SmackVU Compressor for Nebula

General Info

An early VCA based compressor, considered by many to be among the best of its type, for drums, bass, vocals, and more. It's not without its detractors, with some considering it to be a simple one trick pony, mainly due to the original hardware's lack of adjustable attack and release controls. The Nebula programs I've made here do have added attack and release controls, making it much more flexible. By default the programs load on settings that represent the hardware closest. From there you can adjust the controls and get different behaviors that weren't possible with the original hardware, while retaining the rest of the original characteristics that got the original labeled a character piece.

The attack control allows you to set slower attacks than the hardware allowed, which allows you to actually enhance the 'knock' effect heard on drums even beyond what the hardware did. You can also use the added look-ahead control to get instant peak limiting, in some cases (depends on the material). The release control can be set faster or slower than the original, allowing a range of different behaviors from intense pumping to more subtle compression. You can get over 30dB of compression and it still sounds authentic.

Programs were all sampled in stereo (using 2 units), providing left and right channels that are very subtly different, adding to the analog imperfections that most of us came to Nebula looking for. There's also a 'pass-through' program done like the typical Nebula preamp style programs, for getting some tone (very subtle) of the hardware without any compression. There are also skins for both Nebula 3 and 4, made by JPN which allow you to switch between lite, full, and SHQ versions of the programs quickly, without Nebula resetting all the controls (like it usually does on a program change).

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. See the skin install guide contained in the skins .zip for info on how to install them.

Nebula Category Locations

This doesn't matter if you're using the SmackVU 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 44.1, 48, 88.2, and 96khz sets respectively. CC stands for 'Cupwise Compressors'. The pass-through programs are placed in the 'PRE' then 'CW4', 'CW5', 'CW8' and 'CW9' sub-categories.

Lite, Full, and SHQ

Lite programs use less CPU, but have no sampled harmonics. The Full version adds 2nd and 3rd harmonic orders, but also increases the CPU use. SHQ has a full 5 harmonic orders on top of the fundamental, with a HUGE increase of CPU. You will NOT be able to run them live, and 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 kerns for more harmonics, so the distortion model is more complete.

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

Controls

Attack- Variable from 10 to 100ms. The programs load with the control set to the 10ms position by default, which is representative of the hardware's fixed attack behavior. You can increase the time above that, getting behaviors impossible with the hardware.

Release- Variable from .1 to 2.2 seconds. The programs load with the control set to the .3 second position by default, which represents the hardware's fixed release behavior. You can adjust above and below that to get results impossible with the hardware.

Thresh- Threshold control.

Compression- Sets the ratio, goes from 1:1 to infinite:1, which is great for hard limiting. Infinite shows as 100.

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

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 programs, 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 programs. 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:

- Increasing the attack speed slightly above the lowest setting allows you to increase/enhance the 'thwack' or 'knock' effect the compressor is famous for. Try settings between 10 and 50ms for this.
- Don't forget about the 'wet' control. Try setting a really strong compression effect that enhances the attack of a drum input, as with the previous tip, and then dialing it back by lowering the wet %. Also works good with bass.

V1.4 – 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 Dec2017-Oct2020 Tim Wisecup

www.cupwise.com

BIG THANKS TO JPN FOR THE AWESOME SKIN(S) FOR THIS RELEASE!!!!