Subject: Baffle step compensation
Posted by dB on Wed, 14 Mar 2007 10:20:54 GMT
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Hi Wayne,What is baffle step compensation?I know there are rectifications to do in the front side of a speaker (and xover), but I don't know if the problem exists more in the bass or any other frequency. I know there are adjustments in the 2K & 3K area also, because I saw some measuring in other webpages years ago. Is this discrepancy of a limited (dB) value and how can we take that in mind and how to address it in designing the speaker?Can you report to a post (of your one if there are some) on that, if you know any?Best RegardsPs. We are going to have our little party here in Portugal too.
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Subject: Re: Baffle step compensation
Posted by Wayne Parham on Wed, 14 Mar 2007 13:45:19 GMT
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When a loudspeaker is mounted on a baffle, it radiates into halfspace as a result of that baffle. It is not radiating omnidirectionally; It is constrained to half space by the baffle. But at lower frequencies, the baffle is too small to constrain the radiating angle. Sound waves curve around the baffle, and radiate omnidirectionally. As a result, the DI of the loudspeaker changes. Above the frequency where this occurs, DI is higher and therefore SPL is higher too, assuming power response is flat. Without baffle step compensation, power response is usually flat, so SPL is lower below the frequency where DI increases as a result of the baffle. Baffle step compensation increases bass output relative to midrange output, usually by attenuating mids and higher frequencies. The idea is to modify power response to compensate for the directivity increase caused by the baffle.

Subject: Re: Baffle step compensation. Thanks.
Posted by dB on Wed, 14 Mar 2007 18:21:26 GMT
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Very much appreciated Wayne, Thanks.I guess I can say, for small problems there are always small (easy) solutions. Alike to speakers in open air arenas vs speakers for small room spaces (there is more bass inside, I guess).