

MAGNUS MK2

Magnus MK2 is a 2 stages brick-wall limiter with automatic output level and comprehensive metering, its purpose is to make your tracks the loudest possible.

To achieve this the limiting process is divided in two steps each with separate oversampling options: the first is a clipper that can work like a hard digital clipper or a soft analog one. This stage lets you cut away those small peaks that nobody is going to hear and that will make the limiter work too hard and sound less transparent.

The second stage is a brickwall limiter that will compress everything above 0dBFS.

Simply use the two big knobs to increase the level until you are getting the right amount of gain reduction by any of the two stages.

Do you have a very percussive track? Use more clipper to cut those sharp transient and let the limiter work less. A soft song? Abuse of the limiter and don't use the clipper.

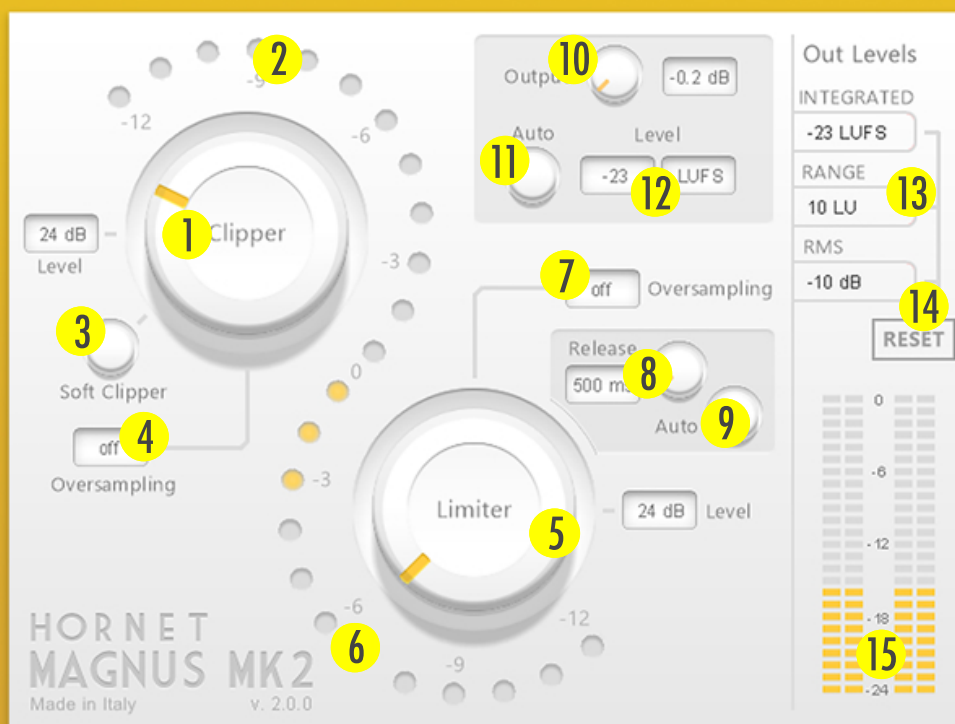
The limiter in Magnus is a quite sophisticated tool, the attack it's instantaneous and the release is made of three different stages, these stages are musically tuned and follow the classic time divisions of music. When the release is set to auto the first stage is equal to the length of one beat, the second to half measure and the third to a full measure so that when summed you get a release envelope that works faster on the upbeat and gradually slower on the rest of the measure. This kind of envelope allows Magnus MK2 to be a very musical and transparent limiter allowing high level of limiting without obvious compression pumping.

If you prefer to set your release time manually keep in mind that the release knob sets the longer envelope so the shortest one will be one fourth and the middle one will be half of that time.

Magnus MK2 includes some very useful metering options, the output level is displayed as compressive RMS and integrated LUFS, also the LU dynamic range is displayed.

We have also added both output peak and RMS meters to visually give you a clue on the output levels.

If you are in a hurry and you want to reach a precise output value just enable the auto output that will automatically trim the output knob to reach your specified peak level in both dBFS, RMS or LUFS.



1. Clipper level knob

This knob sets the amount of gain applied to the signal going into the clipper stage, it can be set from -6dB to +24dB to reach the desired level of peak reduction.

2. Clipper gain reduction meter

This round meter shows the amount of gain reduction going on in the clipper stage, a handy peak hold indicator is provided so you can see how much each peak of your signal is being cut by the clipper stage, usually cutting more than 3 / 6 dBs produces a audible distortion.

3. Soft clipper button

This button changes the behaviour of the clipper between hard and soft, in the first case the response is linear until 0dBFS are reached, after that point everything is suddenly cut so that no peak can exceed that level. Using the soft clipper produces instead a more natural distortion sound (similar to that of analog gear) and can lead to higher RMS levels even if with increased distortion levels.

4. Clipper oversampling

Clicking this control will reveal a dropdown menu from which you can chose the amount of oversampling for the clipper stage, a higher amount will result in a more high quality sound sacrificing a bit of cpu cycles.

5. Limiter level knob

This knob sets the amount of gain applied to the signal going into the limiter stage, it can be set from -6dB to +24dB to reach the desired level of peak reduction.

6. Limiter gain reduction meter

This round meter shows the amount of gain reduction going on in the limiter stage, a handy peak hold indicator is provided so you can see how much each peak of your signal is being reduced by the limiter stage there is no general rule here and the ideal amount varies with the program material, just use your ears and keep tweaking until it sounds good.

7. Limiter oversampling

Clicking this control will reveal a dropdown menu from which you can chose the amount of oversampling for the limiter stage, a higher amount will result in a more high quality sound sacrificing a bit of cpu cycles.

8. Limiter release time

This knob adjusts the release time of the limiter, this parameter affects the speed at which the processor recovers its gain after applying the gain reduction, shorter times creates higher RMS levels but also a more pronounced pump effect

9. Limiter auto release button

Clicking this button syncs the release time of the limiter to the current song's tempo, the length is set to exactly one measure and the three internal envelopes are set accordingly

10. Output level knob

This knob adjusts the output level, it defaults to -0.2dBs that is common for music but you can set it to the level you prefer

11. Auto output level

This button toggles the automatic output level compensation the output knob is automatically adjusted so that the output level peaks at your specified target level

12. Auto output target level

The combination of these control lets you specify the output target level you want to adjust to. The first one is a standard text box where you can enter the desired level, the second one is a dropdown menu that lets you select the desired output type between dBFS, RMS and LUFS.

If you choose dBFS the output is adjusted so that no peaks exceed the set dBFS level, when choosing RMS the last 600ms of audio are considered and the output adjusted so that the level is not above the selected value. Using LUFS finally uses the momentary measurement as specified by the EBU R128 standard.

13. Output levels display

These three boxes display the output levels in three different ways, the first one shows the integrated LUFS levels as defined by the EBU R128 standard, the second one the dynamic range of the output (still according to the R128 standard) and the third one the RMS level.

14. Meters reset button

Clicking on this button resets the level displays and start the LUFS and RMS evaluation from scratch.

15. Output meters

These two meters shows you the level of both the dBFS peaks (the inner ones) and the RMS level of the last 600ms (the outer ones)