



① Precision Time Align

① Precision Time Delay

## **User Guides**

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**Eventide Inc.**

One Alsan Way

Little Ferry, NJ 07643

201-641-1200

**[www.eventide.com](http://www.eventide.com)**

## Table of Contents

<b>CHAPTER 1 – INSTALLATION</b>	<b>6</b>
<b>CHAPTER 2 THE EVENTIDE PRECISION TIME DELAY</b>	<b>7</b>
Phase Invert	7
Delay Time	7
Samples	8
Distance	8
Course Adjust	8
Fine Adjust	8
<b>CHAPTER 3 THE EVENTIDE PRECISION TIME ALIGN</b>	<b>9</b>
Negative Delay	9

## Introduction

Eventide's new Precision Time Delay and Precision Time Align plug-ins for Digidesign Pro Tools provide you intuitive environments through which to synchronize a signal to microsecond accuracy.

Both plug-ins seamlessly integrate with the Pro Tools environment, and provide four different methods for calibrating the signal to achieve perfect signal matching. Precision Time Delay and Precision Time Align also support phase inversion and two levels of precision controls for optimizing the time shift in a recording.

Additionally, Precision Time Align permits you to perform negative delays, which essentially move the track up in time relative to the tracks in the recording.

Whether you wish to correlate multiple tracks of a single instrument, compensate for phasing from different mics on a kick drum, or align audio segment for a tracking-only session, Precision Time Align and Precision Time Delay are ideal for these and endlessly other similar engineering tasks.

## About This Manual

We're very confident you'll be able to use your new plug-ins without reading this manual, but we urge you to have a quick look. There are several unique features and interesting options presented in this manual, 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 Precision Time Delay and Time Align plug-ins 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](http://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**

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### **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's Precision Time Delay and Precision Time Align are part of the Anthology II bundle, which 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 the 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 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](http://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 you may be required to increase your DAE memory allocation to run optimally.

### **Authorizing with the iLok USB Smart Key**

Because the Precision Time Delay and Precision Time Align utilize 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 the plug-ins. 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 the plug-ins into a channel. Then, follow the instructions on-screen.

## Chapter 2 The Eventide Precision Time Delay

Eventide's Precision Time Delay is a remarkably simple time-shifting resource that allows you to accurately compensate for timing disparities in a recording. Precision Time Delay will generate perfectly synchronized double-tracked vocals, crisper background vocals, and entirely eliminate timing anomalies on instruments being recorded simultaneously from different microphones.

After you master its easy design, you'll find out the precision truly is the operative description for this plug in. Between the Coarse and Fine Adjust slider controls, you can achieve perfect correlation between two tracks to 1/64<sup>th</sup> sample.

Precision Time Delay and Precision Time Align are identical products, except for latter supports negative delays. (That capability is described in the next section.) Each is accessible separately from Pro Tools' Plug Ins menu.



**Figure 1** The Eventide Precision Delay user interface

Precision Time Delay is comprised of the following attributes and controls:

### Phase Invert

Click this button to invert the phase of the signal. An example where this might be employed is when two microphones are recording opposite sides of a snare drum, which naturally result in mirror-image acoustical phasing.

### Delay Time

This displays the current active value for Precision Time Delay, in milliseconds. A new value can be selected by left-clicking on the display. It will refresh with a white background, after which you can enter a new value. Subsequently all other values for Samples and Distance will update accordingly to reflect the change, as well as the slider positions for Course and Fine Adjust. (Samples and Distance controls, described below, work in identical fashion.)

Delay times for Precision Time Delay range from 0 ms to 10 ms. Delay times for Precision Time Align range from -10.1 ms to 10.1 ms.

## Samples

The Samples display allows you to select the time delay based on the Sample rate. Precision Time Delay and Time Align support sample adjustment in increments of 1/64 proportional to the selected sample rate. As a result, the larger the sample rate, the more granular the samples selector becomes.

For example,

- A sample rate of 44100 yields a total of +-445.41 samples;
- A sample rate of 48000 yields a total of +-484.8 samples;
- A sample rate of 88200 yields a total of +-890.82 samples;
- A sample rate of 96000 yields a total of +-969.6 samples;
- A sample rate of 176400 yields a total of +-1781.64 samples; and
- A sample rate of 19200 yields a total of +-1939.2 samples.

## Distance

Distance is measured in both English (feet and inches) and Metric values. When entering an English measurement unit, always use inches. For example, entering "28" will result in a new value of 2 feet, 4 inches. For Metric measurement units, you may enter a decimal value to express distances less than one meter. For instance, entering "0.65" will result in a new value of 65 cm.

Precision Time Align and Precision Time Delay support distances +/- 10 feet, 11.8 inches (English distances) and +/- 3.3 meters (Metric distances).

## Coarse Adjust

The Coarse Adjust slider control allows you to quickly find the general time shift range you are seeking. Move the slider to the right or left to gauge the delay compensation, then proceed to the Fine Adjust control to more accurately tune your general setting.

Course Adjust for Precision Time Delay is from 0 to 10 ms. Course Adjust for Precision Time Align is from -10 to 10 ms.

## Fine Adjust

The Fine Adjust slider control works in conjunction with the Course Adjust to yield the most perfect time shift adjustment possible. After the general time delay has been established using Course Adjust in milliseconds, use Fine Adjust to tweak the settings in microseconds.

Fine Adjust for Precision Time Delay is from -100 to 100  $\mu$ s (values less than zero are cut off). Fine Adjust for Precision Time Align is from -100 to 100  $\mu$ s.

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**Note:** Precision Time Align and Precision Time Delay achieve sub-sample accuracy through the use of oversampling. This process necessarily requires the use of an anti-aliasing filter. Although Precision Time Align uses a very high quality filter, at low sample rates the very high end of the audible spectrum may be affected. Using PTA or PTD at a sampling rate of 44.1 kHz will result in ~2 dB of attenuation at 19000 Hz.

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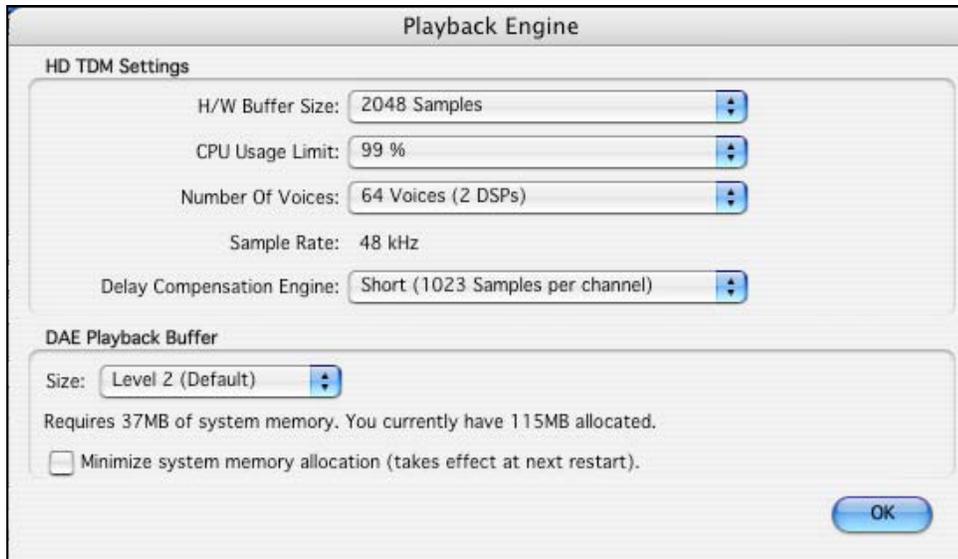
## Chapter 3 The Eventide Precision Time Align

### Negative Delay

The Precision Time Align plug-in is identical in every way to Precision Time Delay, except for its support for Negative Delay. This allows you to move the delay forward in time relative to the rest of the signal.

In order to use this capability, you must first activate the Delay Compensation Engine in Pro Tools. To do this,

- From the **Setups** menu, select **Playback Engine**; the following screen displays:

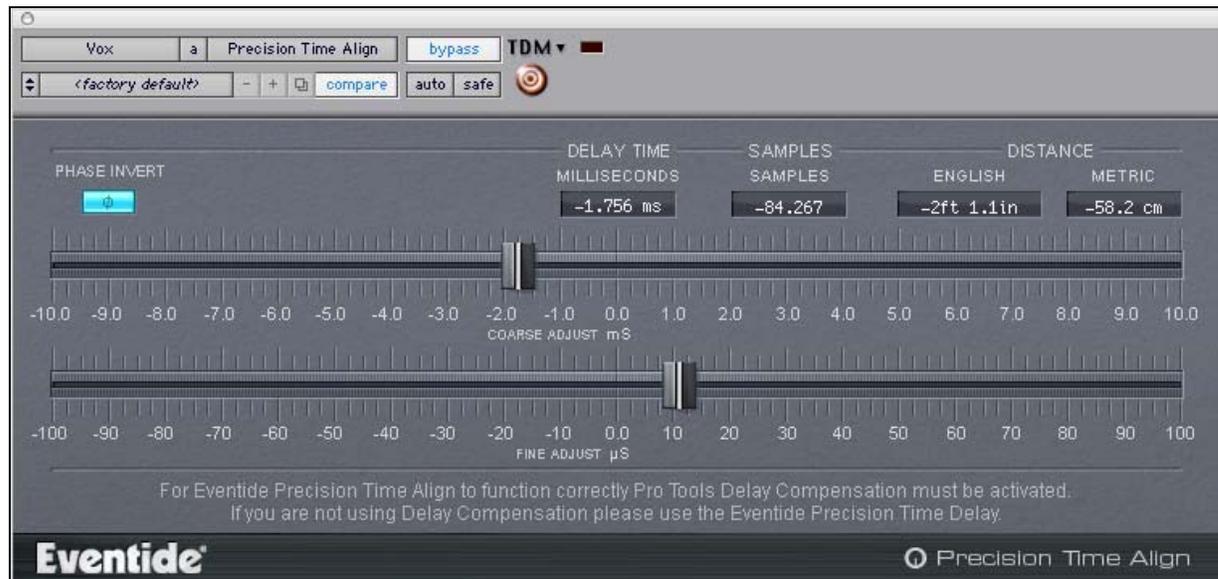


**Figure 2** Pro Tools' Playback Engine window

- Select one of the available options from the *Delay Compensation Engine* drop-down list, and click **OK**.

You can now use Precision Time Align's Negative Delay functionality.

As the screen below illustrates, where Precision Time Delay's values to the left of "0" are disabled on the Course and Fine Adjust sliders, they are now active



**Figure 3** Eventide Precision Time Align user interface

Now you can perform time adjustments that actually move the signal forward in the playback relative to the other tracks. As you see in the illustration above, Delay, Samples, and Distance values display as negative, reflecting that a negative delay is being performed.

If you do not require negative delay or delay compensation functionality, use the Precision Time Delay instead.

All other aspects of Precision Time Align are identical to Precision Time Delay. Go to the previous section to reference descriptions of its interface and functional areas.

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**Note:** In Mix systems, which do not use delay compensation, the Precision Time Align tool is unavailable and not displayed in the Pro Tools' Plug Ins directory.

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**Note:** Precision Time Delay is better suited for tracking live instruments than Precision Time Align, because of its minimum throughput delay.

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