Voxengo CRTIV Reverb User Guide

Version 2.4

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

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Introduction

CRTIV Reverb is a stereo reverberation effect plug-in for professional music production applications. This reverb plug-in provides a wide palette of reverb spaces while requiring only a minimal effort to obtain useful results. The tails created by this reverb are very dense and produce a well-defined spatialization. Since the reverb uses a kind of "true stereo" algorithm the panned sounds receive a good stereo field placement. We believe CRTIV Reverb provides one of the lushest reverb tails available on the market.

The early reflections placement, pre-delay, and levels are chosen automatically based on a pre-defined model that depends on the "Room Size" and "Ambience" parameters. CRTIV Reverb is technically based on Feedback Delay Network building blocks using the Hadamard matrix, and uses self-modulation techniques.

CRTIV Reverb is great on any sound sources: vocals, synths, drums, mixes. This reverb is a relatively CPU-demanding effect (it takes 7.5% of a single core of i7-7700K processor, at 44100 sample rate), for comfortable use it requires a higher-end processor.

Features

- Easy-to-use design
- "True stereo" 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 at 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".

Reverb Parameters

This group of knobs affects reverb's characteristics.

The "Room Size" parameter controls the perceived room size. This parameter affects reverberation time and early reflections spread. Internally, this parameter is mapped to a logarithmic scale with reverb times ranging from 15% to 550%.

The "Ambience" parameter controls the perceived "ambience" of the reverb, with 0% producing "enclosed space" sound while 100% producing an "open space". The lower "ambience" values produce a damped "closed" room sound (plate-like) while higher values produce "brighter" sound with an open and bright pre-delayed sonic character. This parameter can be also used to control the resulting reverb tone of low-frequency sounds like bass-drums. The "Ambience Mode" selector selects between natural (1) and alternative (2, 3) mode. Mode "2" is more boomy with a feedback'y character, rougher "vintage" feel; in this mode, the "Ambience" parameter also adjusts the frequency of resonance. Note that in mode 2 resonances can be quite loud and work more like a special effect than a neutral reverb. Mode "3" is similar to Mode "2", but offers a slightly less "resonant" character.

The "Damp Lo" parameter specifies corner frequency of the low-frequency damping filter. Controls the amount of low-frequency reverberation, "boominess" of the reverb. Can be also used to reduce low-frequency noisy rumble if it appears when processing certain sound material like piano.

The "Damp Hi" parameter specifies corner frequency of the high-frequency damping filter. Imitates air and room surface damping. The "1x/2x/3x" switch selects the strength of the damping. The "1x" mode produces brighter sound, the "3x" produces dimmer sound. The "3x" mode may be useful when used with the high "Ambience" settings, to reduce overall brightness.

The "Hi Gain" parameter specifies gain adjustment of the fixed high-shelf filter. This parameter can be used to make the overall reverb sound brighter or dimmer. This is effectively a "tilt" filter.

Levels

The "Wet Gain" parameter controls the loudness of the reverb signal.

The "Dry Gain" parameter controls the loudness of the dry input signal. The "mute" switch can be used to disable the dry signal in the output mix. Muting the dry signal permits the use of the plug-in as a "send" effect.

Credits

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

Graphics user interface code by Vladimir Stolypko. Graphics elements by Vladimir Stolypko 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), "LZ4" compression library by Yann Collet, "base64" code by Jouni Malinen, filter design equations by 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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