Subject: Re: 8 pi speakers install tweeter waveguide inside cabinet?
Posted by Wayne Parham on Tue, 05 Jul 2022 16:48:33 GMT
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The vertical distance between adjacent sound sources sets the height of the forward lobe, which is punctuated by deep nulls just above and below it. It's a function of both position and frequency.

Generally, the closer you can get the sound sources, the better.

But there is a "diminishing returns" point, and that's where the distance roughly matches the vertical dispersion. What I mean by that is there is a distance between two sound sources that places the nulls above and below at positions roughly equal to the dispersion angle of the horn/waveguide(s). If the nulls are outside the dispersion angle, they are in an area that the speaker was not designed to radiate into.

So the important requirement is to position sound sources close enough to prevent the vertical nulls from falling within the radiation pattern.