Subject: Bass cabinet recomendations - need tips
Posted by Undecided on Wed, 03 Jul 2002 20:12:33 GMT
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I'm building a sound system with four PHL 1120 midranges and a Raven2.0 tweeter per cabinet. I picked those drivers because I like thesound quality and efficiency. I'm worried about the bass guitar reproduction, I want qualitybass at high spl to mate with the above midrange/tweeters.Initial thoughts are to use a 15" or 18" prosound woofer in a sealedbox for good bass, but doing so I lose the low end response (20hz-30hz).So.. I don't mind building an additional subwoofer tocomplement the system for those home theater times when you wantto shake the intestines.. Is this the right choice or shouldI combine the woofer and subwoofer together ? Doing so, I probablyhave to sacrifice quality ?The last issue is the midbass. The midrange will probably be crossedover at 300-400hz so I need another driver to run between the woofer and midrange. Again, my initial thoughts are a prosound12" in a sealed box (f3 80-100hz). I plan to use a fully active crossover system for whole cabinet.Any thoughts on driver selection and box configuration ?My brain has odd ideas;Plan A = one tweeter, four midrange, one prosound 12 inch, oneprosound 18 inch in a sealed box (per channel). F3 probably 60hz.Plan B = Plan A plus a seperate subwoofer enclosure using a longthrow 18" subwoofer to complement the system. F3 probably 20hz. Plan C = Compromise, combine plan A and B and use the 18 inch in avented box to extend the low end from f3 60hz to maybe 35hz (heh)and lose transient response of a sealed box and lose 20hz capability?Plan D = Plan A minus the prosound 18 inch woofer.. Instead usea long throw 18 inch woofer in a vented box to reach 20hz. Make the12 inch midbass work a little harder perhaps cross them over between80-300hz and hope the bass quitar will sound good ?I'm limited to 10 cubic feet for the bass cabby.

Subject: Re: Bass cabinet recomendations - need tips
Posted by bmar on Wed, 03 Jul 2002 20:56:46 GMT
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Put a JBL 2245 18" in a 8' boxput a JBL 2226 15" in a 3' boxthis will get you from 25hz to 1600hz with no problems.vented or sealed, you weigh the pros and cons and decide yourself.if you want clean fast bass, those two drivers are among the best.If you run active amplification you'll have a great system with the other drivers you have now.Bill

Subject: Thoughts re: Eminence Kilomax 18" ?
Posted by Undecided on Fri, 05 Jul 2002 06:52:45 GMT
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Unless I choked running some crude numbers, Kilomax 18" needsa 400+ liter box for q = .707.. but what if we reduce the box to220 liters?220 liter sealed box q = .8 f3 = 42hz @ 94db30hz @ -8dbThoughts? I wonder if the bass would be tight and clean?Then I can get a long throw woofer to make a seperate subwooferfor 20hz - 40hz?

Subject: Re: Nice Driver
Posted by bmar on Fri, 05 Jul 2002 11:30:01 GMT
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Kilomax is a great speaker. I have listened to the 15" and it sounds very close to a JBL but I dont think it's as tight. Never listened to an 18" kilo but the specs and price are very inviting for sure. at 1/3 the cost of a JBL I would think you could be very happy with it.in a closed box of 220 liter, I come up with an F3 of 43hz at 104db. 30hz -8 @ 93db.Same as you. Now, If you can push the box to 250 liters. not much will change in your closed box. This will how ever give you a very good option. 250 liter vented box, tuned to 27hz will give you 30hz @ -3db20hz @ -10dbyou can vent the cabinet on the back side and if you dont like the vented box version just seal the port and you have a your sealed box back.with an F3 of 30hz you might be pretty happy with out a sub!

Subject: Re: Nice Driver
Posted by Adam on Fri, 05 Jul 2002 13:29:03 GMT
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I would definitely port the kilomax myself.... A beefy driver like that is too good to waste in a sealed box.Adam

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Subject: Adam read -
Posted by Undecided on Fri, 05 Jul 2002 19:17:32 GMT
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Here is my inital thoughts for my crazy sound system, all sealedbox except subwoofer. Top cabinetOne - (Raven 2 *or* Sa8535 isodynamic - 103db)Four - 6.5" - (Audax PR170M0 *or* PHL 1120 *or* PHL 1230)Bass cabinet (this is where I have problems deciding)one - prosound 12 inch (PHL ?, eminence ?, etc.. ??????)one - prosound 18 inch (kilomax 18? PHL? JBL? or Lamdba 15" ? etc.)Seperate subwoofer (use vented?) - 18 inch (blueprint 1803?, leviathan ?, Brahma ?, Maelstron? etc)That is the reason I was thinking sealed for Kilomax 18. Many folkson the forums

think that sealed would sound slightly better forbass quitar reproduction over the vented. Since I plan to adda subwoofer anyways, I was seeking a prosound woofer that wouldat least f3 around 40-45hz so I can have some tight bass. Butmost of the other prosound woofers except kilomax do f3 around 60-80hz.I'm not sure what the pro's and con's are if my woofercabinet *and* subwoofer cabinet are vented as opposed to onebeing sealed and the subwoofer is vented. Normally if I had an R&D budget, I would just buy all these goodwoofers and test them out, but I can't afford to do so.. I'vebeen reasearching all the audio forums compiling data to getheaded in the right direction. So many good ideas out here,time to digest all the data and settle on a design so I canterrorize the neighbors with some loud and clean tunes (hehehe)

Subject: Sealed vs. Vented systems
Posted by Wayne Parham on Fri, 05 Jul 2002 20:01:12 GMT
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Response curves of closed vs. vented systems

Subject: Re: Adam read -
Posted by Adam on Fri, 05 Jul 2002 20:04:10 GMT
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Well, I'm not too crazy about sealed boxes. There is no doubt in my mind that a sealed box can sound good, but I personally think that a ported box will sound better with the right driver if you design the box properly, and will go deeper and be more efficient than a sealed box. If you do get the Kilomax, I encourage you to try both designs to see what you like the best. The kilomax will run good sealed.... I just think it would run even better ported.Your car system plan looks really nice, although it's a bit complicated. Your top end design sounds pretty good, but the seperate woofer and subwoofer are unnecessary. Any of the subwoofers you mentioned will perform excellent in a vehicle. I have heard of the Leviathan being used in car with amazing SQ results, the brahma is a beautiful sound quality woofer whichw ill run in tight cabinets, and can play loud as well. There are also some other good woofers out there for sound quality, like Crystal CMP's (I own a 15" model), Ground Zero subs, and Eclipse (although pricey). You don't need to use the bass cabinet at all. Any of these woofers will authoritatively handle 20-80 Hz in a car, where you can xover to the Audax woofers. I wouldn't run your fronts any higher than an 80 Hz xover, because the higher you go, you will actually notice a shift of midbass and bass frequncies to the rear of the car, which doesnt' sound good. You can try porting all of these woofers (except the CMP, doens't sound as good) and you may or may not like it. Ported boxes in cars tend to have a rising response in the lower octave, which some people don't like. If you really hate that and don't have a good EQ to compensate, a sealed box would be a better bet.My planned system uses a pair of Image Dynamics horns up front running down to 1.2 kHz, crossing over to four Seas Excel 7" midbass drivers in tiny ported enclosures, and finally crossing over at 60 Hz with an Eclipse Plutonium 18" woofer in a compact passive radiator box. The sub is currently in the prototype building stage and won't be available on the market for a few more months I believe.The whole

system will be running off an array of USAmps, with the horns and midrange drivers running off a hybrid tube amplifier. Fully digital equaliser and seperate active crossover, with a Nakamichi Cd-45z cd player as the "brain" of the entire operation.Adam

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Subject: Adam -Not for car, for home.
Posted by Undecided on Fri, 05 Jul 2002 23:17:18 GMT
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This system is for home use, not car.. heheDoes that change any of your ideas?

Subject: Re: Adam -Not for car, for home.
Posted by Adam on Sat, 06 Jul 2002 00:24:04 GMT
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Whoops... Sorry about that bud, lol. I dunno why I thought that... I was in the car audio state of mind from another board, musta warped my head :PHonestly, it doesn't change much tho. I wouldn't recommend the Eclipse or Crystal subs anymore, but you can still run the Maelstrom, Blueprint, etc... Your full range system is still a solid setup. Out of the subs you listed, I'd be inclined to run a Brahma or a Leviathan first... But really, any of those drivers would perform exceptionally well. I think the Brahma and Leviathan would lead in the SQ department, though. The Brahma might need a little more power than the others.Whether you run stereo or mono, and run them in a sub/satelite or "tower" configuration is really up to your tastes and your listening room. If you decide to run them in tower format, with a sub on each channel and the midrange/tweeters stacked directly on top of the subs, I would personally take the subwoofer allt he way to 150-200 Hz and use a smaller diameter midrange driver, like a 4" or 5" Eton unit. Just some thoughts... All four of the subwoofers you listed will do really well. I'd eliminate the "bass" cabinet, as it's bandwidth can still be handled well by the subwoofer. If I can help ya with anything else, feel free to ask.siradam48@hotmail.comAdam

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Subject: Re: http://www.mmxpress.com/GZ.html (funny link) nt.
Posted by Undecided on Sat, 06 Jul 2002 06:55:55 GMT
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Subject: Re: http://www.mmxpress.com/GZ.html (funny link) nt.
Posted by Adam on Sat, 06 Jul 2002 17:09:03 GMT
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Yeah, that is pretty humerous... That's not the company I'm talking about, though.That's the American Ground Zero.Here's the German one.http://www.magma-audio.de/english/gz_index.htmAdam