Subject: 2 Pi Efficiency Answer
Posted by Wayne Parham on Wed, 13 Nov 2002 01:31:28 GMT
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be described in terms of peak power or RMS, sensitivity has some descriptive qualifiers too.Here are some of the things that should be specified:1. Where is the measurement taken? Even when specifying 1 meter, is that 1 meter from the horn mouth, baffle or voice coil?2. What spatial condition does the speaker radiate into?3. Is 2.83vRMS the input signal, or is it a signal that causes the dissipation of 1 watt?4. What frequency or range of frequencies is used?5. If a range of frequencies is used, is the range averaged? Are resonance or breakup modes included in the average?The answer to these questions can quite literally give 10dB difference in sensitivity, and I'm not exaggerating. This is actually a low figure, because just the difference of free space to eighth space represents 9dB. The difference of mid-band to resonance, either mass resonance or upper bound (breakup mode) is also often 10dB. So the difference between low-midband in free

be either 3dB or 6dB higher than half-space measurements indicate, depending on the model. This is significant because Eminence measures their components with an accurate new Klipple system in an improved, larger sound chamber. They are doing a good job at providing us with accurate measurements with this equipment, and their data shows performance in half space.That

frequency cutoff up to 1kHz, where output begins to rise. It is also at this point that an inductor in

not be used for averaging. So the speaker in half space would actually only be a 94dB speaker, but since you should put it in quarter space for best performance, you can also expect it to provide 97dB at one meter, with one watt of input power.