9mm 126mm -— 126mm – _ 102mm -102mm -127mm 305mm 557mm 581mm 152mm 76mm 9mm 150mm 38mm 9mm Design by S. Lindgren

July 2020

Compact series chamber tuned floorstander for Alarkaudio Alpair 5.3 3 in full-range drive unit

Notes:

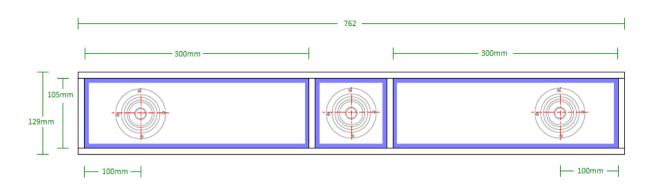
- 0/ Compact design intended for small spaces & modest SPLs
- 1/ 12mm sheet material assumed. MDF acceptable, quality void-free multiply (Baltic birch, apple, marine, bamboo etc.) recommended
- 2/ Lag all internal faces as indicated 10mm acoustic fibreglass board, wool felt, jute, recycled denim or similar. Avoid acoustic foam. Ensure kept away from driver & vents
- 3/ Chamfer driver cutout to improve airflow & reduce reflections

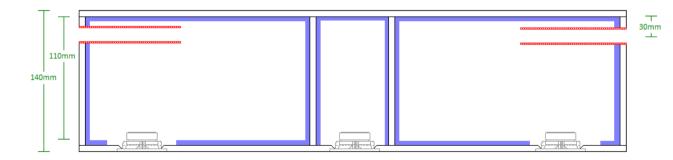
High-gain alignment assumes voltage source amplifier & 1/2 ohm series resistance for typical wire, connection resistance

Fb = 69Hz

F3 = 65Hz [nominal anechoic]

F6 = 59Hz [nominal anechoic]





Simple 3-driver soundbar for Markaudio Alpair 5.3 3 1/2 in wideband drive unit

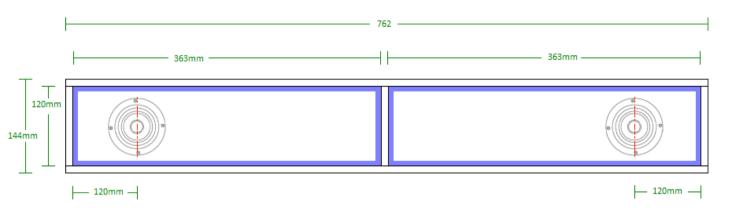
Notes:

- 0/ Sealed and vented alignment options. For former, delete ducts
- 1/ 12mm sheet build material asssumed with 18mm front baffle for increased rigidity
- 2/ Central void should be filled (expanding foam or equivalent) to avoid cavity resonance
- 3/ All internal faces lagged 15mm 20mm BAF, SAE-F10, jute or equivalent
- 4/ Vent 30mm diameter x 96mm long
- 5/ Design assumes HT receiver with dedicated central channel. Matrix center may be used if amplifier not internally bridged type

1/20hm series R assumed for typical wire loop, connection resistance

Fb = 74Hz

F6 = 58Hz [nominal anechoic]



Simple quad-unit soundbar for Alarkaudio Alpair 5.3 3 1/2 in wideband drive unit

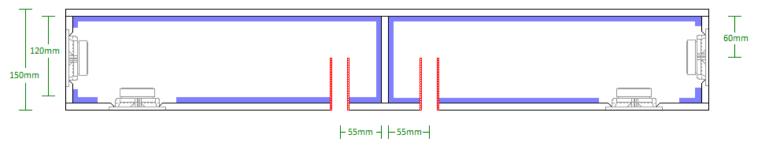
Notes:

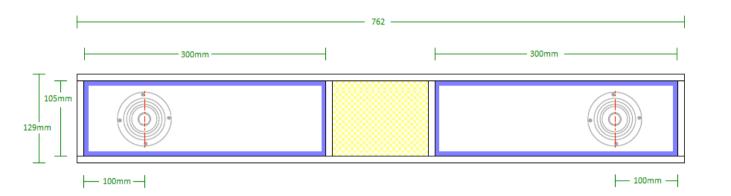
- 1/12mm sheet build material asssumed with 18mm front baffle for increased rigidity
- 2/ All internal faces lagged 15mm 20mm BAF, SAE-F10, jute or equivalent
- 3/ Vent 30mm diameter x 50mm long

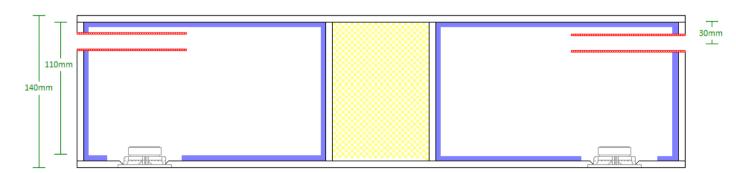
1/20hm series R assumed for typical wire loop, connection resistance

Fb = 74Hz

F6 = 62Hz [nominal anechoic]







Simple vented box soundbar for Markaudio Alpair 5.3 3 1/2 in wideband drive unit

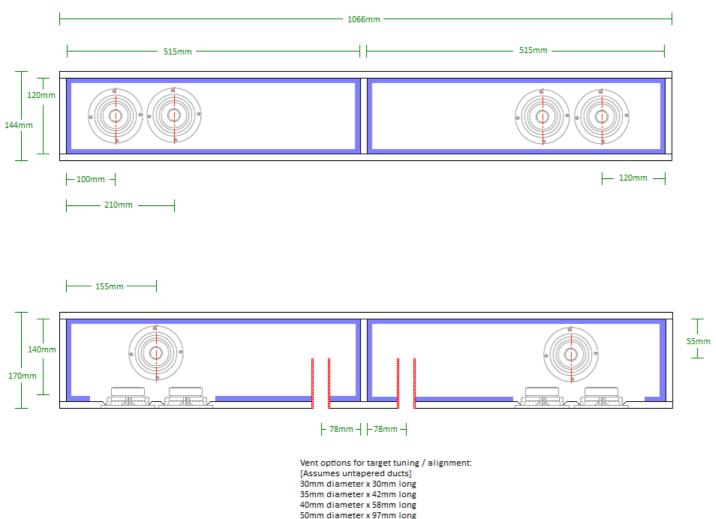
Notes:

- 0/ Sealed and vented alignment options. For former, delete ducts
- 1/ 12mm sheet build material asssumed with 18mm front baffle for increased rigidity
- 2/ Central void should be filled (expanding foam or equivalent) to avoid cavity resonance
- 3/ All internal faces lagged 15mm 20mm BAF, SAE-F10, jute or equivalent
- 4/ Vent 30mm diameter x 96mm long

1/20hm series R assumed for typical wire loop, connection resistance

Fb = 74Hz

F6 = 58Hz [nominal anechoic]



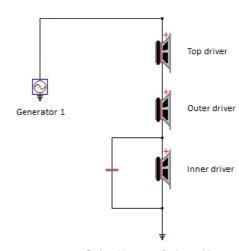
Six-unit soundbar for Markaudio Alpair 5.3 3 1/2 in wideband drive unit

Notes:

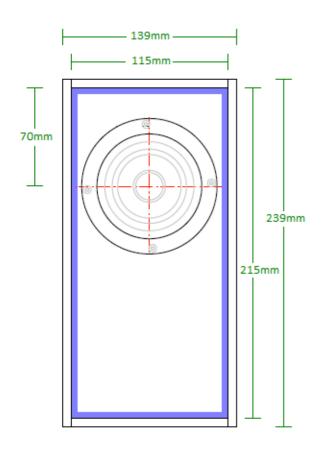
- 0/ 12mm sheet build material assumed with 18mm front baffle for increased rigidity
- 1/ All internal faces lagged 15mm 20mm BAF, SAE-F10, jute or equivalent wool felt. Avoid acoustic foam
- 2/ Vents 30mm diameter x 30mm long. See alternate vent dimensions in table below
- 3/ Drivers wired in series for each channel. Option (below) for low-pass filter for inner drivers on front baffle

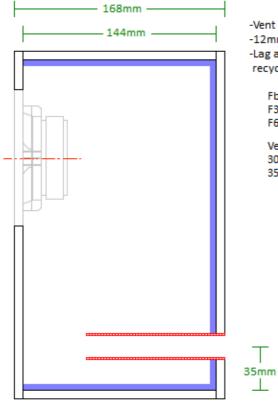
Fb = 74Hz

F6 = 60Hz [nominal anechoic]



Optional low pass for inner driver 56uF bipolar electrolytic [adjust value as desired]





Sub-compact desktop vented box for Mark Audio Alpair 5 Gen.3

- -Vent on rear panel
- -12mm construction material assumed. Void-free multiply highly recommended
- -Lag all internal faces apart from front panel with 12mm acoustical fibreglass, wool felt, recycled denim or similar. Avoid acoustic foam

Fb = 74Hz

F3 = 63Hz [nominal anechoic]

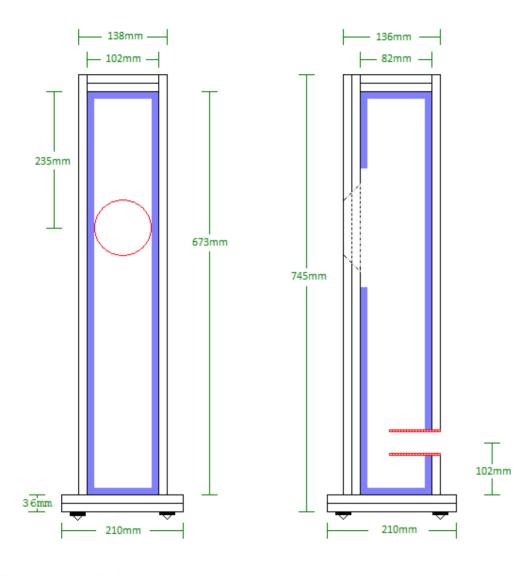
F6 = 57Hz [nominal anechoic]

Vent options (untapered cylindrical ducts)

30mm diameter x 89mm long

35mm diameter x 124mm long

Design by S. Lindgren March 2019



Pudu Compact Mass-loaded Quarter-Wave for Markaudio Alpair 5.3 3 in wideband drive unit

Notes:

- O/ Internal dimensions given (diagram not to scale)
- 1/ 18mm build material assumed. MDF acceptable, quality void-free multiply (Baltic birch, apple, marine, bamboo) recommended
- 2/ Front & top baffles doubled for maximum rigidity
- 3/ All internal panels lagged 12mm 15mm acoustic fibreglass board, wool / jute felt or similar Avoid acoustic foam
- 4/ Chamfer driver cutout to ensure good air-flow
- 5/ Vent on rear baffle

Alignment assumes voltage source amplifier with 1/2ohm series resistance for typical wire, connection resistance

Vent dimension options (untapered cylindrical ducts):

30mm diameter x 29mm long

35mm diameter x 41mm long

40mm diameter x 60mm long

45mm diameter x 76mm long

50mm diameter x 102mm long

Fb = 72Hz

F3 = 68Hz [nominal anechoic]

F6 = 62Hz [nominal anechoic]

Designed by S. Lindgren July 2020