

# GClip Manual

## Welcome to GClip

GClip is a wave-shaping signal clipper. It prevents the signal level from exceeding a specified maximum. The clipping function used can be altered to have a hard- or soft-knee.

## Interface



The display features three main areas. At the top-left is the graph display, to the right is the wave display and at the bottom-left are the parameter controls.

**Graph Display:** This shows the shape of the clipping function that is applied to incoming samples. All three knobs affect the shape of this curve.

**Wave Display:** This shows the waveform of the signal after the input gain has been applied. Superimposed over that is the output signal, after clipping. So you get a before and after display. The clipping level is also displayed as a solid horizontal line.

**Gain:** This allows you to raise the signal level before clipping.

**Clip:** The clipping level as a percentage of the maximum sample value. So, if

you consider samples to go from -1 to 1, then a clipping level of 50% will restrict all samples to between -0.5 and 0.5.

**Softness:** This parameter sets the shape of the "knee" of the clipping function. If this parameter is 0% then GClip behaves as a simple signal clipper, truncating samples that exceed the clipping level. Greater values for softness will cause samples approaching the clipping level to be affected.

**2x Oversample:** Turn oversampling on or off. Wave-shaping can introduce audible aliasing, especially with more drastic settings. The oversampling mode can help to minimize aliasing in such cases.

## Hints and ideas

- The user interface features a wave display to aid configuration. Simply play the audio and watch the wave display while you set the desired values for input gain, clip-level and softness. And don't forget to use your ears as well.
- You can create a distortion effect with excessive gain and harsh clipping. On the other hand, if you're not after distortion, then listen carefully to sections that are reaching the clip threshold.
- When using GClip for more extreme wave-shaping, the oversampling mode can reduce aliasing for a warmer sound.

## Installation

I've always aimed to ensure that the GVST plug-ins are each a single file and as compact as I could make them.

For simple plug-ins like these, installation usually boils down to copying a file, so I've never created any automated installers. I know some people would prefer an installer, so apologies for the extra hassle, but hopefully it won't be too difficult.

The installation process will vary for different hosts and different operating systems, but I'll try to cover the basics below.

## 32-bit or 64-bit (Windows and Linux)

The Windows and Linux plug-ins come in 32- and 64-bit versions. Generally speaking you will need the one that matches the host software you're running.

If you're not sure, you can usually tell if you look at the "About" screen, which can usually be found in one of the application menus.

Taking Audacity as an example: at the time of writing you can find the necessary detail in the "Build Information" tab of its "About" screen.

If all else fails, you could try both and see which works. These days 32-bit applications are becoming increasingly rare, so try the 64-bit version first.

## General installation

1. All GVST plug-ins come compressed in a `.ZIP` file, so the first step is to extract the files from the `.ZIP` file.
2. Once extracted, you should have a plug-in file - on Windows it will be a `.DLL` file, on Mac a `.VST` file, and on Linux a `.SO` file.
3. You will need to copy the plug-in file to the appropriate folder for your host program and possibly configure the host software to find it.
4. Many hosts will allow you to specify a folder on your computer where it should look for plug-ins. For example, in the Preferences in Audacity for Windows or Mac, you can add extra locations for VST plugins.
5. In most cases, you will need either to restart the host program or re-scan the plug-in folder in order for newly-installed plug-ins to appear.
6. The exact process will depend on the software you're using. You should be able to find specific instructions by searching the Internet, e.g. "How to install a VST plugin in Cubase".

## Special/default plug-in locations

On a Linux machine, the convention is to locate VST plug-ins under the `~/.vst` directory. I have all the GVST plug-ins copied into `~/.vst/GVST`.

Similarly, there is a common location for audio plug-ins on a Mac:

`~/Library/Audio/Plug-Ins`. I copy all the GVST plug-ins into

`~/Library/Audio/Plug-Ins/VST`.

It's usually more convenient to place the plug-ins in a location of your choosing and point your host software to it, if that's supported by the application.

## License

1. GVST plug-ins are provided to the user at no cost. While every GVST plug-in is tested to the best of the developer's ability, no warranty or guarantee is offered to the end user.
2. No suggestions made by the developer or his representatives (i.e., freely offered support) are to be taken as an implied warranty or guarantee.
3. These plug-ins may only be distributed by the official GVST website, or by parties explicitly given permission by the developer.
4. GVST plug-ins are to be distributed only in their original form as intended by the developer (i.e., the unaltered archive).
5. GVST plug-ins are freeware, meaning you are never under any obligation to pay for them! However, should you wish to help support continued development of GVST software, please consider donating through the official website.
6. GVST plug-ins can be used freely to create and process audio for private or commercial works.

In a nutshell, the code's all mine, but any music or sounds you create using GVST plug-ins is all yours. Of course, if you hit the big time then do feel free to pop back and donate a little something.

## Credits

- Plug-in development, website and graphics by Graham Yeadon.
- A special mention to Rick "grymmjack" Christy and Greg Pettit who helped me with the UI design and documentation early on.
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