DynEQ 0.97 user manual

Installing JS plugins on macOS

Create a folder "mrelwood" in:
~/Library/Application Support/REAPER/Effects/
and move the unzipped "DynEQ" folder in there.

Installing JS plugins on Windows

Create a folder "mrelwood" in:
C:\USERS\<username>\AppData\Roaming\Reaper\Effects\
and move the unzipped "DynEQ" folder in there.

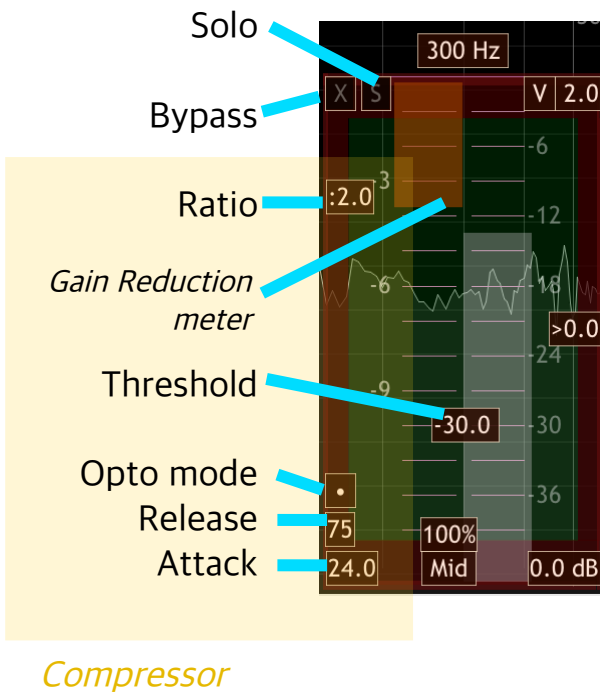**Restart REAPER** for the plugin to appear in the plugin list.

DynEQ introduction

DynEQ consists of **two identical processing modules** (red & green) and a **spectrum analyzer**. It also has a **help mode** built in, so if in doubt, click the question mark at the bottom right corner.

DynEQ is **phase coherent** when no boosting/cutting takes place, so the plugin is an extremely precise tool for **taking control** of a master stereo track, but also very useful for precise fixing of resonances and loud notes on individual instruments.

DynEQ has an automatically hiding bottom bar that shows the center frequencies of **other plugin instances'** modules. The frequencies are color coded by their M/S mode. The bottom bar can be selected to show one of the 8 available communication groups at a time. You can for example use the channel 1 for drums, 2 for bass, 3 for vocals, 8 for master, etc.

DynEQ Controls

Solo

Bypass

Ratio

Gain Reduction meter

Threshold

Opto mode

Release

Attack

| 300 Hz | V | 2.0 |

X S

:2.0   3

-6

-12

-6

-18

>0.0

-24

-9

-30.0   -30

-36

•

75   100%

24.0   Mid   0.0 dB

Compressor

Compressor and Monitor Sections

Attack and **Release** adjust the time (ms) of said parameter of the module's compressor.
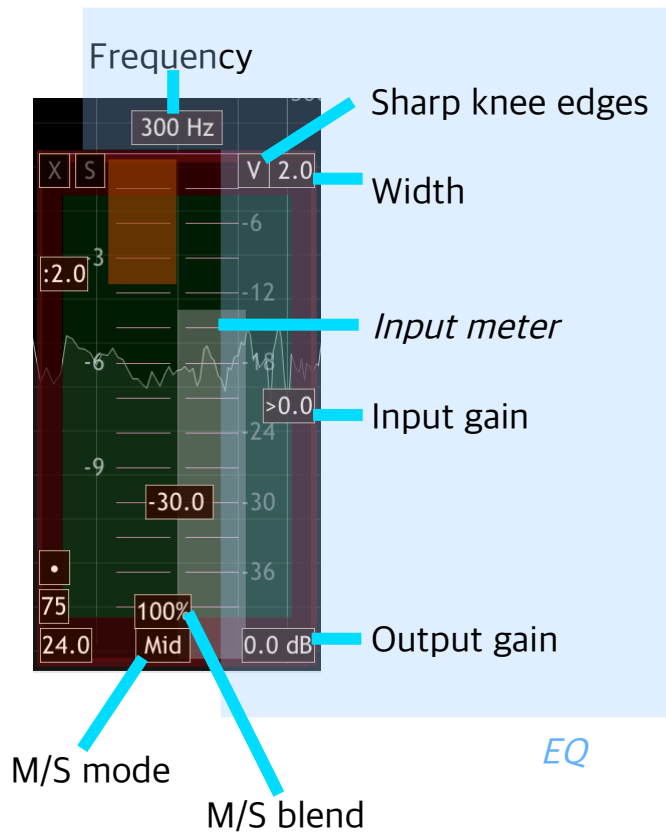Single-click for a fast or slow preset, drag to adjust.

Opto mode button changes the release curve of the compressor. When enabled, the release time gets faster as the gain reduction is increased, resulting in a more natural and present sound on some sources.

Threshold slider adjusts the volume threshold above which the compressing or expanding will take place.

Ratio slider adjusts the compression ratio of the module. When below 1:1 (top of the slider travel), the module will function as a transient enhancing expander.
Single-click to 4:1 or 1:1, drag to adjust.

X button **Bypass**es the module. **S** button **Solo**s the module.

Frequency

Sharp knee edges

Width

Input meter

Input gain

Output gain

M/S mode

M/S blend

EQ

EQ and M/S Sections

Frequency slider sets the center frequency for the module processing.

V applies **sharp knee edges** for the processing frequency range. Sharp edges helps separating for example bass guitar from the bass drum for processing.
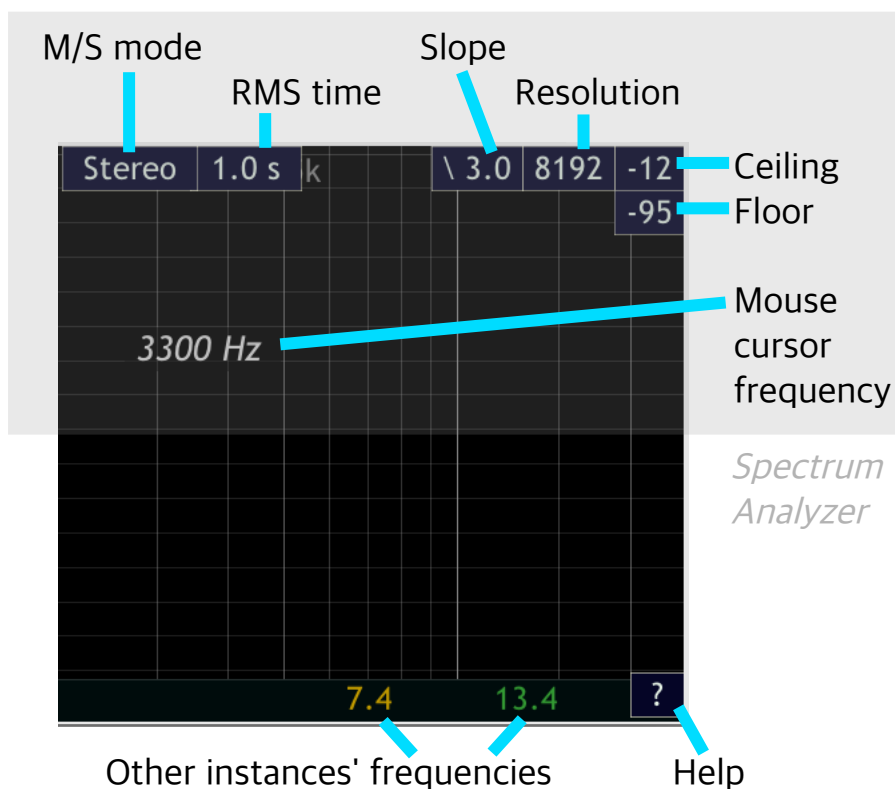
Width adjusts the width of the module's frequency band.

Input gain adjusts the module gain before the compressor section.

Output gain adjusts the module output level, after the compressor section. Functions as an EQ band gain setting.

Single-click on the **M/S** button switches between Mid–Side processing modes Stereo, Mid, and Side. Dragging the button extends to selections L and R.
Blend % varies between the selected M/S mode and normal Stereo mode.

M/S mode

RMS time

Slope

Resolution

Stereo | 1.0 s | k | \ 3.0 | 8192 | -12 — Ceiling
-95 — Floor

— Mouse cursor frequency

3300 Hz

Spectrum Analyzer

7.4 | 13.4 | ?

Other instances' frequencies — Help

DynEQ Main Section

M/S Mode button selects the stereo mode for the spectrum analyzer. Dragging the button extends to selections L and R.

RMS Time selects the averaging time of the analyzer. Single-click to 0, 500ms or 2s, drag to adjust to 0-10s.

Slope adjusts the analyzer slope from equal power per octave (0dB) to that of a pink noise, -3dB/oct (= equal energy). Single-click to 0dB or 3dB, drag for a precise setting.

Resolution selects the analyzer FFT window size. Single-click to turn the analyzer on/off, drag to adjust.

Ceiling and **Floor** scale the vertical display of the analyzer.

Mouse cursor frequency shows the frequency at the exact mouse cursor position, once the feature is enabled by double-clicking the analyzer area.

Help enables reminders of the controls' functions.

Multiple DynEQ instances

As soon as a second instance of the plugin is inserted to a project, a bottom bar with an " Others' " button will appear. The bar will display the frequencies of the other DynEQ instances in the project, color coded by their M/S setting.

To only show DynEQ instances of a specific track, drag the slider on top of the bottom bar of each instance on the track to a separate channel.

Clicking the Others' button at the bottom left corner will show and hide the Others' bar. Button label will remain lit to signal that other instances are available.

DynEQ Functions

The modules function **independent** of eachother, so their frequencies and target M/S position are ok to overlap.

Double-clicking **Ratio** sets the value to 1:1 for easy access to the expander side. Double-clicking any other control resets it to a default value.

Attack, Release and **Threshold** are fine tuned **automatical**ly when the center frequency of the module is adjusted. This feature will decrease the need to adjust them every time you adjust the frequency.

The **M/S** button of a module enables targeting the processing only to various parts of the stereo image. When in use, a blend slider (%) will appear allowing for a more precise adjustment. For example, if a piano stereo track has a resonance at a certain lower octave, you can switch the M/S mode to Left, and decrease the blend to target processing to that section.

When the modules **overlap** and the visual position of the module sides no longer represent the processing frequency edges, the sides switch to a narrow design.

DynEQ Usage Examples

DynEQ is versatile enough to support handling of various issues in several types of workflows. A few examples:

1. Vocal track has an intermittent resonance at 1 kHz

- Set a module Frequency to (about) 1000 Hz.
- Lower the Threshold until the resonance is in control.

Ideally it is as simple as that. Depending on the material and severity of the issue you might want to adjust width, increase the Ratio, and single-click the Attack and Threshold settings to fast pre-set values.

2. Bass guitar is louder than kick drum below 100Hz

- Locate a suitable kick drum resonance frequency between 50-80Hz.
- Set a module Ratio setting to expanding (:1 - :0.2), and enable sharp knee edges ("V").
- Find settings for the Ratio, Threshold and Width that emphasize the kick drum only.
- Set the other module to compress the bass guitar with a fast Attack, slow Release, and "V" enabled.

3. Guitar needs an uplifting boost at 1.5 kHz

- Set a module Frequency to 1500 Hz.
- Lower the Threshold until GR meter only barely shows up.
- Boost the Input Gain until the guitar is more present in the mix.

Boosting the input gain before compression prevents the boosting from emphasizing unwanted resonances.

Both modules range from 40 Hz to 20 kHz, so finding the correct Attack, Release and M/S settings they can be used to separate individual drum cymbals and other instruments even from a busy mix.