Subject: Re: 12pi
Posted by Wayne Parham on Wed, 12 Oct 2005 09:28:31 GMT
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The push-pull configuration reduces distortion by improving pneumatic symmetry. One driver pressurizes the throat from the front and the other from the rear, both providing pressure in phase with one another. Loudspeaker diaphragm movement isn't perfectly symetrical because of flux modulation, but the push-pull configuration makes the pressure symmetrical using opposing complementary pairs. When two drivers are used this way, you essentually have a strong one and a weak one on each half-cycle. That way, the overall pressure is equal for both

a lot of information in the threads contained, and I know it's a lot to mull over. But the horn has a lot of design features, and each is given some detail in the threads. In particular, look at the posts

designs".The development history post has several links to previous discussions about each design feature, including a proposed woofer with shorting rings to provide electro-mechanical symmetry, and the reasons why it was not made. That's why the push-pull configuration was chosen instead, because it provides a similar result pneumatically. The evolution of the cooling system is discussed too. In the comparison post, the general performance of basshorns is examined, with studies of various flares, front chambers and rear chambers.