



# Signal Noise SN05/SN05-G

## Brickwall Limiter

## INSTALLATION

The package should contain the following files:

<i>SN05 Limiter.dll</i>	– 32bit GUI-less version
<i>SN05G Limiter.dll</i>	– 32bit version with GUI
<i>SN05 Limiter x64.dll</i>	– 64bit GUI-less version
<i>SN05G Limiter x64.dll</i>	– 64bit version with GUI
<i>sn05_manual.pdf</i>	– manual (this file)

To install the plug-in, copy the DLL files of the version(s) you wish to use to the respective VST plug-in folders. Tested with Cubase 5.1 (32-bit) and Cakewalk 2019 (64-bit).

## CREDITS

SN05-G uses biquad algorithms by Robert Bristow-Johnson as found in "*Cookbook formulae for audio EQ biquad filter coefficients*", 2005 [1], and look-ahead limiter algorithm by (c) 2011 M. Holters. Plots used in Appendix of this manual were generated with VST Plugin Analyser by Christian-W. Budde [2].

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[1] <https://www.musicdsp.org/en/latest/Filters/197-rbj-audio-eq-cookbook.html>

[2] <http://www.pcjv.de/applications/measurement-programs/>

## DESCRIPTION

SN05-G is a 3-stage brickwall limiter (Figure 1.) designed to sit at the very end of signal chain in DAW, but it can be used on individual tracks, too. Thus it can be used for mastering as well as sound shaping duties equally.

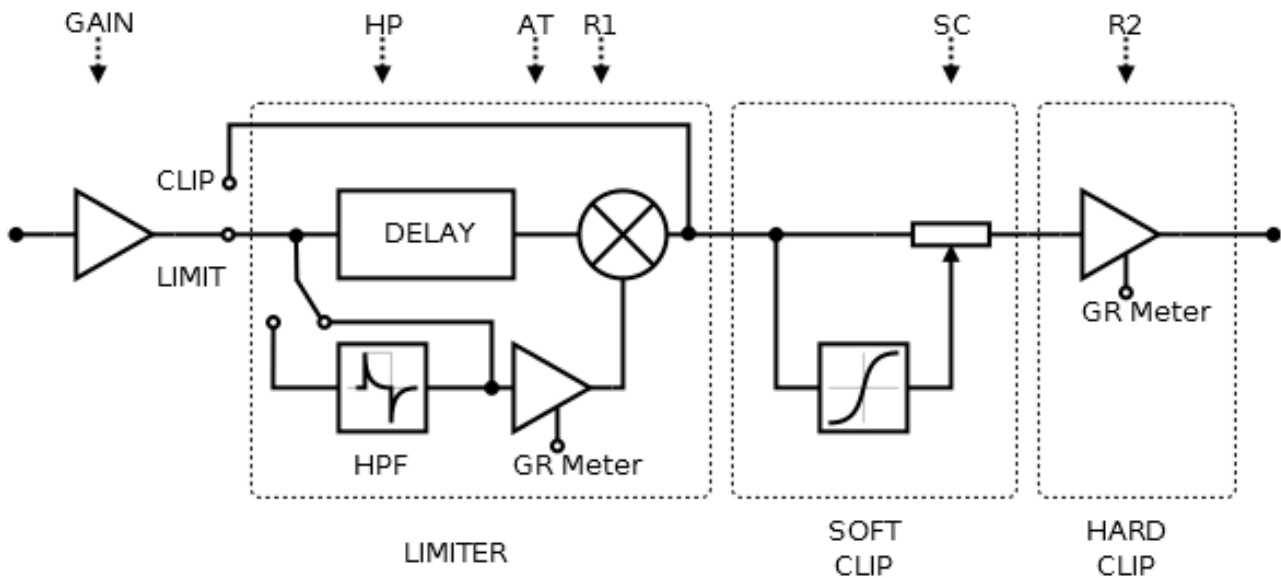


Figure 1.

## CONTROLS AND USAGE

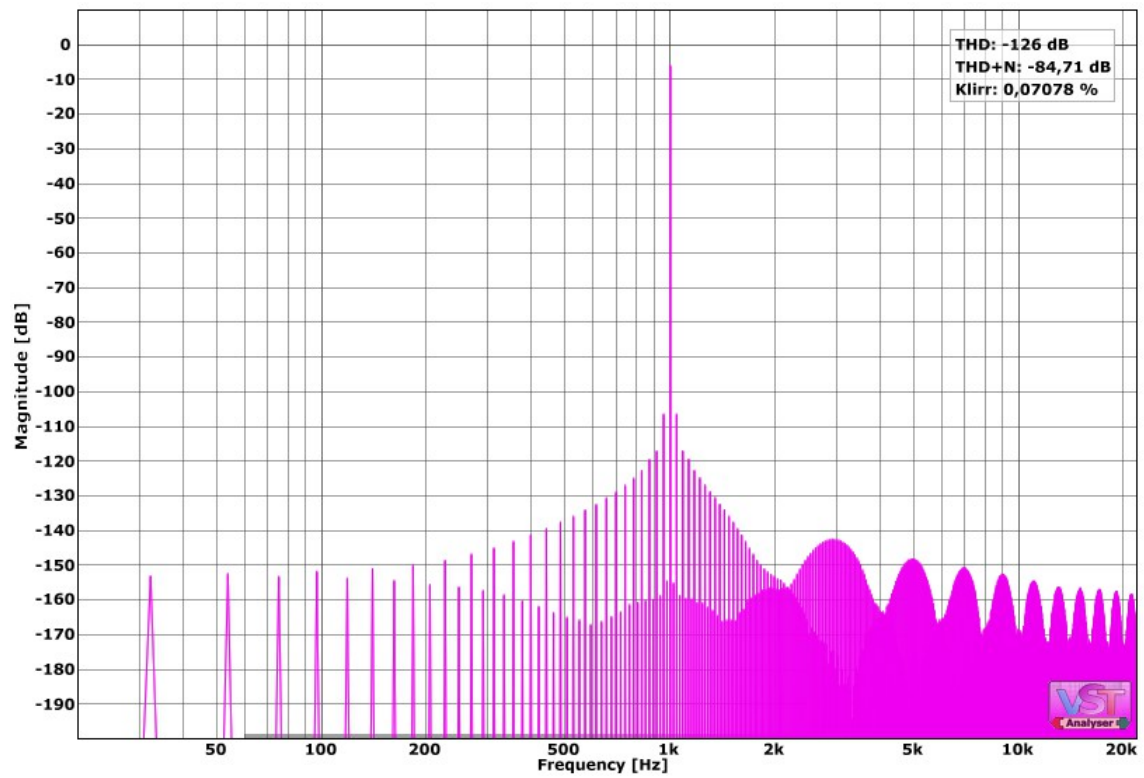


Figure 2. - GUI (default settings)

- 1) **Gain:** Sets the input gain from 0dB to +24dB. Standard operation (left mouse drag) increases/decreases the value by 1dB. Holding the Shift key changes the steps to 0.1 dB. Alternatively, you can insert the value directly into text field below the knob.

- 2) **Ceiling:** Sets the sample peak ceiling from 0dBFS to -24dBFS. Standard operation (left mouse drag) increases/decreases the value by 1dB. Holding the Shift key changes the steps to 0.1 dB. Alternatively, you can insert the value directly into text field below the knob.
- 3) **Led:** Enables/disables limiter's sidechain HPF.
- 4) **HP:** Sets the cutoff frequency of sidechain HPF (15Hz-2kHz).
- 5) **AT:** Sets the attack time of the limiter (0.02-250ms).
- 6) **R1:** Sets the release time of the limiter (10-1300ms).
- 7) **SC:** Sets the amount of soft-clipping (0-100%).
- 8) **Limit / Clip:** Flip this switch up (Limit) to engage limiter before clippers. Flip this switch down (Clip) to bypass the limiter (signal passes only through clippers).
- 9) **R2:** Sets the release time of the hard clipper (0.1-50ms or 1-500ms with limiter on).
- 10) **GR meter:** Upper meter displays the amount of GR applied by look-ahead limiter, lower meter displays the amount of GR applied by the final brickwall clipper.

## APPENDIX



THD @ 44.1 kHz, default settings with gain +10dB and ceiling -1dBFS ( $GR_L = 10\text{dB}$ )