

BIG BARBARIS HORN

This horn was designed by Russian speaker DIY designer Mokshancev Boris Borisovich.
(Author's email: Bob-hornik@yandex.ru)



Photo of Author with Big Horn

Big Barbaris Horn has been also replicated by Yury Likhovol



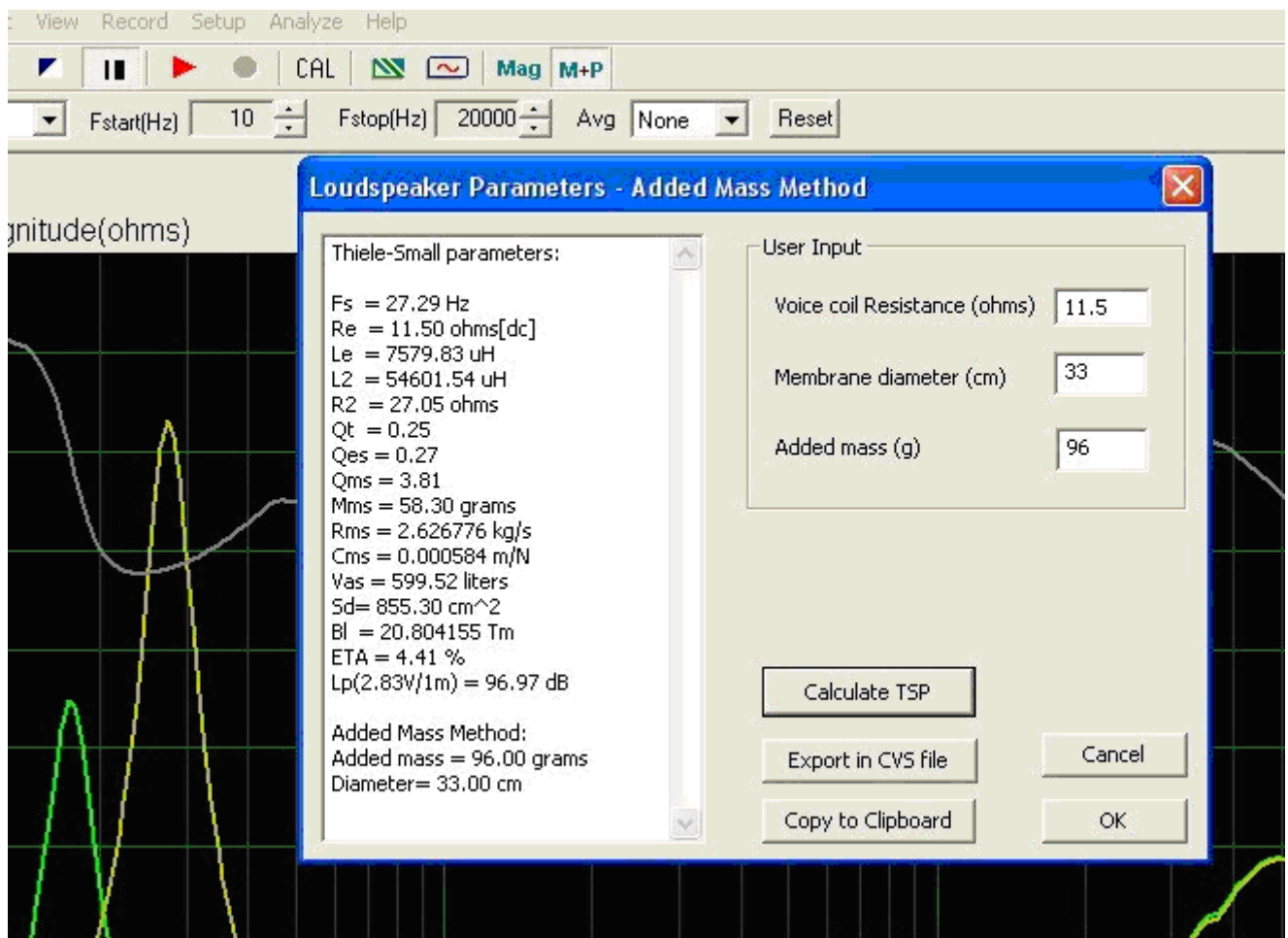
Photo of Yury Likhovol



Yury Likhovol's horns (<http://photofile.ru/users/yas/3682966/>)



Yury is building the Big Barbaris Horn



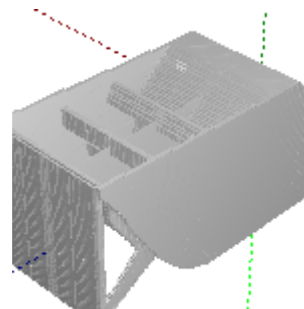
Altec 416Z T-S measured data



Measurements of Yury's bass horns in real room (left and right)

3D Response Simulation Report

Description: This Big horn was designed by Russian designer Boris Borisovich
audiportal.su
Model: Altec 416Z
Enclosure: BarbaHorn
Report By: 3D Response version 0.0
Report Date: 20.02.2010 13:54:49



Properties

Dimension: X:330 Y:250 Z:300

Driver: X:230 Y:125 Z:80

Microphone: X:150 Y:131 Z:280

Driver

Fs : 27.2900 BL : 21.0110

Re : 11.5000 Mms: 0.0604

Vas: 599.5200 Cms: 0.0006

Qes: 0.2700 R : 16.5000

Qms: 3.8100 Le : 0.0076

Sd : 0.0855

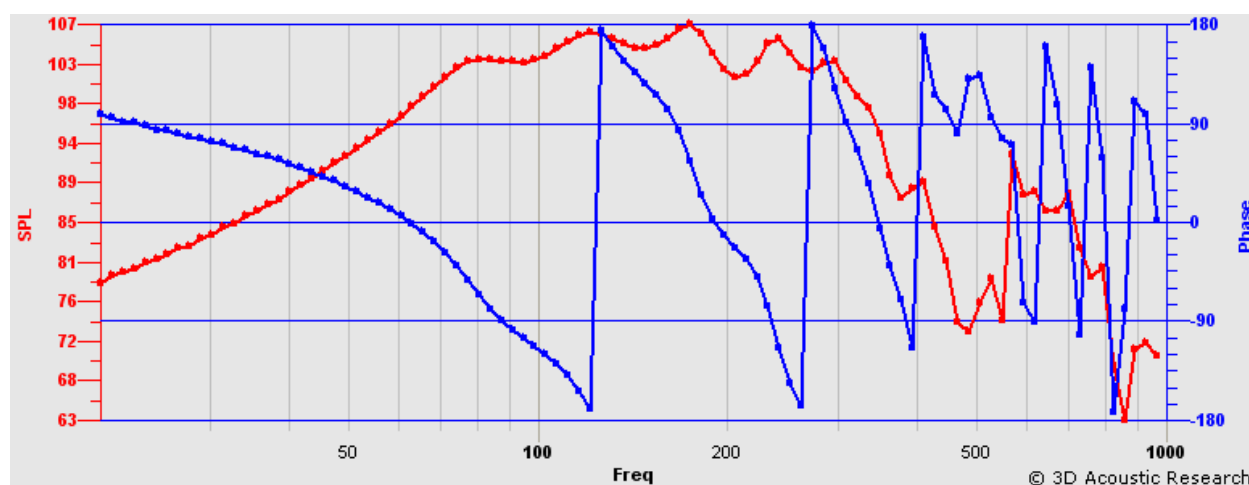
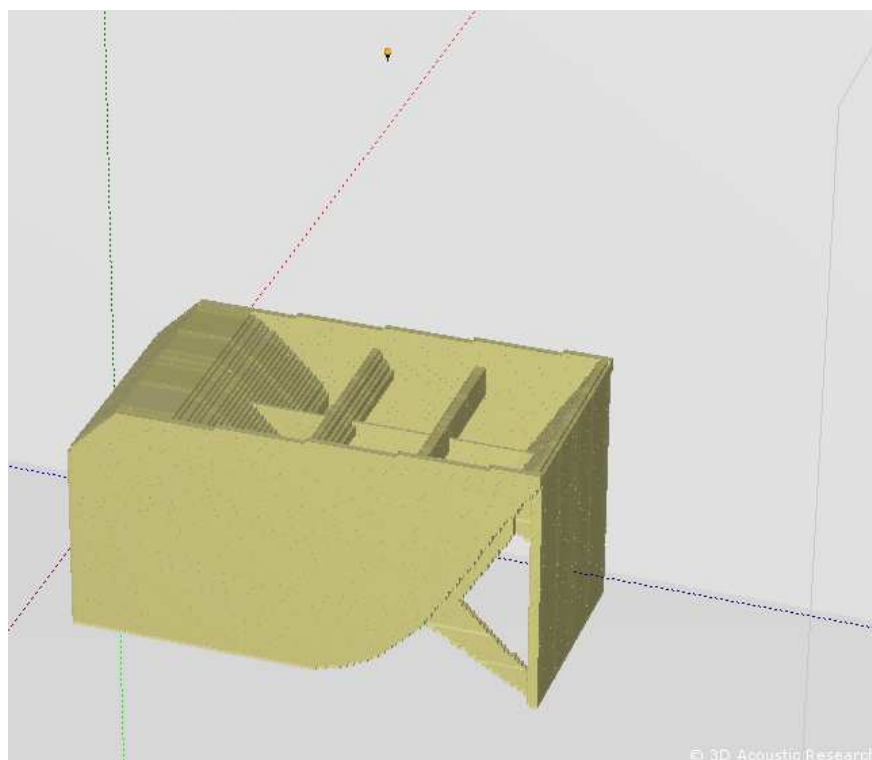
Layers for modeling:

# of layer	Width of layer	BMP
1	2	
2	1	
3	2	
4	13	

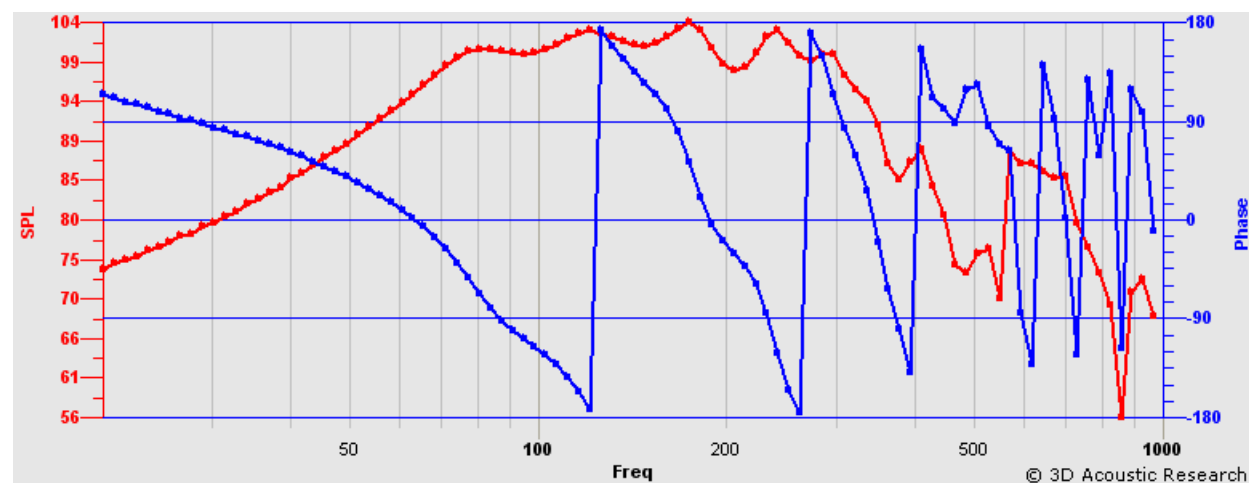
5	1	
6	11	
7	3	
8	1	
Then repeated from layers 7 to 1 in reversed order		
Total internal width = 63 cm		

Frequencies Hz (1/24 octave)

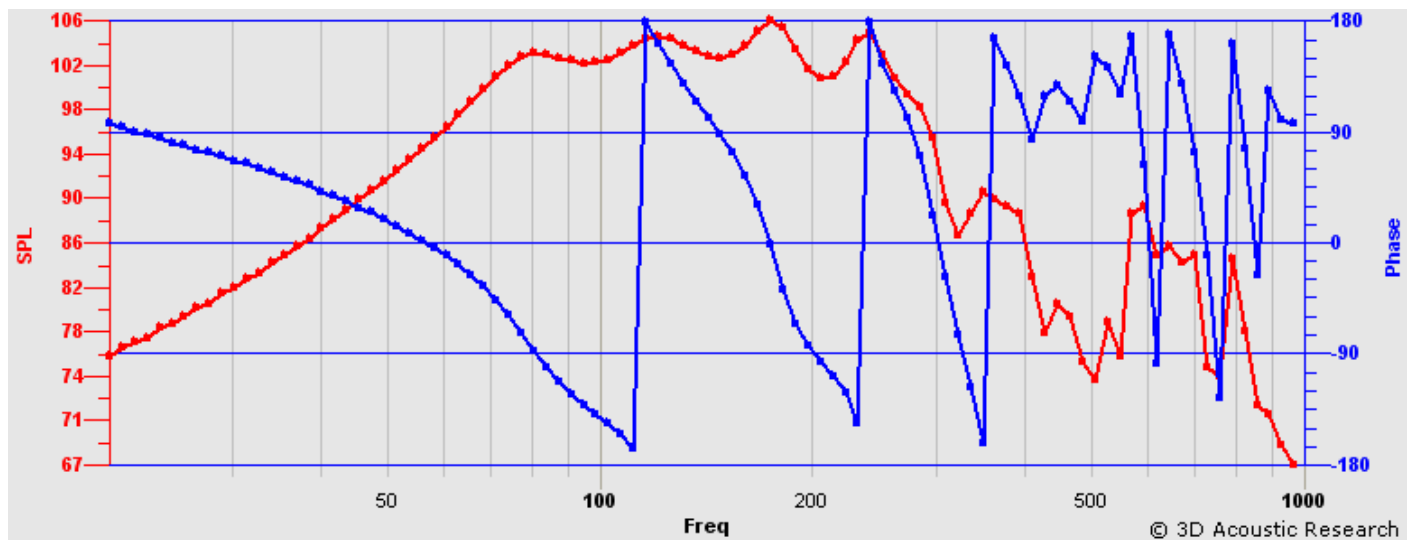
20.00 20.83 21.70 22.61 23.55 24.53 25.55 26.62 27.72 28.88 30.08 31.34 32.64 34.00 35.42
 36.89 38.43 40.03 41.70 43.44 45.25 47.13 49.10 51.14 53.27 55.49 57.81 60.22 62.72 65.34
 68.06 70.90 73.85 76.93 80.13 83.47 86.95 90.57 94.35 98.28 102.37 106.64 111.08 115.71
 120.53 125.55 130.78 136.23 141.91 147.82 153.98 160.40 167.08 174.04 181.29 188.85 196.72
 204.91 213.45 222.34 231.61 241.26 251.31 261.78 272.69 284.05 295.89 308.22 321.06 334.44
 348.37 362.89 378.01 393.76 410.16 427.25 445.06 463.60 482.92 503.04 524.00 545.83 568.57
 592.27 616.94 642.65 669.43 697.32 726.37 756.64 788.17 821.01 855.21 890.85 927.97 966.63



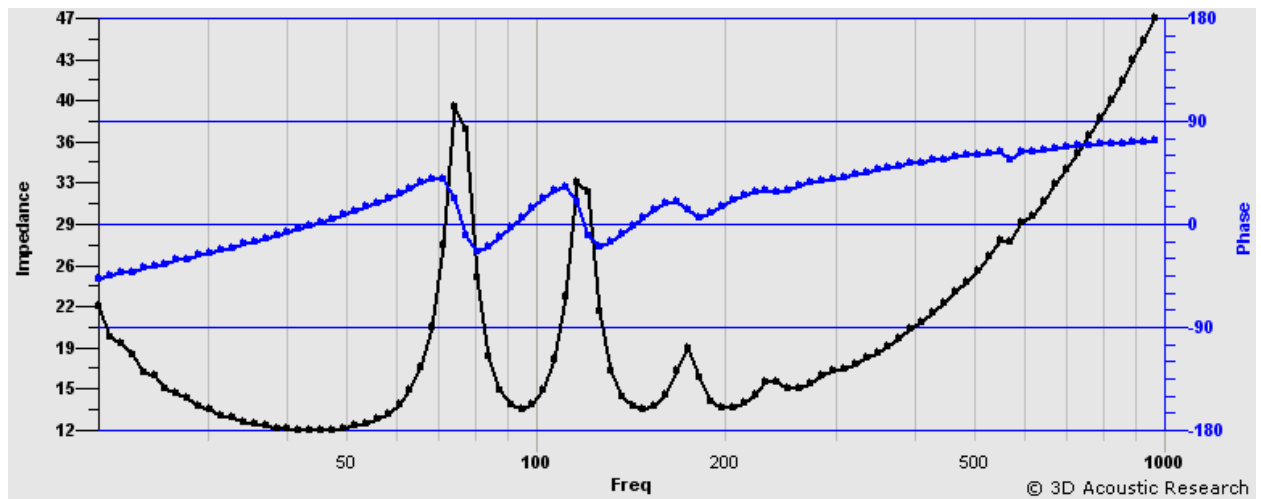
Mic response 2.83V/1 m from front horn plane in front of horn mouth



Mic response 2.83V/1.5 m from front horn plane in front of horn mouth

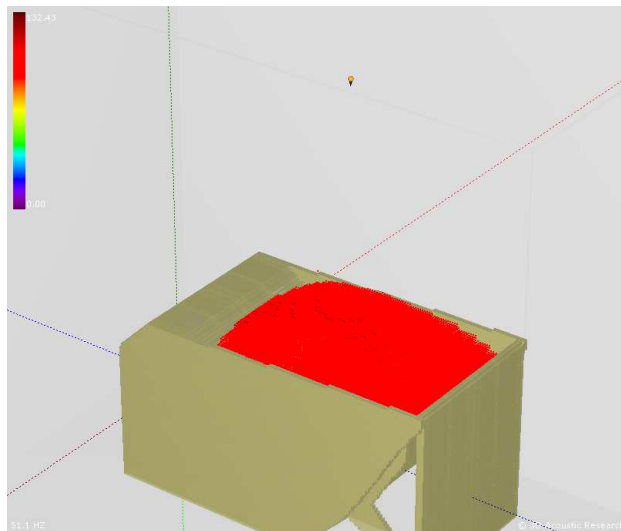


Mic response 2.83V/1 m from front horn plane and 1 m from horn base

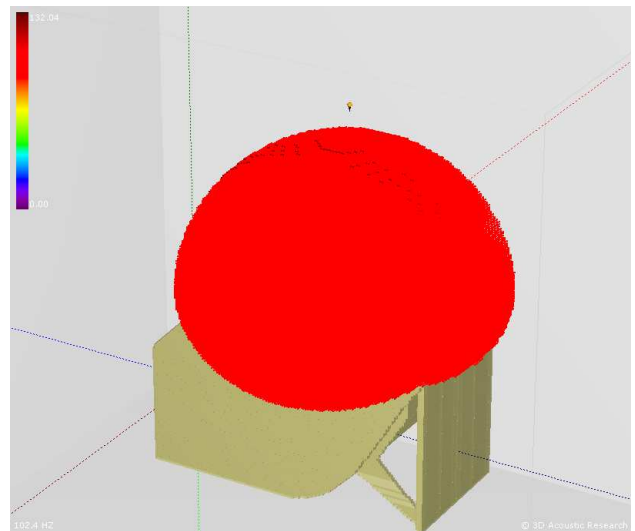


Electrical impedance

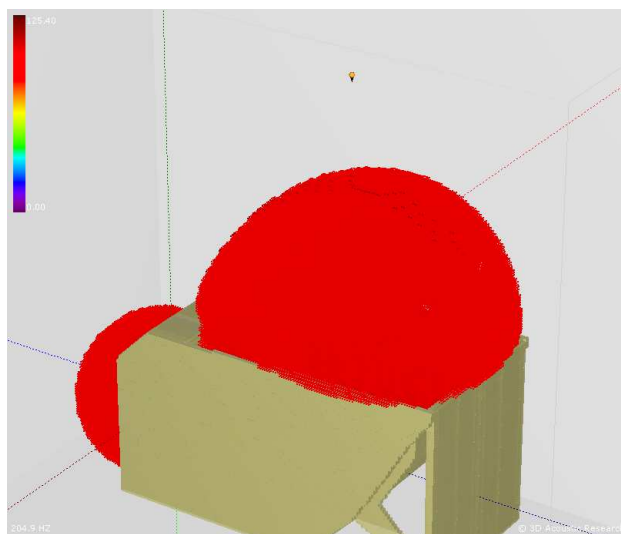
Constant SPL 3D data:



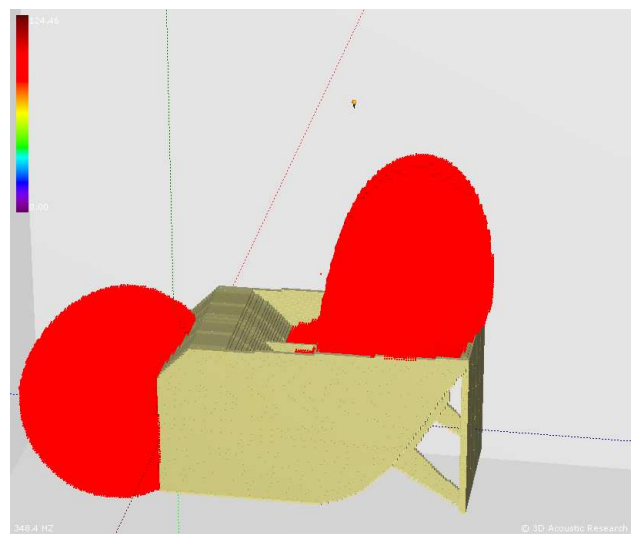
3D points within 130-105 db, 51 Hz



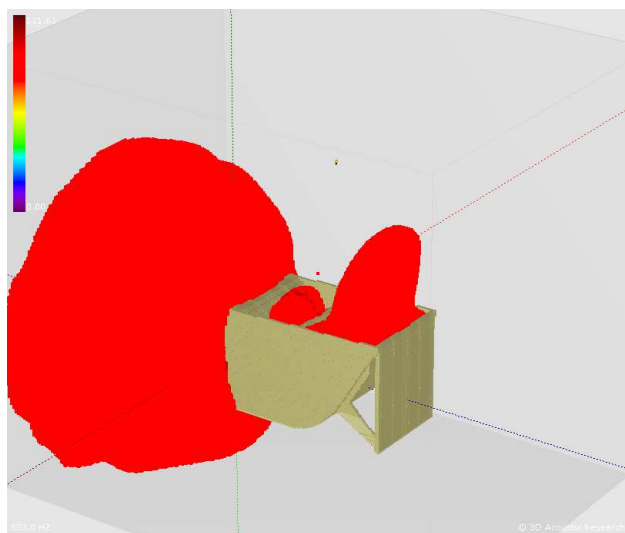
3D points within SPL 130-105 dB, 102 Hz



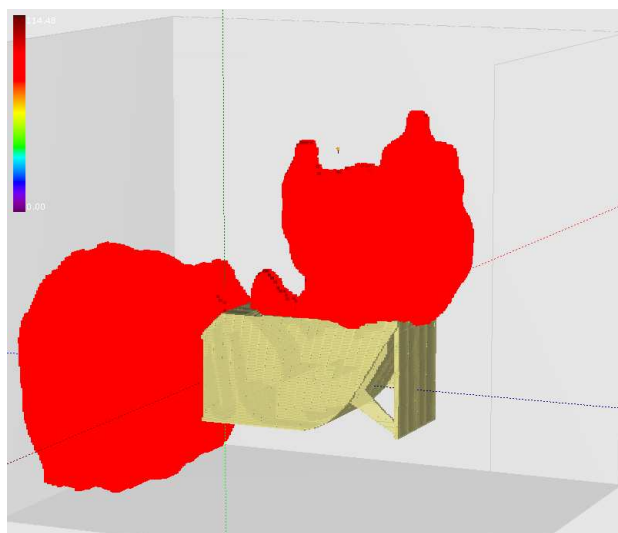
3D points within 130-105 dB, 204 Hz



3D points within 130-100 dB, 348 Hz

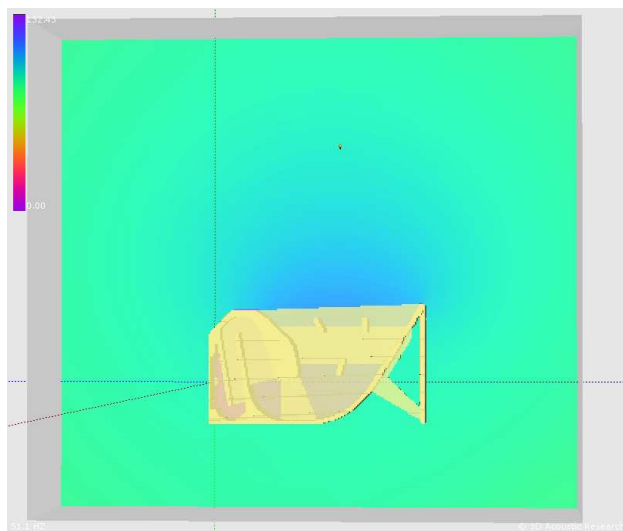


3D points within 130-85 dB, 503 Hz

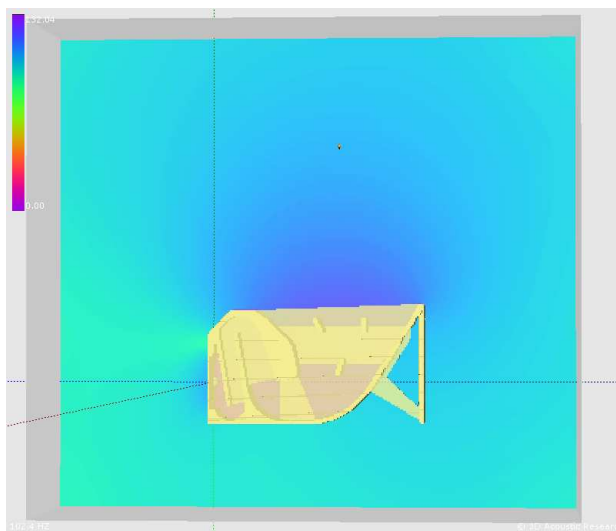


3D points within 130-85 dB, 821 Hz

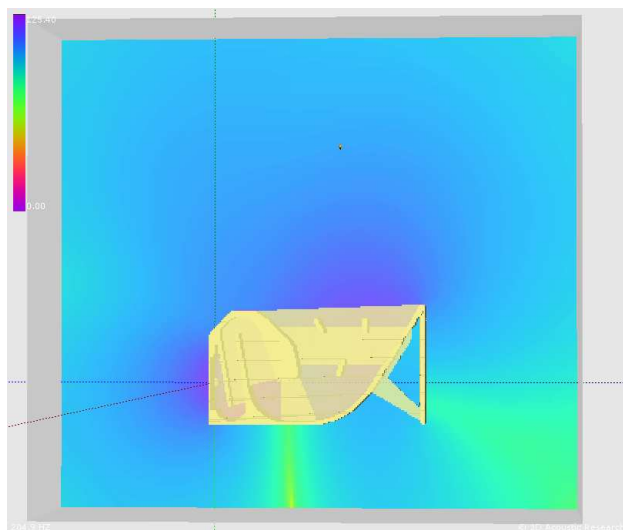
Cross section SPL distribution:



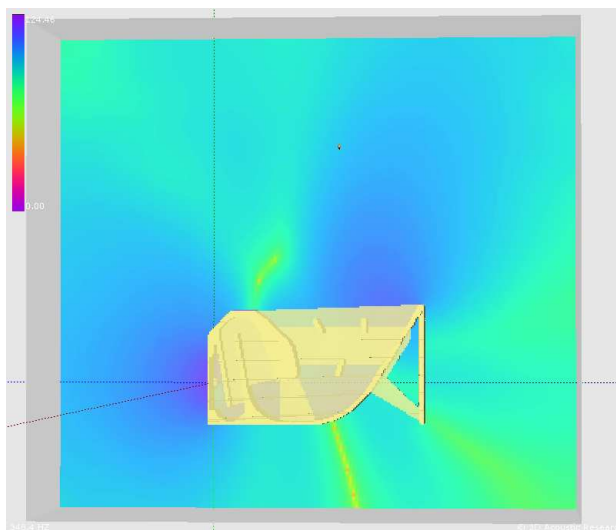
51 Hz



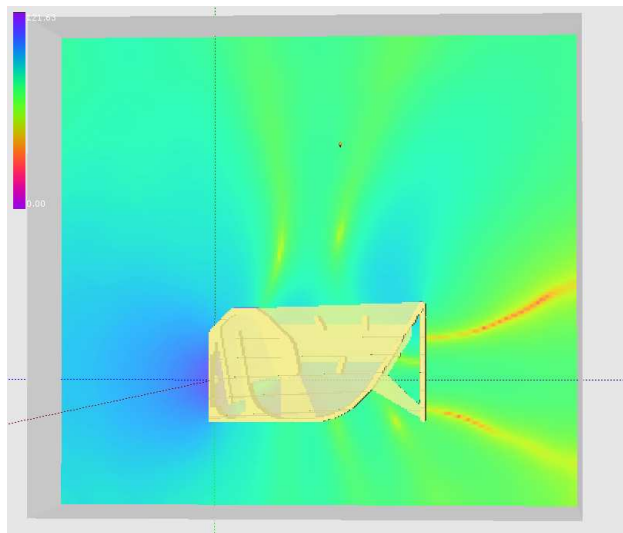
102 Hz



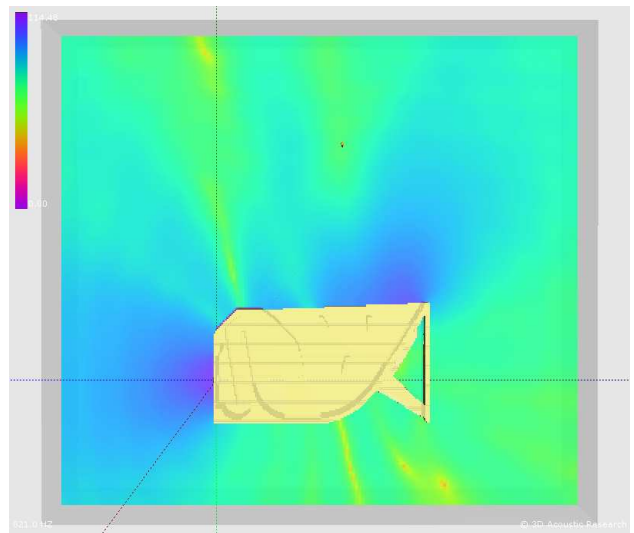
204 Hz



348 Hz

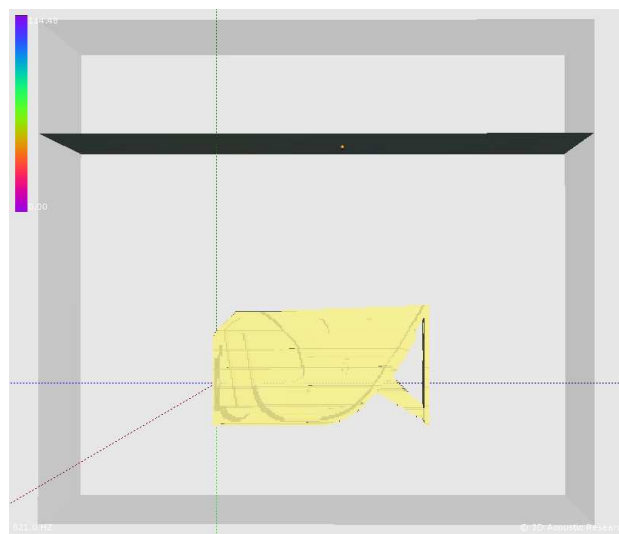


504 Hz

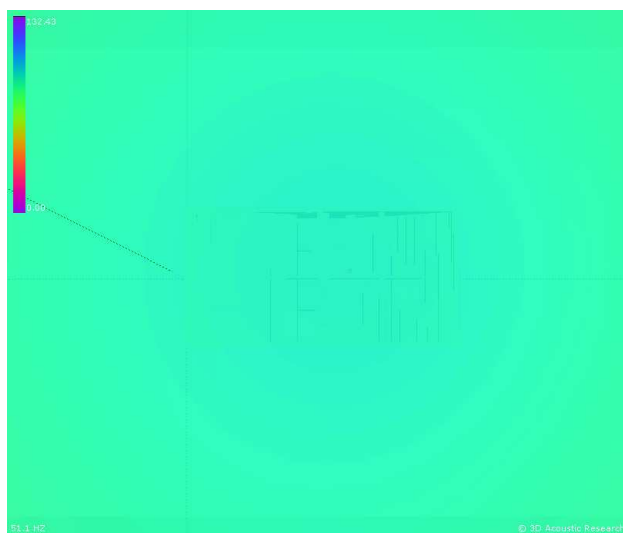


821 Hz

Front plane distribution:



1 m away plane



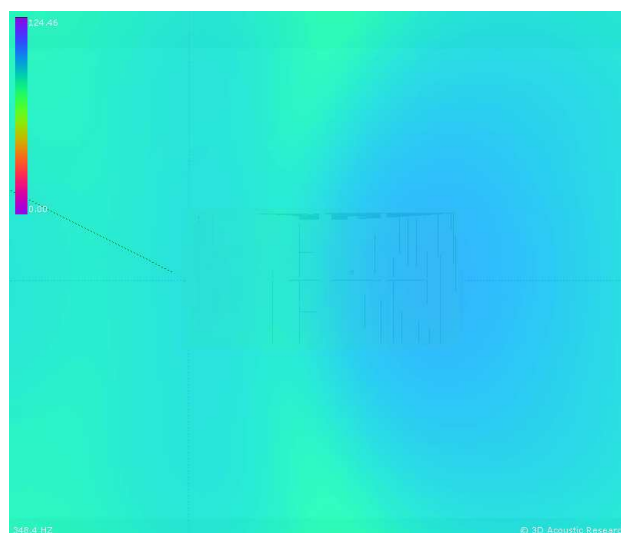
51 Hz



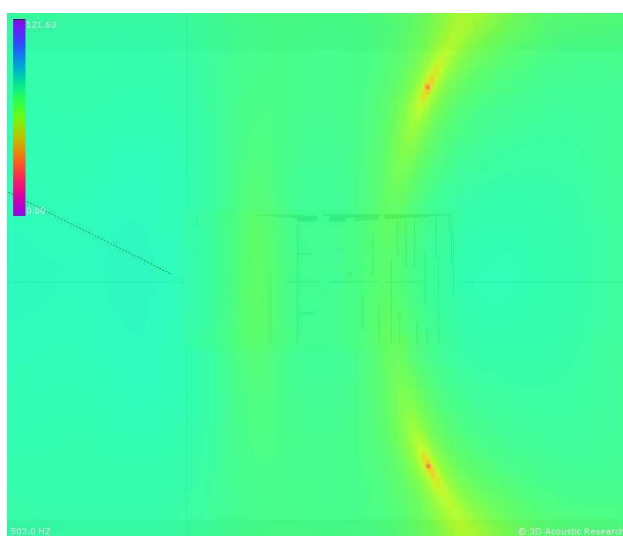
102 Hz



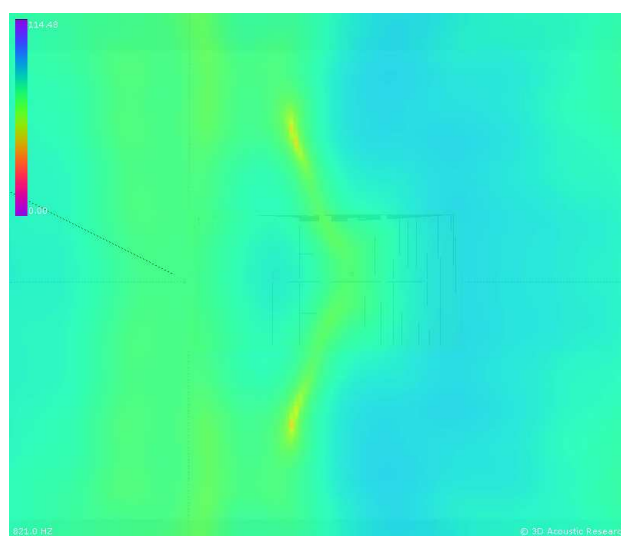
204 Hz



348 Hz

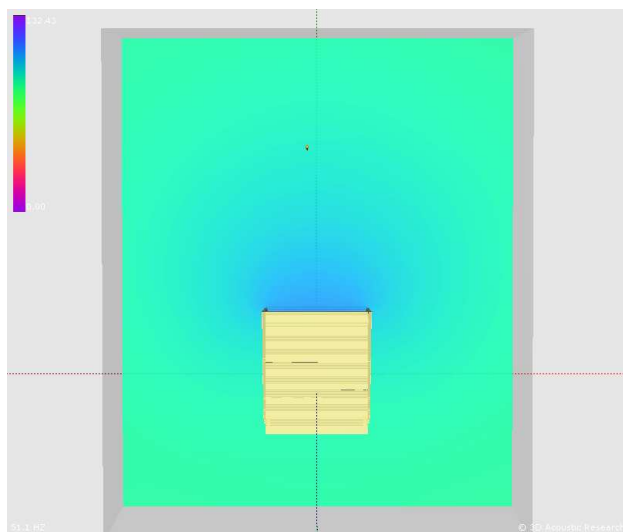
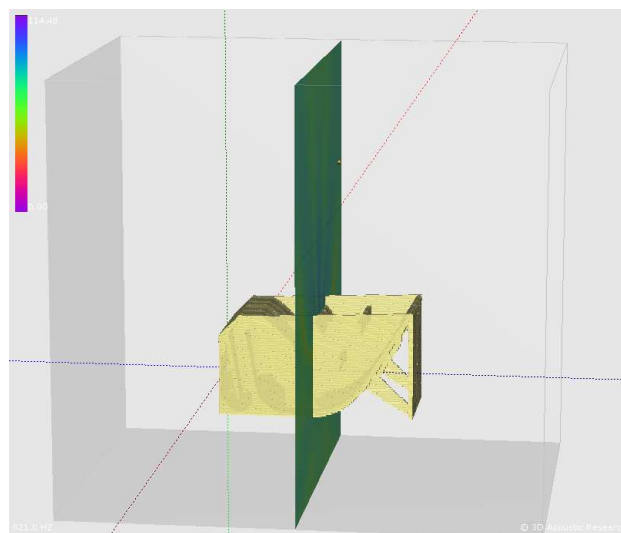


504 Hz

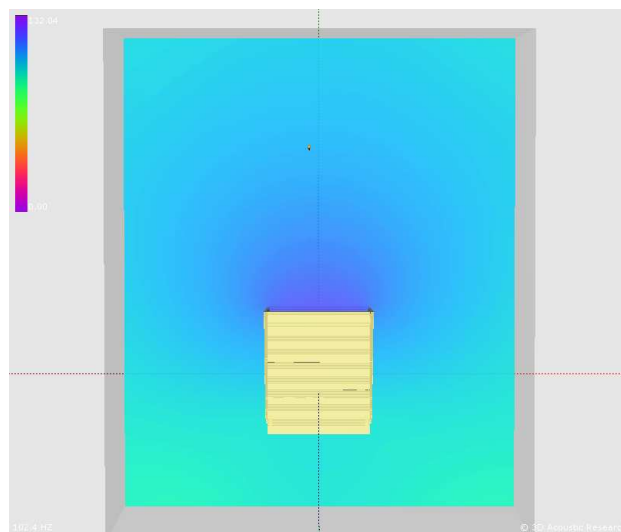


821 Hz

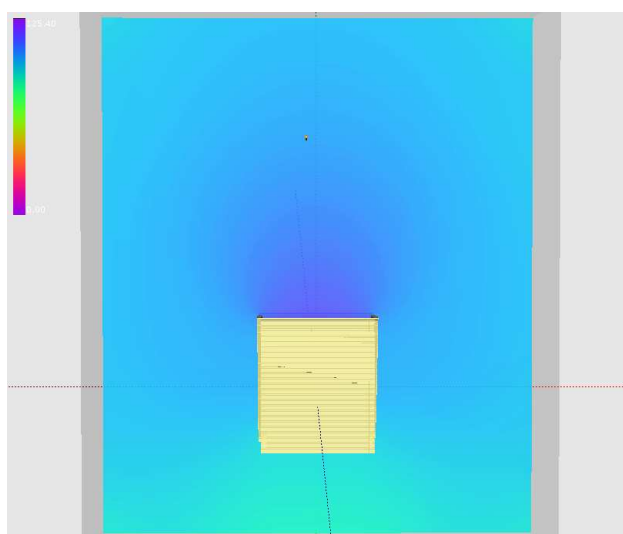
Central cross section pressure distribution:



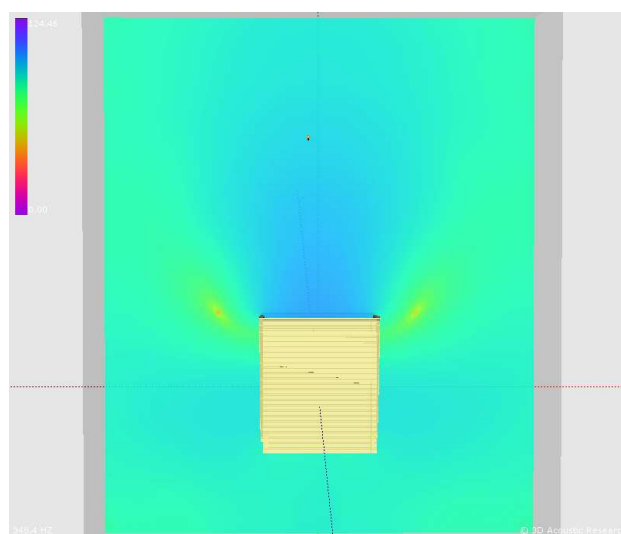
51 Hz



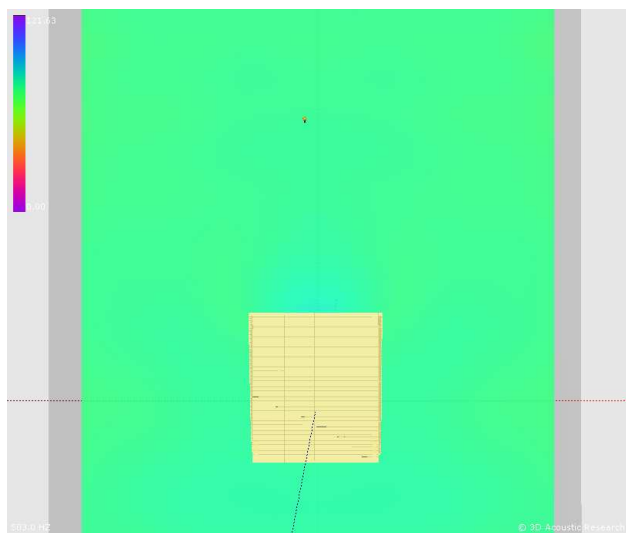
102 Hz



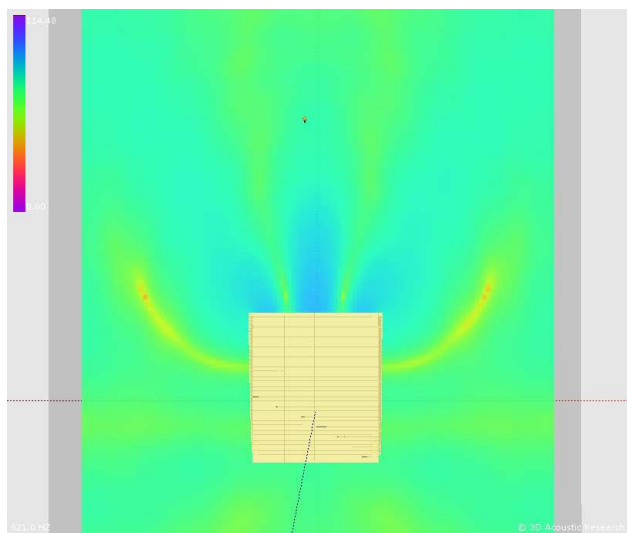
204 Hz



348 Hz



503 Hz



821 Hz