GMax Manual

Welcome to GMax

GMax is a maximizing limiter. The most common usage is to boost the perceived level of a signal by increasing base amplitude while preventing clipping. It works by first increasing the level of the incoming audio by a given amount. Then, any audio that becomes too loud is "turned back down", ensuring that the level never exceeds the "ceiling" level. While a maximizing limiter is often used to make an entire song seem "louder", it may also be used in place of a compressor to help control individual tracks.

Interface

The GMax display features three knobs. Each has a label above it and a display of its current value below it. At the bottom-right of the user interface is a gain-reduction meter.

Gain: The desired signal gain. The incoming signal is boosted by this amount before going to the limiter.

Ceiling: The threshold of the limiter. The limiter prevents the peak signal from exceeding this level.

Release: This is the time taken for the limiter to recover after reducing a too-hot signal. When GMax is used for light peak suppression, the release time should be quite short. You only want to dip the volume briefly and affect as little audio as possible. However, the release time becomes much more important when using GMax for heavier limiting. In such cases, the only way to find the best setting is by ear.

Meter: The gain-reduction meter shows how much the signal level is reduced by the limiter. The resolution is 1 dB per bar.

Hints and ideas

- The gain reduction meter shows when the limiter is affecting the signal. You should listen carefully to these sections to make sure that you are not pushing the signal too hard (or maybe to make sure that you're pushing it hard enough!).
- When maximizing a mix, it's a good idea to leave a little headroom. Some audio equipment doesn't cope well with signals that reach the maximum peak level of 0 dB. Setting the ceiling a little lower - at around -0.3 dB, for instance - is a good starting point.

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.

- VST technology copyright Steinberg GmbH.
- The "VST" name and logo are registered trademarks of Steinberg GmbH.
- "Windows" is a registered trademark of Microsoft Corporation.
- "Mac" and "OSX" are trademarks of Apple Inc.