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Subject: Re: Request for Four Pi plan

Posted by [Wayne Parham](#) on Tue, 03 Mar 2026 22:58:32 GMT

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That's a really attractive look. We do that on the constant-directivity cornerhorns.

But I can't recommend that on our three Pi or four Pi model loudspeakers for a variety of reasons.

The main one is the possibility of shifting standing wave mode positions within the cabinet. If you move the woofer or the port for aesthetics or to maintain the close distance between woofer and tweeter, then the standing waves inside the cabinet line-up differently.

That can be a problem, because in a cabinet this large, standing waves occur in the lower midrange. That's a frequency that is tough to damp. So we tackle that problem in two ways - by placing the sound sources carefully and by positioning damping material in the middle of the cabinet as well as along the walls.

I designed these cabinets with transmission line modeling tools in addition to more traditional Helmholtz modeling tools and I did the final alignments and verification with acoustic measurements.

So if you modify the layout, be sure to measure response and pay attention to the lower midrange. You may want to build a test box so that it can be adjusted if it has some midrange ripple.

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