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Subject: Cornerhorns and constant directivity

Posted by [Wayne Parham](#) on Sat, 16 Jan 2010 05:50:34 GMT

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You're about right. I wouldn't expect much directivity control below 500Hz in freespace. The corners set the pattern for a couple octaves below that. In my opinion, this is the biggest benefit from corner placement: It gives the loudspeaker designer the opportunity to create a pattern having constant directivity all the way down to the Schroeder frequency.

On a related aside, I love good horn loaded loudspeakers and have always built them. But it cracks me up to watch people talk about cornerhorns and focus on the acoustic loading of a truncated basshorn. To me, that is trivial compared to the possibility of constant directivity. To build a loudspeaker designed to be placed in a corner and fail to incorporate constant directivity horns or waveguides is a huge mistake. The biggest benefit of a cornerhorn is how it directs the sound field above the Schroeder frequency, not below it. A good cornerhorn is probably the only configuration I know of that can provide constant directivity all the way down to the Schroeder frequency, approximately 100Hz or so.