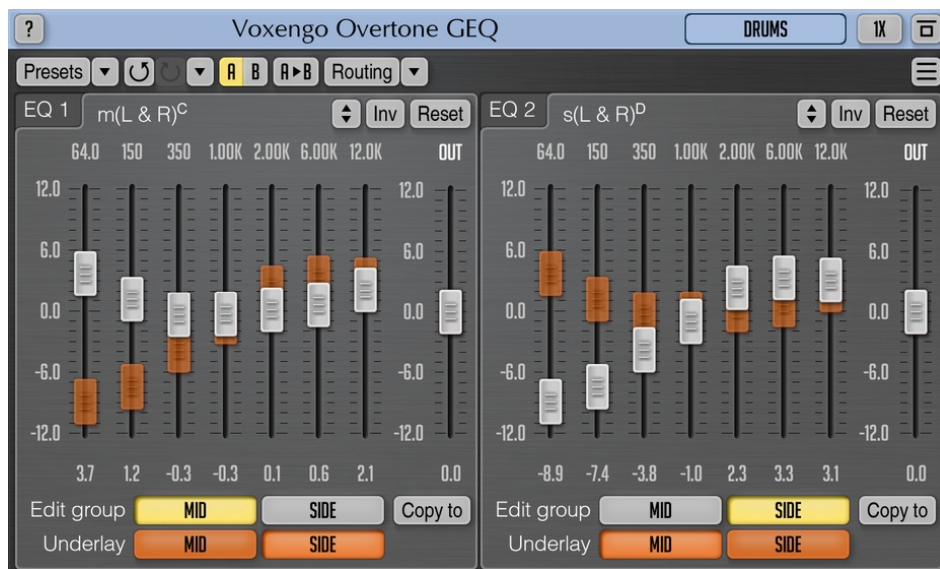


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# Voxengo Overtone GEQ User Guide



Version 1.12

<https://www.voxengo.com/product/overtonegeq/>

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## Introduction

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Overtone GEQ is 7-band harmonic (overtone) graphic equalizer with multi-channel operation support (supporting up to 8 input/output channels, audio host application-dependent). Overtone GEQ offers extensive internal channel routing capabilities, and supports mid/side channel processing.

Beside equalizing, Overtone GEQ applies harmonic enhancement processing: it uses 7 harmonic enhancement modules, one for each EQ band. This generates a complex harmonic coloration you will probably like a lot.

Overtone GEQ was designed to allow audio engineers to apply quick EQ shape adjustments together with adding a bit of harmonic richness to the audio material (mainly mixes and sub-mixes due to a comparably high processing load this EQ puts on a CPU).

## Features

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- 7-band graphic equalizing
- +/- 12 dB gain range per band
- 2 graphic equalizer views
- Stereo and multi-channel processing
- Internal channel routing
- Channel grouping
- Mid/side processing
- Complex harmonic coloration
- Up to 8x oversampling
- 64-bit floating point processing
- Preset manager
- Undo/redo history
- A/B comparisons
- Contextual hint messages
- All sample rates support
- Zero processing latency

## Compatibility

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This audio plug-in can be loaded into any audio host application that conforms to the AAX, AudioUnit, VST or VST3 plug-in specification.

This plug-in is compatible with Windows (32- and 64-bit Windows XP, Vista, 7, 8, 10 and later versions) and macOS (10.7 and later versions, 64-bit Intel processor-based) computers (2.5 GHz dual-core or faster processor with at least 4 GB of system RAM, SSE4.2 instructions support required, e.g. any Intel Core i-, AMD Bulldozer- or Zen-based processor). A separate binary distribution file is available for each target computer platform and audio plug-in specification.

## User Interface Elements

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Note: Most interface elements (buttons, labels) located on the top of the user interface and on the bottom are standard among all Voxengo plug-ins and do not require much learning effort. For an in-depth description of these and other standard user interface elements and features please refer to the “Voxengo Primary User Guide”. Learned once it will allow you to feel comfortable with all pro audio plug-ins from Voxengo.

### Graphic EQ View

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Overtone GEQ features two graphic EQ Views, having seven +/- 12 dB equalizer bands each. Graphic EQ View features the “Reset” button which allows you to reset the contents of the View to the default settings. The “Inv” button inverts equalizer curve, and the “Up-Down” button, when being dragged, allows you to scale the equalizer curve in order to amplify or attenuate it. The “Edit group” selector selects which channel group’s EQ shape should be edited in the View, the “Underlay” selector selects which channel group’s EQ shape to display underlay.

Note that frequency and gain read-outs can be dragged for vertical linear adjustment, or adjusted with the mouse wheel.

### Group Selection

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The “Edit group” is the channel group whose EQ shape you are now editing (selectable in the EQ View 1 and EQ View 2 individually).

The “Underlay” selects which channel group’s EQ shape to display as underlay in the EQ View. Underlay can be useful when manipulating two EQ shapes for two channel groups simultaneously, to see how these shapes differ from each other. When working with a single channel group, the underlay is usually unnecessary.

Individual audio channels can be attached to channel groups via the Channel Routing window. For example, this allows you to have individual EQ settings for channel “A” and for channel “B”, separately. To achieve this simply assign channel “A” to group “1”, and channel “B” to group “2”.

In surround setup you may assign left, right and front channels to group “1”, rear surround channels to group “2”, LFE channel to group “3”, and apply an EQ shape to them independently from each other.

Each audio channel within plug-in can be assigned to a single channel group only.

EQ settings of one group can be copied to another group by using the “Copy to” button.

## **Additional Information**

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Since Overtone GEQ implements graphic equalizing by means of an array of bell-shaped EQ bands, when you boost or cut adjacent bands the actual boost or cut may go over the visual setting (i.e. when some EQ band slider indicates 9 dB, the actual audible boost may be 10.5 dB, if the nearest band also stays at 9 dB).

## Credits

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DSP algorithms, internal signal routing code, user interface layout by Aleksey Vaneev.

Graphics user interface code by Vladimir Stolytko. Graphics elements by Vladimir Stolytko and Scott Kane.

This plug-in is implemented in multi-platform C++ code form and uses “zlib” compression library (written by Jean-loup Gailly and Mark Adler), LibLZF by Marc Alexander Lehmann, filter design equations by Magnus Jonsson and Robert Bristow-Johnson, VST plug-in technology by Steinberg, AudioUnit plug-in SDK by Apple, Inc., AAX plug-in SDK by Avid Technology, Inc., Intel IPP and run-time library by Intel Corporation (used under the corresponding licenses granted by these parties).

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## Questions and Answers

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**Q. I'm having trouble figuring out what the blue (underlay group) faders do. Also, why is there two EQ views? Left/right operation?**

**A.** Blue faders are “underlay” only and they show how faders in another group look. Two EQ views are there for convenience only – so that you do not have to switch from one group to another (if it was a single EQ view only).

**Q. What this “underlay group” feature is for?**

**A.** Underlay is there to see how EQ setting of “Edit group” differs from any other (underlay) group.

**Happy Equalizing!**