Subject: Re: Trying to understand bass "quality"....
Posted by Wayne Parham on Sun, 05 Dec 2004 18:51:56 GMT
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Hi Charlie,It's hard to say without hearing it. But I'd like to offer some general thoughts. To me, the octave between 40Hz and 80Hz is what most people think of as bass. That's where dance club bass lives. The range below it is for effects in movies and the range above it is midrange, the lowest part of the male voice being around 100Hz.There are two things that I think are very important below 100Hz. First is distortion. I don't know why, but many discount the importance of this. Some of the horn guys think that the reduction of excursion from horns will reduce it, so they use woofers with rather average or even poor distortion performance. Some even say they think people prefer the sound of distortion in the woofers, presumably because it increases midbass energy. But all that is horse poop if you asked me. Whatever distortion is made between 20Hz and 80Hz turns into harmonics above 40Hz up through the lower midrange. It increases listener fatigue and in extreme cases makes the system sound boomy or bloated.I'm guessing distortion isn't a big problem for you, so I'll move onto the second. You may be experiencing cancellation in the 40Hz to 80Hz range. In wavelength, that's 14 to 28 feet. So in half-wavelengths, where you're going to see cancellation, the critical range is 7 to 14 feet. Try to make sure your two woofers aren't spaced apart within this range, or they will cancel each other in the midbass. Also, consider the effect of boundaries. If a speaker is 3.5 feet to 7 feet from a side wall or back wall, you'll have some cancellation from the wall reflection. If both speakers are set-off from a wall by the same amount, then the effect will be doubled. That's one reason why I like having woofers in corners. Try to keep them within a couple feet from walls, if possible. Use directional mids and tweeters to combat boundary reflection in their bands.Wayne