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Subject: Advice building bass cab

Posted by [notben](#) on Fri, 20 Aug 2010 16:28:50 GMT

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Hi folks. I'm fairly new to the forum. As someone who has built a set of Pi speakers, I thought I would come here for a little help or advice.

I have all the materials to build a 1x12 Bass guitar cabinet using the Eminence Beta 12 driver:  
<http://eminence.com/pdf/beta-12a-2.pdf>

I plan on building the smaller of the bass guitar cabinets that Eminence details in their cabinet plans pdf, its the second cabinet detailed: <http://eminence.com/pdf/cab-beta-12a-2.pdf>

I am looking for someone with some experience to let me know if I am on the right path with some of the details, or maybe even if someone has built a box for this driver, what did they do.

The cabinet specs list:

$V_b = 1.75 \text{ cu.ft}$

$V(\text{total}) = 1.894 \text{ cu.ft}$

I am assuming the  $V_b$  is the inner box dimension and the  $V(\text{total})$  is the maximum one could use. I am using 11 ply birch plywood which is close to .5" and I have used this site to help me reverse engineer my dimensions: <http://www.bcae1.com/spboxnew2.htm>

I am using the calculator that allows you to input wood thickness, driver size and then use the sliders to instantly see changes to the box volume.

What I have come up with for outer dimensions is:

16" H

18" W

13".0" D

With inner dimensions of:

15" H

17" W

12" D

Giving an internal volume of 1.795 cu. ft.

And I am going to put the two 3" ports on each lower corner. I am not sure how high from the bottom, but I figured I would center them between the driver and the corner of the baffle.

Eminence says this should give a box with a resonant frequency of 54.15hz if you use their design. I don't know how to check if my calculations are matching up.

Also, I wish I could go lower, but I don't want to build a 4cu.ft. box.

So, does anyone know if I have missed interpreted anything on the designs, or can anyone do any other calculations that may make a better sounding box?

Thanks,

Ben

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