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/yras/3682966/)
Yury is building the Big Barbaris Horn
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 audioportal.su
Model: Altec 416Z
Enclosure: BarbaHorn
Report By: 3D Response version 0.0
Report Date: 20.02.2010 13:54:49

Properties
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:

<table>
<thead>
<tr>
<th># of layer</th>
<th>Width of layer</th>
<th>BMP</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>2</td>
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<tr>
<td>4</td>
<td>13</td>
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</tbody>
</table>
Then repeated from layers 7 to 1 in reversed order

Total internal width = 63 cm

**Frequences 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

Cross section SPL distribution:

51 Hz   102 Hz

204 Hz   348 Hz
Front plane distribution:

504 Hz

821 Hz

1 m away plane
Central cross section pressure distribution: