

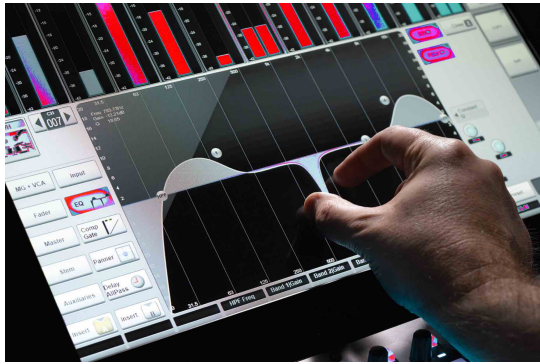
BOBBY OWSINSKI'S

THE 6 TROUBLE FREQUENCY AREAS

EVERY ENGINEER SHOULD KNOW

Stop The Frustration And Bring Clarity And
Separation To Your Mixes





Trouble Area #1

200Hz (Muddy)

Too much 200Hz can cause the track or the mix to sound muddy or boomy, while not enough can make it sound thin.

It's a fine line, but many times mixers err on the side of too much 200Hz and end up with a track that's too thick and clutters up the mix.

SOLUTION

If your mix seems muddy, focus in on 200Hz on your individual tracks (bass and kick might be the exceptions), and cut a few dB with a fairly narrow bandwidth ($Q = 4$ or 5).

TIP: All tracks won't need this, only the ones making the mix muddy.





Trouble Area #2

300Hz to 500Hz (Boxy)

Too much of this frequency area results in the dreaded "boxy" sound, or if you're listening to a floor tom or kick, the "beach ball" effect.

It's also an area that some less expensive microphones (especially dynamics) tend to emphasize, which is why many mixers sometimes automatically cut a few dB out of this area on the kick drum during the mix.

TIP: Buildup in this frequency area happens if you're recording all your tracks with the same mic.

SOLUTION

Cut a few dB and sweep between 300 and 500Hz and watch how much better the track sounds.





Trouble Area #3

800Hz (Walmart)

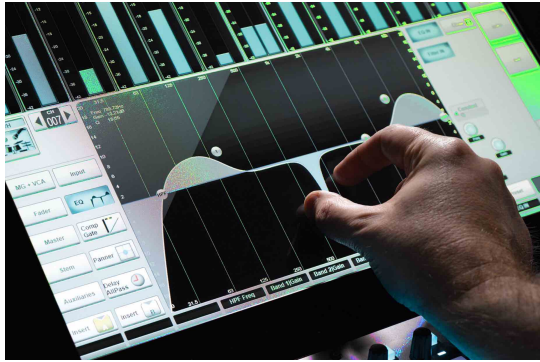
Too much in this area results in what's sometimes known as the "Walmart" sound, meaning that it sounds like a cheap stereo purchased in a department store.

Try it for yourself - get a cheap pair of computer speakers and you'll find that 800Hz is what you'll mostly hear. Obviously, too much of this frequency range is not a good thing.

SOLUTION

Before you begin to boost the high-end of a track that sounds dull or lacks definition, drying cutting a few dB at 800Hz instead.





Trouble Area #4

1.5kHz (Nasal)

This is the nasal range of the frequency spectrum and, as the name suggests, too much of it results in a vocalist that sounds like she's singing through her nose.

This can sometimes be the result of a microphone that's poorly matched to the vocalist.

TIP: Your best most expensive mic isn't always the right one for vocals.

SOLUTION

Once again, cutting a dB or two (you don't need to cut too much) in this area will restore the natural qualities of the vocalist.





Trouble Area #5

4kHz to 6kHz (Presence)

This frequency range is frequently underutilized during the mix, resulting in a track that lacks definition.

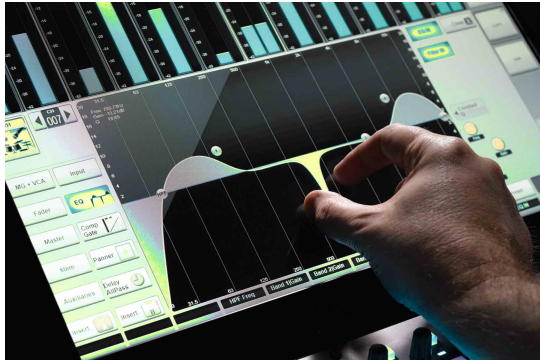
Without enough of it, the track tends to sound dull, but too much can make the track sound thin or, in the case of a vocal, sibilant.

SOLUTION

Adding a dB or two to a track that seems a bit buried can add definition and bring it forward in the mix.

TIP: Use a wide Q (bandwidth) of around 1 to 1.5 and sweep between 4k to 6kHz.





Trouble Area #6

10kHz+ (Air)

Another widely overlooked frequency band is the “air band”, and it provides clarity and adds a certain "realness" to the track.

Many vintage mics naturally have a lot of the air frequencies, which is why we prize them for their sound, but that doesn't mean that we can't add them with EQ.

SOLUTION

Both the Maag Audio EQ4P and the [Volko Audio Q3D](#) (which is free) have a special "Air Band" designed to add those frequencies back in the mix with a minimum of phase shift. You can dial it in on other equalizers by boosting 10kHz or higher with a wide Q (1) or shelf.



About Bobby Owsinski

Bobby Owsinski started his career as a guitar and keyboard player, eventually becoming an in-demand producer/engineer working not only with a variety of recording artists, but on commercials, television shows and motion pictures as well. Living in Los Angeles and always on the cusp of the latest technology, he was one of the first to delve into surround sound music mixing, and eventually worked on over a hundred 5.1 surround projects and DVD productions for a variety of legendary superstar performers including The Who, Willie Nelson, Neil Young, Iron Maiden, The Ramones, and Chicago, among many others.

Most recently, Bobby has produced and mixed records that made it to #2 on the Billboard Blues Chart and #5 on the iTunes Rock Chart.

Bobby is also one of the best selling authors in the music industry with 23 books that are now staples in audio recording, music, and music business programs in colleges around the world, including *The Mixing Engineer's Handbook*, *Social Media Promotion For Musicians*, *Music 4.0: A Survival Guide For Making Music In The Internet Age* and more.

He's also a contributor to Forbes writing on the new music business, his popular blogs are nearing 8 million visits, and he's appeared on CNN and ABC News as a music branding and audio expert.



Useful Resources from Bobby Owsinski

Blogs: [Music Production Blog](#)

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Shrink The Gap Between You And The Experts



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Stop The Frustrations And Bring Clarity And Separation To Your Mixes
by Bobby Owsinski

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