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Subject: Re: 4pi - like

Posted by [Wayne Parham](#) on Tue, 04 May 2010 00:36:51 GMT

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Crossover is not really at 1.6kHz, although I've called it that sometimes because that's the approximate corner frequency of the high-pass. Actual acoustic crossover is done where the horizontal directivity of the midwoofer and tweeter horn match, around 1.3kHz. There is naturally some overlap in that region where both woofer and tweeter are playing simultaneously, which is the cause of the vertical nulls, spaced about 25° above and below the forward axis. That's the position of the nulls with the drivers mounted as shown in the plans. If you move the sound

loudspeaker performance data if you're going to mount the horn outboard, I'd suggest moving the woofer up in the box so it's position is closer to the horn, maintaining the close vertical spacing between them. You can basically just flip the box over, and move the woofer up just a smidge, like an inch. This will allow you to position the tweeter directly over the woofer, instead of slightly offset to the left or the right to allow space for the port.

About the compression drivers, personally, I like the sound of the 2425 and 2426 but I think the DE250 sounds a little better. Both the JBL and the DE250 are very smooth sounding, but the JBL has a bit less output in the top octave. The DE250 is just as smooth to my ears but it has better reach. You get the shimmer without harshness, so it's a win/win and since it costs less, I guess that makes it a win/win/win. Still, the JBL driver is very nice sounding and I've enjoyed several speakers with 2426 compression drivers.