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## Voxengo Warmifier User Guide



Software version 2.0

<http://www.voxengo.com/>

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## Introduction

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Warmifier is a special plug-in for professional music production applications which processes audio signal in a way similar to analog valve equipment. By using Warmifier you can achieve valve 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 color of the effect. Also, you have several valve types to choose from. Each valve 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 different analog mixing consoles. In most cases it boils down to adding a subtle “sparkle”, “presence”, “warming” or “solidifying” effect to a sound track it was applied to.

## Features

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- 7 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
- 40 ms compensated processing latency

## Compatibility

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

This plug-in is compatible with Windows (32- and 64-bit Windows 7, Vista, XP) and Mac OS X (10.5 and later versions, 32- and 64-bit, Intel processor-based) computers (2 GHz dual-core or faster processor with at least 1 GB of system RAM required). A separate binary distribution file is available for each target computer platform for each 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.

### Model Parameters

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

The “Model” selector specifies saturation model. It lists names of famous valves whose coloration this plug-in strives to reproduce.

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 produce clipping easily.

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 process. 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 when tweaking these parameters.

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

### EQ & Out

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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

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This plug-in was produced by Aleksey Vaneev in Syktyvkar, Komi Republic, Russia.

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 Stolytko.

Plug-in is implemented in multi-platform C++ code form and uses “zlib” compression library (written by Jean-loup Gailly and Mark Adler), filter design equations by Robert Bristow-Johnson, FFT code by Takuya Ooura, VST plug-in technology by Steinberg, AudioUnit plug-in SDK by Apple, Inc. (used under the corresponding licenses granted by these parties).

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## Questions and Answers

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**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 software synth you will quickly hear that it sounds “plain” as it is. But when you apply Warmifier to this simple sound, it immediately becomes “fuller” and “crisper”. As a last instance, you may use spectrum analyzer to see what Warmifier does to the sine-wave.

**Q. I would like to use Warmifier in mastering to give my mixes and 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 subtle for your task. But it can be used to increase the overall “presence” and “spark” 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 equalizing 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!**