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Subject: DIY High-efficiency 2-way  
Posted by [mjhara](#) on Wed, 19 Oct 2016 00:33:51 GMT  
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Hi everyone -

I'm not sure if this is the correct forum for this inquiry, but after trying on Reddit with little luck I thought I'd go straight to the 2-way high efficiency source! I'm in the midst of designing a pair of high-efficiency two way speakers to pair with my DIY 2A3 tube amp, and am quite a beginner when it comes to designing a crossover.

Here's an image of what I've designed thus far:

It is a two way system with a 12" woofer crossed at (probably) 800Hz to a 1" compression driver on a 60 degree 9-sided conical horn. Here are the drivers I'm planning on using:  
<http://aespeakers.com/shop/td/td12x/>  
<https://www.parts-express.com/radian-475pb-8-1-aluminum-horn-driver-8-ohm-2-3-bolt--294-702>

Now admittedly there are probably some functional issues at hand with the design, but I'm an architect by profession and I would say that I care as much about how the speakers look as I care about how they sound and function. However, that is not to say I just want to slap together a generic crossover and simply hope for the best - I'd like to do as good a job as I can given my relatively amateurish electronics skills.

That being said - what advice might you confer for designing a crossover for a configuration like this? I've read most of Wayne's literature and am starting to familiarize myself with the process but it still seems very foreign to me.

Any advice and/or comments would be appreciated, aside from the one I keep getting that is telling me to just build a different kit. I've built kits in the past and while they're fun, I want to try something original, difficulty be damned.

Thanks for your help -

#### File Attachments

1) [5zfH4We.jpg](#), downloaded 4673 times

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Subject: Re: DIY High-efficiency 2-way  
Posted by [Wayne Parham](#) on Wed, 19 Oct 2016 16:54:43 GMT  
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My design approach is outlined in various threads here, with most of the important topics listed in the Pi Speakers FAQ. Pay particular attention to the links in the sections called "Horn / Waveguide information," "Crossovers" and "Simulations and Measurements." The thread called

"Crossover optimization for DI-matched two-way speakers" shows specifically what process I use when designing a loudspeaker, complete with measurements.

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