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Subject: Upper bass harmonics of BIG cones could affect sound

Posted by [Scooter](#) on Sat, 24 May 2008 05:55:59 GMT

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Hi threeeyedowl, Many designers both listen to, and review the CSD(stored energy)plots of bass speakers several octaves above the crossover frequency to see if harmonics, cone break-up, or just distortion will affect the midbass sound. The best designers want all bass "nasties" -60db down, and claim that it is easy to hear even -40db down cone break-up. Very large diameter woofers might require very steep crossover slopes to approach the -60db goal....steeper than LR4 can "ring" and have audible phase shifts. I have found 15" woofers to have the best balance of bass SPL, bandwidth, and low midbass distortion. The 15" also seems to be the most popular pro-audio size, and hence offers the most options and best engineering.

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