
Subject: 3-Pi directivity

Posted by [dheflin44](#) on Sat, 12 Jan 2013 15:57:33 GMT

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Hi Wayne,

I was looking at the horizontal dispersion curves for the 3 Pi, and it looks like the 90deg directivity control doesn't start until 2kHz. Should the directivity ideally start at a lower frequency (like the 4-Pi)?

Thanks,
Darrell

Subject: Re: 3-Pi directivity

Posted by [Wayne Parham](#) on Sun, 13 Jan 2013 04:38:57 GMT

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I think what you're seeing is the wide-angle off-axis curves fall off more rapidly above 2kHz. It is apparent in the 50° response curve, and while they aren't shown, this is even more noticeable in the response curves taken further off-axis, outside the flare wall angle. But up to +/-45°, the off-axis curves fall off at pretty much the same rate, which is a signature of constant directivity.

Woofer beamwidth narrows to 90° around 1.2kHz, and the waveguide is starting to gain directivity control in this region too. I'd say it has full control by 1.5kHz or so, and horizontal directivity becomes constant 90° above that point.

Subject: Re: 3-Pi directivity

Posted by [dheflin44](#) on Sun, 13 Jan 2013 19:04:04 GMT

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Does the 50deg curve in the plots represent +/-25deg or +/-50deg?

Subject: Re: 3-Pi directivity

Posted by [Wayne Parham](#) on Sun, 13 Jan 2013 21:59:35 GMT

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That's +/-50°, marking the edges of a 100° arc.

Subject: Re: 3-Pi directivity

Posted by [dheflin44](#) on Sun, 13 Jan 2013 22:48:08 GMT

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OK, I see now... I must have been looking at the wrong plots before.
