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Subject: 2Pi Off-Axis Response

Posted by [rvsixer](#) on Mon, 02 Jan 2012 18:30:29 GMT

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Did a quick search here but did not find an answer. Any off-axis frequency response charts/numbers for the 2Pi/2Pi tower?

Also, how is the vertical response? I was considering a 2Pi center channel perched atop my big screen TV (aimed towards the listening area), but just realized a 2Pi turned sideways would fit perfectly underneath the table the TV is on.

And Happy New Year to all !!!!

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Subject: Re: 2Pi Off-Axis Response

Posted by [steve f](#) on Tue, 03 Jan 2012 03:03:23 GMT

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I have no idea what 30 deg. off axis response looks like. The one and two Pi models are pretty good sounding off axis though. To lay a speaker on its side is a mistake. If you can't fit a two Pi as a center channel, use a one Pi. The sonic signature is about the same from about 100 HZ on up.

Happy new year.

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Subject: Re: 2Pi Off-Axis Response

Posted by [rvsixer](#) on Tue, 03 Jan 2012 05:10:09 GMT

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steve f, thanks for the reply much appreciated.

There's several well respected designers that okay their TM designs as centers flipped on their sides (reason given is their normal orientation vertical response is wide). Unless 2pi design/measurements show poor suitability for this application I still need to leave the question open.

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Subject: Re: 2Pi Off-Axis Response

Posted by [Wayne Parham](#) on Tue, 03 Jan 2012 14:10:54 GMT

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These don't have horns and weren't designed for constant directivity so I didn't record off-axis measurements every 10° like I do with my larger uniform directivity designs. But I have, of course, measured off-axis casually and can tell you that the horizontals aren't too bad but the forward lobe in the vertical is only about 30° tall so I would not suggest you lay them on their sides.

The horizontal pattern doesn't narrow as much as some cone/dome speakers because the midwoofer hasn't really started to collapse before the tweeter is brought in. So they are blended in a region where both have pretty wide off-axis response. It only begins to narrow at higher frequency where the tweeter's directivity begins to beam. However, the vertical is clean only through about 30°. Above and below this there are nulls in the crossover region, especially the higher end. Down low, the nulls are further apart, of course, but they draw together above 2kHz. The blended overlap region tends to improve the horizontals but hurt the verticals. I find this to be a useful compromise because I don't think the vertical beamwidth needs to be very tall.

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Subject: Re: 2Pi Off-Axis Response  
Posted by [rvsixer](#) on Thu, 05 Jan 2012 14:31:46 GMT  
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Wayne, thanks for the off-axis info/explanation.

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