TILTSHIFT

Manual for version **3.15**

- Introduction
- Interface Preview
- Controls
- Specs
  - Supported Channel Configurations
- Presets
- Acknowledgements
- Authors
- Translators
- About Goodhertz Plugins
  - User Interface
  - Preset Bar
  - Toolbar
  - Keyboard Shortcuts
  - Right-Click Actions
  - Right-Click Preferences
  - Mouse Modifiers
  - Automation
  - Plugin Settings
  - System Requirements
  - Contact Support

Tiltshift

Superior tone-shaping, from mix to master

Tiltshift is the most intuitive and effective way to shape your sound.

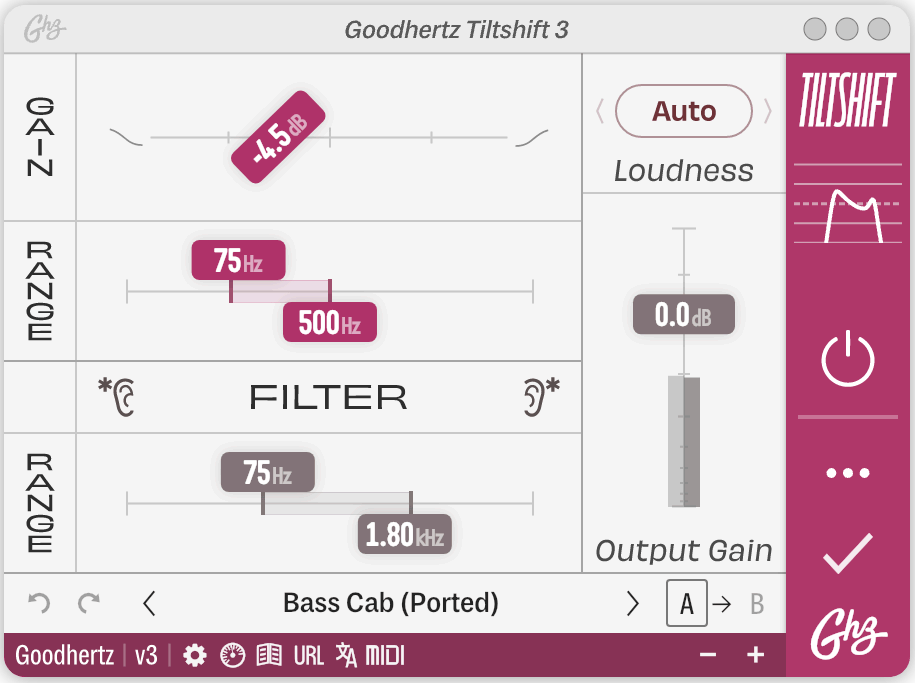
The guiding principle of EQ plugins often seems to be: more is more. More bands, more peaks, more valleys, more parameters to learn, and more metering to focus on. While we do appreciate a full-fledged multiband EQ when it's needed, we've found that oftentimes, they're not the right tool for the job. "More is more" also means more complication, more signal mangling, more phase distortion, CPU-usage, etc., and less productive mixing or mastering, less musicality and creativity.

Tiltshift is a new type of tilt EQ that does more with a lot fewer controls. More than any other EQ, Tiltshift is able to dramatically alter the tone and timbre of your audio while sticking to the first rule of mastering: **do no harm**. By using extremely gentle slopes (often less than 1 dB per octave), the relative phase, frequency, and transient response of the audio is preserved, making it easier to find the right global EQ curve before focusing on specifics, and **Tiltshift**'s perceptual loudness lock technology makes it easier to compare EQ settings without being influenced by simple gain changes.

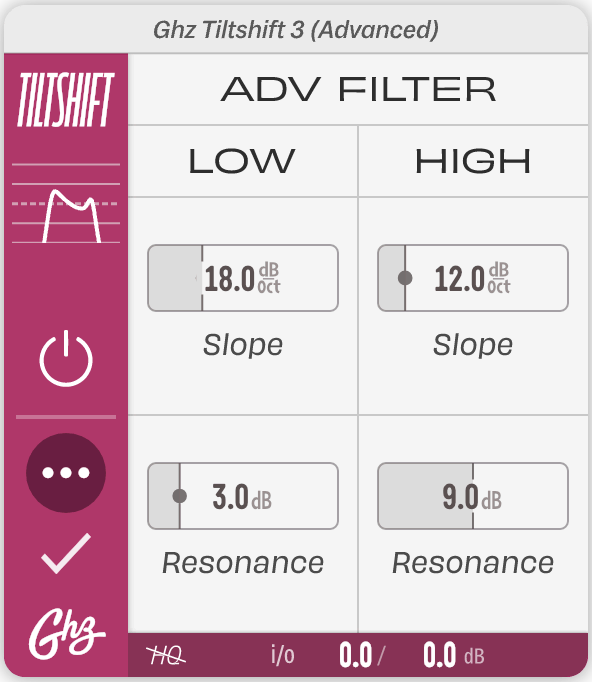
So what if there was *less* in an EQ? Meet **Tiltshift**: superior tone-shaping, suitable for anything from mixing to mastering.

Interface Preview

Here's a screenshot of Tiltshift in action. Click anywhere on the interface to jump to a control's definition below.



Advanced Controls



Controls

Primary Controls

Tilt

Tilt Gain

Default 0.0dB

Varies the amount of spectral tilt.

This simple slider is the heart and soul of **Tiltshift**. In theory, you might never need to touch another slider, because simply tilting forward or backward provides extremely musical, natural-sounding tonal variation.

- Negative values tilt the sonic spectrum toward the bass.
- Positive values tilt toward the treble.
- Want something warm & full sounding? Try tilting towards the bass `-3 dB`.
- Looking for something bright ala Studio 54? Try tilting towards the treble, `+3 dB`.

> **What does Tilt Gain's decibel value represent?** It specifies the exact amount that the treble & bass are boosted or cut in opposing directions. For example, for a **Tilt Gain** of `+6dB`, the treble is boosted `+6dB`, while the bass is cut `-6dB`.

Tilt Range Low

Default 20Hz

Tiltshift was primarily designed for wide, gradually-sloping tilts across the entire frequency spectrum. However, there are times when you may want to tilt a smaller portion of spectrum. For this reason, we included **Tilt Range Low** & Tilt Range High, which control the range in which the tilt EQ operates.

> For example, let's say you're making a bass track brighter by tilting up the treble, but you don't want to boost anything above 2 kHz. By setting **Tilt Range High** to 2 kHz, you can limit the tilt range to level off above that frequency. Get this setting.
>
> Looking to tilt just the "air" in your track? Drag the **Tilt Range Low** to something up high, like 10 kHz, and push the **Tilt Range High** up as high as it can go, 24 kHz. Then tilt up the **Tilt Gain** just a little — voila, more presence in your sound's high atmospheres. Get this setting.

Tilt Range High

Default 20.0kHz

High frequency point for the tilt range. See Tilt Range Low.

Tilt Loudness Mode

Default Auto

Unlike a typical tilt EQ, which always boosts & cuts an equal amount in either direction, **Tiltshift** is smarter. With **Tilt Loudness Mode** set to Auto, the loudness is automatically matched for any tilt setting using our perceptual loudness locking technology. This makes comparing EQ settings much easier and makes it possible to perform more natural sounding tilt automations.

Option	*Discussion*
Auto	Automatically varies the gain to maintain the same perceived loudness
Standard	Functions like a typical tilt EQ: cutting and boosting an equal but opposite amount

Option	*Discussion*
Treble	Keeps the gain of the bass fixed while varying the treble
Bass	Keeps the gain of the treble fixed while varying the bass

Filter

Tiltshift's Filter section perfectly complements the Tilt section: the Tilt shapes the overall frequency spectrum while the Filter further refines the extremes of the frequency range. Use it for anything from filtering out DC offset on a master, to more creative applications, like recreating the response of a guitar cab or cellphone.

Filter Listen Low

Default Off

The "Listen" function allows you to audition the audio that the low cut filter is removing.

> **Filter Listen Low** is very useful for helping to dial in the appropriate Filter Range Low & Filter Slope Low for what you're trying to accomplish.
>
> For example, if you're trying to remove some low frequency pops and plosives from a vocal, use the "Listen" function to help set Filter Range Low so that you are hearing mostly plosives and not important components of the vocal itself.

Filter Listen High

Default Off

The "Listen" function allows you to audition the audio that the high cut filter is removing.

> **Filter Listen High** is very useful for helping to dial in the appropriate Filter Range High & Filter Slope High for what you're trying to accomplish.

Filter Range Low

Default 4Hz

Controls the corner frequency of the low cut filter.

ℹ The frequency response at this frequency is -3 dB if Filter Resonance Low is set to 0 dB.

⚠ When **Filter Range Low** is at its minimum value, the low cut filter is bypassed completely.

Filter Range High

Default 24.0kHz

Controls the corner frequency of the high cut filter.

ℹ The frequency response at this frequency is -3 dB if Filter Resonance High is set to 0 dB.

⚠ When **Filter Range High** is at its maximum value, the high cut filter is bypassed completely.

Output

Output Gain

Default 0.0dB

Varies the output gain.

📊 **Output Gain** includes a level meter embedded in the slider. This meter shows the peak level of the signal both pre (lighter color) and post (darker color) **Tiltshift**'s processing.

If the signal peak exceeds or equals 0.0dB the meter color turns red, indicating that clipping *could* occur. **Tiltshift** will never clip internally, due to its double-precision floating-point processing, but the signal might be clipped at a later stage (by the host/DAW or DAC).

Master On/Off

Default On

Bypasses **Tiltshift**'s processing.

> We recommend using the **Master On/Off** instead of your DAW's plugin bypass to avoid digital artifacts.

Advanced Controls

The Advanced section offers more precise control and fine adjustment options.

To access **Tiltshift**'s advanced controls, click the ••• icon in the sidebar.

Advanced Filter

Filter Slope Low

Default 12.0dB/Oct

Continuously varies the steepness of the low cut filter in dB per octave.

Filter Resonance Low

Default 0.0dB

Controls the amount of filter resonance at the Filter Range Low frequency.

> **Filter Resonance Low** allows you to boost at the very same frequency where the low cut begins to act. This may seem

> counter intuitive: why boost something that you're intending to filter out? *Because it can sound awesome.*
>
> Here's an example: imagine you have a beefy kick drum that has too much sub bass energy around 40 Hz. To reduce the sub bass, you set Filter Range Low to 60 Hz, thereby rolling off everything below 60 Hz. You've effectively tamed the excessive sub energy, but you find that now the kick drum sounds a bit weak and thin. By setting the **Filter Resonance Low** to 6 dB, you can bring back some of the kick drum's power and bass, while still cutting excessive sub bass. Win-win.

Filter Slope High

Default 12.0dB/Oct

Continuously varies the steepness of the high cut filter in dB per octave.

Filter Resonance High

Default 0.0dB

Controls the amount of filter resonance at the Filter Range High frequency.

HQ Mode

Default Off

HQ Mode is our no-holds-barred processing mode where super high quality audio is given priority over CPU usage.

When **HQ Mode** is turned On, **Tiltshift** uses a higher precision algorithm, providing better spectral resolution at the expense of higher CPU usage.

Option	*Symbol*
Off	~~HQ~~
On	**HQ!**

We recommend using **HQ Mode** when you need the highest possible quality and don't mind 2-4x higher CPU usage. An important lead instrument, vocal, or a mastering session is a great place for **HQ Mode**.

HQ Mode cannot be MIDI mapped since automating it is not recommended.

Preprocess Input Gain

Default 0.0

Controls the input gain *before* it hits **Tiltshift**'s processing.

Postprocess Output Gain

Default 0.0

Controls the output gain *after* **Tiltshift**'s processing.

Specs

Supported Channel Configurations

Input Channel #	*Output Channel #*
Mono	Mono
Mono	Stereo
Stereo	Stereo

Presets

The presets are a great way to get to know each plugin. The preset drawer can be accessed at the bottom of each plugin by clicking the current preset name.

- **General**
  - *Default*
  - *Brighter*
  - *Darker*
  - *Thinner*
  - *Warmer*
  - *Dull*
  - *Sharp*
  - *Sub Love*
  - *Air*
  - *White Noise -> Pink*
  - *Pink Noise -> White*
- **Filter Only**
  - *Vox Rumble Filter (M)*
  - *Vox Rumble Filter (F)*
  - *DC Blocker*
- **Mics**
  - *Berlin Condenser* *Typical large diaphragm condenser*
  - *Pasadena Ribbon* *Ribbon mic with a large diaphragm*
  - *Burbank Ribbon* *Ribbon mic with a smaller diaphragm*
  - *Chicago Dynamic* *Cheap dynamic microphone*
- **Speakers**
  - *Guitar Cab* *Vintage 12*
  - *Bass Cab (Ported)* *Vented 15*
  - *Bass Cab (Sealed)* *Sealed 15*
  - *Grotbox* *Small, low-quality “studio monitor”*
  - *Cellphone* *Tiny, modern cellphone loudspeaker*

Acknowledgements

Annlie Huang / *Chris Conover* / *Diana Zheng* / *Jack Stratton* / *TaeHo Park*

Authors

Devin Kerr / *Rob Stenson* / *Jasper Duba* / *Noah Dayan*

Translators

TaeHo Park / *Tiago Frúgoli* / *Gustavo Guzmán* / *Reda Kermach* / *Noah Dayan* / *Gal Cohen* / *Sydney Bolton* / *Enrico Cirene*

About Goodhertz Plugins

User Interface

Goodhertz plugins are made to be workhorse tools that sound amazing. We've put a lot of thought and care into the audio quality and plugin usability, and for that reason, we've opted for simple and direct controls & interfaces that don't rely on photorealistic knobs or ornamental screw heads to communicate their meaning.

We've also decided to only include meters and graphs when we feel they will directly lead to a better sonic result. Meters/graphs can consume significant CPU resources, and we firmly believe that **if it sounds good, it is good**.

Our meters can be reset at any time using the "Reset Meters" button (in certain plugins) and manually enabled or disabled via the "Enable Metering" User Preference.

Preset Bar

Button	*Action*
↺	Undo the last parameter change.
↻	Redo the last parameter change.
‹	Switch to the previous preset.
“Preset Name”	Opens the preset drawer (Option/Alt + Click to reset all plugin settings to preset).
›	Switch to the next preset.
A	Selects the A settings state.
→ ←	This copies the current settings to the opposite A/B state; i.e. if you’re on the A state, clicking the arrow will copy those settings to the B state.
B	Selects the B settings state.

Toolbar

Introduced in version 3.10, the toolbar at the bottom of the plugin holds a handful of shortcut buttons.

Icon	*Action*
⚙	Opens preferences menu
⏲	Shows diagnostic information
🕮	Opens plugin manual in your default web browser
URL	Opens a URL representation of the current plugin control state (Command/Ctrl + Click to copy the URL to the clipboard)
文A	Opens language-selection menu

Icon	*Action*
MIDI	Opens MIDI Learn menu
HQ HQ!	Toggles HQ mode (only in certain plugins)
	Resets all meters (only in certain plugins)
–	Shrink interface
+	Enlarge interface

Keyboard Shortcuts

Action	*Keyboard Shortcut*
Enter New Parameter Value	Once you've clicked or double-clicked a control, type in a value, then hit `ENTER`, `RETURN`, *or* `TAB`. Depending on the control type, we support a variety of input values, such as fractions (e.g. 1/4 for 0.25), the kilo suffix (e.g. 4k for 4000), note values for time- and rate-based controls (e.g. 1/8T for an eighth note triplet or 1/4D for a dotted quarter note, relative to the current DAW or plugin BPM), and musical notes for frequency controls (e.g. A#5 for 923.33 Hz or Eb2 for 77.78 Hz).
Increment Parameter Value	`↑` *or* `→` arrow keys
Decrement Parameter Value	`↓` *or* `←` arrow keys
Jump to Next Parameter	`TAB`
Jump to Previous Parameter	`SHIFT` + `TAB` *or* `` ` `` (backtick)

Action	*Keyboard Shortcut*
Escape Parameter Focus / Close any Open Drawers	`ESC`
Tap Tempo	`T` *or* **Click** (N.B. For this to work, you must have a BPM, milliseconds, or rate (Hz) control selected.)
Save Preset	`N` (N.B. For this to work, the preset panel must be open.)
Set Preset as Favorite	`F` (N.B. For this to work, the preset panel must be open.)
Edit Preset	`E` (N.B. For this to work, the preset panel must be open.)
Update Preset	`U` (N.B. For this to work, the preset panel must be open.)
Delete Preset	`DELETE` (N.B. For this to work, the preset panel must be open.)

Right-Click Actions

Action	*Instruction*
Read about Control in manual	**Right-Click** & select “Show in Plugin Manual”
Reset Control to Default	**Right-Click** & select “Reset to Factory Default Value”
Lock Control when switching presets	**Right-Click** & select “Lock When Switching Presets”
Copy current plugin settings to clipboard	**Right-Click** & select “Copy as URL to Clipboard”
Paste all plugin settings from clipboard	**Right-Click** & select “Paste From Clipboard”
Reset all plugin settings to Defaults	**Right-Click** & select “Reset All to Defaults”
Reset all plugin metering	**Right-Click** & select “Reset Meters” (only available in certain plugins)

Action	*Instruction*
Reset all plugin settings to Preset	**Right-Click** & select “Reset to [preset] Preset”
Update Preset with current plugin settings	**Right-Click** & select “Update [preset] Preset”
Create new Preset with current plugin settings	**Right-Click** & select “Create New Preset”
Go to the plugin’s manual page	**Right-Click** & select “Read [plugin name] Manual”

Right-Click Preferences

Action	*Explanation*
Language	Switch the display language of text elements in Goodhertz plugins. We currently support the following languages: English, Spanish, Portuguese, French, Italian, Japanese, Korean, Chinese (Simplified), Chinese (Traditional), and Arabic.
Advanced Pane	By default, this is *Closed in New Instances* — i.e. when you add a new instance of a plugin, it does not show you the advanced controls available by hitting the ••• button in the sidebar. If you’d like new instances to start with the advanced controls showing, choose *Open in New Instances*. Either way, each instance remembers whether its advanced pane was open, including when you reopen a saved session.
Control Granularity	By default, all Goodhertz controls move in small increments when dragged. If you prefer controls to operate with larger increments by default, change this option to *Coarse*. N.B. This will swap the behavior of the Shift mouse modifier - i.e. Shift-dragging will move a control with standard granularity when set to *Coarse*.
Dark Mode	Allows you to choose the color palette used for displaying the interface. If you prefer the look of dark colors (or work in a darker environment) enable this option. The *Auto* option will automatically

Action	*Explanation*
	adjust the color scheme depending on the system preferences of your machine (Mac only).
Enable Hover Markers	By default, this is *On* — i.e. all controls will show markers on hover. If you find this behavior unnecessary, deselect this option and no markers will be shown.
Enable Metering	By default, this is *On* — i.e. in normal operation, all audio meters and visualizations available in Goodhertz plugins are enabled and running. If you'd like to turn them off and disable all metering and visualization, deselect this option. And to turn them back on, simply reselect it. N.B. If you're struggling to use a large number of Goodhertz plugins on an older processor with an integrated GPU, sometimes disabling metering can help.
Enable Scroll Input	By default, all Goodhertz sliders can be *scrolled* in addition to dragged. If you find this behavior unnecessary, deselect this option and no scrolling events will be used to control Goodhertz sliders.
Enable Tooltips	By default, this is *On* — i.e. all controls will show a tooltip on hover. If you find this behavior unnecessary, deselect this option and no tooltips will be shown.
GPU Acceleration	By default, this is *Enabled* — i.e. the GPU will be prioritized whenever possible to improve graphics performance. If your graphics card does not support GPU acceleration, this preference will be automatically set to *Reduced*. N.B. If you experience graphics issues, disabling this preference may help.
Keyboard Focus	By default, you can get keyboard focus on any Goodhertz control with a single click. Change this option to ensure keyboard focus only occurs on double clicks.
Window Size	Enlarge or shrink the Goodhertz plugin window by selecting an option here. This will save your preference for all instances of this plugin.
Diagnostics	Displays general information about the plugin and the configuration of your system for diagnostic purposes. If you experience any issues with the plugin, it can be helpful to include this information when

Action	*Explanation*
	contacting us. N.B. Clicking this window will copy the contents to the clipboard.
MIDI Learn	Configure the mapping used to control parameters via MIDI messages. To assign a MIDI number to a control, enable *MIDI Learn* and send a MIDI message while a control is focused. To remove an assigned mapping, click on a mapping entry in the list or select *Clear All* to reset the entire mapping. N.B. You can assign different types of MIDI messages including Pitch Bend, Note, and CC messages.

Mouse Modifiers

Action	*Combination (Mac)*	*Combination (Windows)*
Reset Parameter to Default Value	`OPTION` + Click	`ALT` + Click
Move Control with Coarse Precision	`SHIFT` + Drag	`SHIFT` + Drag
Move Control with Fine Precision	`COMMAND` + Drag	`CTRL` + Drag
Move Control with Normal Precision	Drag	Drag

Automation

Unintentional digital clicks and pops are the worst. They happen for lots of reasons and often end up wasting your time with needless revisions or mastering surgery. When they go unnoticed, they can make their way onto commercial albums and releases.

Plugin automation is a common cause of clicks and pops. Sweeping an EQ band, changing a delay setting, and even automating a plugin bypass can cause digital artifacts if poorly handled.

This is not true for Goodhertz plugins. Any parameter in a Goodhertz plugin, even on/off switches, can be automated freely and smoothly without clicks, pops, or zipper noises (unless otherwise noted). You can push them, pull them, LFO them — whatever you do, they'll handle it gracefully.

Since our Master On/Off controls won't create artifacts, we recommend that you use them rather than your DAW-supplied plugin bypass if you want to disable plugin processing.

Plugin Settings

Goodhertz plugin settings can be copied and pasted as text urls, which look like this: https://goodhertz.com/vulf-comp/3.0.9?cm=0&wf=0&lf=100&lfc=50

To copy and paste, right click anywhere on the plugin interface and select either the copy or the paste option.

E.g. If you paste "https://goodhertz.com/vulf-comp/3.0.9?cm=0&wf=0&lf=100&lfc=50" into Vulf Compressor it will recall the settings associated with that url. This way you can easily send an *exact* plugin setting to someone — in an email or a text — without any guesswork or screenshots.

System Requirements

Mac OS X ≥ 10.13
Audio Unit 64-Bit, VST 64-Bit, VST3 64-Bit, **or** AAX 64-Bit host

Windows ≥ 10
VST 64-Bit, VST3 64-Bit, **or** AAX 64-Bit host

Contact Support

To send plugin feedback, please e-mail us at feedback@goodhertz.com.

If you're having trouble, experiencing a technical issue, or you think you've found a bug, please email support@goodhertz.com.

Find all our contact info & bug-reporting protocol on the contact page.