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Subject: JBL 2446H question

Posted by [Jerry Parker](#) on Wed, 21 Aug 2002 02:37:58 GMT

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Hey Wayne, remember when we were over last time you talked about how the 2446H's 4" diaphragm was so big that it basically was done at around 10khz, and had troubles with any higher frequencies? Well, what do the Pi speakers with the 2446H do for high end extension? Are they more designed for a sound reinforcement application than home use? Also, I never really understood the whole concept of cone diameter relating to wavelength and upper frequency response. I know that as sound waves get higher in frequency their periods become shorter, but how exactly does this relate to the diaphragm's size? I would assume that diaphragm weight is not so much of an issue, so why could a 15" woofer not perform up to 20khz? If I remember correctly the larger the diameter the speaker is, the larger the off axis drop in higher frequency spl there is. Does it have anything to do with how the horn loading of speakers works? Thanks!

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Subject: JBL 2446H answer

Posted by [Wayne Parham](#) on Wed, 21 Aug 2002 05:11:15 GMT

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If you have two sound sources that are 1/2 wavelength apart, they will combine destructively and form a null. So when a radiator is larger than 1/2 wavelength, it has this kind of thing happening across its surface. The net effect is that the radiation pattern begins to narrow as frequency goes up.

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Subject: Re: JBL 2446H question

Posted by [jpowers](#) on Thu, 22 Aug 2002 14:25:53 GMT

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So then is 2446h a good choice for home application when coupled with the 2241h in a pi-4??