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Subject: Uniform directivity

Posted by [Wayne Parham](#) on Thu, 26 Jun 2008 18:50:52 GMT

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The B&C DE250 is one of the smoothest compression drivers I've ever heard or measured. For that matter, it's one of the smoothest tweeters of any type I've measured. It doesn't reach beyond

good as it gets, in my opinion. The crossover is nailed down too. It was designed taking into account the characteristics of each driver and the sound source locations to provide constructive summing, not just straight on the forward axis but also at all angles off-axis within the 90° x 40° coverage angle. The net effect is that the reverberent field is uniform. But if you're used to the sound of a typical direct radiator that falls off off-axis, then having a uniform reverberent field can sound fuller. There is definitely a difference. It's unnatural to me to hear speakers with non-uniform polar response, so I would expect people that are used to hearing a non-uniform sound field would notice the difference when the reverberent field was made to be uniformly charged. Uniform directivity has been one of my main design goals for a long time. My speakers have been built like this for well over a decade, so I'm used to it. When I walk around in my room, the sound is balanced no matter where I go. I can even leave the room, walk down the hall, and the sound volume falls off but the spacial balance doesn't change. It is nice to be able to move freely in the room and hear the same tonal balance wherever I go. I like not having to sit in a specific central spot to have the sound "click" for natural imaging. When I'm listening to my speakers, the sweet spot is very large. That's the benefit of constant directivity. It makes the spectral balance uniform throughout the room. I think speakers that generate a uniform reverberent field are much more natural sounding than those that don't.

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