

Column by Renzo van Riemsdijk (Masterenzo):

There comes Clipper!

Dynamics, it keeps our attention. We bring ourselves a mix and if we put a compressor or limiter on the 2-bus, the dynamic range is reduced but at the same time the music gets punchier, has more impact and energy etcetera. But only if this is done right. Hypercompression doesn't put a smile on our faces.

It may sound illogical: less dynamics but more energy. But if we zoom in on this particular phenomenon it's not as illogical as it may seem. Look at the compressor as a tool that literally compresses things, more specifically music. It's all starting to make some sense: the energy captured within a track is being pushed out of it, together with some extra harmonics and transients (see my previous column). It all causes the energy levels to rise while decreasing dynamics. Quite a remarkable invention, a compressor. Although probably not every property has been developed consciously.

Is there another way to influence dynamics? Yes there is!
It's tonally (sound, coloration) the most transparent tool to let music sound louder and thus decreasing dynamics.

It's a phenomenon that has been discovered by accident by American mastering engineers back in the nineties.

In order to make use of analog outboard gear the digital signal coming from the computer has to be converted into an analog signal. After the outboard machines perform their mojo the analog sound has to be converted again into a digital signal to be loaded back into the computer.

We call this process conversion: from digital to analog (D to A) and from analog to digital (A to D). Mastering engineers discovered that while performing this last conversion (A to D) they could send a pretty hot signal into the A to D converter without directly audible side effects (except for a higher volume).

While loading the music back in a DAW (**D**igital **A**udio **W**orkstation, in short this is the software you work with) the waveforms looked like they'd been shaven off. As if the music barber had been using a ruler while cutting the peaks.

This proved to be a golden invention. It appeared to be the method to let music sound louder without nasty artifacts.

Back in the nineties this technique, together with the infamous Waves L2 brickwall limiter, was responsible for the loud masters made in that era.

Nowadays *clipping* (yes, that's what this technique is called) is still being used to give masters just a little bit of extra volume. Together with the other leveling tools (compressor/limiter) it provides the final overall volume of a track.

One aspect has to be taken in consideration: the A to D converter used has to be of very good quality. Not all converters like it when their ass is kicked with a hot signal, resulting in some nasty artifacts.

The Crane Song HEDD I've been using for quite some years easily takes a very hot signal without directly audible side effects. It's very forgiving but as always: every machine has its limitations.

I thankfully make use of this technique to give my masters just a little tad of extra volume!

So here's the end of this story about Clipper, the ultimate secret weapon among us mastering engineers!

Renzo

Renzo (Masterenzo) is a Rotterdam based Dutch mastering engineer. He has worked for Gery Mendes (GMB), Charlie Dée and Phil Bee's Freedom. More info about mastering and about Masterenzo can be found on his [website](#).