

KELVIN

TONE SHAPER

Plugin Manual

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CONTENTS

Introduction	4
Features.....	5
Getting started	6
Install and Authorise	6
Basic Operation.....	6
Shortcuts	6
Tool Tips	6
User Interface Scaling	6
The Menu Bar	7
Presets.....	7
Mac Preset Locations	7
Windows Preset Locations	7
Preset Reference Level.....	7
Mode	8
Quality	8
Quality for Non-Realtime Rendering	9
Power.....	9
The Main Section	10
Gain and Drive.....	10
Automatic Loudness Compensation.....	10
The Models.....	11
Spread	11
De-Fuzz.....	12
The Shaping Section	13
Low/Mid/High Knobs	13
Pre Sliders.....	13
Post Sliders.....	14
Filter Types	14
Lowpass/Highpass Filters	14

Filter Routing.....	15
The Output Section	16
Out Trim.....	16
Clip	16
Mix.....	16
Input/Output	16
Appendix A: Signal Flow	17
Contact & Support.....	18
Get in Touch	18
Technical Support.....	18
Visit us online.....	18
End Credits.....	19

INTRODUCTION



Kelvin combines flexible dual-stage saturation with powerful push/pull equalization in an inspiring new way to shape sounds.

Deceptively simple to use, Kelvin offers detailed saturation models, mastering-grade performance, and vast sonic possibilities with just a few parameters. Pick your favourite combination from several transformer, tube, and diode circuits to bring tracks to life with rich harmonic coloration and warm saturation, or get creative with frequency specific distortion and beautiful analog-style tone sculpting.

Features

- Dual stage saturation with separate control of gain and model for each stage
- Freely combine 10 highly detailed models of transformer, tube, and diode saturation circuits
- Arrange saturation stages in Series, Parallel, or Mid/Side mode.
- Flexible tone shaping filters to adjust saturation per frequency and overall tonal balance
- Beautifully sounding analog style filters, including passive Pultec style low and high bands
- Unique harmonic "Spread" feature to create width by introducing subtle harmonic variances
- "De-Fuzz" feature to reduce mid-high frequency saturation and clean up artifacts
- Optional soft clipper on output to discreetly shave off peaks or add a 3rd stage of crush
- Auto-gain on output tuned to keep loudness balanced while still allowing musical crescendos
- Smooth audio rate modulation of main parameters
- Dry/Wet control for easy parallel processing
- 4 quality modes, ranging from Low Latency to Pristine using high fidelity linear phase oversampling
- Option to always use highest quality for offline rendering
- A/B preset switching
- Integrated reference level system to automatically adjust input level to match loaded presets
- Presets by experienced artists and engineers
- Native support for both Intel and Apple Silicon processors

GETTING STARTED

Install and Authorise

Unzip and double-click the downloaded installer and follow the on-screen instructions. Once installed restart your DAW (or refresh its list of plug-ins) and insert the plugin on a track. The controls will be hidden and audio output will be disabled until you have activated the plug-in.

To activate, simply copy and paste the license information you received after purchasing the plug-in and click **Activate**.

Once the activation is successful, the plugin interface will appear and audio output will be enabled.

Basic Operation

Buttons and switches are controlled simply by left clicking to cycle through states. Knobs can be controlled either by dragging up and down or by double clicking to enter values directly.

Shortcuts

- Reset to default: **Right Click (or Alt+Click)**
You can use this to toggle back and forth between the default and your last setting.
- Reset to default of loaded preset: **Shift+Right Click (or Alt+Shift+Click)**
- Fine control when dragging knob: **Ctrl+Drag**
- Some parameters can be linked when dragging by holding: **Shift**

Tool Tips

A good way to learn about the parameters in Kelvin is to enable tool tips. When enabled you get a small explanation for any parameter when you hover the mouse cursor over the control. Enable tool tips by clicking on the question mark icon in the lower left corner of the interface.

User Interface Scaling

Kelvin allows you to adjust the size of the user interface. Click the small “i” in the bottom left corner of the user interface to open the info screen. Use the “UI 100%” dropdown menu to select different levels of scaling.

THE MENU BAR



Presets

Kelvin ships with a collection of carefully crafted factory presets. However, to get the most out of Kelvin it is strongly recommended that you experiment with the controls to find your own preferred settings.

A Kelvin preset stores the state of all parameters into one of the two available A and B slots. Loading a Kelvin preset into one slot does not change the preset stored in the other slot. You can toggle between the presets stored in the A and B slot by clicking the **A/B** button, and the **Copy** button allows you to copy the preset in the currently active slot to the opposite slot.

Mac Preset Locations

Factory Presets: */Library/Audio/Presets/Tone Projects/Kelvin*

User Presets: */Users/YOUR USER/Library/Audio/Presets/Tone Projects/Kelvin*

Windows Preset Locations

Factory Presets: *C:\Program Files\Tone Projects\Kelvin\Presets*

User Presets: *C:\Users\YOUR USER\Documents\Tone Projects\Kelvin*

Preset Reference Level

Since a saturation device like Kelvin is very sensitive to input level, Kelvin employs a system to ensure that presets translate well to different tracks with different levels. Every Kelvin preset is automatically stored with a reference level indicating the peak level expected by the preset in order to sound as intended. When loading a preset Kelvin compares the current signal level to the preset reference level, and adjusts the Input/Output parameters accordingly so that the gain staging of the preset is preserved.

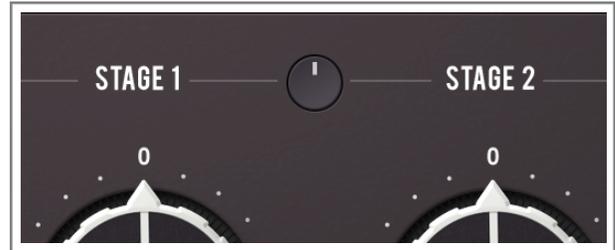
If you prefer exact predictability when loading presets, you can disable the reference level system by going to the Info screen and selecting **"Ref. Off"**.

Mode

Kelvin features two separate saturation stages which can be placed in series, parallel, or in mid/side configuration via the Mode dropdown.

In **Series** mode the output of Stage 1 will feed into Stage 2 creating complex interactions between the stages. This can often provide unique and rich sounds.

In **Parallel** mode the output of each stage is mixed together using the **Blend** knob. The Parallel mode can be quite efficient at beefing up tracks without going overboard, and since there is no interaction between the two stages it can be easier to work with than the Series mode.



The **Mid/Side** mode switches the saturation stages to a Mid/Side configuration. With this you can shape the tone and saturation separately for the mid and sides, using Stage 1 for the mid (mono) signal and Stage 2 for the sides. This can be useful when you need even more focussed control over the sound or when you're looking to add width or creative spatial effects. The Blend control allows you to adjust the mix of the mid and side signals coming out of the saturation stages.

When Mid/Side mode is enabled, the Shaping filters are also switched to Mid/Side mode. Using the filter routing you can assign a band to process either the full stereo signal, or just the mid or side channel.

Quality

Kelvin offers 4 different quality settings which affect the oversampling employed throughout the plug-in.

Low Latency: Near zero latency and low CPU usage at the expense of aliasing suppression and phase integrity.

Good: Good quality with low aliasing and low CPU usage.

High: High quality with practically no aliasing while keeping CPU usage balanced. Useful for most applications.

Pristine: Superior quality with very high precision and aliasing suppression, albeit with significant CPU usage.

Quality for Non-Realtime Rendering

Kelvin gives you the option to always use the highest quality for offline rendering. With this option enabled Kelvin will use the Pristine quality for offline bounces regardless of the chosen realtime quality. This can be useful to maintain a low CPU usage for regular playback while getting the highest quality output when rendering non-realtime.

To enable this option, select the “**Render at Pristine**” option in the Quality dropdown. This is a global setting, so Kelvin will remember it next time you open the project or insert a new plug-in instance.

Note: *Not all hosts support this feature. The option will not be shown in the dropdown menu if your host does not support it.*

Power

Works as a global on/off switch allowing you to smoothly bypass processing for “in/out” comparisons.

THE MAIN SECTION



Kelvin features two separate saturation stages which can be arranged in series, parallel, or in mid/side mode. By combining different saturation models and adjusting gain staging separately for each stage you can achieve a wide range of complex and rich sounds.

Gain and Drive

Sets the processing intensity for Stage 1 and Stage 2. When the stages are placed in series, **Gain** will adjust the gain into Stage 1 and subsequently also Stage 2. **Drive** adjusts the intensity for Stage 2 only. When working in Parallel or Mid/Side mode, the Gain will have no influence on Stage 2.

The visual indicators around the Gain and Drive knobs show the processing intensity for each stage, including harmonics and changes to frequency response. As you get familiar with the different models, the visual indicators can be a helpful guide to quickly dial in your favourite sweet spots.

***Tip:** Hold **SHIFT** while adjusting Gain or Drive to link the two controls. This is especially useful if you want to change the Stage 1 intensity without affecting how hard you're driving Stage 2.*

Automatic Loudness Compensation

In order to keep loudness under control while adjusting Gain and Drive, Kelvin automatically compensates the output level from the saturation. The loudness compensation is not intended to provide exact equal loudness. Instead, it is tuned to keep loudness balanced while still allowing musical energy build-ups when modulating saturation. You can manually adjust the output level using the **Out Trim** and **Output** controls.

The Models

The drop-down menus allow you to choose different models for each stage, offering a range of different tones and textures.

The models in Kelvin are highly detailed level and frequency dependent models of analog circuits, affecting harmonic structure, headroom, dynamics, and frequency response. Some models closely emulate specific pieces of outboard gear, while others combine characteristics from multiple sources for a sound that is unique to Kelvin.



You can **Right-Click** the drop-down to toggle between bypass and last selected model.

Tip: A lot of sonic possibilities can be explored just by combining different models in different order and with different gain staging. The **Swap** button is a handy shortcut to swap the order of the two stages.

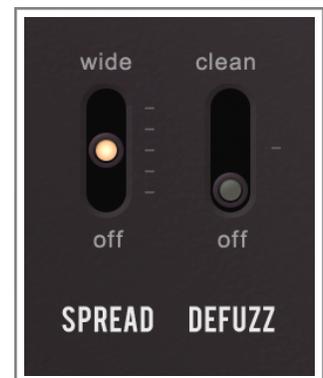
Spread

Enables the harmonic Spread feature which creates stereo width by introducing subtle variances in the harmonics generated on left and right channels. This unique approach to width enhancement can also be used to add dimension to mono material and it doesn't affect compatibility with mono playback.

The spread effect becomes more noticeable as saturation increases but you can also change the intensity of the effect using the four available settings. The top setting offers the strongest effect and may in some cases also slightly change the sound of the saturation.

Tip: Use this feature to add a subtle sense of dimension and depth, or as a more noticeable creative effect mixed in parallel.

Note: The Spread feature has been designed to be used in the Series and Parallel modes. Be careful when using it in Mid/Side mode as you may get unexpected shifts in frequency response and stereo image.



De-Fuzz

Enables the De-Fuzz feature which reduces saturation of mid to high frequencies and cleans up saturation artifacts. The two available settings change the range of frequencies affected. The middle setting affect high frequencies only, whereas the top setting also affect high mid frequencies.

Note: *Depending on Gain/Drive settings De-Fuzz may slightly boost or attenuate high frequencies. This can sometimes be useful for softening intense saturation, but if needed you can use the Shaping section to adjust the highs.*

THE SHAPING SECTION



Kelvin features a shaping section with 3 bands of analog-style pre/post saturation filters. This setup allows you to add frequency specific saturation and matching equalization for seamless musical shaping of harmonics, density, and overall tonal balance.

Low/Mid/High Knobs

Sets the frequency for the corresponding band. The label can be clicked to change [Filter Routing](#).

Pre Sliders

Sets the pre-gain into saturation for the frequency band. The pre-gain is automatically compensated after saturation when the **Post** slider is at unity. Use these sliders to shape the amount of saturation for the corresponding frequency band without changing the frequency response.

Tip: You can use the Pre sliders to gently fine-tune the saturation sensitivity to certain frequencies or abuse it for creative sound design. There's a great deal of interaction between bands so pulling down one band may bring up harmonics from another band as the level is compensated.

Post Sliders

Sets the post-gain for the frequency band. Use these sliders for post saturation EQ adjustments to the tonal balance .

Tip: When using either attenuated pre-gain or boosted post-gain you may want to enable **Clip** to keep peak values in check. Similarly, you can use the Pre/Post sliders to tweak the signal going into the clipper to achieve different sounds.

Tip: You can hold **SHIFT** to link Pre and Post sliders when you want to adjust both at once.

Filter Types

Each band offers a range of different filter types. Click the drop-down menu to select which filter is used for the specific band. The same type is used for both Pre and Post filters.

Kelvin uses high-quality filters with analog-matched magnitude and phase response. The carefully tuned proportional Q filter curves allows for beautiful and efficient broad-strokes tone sculpting.

The **EQP** low and high bands provide accurate replications of classic passive Pultec style bands, but with added flexibility from the continuously variable frequency controls.

Tip: Right-click the dropdown to reset the filter type to default.

Lowpass/Highpass Filters

Kelvin allows you to insert a highpass filter on the Low band and a lowpass filter on the High band. Click the filter drop-down menu and select either **Pre** or **Post** depending on where in the flow you want to insert the filter. Use the slider to set the slope of the filter to 6, 12, 24, or 36 dB/oct.

Normally, the Pre and Post filters are the same type in order to allow the Post filter to either boost, reduce, or completely cancel out any tonal changes made with the Pre filter. However, since a lowpass/highpass filter cannot be boosted or inversed, these filters are only inserted either on the Pre or Post position while allowing you to use other filters, such as shelf and bell, in the remaining position. This also means that, unlike other filters, when a lowpass/highpass is inserted on the Pre position it will directly affect the final frequency response.

Note: When you use the lowpass/highpass in the Post position, any boost or attenuation you do to shape the saturation using the Pre slider will still be compensated on Post before going into the lowpass/highpass. This means you can still use a shelf/bell/EQP to shape the amount of saturation of a band without affecting the frequency response. Using a lowpass/highpass on the Pre position followed by shelf/bell/EQP on Post can be used creatively to change the lowpass/highpass curve.

Filter Routing

By default the shaping filters affect both saturation stages, but this can be changed separately for each band. Click the Low/Mid/High label to open the filter routing dropdown and select which stage to assign the band to.

When Kelvin is set to Mid/Side mode the filter routing also operates in Mid/Side, meaning that you can focus filters to affect just the Mid or Side channel.



Tip 1: As an example, you may want to make a tube model in Stage 2 less sensitive to low frequencies without affecting the low-end character of a transformer model in Stage 1. Simply change the Low filter routing to Stage 2 and pull down the Pre slider to reduce the low-end tube saturation while leaving the transformer sound as is.

Tip 2: You may want to boost high frequencies in the Side channel for a bit of stereo enhancement. To do this, switch Kelvin to Mid/Side mode and set the High filter routing to Side. Then boost the Post slider to taste.

THE OUTPUT SECTION

Out Trim

Adjusts the output gain before soft clipping.

The output level from the saturation stages is automatically compensated to keep a fairly even loudness but Out Trim allows you to manually adjust the level when needed. This knob can also be used to boost or reduce clipping when used in combination with the clipper.

TIP: When using Trim Out to adjust clipping it can be useful to hold **SHIFT** to link the Trim Out and Output controls.

Clip

Enables soft clipping. The clip ceiling is automatically adjusted to maintain a sensible clipping point as Gain and Drive settings are changed. You can however fine-tune how hard the signal is driven into clipping by using the **Out Trim** knob.

Mix

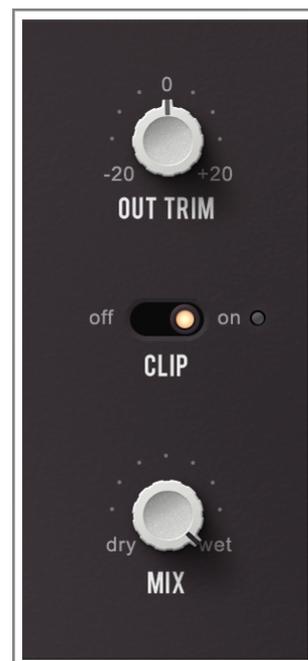
Mixes the unprocessed (dry) and the unprocessed (wet) signal for easy parallel processing.

Input/Output

Positioned in the lower left and right corner of the interface, Input and Output provides clean level calibration in and out of Kelvin. By adjusting Input you can scale the overall saturation intensity applied by Kelvin without changing the relative gain staging between the two stages and the soft clipping.

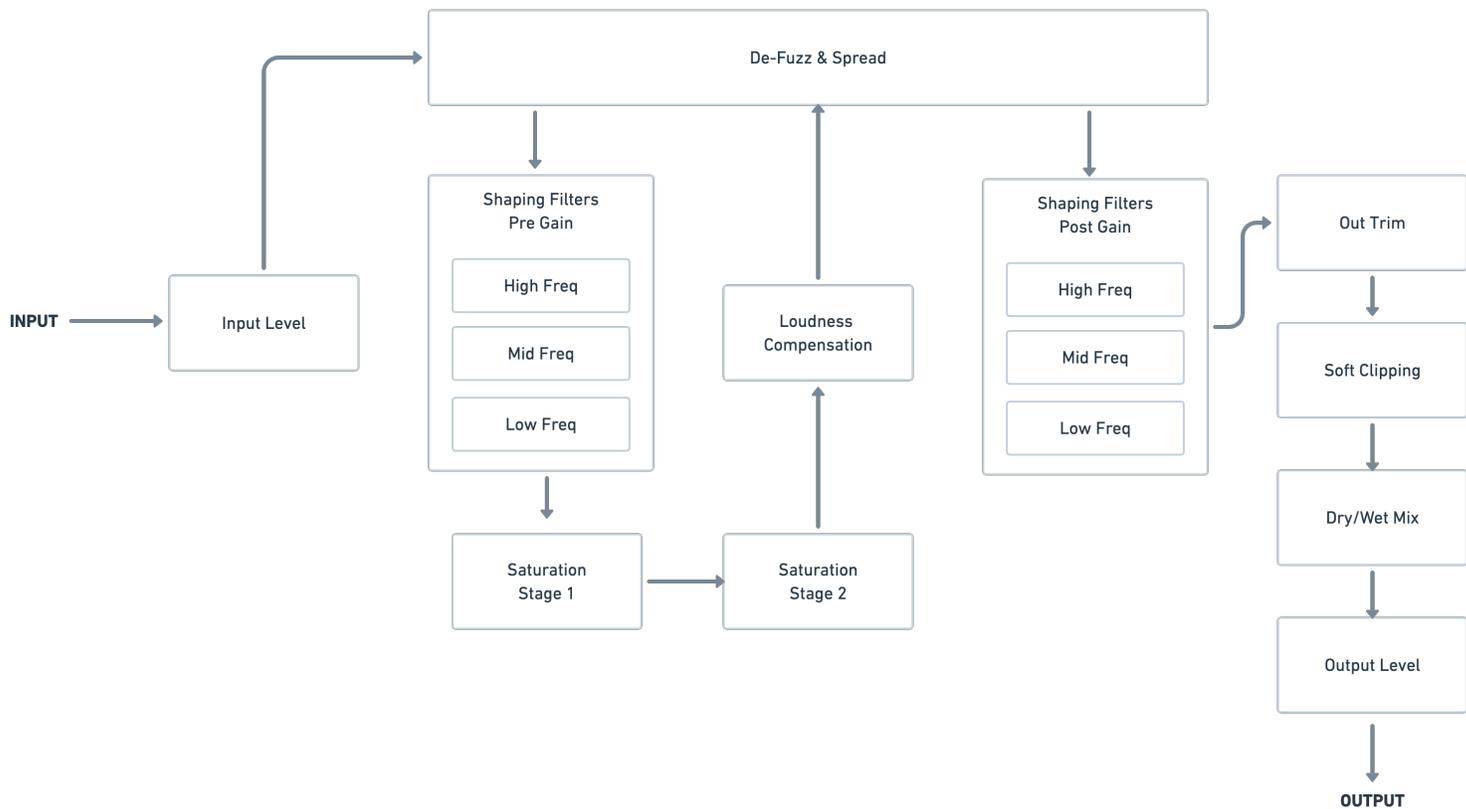
The Input and Output parameters are also used when loading presets to calibrate the signal level to the level expected by the preset. You can read more about that under [Preset Reference Level](#).

TIP: Hold **SHIFT** when adjusting either Input or Output to link the controls and maintain an even loudness.



APPENDIX A: SIGNAL FLOW

This chart shows a simplified version of the basic signal flow in Kelvin (in Series mode).



CONTACT & SUPPORT

Get in Touch

You're always welcome to get in touch if you have questions, feedback or feature requests. We would love to hear from you!

General Contact:

contact@toneprojects.com

Technical Support

If you're experiencing problems or found a bug please do let us know! Drop us an email and we'll try to get back to you within 48 hours - usually within 24 hours.

Technical Support:

support@toneprojects.com

Visit us online

Remember to check out the Tone Projects website. It's also a good idea to sign up to our newsletter to get news, product announcements and tips.

<http://www.toneprojects.com/>

END CREDITS

Kelvin Tone Shaper by Tone Projects

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