
Subject: Horn - install in cabinet or not?

Posted by [laoye](#) on Thu, 05 Sep 2002 20:21:52 GMT

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I'm planning to build 4-Pi pro speakers. I've been advised by one cabinet maker that it is better to build with the horn outside the box, placed freely on top of the cabinet. The idea is to offer some freedom to move it a bit with respect to the woofer cabinet. My experience with speakers is that small toe-in adjustments do matter, but I've never fooled around with doing it with separate drivers. Could folks with experience here comment whether this is the way to enlightenment or madness? Thanks in advance,- Ken

Subject: 4Pi pro

Posted by [LuxmanLover](#) on Thu, 05 Sep 2002 20:45:15 GMT

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I can't comment on the sound of the horn on the outside vs the inside of the 4 pi's but I can tell you to wait till the horn is in your hand before you cut the hole! I went off of Eminence catalogue for the hole size and ended up having to make a spacer for inside the cabinet so the t-nuts would have something to stick into. The centerline of the bolt holes ended up being 1/8" from the cutout. If you use the H-290 I would make the hole 5 1/8 x 10 3/8. Also I'm not sure how it would impact the sound, but the flange on the H-290 is way thick, like 3/8", so I would also consider flushing it into the baffle to improve the esthetics of the unit. Hopefully Wayne will comment on that. Anyway....that's tonites project, hogging out the baffle, so please Wayne stop me if this is a bad plan. I'm hoping it's not cause it's my understanding that it improves the difraction of the high end when the tweeter is flushed in...hopefully this applies to horns as well. Kelly

Subject: Re: Horn - install in cabinet or not?

Posted by [Wayne Parham](#) on Thu, 05 Sep 2002 20:50:56 GMT

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Hi Ken! Whether you mount the horn on top of the box or inside the box is up to you. It's a matter of aesthetics, really. If you mount the horn on top, be sure to keep the mouth flush with the face of the cabinet and keep the woofer to tweeter distance the same. Wayne

Subject: Flush mount

Posted by [Wayne Parham](#) on Thu, 05 Sep 2002 20:57:25 GMT

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There is a diffraction edge that's formed when the horn is not flush with the baffle, but it is too small to affect the sound. Still, a flush mount horn looks very nice. I'd say, "do it!"

Subject: One more thing...actually 2

Posted by [LuxmanLover](#) on Thu, 05 Sep 2002 21:23:36 GMT

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Thx for the speedy response (that's one). Also I would consider doubling up the MDF on the baffle or use 1" material as it's going to be a little thin if you flush the horn all the way in. As far as the appearance thing...I think it's the fact that the port is flush with the baffle that makes the horn flange look out of place standing proud as it were...I'll let you know once I hog it out. KellyTHX again

Subject: you can try glueing

Posted by [Sam P.](#) on Thu, 05 Sep 2002 23:06:09 GMT

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1x2's around the inside edge. I repaired an old AR2 speaker that way, for the same reason...the t-nuts were coming loose where the TOO THIN plywood edge crumbled. Alternative to flush mounting is build up the front baffle, cork panels work well, even another layer of birch ply or mdf, with holes to clear the woofer and horn flanges. Very strong. Sam

Subject: I thought about....

Posted by [LuxmanLover](#) on Fri, 06 Sep 2002 00:52:05 GMT

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adding another panel onto the front but I was concerned about messing with the port length.....it would be very difficult to shorten the wooden port on the 4Pi pros, it would have looked cool a solid hardwood baffle....next time. Kelly
