Subject: Re: Pipes, tapered pipes and Helmholtz resonators
Posted by Wayne Parham on Tue, 13 Mar 2007 05:28:16 GMT
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Here's another link with additional information. The document basically describes, among other things, the effects on standing wave nodes in a pipe of constant taper, when the taper rate is perturbed with expansions and/or contractions along its path. In other words, with this formula, you can now add growth or squish areas in a horn or transmission line to modify standing wave nodes.One can modify driver parameters, driver position, throat area and position, rate of expansion, mouth area and position and now also expansion or contraction chambers along the path as configurable parameters to optimize horn/line response. One might incorporate growth or squish areas with folds, since maintaining a constant expansion through a fold is difficult anyhow.
Acoustical Klein-Gordon Equation