OCTAVOX™

Harmonizer® Plug-In
for Digidesign® Pro Tools®

User Guide

Eventide®

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Introduction

Welcome, and thank you for your purchase of the Eventide Octavox Harmonizer plug-in designed exclusively for Digidesign Pro Tools. Octavox brings you our time-based diatonic harmonizer technology presented in an easy to use and unique interface. Eight voices of pitch-shifting and delay are combined in the Notation Grid™ to let you create simple harmonies or complex rhythmic sequences.

Eventide Octavox features:

- Eight Voices of Diatonic, Time-based Pitch Shifting
- Each Voice offers up to 4.8 Seconds of Delay (with Pro Tools Accel hardware)
- Notation Grid™ provides a unique and musical way to create harmonies
- Unique Snapshots allow you to quickly store, recall, and automate up to 32 presets
- Integrated mixer for placing voices on the sound stage
- Complete automation support and MIDI Program Change for Snapshots
- Three versions are included to support the varying Pro Tools TDM available delay lengths. Octavox MX (1.2 Seconds), Octavox HD (2.4 Seconds) and Octavox XL (4.8 Seconds).

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 Octavox 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 Octavox 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 Octavox 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 Octavox 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 Octavox 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 Octavox. 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 Octavox into a channel. Then, follow the instructions on-screen.

Chapter 2 - Using Eventide Octavox

This chapter details the overall operation of the plug-in as well as what each of the parameters do. 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

Octavox is available for use on either mono or stereo channels, although it is a mono input effect. When using it to process stereo audio sources, it will mono-sum stereo inputs. The plug-in will always produce a stereo output converting a mono channel into a stereo channel.

Using the Controls

The control set offered by Octavox consists mainly of faders and number boxes, although the Notation Grid provides a new way of controlling the pitch and timing of voices. 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 each 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 1.2 Seconds would be typed as 1200.

Pitch and Delay Controls

Derived from such flagship effects processors as the Orville™ and Eclipse, Octavox produces high quality harmony 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.

Voice Select

More of tool than a parameter, Voice Select allows you to bring voices forward when manipulating them in the Notation Grid. You may find voices that share similar delay times and pitches end up stacking up on top of each other. Grabbing with the mouse may not pick the one you'd like to edit. Use the Voice Select button to bring the desired voice to the top, making it easier to grab it and move it with the mouse.

Voice Level

Each voice offers level control from 0dBfs down to –100dBfs.

Voice Enable

Each Voice can be quickly turned on or off using this button. When a voice is turned off, its note graphic is removed from the Notation Grid.

Voice Pan

Each Voice offers a pan control to place it anywhere in the stereo field.

Delay Time

This lets you set the amount of time that passes before the voice is heard. The range of this parameter is determined by the version of the plug-in you load, MX, HD or XL. MX supports the Pro Tools Mix hardware and offers 1.2 seconds of Delay Time. HD support Pro Tools | HD with 2.4 seconds while XL supports Pro Tools | Accel and 4.8 seconds. Use the version that makes the most sense to your system and how you work. If you intend on moving the session from an HD system to a Mix system, try to start with the MX version so your settings are more portable.

Delay Feedback

Each voice has its own feedback loop that causes its own output to feed back into the input. It works best with some amount of delay and can create the popular staircase pitch effects when a semitone or more or shift is applied to the voice. Be careful with cumulative feedback–when the eight voice feedback amounts add to 100% or greater, run away feedback will occur and the audio will mute.

Pitch Interval

This parameter sets the interval of diatonic pitch shift that is applied to the individual voice. Up to 2 octaves are available in diatonic steps and appropriate intervals are created based on the selected key and scale. If you're trying to create harmonies that will always be in key, use these parameters. These pitches can be combined with the Pitch Cents parameter. The two values will be added together to create a final pitch shift amount.

Pitch Cents

This parameter sets the amount of pitch shifting regardless of key or scale. If you desire a fixed pitch shift amount no matter what the key or scale, use these parameters. Cents is most widely used when creating micropitch or detune effects and can be used to offset the Pitch Interval for detuned diatonic harmonies. If you want to create chromatic intervals that ignore the key or scale, use this field.

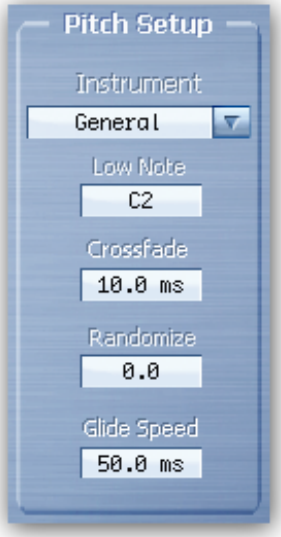
For reference, here's a cents-to-interval conversion chart.

Cents	Pitch Interval	Cents	Pitch Interval
100	Minor 2nd	700	Perfect 5th
200	Major 2nd	800	Minor 6th
300	Minor 3rd	900	Major 6th
400	Major 3rd	1000	Minor 7th
500	Perfect 4th	1100	Major 7th
600	Tri Tone (Flat 5)	1200	Octave

NOTE: Add 1200 cents to these numbers for anything beyond the first octave.

Pitch Setup Controls

These parameters determine the quality and overall performance of the pitch shifting.



Instrument

This pop-up menu sets the Low Note and Crossfade parameters with preset values making pitch setup more convenient.

Low Note

Low Note determines the lowest note that the pitch detector will be listening for. This can be very helpful in filtering out any false readings that may be caused by extraneous low frequencies.

Crossfade

Crossfade sets the window of splicing that occurs during the pitch shift process.

Randomize

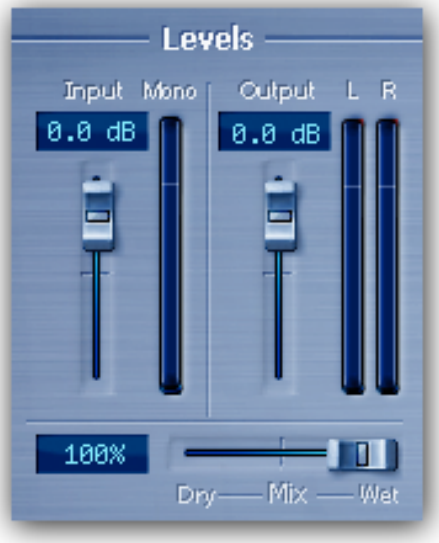
Inspired by the H949's Random Pitch algorithm, the Randomize control will randomly apply a random amount of micropitch to any enabled voices. This is a quick way to create the random detuning that can be useful when creating chorused or choir effects.

Glide Speed

Glide Speed sets the time it takes for each voice to glide to its new pitch. This will effectively set how quickly voices appear to track the changes in source pitch.

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 in to this plug-in. Up to 12 dB of gain is provided to recover low-level signals.

Output

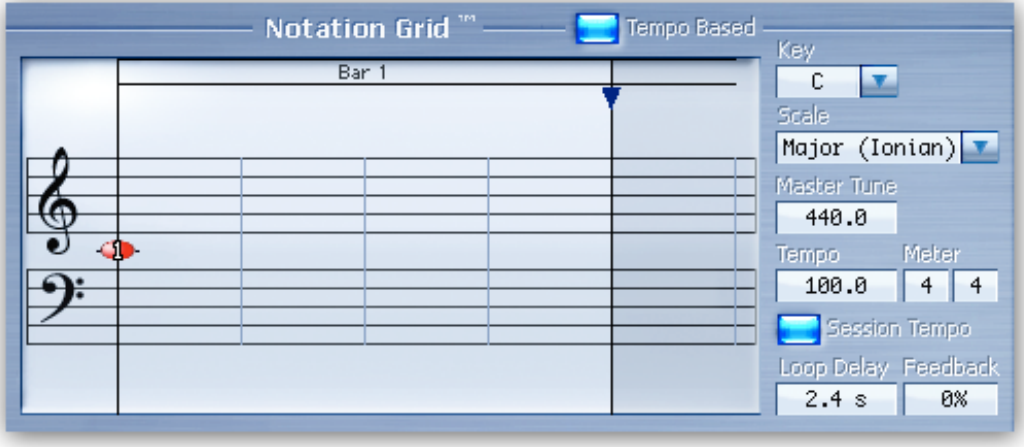
This parameter sets the final output level of the plug-in. Up to 12 dB of gain is available.

Mix

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

Notation Grid

The Notation Grid takes a very unique and musical approach to creating pitches or rhythmic sequences. As each voice is enabled, it is represented on the grid by an oval note graphic with a corresponding number. By clicking and dragging on the oval, the note can be placed anywhere on the grid. The vertical position reflects the voice's pitch shift amount, relative to the selected key. The note's horizontal position reflects the delay time for that voice.



When moving a voice around on the grid, it will automatically snap to quantized pitch and time subdivisions in order to easily create intervals and rhythms. To allow the voices to move freely without being quantized to 16 notes, hold the Command key while dragging the voice.

You may find that the Notation Grid is best for creating harmonies or constructing chords and especially when creating a sequence of notes. However, when creating micropitch or fixed-interval effects it may be easier to set up each voice using its individual parameters. Use the way that works best for you.

The rest of the parameters that affect how voices are processed are detailed below.

Tempo Based

Enabling this button will cause the delay times to be calculated based on the Tempo parameter. As the tempo value changes, the delays will be scaled appropriately to maintain the rhythm. When this parameter is off, changes in the Tempo will be ignored. Note that you can have tempo-based delays and ignore the Session Tempo (below).

Key

This parameter sets the Key that will be used as the pitch reference for scales and intervals.

Scale

This determines the progression of whole steps and half steps that will be used for the chosen intervals.

Master Tune

This sets the overall tuning reference. The tuning is referenced to A4, with a range of 392Hz to 494Hz.

Session Tempo

When this is enabled, Octovox's Tempo and Meter parameters will use and follow the Tempo and Meter changes that occur in the Pro Tools session. Otherwise, when set to off, changes to the session Tempo and Meter will be ignored. Note that the Tempo and Meter parameters may still be automated if this parameter is set to off. (Not available in Pro Tools 5.)

Tempo

This sets the Tempo of the plug-in. In Pro Tools 6 and higher, if Session Tempo is enabled, this parameter value will automatically be derived from the session.

Meter

The Meter parameter consists of two values that determine the meter, or time signature, of the Notation Grid. The left number is the numerator which sets the number of beats that are in a measure. The right number is the denominator which sets the beat subdivision that is referenced in the measure. For example, a setting of 4 on the left and 4 on the right sets the Notation Grid to 4/4 meter and each measure will reference four quarter notes. A seven on the left and an eight on the right creates measures made up of 7 eighth notes.

In Pro Tools 6 and higher, Session Tempo can be enabled to have this value automatically set from within the session.

Loop Delay

This sets the loop point for the Notation Grid. By turning up the loop feedback, the notes in the grid can be repeated by the length of the Loop Delay. This Loop Delay is preconfigured to be the longest possible, but can be changed via the parameter's entry box. This can also be dragged with the mouse by clicking on the handle (the little down triangle) that exists at the top of the Notation Grid. As you move it, it will snap to beat subdivisions, or Command-Click to obtain fine control.

Loop Feedback

This sets the number of repeats heard for the Loop Delay. It can be very useful when you want to create echoes that don't pitch shift on each repeat like the individual voice feedbacks will do.

Snapshots

Overview

Eventide Octavox incorporates our unique Snapshots feature that allows you to quickly and easily load, save and even automate up to 32 of your favorite Octavox "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 Octavox 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 gajiillion 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 Octavox plug-in, on every Pro Tools session on the hard drive. Use these like your favorite 16 Octavox effects. You can even copy this file and move it to other systems that have Octavox 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 Octavox 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 Octavox. 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 Octavox 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 before, 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.

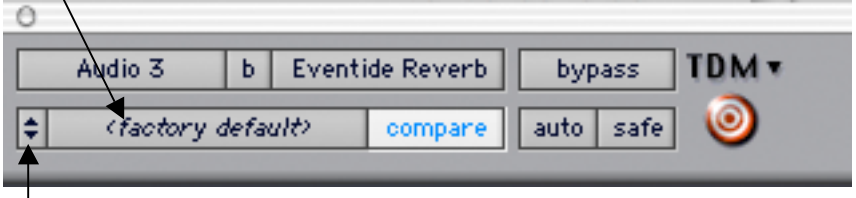
Simply route the desired MIDI Device and Channel to the channel that Octavox is inserted. Sending the appropriate MIDI Program Change number, as detailed below, will load the desired Snapshot.

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

Octavox 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



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