Subject: Small Speakers
Posted by shinningstar on Sat, 07 Apr 2007 07:10:40 GMT
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I have a pair of smaller speakers and a powered sub at home. I just want to know if it sound of it is as a pair of larger speakers. My home don't have enough space so I need full-range sound without taking up too much space in my home. What do you think?

Subject: Hoffman's Iron Law
Posted by Wayne Parham on Mon, 09 Apr 2007 19:30:49 GMT
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I'd say this falls into the realm of "Hoffman's Iron Law". First formulated back in the early 1960's by Anthony Hoffman (the H in KLH), Hoffman's Iron Law is a mathematical formula that was later refined by Thiele and Small, whose work now forms the basis of all modern loudspeaker design.

Hoffman's Iron Law states that the efficiency of a woofer system is directly proportional to its cabinet volume and the cube of its cutoff frequency (the lowest frequency it can usefully reproduce). The obvious implication is that to reduce the cutoff frequency by a factor of two, e.g. from 40 Hz to 20 Hz, while still retaining the same system efficiency, you need to increase the enclosure volume by 23=8 times. In other words, to reproduce ever lower frequencies at the same output level you need an extremely large box!

However, box size isn't the only variable. You can continue to use a small box by accepting a much lower efficiency. In order to retain the same sound pressure level (SPL, meaured in dB's), though, this requires both a very large amplifier and a driver that can handle a lot of power and move a lot of air (requiring high excursions). Furthermore, it must be able to do so with minimal distortion. This is exacerbated by power compression, a phenomenon where the power heating of the driver's voice coil results in a non-linear relationship (read "distortion") between the electrical power in and the acoustical power out.

Another variable not often mentioned is bandwidth. You can provide the perception of violating Hoffman's Iron Law by using a bandpass or basshorn design, which can provide a lot of bass primarily across a limited bandwidth.

Subject: Re: Small Speakers
Posted by randle on Thu, 31 May 2007 09:36:25 GMT
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You can different sized speakers for your liking. You can get medium sized speakers that can sit on your tv stand and not take too much space at all while at the same time giving you a nice range of sound.

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Subject: Re: Small Speakers
Posted by willyable on Thu, 20 Sep 2007 00:13:24 GMT
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I actually have a pair of small speakers that I have hooked up to a sub woofer which sounds great. For the speakers to be so small, the sub woofer gives it a major sound. I think they are like creatives or something like that. You can add a woofer to just about anything to give it a bigger sound. And you would think that they were 300 dollars speakers.

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