Subject: Alpha 6 and horn loading
Posted by Adrian Mack on Sat, 29 Mar 2003 08:35:14 GMT
View Forum Message <> Reply to Message

Hey everyone.Have been playing around with the Eminence Alpha 6 driver in a tractrix horn. Does this look like a good response for 200Hz-800Hz? (I can use different compression drivers on my JBL 2370's so I only need 800Hz and not 1.6KHz). Wayne, I kept in mind what you told me about the throat diameters. This is only a 6" driver, does the throat of 20cm^2 pose any problems? Is it still too small?Seems like the horn has to be 77cm long!!! HUGE! I think this is for a normal shape though, the shape that Hornresp has in the schematics. I want to build one like the horn pictured on the bottom of this picture:Does Hornresp calculate dimensions for these? If not, how can I do this? Does making it this shape even decrease the length at all? (front to back is what I call length :). I dont think I can live with something that is 77cm long :PI have heard that large horns sound a LOT better than small ones. Would I be better off making one with a larger mouth?Thanks!Adrian

Subject: Re: Alpha 6 and horn loading
Posted by Adrian Mack on Sat, 29 Mar 2003 08:42:39 GMT
View Forum Message <> Reply to Message

One other thing, what if I have no back chamber at all? I modeled it in Hornresp without a backchamber and came up with very similar results. In practice though does it sound better with a backchamber?BTW: Is Alpha 6 even a good candidate for horn loading? It does have 20oz magnet, rather small for its size (for horn use), I *think* you need large magnets/strong motor for horns if using a backchamber, but I am not certain. Thanks!Adrian

Subject: Re: Alpha 6 and horn loading
Posted by Wayne Parham on Sat, 29 Mar 2003 08:51:54 GMT
View Forum Message <> Reply to Message

You're getting the compression ratio down compared to your earlier design and I think that's probably good. You basically have a 1.75" diameter throat supporting a 6" diameter diaphragm. It's still maybe a little bit small, but probably worth building and evaluating further.

Subject: Re: Alpha 6 and horn loading
Posted by Wayne Parham on Sat, 29 Mar 2003 08:54:35 GMT
View Forum Message <> Reply to Message

You can use the rear chamber to bring up response at the bottom end. Think about an

underdamped sealed box, how it makes a peak at fb. That can be used to fill in a response dip at the low end. If the horn is large enough, you probably won't have much LF ripple but if you do, then reactance anulling from the rear chamber might be useful.