EQ STRATEGIES

YOUR ULTIMATE GUIDE TO EQ

BJÖRGVIN BENEDIKTSSON

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Dedicated to my father, Benedikt Jónasson,
Minnesota State Chess Champion 1991.

The smartest strategist and fastest chess player I know.

DISCLAIMER AND FTC NOTICE

INTRODUCTION

Learning to use equalization (or EQ) is the first step towards great mixing skills. Knowing how frequencies interact and how to fit them all together is a crucial skill all engineers like yourself should have.

Here's how I learned how important it is:

Way back in my teens, I randomly found myself hired as the live sound engineer at this small venue called The Old Library. It was a cool place, but it had a reputation for bad sound. It was the venue bands were forced to play if there was absolutely nowhere else to go.

Little did they know that they were hiring someone who didn't exactly know what he was doing.

I was extremely intimidated by everything surrounding live sound. All these cables all over the place that you were supposed to know how to connect. All these speakers everywhere, both the monitors on the stage and the P.A for the audience that I was supposed to control. Not to mention the blinking lights of 24 channels on a mixing board?

In a word, overwhelming.

However, all of those things paled in comparison to figuring out how to use the simple, fourband EQ on the mixer. Learning to EQ by desperately twiddling knobs back and forth in a dimly lit venue isn't the best way to learn to EQ. I could hardly see what I was doing!

So, because I didn't really know what I was doing, there was a lot of trial and error and fumbling around in the dark.

Sure, any time I tweaked the EQ the sound of the mix changed. Sometimes for the better, most of the time for the worse.

But it wasn't until I had spent hours behind that mixing board and studied what each frequency sounded like and what it does to the mix that I finally got it:

EQ IS THE MOST IMPORTANT MIXING PROCESSOR FOR CREATING SEPARATION BETWEEN THE INSTRUMENTS IN YOUR MIXES.

INTRODUCTION

EQ helped me take that shitty music venue from its reputation for having terrible sound to becoming an in-demand spot where all the coolest bands wanted to play.

But I wouldn't have been to able to make those shows sound so great if it wasn't for the EQ. I didn't even have any compressors until a year after I started, so limiting myself to mastering EQ wasn't a choice, it was a necessity.

Throughout this book you'll learn everything I've learned since then, in a much more comfortable setting.

You'll learn that EQ can help you in any audio situation, whether you're doing live sound or recording your own music in your home studio.

Today, you might be having trouble getting cleaner mixes, or making the distorted guitar tracks stand out in a dense mix. Maybe your vocal sounds like it's muffled under the other instruments that already sound like they're under a blanket.

After going through this course, you'll make all those instruments jump out of the speakers, with the vocal leading them like it's the leader of the Avengers.

EQ doesn't have to be a mystery so let me show you how to master it. Once you've learned how EQ works and where you can fix the problem areas in your mix, your mixing skills will skyrocket!

WHAT EQUALIZATION DOES AND WHY IT'S SO IMPORTANT

As a mixing processor, equalization is one of the most important ones to create separation in your instruments and balance in your mixes.

You can think of it like you are a sculptor using a chisel. You have a block of marble and chisel away at it until something beautiful forms from your imagination.

When you use filters and cuts, you carve away at the frequency spectrum of your instruments, making room for everything in the mix and cutting away everything that doesn't belong.

You can also look at it from the perspective of a painter or a colorist adding to a pencil drawing. You add gradients of color that make something simple look even more vibrant.

When you add warmth and presence to sounds, you help them cut right through the mix without overpowering other instruments. And weirdly enough, with EQ, sometimes you can get that warmth and presence by removing frequencies instead of adding them.

You can also look at it like an art historian, admiring the various decades of art, all with their different characteristics and picking the most important art pieces of every era to showcase in your gallery. In this analogy, your art pieces are your instruments and the selections you make are your EQ decisions inside the art gallery that is your song.

It's similar to when you're using a frequency analyzer on your mix. Whether you're mixing or mastering you use analysis to help you see the frequency spectrum of each instrument, deciding where you should focus your efforts and discover what's lacking.

As far as art goes, EQ'ing is pretty artistic. Creative EQ'ing can make a mix that sounds like a wet dog sound thick, powerful, and punchy. Your EQ decisions can also completely change the feel of the song.

There's really no one way to go about it. It very much comes down to preference and taste in the long run, as long as you simply follow a few guidelines to help create a balance within the frequency spectrum of your mix. And that's exactly what we'll be digging into in this guide.

WHAT EQUALIZATION DOES AND WHY IT'S SO IMPORTANT

First we'll talk about what an equalizer is and how it works. There's nothing more frustrating than using a tool that you don't understand. We'll make sure you know exactly what the buttons do and what the frequency ranges represent before we dive into more advanced EQ strategies.

From there you'll understand the jargon and vocabulary that's used when EQ'ing audio, with specific tips for each frequency range and instrument. In the end, we'll tie it all together and talk about the finer points of how to EQ your mixes to create separation between your instruments and balance in your mixes.

Before we get started, I want you to understand one important thing. EQ is present in every part of the mixing process and you'll use it every step of the way.

- ***When we record we use our ears, the frequency response of the microphone, and its placement as EQ.***
- ***When we mix the instruments together, whether we want them to sound like a huge wall of sound or a clearly defined group instruments, we use EQ.***
- ***When we add reverb to create space we use EQ to keep the reverb from cluttering up the low-end.***
- ***When we use delays to create depth we'll need EQ to tonally shape the delay to separate it from the source signal.***
- ***When we use saturation to create warmth, EQ tames the high-end harshness.***
- ***When we want to increase the loudness of our mixes by cutting unnecessary energy that eats up the headroom of our mixes, we use EQ.***
- ***When we master our songs together as a cohesive album instead of a collection of unbalanced songs guess what… We'll also use EQ.***

Think of EQ like your lightsaber on your journey as a heroic mixing engineer. You might pick up more tips, tricks, and powers of the Force along the way, but your lightsaber will always be there, trusty by your side.