Subject: Let's talk about 4Pi Speaker Stands =p
Posted by Maxjr on Fri, 16 Mar 2012 13:59:07 GMT
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Hi Wayne and Audioroundtable,

Now that I'm almost finished construction on my 4Pi pair, I looking to build a pair of stands to raise them off of the floor. Since my average ear height will be 30" to 44" off the ground (sometimes sitting on the floor or couch), what is a recommended stand height for 4Pis? I did a search, and came across this thread:
http://audioroundtable.com/forum/index.php?t=msg&goto=62083&&srch=4pi+stands#msg_62083

Is there a specific reason for the 7 degree upward tilt? Is it due to the 40 degree vertical dispersion of the H290? If possible, without losing anything, I'd like to keep the speakers on a 0 degree tilt due to the fact that they will each be sitting right next to a F20 sub (a 15" front loaded horn in a cabinet that is 5' high). I dont mind building the stands higher than 12". With the average ear height of 30"-44" and a listening distance of 8' to 12', what would be the recommended stand height for the 4Pis if there was no tilt? Thanks for all of your help!

Cheers,
Joel

Subject: Re: Let's talk about 4Pi Speaker Stands =p
Posted by Wayne Parham on Fri, 16 Mar 2012 14:53:58 GMT
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I like using stands that are 12" to 15" tall, and have 3°-7° tilt. The reason is this puts the acoustic center at ear height, and maintains a nice forward lobe that is centered. A very important secondary reason is the angle helps to cradle the speaker, using a back stop on the platform that the speaker rests upon. Just put a rubber mat or feet under the speakers and they'll hang on tight.

I actually prefer the lower end of the scale, 3°-5° these days. A few years back, I preferred the

(+20°/-25°). So a little more back tilt helped center it. But we changed one component to move that lobe up a smidge, and now it's perfectly centered too.

All of this is probably minutia, just being a perfectionist. The forward lone is nice and tall, easy to work with. It's not so tall that you get a bunch of ceiling slap, but it's tall enough to cover the listeners at practically any natural height even from just a few feet back. They can be standing, sitting in a chair or sitting on the floor and they'll not be in a null, or outside in a secondary lobe.

Movement of a couple degrees up or down is really a non-issue. But hey, what's wrong with perfection?

Subject: Re: Let's talk about 4Pi Speaker Stands =p
Posted by Maxjr on Fri, 16 Mar 2012 17:50:19 GMT
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Wayne, you're just like me. When I'm cutting wood on the table saw, I'm trying to get each cut to the nearest 32nd of an inch. Thanks for the great response! I'm convinced. 15" is actually perfect as that is the top of the mouth of the F20 horn. At that height; should I use 3 or 5 degrees? I'm leaning toward 5 just because it seems like a rounder number. But, maybe I'll do 4 degrees?
