

Voxengo OVC-128 User Guide



Version 1.0

<https://www.voxengo.com/product/ovc128/>

Contents

Introduction 3

 Features 3

 Compatibility 3

User Interface Elements 4

 Clipper 4

 What's The Deal? 4

 Meter 4

Credits 5

Introduction

OVC-128 is a massively-oversampled soft/hard clipping effect plug-in for professional music production applications. A common use for this plug-in is hard-clipping before the final peak limiter. This is an effective approach in contemporary electronic music when loudness is boosted using a clipper plug-in while minor excessive peaks are absorbed by a final peak limiter that applies no additional gain itself.

Clipping the tracks via OVC-128 is practically similar to clipping using high-quality outboard analog gear. At 44.1kHz source sample rate, the internal audio sample rate of OVC-128 is a whopping 5.6 MHz!

A perfect combination for contemporary electronic music production is OVC-128 followed by Voxengo Elephant mastering limiter in EL-C mode. This combination produces both energy and smoothness.

Note that OVC-128 is a relatively CPU-demanding effect plug-in, it requires a higher-end processor for comfortable use. Performing 128X-oversampled clipping on a single stereo track is computationally similar to performing simple clipping on 1000 tracks.

Features

- 128X linear-phase oversampling
- Clipping hardness control
- Stereo processing
- 64-bit floating point processing
- Preset manager
- Undo/redo history
- A/B comparisons
- Contextual hint messages
- All sample rates support
- 38 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) 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

Note: Most interface elements (buttons, labels) located on the top of the user interface 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.

Clipper

The “Gain” parameter increases signal’s gain, in decibel. Clipping occurs at 0 dBFS level; this parameter pushes input signal into clipping. Drag with the right-mouse-button to change the “Out Gain” in a linked mode.

The “Hardness” parameter selects the hardness of clipping: soft-clipping at 0, hard-clipping at 1. This parameter cross-fades between the “tanh” soft-clipping function and the hard-clipping function.

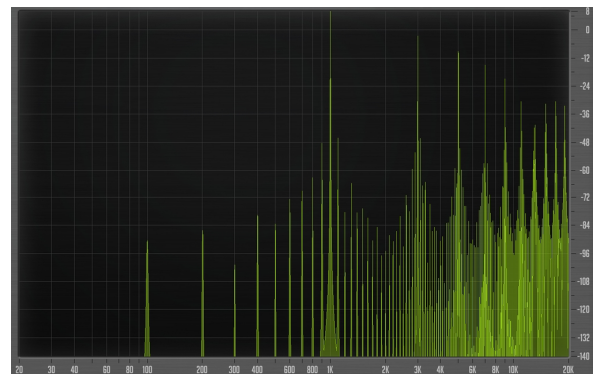
The “OVC” is an acronym for “OVersampled Clipper”.

What’s The Deal?

Here you can see 12 dB hard-clipping applied over 1 kHz sine-wave at 44.1kHz sample rate. As you can see, OVC-128 clipping produces almost no aliasing in comparison to simple clipping.



OVC-128 clipping of 1 kHz sine-wave



Simple clipping of 1 kHz sine-wave

Meter

This panel displays output level meter with the overload (“OL”) indicator. Note that overload mainly indicates the fact that the saturation point was slightly over-reached due to some amount of high-frequency oscillations producing overshoots over the 0 dBFS level. The actual saturation point is at 0 dBFS.

The “Out Gain” controls the overall output level of the plug-in, specified in decibel. Drag with the right-mouse-button to change the “Gain” in a linked mode.

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 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).

Voxengo OVC-128 Copyright © 2019 Aleksey Vaneev.

VST is a trademark and software of Steinberg Media Technologies GmbH.