

## Best Practices on doing EQ Tweaks and using AudioSpectro FIRE

- 1.) This tool is not designed to replace your ears during an audio mastering or mixing session.

This is designed to help you confirm frequency balance issues in your mix based on what you hear and suggest optimal settings to attain frequency balance based on what a modern mix would sound.

- 2.) In audio mastering, it is best to limit the cut and boost to a maximum of 3dB.

You can use the following guide:

±1dB=slight boost or cut

±2dB=moderate boost or cut

±3dB=big boost or cut

If you need more than that, it is recommended to look further back on your audio mixing sessions for specific instrument-EQ-related issues or even re-record the material. You can still implement more than 3dB, provided you have a well-recorded audio and using an EQ plugin that is designed for drastic EQ adjustments such as the Waves Linear EQ (LinEQ).

It also makes sense to implement just like 0.5dB cut or boost increments as this change can be audible.

- 3.) Implement all EQ tweaks on your 24-bit/44100Hz source audio WAV file.

Don't implement any EQ tweaks directly on 128kbps MP3 file!

- 4.) As a golden rule, 128kbps MP3 is only used for analysis purposes.

All EQ improvements (whether in mastering or mixing) should be done on high resolution WAV file (e.g. 24-bit/44100Hz format).

- 5.) EQ settings during audio mastering cannot correct a poorly recorded audio

(such as recorded in very low resolution or low fidelity) or a poor-sounding mix.

So the audio project needs to be re-recorded/re-mixed to satisfy the requirements.

If re-recorded, the most recommended bit-depth/sample rate should start at 24-bits/44100Hz.

- 6.) Don't simply make frequency balance as your ultimate goal in arriving at a great-sounding mix.

You should also pay attention to other aspects that make the mix sound good such as the recording quality and other effects such as reverb, panning, compression, etc.

If these are improperly used, the mix can still sound bad overall even though you attained frequency balance.

- 7.) This tool is best used in balanced mixes that aim to provide a flat overall equalization after mastering.

Balanced mixes means it is properly recorded and all instruments have its correct place/levels on the mix.

A flat equalization (or frequency balance) allows the audio to sound normal and comparable to broadcast quality mixes or masters.

- 8.) Since this tool depends on FFT data analysis of analyzed audio,

its EQ improvement recommendations will be objective and direct. Thus, it will tell the reveal some truth about your mix audio frequency response not being altered by your room acoustic response imperfections. This can be very helpful in setting the right EQ settings for your mastering plugins.

Aside from using your ears, you now have a reliable and objective confirmation tool for your EQ settings.

9.) This tool works best when analyzing tracks with complete production arrangements (with drums, bass, vocals, guitars, etc.). This implies less accuracy when using this tool for tracks without drums and bass. For example; pure instrumental tracks (e.g. a song featuring only one instrument) or vocal-acoustic guitar tracks.

10.) Raw data generation process is very important.  
Use only the recommended tools and software in generating raw data to provide the most accurate results.