Subject: Pro Series 4 Pi answers.
Posted by Wayne Parham on Sat, 16 Jun 2001 20:56:51 GMT
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Lots of questions, here are some answers.The port is 3.5" x 6" x 10" long, and it really has to be that for everything to fit. You can see in the photo below that there isn't a lot of room on the baffle. The port just fits, and it looks pretty good like that to me. The downside is that forces the tweeter to be horizontally offset a little bit, which in turn shifts the vertical coverage angle slightly towards a diagonal. But the null angle is wide, so this is of little consequence.Response of the speaker is nice and flat from 100Hz to 16kHz-18kHz, depending on the compression driver chosen. Rolloff on the bottom is nice and gradual because the alignment is slightly overdamped. Rolloff begins around 60Hz and is -10dB down at 30Hz. This makes a good conjugate for room gain in small to medium sized rooms, sounding very powerful and clean all the way down to the lowest bass frequencies.The crossover is asymmetrical, with some overlap between 1.2kHz and 1.6kHz. The tweeter receives very little energy below 1.6kHz because the slope is third-order. Summing is perfect on-axis, and off-axis at any angle in the horizontal plane. The angular coverage of the tweeter is 90 degrees in the horizontal plane, which matches the woofer's pattern in the crossover overlap region. The tweeter's vertical pattern above 2kHz is 40 degrees, and summing between woofer and tweeter is in-phase at any angle within this arc in the vertical plane. Anti-phase nulls form outside the vertical coverage angle, punctuating the pattern in the crossover range.Impedance is fairly flat between 8-10 ohms from 100Hz to 1kHz, rising slightly above 1kHz to 12 ohms. Below 100Hz, impedance forms the classic bass-reflex curve with two peaks, one at 15Hz and the other at 70Hz. Impedance at 15Hz is 35 ohms and at 70Hz is 25 ohms. Impedance between these peaks is 8 ohms.Power handling is 600 Wrms.Recommended placement is in corners facing inwards 45 degrees (like Pi cornerhorns) or back against a wall. I do not recommend pulling the speakers out from the wall or putting them on stands. Small stands, just a few inches, perhaps angling them back are a good idea. This allows them to cover the listening area very well without lifting the woofer up high enough to create a floor bounce notch.

Subject: Re: Pro Series 4 Pi answers.
Posted by James W. Johnson on Sun, 17 Jun 2001 17:32:58 GMT
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Are their any braces or stuffing in the cabinets?What material do you recommend the boxes be built from?

Subject: Re: Pro Series 4 Pi answers.
Posted by James W. Johnson on Sun, 17 Jun 2001 17:39:45 GMT
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I must admit that the main reason I want to build these speakers is to get really high SPLs with little distortion, I like realistic music playback. My current speakers are 92dB sensitive and handle about 200watts...this gets me around 92dB RMS with 100dB peaks ....and 100dB peaks on these is really pushing their limits, they start to distort, furthermore I have blown 4 tweeters in these speakers over the last year. They are the Kit281 Speakers from Adire Audio.

Subject: Re: Pro Series 4 Pi answers.
Posted by James W. Johnson on Sun, 17 Jun 2001 17:42:11 GMT
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Here is the Pic.....

Subject: Re: Pro Series 4 Pi answers.
Posted by James W. Johnson on Sun, 17 Jun 2001 18:26:22 GMT
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Sorry to load up your forum with questions, I probably should just give you a call.... but what would be a step up from the 4Pis if I wanted some more SPLs and less distortion?Thanks Alot!

Subject: Those woofers look like Toby's !

Posted by RBP on Sun, 17 Jun 2001 20:57:13 GMT
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Are they?I will ck the link again!

Subject: Re: Those woofers look like Toby's !
Posted by James W. Johnson on Sun, 17 Jun 2001 22:04:09 GMT
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They are Adire Audio's AV8, made by Eminence.

Subject: Re: Pro Series 4 Pi answers.
Posted by Wayne Parham on Mon, 18 Jun 2001 04:36:52 GMT
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Seven Pi cornerhorns are the only speakers I know of that I would consider to be a "step up" from four Pi's.Let me make a suggestion: Why not build your four Pi's and listen to them for a while before considering what you may or may not want as an "upgrade." The four Pi speaker is a very capable speaker, and at risk of sounding immodest I have to admit I know of no better loudspeaker of its size, anywhere.

Subject: Thanks! (nt)
Posted by RBP on Mon, 18 Jun 2001 04:38:11 GMT
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Subject: Braces and stuffing - Sounds like teenage girl topics
Posted by Wayne Parham on Mon, 18 Jun 2001 04:54:35 GMT
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Had to make a silly comment. Braces and stuffing. It's the end of the weekend; Please forgive. :-)Anyway, put braces tying front to back panels together and side to side. The braces should be put between the woofer and tweeter. R13 insulation should be put on the back, bottom and side. Also hang a sheet on the braces, spanning the cross-section of the cabinet. This will attenuate midrange inside the cabinet but let bass pass right though. As for wood to build your cabinets, use MDF or Baltic Birch. The braces can be made of any hardwood, 1"x2" works great.