
Subject: Re: One Pi Speaker

Posted by [Wayne Parham](#) on Fri, 22 Feb 2013 21:45:56 GMT

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Yes, that's the one.

Don't lean it back like that. Keep the baffle normal (perpendicular) pretty much lined up with the listeners. The baffle normal is the centerline of the forward axis. Aim this at the listeners. Horizontal movement is fine, you can even be way off-axis in the horizontal. But don't angle it in the vertical. Keep that within about $\pm 15^\circ$. So you can rotate the speaker as much as you want left and right, but don't rotate it up and down.

As for box dimensions, I think you can probably modify the cabinet shape somewhat, because it is small enough that internal standing waves are pretty high in frequency. They are high enough that the insulation inside the cabinet damps them pretty well. That's the biggest problem with mods of the larger cabinets - if you change the dimensions or the positions of the woofer or port, internal standing waves line up differently and there is the possibility of having a pressure node fall on the port or woofer, which results in response ripple. So if the builder chooses to modify a larger cabinet, I usually tell them to measure it to make sure that doesn't happen, and if they can't make measurements, don't do the mods. But it's safer in smaller cabs because the standing waves are higher and the insulation effectively damps them.

Just don't make the cabinet larger than about two feet in any dimension. Don't make it a tower. If you want to make it short and wide instead of tall and narrow, that's probably OK.