



# *The Ultimate Guide to EQ*

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# The Ultimate Guide to EQ

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If you've been looking for a great EQ guide to fix those nasty frequencies in your mixes, look no further.

Using EQ is the first step to making your instruments play well together. Knowing how to EQ can help you make room for all the instruments in the mix. It helps you avoid clashing instruments and gives you complete control over the frequency spectrum.

In the following EQ guide I'll give you a run-down of the frequency spectrum. By recognizing what certain frequencies sound like, you'll become faster and more effective at EQ'ing your mixes.

## Frequency Breakdown for Your Mixes

### *50 Hz*

The lowest frequency range adds fullness to those bass instruments like the kick drum, toms and bass.

Cut in the 50 - 100 Hz area if they are getting too thick and interfering with the clarity of the low-end of your mix. It can also add extra punch to dance music, because it adds a dimension of "feeling" the bass instead of hearing it.

Of course, you'll need pretty juicy, low-end speakers for this. If there's too much rumble in your mix, I would recommend cutting or filtering some of this area.

### *100 HZ*

Boosting here will give the low frequency instruments a 'harder' sound. It adds fullness to guitar and snare.

Too much can also clutter up and add boominess so cut in this area for added clarity in the low end. It also adds warmth to piano and horns.

## *200 Hz*

I like calling this the [muddiness frequency](#) because I always used to cut it so much when I was doing live sound.

It really adds muddiness to live venues but it can also fill up your mix in a negative way. However, if you need to boost, it will add fullness to vocals and snare as well as give your guitars a thicker sound.

If you're still struggling with muddiness, subtle cuts in the master EQ can help reduce unwanted thickness.

## *3 - 600 Hz*

Cuts here will increase punch for kick drums. It'll [reduce boxiness](#) and give it a thicker sound.

Boosting at 400 Hz can add clarity to bass lines, especially when you're mixing for smaller speakers.

## *7 - 800 Hz*

Boosting 700 - 900 Hz can bring out the bass line without cluttering up the low end.

You're targeting the upper harmonics to make them audible in the mix, all while leaving the bass sound itself alone.

Reducing 800 Hz takes out the cheap sound of an acoustic guitar as well as reduce the DI sound of plugged in acoustic guitars.

### *1 - 4 Khz*

Boost 1.5 kHz to increase the string sound of the bass guitar. Cut to reduce nasal sound of vocals.

3 kHz adds attack to most everything. Gives you more punch out of your acoustic guitar chords. Gives presence to piano parts, especially if you've needed to cut its low-end. It brings out the clarity of the voice.

It helps to cut the electric guitars here to make extra room for the vocal if you're having problems with them clashing. Boosting between 2 - 4 kHz brings out the beater of the kick drum.

### *5 KHz*

Adds extra presence to vocals. Brings more attack to the tom drums.

Cuts will make instruments more distant so cut here if you need to pull something back without using volume.

### *7 KHz*

Use a de-esser targeting the frequency range between 6 - 8 kHz to reduce sibilance.

Exact frequency range depends on the singer. Boosting can add extra life to dull vocals.

Boost for more “finger sound” on acoustic bass. Increase to add sharpness to synthesizers, rock guitars and piano.

### *10 KHz and Above*

Most everything above 10 kHz adds air and high-end 'sheen' to instruments.

It doesn't always sound good so don't go boosting everything up there excessively. It can quickly result in a trebly and obnoxious high-end craziness.



# The 3 Simple Principles of Great EQ'ing

Understanding the EQ spectrum is a daunting task. But learning how to EQ properly is one of the most important skill to learn in audio production.

Equalization is probably on every track in modern recording. There is always something added, cut, or filtered.

You hear jargon like: "Boost this frequency", "put a notch filter on that", "cut out the high-end."

However complicated the jargon may seem, the theory of equalization is a simple one. There are only three simple principles you must adhere to when you are EQ'ing your tracks.

## 1. Filtering

**Filtering** means completely cutting out a frequency from a certain frequency.

Filtering out the low or high frequency are the most common. These filters are called either High-pass filters/Low Cuts, or Low-pass filters/High-cuts.

Other filters include band-pass filters and notch filters who either only leave the desired frequency and cuts all the other(band-pass) or completely cuts out one certain frequency(notch).

## 2. Cutting

Subtractive EQ repairs **problematic sounds**, meaning that you find the problem frequency and cut down on it, either



completely eliminating it or reducing it until it ceases to be a problem.

### *3. Boosting*

Sometimes recorded instruments need a bit more shine in the mix.

Adding to certain key frequencies in a sound source can make them more present or add certain characteristics to the sound source.

Examples include adding a lot of 2-4 Khz for a metal-type [kick drum](#) or 5 Khz to make the vocal more present.

### *Simple but Effective*

Equalizing, along with compression, is often the first step engineers take when they start their mix.

By using these simple principles, these hotshot engineers paint a picture with equalization, making everything nicely together.



## 6 Warning Signs That You Don't Know the First Thing About EQ

EQ is a tricky thing. It's super helpful for sculpting your mixes, but it can also make them sound terrible.

Especially if you're doing any of these things below.

### *1. You Move the Wrong Knobs*

This is beginner's mistake number 1 but it's worth pointing out.

If you're only moving the frequency knob without moving the gain knob, you're not EQ'ing. This is a terrible mistake to make, because you're actually doing nothing at all!

If the gain knob is at zero, then moving the frequency knob will gain you nothing, no pun intended.

And don't laugh, I've seen this a few times with people who just don't know the first thing about what they're trying to accomplish.

### *2. You Don't Filter*

Filtering is the first step in EQ'ing.

It's like cleaning up the clutter before you can make your room nice. All instruments have frequency ranges that get in the way of other instruments in a mix.

[Don't fear the filter](#), it's the best way to eliminate low-end buildup and clutter from instruments that don't need it.

Filter out the low-end of the guitars to make the bass guitar fit, and [get rid of the high-end when your instrument doesn't need it.](#)

### *3. You Make Aggressive Boosts*

Sometimes you really do need to boost frequencies to make that track pop, but don't go overboard.

A 20 dB boost is just asking for trouble. When you boost, you're manipulating the phase relationship of the frequencies, introducing a lot more gain as well as potential noise to your tracks.

Use subtractive EQ instead, it's a much cleaner alternative.

By subtracting the frequencies you don't want, you're subjectively boosting the frequencies that you want.

For instance, cutting the lower-mids can achieve the same result as boosting the higher-mids. Don't boost aggressively. Be conservative and cut instead.

### *4. Your Cuts are Wide*

A simple goal to live by is:

*Broad Boosts, Narrow Cuts*

When cutting frequencies, use a narrow Q.

Think of subtractive EQ like a scalpel. You're taking away frequencies you don't like, but you have to be careful to not cut the vitals of the instrument.

## *5. Your Boosts are Narrow*

Same thing as before, but in reverse.

Narrow boosts sound very unnatural. A 20 dB boost with a very narrow Q will pinpoint that frequency and it will stick out like a sore thumb.

Use broad boosts for a more flattering sound.

## *6. You Boost the Same Frequencies in 5 Different Instruments*

This is a surefire way to make all the elements of a mix clash together, resulting in a cluttered and unclear mix.

Think of it like a division problem. You have a set amount of apples, and you need to divide them among a set amount of people.

Similarly, you have a set amount of instruments that you need to divide among the frequency spectrum.

The kick-drum, bass guitar, acoustic and vocal can't all have a 12 dB boost at 4 kHz.

Find different frequencies that flatter each instrument individually, and spread them around.

Also, if you're boosting a frequency in a certain instrument, then it's usually a good idea to cut in an instrument that occupies the same frequency range.

Divide the frequencies evenly among instrument and achieve better separation and clarity in your mixes.

## *EQ Should Be Your Best Friend*

The equalizer is one of the most powerful tools in your arsenal.

But you can also completely screw up your mix if you don't know how to use it.

I hope you weren't making many of these mistakes that I mentioned above, I know I've done plenty of them.



# A Simple and Effective Guide to Drum EQ

The drum sound is the backbone of any mix. The bass drum keeps the pulse going, the snare drives the rhythm forward and the feel of the drum beat is what gives the song its groove.

Knowing your way around the EQ is a very important aspect of getting a great drum mix going.

Every drum mix is different and your preferences will vary depending on what kind of sound you are going for.

That said, looking around in those frequency areas will give you a good starting point to that awesome drum sound.

## *Kick Drum EQ*

The happy medium in a kick drum sound is a thick bass thump from the low-end combined with a driving click from the mids.

Different genres have different drum EQ, but those two areas are universal when it comes to a good kick drum sound.

**50 - 100 Hz** - Boost to add low-end punch. Beware of boosting too much though as it can clutter up the low-end and get in the way of the other instruments occupying this spectrum.

**150 - 250 Hz** - If you're worried about boosting the low-end too much because you think the kick drum is already pretty thick, try cutting in this area.

It reduces potential boominess from the kick while allowing the lower bass frequencies to breathe.

Basically, cutting here gives thickness to the low-end without adding muddiness to the overall sound.

**300 - 600 Hz** - Here you find the infamous cardboard sound. If boxiness plagues your kick drum sound, cut somewhere in this area.

Metal and hard-rock kick drums have a scooped drum EQ at 300 Hz, and some kick drum microphones even have a pre-designed EQ curve that scoops out the mids to reduce boxiness.

**2 - 4 kHz** - This is where the snap, crackle and pop is. If you have a hard time getting the kick drum to cut through the mix, don't add more low-end, add more mids.

A broad boost in this section will bring out the beater sound. Where you decide to boost depends on the genre.

A broad boost in 2 kHz is good for any pop/rock style while a narrower boost at 4 kHz will bring out the click you hear so prominently in metal music.

**10+ kHz** - You don't always need to do anything to the area above 10 kHz.

Kick drums rarely need 'air' since most of their character comes from the low-end and the mids. You could even filter out the higher frequencies with a low-pass filter to reduce drum bleed.

It can also give your kick drum a thicker, more focused sound.

## *Snare Drum EQ*

Many of the guidelines still apply for any drum.

For instance, if a drum is too thick, you can fix it by cutting out some of the low-mids.

If it's too boxy you need to tame the area around 300 - 600 Hz.

**150 Hz** - If your snare sounds too thin and needs some extra weight, adding some 150 Hz can easily thicken things up.

**500 Hz** - For more body to your snare, the fundamental frequencies around 500 Hz gives the snare a rounder sound.

**3 kHz** - Add clarity and punch by boosting this area in the upper mids.

**10+ kHz** - You don't notice a big difference when you start adding air to the snare, but it does lift the snare sound up a bit.

A boost in the highs is similar to how a low boost in a bass instrument is felt rather than heard.

Snare drums can give you annoying ringing overtones that you need to deal with. The best solution is to use a separate EQ to cut the ringing sound out.

Use a narrow Q, boost all the way up and sweep the boost across the frequency spectrum until the ringing sound pops out at you.

When you find it, simply reverse your boost to get rid of the ring.



Rinse and repeat.

## *How to EQ Toms*

Toms are simple to EQ. You want to reduce boxiness, increase thump and add attack.

Here's what you do:

**Cut the Mids** - Wide boosts work really well when you just want to completely get rid of that boxy sound.

Just make sure you leave some left so that it doesn't sound hollow.

**Add the Lows** - Since every tom has a different diameter, their fullness frequencies differ.

Floor toms sound full when boosted at lower frequencies, at 80 - 100 Hz for instance, while smaller toms need boosting at closer to 250 Hz.

Sweep around until you find the sweet spot to boost.

**Sprinkle with Highs** - Similarly, add the attack by boosting from between 5 kHz and 7 kHz, depending on the size of the tom.

## *Overheads*

I like taking a master EQ approach when it comes to overheads.

Bus both of your overheads together so that you only need one stereo EQ.

Then you can approach it one of two ways:

**Master EQ** - Do slight cuts and boost to create the best sounding overall EQ.

This means adding slight low-end boost to bring out the kick drum, reducing some of the overall boxiness and adding presence and air in the upper-mids and high frequencies.

This will give the overheads a great overall drum sound. With this method you can start your drum mix with the overhead sound.

Then you can add the other drums to the overheads to enhance an already great sound from the drum-kit.

**Cymbals only** - If you only want to use the overheads for the sound from the cymbals, use a high-pass filter to cut out everything up to about 500 Hz.

Sounds drastic, but if the other microphones sound great and you can't get a good overall overhead sound going, this method can be a great alternative.

### *Overall EQ with bussing*

Finally, you can do the same overall EQ as I explained with the overheads, but this time with all of the drums.

Simply buss them all together to one stereo group and add a stereo EQ. Then use that to sculpt a perfect master EQ for your drums.

Use this guide the next time you're EQ'ing your drums. I guarantee that these frequency areas will help you solve many of your drum EQ problems.



# How to EQ Bass Using These Little Known Harmonic Secrets

A reader writes in with a question about how to EQ bass guitar:

*“On my recording, I'm using a sub-synth for the bass. It sounds good on stereo with good speakers, but the bass is almost not present on other smaller playing devices. Boost the harmonics? Cutting through frequencies? So the problem is that the bass doesn't cut through in the mix at all. Should i make another layer of the sub-synth on another track? Or should i try to use another bass guitar sound and see how it comes out? Or should i leave the sub-bass, and add another bass guitar sound with it together?”*

---

It's a common problem for the bass guitar to get lost on smaller speakers.

If you mix on great monitors with a nice bass response you don't realize how your EQ decisions are affecting the mix on other playback systems.

## *Boost Harmonics*

For instance, if your bass is really grooving and thick due to a nice boost at 100 Hz, try boosting the harmonic multiples of that frequency.

If the fundamental frequency is 100 Hz, adding broad boosts to 200 Hz, 300 Hz and higher in the right multiples enhances

the natural sound of the bass without excessively boosting one big frequency.

Also, if your bass guitar is sounding muddy, skip the low-end boosts and just concentrate on adding the harmonics. It gives you a well-rounded bass guitar sound without cluttering up the low-end.

To answer the question above, adding another layer of sub-synth won't do any good. It'll just add more bass and unneeded low-end mud. It certainly won't make the bass cut through speakers that don't hear that low-end anyway.

I would say, stick to the sub-synth but try to add more harmonic content in the higher frequencies to make it stand out.

Alternatively you could add a different bass synth that's more natural sounding and easier to manipulate in the middle frequencies.

Since we're on the subject of how to EQ bass guitar, let's go through some of the frequency ranges to see what's helpful and what you should avoid.

### *Low End*

As always, the lowest frequencies only tend to get in the way.

You can clear up that bass sound by simply filtering up the lowest end of the frequency spectrum. Set your filter to at least 40 Hz, but higher could work for some styles.

Then, if the bass guitar needs some extra thickness, boosting the frequency range between 50 and 100 Hz will give you that low-end thickness. But be careful, as I said before, too much can quickly muddy up your low-end.

I'm usually pretty wary of boosting the bass between 100 - 250 Hz. It tends to add muddiness very quickly, which is one of the surest signs of an amateur mix.

Cutting in this range can quickly clear up your low-mid muddiness problems.

However, if your bass needs a little extra roundness then tactfully boosting these low-mids can give it a little more thickness without excessive boominess.

### *Middle of the Road*

Don't neglect the importance of the middle frequencies.

Just because it's a bass guitar doesn't mean you should forget about everything above the low-mids. Here's where you add clarity and punch to your bass guitar.

As I told you before, boosting the harmonics of the fundamentals of a bass guitar can result in a cleaner bass sound.

Boosting around 600 - 900 Hz (I'm being broad here because it depends on so many factors) makes the actual tones of the bass guitar shine through. You won't just hear the low-end rumbling beneath all the other instruments, you'll actually hear some definition from the bass notes.

## *Presence*

Some engineers like their bass guitar a little brighter. If you need to have the bass 'pop' just a little bit more, boosting the frequency areas around 1 - 4 kHz gives you even more clarity and presence to the bass strings.

It can bring out the plucky sound of the bass guitar, especially if the bass player is using a pick, similar to that garage-y Pixies sound so prevalent in the 90's.

I wouldn't venture much further up the frequency spectrum. Most of the higher frequencies just add hiss and high frequency noise that's not particularly flattering to the bass guitar.

You could even filter out the highest frequencies with a low-pass filter to focus your sound solely around the frequency areas you want.

## *EQ Bass With the Best of Them*

It's hard to hear how these tips work without using them in a session, so go open up your DAW of choice and go play around with your bass guitar.



# The Ultimate Guide to Acoustic Guitar EQ

I found this really handy picture that breaks down the acoustic guitar EQ in the frequency spectrum.

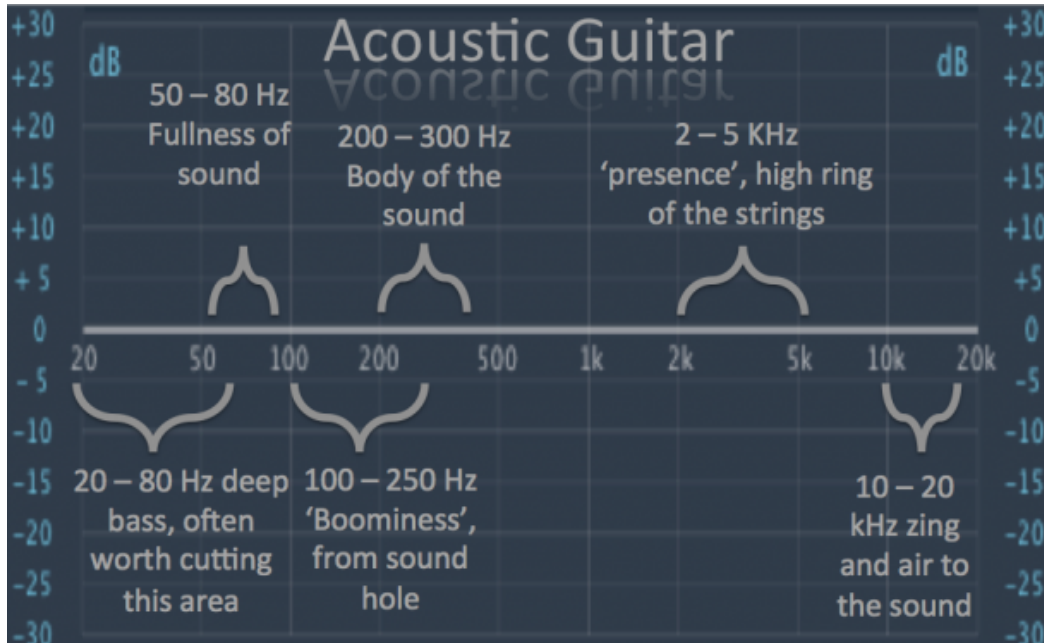


Image by: [www.themusicespionage.co.uk](http://www.themusicespionage.co.uk)

Each frequency range in the image corresponds to a specific character in the acoustic guitar's sound.

## *Deep Bass*

Like I've said time and again, filter out the low-end of the guitar to make room for the bass guitar and kick drum.

Even if you're doing a solo, singer/songwriter act, it's worth cutting that lowest end out. You can't really hear the actual frequencies, but they can add extra low-frequency noise your audio doesn't need.



## Fullness

If the acoustic guitar is the main player in your song, filtering up to about 80 Hz or so could be enough.

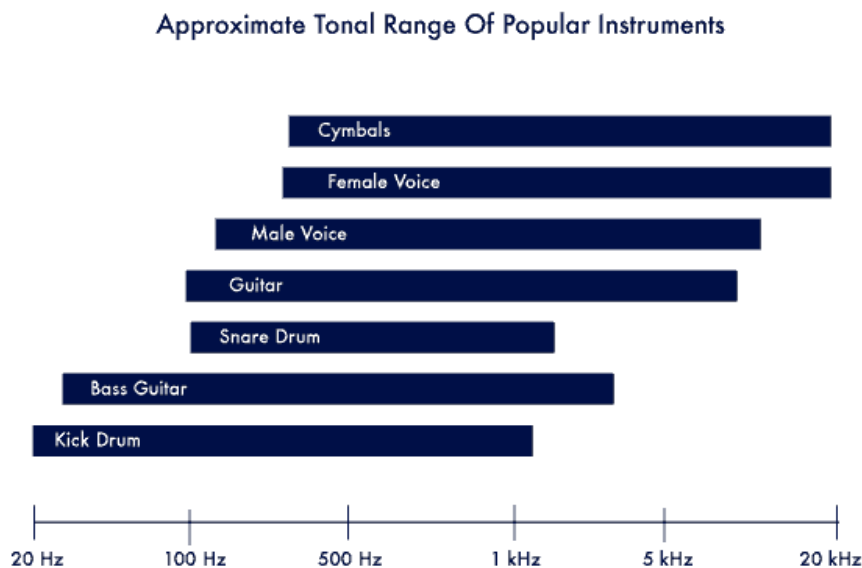
If it's a full band production, your can filter the low-end out even further. It just depends on how full you want your acoustic guitar to sound.

Extra fullness in this frequency range adds thickness to your audio, while too much can interfere with other instruments.

## Boominess

Be careful with the area from 100 - 250 Hz. Too many boosts in that area will muddy up your entire production.

See how almost every instrument overlaps in the 200 Hz range in the picture below:



That's why so many mixes end up sounding muddy. All the instruments occupy that same space between 100 - 250 Hz.

So unless your acoustic guitar sound sounds really thin and weak, I suggest cutting in that area.

Cuts in your acoustic guitar EQ in the lower-mids add subjective boosts to the higher mids, giving your acoustic guitar more presence.

Also, if you pointed your microphone at the sound-hole when you recorded your acoustic guitar it might sound pretty boomy. Cutting at 200 Hz can fix that boomy acoustic sound.

## *Body*

Sweeping around this area is helpful if you need a little extra body to your acoustic guitar sound.

Small boosts can add the extra weight to your acoustic guitar, especially when the lower frequencies only add mud and boominess.

## *"Cheap Sound"*

This is not in the picture but it's worth mentioning.

Cut in the area around 800 Hz to get rid of that cheap string sound you hear on inexpensive acoustic guitars.

A narrow cut in the acoustic guitar EQ there can really smooth out the sound.

## *Presence*

Once you cut the lower-mids, you don't always have to boost the higher mids to add presence.

There's enough presence by just adding a little extra volume to compensate for your low-mid cuts.

However, if your acoustic is still sounding a little dull, a broad boost in the area between 2 - 5 kHz can add some more brightness and attack.

I would actually recommend going all the way up to 8 kHz for that extra brilliance to your strings if you like that sort of sound.

## *Air*

For just an overall facelift to your acoustic guitar sound, add some air with the highest frequencies.

I recommend restringing your acoustic often so that the strings don't lose their brilliance, but if you need to add some extra sheen to them, here's where you go.

## **Easy Acoustic Guitar EQ**

Remember these simple guidelines the next time you slap your EQ on that acoustic guitar track.

It's a simple and easy way to navigate the frequency spectrum of your acoustic and results in a better acoustic guitar sound.

## 7 Quick and Dirty EQ Fixes for Your Guitar

Where can I pin-point that annoying tinny sound from my guitar?

What guitar frequency is that?

How can you [EQ](#) that boomy and muddy sound out of your guitar production?

*Any of those questions sounds familiar?*

Just like with every other instrument, the guitar responds to boosts and cuts in the audio frequency spectrum.

There are specific guitar frequency areas that make the guitar sound a specific way.

Here are 7 quick and dirty tricks to make your guitar mixing smoother.

### *1. Yucky Low-End*

Usually, a good place to start your guitar mixing is to filter out the low-end. Cut everything below 100 Hz as a general rule.

Filter all the way up until your guitar starts sounding thin, then back off a little.

Acoustic guitars might need a little more bass, especially if there's no bass. A boost at 80 Hz can lighten the low-end clutter while still giving your acoustic some weight.

### *2. Guitar Thickness*

Add thickness to the guitar in the 150 Hz area.

Be careful since you can easily pile on the low-mids, but if your guitar sounds thin then it can benefit from the added thickness from 150-200 Hz.

I use this guitar frequency a lot if I feel the guitars should have more bass and power.

### *3. The Fundamental Guitar Frequency*

Boosts in the 500 Hz area can compete with the snare drum so make sure that they aren't clashing with each other.

### *4. Honk and Presence*

If your guitar starts sounding tinny or "honky," a nice cut in the 1-2 kHz can round out the sound.

However, if you feel that your guitar lacks presence, you can pull it to the front of the mix by boosting in the 3 kHz area.

### *5. High Frequency Hiss*

Highly distorted guitars can add a substantial amount of hiss and noise to a mix.

Be especially careful when you're boosting in the high mids since you might introduce more hiss than guitar.

### *6. Vocal Cut-Through Trick*

If you feel like the guitar is getting in the way of the vocal, a simple trick is a wide cut around 3-5 kHz.

This can clear up that area in order for the vocal to shine through in a busy mix.

## *7. Brilliance*

After giving the vocal some space, you might need to compensate for the now dull guitar sound.

Add some slight boosts in the 8 kHz area for some brilliance. This works especially well on acoustic guitar and clean electrics.

Now the vocal can shine through in its own area as well as giving the guitar some additional grace.

## *Sweep Around*

You might need to sweep around the frequency areas to find the exact frequencies where the guitar jumps out and comes alive.

Every guitar is different and each one will react differently to a specific guitar frequency.

Use these simple guidelines for a faster EQ workflow. Don't sweep around the spectrum when you are looking to add some fullness to your guitar.

If you already know where you can find it you don't have to waste time.

# How to Eliminate Vocal Muddiness With EQ

Vocal muddiness is a frequent problem.

We all want clarity in our vocals. We want the vocal to shine through the mix without the low-end cluttering it up. It's such an important part of the mix, and we don't it to come off muddy and boomy.

*But what can you do to fix muddy vocals?*

I got a question from a reader who had this exact issue. He was having problems with too much low-end, causing the vocals to sound boomy.

Here's his question:

*I'm recording with a condenser mic and I'm using the Auralex Mudguard to eliminate reflections but the vocals sound muggy and low. I tried to put a tube amp effect on it but it makes no difference. Can you help me?*

---

I'm answering this question without hearing the audio he has recorded so I'm somewhat limited in my advice.

However, there are a few different things you can do to clear up your vocals in order to make them less boomy and muddy.

## *1. Scrap that tube amp effect*

That probably won't do anything to help you clear up your vocals. If anything it might add more lower mids, causing even more boominess.

## *2. Filter out the low-end*

If you're [recording vocals](#) with a microphone that has a low-frequency roll-off, use it.

It might be enough to clear up the rumble and low-end that's causing that extra boom in your vocals.

If that doesn't work, [use a high-pass filter to remove the frequencies below about 100 Hz.](#)

Vocals don't really occupy the range below 100 Hz, so there's no reason to have extra unneeded energy cluttering up your vocal recording.

## *3. EQ out the muddiness*

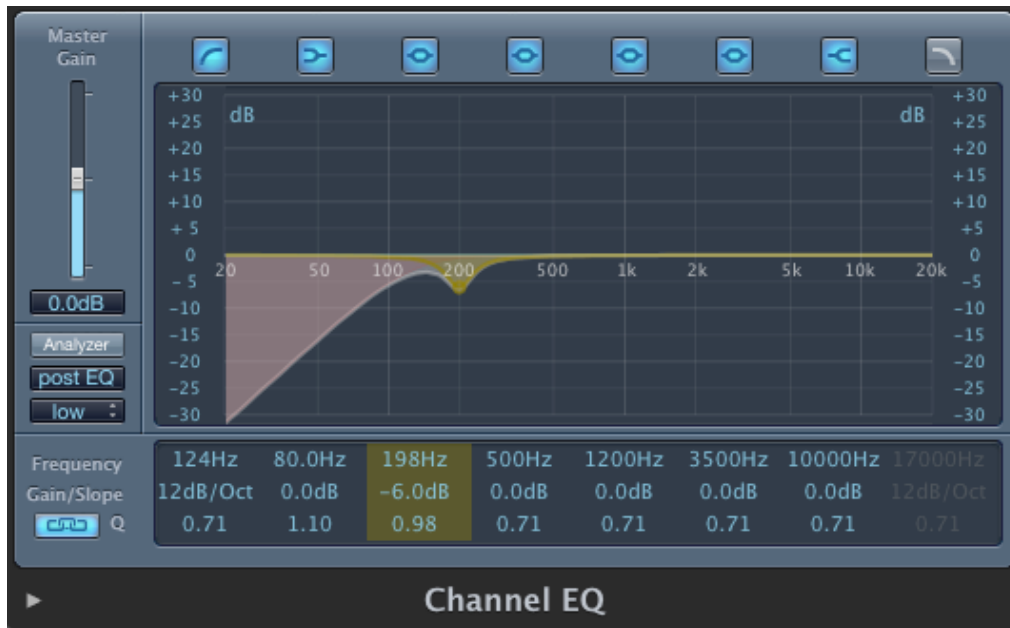
If that's not enough, use an equalizer to cut the extra boominess from the vocal. There might be extra muddiness building up around 200 Hz.

Take a medium to narrow cut around that area and listen to where the vocal clears up.

[Muddiness can be a really big problem, but it's not always that difficult to solve.](#)



As a reference, here's an example of what an [EQ](#) curve would look like when you're trying to cut out that boominess and mud.



Sometimes you only need to filter out the low-end and add a little cut to the low mids to clear everything up.

# The Three Inglorious Gangsters of EQ

*Say hello to my little friend!*

Or rather, say hello to my three little gangsters that do your dirty EQ work for you.

## 1. *The Thug*

The thug is like Joe Pesci from *Casino*. He's the hired hand that does all the dirty work for the family. He doesn't hesitate to get rid of you any way he can.

Use the thug when you need to cut unwanted frequencies from your mix. He'll cut anything that's causing you annoyance: snare rings, muddy bass or hissy guitars.

The thug gets rid of pests without making a mess. He likes it clean and untraceable. Like surgical EQ with a high Q. Just scoop in there and get rid of what's annoying you.

## 2. *The Godfather*

The godfather is like Al Capone. Everybody knows he's the boss, but the cops can't prove it.

He uses legal businesses as a front for his criminal enterprise. They all know he's dirty, but they can't pin it on him.

Think about the godfather when you mask frequencies. Masking is when you boost a higher frequency to hide the problematic frequency below.

Say you have a really nasally vocal at 1 kHz or but you can't cut it without making it sound unnatural. By boosting 3 kHz you mask that nasal sound by covering it up with a more flattering frequency.

Sometimes you need to hide the problematic frequencies. Mask them and none will be the wiser.

### *3. The Undercover Cop*

Think about Tim Roth as Mr. Orange in *Reservoir Dogs*.

When things start getting real ugly, everything's gotta go.

When you get a bunch of low-lives together in a room, there's gonna be a stand-off and that's never gonna end well.

Because sometimes you gotta get rid of everything. If you have problems with your low-end, you need to grab that EQ and filter everything out.

Make sure that the only things left are the instruments that belong there in the first place.

The undercover cop gets rid of the criminals in the most dangerous way possible: by infiltrating their midst. The same goes for your EQ'ing.

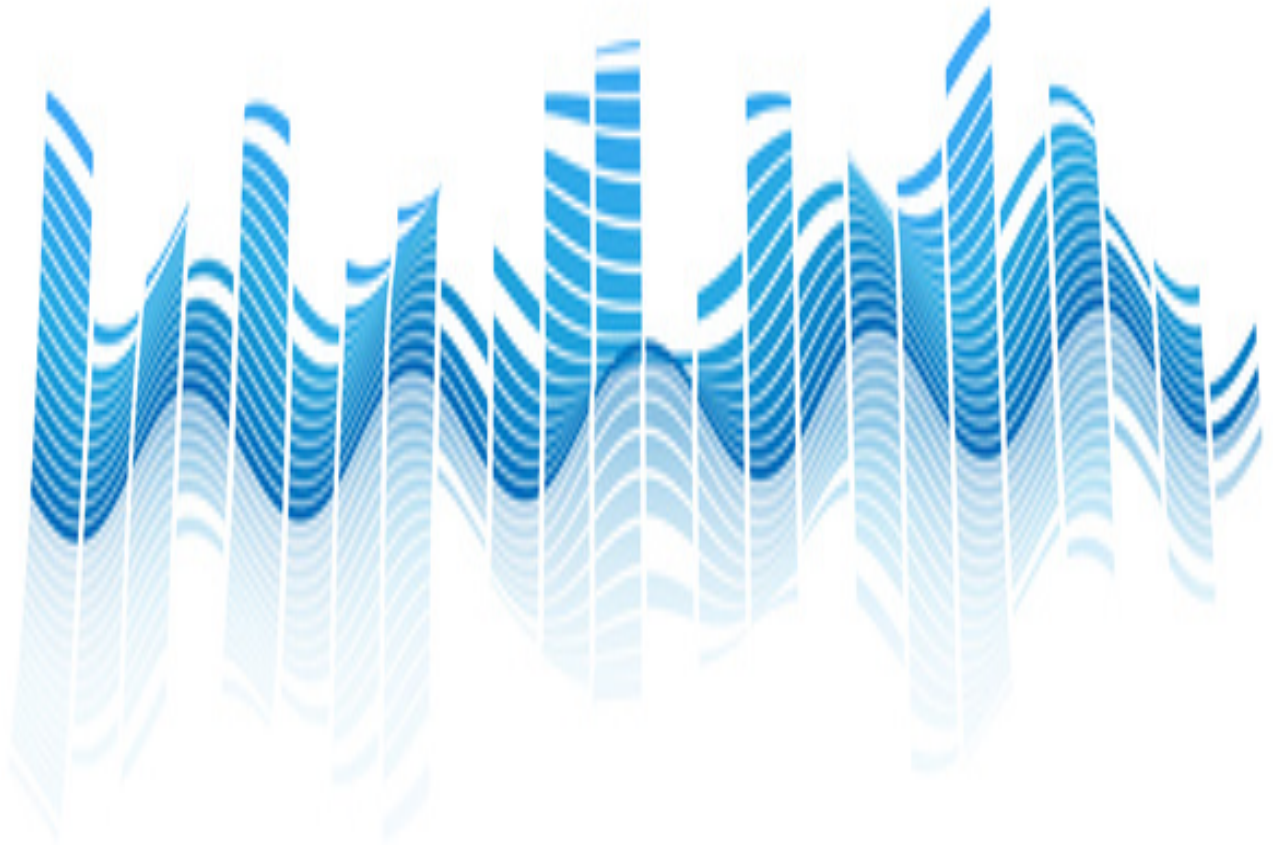
Use the filter carefully. Get rid of the scum, but don't hurt the frequencies around them.

### *Criminal EQ*

Maybe I've been watching too many gangster movies between mixing sessions, but these are the three characters that continually resurface.

Similarly, these are the three things to always keep in mind when you're using EQ.

Know when to cut, filter and boost and EQ'ing will be easy for you.



## How to EQ Like the Grammy Winning Engineers at AES

Sometimes it's frustrating to hear Grammy Award winning engineers talk about their sessions.

They have such great gear, and they can record in amazing studios.

It makes you feel inadequate, because it's obviously much easier to get great tracks going if you're working with top of the line equipment and performers.

But at the same time you can really learn from their perspectives, even if you'll have a much harder time achieving the same sounds.

### *How to EQ Like the Pros*

I forgot who it was, but when the Grammy panel was asked about how to EQ, someone uttered:

*Don't. Just Don't.*

That made the crowd laugh.

However, it's a valid point. There's a ton of EQ'ing you can do by simply changing the microphone or moving the player around.

It's a lot more hassle than just tweaking the EQ during mixing, but by getting the sound as good as possible at the source will give you more experience with mic technique.

If you **do** need to EQ after recording, the old mantra of "cut rather than boost" is still just as valid. Subtractive EQ helps you avoid adding unnecessary gain to your signal.

Just make sure you increase the volume of the instrument because you are essentially lowering the gain of the instrument in certain frequencies.

That's why instruments sometimes sound weaker after you've cut out problematic frequencies. It's just because it's quieter, not weaker.

Like the experts said at AES

*Push the fader up! You gotta fill your frickin' speakers!*

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So make sure you increase the volume so you don't automatically think it sounds worse just because it sounds weaker. It might just be your speakers.

## *Learn from the Experts*

I know you wish you could just give those experts a call whenever you had a question right? It would be awesome to have a few dozen Grammy winners on speed dial right?

Well, I've got the next best thing.

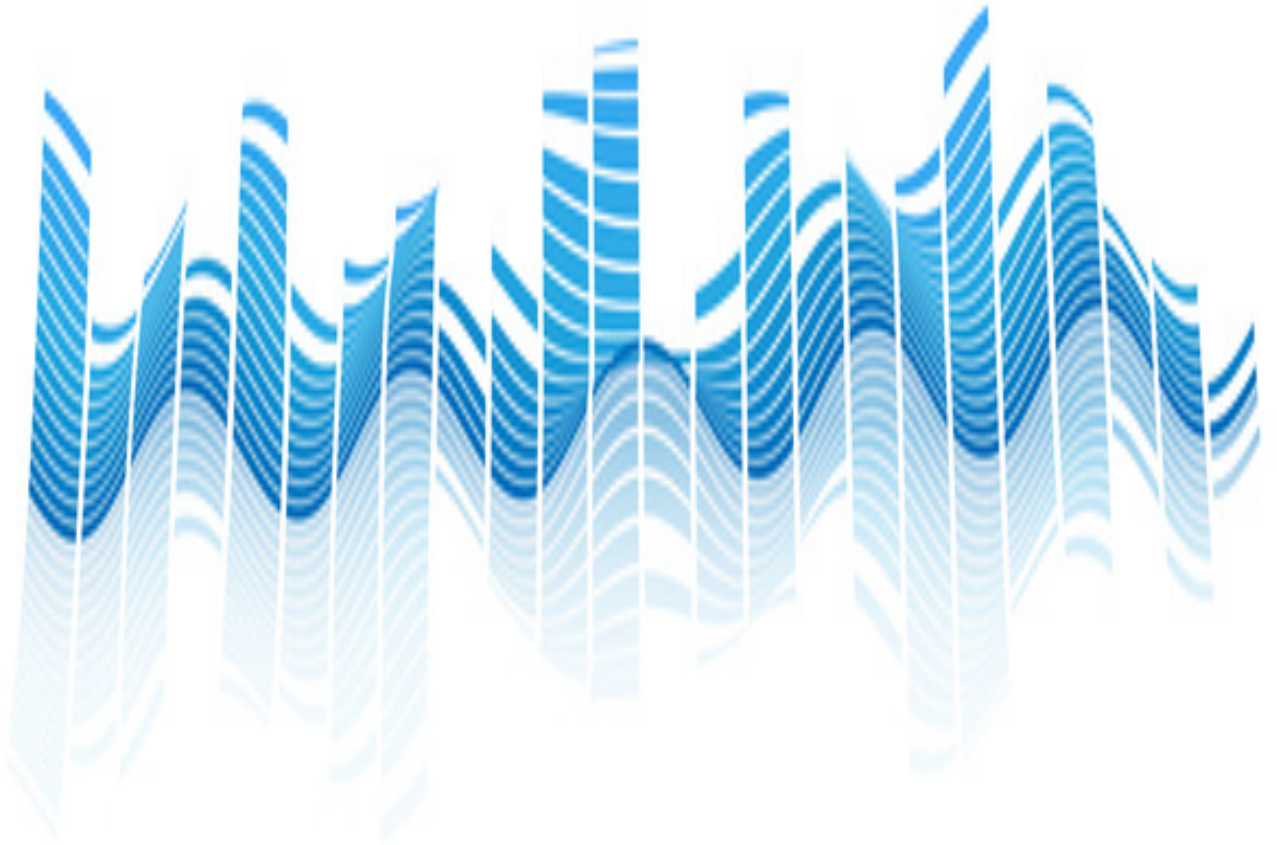
These two experts are duking it out each month, giving their subscribers in-depth mixing tips on how to EQ, compress, create space and just basically take a mix from raw tracks to produced perfection.

You might have heard about them, Joe and Graham from HomeStudioCorner and The Recording Revolution?

Learn from their battles over at Dueling Mixes:

Click the link to get started:

<http://nanacast.com/vp/110214/219371/>



# When to EQ and When To Compress, That's the Big Question!

EQ before compression or compression before EQ?

*That's the big question isn't it?*

It's a never ending debate of preference that doesn't have a right answer.

But there are some general guidelines you can take into consideration. Depending on whether you're recording, mixing or mastering, this argument has a few different sides.

**Recording** - When you're tracking instruments, use your microphone as the EQ. The frequency response changes as you move the mic.

It's like tweaking knobs without the knobs. And if you have access to an outboard, on-the-way-in compressor, by all means use it if you want.

**Mixing** - This is going to be the big "it depends" answer. If you don't need to EQ that much, but you need to compress a lot, then insert your EQ before the compressor.

Or, if you really need to EQ your instrument to make it sound better, then insert the compressor before the EQ.

But you will see all kinds.

Compression before and after, as well as in parallel.

**Mastering** - In mastering, I recommend that you EQ first. I compressed first for a long time, but I was shown the error of my ways.



The thing is, when you're mastering, EQ is THE MOST important processor. You want the song to sound great frequency wise before you start compressing it.

A compressor before might skew your perception, making you EQ differently than you should.

## *Conclusion*

So depending on which part of the audio production process you're on, the approach to EQ and compression becomes different.

I really hope you've enjoyed this collection of articles about EQ. Thanks for reading.

Björgvin Benediktsson

Audio Issues

## **P.S.**

EQ solves A LOT of problems. It's the #1 processor when it comes to fixing bad sounding instrument.

If this guide wasn't enough and you would more info on EQ, [Understanding EQ](#) is a great video resource that teaches you how to work the frequency spectrum, complete with real world problems and practical solutions.

[Check it out here.](#)