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Subject: Axisymmetrical horns

Posted by [Wayne Parham](#) on Sat, 17 May 2008 07:11:16 GMT

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I really thought your speakers sounded nice. All the rest of this is academic. But in the pursuit of the best sound we can make, please don't be offended if I make an observation, a question about one of your design choices, really. The one thing that always puzzled me is why you chose a round tweeter horn. I remember talking to Earl about his choice to go axisymmetric on the Summas too, when he could have chosen to use an asymmetrical prolate spheroidal flare instead.

That shape is in the same family that he likes so much, with the throat radiused like the oblate spheroidal horn in the Summas. I think you both use 90° axisymmetrical horns and a crossover around 1kHz. They're about 12" diameter, as I recall, so the center-to-center spacing from woofer to tweeter must be about 15" or so. With those general dimensions, I would expect lobes at around 25° above and below the forward axis. In that case, it seems to me it would be better to use a horn with 50° vertical pattern. Why use a 90° round tweeter horn? Do you really want the tweeter pattern to be taller than the lobe angle?

Baffle spacing, phase angles and time alignment, revisited

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