Subject: Re: More HornResponse
Posted by lunkie on Thu, 17 Jun 2010 15:03:11 GMT
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It's been awhile since my last post on this but home matters always seem to put speaker matters on the back burner. And I've been playing around with hornresp also, somewhat getting the hang of it (at least for straight horns). I've probably run over 30 different drivers through it and keep coming back to the B&C 8 PE 21. So here's what it looks like now.

With this response.

It's a little smaller in the throat and mouth. Yes the throat seems small, so I decided to email the folks at B&C and ask them what compression ratio they recommended. They replied and said to use D.B. Keele's formula for horn throats and said that a 5.5 to 1 CR is OK for the 8" and using Keeles formula that's what it worked out too. I've bought a 3/4" sheet of MDF and have laid out the horn on it (boy was that fun) and one of these days will get around to cutting it out.

Some observations about using hornresp, at least for straight S1 to S2 horns.

Yes the mouth does effect low freq response but not as much as I would have thought, for a given driver. Going down from 288 inch/sq to 200 inch/sq did not effect the low side all that much. Changing the driver can really effect the low end, for a given horn.

The size of the throat really effects the high freq reponse, so does the Le of the driver. Also, note 2, page 17 of hornresp says that the upper response can be up to and over an octave higher than predicted. Anyone experience this?

The rear chamber effects low reponse, when the volume is small.

The front chamber effects high response.Start small and go up.

The loudspeaker wizard is really neat.

And a disclaimer for all the above, different drivers may and will not always model as per the above.

One final thought / question on straight sided cd horns vs radial cd horns (like the H290). From what I can gather hornresp does not model radial horns. What if you took the mouth, throat and length dimensions of a radial horn and plugged these values into hornresp for a straight cd horn? How similar or not would the response be for a given driver use in both types of horns? Or asked another way what are the response differences between a straight sided cd horn vs a bi-radial cd horn of the same dimensions, using the same driver?
Thanks in advance for any input anyone has.

File Attachments

1) B&C 8 PE21 8inch.jpg, downloaded 9022 times
2) PE21 Responce.jpg, downloaded 8720 times