GForm Manual

Welcome to GForm

GForm is a formant/pitch shifting effect. It's primarily intended for vocals, but you can experiment with applying it to any monophonic sound source.

GForm dpends on pitch-tracking, so it's unlikely to have any useful effect on rhythm, chords or multi-part records.

Shifting the pitch and formant of a vocal recording can alter its percieved age and gender.

Interface

The main user interface is straightforward with just three variables - pitch, formant and an oversample switch.

Pitch: This controls the pitch variation applied by the effect. It is measured in semitones and has a range or +/- 12, so you can vary the pitch by up to an octave up or down. The effect aims to alter the pitch without changing the timing.

Formant: This controls the formant variation applied by the effect. It has the same range as the "pitch" parameter: +/- 12 semitones. This controls the shift in the fundamental frequencies, without changing the pitch. So, you could make a voice slightly "deeper" without actually making it lower in pitch.

Oversample: Engaging this switch will turn on oversampling. In this mode the effect will operate at twice the native sampling frequency and then

downsample the result. This can sometimes help avoid unwanted aftefacts in the processed sound.

In addition to the main controls, there is a second page of settings accessed via the "Tweak" tab. There are three further settings found on that tab that all.

Min Freq: This controls the lowest frequency that the processor will look for. When the signal's pitch drops below this, it is simply ignored. Narrowing the expected frequency range can make the pitch detection more efficient and more accurate.

Max Freq: This is the counterpart to the "Min Freq" setting that specifies the upper end of the range. As mentioned, this pair of settings can help with the pitch detection underlying the effect.

Gate: Similar to the frequency limit parameters, this specifies a volume floor. The pitch detection will ignore the input if it drops below this level. Again, this helps to make the pitch detection more efficient and accurate.

Hints and ideas

- Broadly speaking, raising the pitch and formant will make a voice recording seem "younger" or "more feminine", while lowering the same can make the voice seem "older" or "more masculine".
- If you record multi-part harmonies with a single voice, you can experiment with changing the formant of the backing vocals to make the sound richer and more varied.
- With extreme settings you can create a chipmunk or demonic effect on spoken or sung vocals.

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.