
Subject: Baffle step compensation

Posted by [BillEpstein](#) on Thu, 29 Jan 2004 23:20:56 GMT

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You all know that when I approach a technical subject there's going to be trouble.....I followed the link 'cause this guy Murphy make sense with his PeeCreek and other designs. Even if they are what my late, lamented music teacher would call "pea-shooters"(he was speaking of 1/2" bores with 7" bells). Also 'cause on the 'Full Range Forum' and Madisound and others they treat baffle step compensation as something any nitwit does as a matter of course. So if my speakers are out in the room I need to do this BSCT (baffle step comp thang)? But what if my speaks are against a wall, 1/4 space or against a wall and another wall, 1/8 space? Or what if I place the tweeter so that it is equidistant to only 2 edges? Gotcha there, huh Dennis? I assume that horns have a very different effect than cones or domes. But I'm interested because I am about to build a sort of 2 Pi Alpha 10 but with this Audax tweeter:<http://www.partsexpress.com/pe/pshowdetl.cfm?&DID=7&Partnumber=276-152&scqty=4> So I'm interested in crossover ideas and whether this BSCT is necessary, if I should place the tweeter off axis from the woofer or even if this is a good idea at all. The Audax, BTW, if any good, is really cheap at \$11.25.

http://www.trueaudio.com/st_diff1.htm

Subject: Re: Baffle step compensation

Posted by [Wayne Parham](#) on Sun, 01 Feb 2004 14:23:08 GMT

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Baffle step is electronic compensation EQ, but I'm pretty sure you already knew that. And, as you've alluded, if the baffle is large enough, there is no need for baffle compensation. But there may be other reasons to tailor response or to compensate for something else like interaction between reactive components, driver response anomalies or collapsing DI from a horn or circular radiator at high frequencies. Baffle step is just one issue of many. The issue is pretty simple, really. The loudspeaker's baffle forms a half-space launch point at midrange frequencies up, but at low frequencies, baffle dimensions are much smaller than the wavelengths generated. So the baffle is insignificantly small at those frequencies and below. But then, the walls become significant at some frequency too. Usually, if the speakers are near the walls, then there is a frequency region between where the baffle stops acting as a half-space lunch point and where the walls start. But the point is that baffle-step compensation has to do with compensating for increased midrange due to the increase in DI from transition from free-space to half-space.
