

ECHANNELTM User Guide

Eventide[®]

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Contents

1	Introduction	1
1.1	About This Product	1
2	Registration, Activation, and Installation	2
2.1	Registering Your Plug-in	2
2.2	Activating Your License	2
2.3	Installing Your Plug-In	3
2.4	Moving or Removing an Activation	3
3	EChannel	4
3.1	Input	4
3.1.1	Invert Phase	4
3.1.2	Input Meter	4
3.1.3	Overload Display	5
3.1.4	Input Gain	5
3.2	Gate	5
3.2.1	Side Chain	5
3.2.2	Input Meter	5
3.2.3	Threshold (TH)	6
3.2.4	Gain Reduction (GR) Bar Display	6
3.2.5	Release Time	6
3.3	Compressor	6
3.3.1	Side Chain	6
3.3.2	Saturation (SAT)	7
3.3.3	De-Ess	7
3.3.4	Input Meter	7
3.3.5	Threshold (TH)	7
3.3.6	Gain Reduction (GR) Bar Display	7
3.3.7	Ratio	8
3.3.8	Attack Time	8
3.3.9	Release Time	8
3.3.10	Knee	8
3.3.11	Make-Up Gain	8
3.4	Five-Band Parametric Equalizer	8
3.5	Graphical Display	8
3.6	On	9
3.7	Filter Type	9
3.7.1	Low Filter (20 Hz - 800 Hz)	9
3.7.2	Low Mid Filter (100 Hz - 2 kHz)	9
3.7.3	Mid Filter (500 Hz - 800 kHz)	10
3.7.4	High Mid Filter (1 KHz - 20 kHz)	10
3.7.5	High Filter (5 kHz - 20 kHz)	10
3.7.6	Q	10
3.7.7	Gain	10
3.8	Output	10
3.8.1	Transformer	10
3.8.2	Output Meter	11
3.8.3	Overload Display	11
3.8.4	Output Gain	11

3.9 Saving and Recalling Plug-In settings	11
4 Conclusion	12

Chapter 1

Introduction



1.1 About This Product

The Eventide EChannel plug-in is a powerful audio engineering plug-in for Avid AAX, Apple Audio Units, and Steinberg VST formats. It provides you with a routable Gate, Parametric EQ, and Compressor. Its flexible modular design accommodates different signal processing routing, its graphical displays provide you adept precision in frequency adjustment, and its suite of controls give you a near infinite number of ways to generate exactly the tone and frequency characteristics you're seeking. Additionally, through its support for side-chaining, you can use an alternative audio source to color the characteristics of your main signal. Whatever your audio application may be, EChannel will be invaluable for its remarkable versatility and industry benchmark performance. 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](http://www.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 EChannel license, the Serial Number will start with EC (i.e. EC-#####). 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 EChannel 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 EChannel 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 EChannel 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 EChannel in two locations at the same time.

Chapter 3

EChannel

The EChannel user interface 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. EChannel is comprised of the following discrete components, which collectively or individually provide you a robust and precise tone-shaping and frequency-manipulation environment.

- Input
- Gate
- Compressor
- 5-Band Parametric EQ
- Output Stage

Clicking the In/Out button enables or disables that particular module. Because of its modular design, the signal processing sequence can be shuffled. For instance, you can click anywhere on the Gate module and drag it to the right of the Compressor, thereby switching the order of those functions. You can move the Gate, Compressor, and EQ modules to any position in the processing signal chain you wish. The Input and Output stages, however, are static, the input coming before, and Output coming after the routable sections. The remainder of this manual describes the characteristics of each module, their controls, their capabilities, their technical specifications, and any tips or tricks.

3.1 Input

This stage is where the signal is introduced into the EChannel plug-in. Its sequence cannot be shuffled, and it cannot be disabled. The active signal is represented dynamically on the bar input meter, from -60 dB to 0 dB.

The Input module is comprised of the following features and controls:

3.1.1 Invert Phase

Click this button to invert (reverse) the phase of the input signal.

3.1.2 Input Meter

The Input section contains a large mono or stereo meter which shows signal level from -60 dBfs to 0 dBfs. This meter is stretched to have more resolution at higher levels.



Figure 3.1: EChannel Input Section

3.1.3 Overload Display

When a signal transient peaks above -0.1 dBfs, the area directly above this point on the bar frequency graph displays red to indicate an overload. If an overload is detected, the overload light will stay lit until it is cleared by clicking on it.

3.1.4 Input Gain

The Gain control is specific to the Input module. It can be adjusted from -60 dB to +12 dB. Click on the circular Gain knob and drag its vertical marker to the left or right to decrease or increase the gain. Alternatively, you can also designate the gain by entering it into the text box provided. The gain value displays numerically beneath the Gain knob.

3.2 Gate

The Gate module allows you to effectively remove signals occurring below the designated threshold. To enable the Gate module, click the In/Out button to display green. Click anywhere on its panel and drag the module to move it to another position in the signal chain.

The Gate module is comprised of the following features and controls:

3.2.1 Side Chain

Click this button to invoke the Gate's Side Chain feature. The alternate audio source is selected from your DAW's key input on its plug-in header, and triggers the Gate from the selected alternate audio source. Side chain operation is currently only available in AAX and AudioUnits plug-ins.

3.2.2 Input Meter

This meter displays the input signal exactly as it is perceived in the Gate's level detector, allowing you to easily set the gate threshold by pulling it up or down alongside the meter. Any time the input meter is below the Threshold fader, the signal will be removed.



Figure 3.2: EChannel Gate Section

3.2.3 Threshold (TH)

Move the slider up or down (or enter a value in the text box) to increase or decrease the threshold level for the signal. Values can be adjusted from -60 dB to 0 dB. The threshold value displays numerically beneath the Threshold slider. (For visual setup, the gate threshold can be set by viewing it against the input meter.) Signals below this threshold will be removed.

3.2.4 Gain Reduction (GR) Bar Display

This bar graph displays the gain reduction being applied to the signal, as determined by your threshold setting and input level.

3.2.5 Release Time

The Release control determines how long the gate is triggered. Click on the circular Release knob and drag its vertical marker to the left or right to decrease or increase the release time of the gate. The gain value displays in milliseconds beneath the Release button. Values can be adjusted from 1 ms to 500 ms.

3.3 Compressor

The Compressor permits you to alter the dynamics of your input signal. To enable the Compressor module, click the In/Out button to display green. Click anywhere on its panel and drag the module to move it to another position in the signal chain.

The Compressor module is comprised of the following features and controls:

3.3.1 Side Chain

Click this button to invoke the Compressor's Side Chain feature. The alternate audio source is selected from your DAW's key input on the plug-in header, and triggers the Compressor from the selected audio source. Side chain operation is only available in AAX and Audio Units plug-ins.

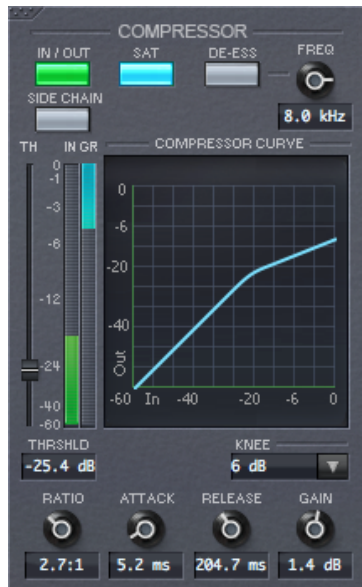


Figure 3.3: EChannel Compressor Section

3.3.2 Saturation (SAT)

Click the Saturation button to activate soft saturation at the Compressor's output. This soft saturation sits after the Compressor's gain control and will introduce a nonlinearity which will keep the output from going above 0 dBfs. This can also be used to add character to your peaky audio.

3.3.3 De-Ess

The De-Ess control allows you to de-emphasize the hiss associated with prominent "S"es on vocal signals. To activate the control, click its button, and set the frequency to the midpoint frequency that the "S"es are being pronounced. This will noticeably reduce this annoying effect. The De-Ess control can be adjusted from 4 kHz to 9 kHz.

3.3.4 Input Meter

This meter displays the input signal exactly as it is perceived by the Compressor's level detector. This allows you to easily set the Compressor threshold by pulling it up or down alongside the meter. Any time the input meter is above the Threshold fader, gain reduction will take place. Because of this, changes in the attack or release time will effect the level of this input meter - this is intentional and to be expected.

3.3.5 Threshold (TH)

Move the slider up or down (or enter a value in the text box) to increase or decrease the threshold level for the signal. Values can be adjusted from -60 dB to +0 dB. The threshold value displays numerically beneath the Threshold slider. (For visual setup, the compressor threshold can be set by viewing it against the input meter.) Signals above this threshold will be reduced.

3.3.6 Gain Reduction (GR) Bar Display

This bar graph displays the gain reduction being applied to the signal, as determined by your threshold setting, input level, and compression ratio.

3.3.7 Ratio

The Ratio control is used to select how much gain reduction occurs for each decibel of signal level above the threshold. The range is from 1:1 (no compression) up to 20:1. To create a hard limiter, set the ratio to 20:1 and the Knee parameter to 0dB.

3.3.8 Attack Time

This control allows you to adjust how quickly the Compressor reacts to signals above the selected threshold. Values range from 100 us to 50 ms. The attack value displays numerically beneath the Attack control.

3.3.9 Release Time

The Release control determines how fast the Compressor responds to decreasing signal levels. Release values range from 1 ms to 500 ms. The release value displays numerically beneath the Release control.

3.3.10 Knee

The Knee determines a region above the threshold where the gain reduction transitions from 1:1 to the designated Ratio setting. As the input signal crosses the threshold and moves through this window, its gain reduction increases to the selected ratio value (below). Knee values can be adjusted in 6 dB increments from 0 dB to 24 dB.

3.3.11 Make-Up Gain

The Make-Up Gain control for the compression module allows you to apply make-up gain to the compression output. The Compressor supports gain values from -24 dB to +24 db. The gain value displays numerically beneath the Gain control.

3.4 Five-Band Parametric Equalizer

The Equalizer module of the EChannel plug-in consists of five parametric filter sections that collectively cover the entire audio spectrum. An editable EQ curve graphical display renders each equalization filter curve individually, as well as a composite equalization curve for the cumulative EQ setting. Q settings may be assigned for each filter section, and several boilerplate settings are configured for each EQ section. You may change a frequency setting for any filter section by using either their respective parametric controls or by selecting a point for that filter on the EQ curve graphical display and moving it with your mouse. Additionally, each band can be turned on and off individually by using its respective ON button. Each filter section is easily identified by its associated color. Like the Gate and Compressor modules, the EQ module can be docked in another position in the signal processing sequence by clicking anywhere on its panel and dragging it right or left.

3.5 Graphical Display

The EQ curve Graphical Display allows you to edit the Frequency, Gain, and Q of each of the EQ sections 5 bands. Each EQ band is shown graphically by a colored dot whose color corresponds to that in the controls below. You can click and drag each dot and change the Frequency and Gain of the associated band. To set the Q for this band, control click and drag on the dot, or use your mouse wheel.



Figure 3.4: EChannel EQ Section

3.6 On

Each EQ band can be turned on or off by clicking ON button at the left of each filter. This can be useful for easily judging the contribution of each filter to the overall frequency response.

3.7 Filter Type

The following list details the characteristics of each filter type. Each filter type listed is available by clicking the down arrow button to the right of that filter section's name.

3.7.1 Low Filter (20 Hz - 800 Hz)

The lowest frequency filter section supports the following filter types:

- 6 dB/Oct Low Cut
- 12 dB/Oct Low Cut
- Low Shelf
- Classic Peak
- Modern Peak

3.7.2 Low Mid Filter (100 Hz - 2 kHz)

This filter section supports the following preset EQ values:

- Classic Peak
- Modern Peak

3.7.3 Mid Filter (500 Hz - 800 kHz)

This filter section supports the following preset EQ values:

- Classic Peak
- Modern Peak

3.7.4 High Mid Filter (1 KHz - 20 kHz)

The High Mid filter section supports the following preset EQ values:

- Classic Peak
- Modern Peak

3.7.5 High Filter (5 kHz - 20 kHz)

The High Frequency filter section supports the following preset EQ values:

- 6 dB/Oct High Cut
- 12 dB/Oct High Cut
- High Shelf
- Classic Peak
- Modern Peak

3.7.6 Q

Each filter section has its own Q settings control. These are used for determining the range of frequencies that are impacted by each band, thereby setting the shape of the filter. The bandwidth is equal to the frequency setting divided by Q. Larger Q values tend to create a narrower bandwidth; lower values affect a broader range of frequencies. Each Q setting range is from 0.5 to 20.0. The value is numerically displayed to the right of the Q control for each filter section.

3.7.7 Gain

Each filter section also has its own accompanying Gain control. Use these to set the gain or attenuation for each band's center frequency. Each filter's Gain may be set from -24 dB to +24 dB. The gain value is numerically displayed to the right of the Gain control for each filter section.

3.8 Output

The final stage in the EChannel plug-in is, fittingly, Output.

The Output module is used to set the final output level for the audio being processed.

3.8.1 Transformer

The final signal processing element, the Output module contains a model of a Transformer which can be driven into saturation. This analog model is after the output level control so that it can be driven if desired. Unless driven very hard, it is a subtle yet distinct effect which is most noticeable on signals with a lot of low frequency content.



Figure 3.5: EChannel Output Section

3.8.2 Output Meter

The Output section contains a large mono or stereo meter which shows signal level from -60 dBfs to 0 dBfs. This meter is stretched to have more resolution at higher levels.

3.8.3 Overload Display

When a signal transient peaks above -0.1 dBfs, the area directly above this point on the bar frequency graph displays red to indicate an overload. If an overload is detected the Overload Display will stay lit until it is cleared by clicking on it.

3.8.4 Output Gain

The Output Gain control can be adjusted from -60 dB to +12 dB. Click on the circular Gain button and drag its vertical marker to the left or right to decrease or increase the gain. Alternatively, you can also designate the gain by entering it into the text box provided. The gain value displays numerically beneath the Gain button.

3.9 Saving and Recalling Plug-In settings

When EChannel is installed, a library of settings is placed into the <user>/Documents/Eventide/EChannel/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 EChannel 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 EChannel Plug-In Folder if you wish.

Chapter 4

Conclusion

We hope you enjoy the Eventide EChannel 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.