Manual

NASTY SIGNAL COLORING FX SUITE

Content

1 Introduction

1.1 License

1.2 Installation

Requirements:

- Windows XP, SSE support
- Tested and known to work in many VST compatible hosts

Put the “.dll” files contained in this archive in the VST Plug-In folder of your host.

1.3 Overarching topics

Warning: Lower your listening volume while operating the Plug-In to avoid hearing damage or damage of speakers or any other equipment.

CPU usage: All different features are increasing slightly the overall CPU consumption of the device. The other way around disabling them will save CPU cycles.

Usage tips:

- Use the 'OUT' knob to level the outgoing audio and for handy A/B comparisions
- Use <ctrl> + mouse left click on a knob or switch to restore default position
- Use <shift> + mouse left click on a knob to fine adjust values

Some general tips on EQ'ing (related to mixing, not mastering):

1. Use your ears and not your eyes!
   You will make different EQ decisions either done by eye or by ear. But the hearing rulez.

2. Sweep through frequency spectrum with higher EQ boosts to identify more easily weak or hot spots – but:

3. Always EQ in context!
   Make your specific EQ decision always in context of the rest of the mix. EQing is always relative, never absolute.

4. Use coloring devices to your advantage to obtain certain sound qualities whilest mixing (if necessary and wanted).

And always remember: garbage in, garbage out ;-)

1.4 Credits

Special thanks to the community for their support and recommendations.

Many thanks to Christian Budde for his famous Plug-In analyzer and so many thanks to g200k for his so useful knobman tool!

Special Thanks to the beta testers.

2 NastyLF

2.1 Overview

'NastyLF' - adding mojo to the lowend.

At a glance:

Getting the lowend right is one important key in successfully mixing modern music these days.
As a creative mixing device 'NastyLF' offers subtle low frequency enhancements including creamy lowend distortion up to more agressive filtering and nasty saturation.

Concept:

'NastyLF' is a specific and tuned combination of lowend EQ and output stage.
The low frequency EQ in classic boost/cut design offers both: broad 'oldschool' as well as rather narrow 'modern' curves (switchable) altogether with a variation of that special sounding curve designs when using boost and cut in combination. A new developed output stage offers tasty lowend saturation which can virtually be driven up to 24dB with internal automatic gain compensation.

Example Applications:

- changing easily tonal balance of lower frequency audio content in a musical sounding fashion
- improving bass presence due to saturation effects
- getting the lowend perception more solid and homogeneous
- adding sonic grip and fatness to thin sounding audio sources

Tech notes:

- offering even and odd harmonics
- zero latency processing
- low CPU usage
- Plug-in integration is done with Synthmaker software
- performance crucial parts are written in assembler or optimized by hand
- completely SSE optimized

2.2 General usage tips

Use this Plug-In as an insert effect in any mono or stereo channel of your VST host.

Assure the 'IN' switch is in *upper* position (so LED is lightning red). If it's grey drag that switch into upper position. This toggles the overall operation (on/off).

> Tip: Use the 'OUT' knob to adjust the overall output level to equal levels and then use the 'IN' switch for convenient A/B testing (by switching from 'IN' positon to '0' and back).

How to start?

Use the presets just for some basic orientation or understanding: EQing is to be an individual approach each time, there is no magic setting which fixes general problems. Therefore some more hints here on how to start with this device and how to get the most out of it:

Decide first wether your are more after frequency balancing/correction or more after saturation. If both, start first with frequency adjustments and then apply saturation effects afterwards.

When boosting, always apply some (smaller) amount of cuts to obtain that EQ curve 'dip' and it's musical qualities.

If you are in need of some 'steeper' cutting action this is the wrong device -> choose a technical EQ instead or apply one afterwards.
It's always a good practise to start with a more musical/coloring device followed (if necessary) by more technical (transparent and precise) devices.

Frequency and narrow/wide curves: If one is after a more 'vintage' type of sound I would recommend to start with wide curves (W position). To obtain more modern characteristics choose always the narrow (N) option. Sweep through the frequency afterwards to find spots where the effects are most helpful/pleasant.

Start saturation always in '0' position which adds just minimum effects. If that still is too much (e.g. on sensitive acoustic recordings) you can lower the output (which 'drives' the output stage too) or lower the input signal in your host or maybe you should choose a more subtle working Plug-in (e.g. TesslaSE).

Increase amounts of saturation as needed/wanted. This can also be used for 'maximizing' purposes if some distortion is acceptable. Use the 'LF' switch position to additionally and critically judge the applied distortion just in the context of low and low-mid frequencies.

Tip: Use the 'IN' switch's lower 'LF' position to just hear the processed signals lower and lower-mid content. This is usefull to better judge a certain impact of settings on the lower frequency content (especially distortion).

2.3 Quick reference

Turning the 'BOOST' knob clock-wise increases LF audio content.

Turning the 'CUT' knob clock-wise decreases LF audio content.

Volume control of the output stage. Center position is 0 dB.

'FREQ' selects the center frequency of both 'CUT' and 'BOOST'

This meter displays the outgoing signals level.

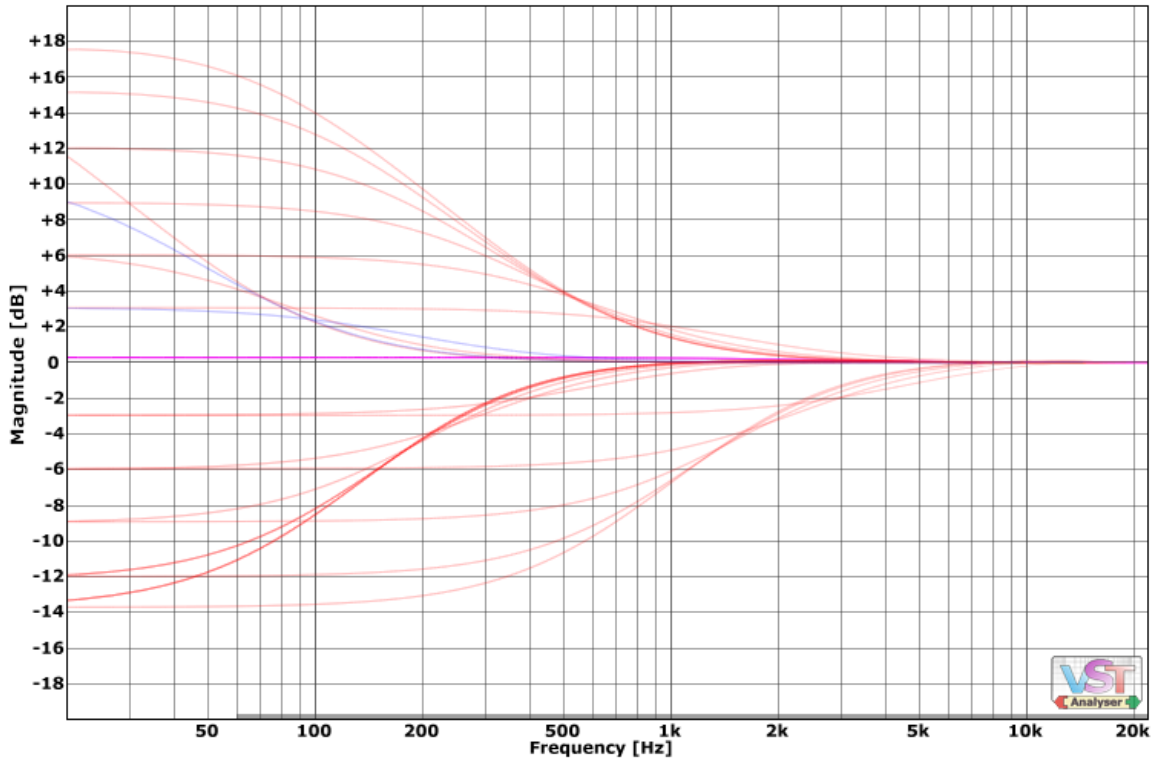
Turns the processing 'IN' (LED is red lightning) or out (LED is grey and switch in '0' position). 'LF' position monitors the (processed) LF signals only (LED is flashing then).

Controls the saturation of the output stage in 5 gain steps. Output levels are internally compensated. Position 'OFF' disables the ouput stage effect.

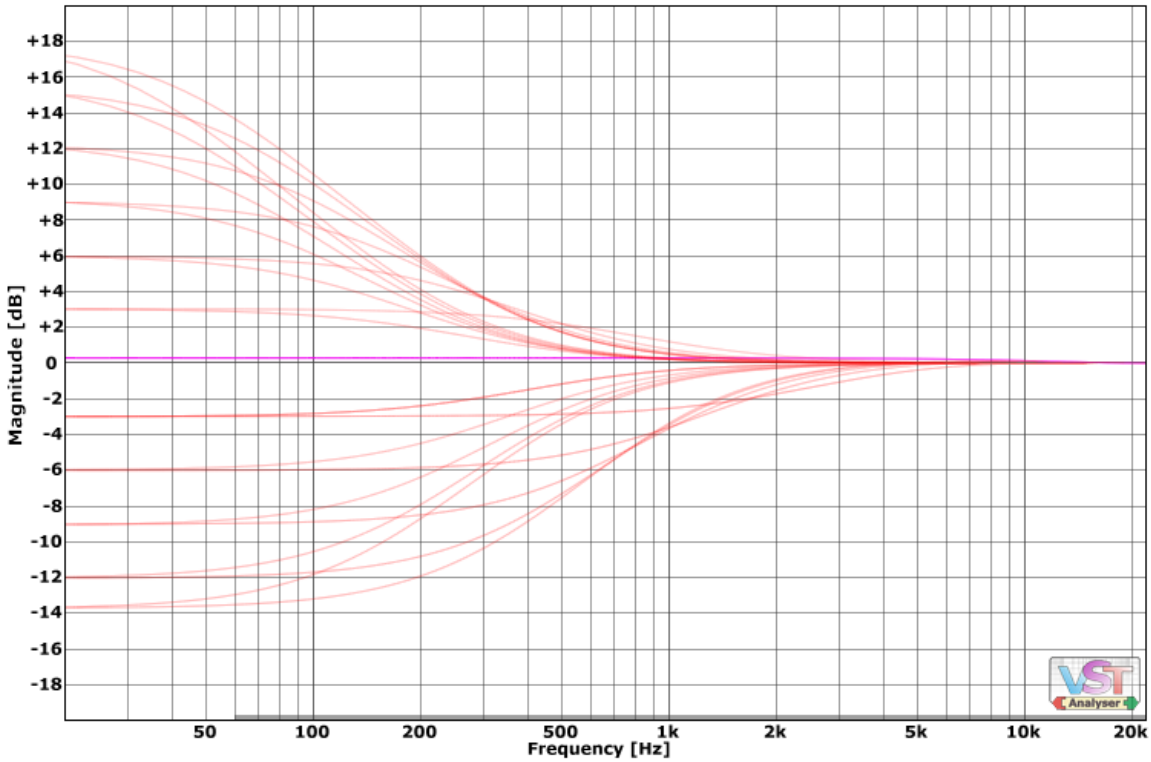
The 'N-W' switch selects more narrow or wide EQ curve behaviour.

For some further details please refer to the sample EQ plots below.
Plots are made with Christian Budde's analyzer.

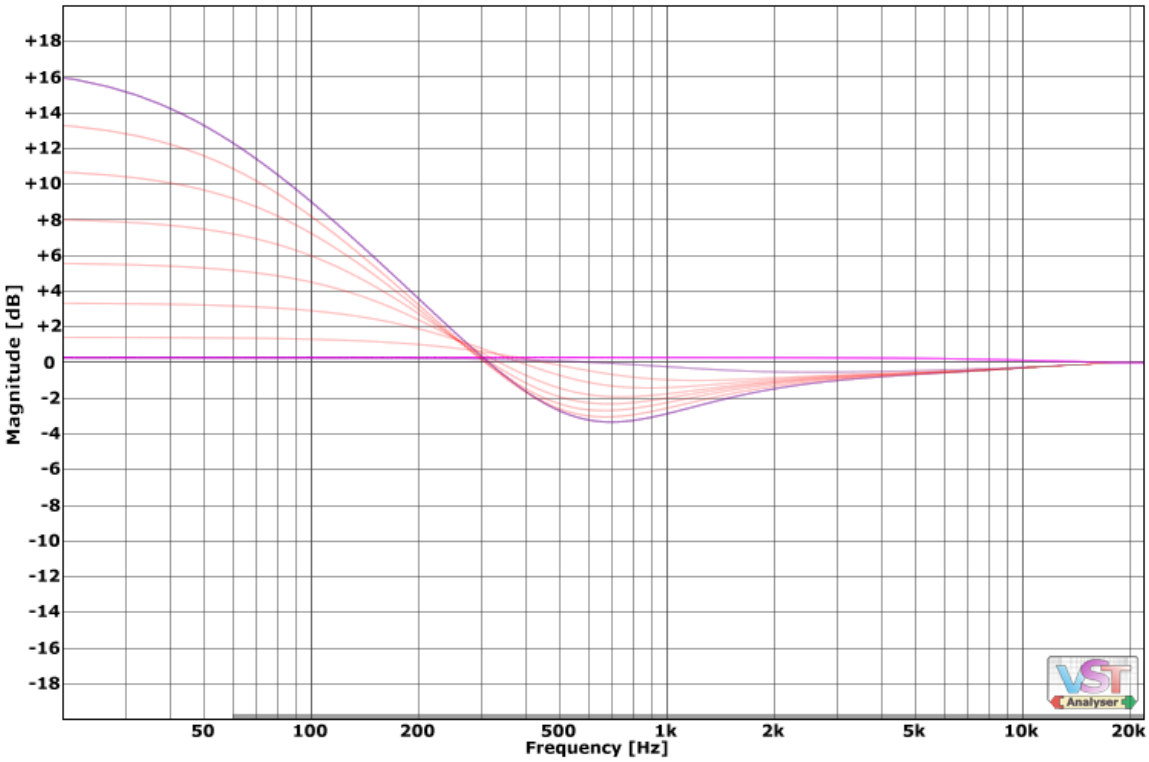
Basic CUTs and BOOSTs @ 20Hz and 100Hz 'FREQ', 'W' position:



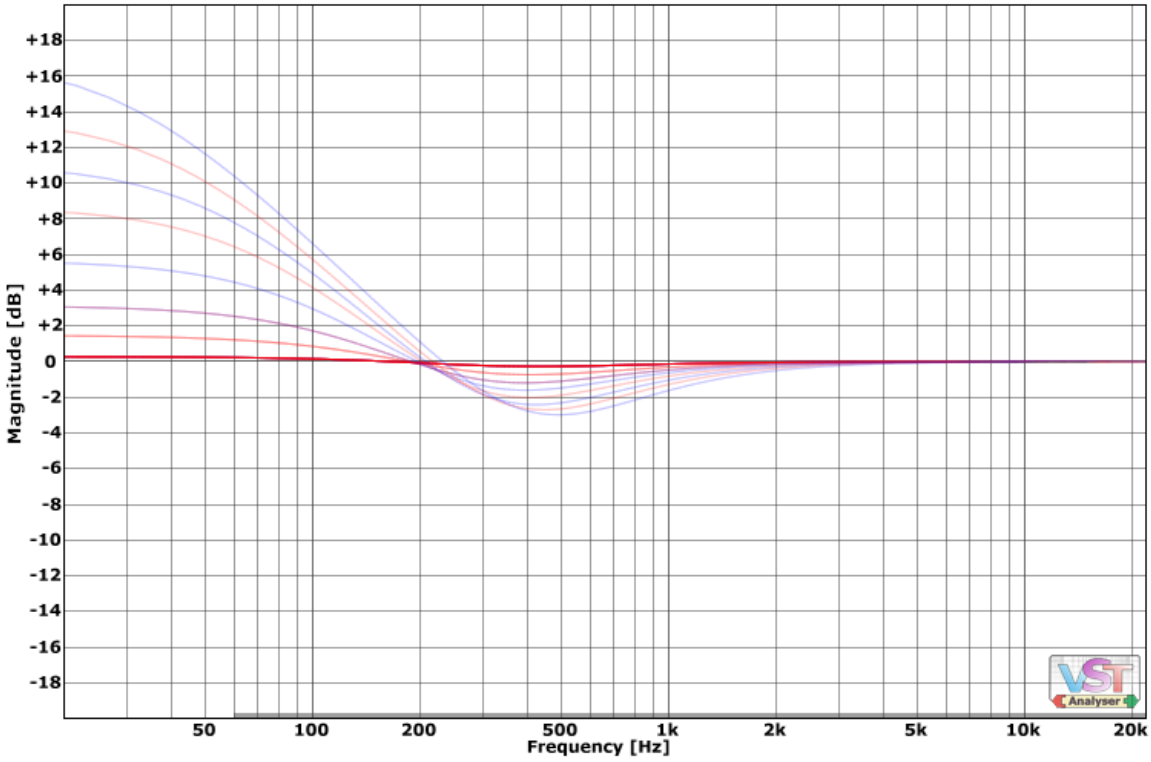
Example impact of N-W switching @ 60Hz 'FREQ' position:



Some sample cut and boost combinations @60Hz 'FREQ' and in 'W' position:



same in 'N' position:



3 NastyHF

3.1 Overview

'NastyHF' - adding mojo to the highend.

At a glance:

Getting the highend right is one important key in successfully mixing modern music these days.
As a creative mixing device 'NastyHF' offers pristine high frequency improvements including fancy harmonic enhancements with extrem low artifacts.

Concept:

'NastyHF' is a specific and tuned combination of highend EQ (peak and shelve) and output stage.
The high frequency EQ offers both: broad 'old school' as well as rather narrow 'modern' curves (switchable). HF peaking is applied on fixed frequencies and the 10kHz filter performs as a shelve. Both designs feature special musical sounding curves.
A new developed output stage offers tasty HF saturation featuring prominently fancy K2 and K3 harmonics with attenuated higher harmonics.

Example Applications:

- improving easily the brilliance of recordings and mixes
- improving presence perception due to saturation effects
- getting the high end more “in the face”
- adding sonic grip and warmth to thin sounding audio sources

Tech notes:

- oversampled output stage
- featuring K2 and K3 harmonics almost artifact free
- minimum latency processing
- reasonable CPU usage
- Plug-in integration is done with Synthmaker software
- performance crucial parts are written in assembler or optimized by hand
- completely SSE optimized

3.2 General usage tips

Use this Plug-In as an insert effect in any mono or stereo channel of your VST host.

Assure the 'IN' switch is in *upper* position (so LED is lightning red). If it's grey drag that switch into upper position. This toggles the overall operation (on/off).

> Tip: Use the 'OUT' knob to adjust the overall output level to equal levels and then use the 'OFF-ON' switch for convenient A/B testing (by switching from 'OFF' positon to 'ON' and back).

NastyHF ain't that complicated and offers just few controls. However:

When mixing be clear about your current task - analyse and decide which frequency range would be most helpful to boost in your current mix.

If you are in need of some 'steeper' cutting action this is the wrong device -> choose a technical EQ instead or apply one afterwards.
It's always a good practise to start with a more musical/coloring device followed (if necessary) by more technical (transparent and precise) devices.

Frequency and narrow/wide curves: If one is after a more 'vintage' type of sound I would recommend to start with wide curves (W position). To obtain more modern characteristics choose always the narrow (N) option. Sweep through the frequency afterwards to find spots where the effects are most helpful/pleasant.

3.3 Quick reference

Turning the 'BOOST' knob clock-wise increases HF audio content.

'FREQ' selects the center frequency of the filter. Up to 5kHz is peaking and above is shelving characteristics.

Volume control of the output stage. Center position is 0 dB.

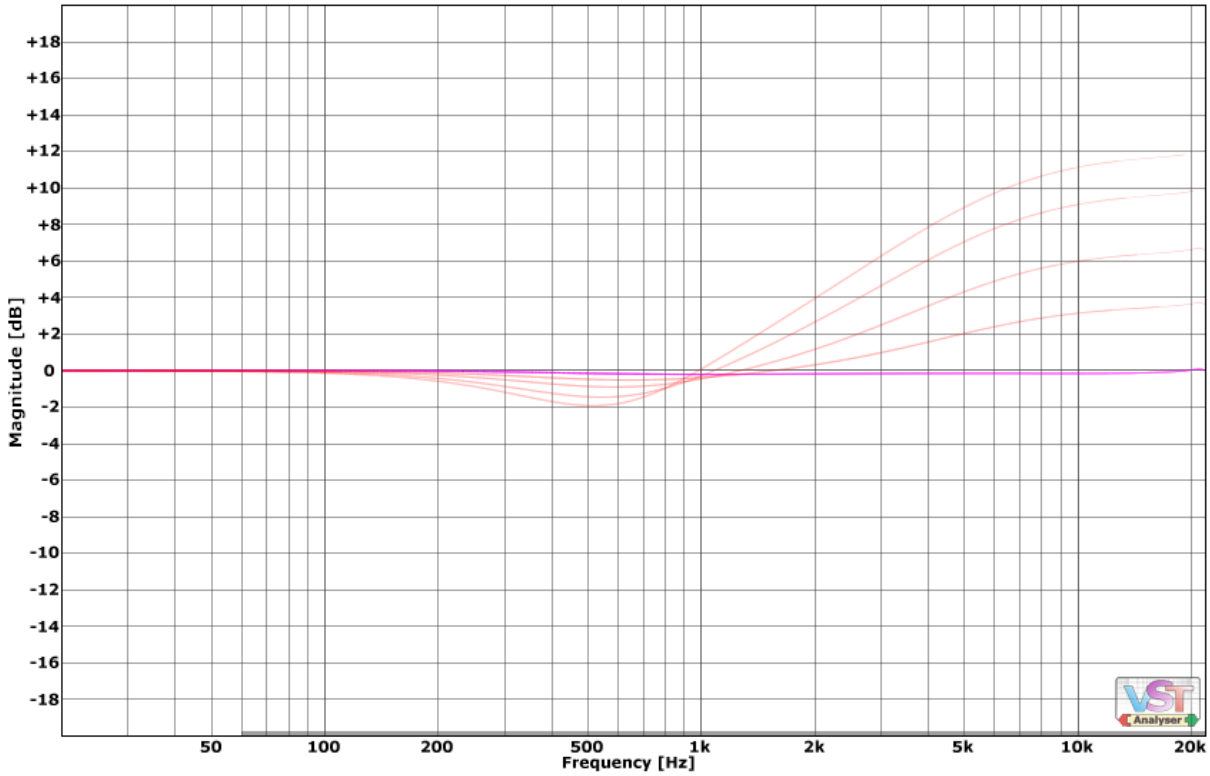
This meter displays the outgoing signals level.

The 'N-W' switch selects more narrow or wide EQ curve behavior.

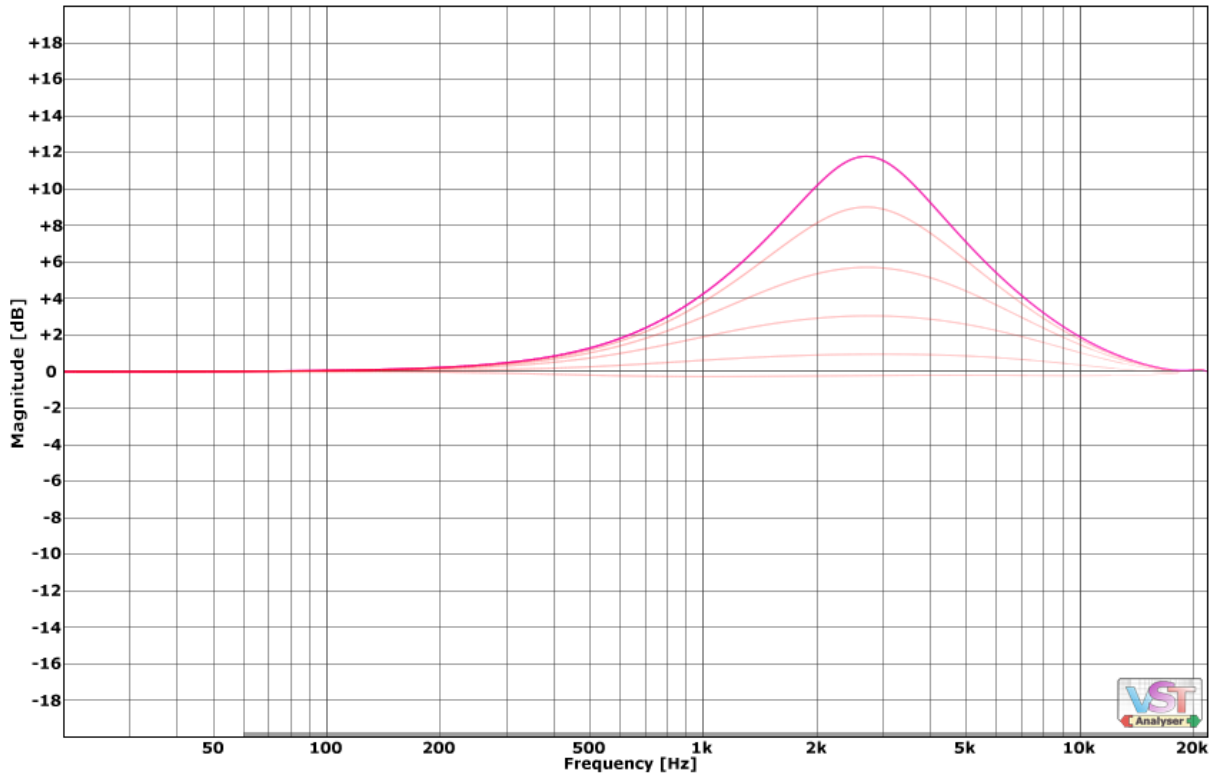
Turns the processing on or off.

For some further details please refer to the sample EQ plots below.
Plots are made with Christian Budde's analyzer.

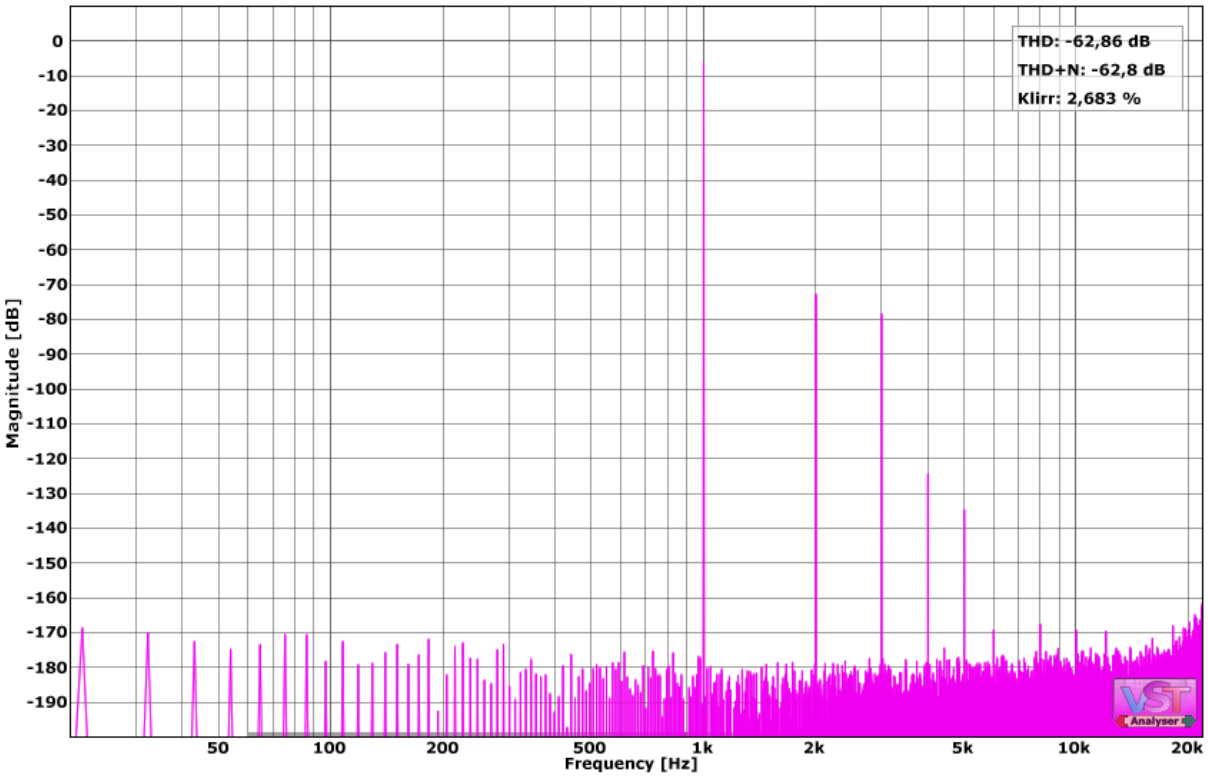
Sample HF shelving boost:



Example peaking boost:



Fancy harmonic distortion with extreme low artifacts:



4 NASTYtableTop

4.1 Overview

'NASTYtableTop' – signal coloring made easy.

At a glance:

Digital audio sources often lacking 'phatness' and impact these days.
As a creative mixing device 'NASTYtableTop' offers easy to use subtle to drastically low-mid frequency boosts.

Concept:

'NASTYtableTop' is a low-mid frequency booster which increases perception in this frequency range by saturation. In subtle amounts this is perceived as a kind of 'phatness' while in extrem settings this is going to be perceived as 'muddy' and/or 'distorted'.

Example Applications:

- pimp lame softsynths
- improving bass presence due to saturation effects
- improving overall perception of lower-mid frequencies
- adding sonic grip and fatness to thin sounding audio recordings

Tech notes:

- zero phase and zero latency processing
- fool proof single knob design

- low CPU usage
- Plug-in integration is done with Synthmaker software
- performance crucial parts are written in assembler or optimized by hand
- completely SSE optimized

4.2 General usage tips

Use this Plug-In as an insert effect in any mono or stereo channel of your VST host.

Don't overdue saturation effects on a whole mix. It's a good mixing strategy to apply a little here and there where saturation is actually helpful.

4.3 Quick reference

Dial in lower mid frequency boost by turning the knob clockwise. The meter surrounding the knob indicates a rough overall volume estimate.
While being in the green area the added distortion should not be that sensible in most cases. However, on material like e.g. Acoustic piano recordings this will always be sensible and you might not want to use a device like this in such situations.

If the device is feed by an already hard driven signal (volume wise) it might not necessary to dial in more saturation by turning the knob.

5 NastyVSD

5.1 Overview

'NastyVSD' – a “virtual summing device”.

At a glance:

"NastyVSD" is a kind of "summing device" effects simulator and features some of the effects which can appear while going outboard (out of a Digital Audio Workstation (DAW)) and receiving a analog summed stereo mix back into the DAW. When doing this, "safety limiting" or even AD clipping is performed, so this is included in this simulation as well. When driven hard (aka abused), this could be used for maximising purposes as well.

Example Applications:

- adding easily some “mojo” to recordings and mixes
- improving presence and room perception
- adding more sonic grip and warmth to thin sounding audio sources
- limit or hard-clip audio

Tech notes:

- 4x oversampled input stage
- easy to use limiter
- minimum latency processing
- reasonable CPU usage
- Plug-in integration is done with Synthmaker software
- performance crucial parts are written in assembler or optimized by hand

- completely SSE optimized

5.2 General usage tips

Use this Plug-In as an insert effect in any stereo channel of your VST host.

Assure the 'IN' switch is in *upper* position (so LED is lightning red). If it's grey drag that switch into upper position. This toggles the overall operation (on/off).

> Tip: Use the 'OUT' knob to adjust the overall output level to equal levels and then use the 'OFF-ON' switch for convenient A/B testing (by switching from 'OFF' positon to 'ON' and back).

NastyVSD is easy to handle, but there is just one thing to understand:

The signal flow is from left to right through the interface. Increasing the 'DRIVE' of the input stage (leftmost) also increases the internal signals volume at the point when leaving that stage and entering the limiter. This can be compensated with the 'GAIN' knob in the middle. In the same way the 'OUT' knob to the right handles the amount of hard-clipping, since the clipper is the very last stage in front of the Plug-Ins output.

> Note: Opposed to version 1.0 of this software the internal routing slightly changed. In 1.0 there was the input stage followed by the limiter or clipper (switchable). Since version 1.1 there is a fixed routing as follows: input stage -> limiter -> clipper. Each stage is controlled by it's level dial.

So, if you want e.g. judge the saturation effects just when hitting the input stage you should lower the gain of the limiter which can introduce certain amounts of saturation as well.

5.3 Quick reference

(From left to right)

DRIVE: Increases or decreases the signal level while entering the input stage saturator

INPUT STAGE VU: Shows the signals volume performance at the ouput of the input stage

GAIN: Increases or decreases the signal level while entering the limiter or clipper

SLOW-FAST: The release time of the limiter. 'SLOW' is 300ms and 'FAST' is 10ms.

(LIMIT-CLIP: Switches between limiter and clipping mode) – removed with v1.1

LIMITER VU: Shows the signals volume performance at the ouput of the limiter/clipper

OUT: Increases or decreases the signal level while while leaving the device

ON-OFF: Switches the device on or off

6 NastyCS

6.1 Overview

'NastyCS' – a character channelstrip.

At a glance:

'NastyCS' features the very best “nasty” things coming from this Plug-In series and additionally two mid frequency EQ's originally developed for the BootEQ Plug-In as well as high- and low-pass filtering.

Example Applications:

- adding easily some “character” to recordings and mixes
- frequency shaping with musical sounding EQ curves
- adding more sonic grip and warmth to thin sounding audio sources
- limit and saturate audio

Tech notes:

- 4x oversampled output stage
- easy to use limiter
- minimum latency processing
- reasonable CPU usage
- Plug-in integration is done with Synthmaker software
- performance crucial parts are written in assembler or optimized by hand
- completely SSE optimized

6.2 General usage tips

Use this Plug-In as an insert effect in any stereo channel of your VST host.

Assure the 'OUT' switchs LED is lightning red. If it's grey click on it. This toggles the overall operation (on/off).

> Tip: Use the 'OUT' knob to adjust the overall output level to equal levels and then use the 'OUT' switch for convenient A/B testing (by switching from off to on and back).

NastyCS features some “dual knobs” which are handled in this way:

This type of knob is actually two knobs, an inner and an outer one. The inner and outer one can independently dragged by clicking on the inner or outer part of the knob and dragging the mouse vertically up or down.

A symbol beneath the knob indicates this knob type and also shows which function belongs to the inner and the outer knob.

Example: The leftmost HP/LP knob is a dual knob where the HP filter is tied to the inner knob and the LP to the outer knob.

The signal flow in the output section:
(EQed signal) --> 'DRIVE' --> (internal saturator) --> 'LIM' --> 'OUT' --> level meter and output

6.3 Quick reference

(From left to right)

HP/LP: High- and low-pass filter. To pass all frequencies through assure that the inner knob is leftmost and the outer one is rightmost (like shown in the picture above)

LF+/LF-: The Lowend EQ in boost/cut design: Inner knob boosts the lower frequencies while the outer cuts

GAIN/FREQ: The parametric mid filters – the inner knob decreases or increases the frequency (Zero position is middle/top like shown above) while the outer knob selects the frequency

HiQ: Switches into high Q mode of the EQ resulting into a steeper curve. Extremely useful to eliminate just certain audio artefact's with “notching”

HF SHELF: Boosts the high frequency audio content

DRIVE/OUT: The switch left to 'DRIVE' activates the saturator and now the inner (red) knob is active and determines the drive of the signal. The switch right to 'OUT' activates the device and the outer knob which sets the outgoing volume

LIM: Activates the limiter

FAST: Sets the limiters release time to 10ms (instead of 300ms)