

PSP Tilt-Q

Tilt and Contour equalizer



Operation Manual

PSPaudioware.com

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Thanks to all our users around the world for ideas and help in the development of new plug-ins!

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Overview

PSP Tilt-Q offers Tilt and Contour (loudness) control, and high and low pass filters as well. Additionally Tilt and Contour has three characteristics each. High and low pass filters can operate in 6, 12 or 24 dB/octave modes.

The output consists of the PSP's proprietary soft saturation shared with PSP's other equalizers such as PSP ConsoleQ or PSP preQursor3.



Features

- Tilt equalizer with three characteristics to choose from.
- Contour (loudness) equalizer with three characteristics to choose from.
- High Pass Filter with selectable 6, 12 or 24 dB/octave steepness.
- Low Pass Filter with selectable 6, 12 or 24 dB/octave steepness.
- Equalization can be applied to Left, Right, Mid, Side or to both input channels.
- FAT double sampling: In PSP TiltQ FAT is automatically switched on for low (below 50 kHz) sample rates, and off for higher sample rates. This ensures accurate processing independent of the sample rate.
- 64-bit double precision floating point math for ultra-low cumulative errors in the filters – no more worrying about piling up noise or unrealistic filters' behavior!
- An optional second-generation SAT (for SATuration) option in the output of each plug-in. This not only protects against digital clipping in software or hardware that comes after the plug-in, but it also adds a smooth overdriven sound to hard-driven signals. The SAT algorithm is located after the output level control in the plug-in's internal chain, and its ceiling reference level is set to a fraction of dB below 0 dBFS.
- A 31-band bar analyzer with optional spectrum curve display mode.

PSP Tilt-Q main panel

PSP Tilt-Q is a PSPaudioware's Tilt type equalizer designed to combine a musical response and an easy, yet flexible operation.



PSP Tilt-Q Controls

PSP TiltQ has a very straightforward user interface, reflecting the simple console equalizers. As such, its controls need only basic explanation.

General equalizer panel controls:

ALL IN (All processing): Click this button to engage (when illuminated) or bypass all of the enabled filters, enabled equalizers, level control and enabled output saturation.

Polarity button: Reverse selected channel(s) polarity when engaged.

OPEN / CLOSE: Click the label at the upper right corner of the plug-in to open or close the PSP Spector PSPEC-31 panel above the main panel.

HPF (High Pass Filter):

Button: Click this button to engage (lit) or bypass the filter. When the IN button is not lit, the HPF filter band is not visible on the PSP Spector panel and its marker is greyed out.

LED switch: Click on LEDs to toggle between filter's 6, 12 or 24 dB/octave slopes.

Slider: The slider lets you adjust the high pass filter frequency. The HPF has a range from 10 Hz to 1000 Hz.

Numerical Value above the slider: Displays the HPF cutoff frequency in hertz (Hz) and kilohertz (kHz). Click to type-in the new value.

LPF (Low Pass Filter):

Button: Click this button to engage (lit) or bypass the filter. When the button is not lit, the LPF filter band is not visible on the PSP Spector panel and its marker is greyed out.

LED switch: Click on LEDs to toggle between filter's 6, 12 or 24 dB/octave slopes.

Slider: The slider lets you adjust the high pass filter frequency. The HPF has a range from 400 Hz to 40 kHz.

Numerical Value above the slider: Displays the HPF cutoff frequency in hertz (Hz) and kilohertz (kHz). Click to type-in the new value.

Tilt:

Button: Click this button to engage (lit) or bypass (unlit) the tilt equalizer. When the button is unlit, the tilt eq is not visible on the PSPEC-31 panel and its marker is greyed out.

Knob: Use the knob to adjust the boost or attenuation of the tilt between -15 dB and +15 dB. The positive tilt gain value refers to boost of the high band and attenuation of the low band.

Numerical Value under the knob: Displays the gain in decibels (dB). Click to type-in the new value.

LED switch: Click on selected LED to choose the tilt characteristic. The bottom setting offers a smooth and classic tilt over the broad range of frequencies. The middle setting sets tilt's focus on lows and highs while the middle range with reduced effect of the tilt gain. The top setting provide a curve focused on the middle range gain transition while lows and highs have a soft gain curve.

Slider: Adjusts the frequency of the low filter. Use the SHIFT key for a precise frequency adjustment. The Tilt frequency range is 350 Hz to 2 kHz.

Numerical Value above the frequency slider: Displays the tilt pivot frequency in hertz (Hz) or kilohertz (kHz). Click to type-in the new value.

Link button: links the tilt's and contour's frequency sliders.

Contour:

Button: Click this button to engage (lit) or bypass (unlit) the contour equalizer. When the button is unlit, the contour eq is not visible on the PSPEC-31 panel and its marker is greyed out.

Knob: Use the knob to adjust the boost or attenuation of the contour between -15 dB and +15 dB. The positive gain on the knob refers to boost on lows and highs and dip in the middle frequency range.

Numerical Value under the knob: Displays the gain in decibels (dB). Click to type-in the new value.

LED switch: Click on selected LED to choose the contour characteristic. The bottom setting offers a complex loudness control similar to some hardware loudness filters known from HiFi amplifiers. The middle setting sets contour's broad dip in the middle and gain of the bottom-end and top-end frequencies. The top setting provide a curve with a moderately broad dip and a typical gain of lows and highs.

Slider: Adjusts the middle frequency of the contour. Use the SHIFT key for a precise frequency adjustment. The contour middle frequency range is 350 Hz to 2 kHz.

Numerical Value above the slider: Displays the contour's frequency in hearts (Hz) and kilohertz (kHz).

Output: This knob adjusts the global output level. The output level is variable between -20 dB and $+20$ dB. This control affects only processed channel selected with a Channel Select Switch.

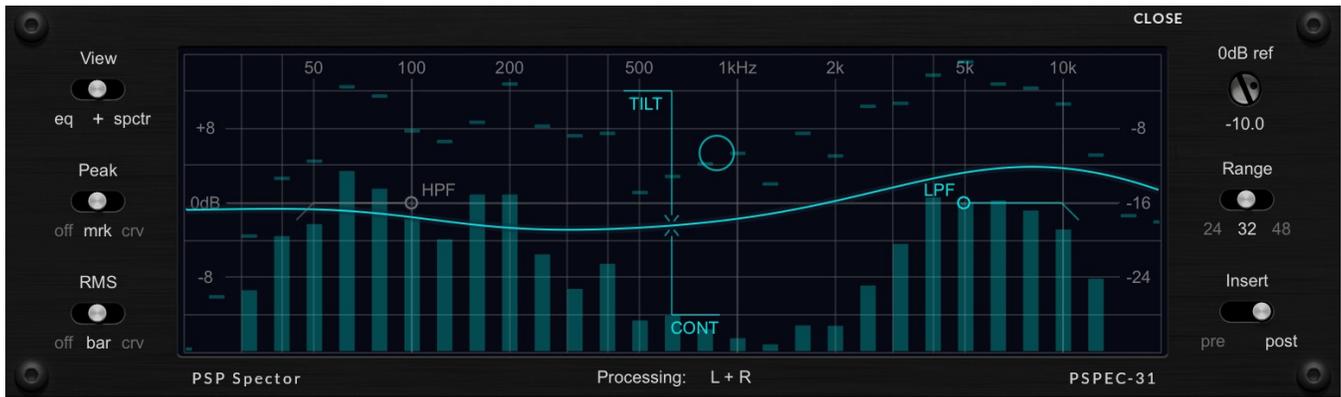
Output LED: This LED will flash when 0 dBFS is exceeded on output. Don't worry, it's not indicating any internal distortion. Once triggered, the LED will stay dark red until you reset it by clicking it. Note that when SAT is engaged, you will never exceed 0 dBFS on the output.

SAT: This turns on the Saturation algorithm described in the Overview. The output saturation algorithm affects the channel selected for processing only.

Sat LED: This LED will flash when the soft saturation algorithm is actively attenuating (soft-clipping) the output signal.

M-L-OO-R-S Channel Select Switch: Use this switch to assign the entire plug-in's processing to only the selected channel or to the stereo signal. This switch also determines the analyzer's behavior. The analyzer displays measurement of a single channel when L or R is selected. The maximum peak and RMS values of channels are displayed in stereo mode (middle position).

PSP Spector PSPEC-31 panel



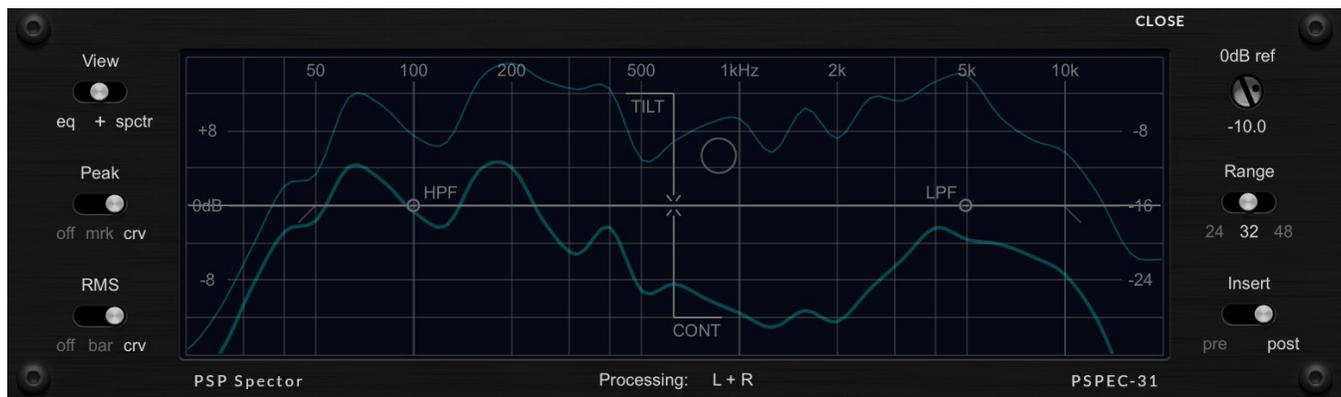
PSP Spector PSPEC-31 is a new pop-up display panel that's been added to version 2 of PSP Tilt-Q. Although it doesn't influence the plug-in's sound, it offers several powerful features that you'll find helpful for everyday use.

PSP Spector lets you manipulate the classic analog sound of PSP Tilt-Q with digital parametric EQ controls. It displays the plug-in's equalization curve, and there are onscreen markers for each filter that you can click and drag to set their gain and frequency directly.

In addition, PSP Spector offers a 31-band spectrum analyzer, which lets you observe the spectrum of the track either before or after equalization has been applied.

The analyzer's spectrum can be displayed in several views:

- a bar-graph view with peak values for each band displayed as floating line markers above each band (as shown above);
- a smooth curve view with peak values for each band displayed as floating markers; or
- a smooth curve view with peak values for each band displayed as a higher curve (as shown below)



NOTE: Although the curve mode may resemble a Fast Fourier Transform (FFT) display, it is still a 1/3-octave measurement, interpolated for a smooth overview curve on the display.

PSP Spector PSPEC-31 controls:

CLOSE: Click on the CLOSE label, either at the upper corner of the analyzer's display or the upper right corner of the main panel, to disable and close the PSP Spector panel. Click on the main panel's OPEN label to open and enable the PSP Spector panel again.

NOTE: To keep CPU usage as low as possible, the analyzer stops processing audio when you close the PSP Spector panel. (You're not looking at it when it's closed, right?)

View switch: Selects the EQ only (left), spectrum analyzer only (right), or both together (middle). When EQ only is selected, the analyzer stops processing audio.

Peak switch: Selects how bands' peak values are displayed: off (left), floating line markers (middle), or smooth curve (right).

RMS switch: Selects the analyzer's main display of RMS signal values: off, (left), bar graph (middle), or smooth curve (right).

0dB ref: This trimpot sets the reference level offset for 0 dBFS measurement. The numerical scale on the right side of the display shows the dBFS value when the reference is set to 0. Negative values move the 0 dB reference down; at these settings, the displayed spectrum is boosted. Double-click the trimpot to set a default reference value of -20.0 dB; the range is -40.0 dB to 0 dB.

Range switch: Selects the level range on the display graph: 24 dB (left), 32 dB (middle), or 48 dB (right).

Insert switch: Selects whether the PSP Spector is inserted pre-equalizer (left) or post-equalizer (right).

NOTE: PSP Spector PSPEC-31 doesn't affect the audio signal. The insert point selection just allows you to analyze the signal before or after PSP Tilt-Q applies its EQ curve.

Tilt-Contour ring handle: Click and move this control around to adjust the gain of both: tilt and contour at the same time. Use Alt/Option or Shift to lock the movement horizontally or vertically. Double click to reset tilt and contour gains.

TILT label: click and grab horizontally to adjust tilt's pivot frequency. Double click to engage or disengage this eq.

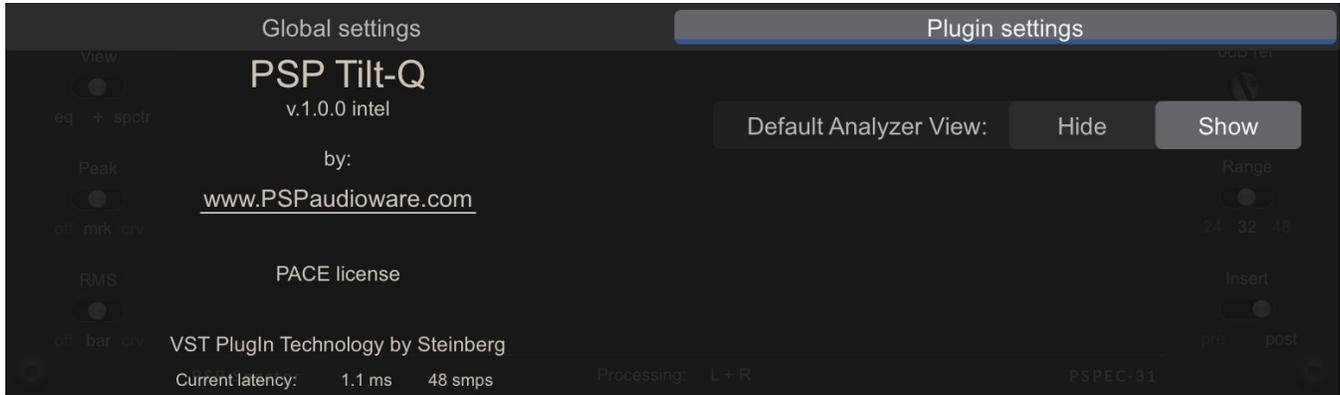
CONT label: click and grab horizontally to adjust contour's center frequency. Double click to engage or disengage this eq.

HPF and LPF labels on the display: Click and drag any of the band markers to change the frequency settings for that filter. Double-click the marker to enable or disable that filter.

All markers and the equalization curve will be greyed out when the ALL IN button on the equalizer's main panel is disengaged (not lit).

Rear panel

Clicking on the front panel's PSP Tilt-Q label opens the rear panel About box, on the Plugin Settings tab. Click on the link to open the PSPaudioware.com website. Click on any label other than the web site link to close the rear panel and return to the front panel.



The Global Settings tab lets you access this manual or set whether Hints (floating information boxes that appear when hovering over a control) are visible or not. It also shows the installed version of the software, for help with troubleshooting. Please go to **Config** section of this manual for more details.

PRESET HANDLING AND VIEW OPTIONS

Every PSP plug-in comes with a large library of factory presets. You can use them as a starting point for experimenting with your own sounds, examine them to understand how the various features work, or keep them handy for when a track or mix needs a quick and high-quality way to create an effect or fix a problem.

To access the preset library, just click on the Preset Bar along the top of the plug-in window. If you're familiar with other PSPaudioware plug-ins, you'll find that this one works exactly the same way.



Preset Browser

PSP Tilt-Q features a comprehensive preset management and browser system. To access the preset browser, simply click on the preset name window at the top of the plug-in (which displays 'Default' when the plug-in loads).



The new preset manager has three main categories which can be accessed via the tabs at the top of the preset browser: **Application**, **Designer**, and **My presets**.

Application – shows all factory presets, sorted by application or type of effect. These can be selected from a list on the left side of the preset browser.

Designer – shows all factory presets, sorted by designer. A photo of the designer is displayed for each of their presets. Click on the photo to open the designer's website.

My presets – shows only the presets you have created and saved, or downloaded and added to your custom presets for PSP Tilt-Q.

NOTE: The Factory presets are built into PSP preQursor3. While you can't edit them directly, you can make adjustments to them, and then save the result as a user preset.

To add categories to the preset list, you can create new subfolders in the preset directory.

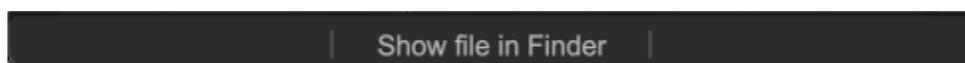
For Windows users, this is located at:

C:\Users\Username\Documents\PSPaudioware.com\User Presets\PSP Tilt-Q

For Mac users, this is located at:

~/Documents/PSPaudioware.com/User Presets/PSP Tilt-Q

NOTE: You can find the exact file location by clicking on the **Show File in Finder** button at the bottom of the preset browser window.



To select a preset, simply click a preset name in the right window. On the first click, the preset will be temporarily loaded so that you can audition it while still in the preset browser. To confirm the preset choice and get back to the main user interface, double-click the preset name again.

Copy / Paste

A dark rectangular button with the text "Copy" and "Paste" in a light gray font, separated by a small gap.

The **Copy/Paste** feature is useful for when you're running two or more instances of Lexicon PSP42 and you want them to have identical settings.

Of course, you can always open a new instance and load the same preset as your first instance has, but this only works if your first instance hasn't been tweaked at all since the preset was loaded. To share your tweaks between instances, use **Copy** and **Paste**.

To use this feature, simply click the **Copy** button, open a new instance of PSP Tilt-Q where it's needed, and click the Paste button to load the first instance's settings.

This feature can be particularly useful for processing similar instruments or sounds, when only a few minor tweaks are needed for each instance.

A/B System

A dark rectangular button with the text "A / B" and "A ➔ B" in a light gray font, separated by a small gap.

The **A/B system** lets you quickly audition changes to your settings. You can compare how different tweaks work in a track or mix, or even audition two different presets on the fly.

The **A/B Button** allows you to quickly switch between the current plug-in settings (**A**) and a previous group of settings that you've previously stored (**B**).

The **A>B Button** copies the **A** settings over to the **B** slot. This lets you temporarily 'bookmark' your current settings, make more tweaks, and then compare the new tweaks with your 'bookmarked' settings using the **A/B Button**.

Undo / Redo



The **Undo/Redo** feature can be extremely important when designing presets! We all know the frustration when we make one too many edits and ruin a previously great sound. With the **Undo** and **Redo** buttons (the counterclockwise and clockwise arrows as shown above), you can step backward and forward through your edit actions until you're back where you wanted to be.

These buttons will let you undo a preset selection, returning you to your previous preset with all settings as they were when you stopped editing it.

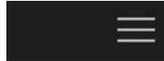
GUI resizing

100%

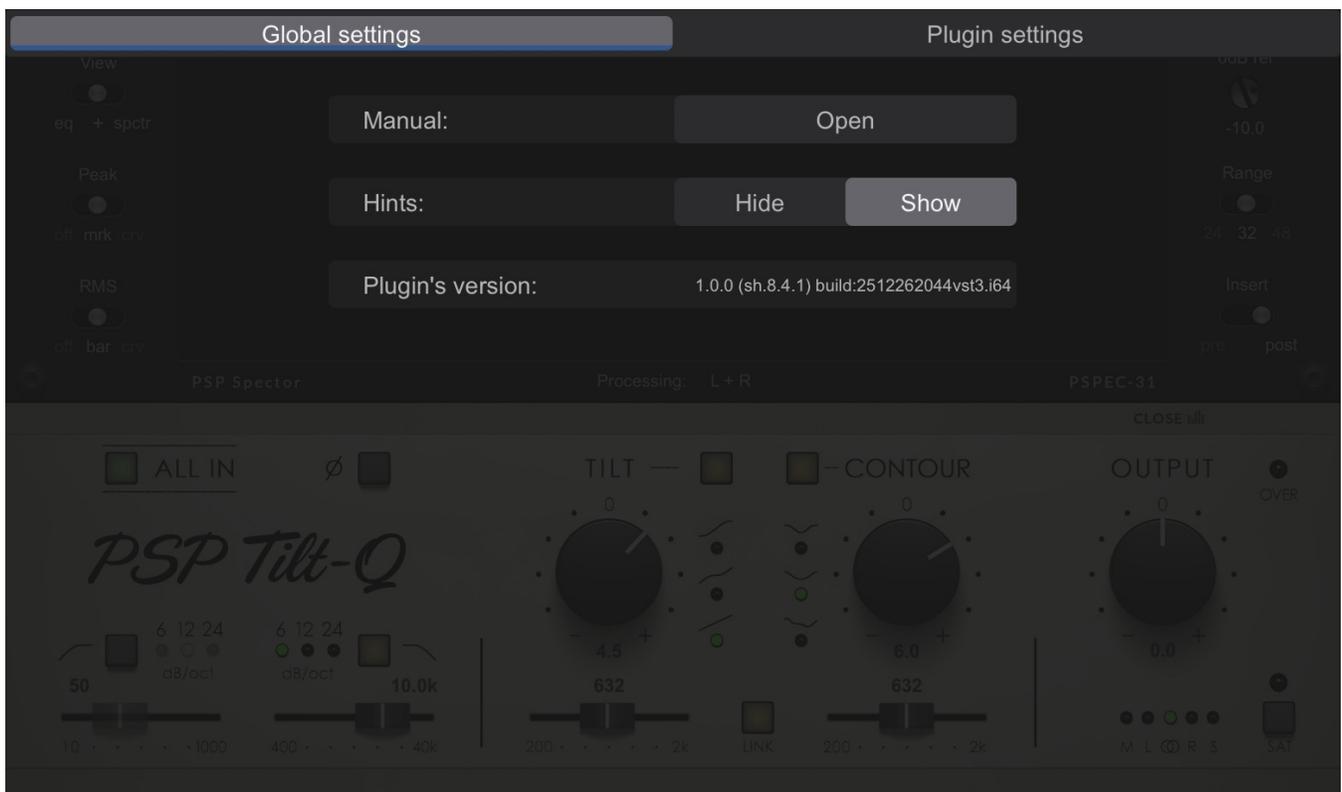
The percentage at the top left shows the current user interface size. Click on it to reveal a dropdown menu of size choices, or hover your mouse on it and scroll up and down to change the size quickly. Double-click to reset it to the default size (100%).

You can also resize the plug-in interface by click- dragging the right bottom corner of the plug-in to any size you like.

Config section



Click the icon with three parallel lines in the top right corner to open the **CONFIG** menu. You will find controls to open the manual, hide or show mouse-hover tool tips (Hints), and check your current plug-in version with build number.



These functions are also available in the **Global Settings** tab on PSP Tilt-Q back panel, which is accessed by clicking the PSP Tilt-Q name on the front panel.

Clicking the Plug-in Information and Settings tab returns you to the main view.

Minimum System Requirements

In order to run PSP Tilt-Q, you'll need to install the free [iLok License Manager](#) application, but you don't need a hardware dongle. By default we provide 3 licenses which can be activated in 3 separate locations, each of which can be either a computer or an iLok dongle (2nd generation or above). You can move these licenses at any time using PACE's iLok License Manager software.

Windows

VST

- Windows 7 – Windows 11
- 64-bit VST3 compatible application

VST3

- Windows 7 – Windows 11
- 64-bit VST3 compatible application

AAX

- Windows 7 – Windows 11
- 64-bit Pro Tools

All DAWs

- Up to date iLok License Manager application installed

macOS Intel or macOS AppleSilicon

AudioUnit

- macOS 10.14 – macOS 14 Sonoma
- 64-bit AudioUnit compatible host application

VST

- macOS 10.14 – macOS 14 Sonoma
- 64-bit VST3 compatible application

VST3

- macOS 10.14 – macOS 14 Sonoma
- 64-bit VST3 compatible host application

AAX

- macOS 10.14 – macOS 14 Sonoma
- 64-bit Pro Tools

All DAWs

- Up to date iLok License Manager application installed



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Processing

- All internal processing done with 64-bit double precision floats.
- PSP Tilt-Q supports 32-bit and 64-bit floating point audio streams.
- PSP Tilt-Q supports sample rates up to 384 kHz.

PSP Tilt-Q and Plug-in Latency

In order to achieve the highest quality results, most of the plug-ins in PSP Tilt-Q require a small buffer containing a number of samples in order to process your audio material properly. The amount of samples needed was kept purposefully small so that these equalizers could be used in tracking—in all cases the internal latency is around 1 ms (one millisecond). The final latency may vary a bit based on sample rate.

That said, most modern DAWs include plug-in delay compensation, which eliminates the effect of the delay incurred by PSP Tilt-Q on playback. PSP Tilt-Q fully supports the latency compensation of all host DAWs (meaning, accurately reports its samples of delay to the host). Note that some host DAWs have limitations regarding its delay compensation, so be sure to refer to your DAW's user guide for more information. For your convenience the latency of the plug-in is reported at its bottom bar in samples and milliseconds.

Limitations of the demo version

We offer a 30-day evaluation period without any audio interruptions or control limitations. To get access to the plug-in and your unique authorization details, simply login to your account at our [user area](#).

Enjoy!

– the PSP team

Support

If you have any questions about any of our plug-ins, please visit our website:

www.PSPAudioware.com

The website is where you can find the latest product information, free software updates, online support forum and answers to the most frequently asked questions.

Problems with the installation, activation or authorization?
Please watch our [troubleshooting video tutorials](#) on our YouTube channel.

You can also contact us by e-mail: support@PSPAudioware.com.
We will gladly answer all of your questions. As a rule we respond within 24 hours.

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