
Subject: Eminence Delta Pro 8-A in a JBL AM6200-64 horn project

Posted by [brad944911](#) on Thu, 15 Jun 2017 15:45:36 GMT

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ALL,

First time posting here and first time working with horn speakers, but not speakers, so I can be dangerous

I need some help and advice...I came across a set of horns(no cabinets/speakers) from an old JBL 2 way pro speaker, the AM6200-64's, and want to build a nice set of 2 way horns myself without breaking the bank buying the JBL drivers. To that end, I did tons of research and purchased the Eminence Delta Pro 8-A's based on what I read about good horn candidates; meeting the BI, EBP, freq resp and power handling. I downloaded Hornresp, but I cannot really figure it out (especially with the prefab'd horns) and need a hand.

I have a free weekend this Friday-Sunday and won't have another for a while so instead of monkeying around with doing all the wrong things in Hornresp, I would appreciate a hand with figuring out the front cavity volume, rear cavity volume and what range the program says I can expect so I can get this at least mocked up. At least by reviewing how experienced usres use the software, I can learn hopefully.

If anyone well versed in horns and Hornresp would like to help me out, I can offer ya a few good craft beers if ever in the Tampa area

Here are the parameters:

- The horns = a 4" mouth, are 11.5" deep and roughly a 17"x13"(60x40 pattern) mouth
- Speakers = Eminence Delta Pro 8-A. I attached the spec sheet but here's what Hornresp needs:

$S_d = 218.2\text{cm}^2$

$C_{ms} = .28\text{mm}$

$R_e = 5.4$

$B_l = 14.1$

$L_e = .82$

Parameters I don't know: M_{md} , R_{ms} and N_d .

Once again, thanks for the help guys! It's more than appreciated!

Brad

File Attachments

1) [am620064.jpg](#), downloaded 247 times

2) [290-507--eminence-delta-pro-8a-specifications.pdf](#),
downloaded 323 times

Subject: Re: Eminence Delta Pro 8-A in a JBL AM6200-64 horn project

Posted by [Wayne Parham](#) on Thu, 15 Jun 2017 20:23:12 GMT

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Do searches here because you'll find a lot of information about horn loaded loudspeakers and how to design them.

I will tell you this for starters: A horn is really maxxed out at a decade, which is a little over two octaves. So if you plan to horn-load that driver, keep this in mind. You can do a hybrid approach that rear loads the driver with a Helmholtz cavity like Altec did to get some bass, or you can rear-load with a transmission line or horn. But those approaches complicate the design, and even a "standard" horn design is sometimes difficult for a first-time build because of the additional challenges of acoustic filter function created by the horn/waveguides, modified (but usually improved) directivity, shifting acoustic centers and requisite crossover phase, limited passband, etc.

Subject: Re: Eminence Delta Pro 8-A in a JBL AM6200-64 horn project

Posted by [brad944911](#) on Thu, 15 Jun 2017 20:40:51 GMT

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Wayne,

Yes sir, I did research this site quite a lot over the last week or so...great(and a bit overwhelming at times) info on SEVERAL topics. I followed the white rabbit down several holes

I guess I should've mentioned that this part of the project is just for the mid bass/midrange. I already have the bass cabs and tweeters lined up; this was the last piece of the puzzle.

I also omitted all info system-wise...I apologize. For reference, I look to use this mid horn for 300Hz to 2KHz roughly. I will be tri-amping the system and using all active crossovers as well as EQ'ing. I have rudimentary measurement gear to check progress/regress.

Mostly I was looking to see if someone versed in Hornresp would run a mock-up so I could validate/scrap what I have. I know it's a lot of trouble, but so is all the wood working on a compressed schedule. Just thought it was worth a shot.

If these are a miserable failure, I guess I can get some of your horns...they were originally my plan until I fell into these JBL faces.

Thanks for the response and for maintaining this site.

Brad

Subject: Re: Eminence Delta Pro 8-A in a JBL AM6200-64 horn project

Posted by [Wayne Parham](#) on Thu, 15 Jun 2017 21:14:42 GMT

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Hornresp is great at modeling the lower and midband response, but since the upper end is largely determined by cone shape and material, it can't really model that. Hornresp is going to tell you what a rigid piston does, and at high frequencies, the cone isn't pistonic.

You can manipulate the rear chamber size for reactance annulling or to modify response down low to suit your needs, but I suspect that won't matter too much. You will probably find it changes the ripple down near cutoff. Play with different chamber sizes and see.

But again, understand that you'll need to measure the driver on the horn to know what it does at the high end of the passband.