Manifold
CH1
System model

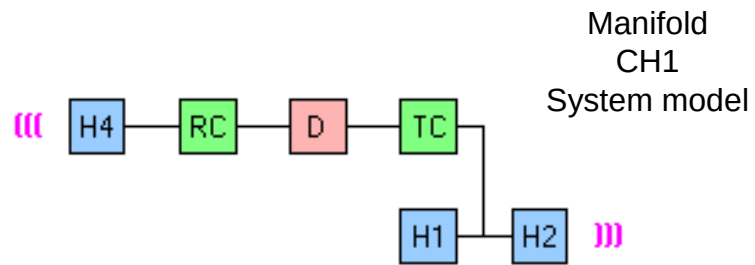H4 — RC — D — TC
H1 — H2

H1

H2

D

RC

H4

Particle velocity #1
H4 throat

Particle velocity #2
H4 mouth
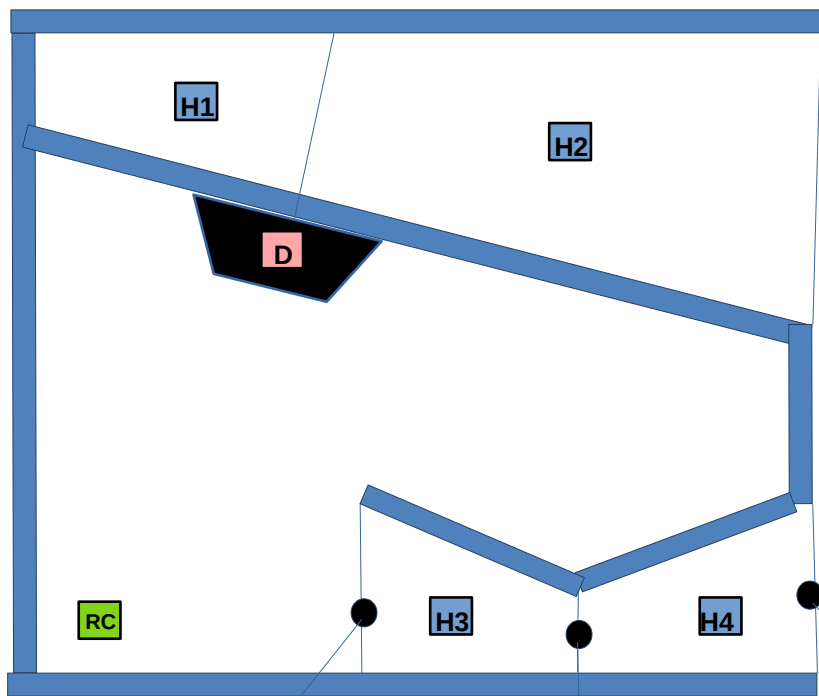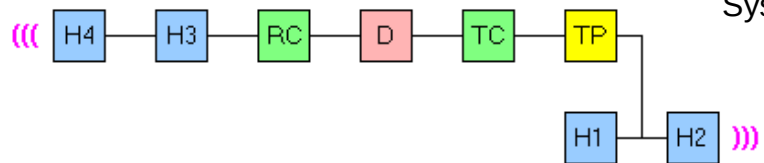
Hornresp - Input Parameters Manifold-MTB

File Tools Window Help

Ang	2.0 x pi	Eg	2.83	Rg	0.00	Fta	10.68
S1	122.00	S2	703.97	Par	24.54	F12	0.00
S2	703.97	S3	2807.47	Par	59.39	F23	0.00
S3	0.00	S4	0.00	L34	0.00	F34	0.00
S5	431.85	S6	671.00	Par	50.00	F56	0.00

Sd	880.00	Cms	1.37E-04	Mmd	94.99	Re	4.70
Bl	23.08	Rms	2.94	Le	1.08	CH1	1

Vrc	127.74	Ap	0.00	Vtc	0.00		
Lrc	43.42	Lpt	0.00	Atc	0.00		

Comment Manifold-MTB

Previous Next Edit Add Delete Record 9 of 10 Calculate

Manifold
CH2
System model

))) H4 — H3 — RC — D — TC — TP

H1 — H2)))

H1

H2

D

RC   H3   H4

Particle velocity #1
H3 throat

Particle velocity
No data available

Particle velocity #2
H4 mouth

Hornresp - Input Parameters Manifold-MTB
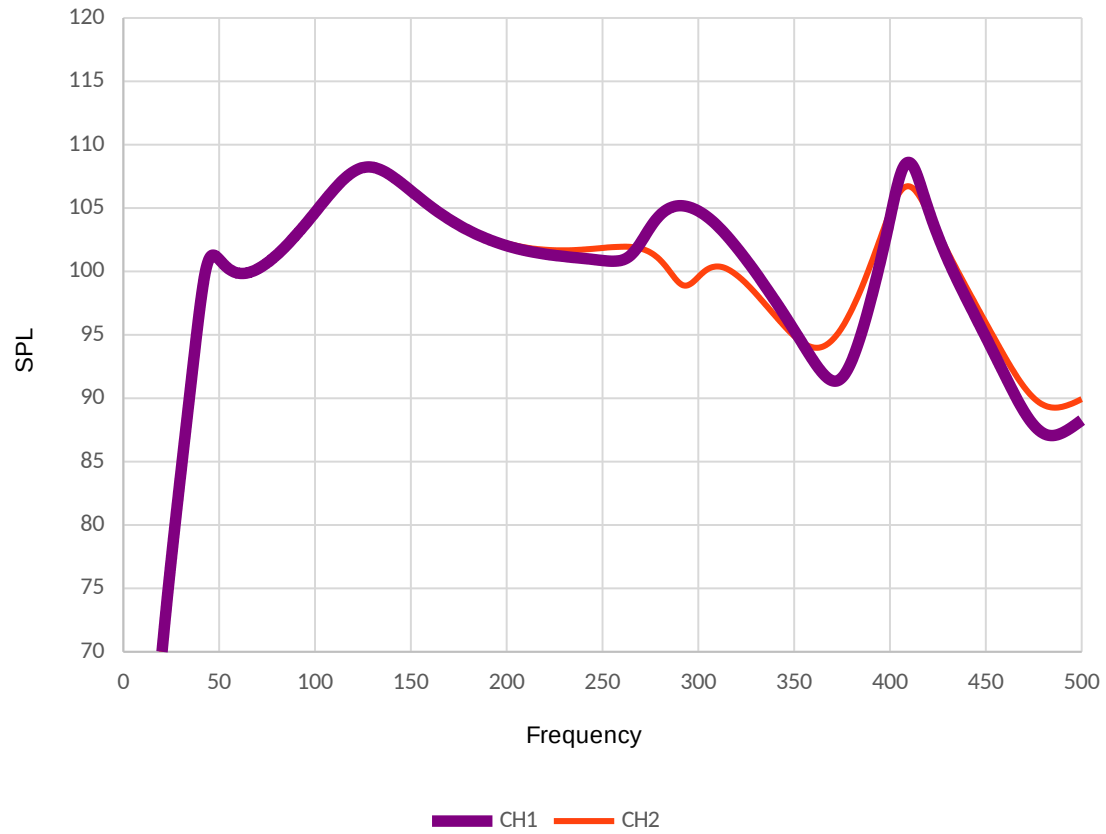
File   Tools   Window   Help

Ang	2.0 x Pi	Eg	2.83	Rg	0.00	Fta	5.95
S1	122.00	S2	703.97	Par	24.54	F12	0.00
S2	703.97	S3	2807.47	Par	59.39	F23	0.00
S3S	671.00	S4	431.85	Par	25.00	F34	0.00
S4	431.85	S5	671.00	Par	25.00	F45	0.00

Sd	880.00	Cms	1.37E-04	Mmd	94.99	Re	4.70
Bl	23.08	Rms	2.94	Le	1.08	CH2	1

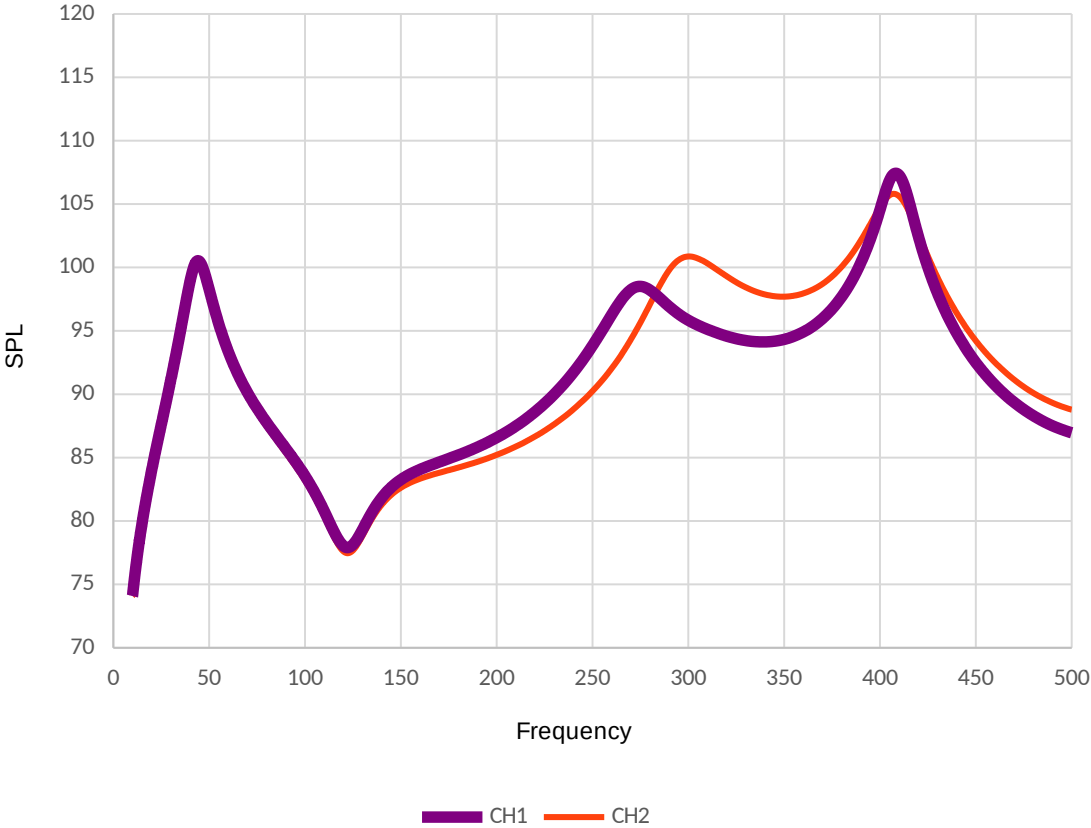| Vrc	127.74	Ap1	0.00	Vtc	0.00	CAUTION:	
Lrc	43.42	Lp	0.00	Atc	0.00	S1 < Sd	

Comment   Manifold-MTB as CH2

Previous   Next   Edit   Add   Delete   Record 10 of 10   Calculate
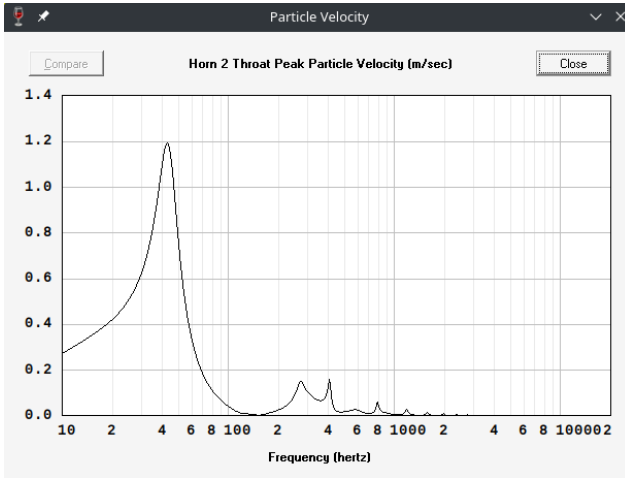
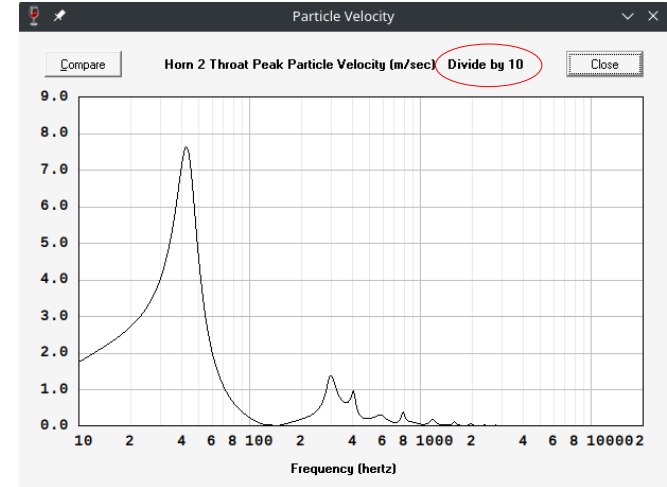Total SPL Comparison

CH1   CH2

Port SPL Comparison

Manifold
CH1
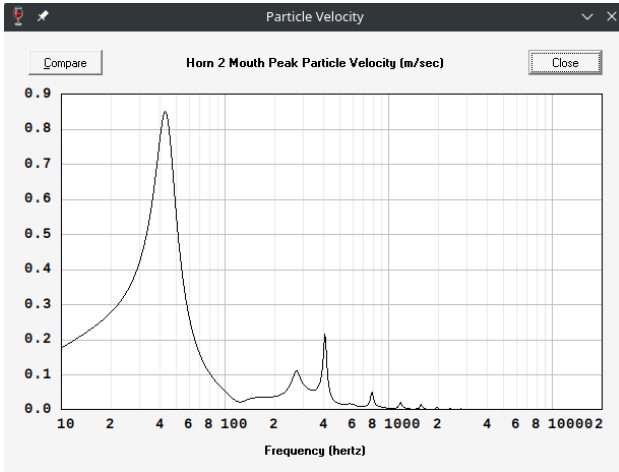### Particle Velocity at Port Throat

Manifold
CH2
Particle Velocity at Port Throat
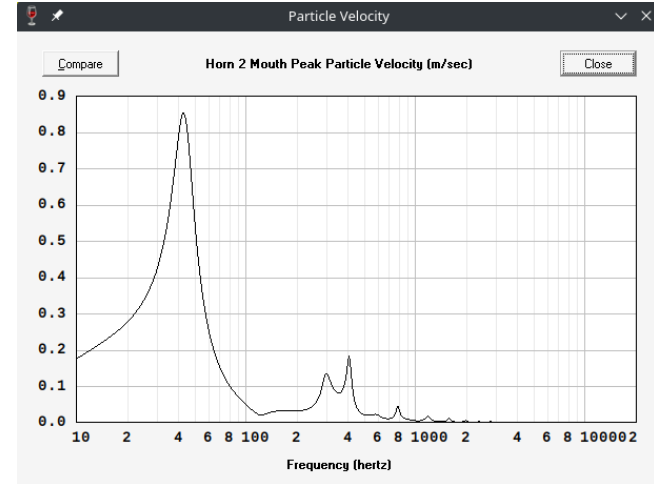

Peak at Port Throat lowered
from 1.20 m/sec to 0,75
m/sec
37% reduction

Manifold
CH1
Particle Velocity at Port Mouth

Manifold
CH2
Particle Velocity at Port Mouth

No speed change at Port Mouth side

Manifold
CH1
Particle Velocity at Port Mouth

H4

Throat

Mouth

Manifold
CH2
Particle Velocity at Port Mouth

H3   H4

Throat

Mouth

Particle velocity
No data available

Particle Velocity clearly reduced the speed at Throat side because the area was increased at CH2 model, while at mouth there is no differentce, but, due to Venturi effect we expect increased speed at middle position for CH2, it might be at the same magnitude from CH1 Throat, considering the same CSA, but it will generate less turbulance improving sound quality.

Venturi Effect

Left window:

Hornresp - Input Parameters Manifold-MTB

File Tools Window Help

Ang	2.0 x pi	Eg	2.83	Rg	0.00	Fta	10.68

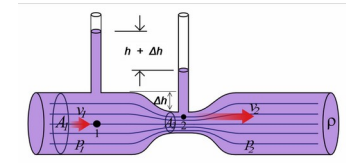|							
S1	122.00	S2	703.97	Par	24.54	F12	0.00
S2	703.97	S3	2807.47	Par	59.39	F23	0.00
S3	0.00	S4	0.00	L34	0.00	F34	0.00
S5	431.85	S6	671.00	Par	50.00	F56	0.00

Sd	880.00	Cms	1.37E-04	Mmd	94.99	Re	4.70
Bl	23.08	Rms	2.94	Le	1.08	CH1	1
Vrc	127.74	Ap	0.00	Vtc	0.00		
Lrc	43.42	Lpt	0.00	Atc	0.00		

Comment Manifold-MTB

Previous Next Edit Add Delete Record 9 of 10 Calculate

Right window:

Hornresp - Input Parameters Manifold-MTB

File Tools Window Help

Ang	2.0 x Pi	Eg	2.83	Rg	0.00	Fta	5.95

S1	122.00	S2	703.97	Par	24.54	F12	0.00
S2	703.97	S3	2807.47	Par	59.39	F23	0.00
S3S	671.00	S4	431.85	Par	25.00	F34	0.00
S4	431.85	S5	671.00	Par	25.00	F45	0.00

Sd	880.00	Cms	1.37E-04	Mmd	94.99	Re	4.70
Bl	23.08	Rms	2.94	Le	1.08	CH2	1
Vrc	127.74	Ap1	0.00	Vtc	0.00	CAUTION:	
Lrc	43.42	Lp	0.00	Atc	0.00	S1 < Sd	

Comment Manifold-MTB as CH2

Previous Next Edit Add Delete Record 10 of 10 Calculate

CH2 show a warning not present at
CH1 model while both have the same
front horn.

Left window — Hornresp - Input Parameters Manifold-MTB

File Tools Window Help

Ang	2.0 x pi	Eg	2.83	Rg	0.00	Fta	10.68
S1	122.00	S2	703.97	Par	24.54	F12	0.00
S2	703.97	S3	2807.47	Par	59.39	F23	0.00
S3	0.00	S4	0.00	L34	0.00	F34	0.00
S5	431.85	S6	671.00	Par	50.00	F56	0.00

Sd	880.00	Cms	1.37E-04	Mmd	94.99	Re	4.70
Bl	23.08	Rms	2.94	Le	1.08	CH1	1
Vrc	127.74	Ap	0.00	Vtc	0.00		
Lrc	43.42	Lpt	0.00	Atc	0.00		

Comment Manifold-MTB

Previous Next Edit Add Delete **Record 9 of 10** Calculate

Right window — Hornresp - Input Parameters Manifold-MTB

File Tools Window Help

Ang	2.0 x Pi	Eg	2.83	Rg	0.00	Fta	5.95
S1	122.00	S2	703.97	Par	24.54	F12	0.00
S2	703.97	S3	2807.47	Par	59.39	F23	0.00
S3S	671.00	S4	431.85	Par	25.00	F34	0.00
S4	431.85	S5	671.00	Par	25.00	F45	0.00

Sd	880.00	Cms	1.37E-04	Mmd	94.99	Re	4.70
Bl	23.08	Rms	2.94	Le	1.08	CH2	1
Vrc	127.74	Ap1	0.00	Vtc	0.00	CAUTION:	
Lrc	43.42	Lp	0.00	Atc	0.00	S1 < Sd	

Comment Manifold-MTB as CH2

Previous Next Edit Add Delete **Record 10 of 10** Calculate

CH2 prove the posibility to use Throat Chamber Adapter
(Ap1/Lp) while CH1 don't.
Vented rear chamber (Ap/Lpt) is not needed for CH1.