
Subject: There is some science, but still horns are mostly art.
Posted by [Bill Fitzmaurice](#) on Sat, 15 May 2004 18:49:47 GMT
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Download the McBean program as was suggested and you'll find that you can build virtual horns with many different parameters and get many different results. What horn you should end up building is determined by your particular needs in terms of available space, required bandwidth, desired SPL and so on. Experiment. You at least have the advantage of a computer program; I built probably 50 horns with no way of knowing how they'd work until I built them. There are many ways to build a horn, with so many permutations of both the driver specs and horn dimension specs possible that I'm sure the combinations add up to the millions. If what you desire is a short quick answer on the 'correct' way to build a horn I'm afraid that there isn't one. I designed my first horn in 1969, and I still have not achieved the Holy Grail of the 'Perfect Horn'. Give me another 35 years and I might get close. If you're serious about learning about horns required reading is Olsen's book on Acoustical Engineering, available through Old Colony Sound at www.audioxpress.com. As for both Leach and Keele, according to their formulas all of the horns I've built over the last ten years, including the pictured DR250a, could not possibly work. They do work, which is why I say use the math as a guide, but not as a crutch.
