Subject: Theater 4Pi question....very interesting!
Posted by Ed White on Sun, 30 Sep 2007 04:52:28 GMT
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Wayne,I posted earlier about my problem of ordering the Theater 7Pi kit (The older TWO WAY version) and moving to a place where there are no suitable corners to use them. You suggested that I Put the parts in a Theater 4pi configuration. That sounds like an excellent idea. That would work in my situation.Question, is the TWO WAY crossover I received with my Theater 7Pi kit the same as you get with the Theater 4Pi kit, and can I just go ahead and use the Theater 7Pi kit in a Theater 4Pi box?That would be fantastic if I could do that. Also, I read where the use of a 811b Altec horn with the 2002 driver I had was an excellent combination. There was a post of a guy wanting to make a Model 19 clone with Theater 4pi parts and an 811b horn. THAT would do the trick for me, and make my happy meter spin if I could do that.Can you send me the Theater 4Pi plans? I feel the magic beginning to happen again. I HATE moving and having to change all of your plans.

Subject: You've got mail!
Posted by Wayne Parham on Sun, 30 Sep 2007 15:37:05 GMT
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The tweeter crossover is the same between all the models. The thing that changes is the woofer and midrange crossovers. So they're compatible with one another, making an easy upgrade path. You can easily add a midhorn to what you've got too.

Subject: Re: You've got mail!
Posted by Ed White on Sun, 30 Sep 2007 19:59:01 GMT
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Thanks!This sounds like a great idea!Thanks! What frequencies does the midhorn cover? Seems like you could build a bass bin and a separate Mid/tweeter box to set on top, ala Altec 19 style, and it could have room and access in it to drivers and crossovers for tweaking, etc.

Subject: Re: You've got mail!
Posted by Wayne Parham on Sun, 30 Sep 2007 22:32:12 GMT
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The midhorn is designed to cover 200Hz to 2.0kHz. In practice, it works lower than this because

the driver is large and having no rear chamber, the lower rolloff is gradual. With boundary loading, there's pretty good output at 100Hz. For that reason, I allow a lot of overlap between the woofer and midrange. Wavelengths are long, so summing is good. They act as a single sound source.The midhorn's range allows the use of the standard 1.6kHz tweeter crossover. With the acoustic rolloff of the midhorn, you get perfectly matched curves when the midhorn and tweeter mouths are flush. Some drivers need a small coil, some don't. Each driver is independently optimized for perfect summing taking position and electrical characteristics into consideration. It really sums nicely with seamless transition between midhorn and tweeter.The crossover was

not sum properly, especially if length or dispersion characteristics are much different. For example, the Altec 811 will probably need to be positioned differently to get summing right. You'll probably need to move it forward a few inches.

Subject: Re: You've got mail!
Posted by Ed White on Mon, 01 Oct 2007 01:34:05 GMT
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Well, if I go with the midhorn, the H290 sounds like a good plan. I guess I don't understand why a Theater 7 needs a midhorn, when the Theater 4 gets raves for good sound while just being a two way. I'm sure it's well thought out, but I am interested in what the benefits are and general impressions of the sound difference between the two.I suppose there's a certain "Look" of that big 811b that just has a certain appeal...it looks cool, I suppose, but the sound is the thing.

Subject: Re: You've got mail!
Posted by Wayne Parham on Mon, 01 Oct 2007 14:06:12 GMT
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I experimented with making it a two-way for a while. The problem is the distance between the woofer and the walls that form the corner is perfect at low frequencies, but creates notches in response at higher frequencies. It was still worth experimenting for me, because those kinds of notches aren't too distracting. To tell the truth, it works pretty well with some woofers, those with rising response like the Delta 15 being the best ones to use. You can surely make one like that and use the Altec 811 on top, omitting the midhorn. It's a neat system. But I think the three-way version is better, and that's why I went back to it.
