Subject: Re: What are 'high efficiency' speakers?
Posted by Wayne Parham on Mon, 22 Feb 2016 22:22:50 GMT
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Yes. High-efficiency means more electrical energy is converted to acoustic (through kinetic). It almost always means horns are involved, although there are some direct-radiating designs that are more efficient than others.

While efficiency is rated as a percentage, most tend to lump directivity and efficiency together and look at another metric, which is SPL/power/distance. This is a rating of how loud a speaker is at a given distance with a given power level. The most common rating is dBA (20 micropascals) measured at one meter with one watt dissipated. This combines a handful of parameters such as directivity and sensitivity, but it's a useful metric that most people are familiar with.

As a general rule, I'd say low efficiency is anything below 85dB/W/M. Medium is 85dB-90dB, and it's what most speakers are capable of doing. Speakers that can deliver 90-95dB on axis are the low end of the high-efficiency scale. There are some direct-radiating speakers that are in that range. Above 95dB are the highest ratings, and this is generally limited to horns.