amount of delay time, in milliseconds, for each channel of delay.

Level

These parameters adjust the overall level of each delay.

Feedback

These parameters set the amount of audio that is fed back into each delay. Also known as regeneration, feedback controls the number of repeats that heard when a signal is fed into it.

This parameter offers a range of -100% to 100%. Zero percent results in no feedback (only one repeat), while higher numbers produce increasing amount of feedback. Negative numbers produce a feedback signal that is 180 degrees out of phase.

Compressor Section

A fully parametric and movable compressor is offered via the Compressor section. This dynamics effect can be positioned immediately after the Input gain or before the final wet/dry mix control. There is also a Bypass setting that allows you to easily audition the plug-in without compression.



Threshold

Threshold sets the level at which gain reduction begins to take place. Signals that pass above the Threshold value will begin to have their gain reduced by the amount set via the Ratio parameter.

Ratio

The Ratio parameter sets how much gain reduction will occur for every dB of signal level above the Threshold. The range is from 1:1 (no compression) up to 100:1. To create a hard limiter, set the Ratio to 100:1 and the Knee parameter to 0dB.

Gain

This parameter allows you increase the compressor's output level in order to make up for the level lost due to gain reduction.

Attack

This parameter determines how fast the compressor will react to signals above the Threshold.

Release

This parameter determines how fast the compressor will react to decreasing signal levels.

Knee

The Knee determines a region above the Threshold where the gain reduction transitions from 1:1 to the Ratio setting. As the input signal crosses the Threshold and moves through this window, its gain reduction is increased up to the Ratio value.

Pre / Post / Bypass

When the Compressor is set to Pre, it affects the signal prior to the Pre-EQ.

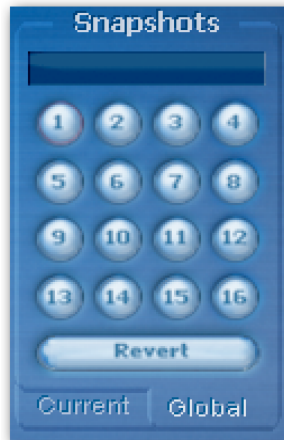
When the Compressor is set to Post, it affects the entire plug-in.

When set to Bypass, the Compressor is effectively removed from the signal chain.

Snapshots

Overview

Eventide Reverb incorporates our unique Snapshots feature that allows you to quickly and easily load, save and even automate up to 32 of your favorite Reverb “scenes.” They’re very much like presets, but you can load them directly from the plug-in panel and even via MIDI Program Change. This means that you get the live performance functionality offered from our high-end hardware processors directly in the Pro Tools environment.



Loading

To load a Snapshot, simply click on any of the numbered buttons at any time. The entire Reverb plug-in panel will change to reflect the settings stored in the chosen Snapshot. You'll also notice that the name of the currently loaded Snapshot is displayed in the text box above the number pad. And, so you know what you're loading before you click, move the mouse over any of the 16 numbered buttons to reveal its name. You can choose from the bank of 16 Current or 16 Global Snapshots by first clicking on the tab at the bottom of the Snapshots area. These are described in the sections below.

Renaming

Click once on the name in the entry box, and it will be selected for editing. Type up to 16 characters, hit return and the Snapshot has a new name. No need to save it just to rename it.

Saving

To Save your work and overwrite one of the Snapshots, simply command-click on any of the numbered Snapshot buttons and it's instantly stored. There's no undo, but you can restore any of the defaults at any time by reloading it from the preset menu, then saving it in the appropriate location. Read ahead about the differences between Current and Global to insure your work is repeatable.

Revert

Revert gives you the freedom to return to the effect settings you were working on before you loaded one or more Snapshots. It's very much like compare, except that you can load a gajillion Snapshots, and still get back the same parameter values that you had been editing prior to loading Snapshots.

You'll notice that as soon as you click on a Snapshot button, the Revert button glows to indicate that you can press it. Click on some other Snapshots. It's still lit. If you click on Revert, it goes out and you're back to the original edits you'd just been working on.

You'll also notice that the selected Snapshot button goes out as soon as you change a parameter's value. This is to indicate that you are no longer listening to a Snapshot.

Global vs. Current

There are two kinds of Snapshots, Global and Current, and they are grouped in banks of 16. During installation, the Global bank is created as a preference file on your hard drive. You can overwrite each of these 16 defaults at any time and they will be available for every instance of the Reverb plug-in, on every Pro Tools session on the hard drive. Use these like your favorite 16 Reverb effects. You can even copy this file and move it to other systems that have Eventide Reverb installed so you can take your favorites with you.

Now, the Current bank is a little different. When the plug-in is first inserted on a channel, the Global bank is copied into the Current bank. At this point, they're the same. The only difference is that the Current Snapshots are saved with the current

instance of the Reverb plug-in. If you save changes to one of the Current Snapshots, you won't be able to load that Snapshot into another instance of Reverb. This Current bank is unique to the current plug-in instance.

Why are there Global banks and Current banks? The main reason to have two is because you can automate the loading of Snapshots via MIDI Program Change. This is a very powerful feature, however if you only had Global Snapshots, and they had been modified since you last loaded the session, the Snapshot that gets loaded is likely to sound different. Therefore, we offer you two kinds.

Proper Snapshot Hygiene

Snapshots can be very powerful in use, but knowing how they work will help ensure that your Eventide Reverb Snapshots load and sound right every time. So, if you want to load a Snapshot using Program Change, load it from the Current bank. If you want to build yourself your favorite 16 and use them everywhere, use the Global Snapshots. If you want to copy a cool Current Snapshot into the Global bank, simply load it from the Current tab first, then command-click on the desired Snapshot button from the Global tab.

Restoring Global Defaults

The Global bank contains the same presets that can be found in the Default Snapshots folder up in the Pro Tools preset load menu. Load one and store it back into its numbered location on the Global tab to restore it to its "factory settings."

Automating with Program Change

As mentioned earlier, you can use MIDI Program Change to select and load any of the 32 Snapshots. This can occur as part of a MIDI track, where Program Change events are used to automate the loading of snapshots. Be sure to read the sections above on using Snapshots for predictable loading every time.

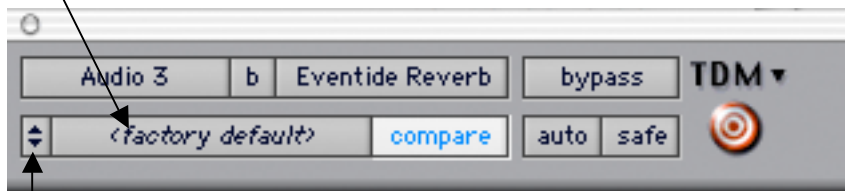
Simply create a MIDI track and assign the desired MIDI Device and Channel to the channel in which Reverb is inserted. Sending the appropriate MIDI Program Change number, as detailed below, will load the desired Snapshot.

Program Change number...	Loads...
000	Revert
001 thru 016	Current Snapshots 1 thru 16
017 thru 032	Global Snapshots 1 thru 16

Saving and Recalling Presets

Reverb utilizes the standard Pro Tools Save and Recall interface for presets. Available via the Global Plug-in Header, presets are organized into familiar groups of folders. Simply click on the preset select menu and select a preset. It will load instantly.

Click here to select a preset



Click here to access the store features