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Subject: Re: Ordered Stage 4 a few days ago, question on port...

Posted by [Wayne Parham](#) on Wed, 25 Oct 2006 17:58:11 GMT

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You'll want to tune the box to 38Hz. To do that with a 4" port, I'd make it 6" long. The Helmholtz formula used to calculate this is for a straight (non-flared) port, but the alignment has a lot of "wobble room" so I wouldn't worry about the flare. In fact, you could safely use a 4" port anywhere from 5" to 7" and the response would be almost the same. Here's the Helmholtz formula: Here's a little BASIC program that will calculate the formulas for you:

```
10 INPUT "Enclosure Volume";VE
20 INPUT "Diameter of Port";PD
30 INPUT "Length of Port";PL
40 VB=VE*1728:PI=3.1415926535:AP=PI*((PD/2)^2):LC=PL+((8*PD)/(3*PI))
50 FR=(13548/(2*PI))*(AP/(VB*LC))^0.5
60 PRINT "Fr =";FR;"Hz."
70 GOTO 10
```

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