Subject: PiAlign questions: ideal vs enclosure Q (and Kappa15LF looks sweet!)
Posted by AudioLapDance on Wed, 28 Nov 2001 11:49:32 GMT
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Hey Wayne et all,I just have the left tweeter crossover to finish on my Theater Seven Pis.Goodness Gracious!!!These things can play loud and clean! When cranked the bass blurs my vision and the percussion is so sharp it feels like you're getting slapped in the face (but no sibilance)! Air guitar is impossible to resist! I could go on and on ... Wayne, you da man!When using PiAlign I sometimes notice a huge difference between ideal Q and encl Q.Ex:Rat Shack 1197 Fs=85HzQt=0.37, Qd=2.7Vad=0.17 cuft (4.9 l)Ideal Q=40Encl Q=10Eminence Kappa15LFFs=39HzQt=0.38, Qd=2.6Vad=5.6 cuft (159 l)Ideal Q=19.5Encl Q=6.6Wayne, what's going on? Is it possible to get closer to the ideal Q or is the calculated encl Q as close as it gets? How does this affect performance?By the way, the Kappa15LF may be the road to a poor man's Pro Four Pi (small cab JBL 2226 kick ass speaker). PiAlign gives a 25.5" x 17.5" x 12" cab with a 4.6" diam x 10" port (LDF vol=300, wood=1.5). The Kappa15LF has good Xmax (5.5mm), OK Zmax (86) and low Qms (6 so no mud motor!). The freq response looks good (no big peak at 2k) but the high Le (1.27mH) will require a zobel. Wayne, maybe you should audition a few pairs and see if you want to offer them as an official Pi product. :-)Cheers,Jeff

Subject: Re: PiAlign questions: ideal vs enclosure Q (and Kappa15LF looks sweet!)
Posted by Adam on Wed, 28 Nov 2001 14:03:36 GMT
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Sounds good dude, I'm looking forward to getting my pi's done with the Kappa 15LFA's... But one thing. It actually does have massive peaking at 1.7 and 2 kHz. The peaks are as much as 10 db higher from reference.Thought I'd let ya know.Adam

Subject: Which graph to trust?
Posted by AudioLapDance on Wed, 28 Nov 2001 15:21:31 GMT
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Hey Adam,I saw Colin's K15LF freq resp graph below. He indicated that he received it from a DIY buddy at Eminence. The graph on the Em website doesn't have the peak but they both show that

the sensitivity is ~95dB (where did they get 101dB for the spec sheet?!?) As Wayne points out, these graphs aren't very consistent so maybe the actual response lies somewhere in between?I guess we'll have to trust our ears.Good luck with the Pis. Let us know how it turns out.Cheers,Jeff

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Subject: Re: Which graph to trust?
Posted by Colin Fritzke on Wed, 28 Nov 2001 15:47:59 GMT
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Trust the chart on my webpage. I was very much into going with the Kappa 15LF for the same reasons you suggested, but upon closer inspection of an actual FR plot, I decided against it because there is no way Wayne's standard Four Pi Crossover will deal with those peaks at 1.7K and 2K. They could be tamed, but that would require some drastic measures and I have neither the tools nor the patience to do it. Eminence sensitivity specs are high because they rate the sensitivity of their drivers at 1kHz.Wanna get some Kilomax 15's? I know of a source that can get them for not too much more than you'd pay for the Kappas....Colin

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Subject: PiAlign answers: ideal vs enclosure Q
Posted by Wayne Parham on Wed, 28 Nov 2001 22:49:10 GMT
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PiAlign is a very old program and some of its terms are unusual. Enclosure Q is a term I used to describe port choking. What I was trying to do was to balance port tuning with its resistance to flow given the size constraints of what could physically be put inside the box.

Subject: Re: Which graph to trust?
Posted by LuxmanLover on Fri, 30 Nov 2001 00:40:32 GMT

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I noticed the same thng about the Kappa 15lf's when I ran them in Unibox.... the rated efficiency was a whopping 101 db but Unibox gave it 95db which struck me as weird 'cause Unibox is usually very close if not right on what the manufacture's stated numbers usually are.Kelly

Subject: Re: Which graph to trust?
Posted by Adam on Fri, 30 Nov 2001 18:50:31 GMT
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Well Eminence told me themselves that they overstated the sensitivity ratings on most of their woofers to compete with competitors who do the same... Hmm...Colin, WHERE on earth are you getting kilo's for the same price as kappas? I'd love to know... Adam

Subject: Re: Which graph to trust?
Posted by Colin Fritzke on Fri, 30 Nov 2001 19:20:17 GMT
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Adam,See this thread: http://www.AudioRoundTable.com/PiSpeakers/messages/1871.html. The price he quoted me is in Canadian dollars, so that converts to approximately $143 US each. Not bad, eh?George got them for me here in Canada (He's in Toronto and I'm in Calgary). Those are his Premium Stage Four Pi's w/Kilomax 15's in the picture above.Colin

Subject: Re: Which graph to trust?
Posted by Adam on Fri, 30 Nov 2001 19:21:28 GMT
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I find that strange... I'm pretty sure I can hear a peak in the 2 kHz region during listening tests (with no crossover), I can't say that it's as huge as 10-12 db though!I can surmise that the Delta probably has a similar response to the Kappa. Wayne is using 2nd order on the woofer for that design, and I haven't heard complaints. Perhaps the peak isn't as large as I thought, and the crossover is dealing with it. I'm not really sure what would explain those peaks, either.I was thinking of using third order or even fourth on the woofer, but changed my mind. I've been using a crossover for Kappa LFA and 2002 2-ways nearly identical to Wayne's in every respect (coincidence, I assure you... :)), except the crossover is at 1.5 kHz and it doesn't have the bypass cap on the l-pad to lift the upper frequency range. So I'm just gonna use stock parts and use my design, and add the cap as well. The design sounds pretty good, so I'm gonna ride with it. I've already got four Kappas and four of the compression drivers collecting dust.. Can't turn back now.I'll definitly let you know how they go. Gonna start soon, hope to have the first pair at least functional in the next couple weeks. Four of these things with 500 watts each is gonna be unbelievable... >:)Adam

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Subject: Re: Which graph to trust?
Posted by Adam on Fri, 30 Nov 2001 19:25:16 GMT
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Get outta here... that's like 220 cdn... and I'm in London (which is about three hours from toronto)!!! How aboot that eh... lol.I'll have to look into that... Wanna buy four Kappa 15LFA's??? :D Mint condition.

Subject: Re: Which graph to trust?
Posted by CO on Sun, 02 Dec 2001 17:07:38 GMT
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Drop me an email on the kappas if they are still avaliable.Charles

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