Subject: Re: Thoughts on focused arrays and the phase problem
Posted by Dave Peterschmidt on Tue, 15 Feb 2005 20:26:51 GMT
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Jim,Thanks for responding, and again, many thanks for your excellent white paper. What you're saying makes sense to me, especially the vertical plane sound localization problems the human ear has. I do think a stepped baffle would be an interesting aspect of arrays to play around with, though. I find myself disagreeing with you a bit on the aspect of "focusing" the sound as tightly as you describe, at least with my "stepped" baffle idea as opposed to a true concave baffle. I can understand how a true concave baffle would orient the outer drivers inward toward the middle of the array and result in a tightly focused sweet spot. But I'm having trouble seeing how that effect would be created by my "stepped" baffle concept where the drivers are still oriented vertically on the baffle. Instead of a sweet-spot focusing effect, what I'm thinking you'd get would be a normal cylindrical wavefront as with a flat baffle, but with a slight reduction in the amount of smearing over entire nearfield listening area due to slightly improved phase coherency among all the drivers. Of course, in practice it may be that this effect isn't even noticable. Or I might be completely out in left field and not even close to reality. I'm just thinking out loud here...