Subject: 2 pi and PiAlign program
Posted by Paul on Sun, 14 May 2006 13:09:17 GMT
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the Qd value for the alpha 10 in the pialign data base that comes with the software is 2 but according tot he emminence website qts is .59 for the alpha 10 and the Qd should be 1/.59 = 1.69.  When I plug in 1.69 into pialign I get a slightly bigger enclosure that the one in the 2pi design.Why use a different QTS than what is provided in the emminence spec sheet?ThanksPaul

Subject: Re: 2 pi and PiAlign program
Posted by Wayne Parham on Sun, 14 May 2006 17:50:15 GMT
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Eminence is constantly changing specs and that figure was for an earlier model with slightly different values.  I've noticed most times when they do that the parameters are compatible, in that the new driver specs work well in a cabinet designed for an earlier model, not excessively underdamped or anything like that.

Subject: Re: 2 pi and PiAlign program
Posted by Paul on Mon, 15 May 2006 03:15:23 GMT
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thanks, sounds reasonable.I'm trying to use the pialign program to get the ideal dimensions for a vented subwoofer based on the 10" dayton titanic woofer.  qts is 0.4 (qd=2.5)vas is 1.345fs is 28from pi allign I get:enclosure volume of .55 port length of 1.4port diameter of 1.7the enclosure size seems way to small  (other sources suggest 1.5 cf)am I doing something wrong?Thanks

Subject: Re: 2 pi and PiAlign program
Posted by Wayne Parham on Mon, 15 May 2006 04:23:43 GMT
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For a woofer like the one you've described (with Qts~0.38), PiAlign generates a recommendation that results in a very good response curve.  Woofers with very high Qts values tend towards underdamped response and those with very low Q make slightly overdamped systems.  You're is right in the middle so the response curve will be nice and flat.  But PiAlign favors small cabinets and you can increase cabinet size and get deeper extension.Woofers work well in a range of cabinet volumes.  For example, I'd expect the woofer you've described to work very well in

cabinets from 0.5ft3 to 2.0ft3 tuned to 25-30Hz.  If you're going for a full-range speaker with a wide-bandwidth woofer, something like a small two-way speaker, then I'd go with the PiAlign suggestion.  But if you are going for a sub, I'd look at alignments that use larger cabinets to get deeper response.

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Subject: Re: 2 pi and PiAlign program
Posted by Paul on Mon, 15 May 2006 12:02:32 GMT
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Thanks a lot.That puts things into perspective.  It is for a subwoofer, so rather than use the pialign result I'll probably go with a 1.5 cf vented box.Paul

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