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Subject: Re: 2-pi tower.

Posted by [Wayne Parham](#) on Sat, 08 Aug 2009 12:41:53 GMT

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help develop this speaker, since the tower is physically tall and would suffer pipe modes in the passband. The woofer and port positions were chosen so Helmholtz resonance is the predominate tuning mechanism, reducing the influence of pipe modes by both position and damping.

You'll notice the plans suggest insulation span the cross-section of the cabinet, laying on the braces spaced 1/3rd the way from the top and 1/3rd the way from the bottom. This, in addition to the insulation on the cabinet walls and the position of the port and woofer, smooths pipe modes to the point where they are invisible to measurement and inaudible to the ear.