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Subject: Re: LAB12 driver - why is it so good and efficient?  
Posted by [Wayne Parham](#) on Mon, 13 Apr 2009 17:25:33 GMT  
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A driver tuned to be a subwoofer needs low  $f_s$  and high  $x_{max}$ . Those characteristics tend to reduce sensitivity when used as a direct radiator. However, anything can be used for horn loading, and when properly matched, efficiency will be increased. High EBP will give higher bandwidth, but that's not required (or even desired) for a subwoofer. So the combination of low  $f_s$  and high mechanical excursion limits are more important for a subwoofer driver. When used in a horn, it is also important to match the driver with the front and rear chambers and the horn flare. By the way, we don't use the LAB12 driver anymore. Ours in an OEM driver that is essentially the same as a LAB12, but that is machined to fit our cooling plug. This makes a big improvement in thermal performance, which is really important in high-power basshorns. Since excursion is reduced by horn loading, the effectiveness of the woofer's cooling vent is reduced too. Our

effectiveness

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