OCTAVOX™
User Guide

Eventide®

Contents

Chapter 1

Introduction

1.1 About This Product

The Eventide Octavox plug-in is a powerful audio engineering plug-in for Avid AAX, Apple Audio Units, and Steinberg VST formats. 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. The voice intervals can even be played via MIDI notes with several useful modes, for further sonic and live performance possibilities. Eventide Octavox features:

- Eight Voices of Diatonic, Time-based Pitch Shifting

- Each Voice offers up to 4.8 Seconds of Delaye

- Notation Grid™ provides a unique and musical way to create harmonies

- Voice interval amount can be "played with a MIDI keyboard

- 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 for Snapshots

1.2   About This Manual

While we're very confident you'll be able to use your new plug-in without reading this manual, we urge you to have a quick look. There are several unique features and interesting options presented in Octavox and a cursory glance will illuminate any features you may overlook. 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 your plug-in host or the Macintosh or Windows 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 standard controls and features from the major plug-in hosts 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 (http://www.eventideaudio.com).

Chapter 2

Registration, Activation, and Installation

Eventide uses PACE's ilok.com licensing system, with or without an iLok hardware dongle, to license our plug-in products. Each license provides two activations which can reside on either your computer or on an iLok license dongle. Once you've purchased your plug-in, you'll need to register it on Eventide's website, activate your license, and install the plug-in on to your computer.

2.1   Registering Your Plug-in

When you purchase an Eventide Native plug-in, you'll receive a Serial Number and License Key. The Serial Number will be two letters followed by 6 numbers. If you have an individual Octavox license, the Serial Number will start with OV (i.e. OV-######). If you purchased a group license, the Serial Number will be in the same format, but correspond to that group license (e.g. AX-###### for Anthology X). The License Key will be 3 sets of 4 characters, a letter or a number, each; like XXXX-XXXX-XXXX.

Once you've received these codes, you can register your plug-in on the Eventide website. To do so, please log in to http://www.eventideaudio.com, navigate to My Account in the top right corner, and select Register a New Product. Then, fill out the form by selecting Native Plug-in (VST, AU, AAX) in the Product Category field, select Octavox or the applicable group license in the Product list, and enter your Serial Number, License Key, and iLok.com account name. If you don't yet have an ilok.com account, you can create one for free at http://www.ilok.com. Once you've done so, press Register.

Once you've entered this information and pressed the Register button, Eventide will send the applicable plug-in license to your ilok.com account, which you will need to activate to your computer or iLok dongle.

2.2   Activating Your License

To activate and manage your plug-in licenses you'll need to install PACE's iLok License Manager software which you can download from http://www.ilok.com. If you don't have this software installed, please download and install it now.

Once you have installed and launched iLok License Manager you should be able to log in to your account by clicking the large Sign In button in the upper left hand corner of the application. Once you have, you should be able to see available licenses by choosing the Available tab at the top of the iLok License Manager application. If you have successfully registered your plugin, your Octavox Native license will be available in this list. Please activate this license by dragging it to either your computer or iLok dongle listed on the left. When you do so, you will be asked to confirm the activation, and you will be able to see it by clicking on the location you have chosen. At this point your license is activated.

2.3 Installing Your Plug-In

You should have been given a link to the Eventide Native plug-in installer when you purchased your plug-in, but if you haven't, you can find downloads for all of Eventide's Native Plug-Ins at http://https://www.eventideaudio.com/products/plugins. Please download and launch the correct installer for your system.

Once you've launched the plug-in installer, it will take you through several pages of options. We have tried to choose defaults for these options which will best serve the majority of users, but it is worth a minute to make sure you understand these options before clicking through to the next page. Once you have followed through the installer, your plug-ins and presets should be in your chosen locations, and you can hit finish to end the installer application.

At this point, you should be ready to use your Eventide Octavox Plug-In.

2.4 Moving or Removing an Activation

If at any point, you decide to move your plug-in activation, you can do so in iLok license manager. To move an activation between an iLok dongle and your computer, simply plug in the iLok, locate the license in its current location, and drag it to its new location. To deactivate a license, find it in its location, right click on it, and choose deactivate.

Remember that each Eventide Native Plug-In License comes with two activations, which can be used on either a computer or iLok dongle, meaning you can use Octavox in two locations at the same time.

Chapter 3

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. The Octavox user interface (below) is a compact yet intuitive environment that uses consistent conventions throughout. It should take you no time at all to effortlessly navigate through each part of the plug-in.

3.1   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.

3.2   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.

3.2.1   Live Mode

Located in the top right corner of the plug-in, Live Mode toggles the latency of the plug-in. When turned off, Octavox uses 40ms of latency and the benefit of delay compensation in your DAW to improve pitch detection, while still sounding in time during playback. If you would like to use Octavox for a real time application, just turn on Live Mode and the latency will return to normal.

3.3   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.

3.3.1   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.

3.3.2   Voice Level

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

3.3.3   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.

3.3.4   Voice Pan

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

3.3.5   Delay Time

This lets you set the amount of time that passes before the voice is heard.

3.3.6   Delay Feedback

Each voice has its own feedback loop that causes its own output to feed back into it's input, post pitch-shifter. It works best with some amount of delay. 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.

3.3.7 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.

3.3.8 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.

3.4 Pitch Setup Controls

These parameters determine the quality, overall performance, and MIDI control of the pitch shifting.
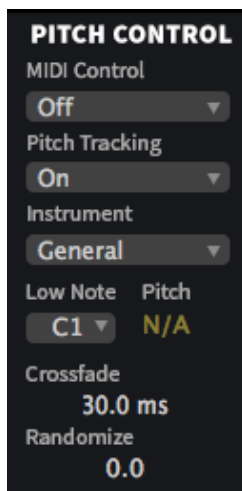
3.4.1 MIDI Control

This determines how the individual voices will respond to incoming MIDI notes. When in each MIDI-enabled mode, playing scale tones on a MIDI keyboard will set the pitch interval, relative to unison in the currently selected key and scale. Unison is taken to be the closest tonic of the scale to middle C (MIDI C3), which is also reflected on the plug-in's Notation Grid™. For example, in C Major, playing an E4 will result in a shift of '+10th'. Playing notes that are out of key and scale will not set an interval. To help you understand how the modes differ, try out each mode while playing single notes and chords on a connected MIDI keyboard:

- Off – incoming MIDI notes are ignored.

- Routed – each time a new note is received, the enabled voices' intervals are set to the currently pressed keys. The lowest note is mapped to the appropriate interval for Voice 1, the next lowest to the appropriate interval for Voice 2, etc. If less than eight notes are pressed, the notes will be mapped repeatedly until all the voices' intervals are tuned. For example, playing a single note will map to all eight voices.

- Gated – probably the most practical mode, Gated behaves very much like Routed, however voices only pass audio when notes are pressed. Keep this in mind in the event you are hearing no audio output from Octavox. This mode can be useful in 'playing' the inputted audio much like you would a synthesizer, with limitless sonic and performance opportunities.

Additionally, moving the Pitch Wheel on a connected MIDI keyboard sets the Shift amount for all voices, up to +/-100 cents (1 semitone). Moving the Modulation Wheel sets the Randomize parameter (described below), which can result in interesting chorusing effects.

NB: To maintain backwards compatibility for sessions with previous Audio Unit (AU) versions of Octavox, there are two AUs included in the installer; one with MIDI support, and one without. If you are seeing "Mode Disabled" in the MIDI Control field, please make sure you are using the "Octavox" AU plug-in, and not "Octavox (No MIDI)". "Octavox (No MIDI)" functions the exact same as "Octavox", but without MIDI control, and is included for legacy support. There is only one plug-in for VST and AAX.

3.4.2   Pitch Tracking

This is used to turn off the pitch detection entirely when using Octavox on non-pitched or polyphonic instruments. By turning off Pitch Tracking, the plug-in will act as though the incoming pitch is always the root note of the scale. This allows the plug-ins to be used on drum tracks and many other types of instruments.

3.4.3   Instrument

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

3.4.4   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.

3.4.5   Crossfade

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

3.4.6   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.

3.5   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.
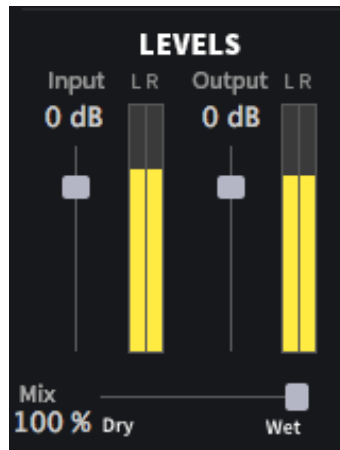
3.5.1 Input

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.

3.5.2 Output

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

3.5.3 Mix

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

3.6 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.
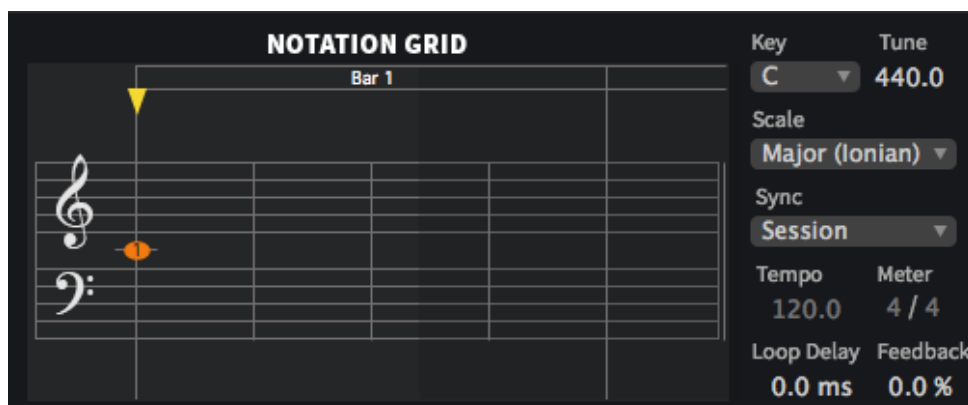
When moving a voice around on the grid, it will automatically snap to quantized pitch and time subdivisions in order to easily create intervals and rhythms. To allow the voices to move freely without being quantized to 16 notes, hold the Command key while dragging the voice. You may find that the Notation 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.

3.6.1   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 plug-in host's Tempo (below).

3.6.2   Key

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

3.6.3   Scale

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

3.6.4   Master Tune

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

3.6.5   Session Tempo

When this is enabled, Octavox's Tempo and Meter parameters will use and follow the Tempo and Meter changes that occur in the plug-in host. Otherwise, when set to off, changes to the plug-in host's Tempo and Meter will be ignored. Note that the Tempo and Meter parameters may still be automated if this parameter is set to off.

3.6.6   Tempo

This sets the Tempo of the plug-in.

3.6.7   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.

3.6.8   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.

3.6.9   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.

3.7   Snapshots

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. This means that you get the live performance functionality offered from our high-end hardware processors directly in your DAW.
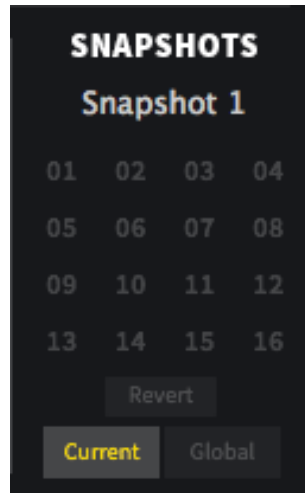
3.7.1   Loading

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.

3.7.2   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.

3.7.3   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, so be very sure before you overwrite a Global Snapshot. Read ahead about the differences between Current and Global to insure your work is repeatable.

3.7.4   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.

3.7.5 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 DAW 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 Eventide Octavox installed so you can take your favorites with you. Remember, there's no undo for Global Snapshots, so be very sure before you overwrite one. 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 are 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. 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.

3.7.6 Proper Snapshot Hygiene

Snapshots can be very powerful in use, but knowing how they work will help ensure that your Eventide Octavox Snapshots load and sound right every time. So, if you want to load or automate a Snapshot, 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.

3.7.7 Restoring Global Defaults

If you need to restore the factory Global Snapshots at any time, simply run the plug-in installer again, as it will place the default Global Snapshots back into the Snapshots folder.

3.7.8 Automating Snapshots

As mentioned earlier, you can use your DAW's automation lane to select and load any of the 32 Snapshots. Be sure to read the sections above on using Snapshots for predictable loading every time.

3.8 Saving and Recalling Plug-In settings

When Octavox is installed, a library of settings is placed into the
<user>/Documents/Eventide/Octavox/Presets folder. In this folder is a series of .tide files which will show up as options in Eventide's plug-in preset bar. From inside the Eventide Octavox you can load or save these settings. We recommend saving your own settings to this folder to ensure that they are available to any instance of the plug-in you're working with. You can also create sub-folders inside the Octavox Plug-In Folder if you wish.

3.8.1 Mix Lock

Located at the top right of the plug-in next to the Live Mode and Key Lock buttons is a button called "Mix Lock". Pressing this will enable a global mix value that will be the same on every preset that is loaded. Meaning that, with Mix Lock on, setting a mix value of 50% will load every preset with a mix value at 50%.

3.8.2 Key Lock

Located at the top right of the plug-in next to the Live Mode and Mix Lock buttons is a button called ”Key Lock”, which performs a similar function to Mix Lock. Pressing this will keep the key and scale related parameters the same as you flip between presets, meaning that all preset values will be modified to stay in the key you currently have selected. This allows you to set instrument and pitch detection parameters for your instrument and click through the presets without hearing out of key notes or bad pitch detection.

Chapter 4

Conclusion

We hope you enjoy the Eventide Octavox plug-in and put it to good use in all of your mixes. Please be sure to check over Eventide's other Native Plug-In offerings for more unique and interesting effects.