Subject: Re: Corner horns & flanking subs?
Posted by Wayne Parham on Sat, 28 Mar 2020 15:38:11 GMT
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Constant directivity cornerhorns don't benefit from flanking subs. The anomalies created by reflections from nearest boundaries when using traditional loudspeakers don't occur in cornerhorn installations. The sound source is acoustically close to the nearest reflectors in the frequency range where the radiation would be omnidirectional if it weren't for the constraint of the boundaries. So the walls act like vertical ground planes instead of reflectors. See the link below for more information.
Speaker placement and wavefront launch
When using constant directivity cornerhorns, place your subs far away from the mains. This is a distributed multisub configuration which provides modal smoothing at low frequencies, up to around 80Hz. You can put a pair of subs in the opposite corners of the room. Or you can put them at adjacent wall midpoints. You can even place them in arbitrary locations, just as long as they are apart from one another and from the mains.

For distributed multisubs, run a summed mono signal like the LFE channel, low-passed at 50Hz to 60Hz fourth-order so that only the deepest bass radiates from the subs. Even with that steep slope and low crossover point there is still some output above the crossover frequency so you can expect good modal smoothing up to around 80Hz. This won't reach the higher-frequency room modes, but they aren't as troublesome as the speaker boundary interference response (SBIR) from nearest boundaries. Mitigation of SBIR is the main benefit provided by flanking subs.