KOMISSAROV SMALL BACK LOADED HORN WITH FOSTEX FE206E

This horn was designed by Russian horn designer Evgeny Komissarov. Evgeny has built this relatively small horn for 8” Lowther drivers.

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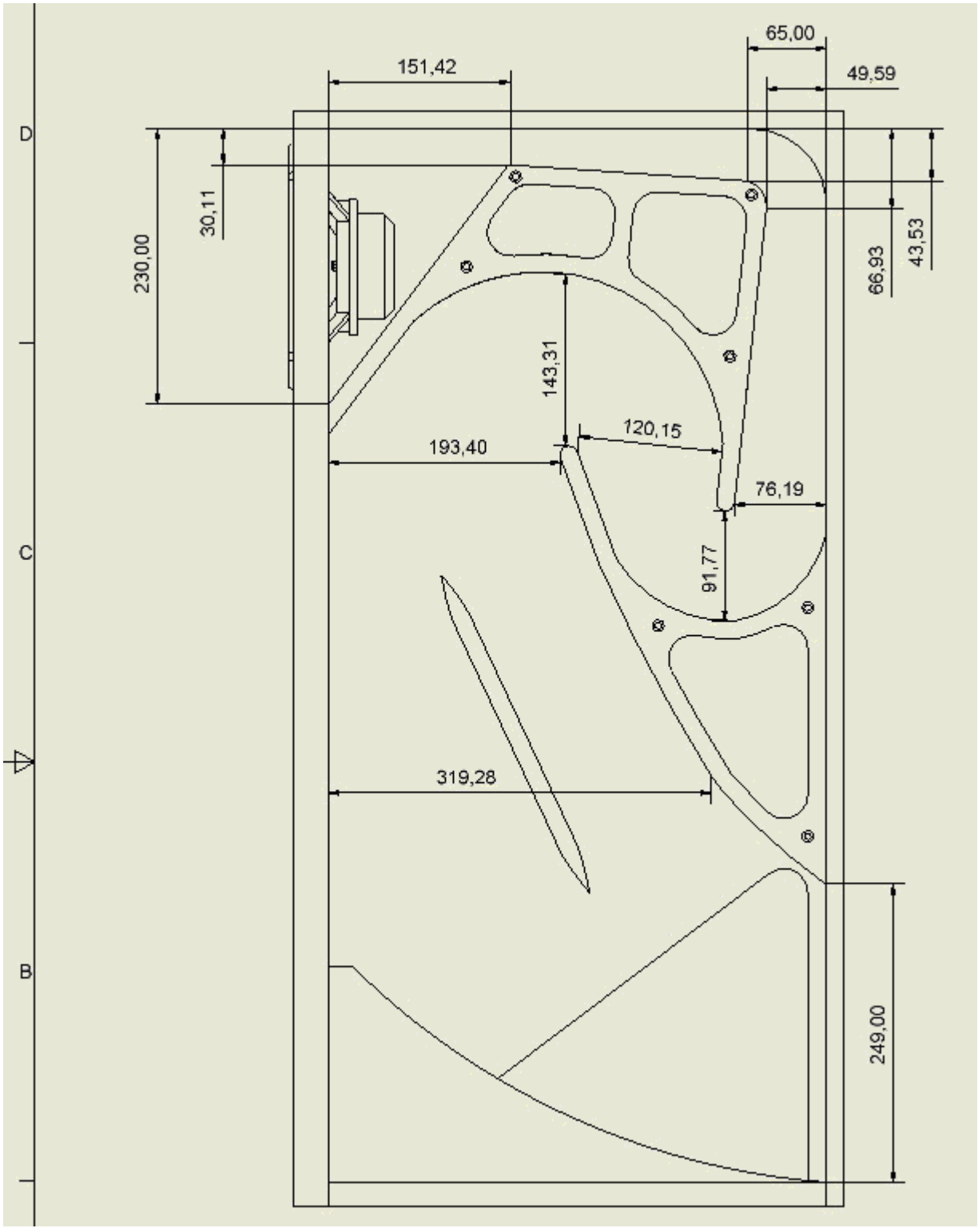
In this paper we evaluate the horn for much cheaper and common Fostex Fe206E.

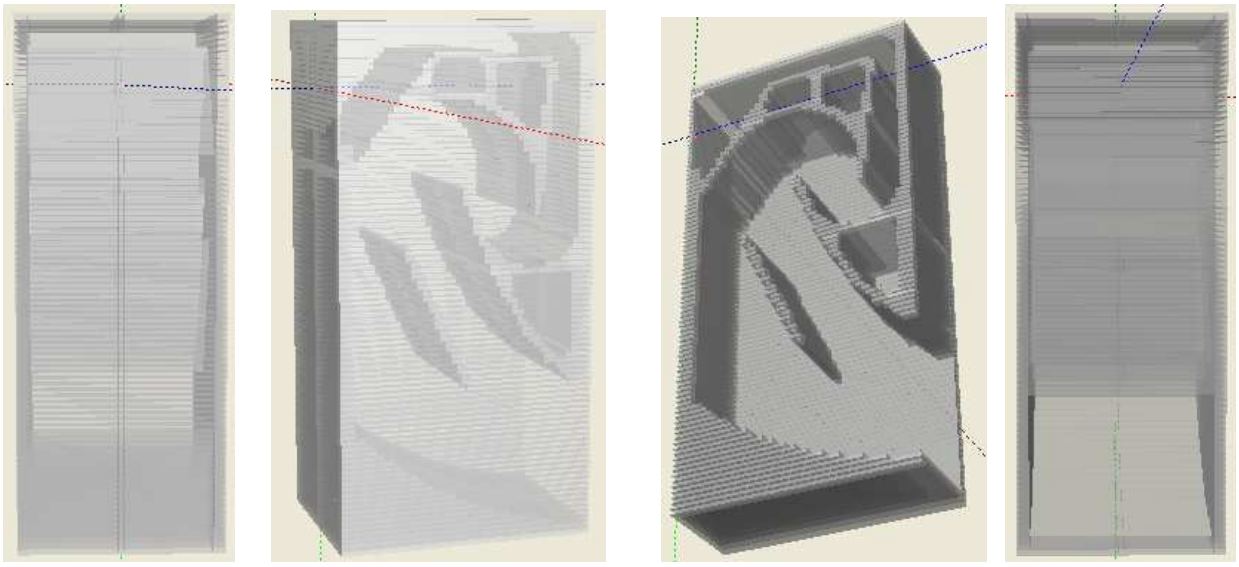
Re	6.690	Ohm	Mms	18.896	Gramm
Sd	206.10	cm2	Cms	0.881	mm/N
Fs	39.000	Hz	Rms	1.241	Ns/m
Vas	54.530	Liters	BL	13.118	T*m
Qes	0.180		R	8.100	cm
Qms	3.730		Le	0.000	mH
			Qts	0.17	

Fe206E T-S data

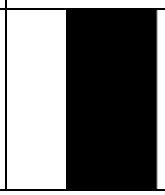
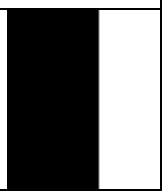


Original horn drawing by E. Komissarov

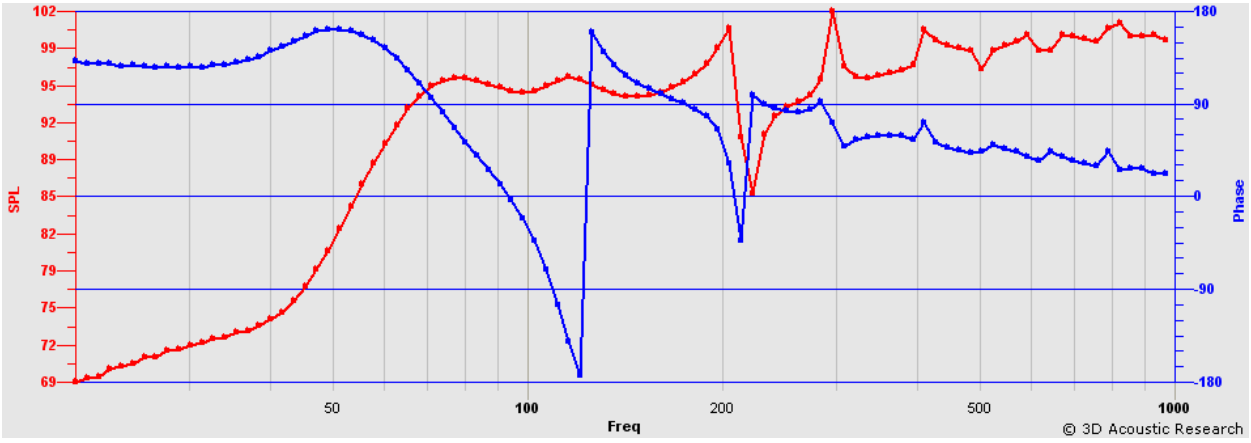
Simulaton #1. Simple horn exit



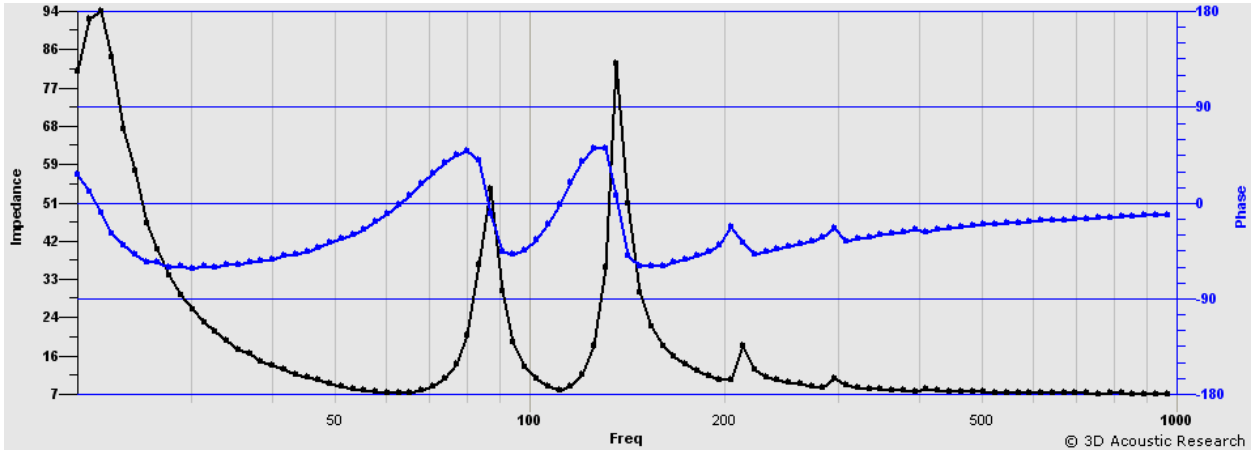
Layers for modeling:

Width, cm	2	15	1	15	2
BMP					

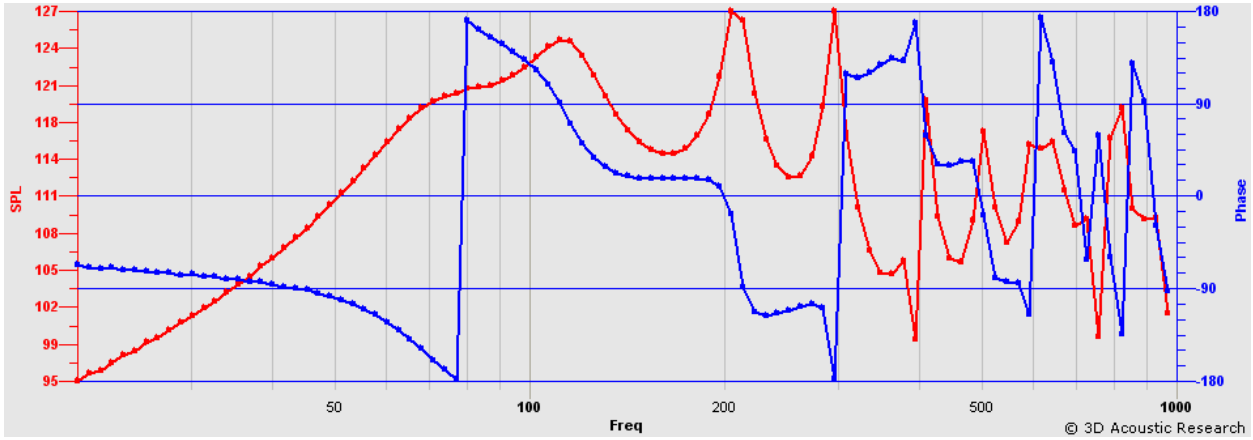
Total width 35 cm



SPL 2.83 V/1 m on driver axis

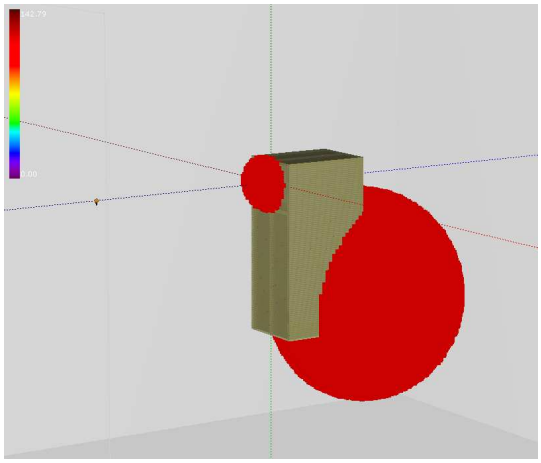


Electrical impedance

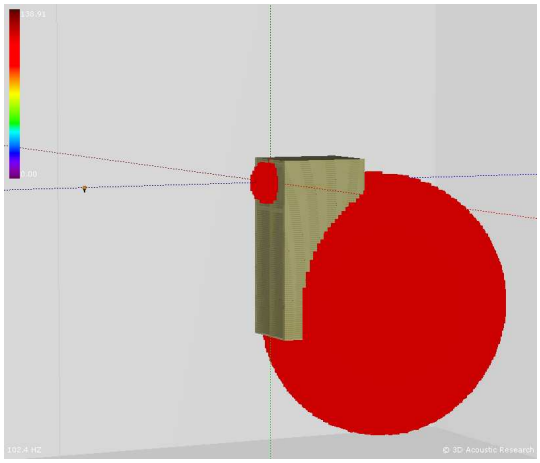


SPL 2.83 V/near rear horn exit

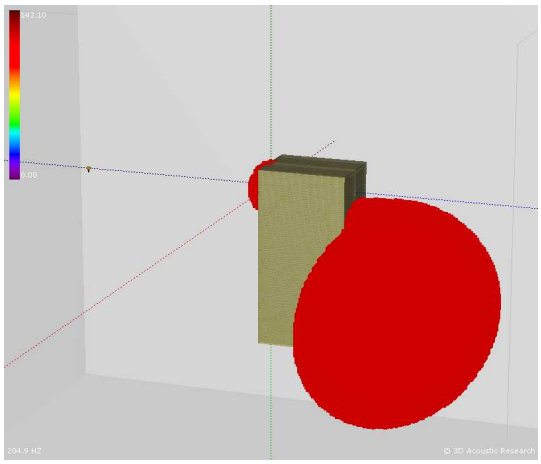
3D directivity:



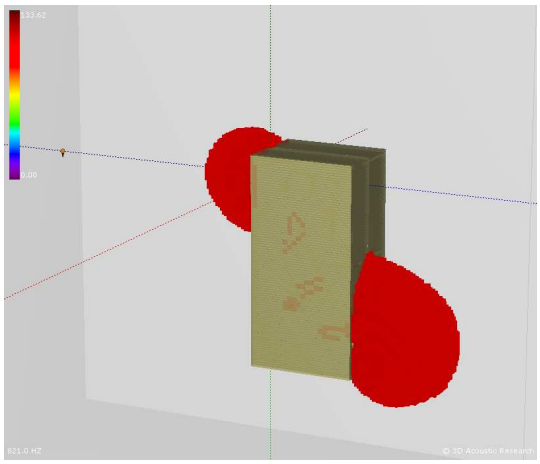
95-100 dB, 51 Hz



105-100 dB, 102 Hz

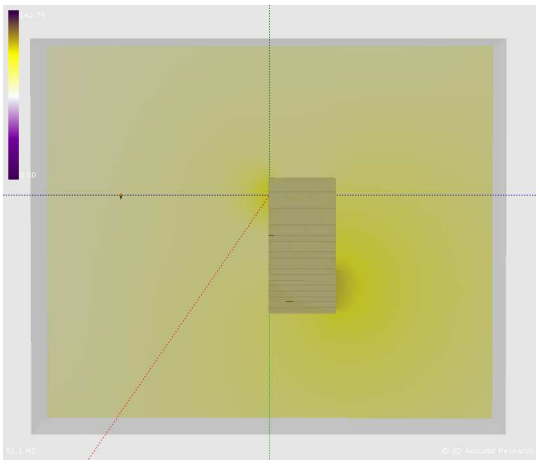


110-115 db, 204 Hz

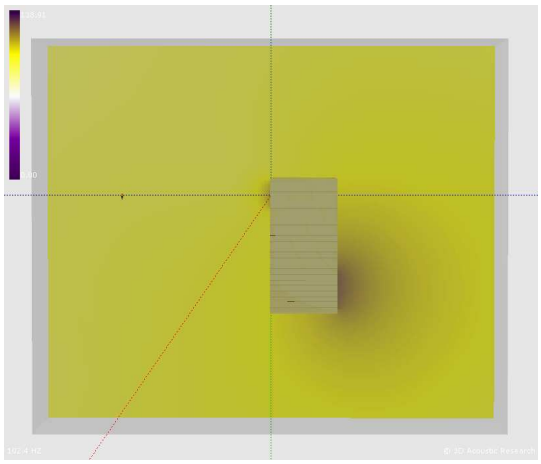


110-114 dB, 821 Hz

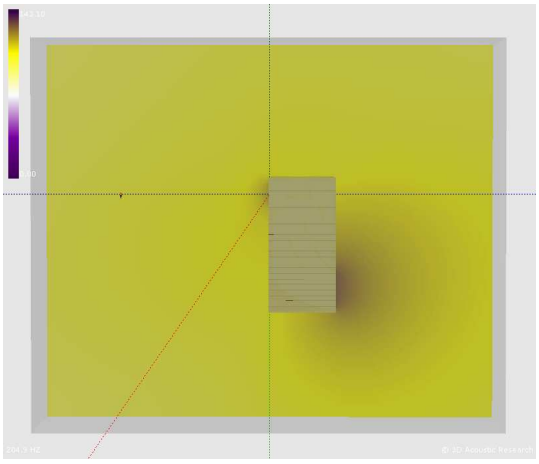
Cross section:



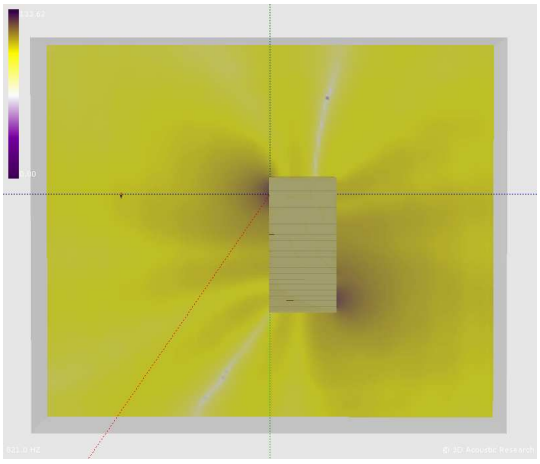
51 Hz



102 Hz

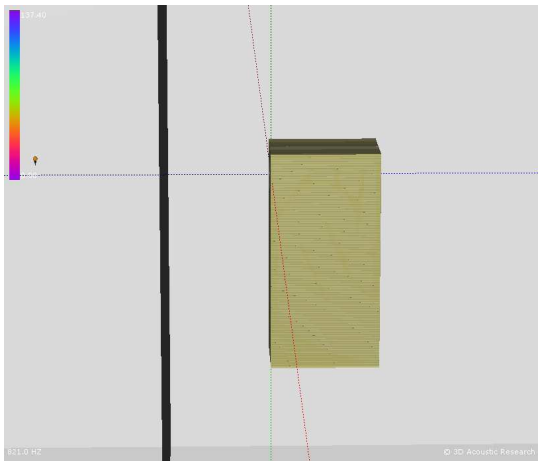


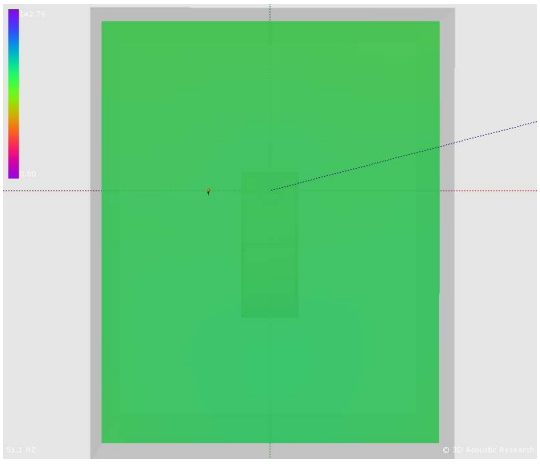
204 Hz



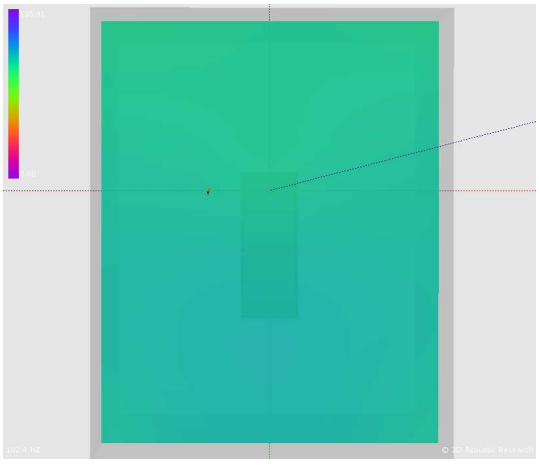
821 Hz

Front plane:

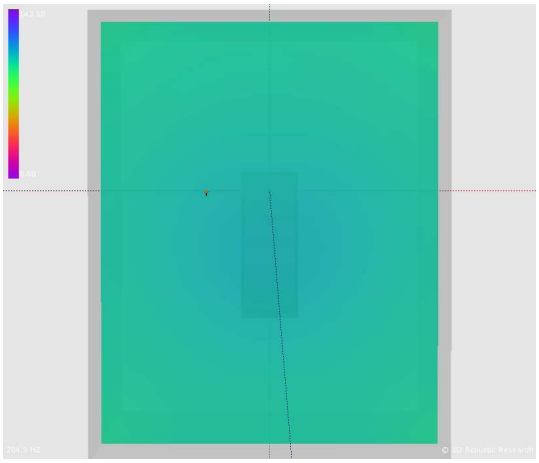




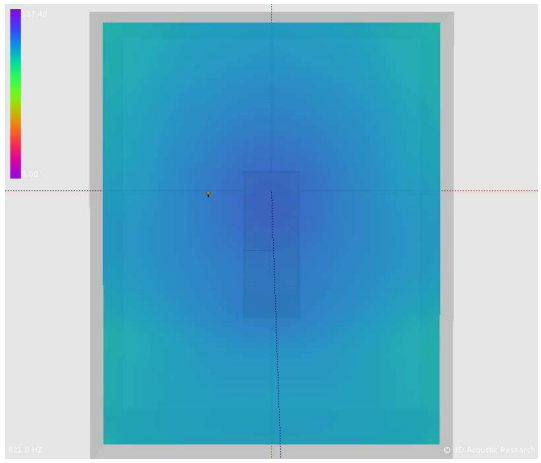
51 Hz



102 Hz

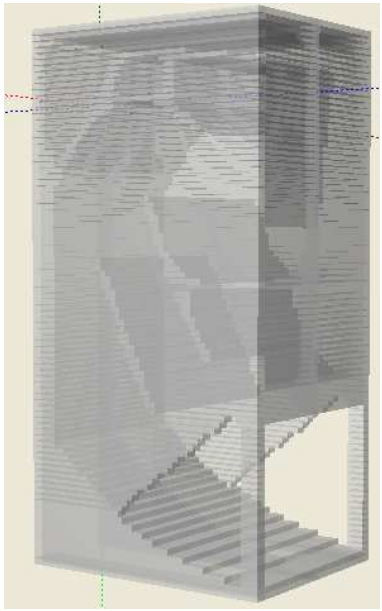


204 Hz



821 Hz

Simulation #2 Original horn exit (with hole at side walls)



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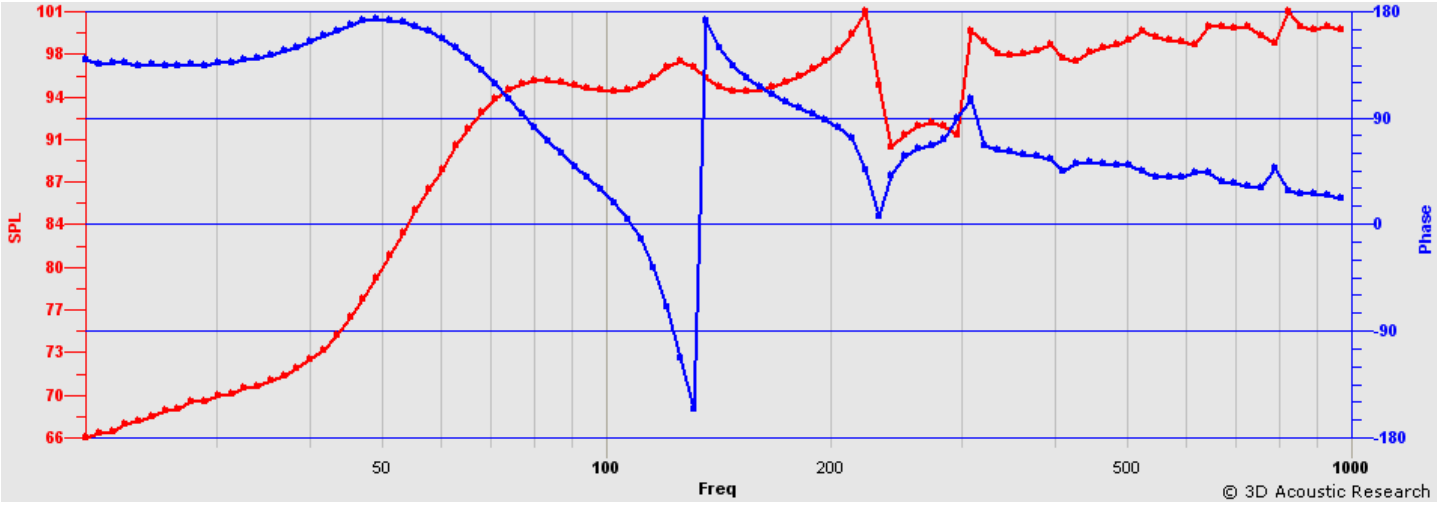
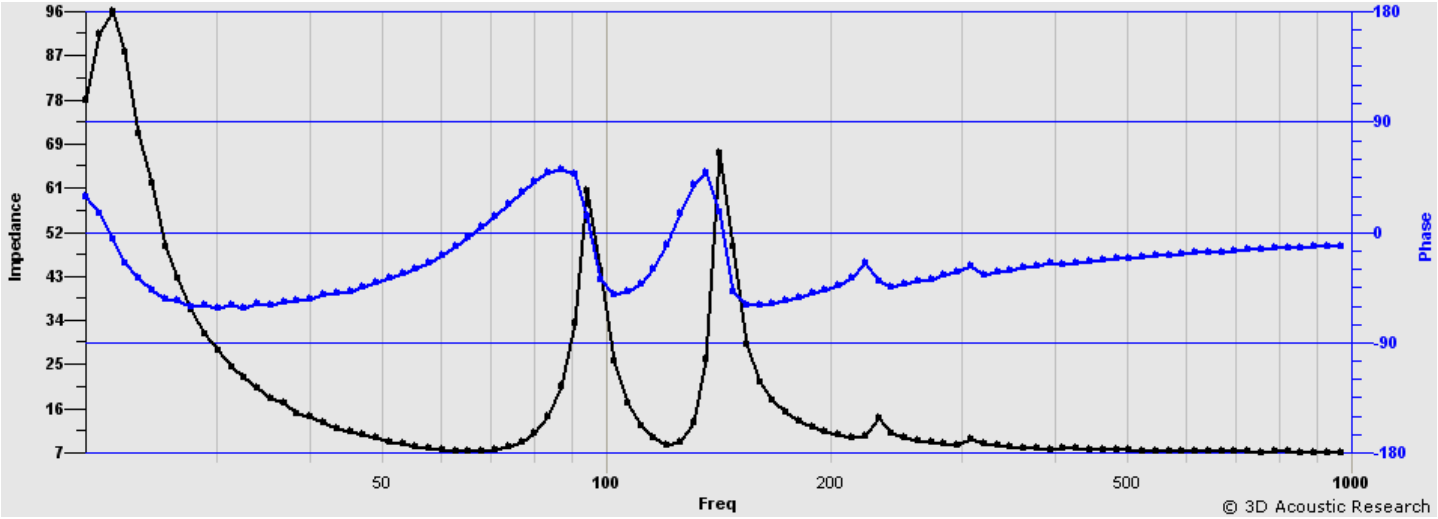
BMP					

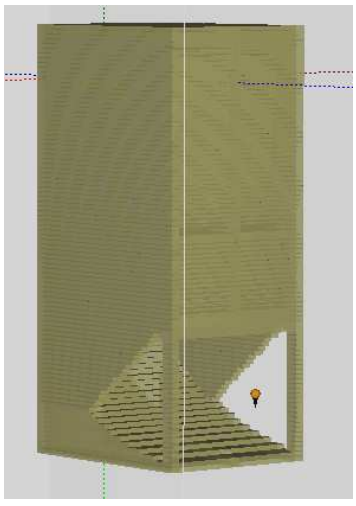
Total width 35 cm

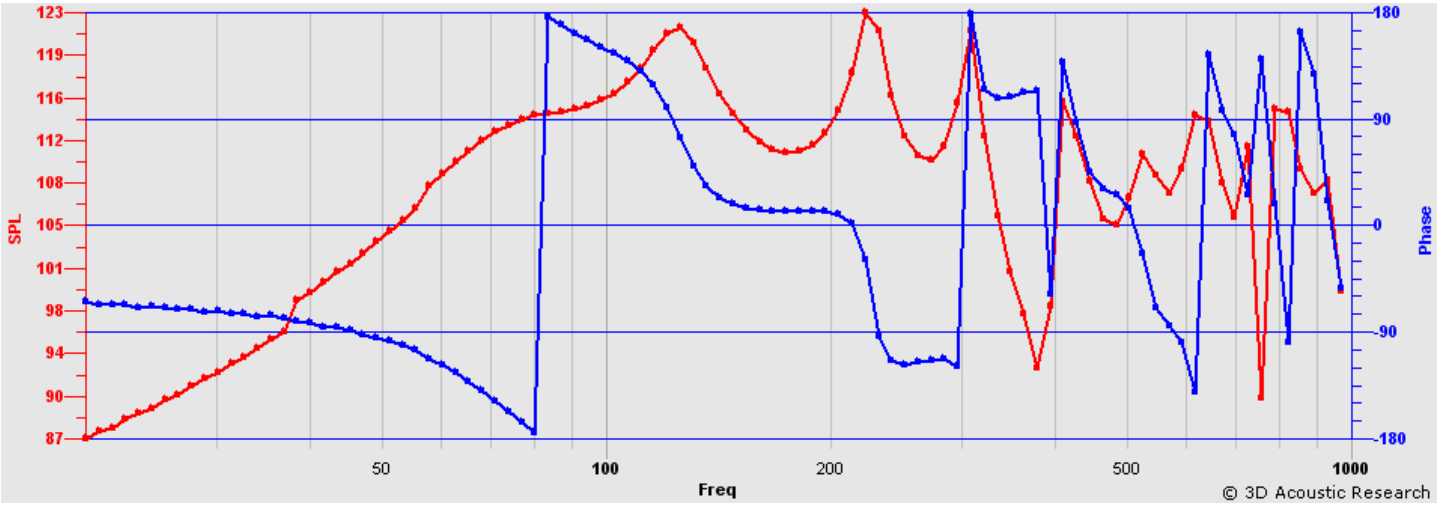


SPL 2.83 V/1 m on driver axis



Electrical impedance





SPL 2.83 V/near rear horn exit