

LICENSE

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Freeware license for the 'TesslaSE' VST audio plug-in.

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INSTALLATION

Put the TesslaSE.dll file in the VST plug-in folder of your host.

OVERVIEW

'TesslaSE' – modelling pleasant sounding 'electric effects' coming from transformer coupled tube circuits in a digital controlled fashion.

at a glance:

- transformer style signal saturation

- smooth transient polishing and increased RMS leveling
- subtle analog style signal colouration
- switchable sub bass enhancements

features and tech notes:

- zero latency processing
- low CPU usage
- harmonic enhancements without artefacts (aliasing)
- proprietary signal processing and modelling algorithms implemented
- plug-in integration is done with Synthmaker software
- performance crucial parts are written in assembler
- completely SSE optimized

requirements:

- Win32 compatible system, SSE support
- Tested and known to work in many VST compatible hosts

WARNING

Lower your listening volume while operating the plug-in to avoid hearing damage or damage of speakers or any other equipment.

BASIC OPERATION AND ADVICE

Use this plug-in as an insert effect in any stereo or mono channel of your VST host. It can be operated both as a mono or as a stereo plug-in.

Assure the output switch in the lower right corner is in 'on' position (red lightning). If it's grey click on it until it's red lightning. This toggles the overall plug-in operation (on/off).

Level your incoming audio so the needle of the VU style metering in the middle of the plug-in hits clearly the right most (red) area. Dial in amounts of the 'saturate' knob to apply further saturation effect to your audio if wanted.

Use the 'output' knob to adjust the overall output volume as needed and for handy A/B testing at equal volume levels.

FINDING THE SWEET SPOT

TesslaSE performances best as a subtle audio effect applied here and there in a whole mix situation. Don't expect all your mixing problems to be solved by just some magic on the stereo bus – there is no such 'holy grail' in audio processing.

Turn up your selected audio channels volume that way it basically performs around 0dBFS. The 'VU' type meter in the plug-in is adjusted to support you that way: Increase volume so the needle hits clearly the red marked section of the meter.

Increase 'saturate' as needed until the unit performs audible distortion. If you already notice distortion then lower slightly the input volume to the plug-in or turn down the 'saturate' knob counter clock wise – you are now in the sweet spot.

Tip: Use this type of setting to perform TesslaSE on several audio channels in your whole mix to improve slightly the overall sonic image and density.

Tip: Use the 'input' knob to level up the incoming audio volume.

ADVANCED USAGE / GAIN COLOURATION

Like real analog gear this plug-in introduces subtle signal alteration just by inserting it right into the signal chain, e.g. frequency and phase response as well as a harmonic fingerprint.

Depending on your monitoring situation and listening experience you can probably identify some of this rather subtle effects by carefully A/B testing at equal RMS volume levels.

Tip: Use the 'output' knob on the right side to adjust the overall output and use the 'on/off' output switch for convenient A/B testing.

To take full advantage of the transformer style gain colouration provided by TesslaSE please use the switches on the right side of the VU meter. Switching from 'OFF' to +3, +6 or +9dB mode features further specific colouration which usually appear as if you would 'push' real analog gear into its limits. Re-adjust input or output volume if necessary.

Note: The former experimental 'AUTO' mode (as in Version 1.0) has been removed in the actual version.

THE 'phat' MODE

Since Version 1.1 a new 'phat' option has been introduced. This option increases slightly the density of the harmonic spectrum produced by the saturation of the device. Use this feature to taste.

SUBBASS ENHANCEMENTS (SBE)

The core algorithm of 'TesslaSE' performs a sweet bass enhancement which is swichable due to the 'SBE' switch. In the 'TesslaSE' version it's tuned to a fixed frequency around 55Hz and it increases the lowend perception unlike any ordinary EQ.

Tip: Use the plug-in's default setting to perform the plug-in in a couple of instances on a whole mix to increase the overall sonic impression.

This may increase the perception of overall depth but density as well.

TesslaSE AS AN ARTISTIC EFFECT

Don't hesitate to use TesslaSE as an artistic effect while driven heavy on appropriate tracks. Good examples of application might be drum group smashing, saturating bass tracks or smoothing digital synth lines.

Tip: Use the 'input' knob to level up the incoming audio volume until the VU meter needle hits hard the red side.

Enjoy finest analog style saturation!

CPU USAGE / SAVINGS

The different selectable features of TesslaSE increases the overall CPU consumption of the plug-in. The other way around disabling them will save CPU cycles. The basic 'saturate' feature is always in the signal path and therefore always needs some CPU.

Tip: If CPU usage is an issue in your mixing situation avoid the colouration feature. 'SBE' and 'phat' just use a little more CPU.

FURTHER TIPS & TRICKS

- Level your audio input to the plug-in to around 0dbFS to perform easy and best inside the plug.

- Use <ctrl> + click on a knob or switch to restore default position.
- Use <shift> + click on a knob to fine adjust values.
- And always remember: garbage in, garbage out ;-)

CREDITS

Special thanks to the beta crew for the outstanding great support and recommendations.

Thanks to Christian Budde for providing his fantastic VST plug-in analyser and thanks to g200kg for his brand new and excellent knob renderer – the right tool to the right time.

Peace!