

M-Equalizer

An EQ and tone sculpting library for Nebula



General Info

First I'll let Matt, who worked with me to create this release, describe this awesome collection of tools in his own words:

"The 'M-Equalizer' is based on a stereo ganged tube mastering equalizer that acts like a broad shaping tone control for the mix. With the "MOJO" (tube drive), "Bass", "Mid", "High" and "Air" controls, along with the choice to have a cleaner signal 'LoZ' or a more coloured 'HiZ' (high impedance) switchable option, the EQ becomes versatile and quick to dial in. The EQ points and curves are extremely musical, allowing broad shaping of the mix with precise control. The sound is deliciously smooth and big due to the minimalistic circuit and the all-tube and transformer signal path.

Because of the high interactivity between bands, it would've been overwhelming to sample every possible combination that the hardware has to offer. To help circumnavigate this while keeping the sonic signature more accurate to the device in terms of band interaction, phase response and harmonics, Tim and I came up with the 'mastering presets' idea where I set about to sample several 'mastering appropriate' settings, ranging from subtle EQ variations from one preset to the next, to more specifically tailored settings across 11 different presets.

The 'M Equalizer' also has a set of 'Mix' based programs where each band of the hardware device was sampled from full cut, flat and full boost which are then interpolated to give you the full range of control over each band individually. One of my favourite programs from the Mix series is the 'Smiley/Frown' program, which instantly makes an impact as you begin to turn it up or down.

The bonus programs were specifically created with analog tone and colour in mind. The 'AT' pre is sampled on a set of fully restored 70's console channel strips which have a 4 band inductor EQ, Jensen input transformers and Triad output transformers. The 'AT HD' pre is the same device but with the EQ dialed in specifically with warmer frequencies emphasized and was further aided by adding a healthy dose of pentode, triode and tape harmonics from a secondary device to complete the warmer, thicker, glued in sound I was envisioning for use on sterile digital mixes that could benefit from such treatment. The 'N' pre was sampled from a well known vintage British console summing amplifier card which had been converted into a stereo line amp. The colour on this one is more on the subtle side but what it adds is desirable. The harmonic emphasis is on the lows and midrange making it useful for almost any style of music.

I hope you enjoy using this Nebula library as much as I have enjoyed making it for you. Both channels of the hardware were dynamically sampled through a high end signal chain with mastering level converters to capture every nuance of the hardware units as closely as possible. All hardware devices were serviced and then calibrated to get the most out of every preset."

Now I'll give my summary- This product is based mostly on one incredible hardware EQ. We offer 11 mastering EQ 'presets' that Matt frequently uses at his studio. The EQ bands can't be adjusted here, but this allowed us to sample these dynamically, producing 100% self-contained, complete representations of what was sampled (you don't get that with most Nebula EQs). You can transition from the sampled curve to a no-EQ/flat setting, making the EQ more subtle.

Next are the 8 EQ programs aimed at use in mixing situations. Most of these allow you to adjust the gain on a single band sampled from the EQ, but one can transition between two different sampled EQ curves (smile/frown). Then there are 3 mojo programs which allow you to adjust a 'mojo' control sampled from the hardware, which increases harmonics and alters the frequency response. The previously mentioned EQ programs also have the 'mojo' control but it doesn't affect the frequency response for them. Lastly, there are 3 bonus preamp programs.

To add to the potential here, there are different options for the EQ and mojo programs. There are clean EQ versions without dynamics or harmonics, so try those if you want the cleanest possible sound. There are also 'alt' version of the mixing EQs, which combine a set of harmonics from an entirely different sampled setup with these EQ programs. Try them for a slightly different option. Lastly, the effect that happens to the frequency response when you increase 'mojo' in the main mojo programs (mirroring what happens with the actual hardware), has been removed from the 'flat' versions of the mojo programs. This allows you to get the increased harmonics without any change to the frequency response.

There are a lot of tools and options here, with a focus on mastering, but plenty for use in any mixing situation as well. It will take some time to familiarize yourself with what's on offer here but I believe it will be rewarding if you do.

Installation

There are two main steps to the installation-

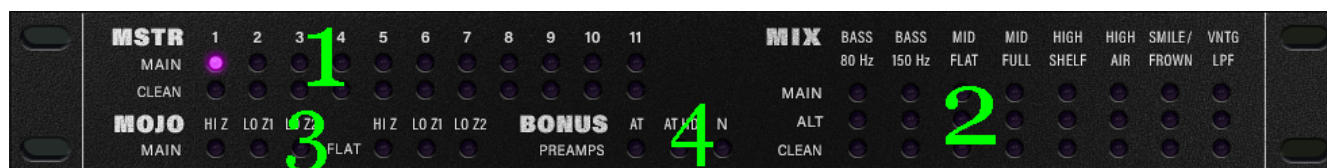
- 1) Install the programs/vectors. Just copy the .n2p files to your Nebula 'programs' folder, and the .n2v files to the 'vectors' folder. Before moving on to the skin install, check to see that the programs load properly in default Nebula, by loading them from Nebula's program finder. The programs are in the 'EQU' category, then the 'ME4', 'ME5', 'ME8', or 'ME9' categories, for each sample rate. 'ME5' is for the 48khz rate.
- 2) To install the skins, follow the section of the skin installation manual relating to either Nebula 3 or Nebula 4, depending on which you're using. After installing the skins you will be loading these programs as a unique plug-in, so don't ever load them from the default Nebula and its program selection list again! The program buttons will not work if you do!

User Interface/Controls – Main section



- (1) **Input** – I recommend you use the drive control instead of this one.
- (2) **Drive** – Use this to increase or decrease input drive. More drive means higher harmonics levels. Whatever amount of boost or cut you apply here is compensated for at the output automatically, so the overall level should stay the same. Disabled for the clean programs.
- (3) **Mojo** – Sampled from the hardware's tube drive control. Increasing this boosts harmonics, and for the main mojo programs it also changes the frequency response (acting like a downward tilt EQ control). It's disabled for the clean, alt, and bonus programs.
- (4) **EQ** – In the mastering EQ and AT HD programs it will be at the 100% setting by default, which gives you the sampled EQ curve. Adjusting it down towards 0% from there allows you to transition from the EQ curve to a flat response, making the EQ more subtle or removing it entirely. In the Mix EQ programs, it usually loads at 0% and allows you to adjust an EQ band up (to 100%) or down (to -100%), but in some cases it adjusts between two different EQ curves. It loads at -100% for the LPF program, giving you the sampled low pass filter. It's disabled for the mojo and preamp bonus programs.
- (5) **Harmonics** – You can use this to adjust the level of the harmonics that are generated by the program. Disabled for clean programs.
- (6) **Output** – Just a simple output gain control.
- (7) **Input and Peak Hold meter, and Overload Indicator** – Input is a VU meter. The Peak Hold displays the loudest peak signal, in dBFS, and holds it for a while before slowly dropping down. You can use this to make sure you're not going over 0dBFS. If you do, the overload indicator lights up.
- (8) **Bypass button** – Click this to bypass Nebula.
- (9) **Frequency Response Graph** – This will show you the sampled frequency response of the mastering EQ curve for those programs, and both extreme ends of the EQ boosting/cutting possible with the Mix EQ curves, as well as the responses you get with the 0 and 100% settings on the mojo control, using the main mojo programs (increasing mojo in those boosts low freqs while dropping the high end).

User Interface – Program Selection Matrix



- (1) **The main and clean mastering EQ presets. You have eleven sampled mastering EQ curves to choose from. The freq response graph in the GUI will help you keep track of what they're doing. The main versions have dynamics and harmonics, but the clean versions have neither. They can be used for the cleanest possible sound.**
- (2) **The mixing EQ programs. The options are all clearly labeled across the top and are described in more detail later in this manual. Just like with the mastering preset programs, the main versions here have dynamics and harmonics, but the clean versions don't. Here there are ALT versions, which use a completely different set of harmonics which are louder and may be more noticeable.**
- (3) **The mojo programs. In the main versions, when adjusting the mojo control upwards the harmonics increase a little. The frequency response also changes- bass freqs get boosted and high freqs are dropped. I would say it's like a downward tilting EQ effect. It's subtle for the HiZ program, but still there. The flat versions of the programs are identical, but remove the downward tilting EQ effect, so you always have a flat response while increasing harmonics.**
- (4) **The bonus preamp programs. There are three to choose from.**

Program details

About the mastering EQ presets:

There are eleven sampled 'preset' mastering EQ curves altogether. You can see what the EQ curve looks like by looking at the frequency response graph window for each one. Adjusting the 'EQ' control downward from its default setting of 100% allows you to transition towards a flat/no-eq setting (at 0%), making the EQing more subtle as you go down. There are two copies of the presets- the main ones, and the clean ones. The main ones have dynamics and harmonics, and you can adjust the 'mojo' control upwards to increase the harmonics. The clean versions have no harmonics, dynamics, or a mojo control.

About the mixing EQ programs:

There are eight of these. The main versions have dynamics, harmonics, and the 'mojo' control. The clean versions do not. The 'alt' versions lack the 'mojo' control, but instead have alternate harmonics samples which were taken from a more heavily driven setup (and also included some addition gear in the signal path).

Bass 80hz- As you can see in the frequency response graph on the GUI, if you take the 'EQ' control down towards -100%, you're lowering a bass shelf at 80Hz, and if you increase 'EQ' upwards towards 100%, you are raising the shelf. The default position of 0% gives you a flat response with no EQ.

Bass 150Hz- Another bass shelf, at 150Hz.

Mid Flat- Features an adjustable, very wide 'mid band' which actually seems to center around 170Hz or so, but is wide enough that it covers nearly the entire audible range.

Mid Full- This mid band centers around 300-400Hz, and is narrower than the mid flat band.

High Shelf- Adjustable high shelf with a very wide slope that goes all the way down to 50Hz at the max boost setting. The shelf plateaus around 2kHz.

High Air- Features a very asymmetric boost and cut. The boost centers around a higher frequency, and you can get a lot more gain here compared to the high shelf band, with a sharper slope. There's even has a dip around 1.7kHz, before the shelf really takes off. The cutting shape with this one is similar to the high shelf band, but not as wide.

Smile/Frown- Adjusting the EQ control upwards gives you a smile EQ shape, and downwards gives you a frown. The overall EQ shape is always centered around the 0dB point, so you're always getting some boosting and some cutting. You can look at the frequency response window in the GUI to try to get an idea of what I mean, and you can use the 'output' control to shift the overall level up or down (as always) to suit your needs.

Vintage LPF- The only mixing EQ program where the EQ control doesn't range from -100% up to 100%. Here, the EQ control loads at -100% which gives you the sampled low pass filter. The max setting of 0% gives you a flat response with no EQ. If set in between those extremes, this program acts almost as a cutting low shelf with a very smooth roll-off, which could be very useful in some situations.

The mojo programs:

These programs were sampled without any EQing, instead focusing on the the 'mojo' control, which was sampled from a tube drive which does alter the frequency response. High freqs are dropped and bass is brought up in a kind of downward tilt EQ type of effect. This happens in the main program versions, but the flat versions always keep the flat response, so you're only getting the harmonic increase with those.

HiZ- This program was sampled using the HiZ mode, which has less of the downward tilt effect, but its still there (in the main program of course).

LoZ 1 and LoZ 2- Matt sampled these both in LoZ mode, and they have much more of the downward tilting effect than the HiZ one. These two were sampled at different gain levels and with different impedance matching, producing two slightly different programs.

Bonus preamps:

These three programs were included as simpler tone programs that you can use to do some subtle enhancement of your signal.

AT- As Matt said earlier in the manual, it was sampled from a pair of restored 70's console channel strips. You don't get much control here as it's a simple preamp style program, but you can adjust the 'drive' control to get the effect of a hotter or quieter input.

AT HD- This one is also described by Matt in more detail at the start of the manual so you should check that out if you haven't. The HD stands for 'higher distortion' but it's still fairly subtle. Besides that, there's also a sampled EQ curve here, and you can use the 'EQ' control to dial it down towards flat just like with the mastering EQ programs.

N- The 'drive' control is the main adjustable control here.

V1 – 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.



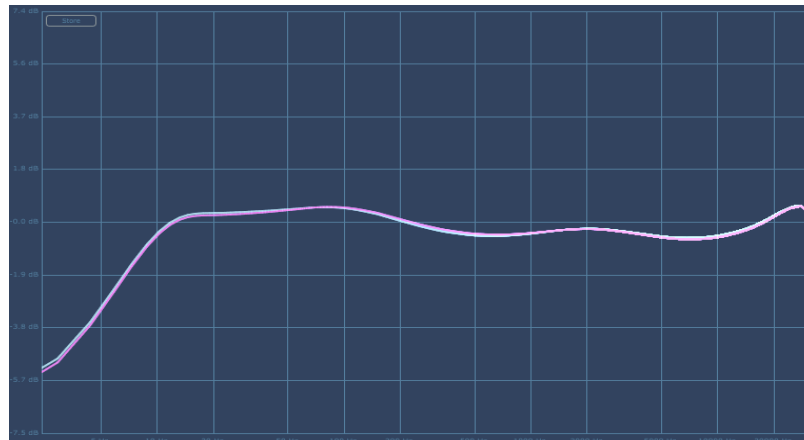
www.cupwise.com



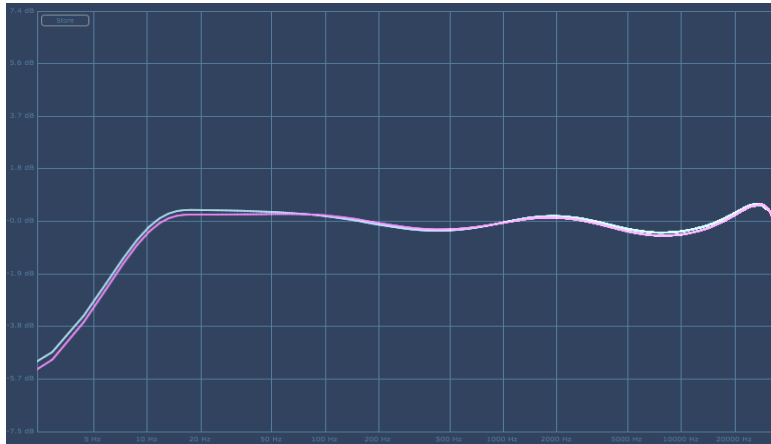
Max made the skin for this release, and he has a patreon, so if you'd like to contribute to his ability to produce more skins for Nebula, check it out!

<https://www.patreon.com/join/azzimov>

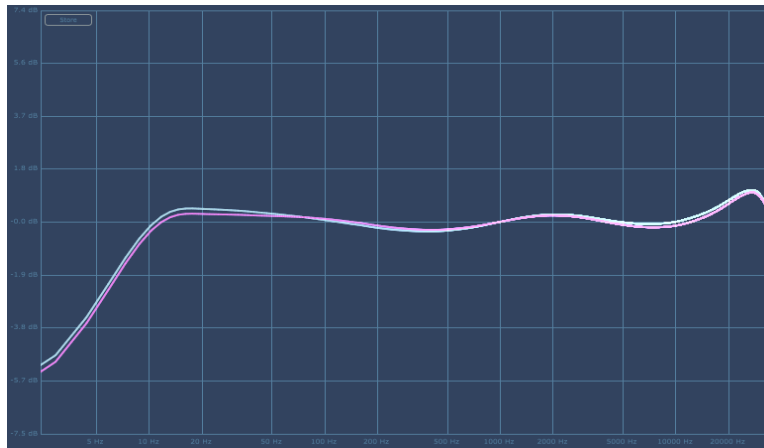
Frequency Response Graphs



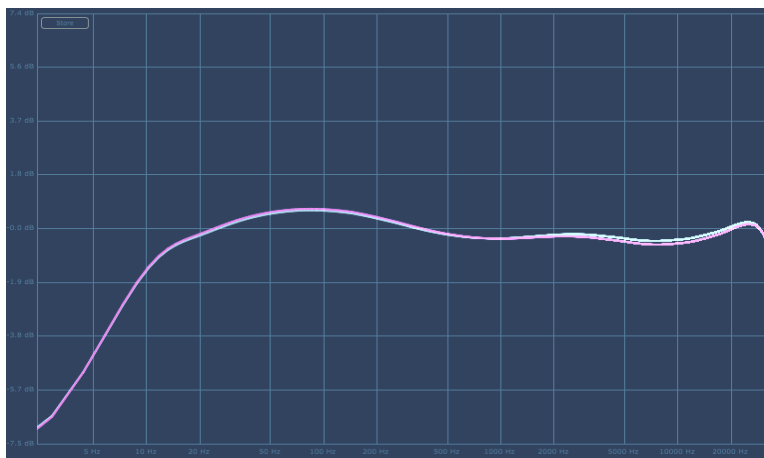
Mastering 1 (above)– with all of these mastering programs, the garph shown is what you get when loading the program, with the 'EQ' setting at 100%. If you lower it to 0% you'll get a flat response, and at 50% you get a response half-way in between the two.



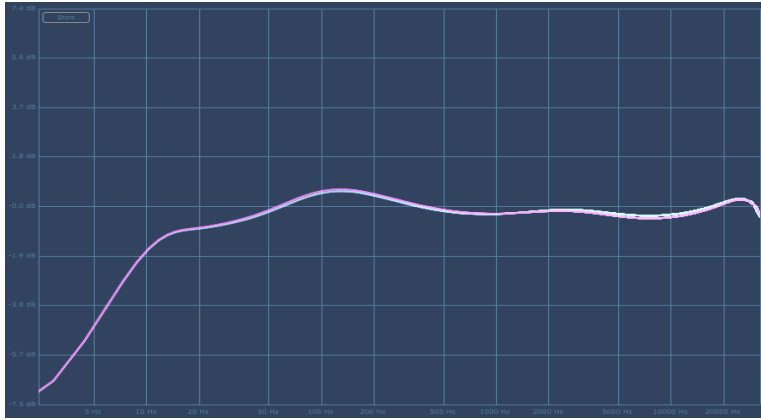
Mastering 2



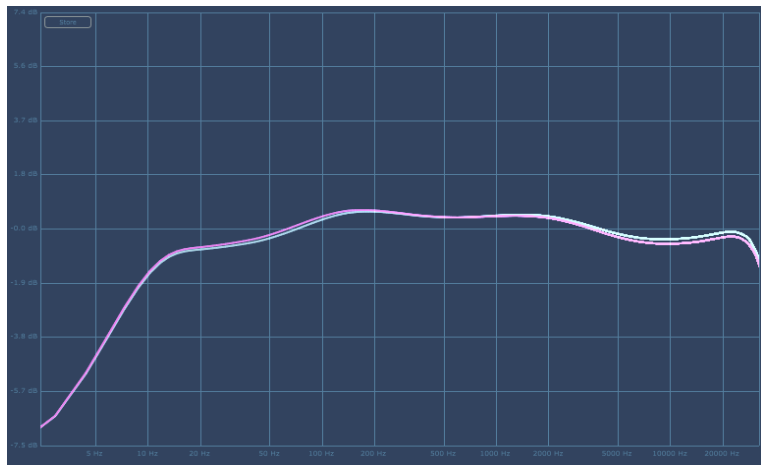
Mastering 3



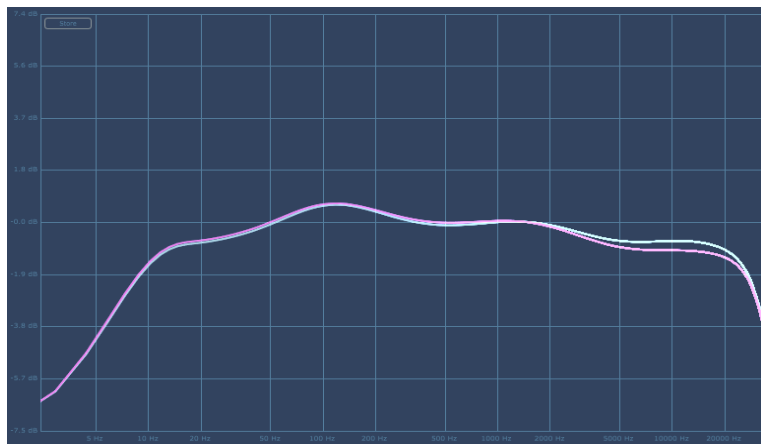
Mastering 4



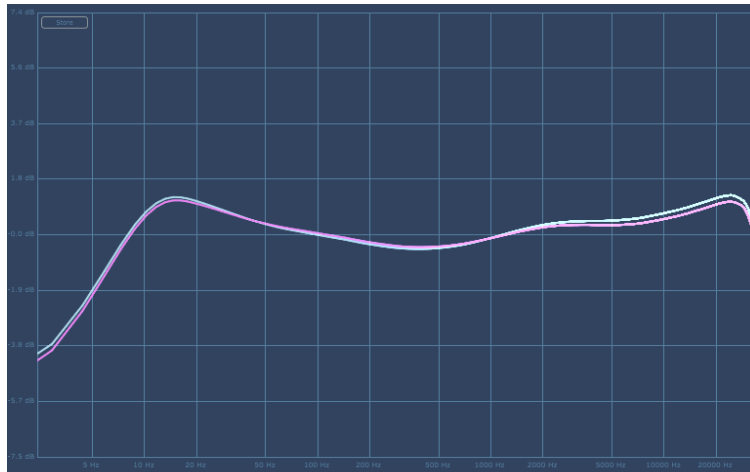
Mastering 5



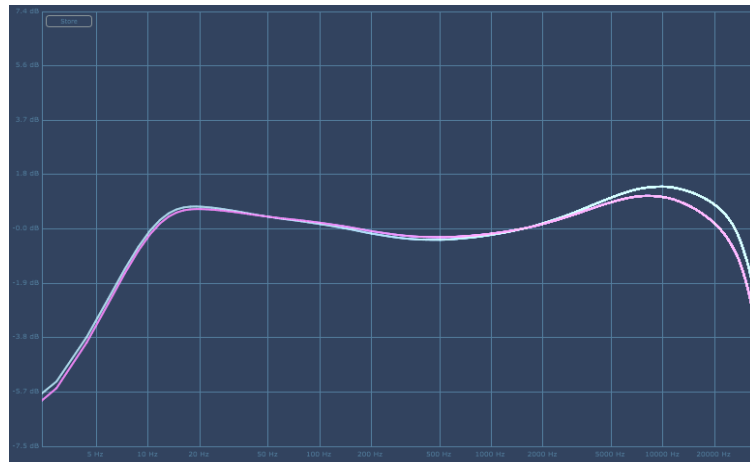
Mastering 6



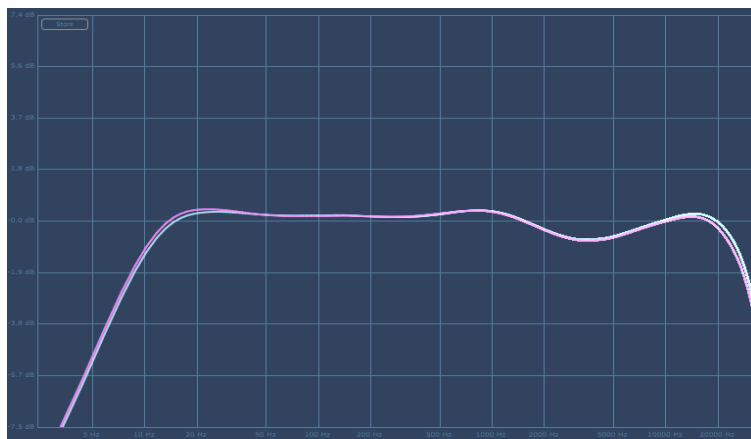
Mastering 7



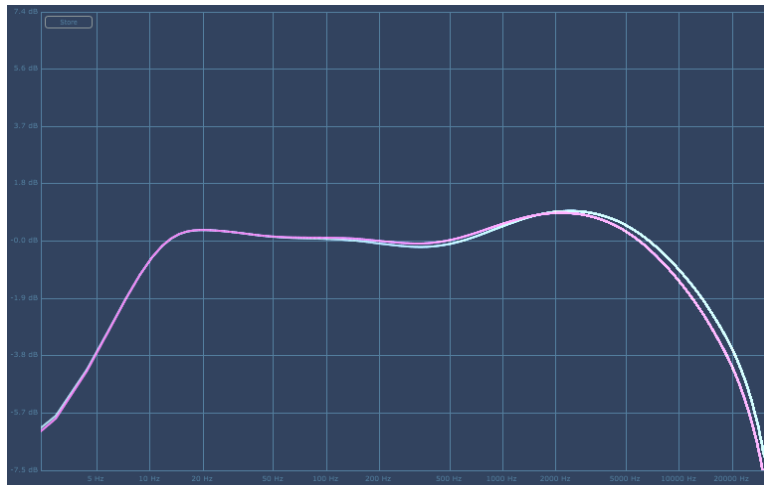
Mastering 8



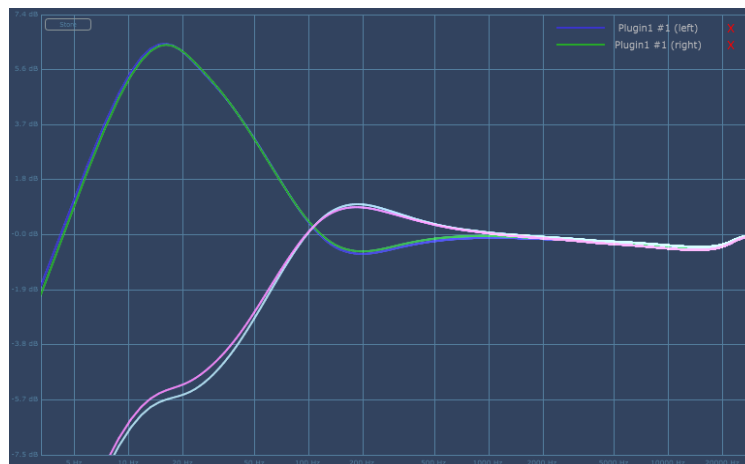
Mastering 9



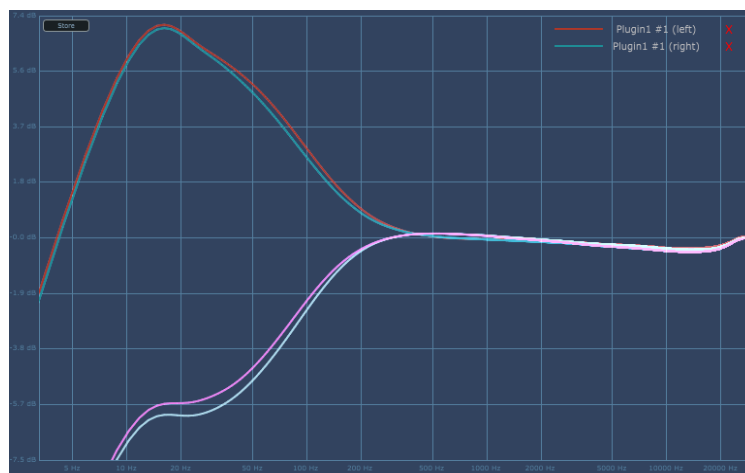
Mastering 10



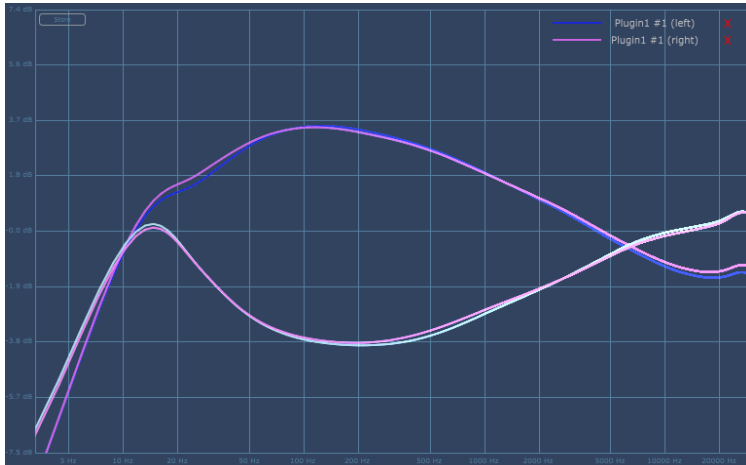
Mastering 11



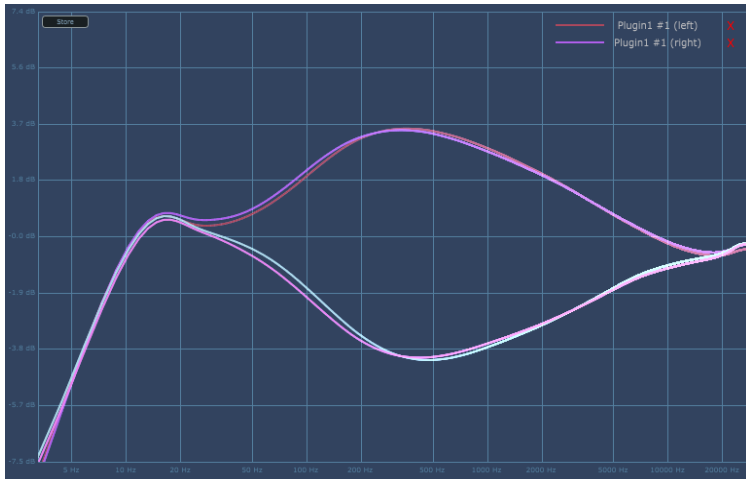
Mixing 1 – with most of these mixing ones, the purple/light blue lines show you the lowest position of the 'EQ' control, and the other lines show you the highest position on the control (the two lines for each are left and right channels).



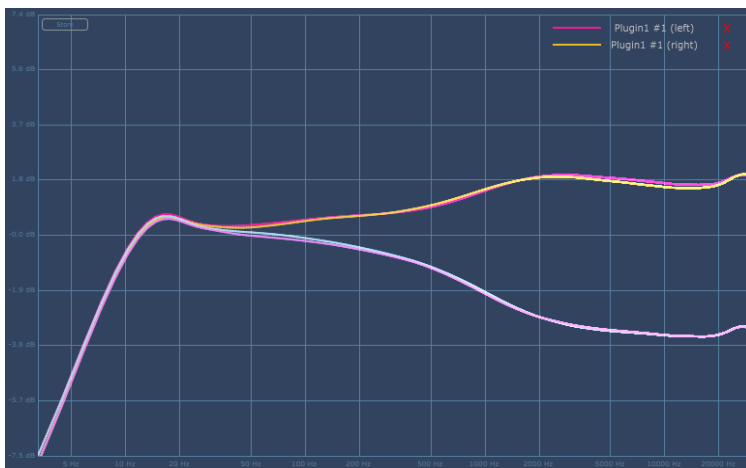
Mixing 2



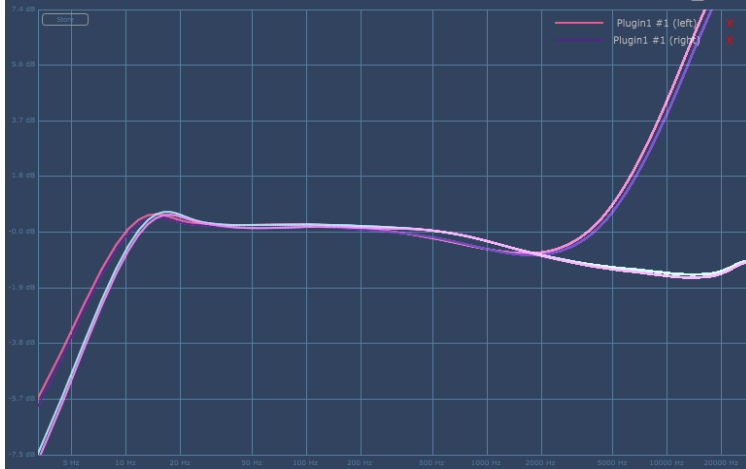
Mixing 3



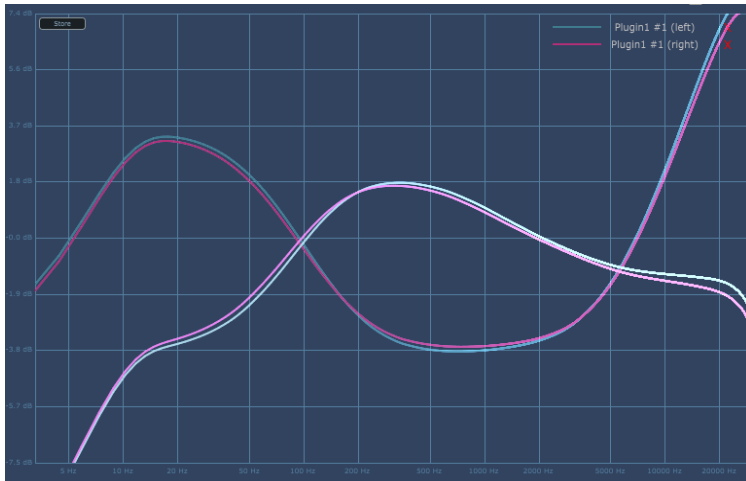
Mixing 4



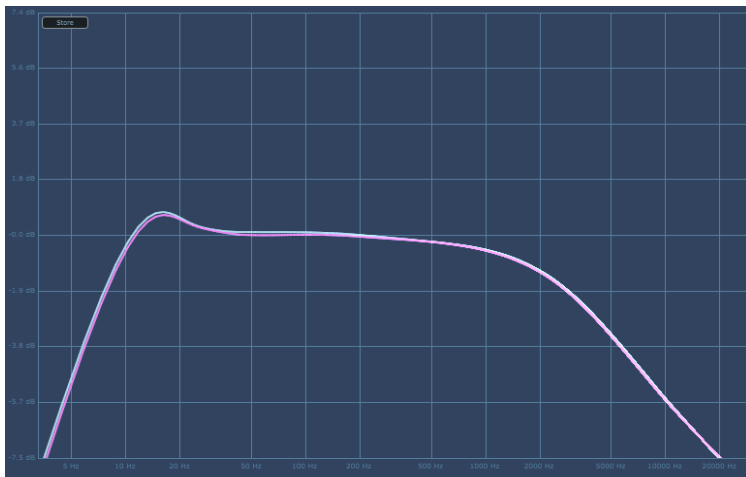
Mixing 5



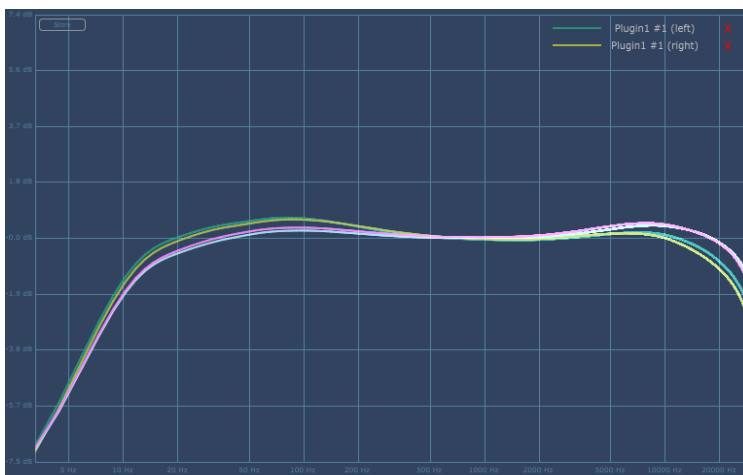
Mixing 6



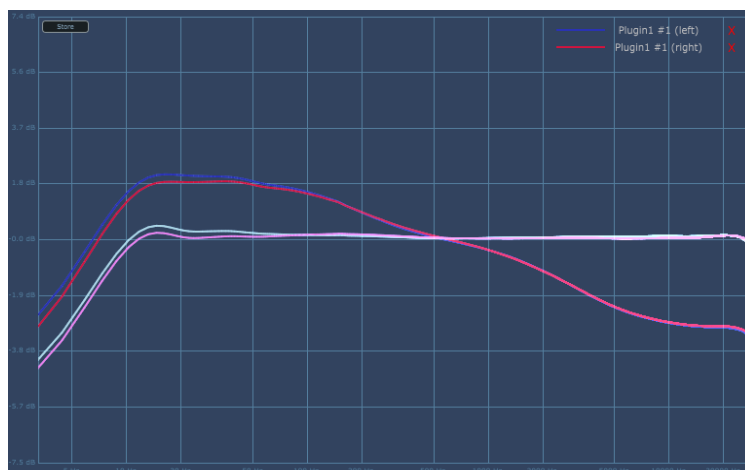
Mixing 7



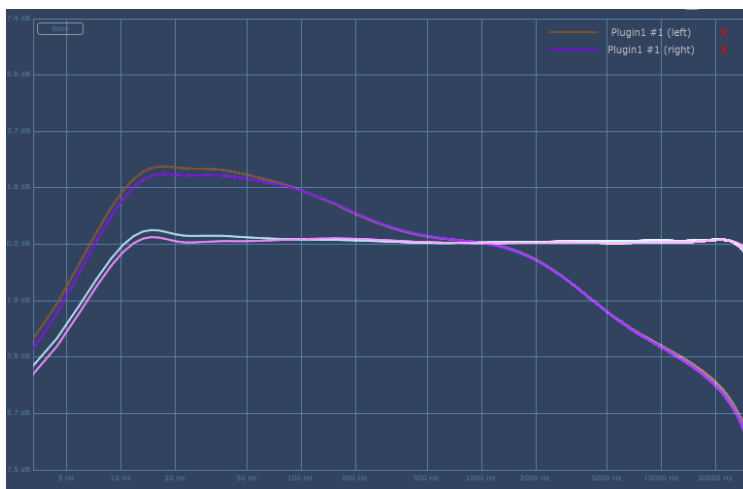
Mixing 8



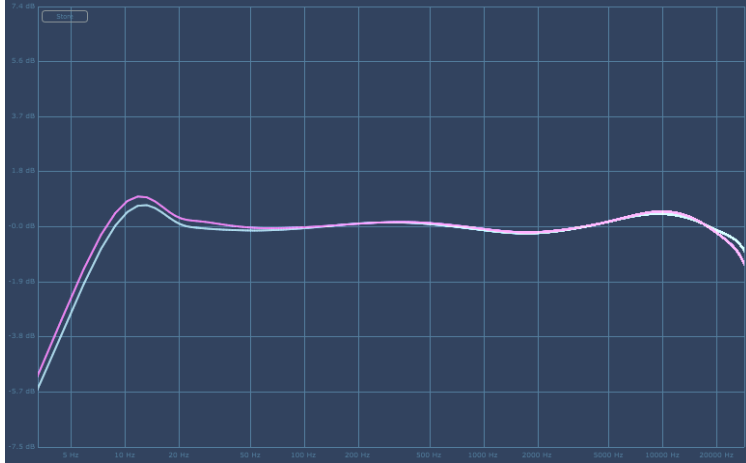
Mojo Hi Z – For these mojo programs, purple/light blue are the lowest setting of the 'Mojo' control, and the other lines are the highest setting. The highest setting always raises bass and lowers the high end, here it's more subtle than in the Lo Z programs.



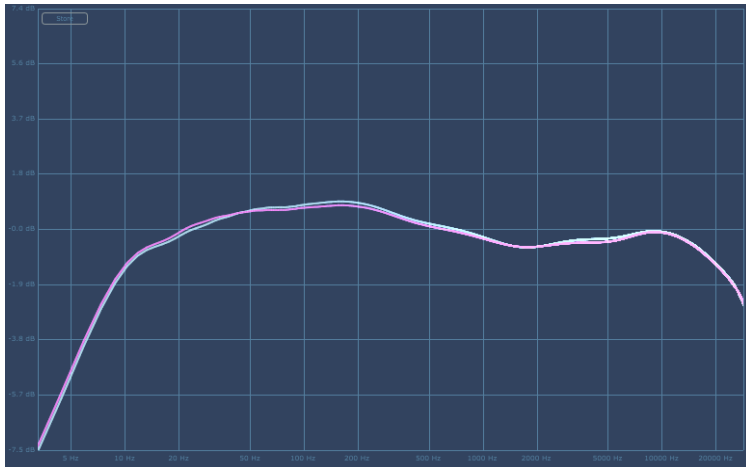
Mojo Lo Z 1



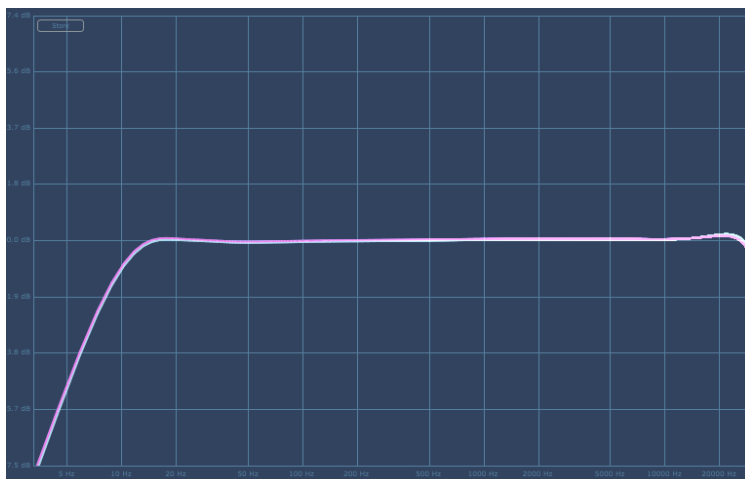
Mojo Lo Z 2



Preamps- AT



Preamps- AT HD – sampled with an EQ curve (unlike the other AT program), and the 'EQ' control here loads at 100% giving this response. Going down to 0% gives flat (like the mojo mastering programs)



Preamps - N