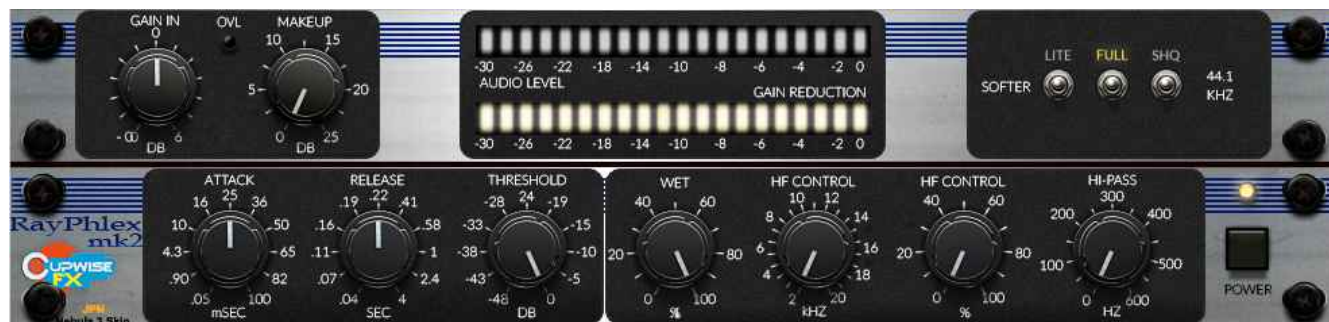# Rayphlex MkII- Nebula Compressor Library

General Information

These programs were are all 'based off' of a very capable, modern compressor (sampled from a stereo-linked pair). It's not 'vintage', and doesn't add lots of color to the final sound, but it does give precise, predictable control over dynamics, includes a section for controlling how the high frequencies are compressed (which can be very handy), has very impressive specs, sounds great, and if you were to look them up online you'll see almost nothing but positive reviews. Some consider them a "sleeper hit".

They offer hard and soft knee modes, and there is an automatic mode that actually uses a 3rd knee which is 'softer' than the soft knee. They have a tube on the output stage which most people agree has little influence on the final sound unless you crank the output to intentionally overdrive it. The extra set of high frequency controls (not seen on other compressors) allows the user to dial back the compression for the high frequencies (in other words- the high freqs don't get compressed as much as the rest of the spectrum). This allows you to counteract any dulling of the highs that may happen when the compression kicks in. The company that made these initially got famous for their enhancers, and this compressor also features a button to switch on a simple bass enhancer that shifts the phase of the bass frequencies to tighten up/focus the sound a bit (which actually works well, in some cases).

Looking at the description in the previous paragraph, it might seem that sampling this compressor, and capturing all of those possibilities would be impossible, yet all of the above listed features have been captured and recreated as accurately as is possible with Nebula, with the exception of the program dependence of the attack/release in automatic mode. However, the 'softer' knee of automatic mode has been captured for use, being combined with the manual attack/release found in the other modes on the hardware.

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

What's in this library:

- Separate hard and soft knee knee compressor programs, with sampled adjustable controls for ratio, attack, and release. These don't have the high frequency enhancer controls, so they take less CPU/RAM resources to load and use (good to use if you know you don't need that extra level of control).

- Separate hard and soft knee compressor programs with sampled ratio, attack, release, high frequency enhancement band cutoff (in kHz), and amount (in %) controls.

- The 'softer' knee compressor module (sampled from the hardware's automatic mode), with the high frequency enhancement controls. There's no sampled ratio control because the hardware bypasses that control in auto mode, so only threshold is used to set the amount of compression. The compression knee is actually softer than the normal soft knee mode.

- A 'preamp-style' program sampled from the units with the compression bypassed, and with an on/off switch for bass phase enhancement. With this program you can use the bass phase enhancer with any material, regardless of whether you pair it with any compression programs from this library.

- Another preamp-style program that was sampled from the units with their output tube stage being overdriven, and with the compression bypassed. You still get a kind of overdrive effect caused by the tube stage. You can dial in how much you want with the 'od' and 'dist' controls.

- All compressors come in lite, full, and shq varieties. Lite uses the least amount of CPU and has no sampled harmonics. It's good for auditioning and setting up the effect in your mix before rendering. Full versions add some sampled harmonics. SHQ (super high quality) have the most complete, best quality model of the compressors, but use a lot of CPU and can only be used for rendering.

If you ever want to use one of these compressors and know you won't need the 'HFcon' (High-Frequency Control) enhancement section, then load and use the programs without it, because they are lighter on resources and will load faster. The programs with HFcon are much more complex and also have a much higher sample count, so they will be more CPU and RAM hungry. On my system I can only run the 96khz lite versions live, for the hard and soft programs with the HFcon section, and have to then switch to full or SHQ to render, so you should expect a similar experience. The 'softer' programs all have the HFcon section and I can run the full version of that one live, because those programs are simpler due to not having a sampled ratio control. Get familiar with the HFcon controls so you can have a good idea of when and where you might need it.

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.

Organization

This doesn't matter if you're using the Rayphlex 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.

Controls

Attack- This control is fully variable from .05 to 100ms. With the fastest setting you can add in a little look-ahead to allow for instant limiting (doesn't always catch every peak with the 'lite' programs, but full or SHQ should).

Release- Release is fully variable from .04 to 4 seconds. It reacts dynamically to the amount of compression at any given moment (usually decreasing a little as compression levels increase).

Thresh- This adjusts the threshold, above which, compression begins. For the 'softer' programs there is no ratio, so the threshold control alone determines how much compression you get there.

Ratio- The sampled ratio control. Turning it up gives you more compression. You can turn this all the way up to 30:1, which with a hard knee, is good for hard limiting. 'Softer' knee programs have no ratio because the hardware bypasses ratio setting in that mode.

HFcon amount (%)- High-frequency control amount. Only in the programs that feature this additional control section. Leaving this control at 0% fully bypasses this section, while turning it to 100% gives you full 'expansion' of the high frequencies. This means that the upper frequencies will be compressed less (up to about 6db less) than the other freqs. Can be used to counter-act high freq dullness caused by compression. It's maybe a little similar to a dynamic equalizer (or a dual-band compressor).

HFcon freq (in kHz)- Sets the cutoff point for the band of high-frequency content that will get less compression. This sampled control ranges from 2 to 20kHz, and the band itself kind of resembles a high shelf with a very wide slope, so it isn't a very 'precise' control in nature, but that's probably why the result sounds as natural as it does. Try boosting the HFcon amount % control up to 100% first to hear what you are doing, then adjust this control to find the cutoff point you like. Then you can re-adjust the % to your desired level.

B-PHA- Found only in the pass-through program with bass 'enhancer'. This will only show 0 or 1 on the readout, because it acts as a switch. It gives you the bass phase enhancement that you can switch on with the actual hardware units by pressing a button. 0=off, 1=on.

MakeUp- This is just an output gain control you can use to bring the level back up after compression. It's also in the tube overdrive pass-through program, because high levels of drive can cause compression, lowering the output.

Trim- Only in the pass-through with bass phase control. Use this to adjust the input gain and have the output level automatically compensated.

Hipass- Adjusts the cutoff point of a high-pass filter on the internal side-chain in Nebula that determines how much compression you get. If you are compressing a more complex input, like a mix of elements, you may not want the bass-heavy parts of that mix to control the compression of the higher frequency elements.

Ahead- It allows you to add a look-ahead of up to 1.5ms, which can be used to achieve a peak limiting effect.

Wet %- This control acts as a wet/dry mixer control. 100% means fully wet, and that is the default setting. If you lower it, the dry signal gets added in. At 0% the result you get is fully dry.

Dist- Only in the tube overdrive pass-through. It allows you to raise or lower the level for the harmonics. This isn't like driving the input to get higher or lower distortion levels. You are directly adjusting the gain on the harmonics, like a mixer control.

Overdrive- Only in the tube overdrive pass-through. This control actually does act as an input drive. It's also compensated for at the output. This is really just a renamed 'trim' control, but I've slightly adjusted it a bit and it starts all the way down by default.

General Usage Tips/Ideas:

- Try using one of the comp programs with the wet control, and set ratio to max and drop thresh all the way down. Attack and release set to fastest settings. Boost the makeup gain to bring the level back up to around what it is at the input. Then lower wet % to bring in the dry signal. You're crushing the audio but then mixing that result with the dry signal. It can be interesting as an effect.
- The bass phase enhancement effect is very subtle. It seems to use a time delay to shift the phase of the low bass frequencies. You may or may not like it or the idea behind it, but it is something to play with and possibly find some uses for. Having it in Nebula means you can use it in just about any situation, with or without any compression programs from this set.

V2.3 – 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.