

PART ONE: MIXING

Chapter 3: Equalizers and Filters

What Are Equalizers And Filters?:

The human ear can hear frequencies from 20 – 20.000Hz.

That means, *that every sound you hear lays anywhere within this range.*

Speakers are trying to display audio the best they can within this range , but due to various reasons, not all speakers are equally build.

Therefore, you need to *fine-tune* the frequencies within your mix with an EQ or a filter.

There are a few differences between EQs and Filters, but the most remarkable is: EQs can cut or boost a frequency, while filters can only cut it.

Why use an EQ?

An EQ can make sure that every audio signal within your mix sounds good.

It is giving you the ability to correct or change certain things within the frequency spectrum and keep signals separated from each other.

Example:

If your hihat sounds too harsh, you used an EQ and make a cut around 7-11kHz. Most EQs will have a graphic interface, which will analyze the frequencies of your signal in real time, so it's easier for you to find disturbing frequencies.

Another way to find a disturbing frequency is the following:

Select a single EQ-band and set the width tight, boost the volume of that band like 5-7dB.

Caution! Turn the speakers low before to avoid blowing your ears.

Now sweep with the boosted band through the frequency-spectrum and look for the frequency that sounds bad.

Concerning the hihat, you slowly sweep through the area around 7-11kHz.

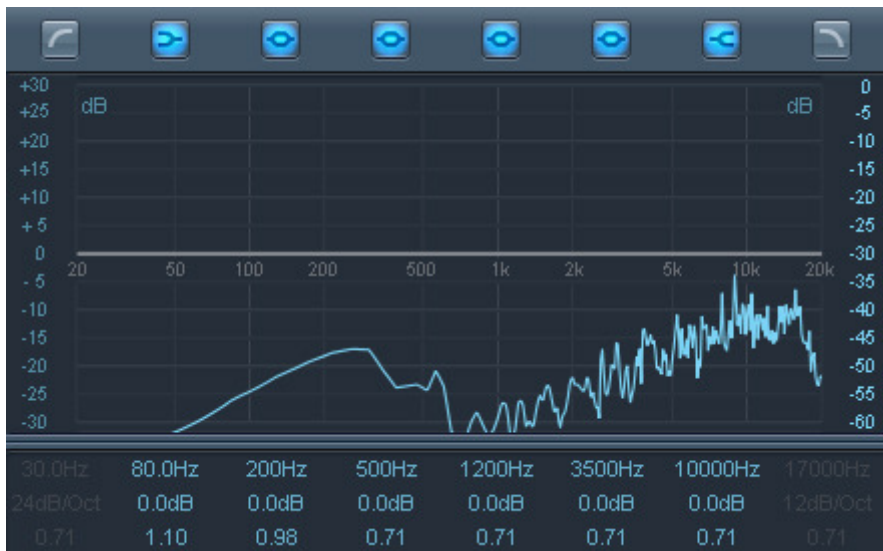
Hear the harshest sound?

Make a cut here and fine tune the bandwidth be readjusting it and...voila!

There you have a nice sounding, not disturbing hihat.

SPECIAL TIP:

Generally cutting a frequency is better than boosting it, as this can cause distortion.



1. Unprocessed, harsh hihat in an analyzing equalizer.



2. Light cut with 4 dB at 7900Hz, this hihat sounds a lot smoother now!