
Voxengo Warmifier User Guide



Version 2.9

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

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Introduction

Warmifier is a special plug-in for professional music production applications which processes audio signal in a way similar to analog tube equipment. By using Warmifier you can achieve analog “warming” and “console” coloration effects.

Warmifier is applicable both to the complete mixes and to the individual instrument tracks. You have several parameters at your disposal that allow you to control the strength and the coloration of the effect. Also, you have several tube types to choose from. Each tube type offers a different overall coloration.

While the effect of this plug-in is definitely subtle, the difference it makes is similar to the difference in sound between various analog mixing consoles. In most cases it boils down to adding a subtle “sparkle”, “presence”, “warming”, or “solidifying” effect to a sound track the plug-in was applied to.

Features

- 7 tube/valve types
- 2 processing modes
- Stereo processing
- Up to 8x oversampling
- 64-bit floating point processing
- Preset manager
- Undo/redo history
- A/B comparisons
- Contextual hint messages
- All sample rates support
- 41 ms compensated 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”.

Model Parameters

This set of controls adjusts the character of the sound processing.

The “Model” selector specifies saturation model. It lists names of famous tubes whose coloration this plug-in strives to reproduce. The models differ in the profile of harmonics they produce, but sonic differences between these models are not pronounced.

The “V Param” and “I Param” (please perceive the names of these parameters abstractly) adjust the characteristic of the sound processing. It is suggested to use “I Param” values below -3.5 dB, because higher values produce clipping easily. At the same time, “V Param” values below -6 dB also produce clipping easily. The actual interaction between the “I” and “V” parameters depends on the “Model” selection.

The “Emphase Lo” and “Emphase Hi” parameters control the gain (in decibel) of two internal shelving filters. Such filters are used to further control the coloration applied by the processing. When the specified value for the “Emphase Hi” is positive, higher frequencies will be saturated earlier than the lower frequencies if elements of both low and high frequencies are present in the signal. Negative “Emphase Hi” values give more weight to the lower frequencies: when the “Emphase Hi” value is negative, you can expect bass frequencies to saturate earlier than the higher frequencies. The “Emphase Lo” parameter works similarly to the “Emphase Hi” parameter, but it adjusts the weight of the lower frequencies. Both parameters can be used interchangeably: instead of using a positive “Emphase Hi” value you can use a negative “Emphase Lo” value. Generally, you should expect only some very subtle changes to the sound when tweaking these parameters.

The “Mode” switch controls the way signal level is evaluated. The “Omni” mode applies processing to signals of different loudness in an equal strength. The “Lvl.Dep” mode performs level-dependent processing with quieter sounds receiving less coloration. The “Omni” mode usually produces a more colored sound in comparison to the “Lvl.Dep” mode.

EQ & Out

The “EQ Lo” specifies low-shelving filter’s boost in decibel. Filter is tuned to 143 Hz.

The “EQ Hi” specifies high-shelving filter’s boost in decibel. Filter is tuned to 2.8 kHz.

Note that filters are working in “pre” mode, applying EQ adjustment before the main processing is applied.

The “Out Gain” parameter changes overall output signal level of the plug-in (in decibel).

Credits

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

Graphics user interface code by Vladimir Stolytko. Graphics elements by Vladimir Stolytko.

This plug-in is implemented in multi-platform C++ code form and uses “zlib” compression library (written by Jean-loup Gailly and Mark Adler), “base64” code by Jouni Malinen, FFT algorithm by Takuya Ooura, 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

Q. Some people keep on remarking about the sound colorations and how they're wonderful, but I just can't get quite the difference between a dry audio signal and one, say, passed thru the Warmifier. No matter what presets I use, to me there is no difference in the sound of material processed with Warmifier.

A. Understanding this topic can be really difficult. Some people tend to say Warmifier does not do anything useful to their sounds. However, there IS difference, technically speaking. For example, if you take a simple sine-wave in a synth you will quickly hear that it sounds “plain”. But when you apply Warmifier to this simple sound, it immediately becomes “fuller” and “crisper”. You may also use a spectrum analyzer to see what Warmifier does to the sine-wave.

Q. I would like to use Warmifier in mastering to give my mixes an analog warmth and feel. When mastering I usually use EQ, then compressor then limiter at the end of the chain. Where can I place the Warmifier in this type of a setup?

A. One of the best places for this effect would be right before the limiter in the chain.

Q. I am thinking of using Warmifier to refresh old classical tape recordings where high frequencies have been lost during the years. Is this plugin suited for this task?

A. Warmifier can be too soft for your task. But it can be used to increase the overall “presence” and “sparkle” of the sound. You may need to look for special high-frequency content synthesis plug-ins. On another note, you may just need to use an equalizer to recover the high-frequency damping of the old tapes. Warmifier provides an equalizer and so you may try it for this task.

Q. Whenever I switch presets I hear a click. Is this normal?

A. While this can be distracting at times, such clicking is technically unavoidable due to the processing topology utilized by the plug-in. We already tried to minimize clicking as much as possible.

Happy Warmifying!