Subject: Reconing JBL 2245 to 2241
Posted by spkrman57 on Thu, 17 Feb 2005 13:28:54 GMT
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I am in the process of getting a pair of cabinets (ported) with a interior volume of 8.8 cu ft, tuned with 2 ports to 28hz per current owner. These cabs were used with JBL 2245's by the previous owner, I can procure a pair of blown 2245's and recone kit for 2240/2241, I have a speaker tech who will perform the recone and wondering what animal will result by this surgical procedure. I am more interested in the recone being closer to the 2240/2241 than the 2245(which has its share of probs I don't want to deal with)I welcome any and all info regarding this scenario, you will not hurt my feelings, I need to know if there is any detrimental effect with this recone. The tech has all the parts already, just waiting for my go-ahead on this venture. If this works okay, I will use my Altec 288 on 350hz round tractix Edgarhorn and finish off with a pair of JBL 075's for a sweet 3 way system.Ron

Subject: Sorry - recone to 2240
Posted by spkrman57 on Thu, 17 Feb 2005 14:43:41 GMT
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Hoping someone can comment on this conversion. Thanks, Ron

Subject: Re: Sorry - recone to 2240
Posted by dwkurfma on Thu, 17 Feb 2005 20:32:51 GMT
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I'd ask over on the high efficiency audio asylum and see if DJK will give you a response.Dan

Subject: I'd stay with the 2245
Posted by Wayne Parham on Thu, 17 Feb 2005 22:19:35 GMT
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Model the response of both speakers to see which one better suites your needs. I'd prefer the deeper extension provided by the 2245. Use recone kit CR82245H. It's only ten bucks more than the 2240 recone kit, CR82240H. Either one will work.

Subject: Taco Bell
Posted by Wayne Parham on Thu, 17 Feb 2005 22:47:14 GMT
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Dennis stops by here from time to time, and I see him on Rog Mogales site sometimes too.

Subject: Re: Sorry - recone to 2240
Posted by Bill Martinelli on Thu, 17 Feb 2005 23:38:43 GMT
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I agree with Wayne. I have experience with all 3 of the drivers and the 2245 is by far a better performer in a prted box. I might suggest a 10 foot box tuned to 22hz for home audio. The 2240/41 are better drivers for pro audio and in horn applications. Bruce uses either of these in his big sub. The 40/41 have a few points higher spl too. I gladly give up the extra spl for the 2245 with a softer suspension and lower extension. Bill

Subject: Re: Taco Bell
Posted by Russellc on Fri, 18 Feb 2005 01:29:13 GMT
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Not to detract from djk or who ever, I don't think you'll learn any more than you will from Wayne and Bill about JBL drivers.Chalupas,Russellc

Subject: Re: Taco Bell
Posted by Wayne Parham on Fri, 18 Feb 2005 03:34:08 GMT
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I meant no offense to Dennis either. He seems like a stand up guy to me.

Subject: Re: Taco Bell
Posted by Russellc on Fri, 18 Feb 2005 10:52:34 GMT
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I'm not familiar with them, so I'm in no position to judge. I have always received experienced advice here. I can't imagine a JBL application that you guys haven't had an opportunity to try.Russellc

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Subject: Re: Taco Bell
Posted by :mikeo: on Fri, 18 Feb 2005 11:32:20 GMT
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DJK = Dennis KleitschThat's who Wayne was referring to.

Subject: 2245 cone is too heavy for the suspension...
Posted by spkrman57 on Fri, 18 Feb 2005 15:08:01 GMT
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Wayne, I am willing to trade the bottom end extension for the higher SPL. Also, I had 2245's in the past and there are issues with them that I don't want to deal with. I have a pair of cabinets that are 8.8 cu ft and tuned for 28 hz. I know that will leave me somewhere around 40hz for bottom end which is okay for me. I never had a problem with my 2226's which had about the same bottom end response. And the 98db efficiency beats out the 95db of the 2245's. I will be running Yamamoto 45 SET amp for 2 watts/chnl. Also, if I ever get some Edgar sub horns, I will be set for drivers as the specs are excellent for a sub-horn driver. Ron

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Subject: The 2245 is tuned lower
Posted by Wayne Parham on Fri, 18 Feb 2005 22:54:42 GMT
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The 2240, 2241 and 2242 drivers are certainly nice too. As you've noticed, they trade extension for SPL. But unless you exceed xmax of the 2245, there are no problems with it that I've encountered, and I've pushed 'em pretty hard. You can exceed the mechanical limits of any driver, but as I recall, you're running tube amps and I don't think you'll have excursion problems with them. Maybe the 2245's you've had were damaged?

Subject: 2245 xmax=.38 2240 xmax=.22
Posted by :mikeo: on Sat, 19 Feb 2005 00:09:33 GMT
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2240 has half xmax of the 2245 and will bottom out sooner. Consider also the plate amp subsonic boost eq to make response flat on Edgar subs. With 45 amps, I'm sure either one will keep up just fine.

Subject: 2240's are not for sub duty
Posted by spkrman57 on Sat, 19 Feb 2005 13:33:31 GMT
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If I need subs, I have plenty of Eminence 15" for that duty. I just want a high-efficiency 3 way system. At 98db, the 2240 would still be the least inefficient in the system. The midrange horn driven by Altec 288 is 115db/watt, and the tweet is around 107db/watt.None of my single ended amp are more than 15 watts/chnl, so max excursion is not a issue.Ron

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Subject: As an aside,
Posted by Wayne Parham on Sun, 20 Feb 2005 10:27:35 GMT
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Throw together a pair of 10" midhorns sometime and see what you think. They're great for covering the 200Hz to 2kHz vocal range. I have the crossovers all worked out and I really enjoy this setup.

Subject: Re: As an aside,
Posted by Chris R on Sun, 20 Feb 2005 13:23:54 GMT
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Will the mid-horns make it to 3.5K or 4KHz? I've been thinkingabout using an APT-200 (or 150) maybe in a Pi7-18.Thx, Chris

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Subject: Re: As an aside,
Posted by Wayne Parham on Sun, 20 Feb 2005 13:42:41 GMT
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See the response graph in the post called "Implentation" in the "Midrange Horn" thread. What you'll notice is that there is some peaking from breakup modes that increases output above 2kHz.

On some drivers, this will be controlled and on others, less so. It's totally driver specific. My approach has been to crossover at 1.6kHz, but you can sure take advantage of the output above that frequency, and push it maybe an octave further. You can also employ a bypass capacitor across the attenuation resistor to increase HF response.

Subject: Altec 288 on 350hz Edgarhorn from 500hz on up to JBL 075's
Posted by spkrman57 on Sun, 20 Feb 2005 16:47:29 GMT
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I think the JBL 2240 will reach up to 500hz no problem. I will also be using a 1st order crossover for all three drivers since I am only running 2 watts/chnl. Ron

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Subject: Re: Altec 288 on 350hz Edgarhorn from 500hz on up to JBL 075's
Posted by Wayne Parham on Sun, 20 Feb 2005 16:50:32 GMT
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Yes, the 2240 will work just fine through the midrange fundamental range.

Subject: Re: Taco Bell
Posted by dwkurfma on Mon, 21 Feb 2005 00:37:37 GMT
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Hey WayneIt can get ugly on audioasylum, and I've had the "pleasant" experience of getting trashed over there. Still, there are a couple (well maybe a few more than that) of guys over there that seem to have their heads on straight and have been doing this stuff a "long" time. Then there are those that start talking about If driver "speed", and "only a horn can keep up with a horn" or how their 6" full range on an open baffle with a little SET can play louder than anyone needs to listen and the pain sets in behind my eyeballs... ;(Dan

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Subject: Re: As an aside,
Posted by Chris R on Mon, 21 Feb 2005 08:25:32 GMT
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Hi Wayne, Were the mid-horn graphs made using an Alpha10 or someother driver? Is the horn causing the lower end of thecurve to have higher output, or does that match the Alpha10'snatural

curve, as in a 2-Pi also?Thx, Chris

Subject: Re: Taco Bell
Posted by Wayne Parham on Mon, 21 Feb 2005 13:07:13 GMT
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Subject: Re: As an aside,
Posted by Wayne Parham on Mon, 21 Feb 2005 13:15:23 GMT
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Those response curves were made with the Delta 10, which is what the horn was originally intended to use.

Subject: Re: As an aside,
Posted by DRC on Mon, 11 Apr 2005 15:59:57 GMT
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Hi Wayne,

Have you tried, or do you know of anyone who has tried, the JBL 2123 in your mid-horn? Im still thinking of how else to approach my TAD1602/2123/TAD2001 system. A lot of the specs are quite similar, although the enclosure volume suggestions are quite different. But I don't know how to relate that to horn use.

Since I'm still on a Mac, I still can't use your (or most other) software to figure things out. Duh.

It would be lovely to get the overall system efficiency up, even if it meant driving the bottom with a larger amp. (Perhaps the AN Kit 4 below and a 45 amp above.) I'm eyeballing the Yamamoto amp Brian Bowdle/Venus HiFi sells. It has such a serious coooool factor, and by all accounts sounds gorgeous. (See, it ain't ALL about business!

Subject: Re: As an aside,
Posted by Wayne Parham on Mon, 11 Apr 2005 16:47:27 GMT
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I haven't tried a 2123 in a midhorn, but I have used the 2120. It has less output above 1kHz, but it

has enough that summing is good with the tweeter at 1.6kHz. I found the 2012 sums best with a 2426 tweeter when the 2012 has a 1mH coil in series and the tweeter polarity is reversed. With a PSD2002 driver, you want the mid run flat out without a coil.When you use the 2123 as a direct

point is not terribly critical, since the wavelength of 200Hz is nearly 6 feet. If the woofer is within about a foot and a half of the mid, front to back, you're in good shape. Just put a 6mH coil on the

crossover point is a little more critical. We want the midrange to cover the entire vocal range, so it is doing just about the whole 200-2kHz decade, just a little shy at 1.6kHz. The midrange driver is 10" diameter, so DI matching occurs between 1.2kHz and 2.4kHz, even without a horn. At 1.6kHz, wavelength is about nine inches. We don't want to be a half wavelength apart electrically or acoustically or we'll have a summing problem. Closer or further, either one is better. The midhorn helps efficiency, directing the pattern into a 90x40 spread. Instead of collapsing DI it stays pretty constant through the midrange. The horizontal directivity is set by the flare and when used in corners, also by the room's walls, particularly at lower frequencies where the horn loses directional control. So the midhorn and tweeter have the same efficiency. But the midhorn upper limit is generally between 1kHz and 2kHz for best performance. There is usually some output above 2kHz, but in hifi situations, I usually shave this with a coil, if it appears in the response.The midhorn and tweeter were a little tricky to get good summing. It's nice that everything worked out, and that was one of my main design criteria. I wanted a horn that was large enough to be used at low frequency to cover the entire midrange band. But I didn't want it so large that it was unattractive. I also wanted a horn that would sum well with the 1" compression tweeters, and preferred if I could retain the 1.6kHz crossover point. This was beneficial for many reasons. So it was nice that it worked out. But it doesn't work out for every midrange driver and in combination with every compression horn tweeter.