Subject: help with pi alignment
Posted by Jim Dudley on Wed, 09 Aug 2006 15:20:29 GMT
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I'm looking for help with a Pi alignment for following car subwoofer. (I use this alignment with an Altec 515-8g at home and love it but someone else made the calc for me.)Driver: Image Dynamics IDQ10 D2 V.2Dual voice coil. Will series wire for 3.7 ohms ReFs 23 hzQes .345Qms 4.77Qts .322Vas 2.26 cu ftSd 350 cm2SPL 89.4I would like to use a 2.5" dia portThe manufacturer has some recommendations but have no idea what alignments.Thanks!!Jim D.

Subject: Image Dynamics IDQ10
Posted by Wayne Parham on Wed, 09 Aug 2006 21:33:41 GMT
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The Image Dynamics IDQ10 woofer looks good in cabinets from 0.5ft3 to 1.5ft3 tuned to 26Hz. PiAlign suggests 0.75ft3 which provides a nice flat response curve that is slightly overdamped. It has f3 of 40Hz and f10 of 25Hz, so it will sound very nice in home or in a car. Being slightly overdamped, room/cabin gain will effectively conjugate its amplitude response. For subwoofer use, you can go a little larger, to 1.0ft3 or 1.25ft3. That will give f3 closer to 30Hz, but f10 is still around 25Hz. The larger 1.0ft3 cabinet makes a great alignment for use outdoors or in very large rooms, but may sound a little bit boomy in medium to small rooms or in your car.

Subject: Thanks Wayne!! (nt)
Posted by Jim Dudley on Thu, 10 Aug 2006 09:58:24 GMT
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Subject: Port tuning frequency
Posted by Jim Dudley on Thu, 10 Aug 2006 12:31:50 GMT
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Wayne,One more question My enclosure looks like it will end up at 0.86 cu ft for the space I have, very close to the pi alignment volume. What frequency should I use for port tuning? I could reduce to .75 cu ft if it matters. Jim D.

Subject: Re: Port tuning frequency
Posted by Wayne Parham on Thu, 10 Aug 2006 13:51:43 GMT
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Tune the cabinet to 26Hz. The IDQ10 works well in cabinets from 0.5ft3 to 1.5ft3 tuned to 26Hz. If you made the cabinet larger than that, you might want to tune lower for an EBS alignment. But in the 0.5-1.5ft3 range, 26Hz is the best Helmholtz frequency for that woofer.