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Subject: Re: Basshorns - Pros and Cons

Posted by [elena](#) on Mon, 12 Feb 2007 15:30:37 GMT

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Patent 4549631 of BOSE Corp. may be helpful to illustrate operation of multiple porting loudspeaker, what I call twin reflex. It is clear from the patent document that, in case of equal frequencies porting tune, emissions cancel out each other, that is the practical principle of the horn reflex porting, by far forward and reflex waves damp out each other. This would achieve better than a pure Helmholtz's resonator operation does, in effect I forecast the use of both of them, but in my practical prototype I employed the reflex principle solely (the cut-away view of the system clarifies that, the top elevation view is somewhat misleading, find out the pictures at the Klipsch forum link posted by D-MAN). The reflex technique is a feed-forward open loop, far better than a feedback closed-loop like an Helmholtz's resonator. I shall explain better if anyone is interested. On the other hand, below the cutoff the half frequency reflex porting -in the system the woofer resonance is at 29 Hz and the cutoff at 55 Hz- ensures good operation, according to the design criteria of a twin reflex system. By the way, I am seeking for an oscilloscope on e-bay Italy, I hope to satisfy the commitment to myself to finally test it and ... cheer up, we have got something good! Good vibrations ELENA

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