

Model : "Roar18"
 Designers: martinsson & Circlomanen
 from www.diyaudio.com

Volume = 552,960 L
 (Based on outside dimensions)
 Non-effective Volume = 16,446 L
 Driver Baffle cut-out = 2,518 L

Segment 1: Volume (purple) = 16,406 L
 Segment 2: Volume (red) = 134,412 L
 Segment 3: Volume (green) = 38,884 L
 Segment 4: Volume (turquoise) = 244,722 L

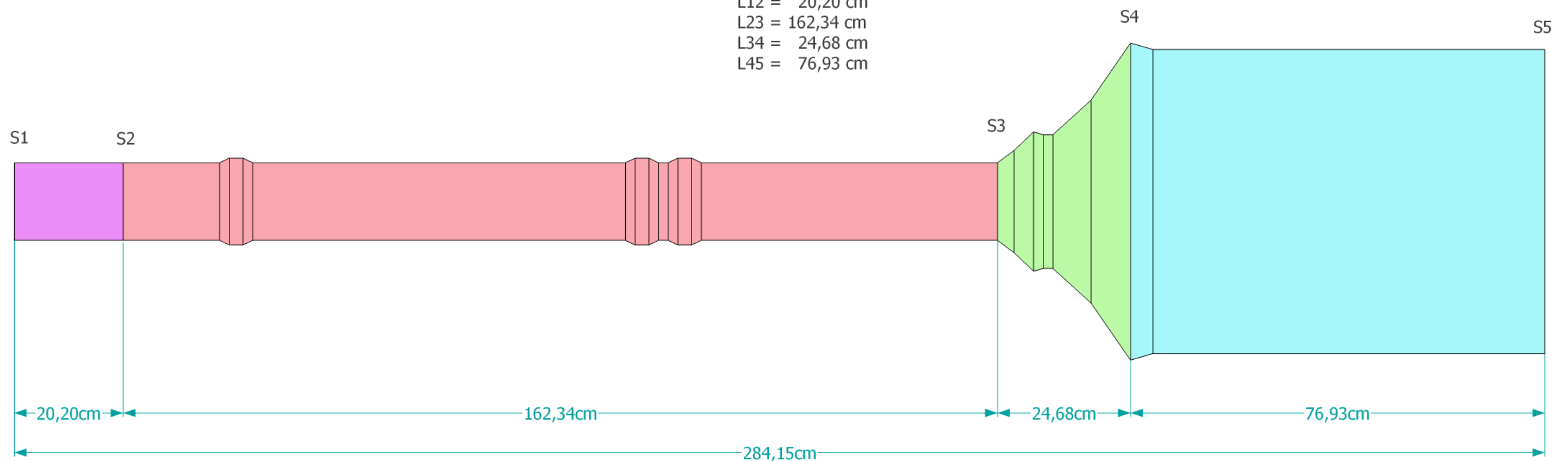
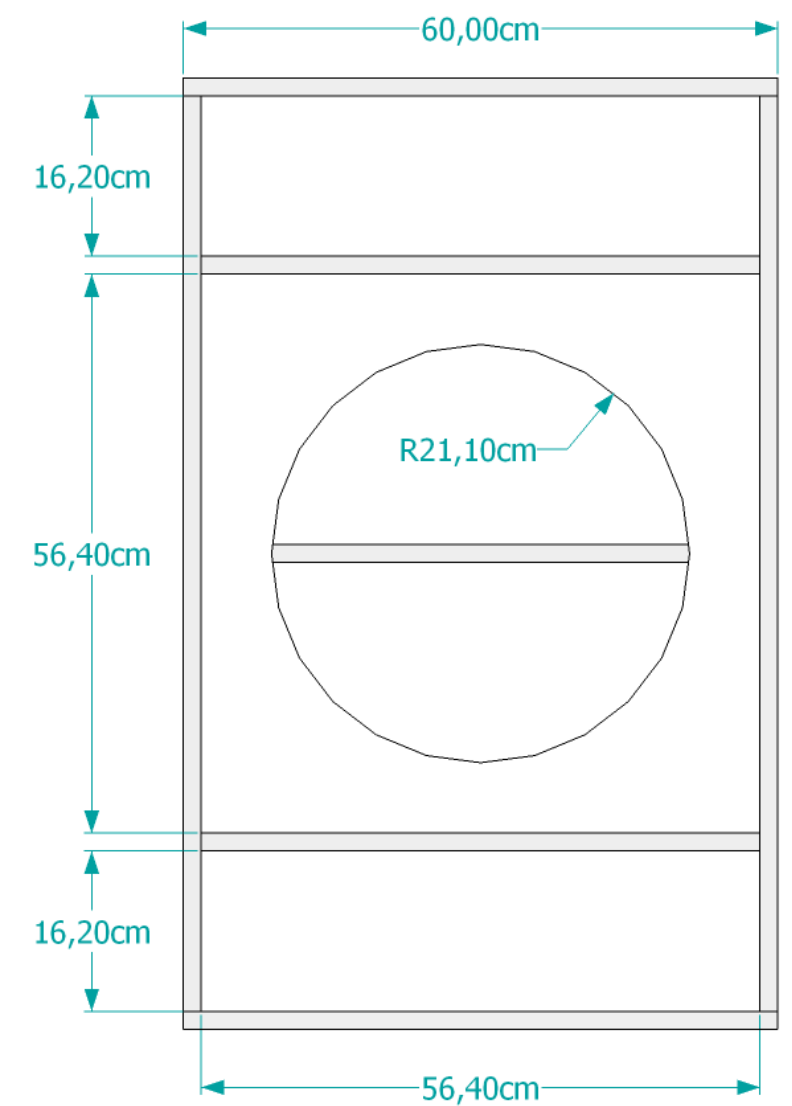
Effective System Volume = 436,942 L
 (including driver-baffle cut-out but without
 bracing & volume taken by LF-driver)

Hornresp input data:

S1 = 812,16 cm²
 S2 = 812,16 cm²
 S3 = 812,16 cm²
 S4 = 3314,85 cm² (see note)
 S5 = 3180,96 cm²

NOTE For higher accuracy in Hornresp
 use for S4 = 3180,96 cm²

L12 = 20,20 cm
 L23 = 162,34 cm
 L34 = 24,68 cm
 L45 = 76,93 cm



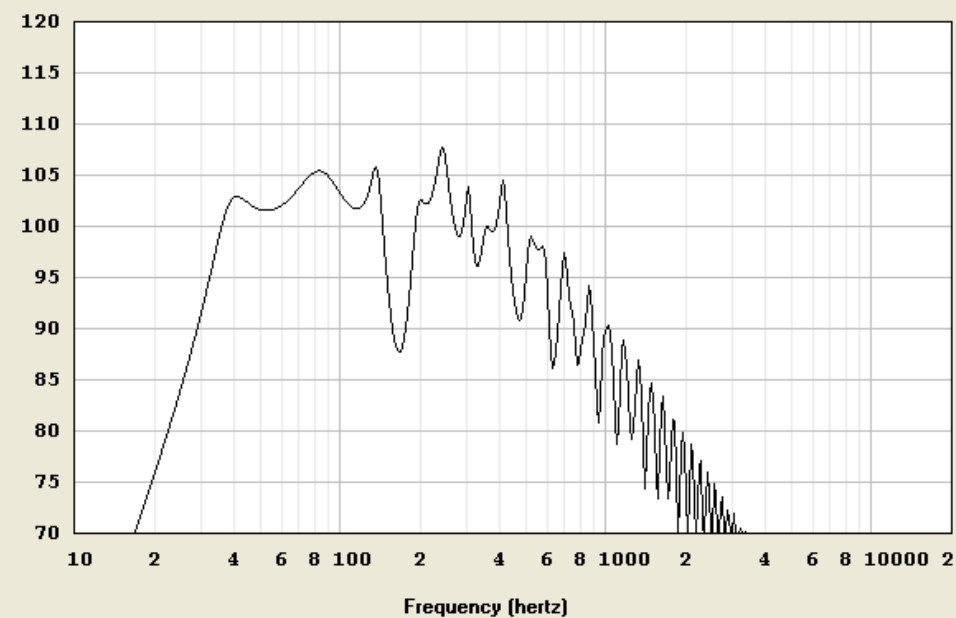
Original Model

Ang	<input type="text" value="2.0 x Pi"/>	Eg	<input type="text" value="2.83"/>	Rg	<input type="text" value="0.00"/>	Fta	<input type="text" value="0.00"/>
S1	<input type="text" value="812.16"/>	S2	<input type="text" value="812.16"/>	Con	<input type="text" value="0.90"/>	F12	<input type="text" value="0.00"/>
S2	<input type="text" value="812.16"/>	S3	<input type="text" value="812.16"/>	Con	<input type="text" value="180.71"/>	F23	<input type="text" value="0.00"/>
S3	<input type="text" value="812.16"/>	S4	<input type="text" value="3180.96"/>	Par	<input type="text" value="37.82"/>	F34	<input type="text" value="0.00"/>
S4	<input type="text" value="3180.96"/>	S5	<input type="text" value="3180.96"/>	Con	<input type="text" value="83.40"/>	F45	<input type="text" value="0.00"/>

Sd	<input type="text" value="1255.00"/>	Cms	<input type="text" value="1.02E-04"/>	Mmd	<input type="text" value="230.00"/>	Re	<input type="text" value="5.05"/>
Bl	<input type="text" value="29.00"/>	Rms	<input type="text" value="4.77"/>	Le	<input type="text" value="1.20"/>	TH	<input type="text" value="1"/>
Vrc	<input type="text" value="0.00"/>	Ap	<input type="text" value="0.00"/>	Vtc	<input type="text" value="0.00"/>		
Lrc	<input type="text" value="0.00"/>	Lpt	<input type="text" value="0.00"/>	Atc	<input type="text" value="0.00"/>		

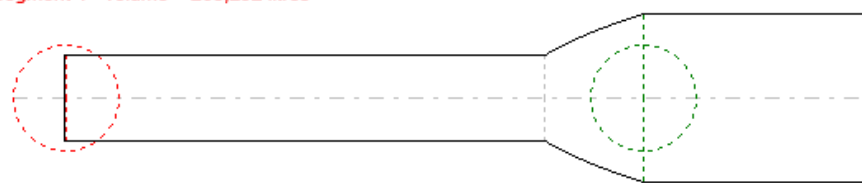
Comment

Acoustical Power (dB) Horn



Schematic Diagram Axisymmetric Design System Volume 488,298 Litres

Segment 1 - volume = 0,731 litres
Segment 2 - volume = 146,765 litres
Segment 3 - volume = 75,510 litres
Segment 4 - volume = 265,292 litres



Roar18_Beyma_18PW1400Fe

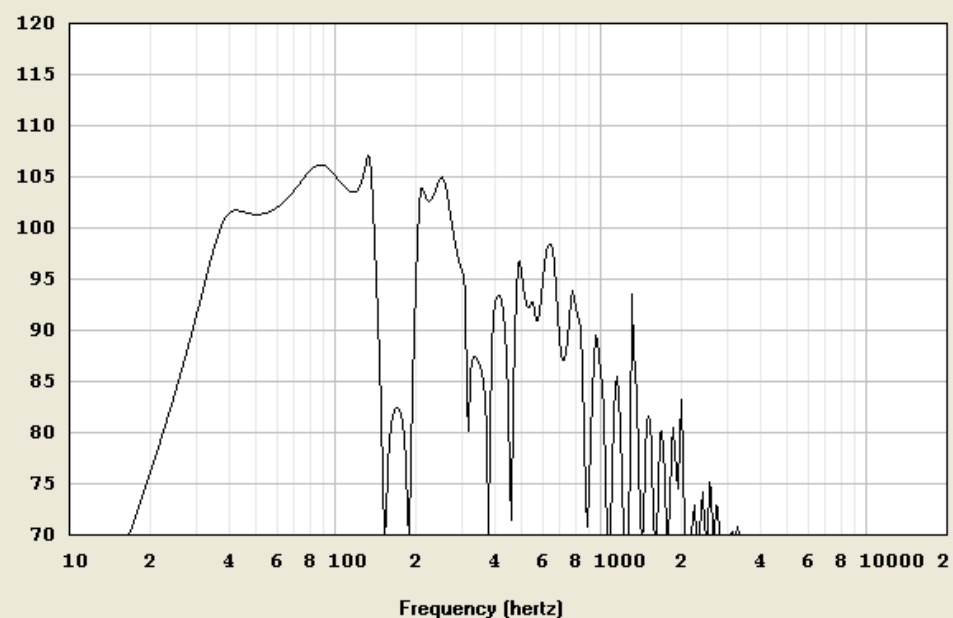
Model based on Advanced centre-line, Cone-Volume and Volume per Segment.

Ang	<input type="text" value="2.0 x Pi"/>	Eg	<input type="text" value="2.83"/>	Rg	<input type="text" value="0.00"/>	Fta	<input type="text" value="0.00"/>
S1	<input type="text" value="812.16"/>	S2	<input type="text" value="812.16"/>	Con	<input type="text" value="20.20"/>	F12	<input type="text" value="0.00"/>
S2	<input type="text" value="812.16"/>	S3	<input type="text" value="812.16"/>	Con	<input type="text" value="162.34"/>	F23	<input type="text" value="0.00"/>
S3	<input type="text" value="812.16"/>	S4	<input type="text" value="3180.96"/>	Exp	<input type="text" value="24.68"/>	F34	<input type="text" value="151.43"/>
S4	<input type="text" value="3180.96"/>	S5	<input type="text" value="3180.96"/>	Con	<input type="text" value="76.93"/>	F45	<input type="text" value="0.00"/>

Sd	<input type="text" value="1255.00"/>	Cms	<input type="text" value="1.02E-04"/>	Mmd	<input type="text" value="230.00"/>	Re	<input type="text" value="5.05"/>
Bl	<input type="text" value="29.00"/>	Rms	<input type="text" value="4.77"/>	Le	<input type="text" value="1.20"/>	TH	<input type="text" value="1"/>
Vrc	<input type="text" value="0.00"/>	Ap	<input type="text" value="0.00"/>	Vtc	<input type="text" value="7500.00"/>		
Lrc	<input type="text" value="0.00"/>	Lpt	<input type="text" value="0.00"/>	Atc	<input type="text" value="1255.00"/>		

Comment

Acoustical Power (dB) Horn



Schematic Diagram Axisymmetric Design System Volume 443,285 Litres

Segment 1 - volume = 16,406 litres
Segment 2 - volume = 131,846 litres
Segment 3 - volume = 42,822 litres
Segment 4 - volume = 244,711 litres



Remodeled_Roar18_Beyma_18PW1400Fe