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Subject: Horn Depth & Mouth Diffraction

Posted by [Cuppa Joe](#) on Sun, 11 Mar 2007 18:03:38 GMT

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When we discussed mouth diffraction in the past, it was under the assumption that the horn in question had an axial depth of at least  $1/4$  WL of the cutoff frequency. On another forum, a designer/manufacturer informed a poster that a conical horn's axial depth needs to be at least a FULL WL at cutoff in order to prevent any mouth diffraction. For a 160Hz midbass horn (for instance), that would mean an axial depth of approx. 7ft! Is he correct, or just over-cautious? How significant is this "spillage" at  $1/4$  WL, if such is the case? One of my 3 designs could be in the toilet....

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