Subject: port size
Posted by David Morehouse on Fri, 25 Apr 2008 13:09:29 GMT
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my delta 12lf's are in 3.5 cu.ft. boxes,with 2-4in. ports 6.25 in. each in length. 40-45 hz. These are no where near the port size Wayne uses. Why such a large difference? Should I retune?

Subject: Helmholtz formula
Posted by Wayne Parham on Fri, 25 Apr 2008 16:36:37 GMT
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Check out the Helmholtz formula below. You can tune to the same frequency using different port sizes. As port area is increased, port length also has to be increased to tune to the same frequency. When in doubt, measure impedance and look for the minimum between the peaks.

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))^.5
60 PRINT"Fr =";FR;"Hz."
70 GOTO 10
```