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Subject: Re: pictures 4 pi speakers

Posted by [Wayne Parham](#) on Thu, 05 Nov 2009 16:50:21 GMT

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Yeah, I was kind of wondering the same thing. It's a pretty common theme on this forum, much like the eWave thread, for people to make mods and sort of roll their own. I'm all about DIY, so I support it as much as I can. For example, look through the photos people have sent me of their projects. Most are stock builds, but many are modified:

<http://www.PiSpeakers.com/DIY>For one thing, I always thought the external horn look was cool, sort of retro, especially if it's a beautiful wood horn. An ABS horn in a box can look good too. So I've usually suggested keeping the distance between woofer and tweeter the same as designed, which then puts the lobes and nulls in the same position as the stock design (if the drivers and horns are the same). I've done so much work to optimize the speaker, this is certainly something to take advantage of and not throw away. Keep the physical relationships the same and the crossover stays optimized and the pattern is good.

I've also supported a handful of drivers and horn flares over the years, all with a common theme of constant directivity and smooth flare shape (lacking sharp edges). However, I can't test them all so when one comes up that I haven't worked with, I always wonder what the pattern looks like. It is most likely different, and one can sometimes make assumptions based on flare shape and length, you can't really know for sure without measurements. But DIY'ers have a habit of using just about everything, so over time you see a lot of variants.