Voxengo PrimeEQ User Guide
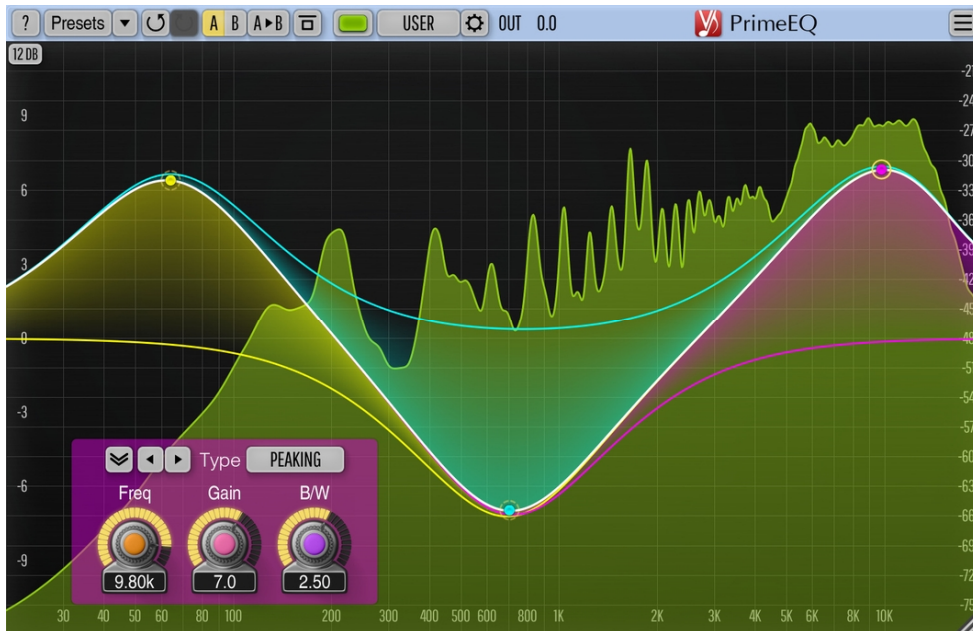
Version 1.8

https://www.voxengo.com/product/primeeq/

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Introduction

PrimeEQ is a parametric equalizer plug-in for professional music production applications. PrimeEQ was designed to be the first equalizer to reach for when track or mix equalization is necessary: just insert the plug-in, put and drag the control points to the desired positions.

PrimeEQ implements an extremely optimized user interface. It features an innovative "differential" display which shows you how exactly a given selected filter contributes to the overall EQ shape. All control points are placed on the overall EQ shape making the workflow with this equalizer fast and efficient. PrimeEQ is similar to CurveEQ in this respect except that PrimeEQ uses independent parametric filters instead of a continuous EQ curve.

PrimeEQ features a deeply customizable spectrum analyzer of the same high quality as found in SPAN, GlissEQ, and other Voxengo plug-ins.

Features

- Extremely optimized workflow
- New "differential" display
- Real-time spectrum analysis
- Up to 32 parametric filter bands
- 13 filter types
- Narrow-band sweeping
- User interface window resizing
- Stereo and multi-channel processing
- 64-bit floating point processing
- Preset manager
- Undo/redo history
- A/B comparisons
- Contextual hint messages
- All sample rates support
- Zero processing latency

Compatibility

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, if not announced otherwise) and macOS (10.11 and later versions, if not announced otherwise, 64-bit Intel and Apple Silicon processor-based) computers (2.5 GHz dual-core or faster processor with at least 4 GB of system RAM required). A separate binary distribution file is available for each target computer platform and audio plug-in specification.

User Interface Elements

Note: All Voxengo plug-ins feature a highly consistent user interface. Most interface elements (buttons, labels) located on the top of the user interface are the same in all Voxengo plug-ins. For an in-depth description of these and other standard features and user interface elements please refer to the "Voxengo Primary User Guide".

Equalizer

The whole user interface area basically represents parametric equalizer's control surface. Please refer to the "Voxengo Primary User Guide" for in-depth information about this control surface's functions.

If you would like to open the filter editor panel, you should select the required filter, and then hover the mouse cursor over the colored strip at the bottom of the user interface.

The "Spectrum" selector allows you to select and edit spectrum's display mode. Please refer to the "Voxengo Primary User Guide" (namely, the topic called "Standard Controls – Spectrum Mode Editor") for in-depth information about spectrum mode settings. Note that the spectrum analyzer displays the output spectrum.

PrimeEQ features the following filter types:

- Peaking – peaking (parametric) filter.
- Lo-shelf, Hi-shelf – low-shelving and high-shelving filters.
- Lo-pass 6, Lo-pass 12, Lo-pass 24, Lo-pass 48, Hi-pass 6, Hi-pass 12, Hi-pass 24, Hi-pass 48 – low-pass and high-pass filters with the specified slope in decibels per octave. The "Gain" parameter affects the transition band (resonance) of these filters.
- Notch – band-rejection filter: filters out a narrow spectral area completely (minus infinity gain at the center frequency).
- Bandpass – a standard band-pass filter. This filter type is usually used for "telephone line" sound effects. This filter can be also used for monitoring of a narrow spectral band.

Note that the "Lo-pass 24" and "Hi-pass 24" filters with the gain set at -6 dB can be used as Linkwitz-Riley filters for 2-band crossovers. They can be also used for 3-band splitting if crossover frequencies are distant enough from each other.

Moving a group of selected control points works differently in PrimeEQ compared to other equalizers. Since in PrimeEQ the control points are placed on the overall EQ curve, when control points are moved in a group, this may create an impression that scaling is performed, especially if filters have a large bandwidth. No such "effect" happens when narrow-bandwidth filters are being moved.

Credits

DSP algorithms and internal signal routing code were created by Aleksey Vaneev.

Graphics user interface code and the "standard" graphics design were created by Vladimir Stolypko.

This plug-in is implemented in multi-platform C++ code form and uses "zlib" compression library (written by Jean-loup Gailly and Mark Adler), "LZ4" compression library by Yann Collet, "base64" code by Jouni Malinen, 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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Happy Mixing!