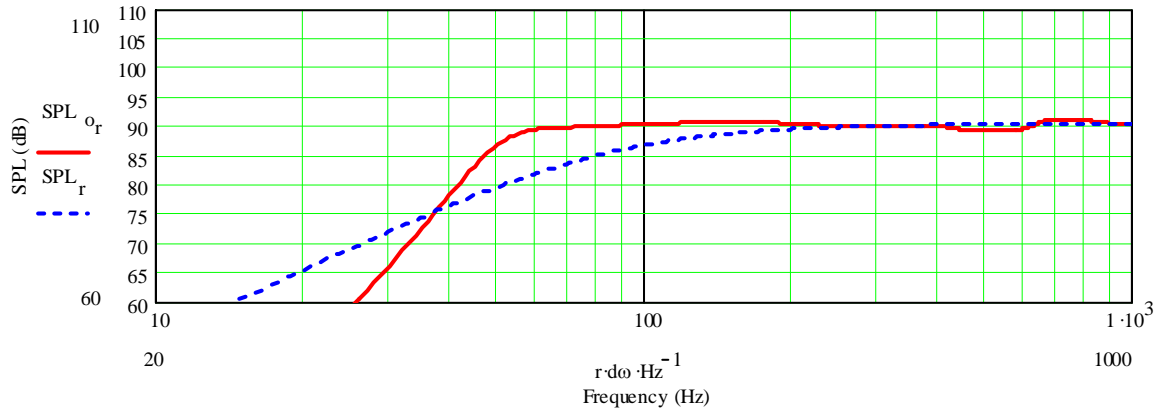


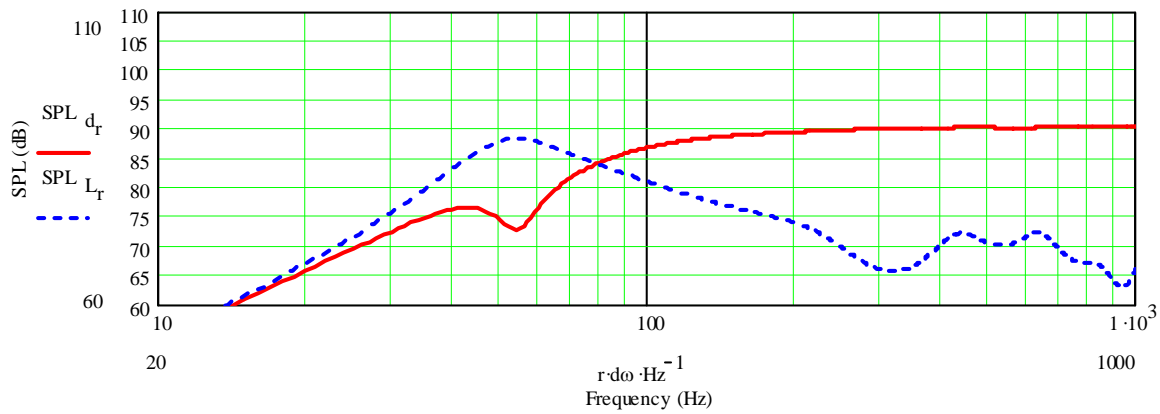
VIFA 3.5 Inch full range drier in TABAQ

Vifa TG9FD-10-04 in by Bjørn Johannesen, Denmark. January the 6th 2007

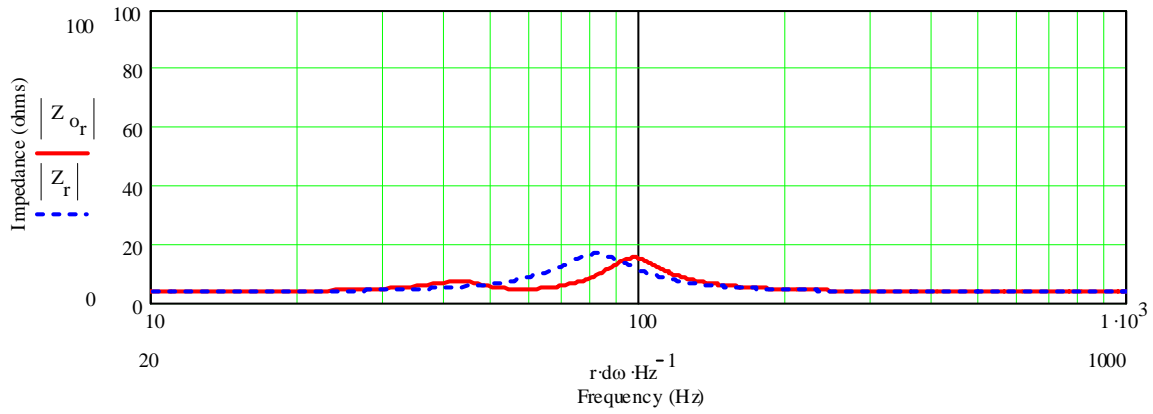
Summed SPL:



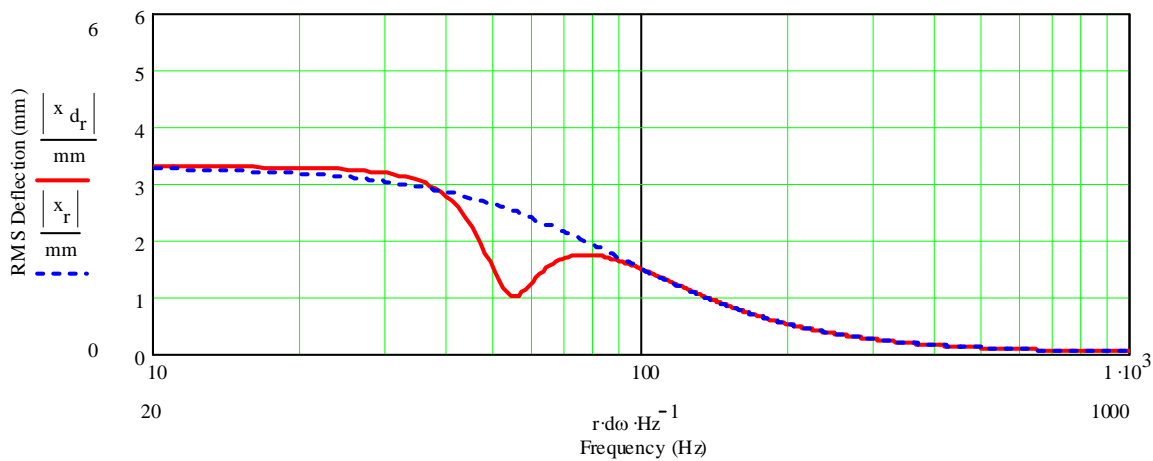
SPL Driver (red) and opening (dotted blue):



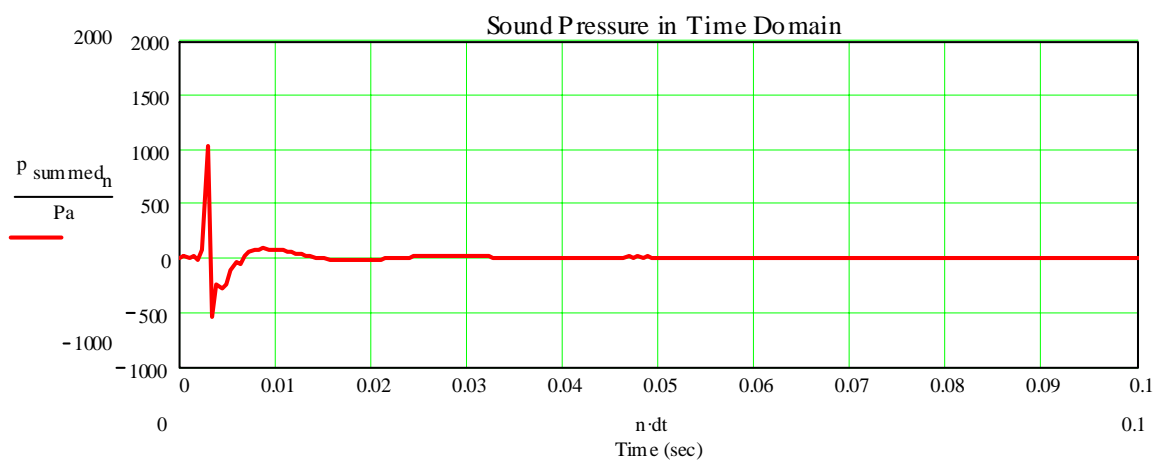
Impedance:



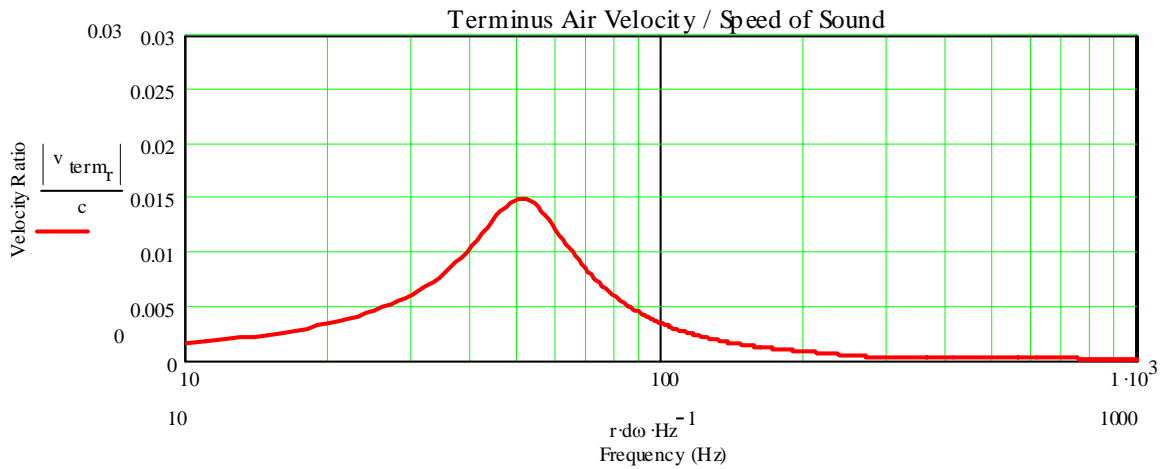
Displacement:



Time response:



Airflow at opening:



Driver parameters:

$f_d := 82 \cdot \text{Hz}$	$V_{ad} := 3.15 \cdot \text{liter}$
$R_e := 3.2 \cdot \Omega$	$Q_{ed} := 0.7$
$L_{vc} := 0.12 \cdot \text{mH}$	$Q_{md} := 2.9$
$Bl := 2.4 \cdot \frac{\text{newton}}{\text{amp}}$	$Q_{td} := \left(\frac{1}{Q_{ed}} + \frac{1}{Q_{md}} \right)^{-1}$
$S_d := 38 \cdot \text{cm}^2$	$Q_{td} = 0.564$

Enclosure definitions:

Closed End of Transmission Line		(Driver ---> Closed End)	
Section Length	Initial Area	Final Area	Stuffing Density
$L_{c_0} := 10 \cdot \text{in}$	$S_{c_{0,0}} := 3.368 \cdot S_d$	$S_{c_{0,1}} := 3.368 \cdot S_d$	$D_{c_0} := 0.99 \cdot \text{lb} \cdot \text{ft}^{-3}$
Open End of Transmission Line		(Driver ---> Open End)	
Section Length	Initial Area	Final Area	Stuffing Density
$L_{o_0} := 10 \cdot \text{in}$	$S_{o_{0,0}} := 3.368 \cdot S_d$	$S_{o_{0,1}} := 3.368 \cdot S_d$	$D_{o_0} := 0.99 \cdot \text{lb} \cdot \text{ft}^{-3}$
$L_{o_1} := 10 \cdot \text{in}$	$S_{o_{1,0}} := 3.368 \cdot S_d$	$S_{o_{1,1}} := 3.368 \cdot S_d$	$D_{o_1} := 0.0 \cdot \text{lb} \cdot \text{ft}^{-3}$
$L_{o_2} := 3.8 \cdot \text{in}$	$S_{o_{2,0}} := 0.421 \cdot S_d$	$S_{o_{2,1}} := 0.421 \cdot S_d$	$D_{o_2} := 0.0 \cdot \text{lb} \cdot \text{ft}^{-3}$

Baffle Step:

Enclosure Geometry Input

`width := 4.75 in` (Front Baffle Width)
`height := 32 in` (Front Baffle Height)
`depth := 5.9 in` (Depth of Enclosure)
`dist := 4 in` (Front Baffle Distance from Rear Wall > Depth, to Eliminate Rear Wall use 100 m)
`num_r := 9` (Number of Points per Quadrant of Baffle Edge)

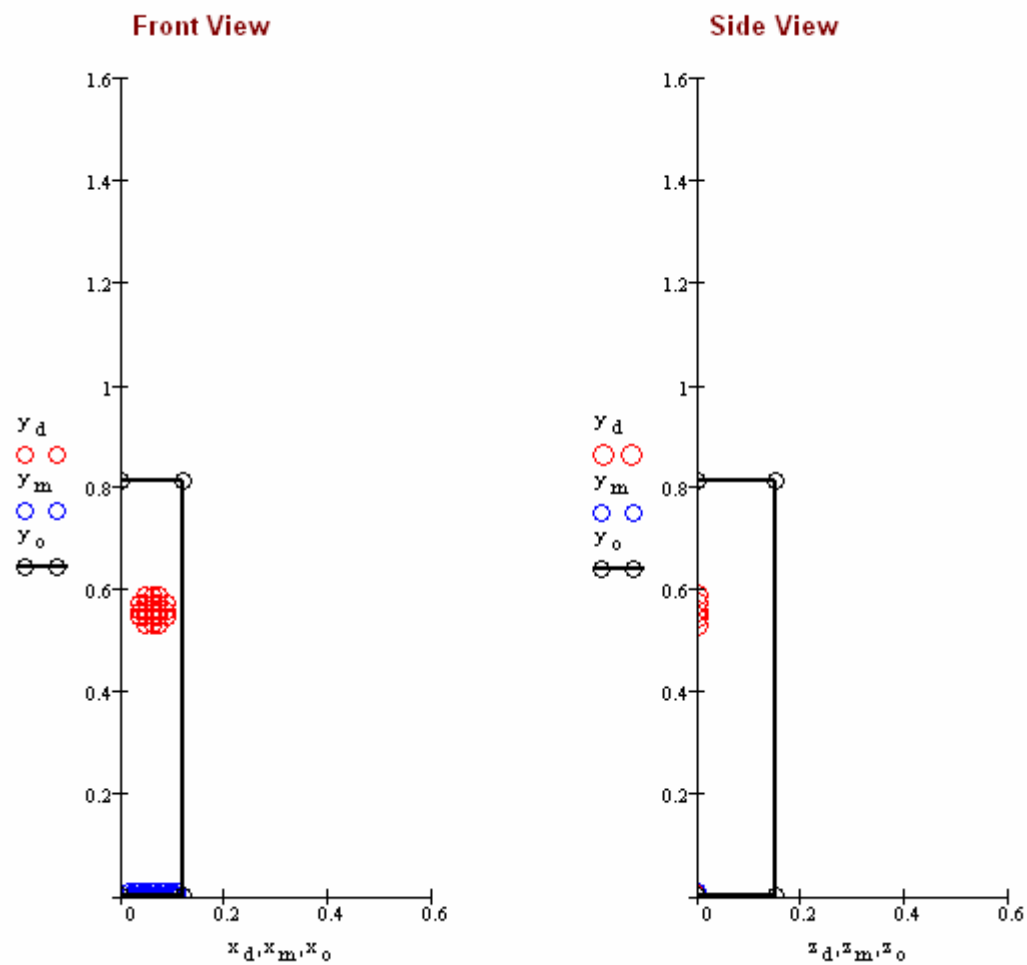
Driver Geometry Input

`x_dc := 2.4 in` (Driver Center x Coordinate)
`y_dc := 22 in` (Driver Center y Coordinate)
`n_dvr := 5` (Number of Points Across Diameter)

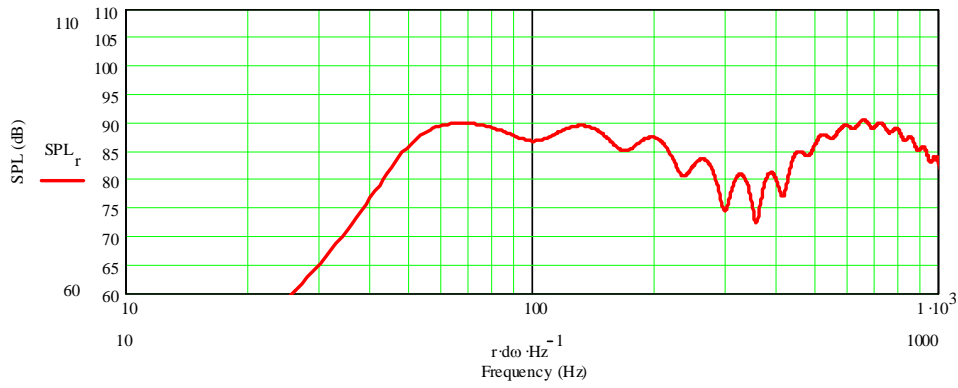
Terminus Geometry Input

`x_mc := 2.4 in` (Terminus Center x Coordinate)
`y_mc := 0.2 in` (Terminus Center y Coordinate)
`w_mth := 4 in` (Terminus Width)
`n_mth := 10` (Number of Points Across the Width)
`Locate := 0` (0 = Front Baffle Terminus, 1 = Rear Baffle Terminus)

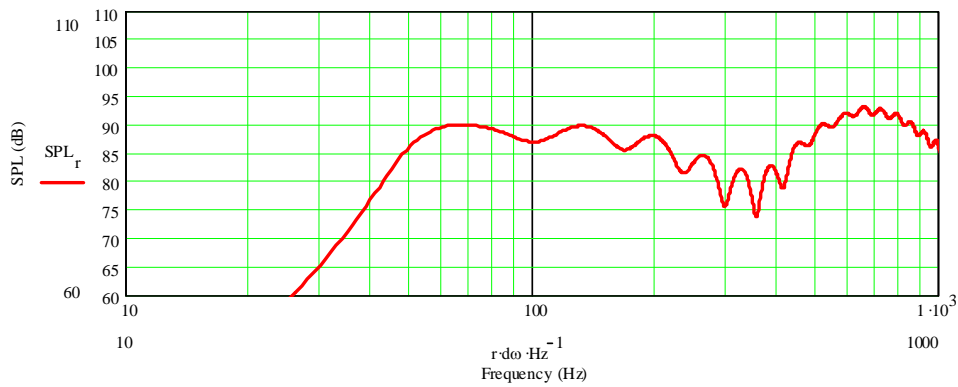
Circular Driver and TL Terminus Simple Source Pattern with Baffle Edge Outline



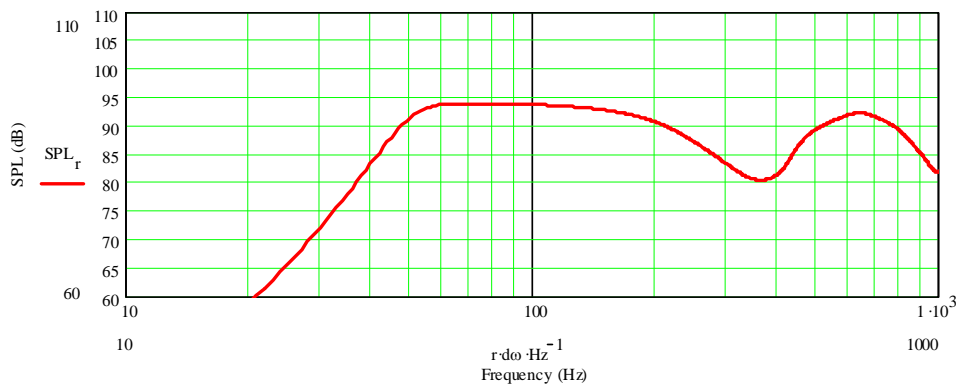
1.8 Ω and 0.5 mH is used for correction purposes:



With no correction, far from the wall:



With no correction and against the wall:



TABAQ is designed by Bjørn Johannesen bjohannesen@post.cybercity.dk

Simulation software is the property of Martin J. King www.quarter-wave.com