
Subject: Request for Four Pi plan
Posted by [amigo](#) on Tue, 03 Mar 2026 12:43:13 GMT
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Hi, Wayne,

Thank you for your kind arrangement. I wish to build a four Pi speaker here in Korea based on your kit. Could you please send me the plan for four Pi and three Pi Sub?

Best regards, Chang-Hee

Subject: Re: Request for Four Pi plan
Posted by [Wayne Parham](#) on Tue, 03 Mar 2026 14:55:20 GMT
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Subject: Re: Request for Four Pi plan
Posted by [amigo](#) on Tue, 03 Mar 2026 16:44:35 GMT
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Thank you very much for your warm hospitality.

In your Pi speaker, the compression driver and horn, corresponding to the tweeter, are mounted flush with the woofer in the enclosure. A large slotted port is located next to this location. Recently, many two-way speakers have the compression driver and horn assembly mounted independently outside the enclosure. Schematically, if the woofer and horn are properly spaced apart and the enclosure volume for the woofer is appropriate, what are the acoustic or structural differences compared to the Pi speakers?

Best, Chang-Hee

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.

Subject: Re: Request for Four Pi plan
Posted by [amigo](#) on Wed, 04 Mar 2026 00:08:10 GMT
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Great thanks for your explanation. The speaker is really subtly sensitive!

Subject: Re: Request for Four Pi plan
Posted by [amigo](#) on Thu, 05 Mar 2026 10:46:19 GMT
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Hi, Wayne,

I could find the drivers, B&C DE250 and JBL2226HPL, here locally, and then I may just place the order only for the horn and the XO from your Parts and Options page. How can I ask Pi logo decal and Is the XO of fully assembled or as discrete components way?

Another question is the local distributor told me that JBL 2226H is not available but 2226HPL is OK and both are 'almost(?)' same drivers. But I am afraid whether they are exactly same models. Would you mind giving me some hints on this?

One more question; When planning to attach a grille to the front of the four Pi speaker enclosures, it seems like the speaker box will have a slightly more bordered area than the front plate for shape reasons, and there will also be a frame for attaching the grille cloth, so I wonder if these will interfere with sound radiation from the front of the speakers. What precautions should I take?

Regards, Chang-Hee

Subject: Re: Request for Four Pi plan

Posted by [Wayne Parham](#) on Thu, 05 Mar 2026 15:21:05 GMT

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We sell crossovers fully assembled and we also sell just the blank board. When buying fully assembled, you'll notice there are options for component selections. When buying the unpopulated raw printed circuit board, you obtain your own passive components and assemble it yourself.

The entry-level assembled crossover is very good. It includes 18gu pure-copper air-core coils, polypropylene film capacitors and non-inductive resistors. All brands are of high quality.

Upgrades available include larger 15gu coils, which is worthwhile, especially if you consider running a tube amp. Various brands of capacitors can be selected, and Mills resistors can be selected as well. Choosing any of those is largely buyer-specific, as they are all good brands making high quality components.

DE250-8. The JBL 2226HPL is a fine substitute for the 2226H, as the only difference is cosmetic. The 2226H is packaged and sold as a raw driver, whereas the 2226HPL is intended to be installed in a cabinet.

About grilles, they are often a "necessary evil" - often made more important because of pets, young children or other "hazards." Then again, sometimes they are an aesthetic decision. Some speakers with grilles look fantastic. But even the most acoustically transparent material isn't truly transparent. Most don't color the sound too bad, but they do have a slight effect.

My suggestion is to make grilles removable so you can have "the best of both worlds." The traditional way to do that was with mounting posts or Velcro. Another way to do it that I really like is with magnets. Small cylindrical neodymium magnets can be embedded in the baffle with mates embedded in the grille frame. Simply drill a hole and press in the magnet, adding a dab of glue. Do this step ahead of veneering and when the grilles are removed, the main cabinet has no visible grille mounts.

Subject: Re: Request for Four Pi plan

Posted by [amigo](#) on Fri, 06 Mar 2026 02:17:53 GMT

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Thank you for your pin-point explanation. :)
