Subject: Pi designed bass for Oris horns?
Posted by JLM on Thu, 02 May 2002 18:17:29 GMT
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Has anyone tried to use one of Wayne's bass designs for an Oris 150/200 Lowther based speaker? I'm considering a very small SET amp in a dedicated sound room for classical, jazz, and pop at average 85 dB sound pressure levels. The room will be roughly 21 ft x 13 ft x 8 ft and well dampened. The Oris horns are 106 dB efficient and cross over at 160 Hz for the 150 model and 220 Hz for the 200 model at 6/12 dB per octave.Calling Dr. Wayne, what's your perscription for these ailments?

Subject: Re: Pi designed bass for Oris horns?
Posted by Wayne Parham on Thu, 02 May 2002 20:47:20 GMT
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See the link:

Implementations with Oris horns

Subject: Re: Pi designed bass for Oris horns?
Posted by Frode on Fri, 03 May 2002 04:45:48 GMT
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Hi!I've used 4Pi with JBL 2226H below my Oris 200. This is a very nice combination, but the deepest bass is missing. Wayne suggested a 2245H but it is difficult to get here in Norway and besides, my upper limit for box size is around 5 cu.ft. I think both the 4Pi with a 2245 and the 10Pi with a 2226/2227 would be a nice match for the Oris. I guess the 2235H also would be nice. As far as I can remember, the 2235 driver should be used in a 4 cu.ft box according to PiAlign.Frode

Subject: Re: Pi designed bass for Oris horns?
Posted by JLM on Fri, 03 May 2002 18:22:06 GMT
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Thanks for the response Wayne, but I don't even know enough to be dangerous. I need spoon feeding:Could you recommend an amp to drive the Pi bass units?Don't know the efficiency of any of these or how they would cross over. These would be going into a dedicated sound room, so size would not be a huge consideration. How low would the 10 Pi option go down to? Where can I listen to one? How much bigger to get down to 20 Hz?Am I the only dummy here?thank you Dr. Wayne

Subject: Re: Pi designed bass for Oris horns?
Posted by Frode on Fri, 03 May 2002 18:48:57 GMT
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Bert has a suggestion for a passive line level filter at the bottom of his manual page.Frode

Filter for Oris

Subject: Re: Pi designed bass for Oris horns?
Posted by Wayne Parham on Sat, 04 May 2002 04:48:32 GMT
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You wrote:>> Could you recommend an amp to drive the Pi bass units?I like Crown amps, lots of clean power. But there's a bunch of other amps that are suitable too.>> Don't know the efficiency of any of these or how>> they would cross over.Obviously, this is application specific. But you could do it actively or passively without much difficulty.>> How low would the 10 Pi option go

are you from Tulsa?>> How much bigger to get down to 20 Hz?Huge. I'd say horns that are useful to 20Hz would be for permanent installation only. You can make a reasonably sized reflex cabinet reach 20Hz, or you could make a transmission line, possibly a TL pseudo-horn. But a true basshorn that reaches 20Hz is a massive device.

Subject: Re: Pi designed bass for Oris horns?
Posted by JLM on Sat, 04 May 2002 06:35:09 GMT
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OK, now you're messing up my head - visions of audio sugar plums blurred with capacitors, resistors, and cabinet options. I'm a pitiful example of an 45 yr old engineer, because I never understood electronics (degree in civil engineering).I remember Crown amps from the 70's. We considered them big, built like tanks, used mostly for professional applications, and not cheap. Is this the same as you mentioned? OK, confession time, I was thinking about using a Decware amp.I'm 700 miles from Tulsa, but have relatives in Springfield, MO so as we get closer coming to you would be a real possibility.

Subject: Re: Pi designed bass for Oris horns?
Posted by JLM on Sat, 04 May 2002 06:40:53 GMT
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Thanks Frode, but designing/building custom electronics it too much for me. I want to know how it's going to sound before I make big investments in money and/or effort.Don't misunderstand, I've built pre-amp and power amp kits (with some help). But those were from Hafler, so no designing, and I could hear examples before hand. I've also built transmission line cabinets for 8 inch drivers, but those were from a company I was very familar with.

Subject: Re: Pi designed bass for Oris horns?
Posted by Wayne Parham on Sat, 04 May 2002 07:27:10 GMT
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Next time you plan a trip to Spingfield, be sure and make some time to come to Tulsa.

Subject: Re: Pi designed bass for Oris horns?
Posted by Frode on Sat, 04 May 2002 08:22:36 GMT
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I'm waiting for some parts to finish my bass amp and in-line filter, so for the time being, I only use a L-pad to dampen the horns. The whole system is powered by a 2A3 amp. This sounds quite nice, and I believe the system would work very well with a passive crossover. I could live happy with this and a 20w tube amp.

Subject: Re: Pi designed bass for Oris horns?
Posted by JLM on Sat, 04 May 2002 15:57:22 GMT
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I think speakers (the only transducers left in the chain other than my ear drums) make a much bigger difference than amps. The Decware SET's are class A, but only a couple of watts (Steve Deckert goes on and on trying to explain why 1.8 watts RMS sound much louder than most would expect). They're reported to love 2 ohm loads versus 16 ohm loads, but I believe that they have limited low frequency capacity. That and needing more power is why I was thinking about a different amp for the bass units anyway.I'd like to limit the total size of the sound room to 23 ft by 15 ft by 8 ft (including any built in bass horn loading). I'd like a couch in front of my desk (that both are in the sweet spot) in the middle/back of the room. I'm also thinking about putting the back wall on a slight angle from square to break up standing waves. Padding/diffusion is assumed to be needed to be ideal, although books and music shelving would cover much of the room. No HT. I'm thinking that the Oris horns would be about 5 feet from the back wall and 3 feet from side walls. What do you think the cabinet design/locations should be? Building them into walls or floor would allow for 2x4 reinforcement ribs on some sides and concrete on the other sides.At what distance of driver separation does it become audible at 160 - 220 Hz? Perhaps the mouth could be located beside the Oris horns along the side walls or below them (acting as stands).

Subject: Decware
Posted by Mike Borzcik on Sat, 04 May 2002 19:39:43 GMT
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For what it's worth, I tried a Zen with my 4 Pi's for a while and then sold it. It just didn't have enough oomph, both in terms of absolute volume and the character of the sound. I'm not sure how closely that would coincide with the results you'd get with your speakers.Mike

Subject: Re: Pi designed bass for Oris horns?
Posted by Wayne Parham on Sun, 05 May 2002 00:43:37 GMT
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I'd start by positioning the speakers in the corners, with the mid/high horns facing in at 45 degrees so that their pattern was within the wall angle. This allows the bass to operate in eighth-space, but doesn't introduce early reflections at higher frequencies because the mid/high horn pattern is within the wall angle. Keep the path length distance between sound sources under 1/4 wavelength at the crossover point. So for crossover around 200Hz, that's about a foot and a half.

Subject: Re: Decware
Posted by JLM on Sun, 05 May 2002 08:05:58 GMT
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Thanks Mike!Can you define "character of the sound". Do you mean that the Pi's outclassed the Zen amp? Or that they were a poor match? Obviously the Oris and the Zen are in different price classes and I'm probably going too cheap with a Zen. Any suggestions for amps?thanks

Subject: Re: Decware
Posted by Mike Borzcik on Sun, 05 May 2002 12:42:46 GMT
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The Zen just sounded underpowered, even when it wasn't actually clipping (which it often was). The clarity and soundstage and all that audiophile crap were all there, but it just didn't have enough drive to make music. Listening to it was a chore, and every time I tried to give it another chance, I always switched back to my Jolida 302a after a day or so.As for suggestions for other amps, Doc Bottlehead's Paramour has been getting a lot of attention on this board lately (you can do a search for it), but that's still in the same price range as the Zen. Personally, I've been looking at some of the offerings from Rogue Audio lately. They seem to be no-nonsense products that have plenty of power and still do all the audiophile stuff right. Haven't actually heard them yet, so I can't really say much more about them. Other than that, I'd think just about any low to medium-powered tube amp in your desired price range would probably work well.Mike

Subject: Re: Decware
Posted by steve f on Mon, 06 May 2002 00:09:18 GMT
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There are some really nice amps by Transcendence Sound. They are OTL amps in both stereo and mono pairs, and available in kit or assembled versions. The designer, Bruce Rosenblit, is an electrical engineer. They have been well received.Steve