Subject: Details...
Posted by one_speed on Mon, 28 Nov 2005 16:21:48 GMT
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Wayne, thanks for taking a look at this. Here's the original thread and your main response....http://www.audioroundtable.com/PiSpeakers/messages/16629.html"Cabinets between about 1.5ft3 and 3.0ft3 tuned to 38Hz are B4 alignments, which have flat response curves.  Smaller cabinets become increasingly underdamped, but it isn't bad until you are under 1.0ft3. If you make the cabinet larger, up to about 4.0ft3, it becomes increasing more like a C4 alignment. The response curve dips a little in the octave above cutoff and then rises again just above falling rapidly at cutoff. Cabinets larger than 4.0ft3 tuned to 38Hz or above are underdamped, and the peak rapidly becomes very large as the box is made larger. But you can make the cabinet larger and make the Helmholtz frequency lower to create an EBS alignment. This will give extended bass at a reduced level.As for crossovers, I would use a simple first-order filter at 200Hz. It will work very well in this application because wavelengths of bass frequencies are large, so summing will be good. Basically, as long as the front to back spacing is less than a foot and a half apart, the two sounds sources will combine as one. Just use a 6.0mH coil on the woofer. If you need a passive crossover on the main driver, use a 16 ohm 10 watt non-inductive resistor across the speaker and a 100uF capacitor in series. That large a cap will probably tempt you to run electrolytic, and if so, you might go with a Black Gate N Type. You can also get several smaller values of another capacitor type and connect them in parallel to form 100uF. An example would be to use (5) 20uF polypropylene capacitors."T/SImpedance:8 ohmMinimum Frequency Response :25HzS.P.L.:95dB/W (m)Rated Input:40WMusic Power:125WEquivalent Mass:55g (0.121 lb)Magnet Weight:1.41kg (3.108 lb)Net Weight:5.0kg (11.023 lb)Fs:25HzRe:6.6 ohmQts:0.25Qes:0.28Vas:254 LXmax:4.8mm (0.187 in)no:1.4%Thanks again for your thoughts...