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Subject: Struggling with understanding TONALITY in speakers

Posted by [Marlboro](#) on Wed, 30 Sep 2009 00:12:02 GMT

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Every since Rick commented that some point source speakers run circles around Line arrays in "tonality", but hasn't taken time to explain his meaning of that, I've been wondering if I'm the only black sheep who doesn't know how to listen for that.

I've been searching the internet and my books for some kind of understanding that I could listen for.

The following combination of quotes is the best I've found so far, and I'm wondering if this is what people here are defining quality TONALITY as being:

"So what sonic clues should immediately become evident? What attributes do we listen for, and what weaknesses should we be mindful of? Let's start with the midrange, which is where most musical content resides, and where our hearing is by far the most sensitive. (Yes, I know we all love bass, but a speaker must reproduce the midrange smoothly if we are ultimately going to like it.) If a loudspeaker nails the midrange precisely, without harsh-sounding peaks, or dips that make the mids sound muffled and distant, it will tell your ears immediately whether you will accept it as natural and "musical." If not, you'll reject it as tonally false or "colored," and music won't sound realistic. We've all heard speech and we're familiar with the sound and nuances of male and female voices. And we've all grown up hearing pop music, which mostly features vocalists or groups of singers, as well as live choruses, the latter in schools or church, or even the national anthem at sporting events. Therefore, a good place to start is with a good CD of an individual singer or a group.

"A choral recording of men's and women's voices is an excellent test of midrange clarity and detail: Can you separate the four parts of a chorus--the male basses and tenors, and the female altos and sopranos? The sopranos are the highest-pitched female vocals; the altos are lower. You should be able to hear each section of a choir clearly. Speakers with depressed midrange response make all choirs sound somewhat muffled and blurred, wooly or "fuzzy" sounding. Almost any modern CD of Handel's Hallelujah chorus from "The Messiah" will do

"Some classic rock recordings like Dire Straits' Brothers in Arms are very well recorded, with natural-sounding vocals, deep bass, and guitar lines that aren't harsh. Likewise Eric Clapton's Unplugged DVD is an engineering stand-out."

What think ye?

Marlboro

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Subject: Re: Struggling with understanding TONALITY in speakers

Posted by [darkmoebius2](#) on Wed, 30 Sep 2009 00:46:50 GMT

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I don't think that quote gets it right - seems to me that the author is really discussing clarity, definition, and accuracy more than tonality. At least, not what I think of when talking about tone. For me tonality is the ability to capture the notes in a realistic sense. Not just the note, itself, but that note with respect to how that particular instrument(and artist) resonates and sounds. For some reason. I always think of cellos when tonality is discussed because of how rich, deep, and textured the tonality is as pitch and emphasis is varied.

Anyway, let's start with Miriam-Webster's Dictionary:

Tone (noun)

1 : vocal or musical sound of a specific quality <spoke in low tones> <masculine tones>; especially : musical sound with respect to timbre and manner of expression

2 a : a sound of definite pitch and vibration

Timbre (noun)

: the quality given to a sound by its overtones: as a : the resonance by which the ear recognizes and identifies a voiced speech sound b : the quality of tone distinctive of a particular singing voice or musical instrument

Overtone (noun)

1 a : one of the higher tones produced simultaneously with the fundamental and that with the fundamental comprise a complex musical tone :

Not saying anyone else should use this metric, it's just what my impression of what tonality means

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Subject: Re: Struggling with understanding TONALITY in speakers

Posted by [DMoore](#) on Fri, 20 Aug 2010 02:04:39 GMT

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I think "tonality" and other terms used to describe certain aspects of a speaker's response (or lack thereof) is generally indicative that there is very likely something wrong with the speaker. What does the term "tonality" actually have to do with a frequency spectrum in any meaningful sense?

Logically, a set of terms used to describe various aspects of performance is, by its very nature, naturally limiting (i.e., to some ill-defined component(s) of the frequency spectrum) and if easily recognised (or accepted by the listener) the speaker would have a set of sonic detriments easily extracted from the whole response spectrum which is never a good thing for speakers to provide. Shouldn't an excellent speaker provide a response that is hard to define - that is, if the definition is brader than just "real"? Therefore anything less than the term "realistic" or even "real" is a negative attribute, is it not?

I've also heard of other terms such as "presence" and "timing" (?) being used to describe speaker output. But seems to me that "realism" (the convincing of the listener (eyes closed) that they are hearing, the sounds as recorded. This is absolutely convincing when it happens, and no other words will adequately describe it. A lack of terms other than "real" is a good thing.

If speakers can be broken down into terms describing a lack of something such as "tonality",

"presence", and/or "timing" issues recognisable by a given listener, then it ain't "realistic"!

If it has a word to describe it (other than the term "real" or a derivative thereof) - it is not a good thing for a speaker to have...

DM

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Subject: Re: Struggling with understanding TONALITY in speakers

Posted by [Wayne Parham](#) on Fri, 20 Aug 2010 13:57:55 GMT

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It's sometimes hard for me to interpret what people mean when they use certain adjectives to describe sound quality. I used to completely reject such terms, preferring to talk about the loudspeaker's features in a more technical sense, the on-axis response curve, the polars, the Q of the crossover circuit and/or box, etc. All those things gave me an accurate picture of what the speaker is doing. But I've relaxed a lot, because most people don't have the equipment or even modeling skills to look at features like that. We're not all techies.

Making speakers "disappear"

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Subject: Re: Struggling with understanding TONALITY in speakers

Posted by [Adveser](#) on Fri, 20 Aug 2010 22:00:31 GMT

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I completely disagree about the midrange being an indicator of quality. I used to set my DSP's to be very recessed and found it much more pleasing to my ear. I have since "grown up" and gotten out of this practice simply because it colored certain sounds and masked others in ways that were not so apparent. Really deep listening showed that bringing up the mids to a more "redbook" value made keyboards less hidden in the mix and made bass guitars sound much better when they are mixed as a lean lead instrument (such as Steely Dan's "Peg")

Reading a book about amplifiers helped because it helped my weed out a lot of the problematic tone problems. My tone used to be glassy and somewhat metallic with a ton of bass. It sounded super realistic to a live band. Problem was that music is supposed to be a single sound with different parts of it becoming more prominent when appropriate, if you take my meaning. If you've ever heard a piece of equipment described as "reveals way too much information" that describes this perfectly.

All of this spawned because of the use of a Bass Boost that is common on Receivers/Amps pre-amp section. If you use this you are gonna have to do a lot of surgery to a signal to get rid of the dull and muddy sound it is going to add. Since I was basically forced into taking the pre-amp out, the highs have to be dialed back now actually.

Tone is completely subjective in any event, which is my point. Bass-heavy and glassy sounds good to me most of the time.

Music should basically ALL come from the mids with a slight bass presence and the cymbals and other really bright sounds reaching higher than the mids. But it should never sound dull. That said, everything should still maintain it's own aural space of it's own, separate from it adding to the bigger picture.

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Subject: Re: Struggling with understanding TONALITY in speakers

Posted by [addictedtosound](#) on Tue, 31 Aug 2010 11:21:16 GMT

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Wouldn't tonality be down to the individual? What may sound right for you may not necessarily sound right to someone else. I think it would be a nightmare trying to get this right to please everyone.

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Subject: Re: Struggling with understanding TONALITY in speakers

Posted by [Adveser](#) on Tue, 31 Aug 2010 23:57:59 GMT

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In my opinion, accuracy is not subjective, and if i'm not mistaken, high quality manufacturers are looking to get it as close as 100% accurate. This is in contrast to a company like Sony, who would rather have the sound be as pleasing as possible.

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Subject: Re: Struggling with understanding TONALITY in speakers

Posted by [DMoore](#) on Sat, 11 Sep 2010 01:36:58 GMT

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I think that attempting to describe aspects of any loudspeaker's performance aside from using strictly technical terms is somewhat pointless, since words themselves all convey different meanings to different people; combined with listeners all hearing "different" things or even hearing differently from each other means that we cannot agree on anything "audio", can we?

Unless everyone agrees (without a factual basis for doing so) that a certain aspect of sound should be called (or labelled) X, we are not talking about X. We could be talking about Y but merely refer to it as X. Audio terms (labels) are inherently a flawed form of communication.

It is pointless to take any of it seriously...

DM

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Subject: Re: Struggling with understanding TONALITY in speakers

Posted by [Wayne Parham](#) on Sat, 11 Sep 2010 03:07:00 GMT

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But what about prat and soundstage? I mean, those are pretty slick things to have, you know. Especially if you throw in some pinpoint imaging and creamy liquid midrange to boot.

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Subject: Re: Struggling with understanding TONALITY in speakers

Posted by [DMoore](#) on Mon, 13 Sep 2010 23:53:53 GMT

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Now, creamy liquidy midrange I can understand! Yummy!

DM

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