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Subject: Line Array Sensitivity

Posted by [FredT](#) on Thu, 24 Mar 2005 21:30:53 GMT

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You'll find the answer to your question in Jim Griffin's white paper on nearfield line arrays in the link below. As I understand it you gain 3dB every time you double the number of drivers. So two 87dB drivers would give you 90dB, four would yield 93dB, and eight would be 96dB. Additionally, as you wire these drivers in different configurations you gain another 3dB if you half the impedance (i.e. two in parallel) and you lose 3dB if you double the impedance (i.e. two in series). In the case of eight woofers you have a choice of four or sixteen ohms nominal impedance, giving you 99dB or 93dB respectively. A hard core SET lover would probably choose the 16 ohm option by wiring two sets of four drivers each in series for 32ohms, then connecting the two sets in parallel to get the 16 ohms (as in the Bottlehead Straight 8 and the Selah Audio XT8 that I'm currently building). You'll probably end up with a minimum impedance about 12 SET-friendly ohms depending on what kind of crossover you use. For more information on modeling the enclosure you might want to download a copy of Win ISD Beta, a feeware enclosure design program, from <http://www.linearteam.dk/> One more thought. Given the fact that you will have a substantial sum invested in this project, this is your first diy speakerbuilding effort, and you want it to sound knock-your-socks-off-good, you might want to pay someone with line array design expertise to help you with the enclosure and crossover design, and also to verify that the drivers you are considering are a good choice for this design.

[Line Array White Paper Link](#)

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