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Subject: Re: The AudioKarma Econo-Waveguide Speaker

Posted by [AudioFred](#) on Fri, 09 Sep 2011 23:12:10 GMT

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Wayne Parham wrote on Tue, 12 April 2011 12:41

You might want to also measure the verticals to make sure your forward lobe is right.

Finally got around to doing this, and the result wasn't pretty. The upper lobe with the stock Econowave crossover is about 10 degrees above perpendicular. This places it exactly in the path to the ears of a standing listener. I never listen standing, but that's still a narrow angle.

I had the right parts in the bin to convert the tweeter crossover to a 3 Pi. In fact, I had a 6.8uF Clarity SA cap (good) and a 20uF Northcreek Zen cap (better). With the 3 Pi crossover the null has moved up to where you measured it in your video, well above the ears of even a standing listener.

I also found the 3Pi third-order crossover sounds better than the Econowave crossover, so it will stay in the speaker. The improvement isn't subtle; it's enough to elevate the sound quality of this speaker from being a "good sounding" speaker to one that's truly involving. The improvement isn't due to better parts because I used Jantzen Z Superior caps in the old crossover. I've noticed with several speakers that asymmetrical crossovers (e.g. 2nd order woofer, 3rd order tweeter) sound better to my ears.

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