Subject: midhorn kit? and some design choices
Posted by ToFo on Sat, 01 May 2004 16:57:38 GMT
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Hi Wayne and group,Just wondering if the flat pack kits will be offered in a high grade birch ply? Also the response graphs for the mid horn, were those with a Delta 10? Have you looked at response of the JBL 2012H on the horn? It is my best guess from looking at the manufacturer published graphs that the 2012H may have even flatter response on the horn (aside from the other obvious reasons for such a driver choice)I am thinking of the JBL equipped midhorn and Peavey CH-3 with BMS 4540 (It looks like a good match to CH-3 and it even has screw mount, HA!) For the mid/high cabinet. There are so many sexy HF horn choices, but I have used a lot of horns at this point and I can't really beat the CH-3.Since I will have no need to push the woofer past the hundreds what do you think of the 2242H? I want shocking impact, solid bottom end and clarity that will compel people to ask "what the heck is that?". I am not set on any one thing. I want flux stabilized, Low fs, Large radiating area, high sensitivity and "I can't believe that bass!" sound quality. That pretty much leaves the JBL and the Magnum. Comments?Thanks,Thomas

Subject: Re: midhorn kit? and some design choices
Posted by Adrian Mack on Sat, 01 May 2004 22:51:48 GMT
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Hi ThomasWayne's published FR plots of the new midhorn is with an Alpha 10 driver. Apparantly the 2012 will work just as well with it, but you cant use it in the 8Pi, ported rear chamber output doesn't go deep enough. The published direct-radiator response curves isn't an indication of how flat it will be in a horn though... but Wayne has said a 2012 will work too, but I don't think that has flux stabalizing rings either(?). I'd suggest the Alpha 10 will sound good though, I know my Alpha 6 horn sounds great and its obviously a non-faraday ring driver. The low-end is really up to you, there's so many available that will work! I havn't used it, but the 2235's characteristics has always had my eye, goes real deep and in a smaller box than the 18's.  Adrian

Subject: Re: midhorn kit? and some design choices
Posted by Wayne Parham on Sun, 02 May 2004 08:24:14 GMT
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Domestic birch is $145.00 each and Baltic is $160.00.  I need to get those listed on the shopping cart 'cause we're already taken orders, but so far, we do it manually.The JBL 2012 is an excellent driver.  You're right that the response graphs shown were done with an Eminence Delta 10.  But the JBL 2012 can be used too, provides nice smooth response and good summing, and has a shorting ring which reduces distortion.The Peavey CH-3 is a good horn, and you can expect it to

perform well.  I also like your choices for woofers.  The systems you have described are very

shown in the post called "Implementation."  So I'm with you 100% on your choice to use a JBL or Eminence Magnum woofer.

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Subject: Re: midhorn kit? and some design choices
Posted by Wayne Parham on Sun, 02 May 2004 08:32:38 GMT
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The plots were actually done with a Delta 10.  The Alpha 10 idea was an afterthought that turned

direct radiator is useable below horn cutoff, whereas from the Delta 10 or JBL 2012, there is not much output down low.

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Subject: Re: midhorn kit? and some design choices
Posted by Adrian Mack on Sun, 02 May 2004 08:47:47 GMT
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Oh, thats the first I've heard of that! Did you just have the Delta 10 on hand or something but not an Alpha?

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Subject: Re: midhorn kit? and some design choices
Posted by Wayne Parham on Sun, 02 May 2004 09:16:44 GMT
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Actually the Delta 10's had to be brought in because until this project, we didn't use them in anything and had no need to maintain stock.  We always have a bunch of Alpha 10 drivers in

cornerhorns, but it has general purpose applications as well.  Other attractive uses are with Klipschorns and Klipschorn clones, and for vocal range in prosound systems too.I bolted one of

Then I connected up the crossover and hacked up a speaker that was equivalent to what was to

tower speaker and the tweeter was a PSD2002.  I found that the speaker sounded excellent, so

in design style and quality/price point.

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Subject: Re: midhorn kit? and some design choices
Posted by Adrian Mack on Sun, 02 May 2004 09:25:44 GMT
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Now that I think about it, I think I do remember you saying the Delta 10 is designed for it. I guess I just forgot as I got into all the talk about the 8Pi. What's the max excursion-limited output of the 8Pi?

Posted by Wayne Parham on Sun, 02 May 2004 10:07:36 GMT
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100Hz is just over 110dB. In this frequency range, the speaker is excursion limited, having a small dip in maximum safe output between 50Hz and 70Hz - Not that response has the dip but power handling has a small dip of about 2dB. It rises again below 50Hz down to 35Hz where it falls rapidly.From 200Hz up, maximum SPL is about 10dB louder. Output over most of the audio range can safely reach 120dB, which is pretty loud for a 100 watt loudspeaker system. From 200Hz up, the horns increase maximum safe output and decrease distortion, but bottom octave excursion and IMD are the weakest points of a design like this.I think most people that are

be very nice with a little 30 watt Class A transistor amp too, or with a simple chip amp or a receiver up to 100 watts per channel. Those are some of the systems I would recommend for use