## Subject: What is Pialign?
Posted by Anonymous on Wed, 17 Jul 2002 14:30:45 GMT
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Is this software similar to other products (ie, WinISD)yielding similar results?

## Subject: It's an alignment, and a program that recommends cabinets using that alignment
Posted by Wayne Parham on Wed, 17 Jul 2002 17:09:08 GMT
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PiAlign is a program that recommends speaker cabinets based on a specific technique.  For more information, see the "Pi Alignment Theory" document, which is included in the program distribution file.

## Subject: more questions
Posted by Anonymous on Wed, 17 Jul 2002 18:40:05 GMT
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Need tutorial - (read the info, still lost) heheIf I take a 12 inch woofer with these specs.qts .32vas 124 litersfs 37hz94dbWhere exactly do I enter this numbers in pialign?Low mid or high mid sections?  What do I enter for low cut/high cut?What if I want sealed not ported ?After entering the data, the program will output the best boxdimensions? Will it tell me f3?Confused

## Subject: more answers
Posted by Wayne Parham on Wed, 17 Jul 2002 19:40:21 GMT
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Enter Vas into PiAlign's "Vad" field, Fts into the "Frd" field and 1/Qts into the "Qd" field.  Also input the number of woofers you plan to use, usually 1.You'll need to enter Imperial measurements for Vas, so enter 4.34. Frd = Fts, so enter 37.  Qts = 0.32 so enter 3.125 for Qd.  If you're using a single woofer, enter 1 for "Qty."No other items are really important for PiAlign's cabinet computation, except volume offset fields which are at the bottom right corner of your screen. Those can be calculated separately pretty easily, and all the rest of the items are informational only, so you can maintain a database of your designs.PiAlign recommends a 1.4 cubic foot box,

tuned to 45Hz for this woofer.  To see the response curve of this alignment, use BoxPlot or something like that to model the cabinet and predict response.

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### Subject: I have a question, too!
Posted by BillEpstein on Wed, 17 Jul 2002 23:53:56 GMT
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I have to admit, as often as I see this, what the heck does "tuned to xxHz" mean?

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### Subject: It's all related to beer
Posted by Wayne Parham on Thu, 18 Jul 2002 00:46:06 GMT
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Every bass-reflex system has a speaker mounted in a Helmholtz resonator.  Helmholtz resonance is what causes a beer bottle to make a tone when you blow into it.  Just like the beer bottle frequency is set by the size of the bottle and the neck,  speaker tuning is set by the size of the box and the port.So, you see, it is all related to beer.

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### Subject: The shape of the bottle? Does a liter bottle of beer......
Posted by BillEpstein on Thu, 18 Jul 2002 01:07:12 GMT
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....sound different than a liter bottle of wine?I'm willing to make the sacrifice of the wine but I haven't got any beer to test this. How different would a Pro 4 sound, what frequency would it be tuned to if it was, say, 53 X 18.5 X 7.125?

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### Subject: Bigger bottle, shorter neck
Posted by Wayne Parham on Thu, 18 Jul 2002 03:07:40 GMT
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A cabinet sized 53" X 18.5" X 7.125" is about four cubic feet, outside dimensions, so the cabinet would be tuned lower if it used the same port.  But you'd lose bass response because the cabinet would be be tuned too low to do much good.Assuming a few hundred cubic inches are displaced by components inside and by wood thickness, your cabinet is 3.5 cubic feet.  So to tune this for 40Hz, you'll need to shorten the port to 5" long, assuming the same rectangular W x H dimensions

speaker, and it will sound pretty good.  A 2226 works very well in cabinets from 2.0ft3 to 5.0ft3 tuned to 40Hz.