Subject: 8 Pi speakers
Posted by wasteh202 on Thu, 03 Jun 2004 03:21:38 GMT
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WayneI have not followed closly the creation of the 8 Pi speaker, but I must say that it looks interesting. I have searched the forum and read the material there, but I am still lacking in some information. Are you packaging the Kits yet, are you shiping out the plans yet ? Also, do you have any posted specs on the speakers ? Thanks, Rodney

Subject: Re: 8 Pi speakers
Posted by Wayne Parham on Thu, 03 Jun 2004 06:15:33 GMT
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Nope, no and nope. But soon.Actually, a prototype was built that proved the point and as you probably saw, other people are already building them from preliminary information. The first one out of the gate was Duncan McBride, who built an excellent looking pair.Kits are available now, inasmuch as the crossovers are worked out and cables assemblies have been put together, so that's all nailed down. We maintain stock of the speaker drivers and most of the crossover electronics, so that part is ready. We're still waiting for inventory on one of the coils. But I still haven't finished the drawings to make the plans. I worked on them today, so it shouldn't be long before I have distribution copies of the plans available.

Subject: Re: 8 Pi speakers
Posted by Wasteh2202 on Thu, 03 Jun 2004 13:31:36 GMT
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WayneThanks for the info. I will watch for the info to hit your website and this forum. After building two pairs of 2Pi Towers I am in not hurry to build another pair of boxes right now. However, I am anxious to hear this combination of drivers in the enclosure that you have disigned. Got any specs you can give on the sensivity and the frequency range ? Also the cab size ? Thanks !

Subject: Re: 8 Pi speakers
Posted by Wayne Parham on Thu, 03 Jun 2004 18:38:46 GMT
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It's 5.5ft3 and 97dB/W/M from 35Hz to 16kHz when placed in corners or against the wall.

Subject: Re: 8 Pi speakers
Posted by Matts on Thu, 03 Jun 2004 19:24:53 GMT
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Wayne,Any plans to design a similar cab for a 12" or 15" woofer? Do the mids from the 10" make it better for this type of design?Matts

Subject: Re: 8 Pi speakers
Posted by wasteh202 on Fri, 04 Jun 2004 00:21:31 GMT
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thanks Wayne... I was hoping that it would be a bit more senstive than 97db. I guess the increase in sensitivity from the PSD2002 is reduced by the addition of an XO ... No ?I'm still interested, my ears are still good... so I really don't need much more than 1 watt.

Subject: Re: 8 Pi speakers
Posted by Wayne Parham on Fri, 04 Jun 2004 04:49:20 GMT
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The midrange and treble is reduced in efficiency to the level of the bass below 100Hz. Not only is the region below 100Hz augmented but also the region above 8kHz. This passive compensation EQ reduces sensitivity about 10dB but increased dynamic range provided by horn loading is retained. Said another way, maximum output is about 10dB higher because of horn loading.Some might wonder what is gained by using a horn to increase acoustic output by 10dB when electrical energy is reduced by 10dB. On first glance, it would appear that the net result is no change. But distortion is decreased, and dynamic range is increased. The system sensitivity remains the same in an implementation like this, but maximum output is increased and distortion is reduced.

Subject: Re: 8 Pi speakers
Posted by Wayne Parham on Fri, 04 Jun 2004 05:01:40 GMT
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I hadn't really considered it but I also wouldn't rule it out. Something like a Magnum 12 in a cabinet like this using a larger horn and a 2" compression horn might make a good system. One problem that would need to be solved is that 2" compression drivers usually don't reach beyond 10kHz, so an additional tweeter would probably be desired. Another is finding a 12" midwoofer that would perform well through the midrange and be suitable for a woofer in a reasonably large

vented back chamber.Most of the midwoofers that come to mind are tuned so that they work best in small vented cabinets having fairly high cutoff. They could be put in a larger cabinet to yield an EBS alignment, but the shelved response resulting from the lack of horn loading in the bass plus additional reduction in bass from an EBS alignment in the vented rear chamber would probably yield too little bass to be really useable. In short, most of the good 12" drivers I'm thinking of are better used as midrange drivers than for something like this.What we really need is to sweet talk Eminence into a driver tuned like the Alpha 10 but with a powerful motor having a shorting ring. Sort of a Magnum 10 with tuning like the Alpha 10. Eminence loves to be sweet talked like this, especially with a purchase order in hand. We'd need to commit to a hundred units and they'd be happy to make 'em for us. That's something to think about. A 400 watt Magnum 10.

Subject: Re: 8 Pi speakers
Posted by wasteh202 on Fri, 04 Jun 2004 05:10:49 GMT
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That helps me alot. Wayne, thank for the great explanation on how this works. I really think the cabs for the Thermonic 8 will challange my woodworking skills. Perhaps I can find a craftsperson to build them for me. Anyway... I'll be looking for the plans when they are available.Thanks

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Subject: Listening to Pi 8s yet?
Posted by GarlandGarland on Sat, 05 Jun 2004 12:28:27 GMT
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Has Duncan finished and listened to his 8s yet?Garland

Subject: Re: Good Idea!
Posted by Matts on Sat, 05 Jun 2004 15:11:34 GMT
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That sounds like a great idea! Would it also be usable in a Super Pi Two? That could create a large "upgrade" market. Us DIY'ers like to upgrade...Also, the next obvious question, have you tried a JBL in the new 8? I'm sure the "Magnum 10" would be a better value, though.

Subject: Re: Listening to Pi 8s yet?
Posted by Wayne Parham on Sat, 05 Jun 2004 18:31:19 GMT

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Duncan is still waiting on his coils. They've been on backorder since the beginning of time, seems like.

Subject: Re: Good Idea!
Posted by Wayne Parham on Sat, 05 Jun 2004 18:33:54 GMT
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Subject: Re: Good Idea!
Posted by Matts on Sat, 05 Jun 2004 20:42:20 GMT
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What about something like the "magnum 10" as you propose in the Two Pi series- would that work with bette quality bass? Would it still "crossover" well with the tweeter? Could be a good market for it besides the Pi 8.

Subject: Re: Good Idea!
Posted by Wayne Parham on Sat, 05 Jun 2004 21:12:26 GMT
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The electro-mechanical specs for the Alpha 10 make it suitable for use in a bass-reflex cabinet tuned to be flat down to 35Hz. Most 10" drivers designed for high-output midrange are optimized for use at higher frequencies. The choice for trade-off is efficiency and improved IMD or bass extension. The Alpha 10 can be used in systems that have deep bass, whereas most high-output 10" drivers really can't.

Subject: Re: Listening to Pi 8s and Pi 2 Towers
Posted by Duncan McBride on Sun, 06 Jun 2004 17:58:57 GMT
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We're waiting on the coils. I went ahead and ordered another pair of Alpha 10s for the Pi 8s, because I've really been enjoying the 2 Pi towers and now I don't want to cannibalize them. I want to be able to do a direct A/B comparison of the Pi 8s and towers - I'll post my own impressions here when I can. Speaking of comparisons, I need to search the Bottlehead forum for a speaker selector switch/solution - any suggestions here? Thanks.

Subject: Re: Listening to Pi 8s and Pi 2 Towers
Posted by GarlandGarland on Sun, 06 Jun 2004 19:43:34 GMT
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Apparently John LaPaire made up a speaker level switch which was used at the latest New England Bottlehead meeting yesterday. Unfortunately, I missed it. I bet a query on the B'head forum will turn up details. I look forward to your report on the Pi 8's. They look great!G.

Subject: Re: Listening to Pi 8s and Pi 2 Towers
Posted by Wayne Parham on Sun, 06 Jun 2004 19:45:26 GMT
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For a speaker selector switch, I'd find a nice DPST or DPDT with high current capacity. Switches with high current capacity have low contact resistance, and that's what you want. Then wire it up to your connectors and mount everything in a nice little box and you're set.

Subject: Re: Listening to Pi 8s and Pi 2 Towers
Posted by wasteh202 on Sun, 06 Jun 2004 22:00:57 GMT
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DuncanPlease do not hesitate to post you findings here. I very much am interested in hearing you findings of the comparison of the 2Pi Towers and the new Pi 8.Thanks !

Subject: Speaker switch
Posted by JLapaire on Mon, 07 Jun 2004 11:20:18 GMT
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Hi Duncan,I put a couple of Potter DPDT relays in a box, wired to the usual banana-type posts and powered by a wallwart that was laying around. 8 feet of zipcord and an SPST toggle make/break the coil line to provide remote capability, but I think I'll increase the length to 15 feet or go wireless. The relays are 10amp @ 277vac, but I wired the contacts in parallel and used a relay for each channel so they could be separated in the box. I'll shoot a pic if you'd like, but there's really nothing to it.When you can switch directly between speakers nothing can hide.We also used it to listen to differences in speaker wire with limited success - you really need two of them to completely isolate the wire.John