Subject: Project JBL
Posted by Jerrod Harden on Thu, 02 Jun 2005 20:22:04 GMT
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Hi guys!I've had these going for several months now. I was waiting to get some better quality pictures to post, but hadn't gotten around to it.I leaked a few photos over at Doc B's, so I wanted to give a sneak peak here. From the bottom up...2226J's, 2123J in a conical midhorn, 2426J/2370A horn, and 2404H. Crossover points are 200@12db/oct.,1.6K@18db/oct.,and 20K@6db/oct. The three horns are tube powered and are 106 db. efficiency. The woofer cabinets are solid state powered and 100 db. efficiency. Not pictured is the new sand bases that the speakers now rest on. I'm currently building Paraglow II's, and a Seduction phono preamp. I recently completed the hemi-orange Foreplay III with Mundorf caps under the hood. Lots of big projects for me, better get to it! Thanks Wayne for the Pi inspired midhorn design, the speakers are sounding fabulous. They are very civilized, perhaps even refined sounding, but never, ever timid. Great scale and dynamics with a sense of subtlety. Make any sense?Take care! Jerrod
Project JBL

Subject: Re: Project JBL
Posted by Wayne Parham on Thu, 02 Jun 2005 22:00:15 GMT
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Looks great!

Subject: Re: Project JBL
Posted by Russellc on Thu, 02 Jun 2005 23:05:25 GMT
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WOW! very nice...are those waynes mid horns?Russellc

Subject: Thanks! (nt)
Posted by Jerrod Harden on Fri, 03 Jun 2005 19:14:39 GMT
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nt

Subject: Re: Project JBL
Posted by Jerrod Harden on Fri, 03 Jun 2005 19:23:30 GMT
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Thanks Russell!I built the midhorns following the information Wayne has provided on the forum. I used the same throat size and expansion angles, but the mouth is slightly larger than spec. I was attempting to lower cutoff slightly without sacrificing the response at the upper crossover frequency. It was a very successful gamble. Are you considering building a pair?Regards, Jerrod

Subject: Re: Project JBL
Posted by Russellc on Sat, 04 Jun 2005 02:14:42 GMT
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I have a pair of 2225H woofers, 2123H mid drivers and 2425H compression drivers, all 8 ohms. I plan to build the 7 Pi 3way with the mid horn.Your project sure looks nice, but I would have to aquire 4 16 ohm bass drivers, and I wanted the 7Pi since they are only 18 inches wide and stick in a corner. But, I have room for those, I am currently using A-7 with 828 cabs and they are plenty big! With four woofers like that those speakers of yours must flat slam! Really a cool set of speakers. I wasted so much time and money on "high end" speakers that imaged well, but had no soul nor the fun factor of high eff. horns.regards,Russellc

Subject: Re: Project JBL
Posted by Jerrod Harden on Sat, 04 Jun 2005 11:58:32 GMT
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Hi Russellc,I intended on replacing the the 4 2226's with a pair of 2245's, but my plans have changed. The 2226's are very "real" sounding, great transient response and definition. Also better efficiency. Response is augmented by an Audio Control Richter Scale bass eq to smooth the response from 125 hz down. It's a pretty simple bass setup, but one of the better ones I've heard. I suppose the old drag racers adage of "There's no replacement for displacement" runs true. Get those 7 Pi's together, you will enjoy them!

Subject: Re: Project JBL - 2012 vs 2123 mid horn?
Posted by swett on Sat, 04 Jun 2005 18:05:51 GMT
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Did you choose the 2123 over the 2012 Wayne lists on the Pi site for a reason, or was it just more available?Wayne, do you have any thoughts on the 2012 versus the 2123? Can it use the same horn?-Ian

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Subject: Re: Project JBL - 2012 vs 2123 mid horn?
Posted by Russellc on Sat, 04 Jun 2005 18:48:48 GMT
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Actually, the 2012 is just a modern version of the 2123H. I bought All 3 of the drivers like this, 2225H instead of 2226H, 2123H instead of 2012, and 2425H instead of 2426H. In all three cases they are virtually identicle in performance, very minor if any differences, just these are older models. Cick "vintage" onthe JBL site to compare numbers. I chose them because they are usually, or at least in my case were way cheaper than the newer versions used, and WAY cheaper than buying the new versions "Brand New". My compression drivers and bass drivers are in very good condition, and the mid drivers were new old stock, still in the box. I paid slightly less than half total than what I would have been paying for all brand new. The performance is the same. Any more, used market prices for both seem to be converging. These drivers also just happened to become available when I was buying them, I would have bought any of those mentioned, they just popped up. The prices were great at the time, thats all. If money were no object, I'd just order all the new versions right from wayne, cheap or cheaper than the others, service A+ and there's this forum to communicate on. I also happened to get OEM versions of all the drivers, stamped on printing of the model # w/o all the fancy stickers. For whatever reasons, these versions don't bring as high of prices. Some don't understand what it is, and are not familiar enough with the drivers appearance and are suspicious. Whatever, I wanted an all JBL & pi, and this is hardly more expensive than getting the base eminence drivers, which are fabulous bargins BTW.Russellc

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Subject: Re: Project JBL - 2012 vs 2123 mid horn?
Posted by Russellc on Sat, 04 Jun 2005 18:52:10 GMT
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Whoops, thats "an all JBL 7Pi, not All JBL "&PI"Russellc

Subject: Re: Project JBL
Posted by Russellc on Sat, 04 Jun 2005 19:04:48 GMT
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Yes, a single 2226 is fairly amazing, with two you should have lots of air moving. I look at the JBL

18 inchers, I will probably snag a pair of these some day and install them in the bottom of my A7s and seal off the lower reflex from the mid horn like several do on the Altec users forum. Of course this will require a 3 way crossover, electronic for my purposes. More complicated wiring, etc. Regards,Russellc

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Subject: Re: Project JBL - 2012 vs 2123 mid horn?
Posted by swett on Sat, 04 Jun 2005 19:41:00 GMT
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Thanks, that makes sense. I couldn't find anyone selling the 2012 used, but if its the new model, that would make sense. I'm trying to do the same thing you are, though I did end up buying the 2226's used, not the 2225's. I bought the 2425's from Bill Martinelli and I found some used 2123's for a good price, so hopefully I'll be able to buy those as well. I couldn't afford or justify new JBL parts, and a perk of buying used is that you can use them for a while and could resell them for about what you bought them for. -Ian

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Subject: Re: Project JBL - 2012 vs 2123 mid horn?
Posted by Wayne Parham on Sat, 04 Jun 2005 20:17:57 GMT
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I didn't measure the midhorn with the 2123, so I can't say for sure. The 2012 rolls off pretty early, and response is clean. It sums nicely with the crossover as shown in the plans. I would guess the 2123 would act like the 2012, but it might be more like the Delta 10, which has more output above 2kHz. This is determined largely by the dustcap.The thing to watch is HF behavior, and the crossover between midhorn and tweeter will be determined by it. Most start to rolloff between 1kHz and 2kHz and the trick is to match this with the tweeter so that summing on and off axis is good.

Subject: Re: Project JBL - 2123 spec sheet
Posted by swett on Sat, 04 Jun 2005 22:57:55 GMT
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Here's the 2123's spec sheet: http://www.jblpro.com/pub/obsolete/2123.pdfThe frequency curve isn't exactly a measurement, but from comparing this with the 2012's, it does appear they both drop dramatically around 5k, so the 2123 is probably a good substitute, though JBL claims the 2012 is an improvement over the old driver. -Ian

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Subject: Re: Project JBL - 2012 is better for horns..
Posted by swett on Sat, 11 Jun 2005 21:57:13 GMT
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I was looking around at both of these, and it appears that the 2012 is a better candidate for a midrange horn, because of its gradually rising response. The 2123 should be quite flat without a horn, so its probably best used as a direct radiator, and is not an exact substitute for the 2012.
-Ian

Subject: Re: Project JBL - 2012 is better for horns..
Posted by Russellc on Sun, 12 Jun 2005 17:52:05 GMT
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I just got it because it works fine, regardless of what graphs show. It was specified for the 7Pi Audiophile model, which in fact was a direct radiator. Mainly, I selected it because of the cost of the new jbl 2012. Wayne has assured me I couldn't tell the difference, which should be slight, and that the 2123 is an excellent choice. I don't know if jbl changed there measuring proceedures between the old and the new, but I notice slight differences between them, including the 2425 and the 2426, which people tell me are identicle. Again, there is certainly nothing wrong with either choice, and no sonic difference will be detected. slight differences such as these, while measureable in a sound chamber, will be dwarfed by room interaction. Myself, I'm not convinced a gradually rising response is a good thing, with non horn speakers it has been my experience it always complicates the crossover design. Even if it appears to better match the high freq. unit, Proper crossover should make it a non issue. Again, I also feel the differences between the drivers is so slight (except for price) it doesn't require adjustment. High efficiency speakers have a tendency to shout already. If money were no object, I would go with the new driver from Wayne. Email wayne for his thoughts. either jbl driver will be superior to the other eminence and so forth "stock" drivers, which truth be told probably would work just as successfully as either JBL.I never found 2012 used, and the new price put it out of budget for me.the 2123 is legendary and has been used in alls sorts of applications, from direct to horn most successfully. I'm sure you will be happy with 2012 as would I if I could afford the blasted thing!Regards,Russellc

Subject: Re: Project JBL - 2012 is better for horns..
Posted by Russellc on Sun, 12 Jun 2005 18:02:53 GMT
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You know, looking at Wayne's response above, he sounds like he is saying that the 2012 is the flatter one, and states that the 2123 has "more output above 2000" ?Whatever, once I get the cabinets I'll post if there are any crossover abnormalities at the crossover point to the compression driver. I'm sure other "budget concerned" individuals have wondered about this. I'm sur the 2012 will be spot on as it was the driver intended for this design.Russellc

Subject: I can't afford the 2012 either :)
Posted by swett on Sun, 12 Jun 2005 18:58:01 GMT
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Everything I've read says the 2123 is a great driver and I'm still trying to get a pair, I just wanted to give you an FYI, about the slight differences between the two response curves. Close enough, but not identical. I'm still deciding on my midrange. If I can, I may just use a pair of 2123's in direct radiator mode. If I can't find any 2123's for a reasonable price, I'm considering Wayne's Delta midrange and Adrian Mack's Alpha midrange. I've never seen any 2012's used either. They are 10 years old now, so you'd think some people would have extra, but maybe people really like them?-Ian

Subject: Re: Project JBL - 2012 is better for horns..
Posted by Wayne Parham on Mon, 13 Jun 2005 20:11:24 GMT
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I haven't used the 2123 in the midhorn, so I don't know. Upper frequency response in the midhorn is largely determined by dust cap stiffness and shape, and its hard to tell how it will act just by the direct radiator response curve. If there were no compression plate, you could probably estimate it but once there is a compression plate and/or phase plug, interactions become more complex.