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Subject: Mid-horn "Chamber"

Posted by [Spinjack](#) on Thu, 25 Aug 2005 17:13:49 GMT

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I have a question about the mid-horn enclosure for the 7-pi Studio. I am going to try to set up the construction to allow for some horizontal angle adjustments, but that feature may require that the mid-horn enclosure be modified for clearance when placing into the corner. What are the restrictions associated with modifying the mid-horn enclosure? Size, depth, height, width. Obviously the driver itself and the horn "flare" dimensions are a limiting factor, but are there other restrictions to consider?

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Subject: Re: Mid-horn "Chamber"

Posted by [Wayne Parham](#) on Thu, 25 Aug 2005 17:26:19 GMT

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That one's going to be easy for you. The midhorn rear chamber was designed to be open, and so must be larger than 0.5ft<sup>3</sup>.

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Subject: Re: Mid-horn "Chamber"

Posted by [Russellc](#) on Thu, 25 Aug 2005 17:37:04 GMT

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As I recall when I first asked a similar question about the mid horn was that it just had to be at least 1/2 cubic foot. ( I dont think it is possible for you to make it any smaller) apparently it isnt that critical about size. More to prevent a back wave off the rear of the driver then reflecting out of the corner and messing with the sound off the front of the horn. Is that about right wayne? Hope this helps. Russellc

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Subject: Re: Mid-horn "Chamber"

Posted by [Spinjack](#) on Thu, 25 Aug 2005 18:36:45 GMT

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Ok, so I can basically use any configuration as long as I don't restrict the volume to less than 0.5 cu.ft.? Open, sealed, short, narrow, wide, deep, anything?

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Subject: Re: Mid-horn "Chamber"  
Posted by [Spinjack](#) on Thu, 25 Aug 2005 18:47:30 GMT  
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This actually brings up another question. Can the high freq horn be in the same enclosure without negative effects? I was thinking about going upwards and using the space that would be taken up by the high freq horn enclosure.

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Subject: Re: Mid-horn "Chamber"  
Posted by [Wayne Parham](#) on Thu, 25 Aug 2005 18:48:28 GMT  
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Yes, with one qualification. The rear chamber should be acoustically inert. If the rear chamber is a sealed chamber over 0.5ft<sup>3</sup>, then it won't peak in the passband. But if it were shaped in such a way that it became a tuned pipe or something, that might alter response. So consider this and keep the shape and dimensions within reason. I don't think you'll have any trouble for what you're doing.

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Subject: Re: Mid-horn "Chamber"  
Posted by [Wayne Parham](#) on Thu, 25 Aug 2005 18:49:42 GMT  
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Yes, as long as the volume and Helmholtz frequency are right.

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Subject: Re: Mid-horn "Chamber"  
Posted by [Spinjack](#) on Thu, 25 Aug 2005 20:11:03 GMT  
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Helmholtz frequency?

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Subject: Re: Mid-horn "Chamber"  
Posted by [Spinjack](#) on Thu, 25 Aug 2005 20:17:31 GMT  
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What I was thinking is that I could use the same enclosure for the high and mid horns, essentially making a taller enclosure for the mid-horn so that I can pull the sides in a bit for left/right clearance. I don't want to make it very long because then I lose range of motion due to a long tail sticking out the back. Of course, without looking at the detailed plans, there may be very little I can do because of the real estate taken up by a 10" driver sitting behind a horn. It may already be as small as it can be.

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Subject: Re: Mid-horn "Chamber"  
Posted by [Wayne Parham](#) on Thu, 25 Aug 2005 20:32:30 GMT  
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That's the frequency the box is tuned to, set by its size and port dimensions. If you're talking about displacing some area in the bass bin to contain everything in the same cabinet, you'll want to make sure the tuning remains the same.

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Subject: Re: Mid-horn "Chamber"  
Posted by [Spinjack](#) on Thu, 25 Aug 2005 20:40:00 GMT  
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The main cabinet will remain as-is, so that shouldn't be a problem.

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Subject: Re: Mid-horn "Chamber"  
Posted by [Wayne Parham](#) on Thu, 25 Aug 2005 20:55:32 GMT  
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Tell me your E-Mail address if you want the plans and I'll send them right out.

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Subject: Re: Mid-horn "Chamber"  
Posted by [Russellc](#) on Thu, 25 Aug 2005 22:52:33 GMT  
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Wayne, I think he means to build the midhorns box such that it would also contain the high frequency horn, rather than having it set on top of the midhorns box. That way the 7 PI cab would

be unchanged, just the mid horns box.Russellc

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Subject: Re: Mid-horn "Chamber"  
Posted by [Wayne Parham](#) on Fri, 26 Aug 2005 03:22:08 GMT  
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Oh, yes, I see that now. That would work just fine, and probably look good too.

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Subject: Re: Mid-horn "Chamber"  
Posted by [Spinjack](#) on Mon, 29 Aug 2005 16:28:22 GMT  
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You already sent them to me. Placed the order on Thursday or Friday.

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