

# S-609A mk2 Bus Comp + Limiter



## **General Info**

'Based on' a compressor (sought after original release version 'A' with the metal knobs!) that has famously found a lot of use as a bus comp, since its introduction in the early 80s. It's known for its characteristic smooth sound and ability to 'glue' the elements of a mix or bus together. It has gained many die-hard fans who use it every time they mix, and it has been used on many classic recordings.

It can also be used in many situations besides bus compression alone. Some like to use it to beef up electric/acoustic guitars, pianos, vocals and other sources, and it even gets used while tracking by some. It has been called a desert island piece. You don't need many dBs of compression to get a benefit out of it, with common use involving just a bit of gain reduction for enhancement. Some even use it without compression just for its (subtle) tone. On the other hand, it still sounds great when you push it for lots of gain reduction.

Attack and release as well as the harmonics were modeled and programmed to get them as close as possible to the hardware, using Nebula technology. The sampled compressor and limiter sections are both included, and combined into one program. If you increase the ratio control beyond the maximum setting on the compressor (6:1), you then transition to the limiter setting (100:1) at max position. This means you can get settings 'in between' those two (as well as all the other sampled ratio settings), which isn't possible with the hardware.

**These programs work and sound best when your input signal levels are measuring around -18dBFS RMS.**

## **Installation**

Just copy the .n2p files to your Nebula 'Programs' folder, and the .n2v files to the 'Vectors' folder. To install the N3 and N4 skins, be sure to read and follow the skin install manual!

## **Nebula Category Locations**

This doesn't matter if you're using the S609A skins, as you should be, but the compressor programs are found in the 'COM' category in Nebula, then in the 'CC4', 'CC5', 'CC8', and 'CC9' sub-categories, for the 44.1khz, 48khz, 88.2khz, and 96khz sets respectively. CC stands for 'Cupwise Compressors'. The pass-through programs are placed in the 'PRE', then 'CW4', 'CW5', 'CW8', and 'CW9' categories.

## Lite, Full, and SHQ

Lite programs use much less CPU, but have no sampled harmonics. The Full version adds 2<sup>nd</sup> and 3<sup>rd</sup> harmonic orders, but also increases the CPU use. SHQ has 6 harmonic orders on top of the fundamental, with a HUGE increase of CPU use. You will NOT be able to run them live- it is for rendering only! You shouldn't load SHQ programs unless you are ready to render, because the moment it loads, your system will take a huge hit in performance. **Make sure to save your project before even trying!** Here are the improvements you get if you render with SHQ:

- More accurate frequency response. The full or lite programs just don't have as perfect of a recreation of the frequency response of the hardware as the SHQ ones.
- SHQ programs have more kernes for more harmonics, so the distortion model is more complete. The additional harmonics SHQ adds to the ones in the full programs are very very subtle, so it's up to you to decide if it's worth the extra time to render with SHQ.

I would recommend using either Lite or Full while mixing, then switching to Full or SHQ for rendering.

## Controls

**Attack-** Variable from 0 to 60ms. By default, the programs load with attack set to give you results that match the fixed attack behavior of the hardware. You can adjust the time above and below that, unlocking potential not available with 'the real thing'.

**Release-** Variable from .04 to 1.5 seconds. Settings below .1 seconds are faster than the hardware can actually be set, which gives you additional options.

**Thresh-** Threshold control.

**Ratio-** Sets the compression ratio, from 1:1 to 100:1. 100:1 is actually the sampled limiter mode, and 6:1 is the highest setting for the compressor mode's ratio. Settings in-between 6:1 and 100:1 are in-between the highest comp ratio and the limiter, which again isn't possible in the hardware, and can give you some interesting results. The 1:1 setting is actually taken from the 'pass-through' program, and 1.5:1 is actually the lowest ratio setting available in the hardware, so settings in between those two allow you to have more subtle compression than you could get with the hardware, again offering you more possibilities.

**Ahead-** It allows you to add a look-ahead of up to 1.5ms.

**Hi-Pass-** A high pass filter on the internal side-chain used for the detection.

**MakeUp-** Allows up to 25dB of gain after compression.

**Wet-** This is a typical Dry/Wet mixer control. The value is the % of wetness.

**Trim-** This is an input drive control only found in the pass-through program, that compensates with the opposite amount of output adjustment. For example, if you boost input by 6dB, the output is lowered by 6dB. This helps keep a somewhat steady level, allowing you to more easily hear the difference in effect you get by having different input drive levels.

**Dist-** Only in the pass-through program. This control directly adjusts the level of the harmonics that the program creates. It's the same control that is usually called 'drive' in lots of other Nebula programs out there, but I always rename it to 'dist' because I think that's more accurate.

## General Usage Tips/Ideas:

- Don't forget about the 'wet' control. As an experiment, try settings that squash the input as much as possible, with fastest attack and fast release times, adjust makeup gain to bring the level up to match the input as close as possible, then adjust the wet control downward to bring back in some dry signal.
- Look-ahead can allow you to catch most or all transients completely, combined with the fastest attack setting. This does get you further away from the sound of the hardware, however.
- As the hardware is widely known as a bus comp you can't go wrong using it in that capacity, or even as a mastering compressor. In these cases, sometimes a slow attack is actually better than a fast one- especially with subtle compression. At the very least try experimenting with slower release settings.

V2.2 – use this version number to keep track of updates. If the manual posted at my site has a higher version number than the one you have, your set probably isn't up to date.

Programs and manual copyright 2019-2020 Tim Wisecup

[www.cupwise.com](http://www.cupwise.com)

Skins were originally made by Scott Kane for an unreleased Acqua compressor I was going to do about 5 years ago. I never got to use those skins, so I slightly adapted the art assets to create these skins from his work on that.