
Subject: Re: Cornerhorns

Posted by [Wayne Parham](#) on Wed, 07 Nov 2001 03:42:03 GMT

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The lower you crossover a subwoofer, the harder it is to localize. You still have distance as a audio clue, but you don't really have ear filtering clues because they require high frequency information. At midrange frequencies and higher, your outer ear causes reflections that produce notch filtering depending on the angle between you and the sound source. That clue isn't there at low frequencies, making subwoofer localization difficult. I still prefer to have subwoofers placed physically close to mains, and I prefer symmetry. I wouldn't ever use a single sub, not so much because of localization but because there is no averaging of room modes. Better to use at least two woofers. The best thing for smooth bass response is averaging, which requires multiple woofers. Keeping the woofers within $1/4$ wavelength of the mains at crossover and through their overlapping frequency range is important to prevent a cancellation notch, but having subs spaced further than $1/4$ wavelength from each other (and from walls) helps to smooth out room modes.
