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Subject: Re: More HornResponse

Posted by [Wayne Parham](#) on Mon, 06 Dec 2010 23:07:32 GMT

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Yes, the front chamber includes both the area behind the plate and also the area formed by the cross-section and thickness of the mounting plate.

What I found when designing the midhorn is the upper end is largely determined by the driver's cone and its voice coil cap. Without a phase plug, there's nothing to make the distances between points on the diaphragm and the throat equal, so it all boils down to cap shape.

There is also the matter of diaphragm breakup. If you're using a cone that peaks a lot in the 2kHz-3kHz range, then the upper end rolloff from different path length distances and the low-pass filter from the front chamber is probably a welcome thing. But if the cone is highly damped, then the rolloff isn't probably as necessary or desirable.

All in all, I found that there are some drivers that work better than others. Most will work well to 1kHz, but going to 2kHz is a different story. It's a combination of many things - diaphragm and voice coil cover shape and material, front chamber size and voice coil inductance - all play a part in the upper end response curve.

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