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.