Subject: Re: Pipe modes
Posted by Wayne Parham on Fri, 24 Jun 2005 11:33:57 GMT
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Pipe modes are caused by standing waves which setup where there are abrupt transitions in the pipe. The discontinuity caused from a straight pipe or one with only a slight flare suddenly terminating in an open end is much greater than a pipe that flares widely and gradually. A compression tweeter horn has 50 or 100 times more mouth area than throat area, and that prevents response peaks in the passband.One thing that might be cool in your application would be to radius the tweeter exit opening on the baffle. A radiused baffle would help smooth the transition and might reduce pipe modes. You would essentially be adding a little bit to the throat flare, and by rounding it to match the baffle, it would help transition the wave from the throat to the half-space condition of the baffle.