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Subject: Re: Horn mouth vs. front baffle or "speaker cone"

Posted by [Wayne Parham](#) on Tue, 04 Sep 2018 21:18:35 GMT

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I definitely understand what you've described. Geddes suggests placing one sub high in the air like that, specifically to deal with modal smoothing in the vertical dimension.

My guess is your troublesome mode is probably in the 60-80Hz range. Partly because you've described it as "bass punch" and partly because flanking subs aren't addressing it.

Self-interference and modes above 80Hz are smoothed with flanking subs, but they can't do anything with the modes below that. They're not spaced far enough from the mains. In most rooms, the modes that flanking subs can address are axials above the second or third wave and some of the oblique and tangentials. These are the modes between about 80Hz and 160Hz, and they're sometimes pretty troublesome. Flanking subs also mitigate the self-interference from nearest boundaries, especially the wall behind the speakers, which almost always causes a deep notch between 80Hz and 120Hz. This is because the convenient place to put speakers is often against the wall or a foot or two from it, but that makes this deep notch. So flanking subs can address all those things, but they can't smooth lower frequency modes, below 80Hz or so.

So all that to say you're probably best off with a distributed multisub placed right where you suggested in addition to your flanking subs. Set a sub up high on a shelf somewhere and low-pass deep enough to prevent localization. Again, this is very much like the multisub arrangement that Geddes prefers. He likes to place one sub 2/3rds the way up the wall.