Subject: stuffing a horn?
Posted by Adam on Tue, 06 Jul 2004 02:17:27 GMT
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I had an interesting thought tonight while reading some information on t-lines. Transmission lines are 1/4 or 1/2 based enclosures (like horns) and use polyfill to slow the speed of sound, and thus shorten the transmission length. A 30 Hz, 1/4 wave transmission line has a length of about 9.4 feet. If stuffing is used in the line, it reduces the length required to around 3-4 feet. This his a huge advantage.What I'm wondering is, could this principle be applied to horns as well? Obviously not possible on mid or high horns, but on bass horns, could you extensively stuff the horn itself with polyfill, reducing the necessary length of the horn? My theory is similar advantages could be realized, with the necessary horn length being cut in half or even more. However, I'm not sure if this would affect the mouth size, and if the resulting change in expansion rate would mess up response. Even if this didn't work, could stuffing a 1/4 wavelength horn with polyfill help increase the perceived length closer to 1/2, and thus smooth out frequency response and improve sound quality?Adam