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Subject: Ten Pi Info

Posted by [Josh Fitzpatrick](#) on Sun, 05 May 2002 16:20:38 GMT

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I'm interested in building a pair of ten Pi's using Eminence Kappa-15lf. I have gone over the site on multiple occasions and think understand all the fundamentals. After using Palign I came up with an enclosure volume of about 2.5 cuft (that is after adding 10%) Does this sound about right. I am however a little confused on how you find port length and its placement in the enclosure. How do you find the port length and the corrected port length both at the same time? Palign also says I should use a 3.5 inch port that is 10 inches long. The depth of the enclosure is only eleven inches. Also, would I want to a psd2002 for the HF driver, and with which horn. I would be very thankful if you could send me plans so I can see what right, and or horribly wrong. One last thing on the Pi alignment theory paper. The page to find the dimensions of the folded horn and enclosure, are X Y and Z internal or external lengths. Thanks for taking the time, Josh Fitzpatrick

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Subject: Re: Ten Pi Info

Posted by [Adam](#) on Sun, 05 May 2002 17:06:01 GMT

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I don't know how anybody else built theirs, but I ran into the same problem you did. My solution was to extend the port out from the baffle a little. Just so you know, I used Kappa 15lf's in my pair as well, and I'm quite happy with them. A bit of midbass boominess, however that likely has more to do with the bracing situation rather than the driver itself. I don't recall the exact alignment I used anymore, but it was something like 2.2 cubic feet (after displacement) with a 4"x10" port, with around a pound of polyfill in the chamber. Adam

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Subject: Re: Ten Pi Info

Posted by [Wayne Parham](#) on Sun, 05 May 2002 20:11:55 GMT

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I don't use the Kappa series, but Adam has reported success with this driver in his version of the volume and port size. The PiAlign program is usually pretty good at recommending a port that

works well in the cabinet, avoiding those that are too long to fit in the cabinet. But if there are absolutely no other good choices, it will occasionally suggest a long port, which can be bent into an L shape to fit into the cabinet. Alternatively, you can calculate by hand to see if there are other choices that will work for you. I generally like to use the Peavey CH-3 or Eminence H290 horns. Each provides smooth response. There are other horns that could be used, but those two have worked very well for me so I've stuck with them. They provide good loading down to the crossover point, and uniform directivity, which is important in many of my loudspeaker designs.

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Subject: Re: Ten Pi Info

Posted by [Adam](#) on Sun, 05 May 2002 20:57:18 GMT

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Mind if I comment a bit, Wayne? Firstly, Kappa's EBP is about 105, which is roughly in line with most of the other woofers used in ten pi speakers. There might be slightly better choices, but my experience with the Kappas has been they are fine for horn loading. I run my ten pi's at 1.5 kHz instead of 1.6 kHz. I know it's a minute difference, but I have been running them fine at that frequency. I just thought I would mention it, because that is what Eminence recommends for the minimum cutoff. Adam

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Subject: Re: Ten Pi info

Posted by [Josh Fitzpatrick](#) on Mon, 06 May 2002 02:53:56 GMT

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How about [dfitz@execpc.com](mailto:dfitz@execpc.com) I have been looking at the Alignment paper for awhile. I looked again after getting back from a movie and one of the other formulas suddenly made sense. I guess I just had to let my brain rest a while.

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Subject: You have mail!

Posted by [Wayne Parham](#) on Mon, 06 May 2002 03:51:23 GMT

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Subject: Re: Ten Pi Info

Posted by [LuxmanLover](#) on Mon, 06 May 2002 12:42:53 GMT

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You could always use a 90 degree fitting on your vent if you had too...or you could get one of those gucci flexible ones the boom cars guys use to put 18" drivers in a 1 cubic foot box for their Honda civics....(just a touch of animosity there....I think it should be legal to carry a box of hand grenades in your vehicle so you could toss one in the open window of every boom car one comes across so they could experience one very loud very final BOOM!!!!!!!!!!!! heheheheheh)Kelly( I really hate those guys)