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## Voxengo TransGainer User Guide



Software version 1.2

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

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## Introduction

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TransGainer, an audio plug-in suitable for a wide range of professional music production uses, implements an audio signal envelope adjustment algorithm that reacts on transients rather than on a signal's loudness level. This algorithm allows you to adjust volume of attack and sustain stages of any sounds you use it on. TransGainer was designed in a way to be suitable for all possible sound sources – be it individual tracks or full mixes.

In many cases TransGainer can be used in place of gate and expander plug-ins while delivering a better sound and offering an easier control. Beside that, TransGainer can be used for audio recording restoration/re-mastering purposes and reverb tail modifications with excellent results.

TransGainer allows you to specify gain adjustments for a sound's transient and sustain stages separately. You can also choose an expected average time between transients so that algorithm delivers you the most precise results possible. With the help of TransGainer you can pass the border from good to excellent audio recordings.

## Features

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- Transient stage loudness adjustments
- Sustain stage loudness adjustments
- 5 processing modes
- Transient-to-transient time control
- Automatic time control
- Stereo and multi-channel processing
- Internal channel routing
- Channel grouping
- Mid/side 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
- Zero 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 (XP and later versions, 32- and 64-bit) and Mac OS X (10.4.11 and later versions, Intel and PowerPC) computers (2 GHz dual-core or faster processor with at least 1 GB of system RAM recommended). 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.

### Envelope Control

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This panel allows you to control input signal’s envelope (dynamics). Here you can see the transient detection meter which displays “power” of detected transients. With sound material that has weak transients the meter will mostly display values around zero while with a highly-dynamical signal the meter will read around 1.0.

The “Mode” selector chooses processing mode of the plug-in (note that the selected mode also affects transient detection meter):

- Mellow: a “standard” mode offering a smooth overall sound.
- LF Focus: a mode with a focus on the lower frequencies.
- HF Focus: a mode with a focus on the higher frequencies.
- Round: mode with a “rounder” sound overall.
- Sharp: a generally “sharper” sounding mode – allows you to adjust transients even if the input sound’s transients are weakly-defined. However, this mode may sound less “controlled”.

The “Auto” switch enables automatic selection of the “Detect Delay” and “Contour” parameters based on the values of the “Trans Gain” and “Sustain Gain” parameters. Note that the “Auto” mode does not engage any audio signal-dependent parameter adjustment.

The “Detect Delay” parameter specifies transient detection guideline – an expected average delay (in milliseconds) between two adjacent transients. Lower “Detect Delay” values force plug-in to react to most transients. Note that overly low values may produce a bit “unstable” sound. This parameter partially affects duration and envelope form of transient and sustain stages. Any unwanted “unstable” fluctuations at lower “Detect Delay” settings can be reduced by increasing the “Contour” parameter. However, when you are using high “Detect Delay” values (thus reducing the number of detected intermediate transients and producing an overall “stable” sound) the “Contour” parameter can be set lower.

The “Contour” parameter specifies duration (in milliseconds) of additional transient-to-transient release stage (this parameter can be also called “Decay” or “Release”). Higher “Contour” values produce smoother sound, but at the expense of reduced “punch” effect. Mellow instrumental and orchestral recordings may require higher “Contour” values while contemporary club music will sound better with low “Contour” values. Note that high “Contour” parameter may hinder the effect of the “Detect Delay” parameter, so it is suggested to adjust the “Detect Delay” parameter with “Contour” set to a lower value. When you are using extreme “Trans Gain” and

“Sustain Gain” settings you should probably use a higher “Contour” value if you want to get a natural sound decay.

The “Trans Gain” parameter specifies maximal gain adjustment (in decibels) any transient may cause. Real gain adjustment is usually lower than this value. Only the fastest transients (that drive the detection meter to 1.0) may force algorithm to reach the specified “Trans Gain” value.

The “Sustain Gain” parameter specifies maximal gain adjustment (in decibels) that may happen during signal’s sustain stage.

## Output

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The “Out Gain” parameter controls the overall output gain (in decibels) of the plugin.

## 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 Stolypko.

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, 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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### Beta-Testers

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gl.tter

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## Questions and Answers

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**Q. I'm unable to obtain an even dynamical enhancement with this plugin, because "punchy" sounds in the original track become much louder than less "punchy" sounds in the same track. How can this problem be resolved?**

**A.** Such situation can be handled pretty well by inserting a compressor (saturator) before TransGainer. By means of compressor or saturator original track's dynamics can be equalized so that TransGainer's algorithm produces an equal loudness increase on every transient.

**Happy Mixing and Mastering!**