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Subject: Port length on multiple ports  
Posted by [AP](#) on Mon, 24 Sep 2001 11:28:52 GMT  
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What happens to port length when 2 or more ports are used in the same box?? Scott

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Subject: Re: Port length on multiple ports  
Posted by [Wayne Parham](#) on Mon, 24 Sep 2001 15:08:25 GMT  
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Grab a copy of BoxPlot because it will calculate multiple ports.

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Subject: Re: Port length on multiple ports  
Posted by [AP](#) on Thu, 27 Sep 2001 14:52:18 GMT  
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Thinking about a home project related to this. Vas-151LQts-.39Coffee table size box (yes, it would be my coffee table). Internal dimensions 13"x22.5"x34.5" (assuming 3/4" wood). I figure I'd end up around 155L with internal bracing. 4"x12" port. Tuned to 21 Hz. Driver and port on one end. As near as I can tell, it'll stay flat and 3db down would be around 20Hz. What do you think? Thanks man! Scott

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Subject: Re: BTW, it's a 12.....  
Posted by [AP](#) on Thu, 27 Sep 2001 14:53:19 GMT  
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Subject: Box tuning  
Posted by [Wayne Parham](#) on Thu, 27 Sep 2001 16:05:09 GMT

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To calculate box tuning, you'll need to know a little more. What is the resonant frequency in free air?

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Subject: Re: Box tuning-Fs=21Hz  
Posted by [AP](#) on Fri, 28 Sep 2001 10:58:52 GMT  
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Subject: PiAlign'ed at 2 cu ft tuned to 20Hz  
Posted by [Wayne Parham](#) on Fri, 28 Sep 2001 11:27:26 GMT  
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You have a motor with these specs:  $V_{as}=5.33$  cu ft  $F_{ts}=21$ Hz  $Q_{ts}=0.39$  So PiAlign equivalents are:  $V_{ad}=5.33$   $F_{rd}=21$ Hz  $Q_d=2.56$  PiAlign recommends a 2 cubic foot cabinet tuned to 20Hz using either a cylindrical 5" long, 1 5/8" diameter port or a rectangular 1" x 2" x 5" long port. You can grab a copy of BoxPlot on the Pi Speakers website to show the response of this cabinet using Thiele/Small analysis. The box you've proposed is about 5 cubic feet, and I suspect that will work just fine. The driver will probably work very well in cabinets from 1.5 cubic feet to 6 cubic feet or so, tuned to 20Hz. You can use BoxPlot to find an alignment that will give acceptable response in this size cabinet.

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Subject: Re: PiAlign'ed at 2 cu ft tuned to 20Hz  
Posted by [AP](#) on Fri, 28 Sep 2001 12:39:10 GMT  
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Thanks for the help Wayne.Scott

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Subject: Re: PiAlign'ed at 2 cu ft tuned to 20Hz

Posted by [Wayne Parham](#) on Fri, 28 Sep 2001 15:53:39 GMT

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No problem. Let us know how it works out.

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