
Subject: Re: large woofers, small room, sound quality?

Posted by [GarMan](#) on Tue, 29 Mar 2005 18:17:31 GMT

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Henry, Out of curiosity, how does your old DJ gear sound in a small room? Even though my speaker system is built with JBL pro drivers that were designed to handle hundreds of watts, it still sounds excellent with only a 10W amp in a 12x15 room. One of the benefits of using high power handling and high sensitivity drivers in a home environment is that you're nowhere close to the drivers' compression region. Result is amazing dynamics. Just make sure the motors present an easy load to the amp. To me, I think dynamics is one of the biggest difference between a PI and a set of "audiophile" speakers. For example, take you average 100W 88dB/w/m audiophile speaker. To get up to 105dB, you'll be operating at minimum 50% of max power handling, where compression and distortion would certainly be present (realistically, 50% of max power would only give you 102 to 103 dB). At max power, you'll probably experience about 4dB of compression, yielding max dB of 104dB. A PI speaker with 95dB/w/m and power handling of 400W would only need 10W of power to reach 105dB. This 10W represents only 2.5% of max power handling. Hardly breaking a sweat. Max dB would be around 118dB, factoring in for compression. Nobody should be listening this loud on a continuous basis, but the effect is very noticable at moderate levels because it lets all the musical peaks through. You had some concerns about using a large 15" driver. A large 15" driver tends to beam if you take it into the midrange, which can be a bad or good thing. For PI speakers, Wayne has worked this to his advantage such that the directivity of the woofer and horn are about the same at the crossover region. In terms of colouration, you get what you pay for. There are certainly cheap hi-eff drivers that sound "honky", but many of the more sophisticated (and expensive) hi-eff drivers sound very neutral. I noticed you mentioned the Magnum to augment the Fostex. A less expensive option would be the Delta12LF that's used in the Theater 3 PI, which I have for Home Theater. It'll take you down to the mid 30's with a box under 4ft³. Gar.
