

Compact Mass-loaded Quarter-Wave for Markaudio CHN50 full-range drive unit

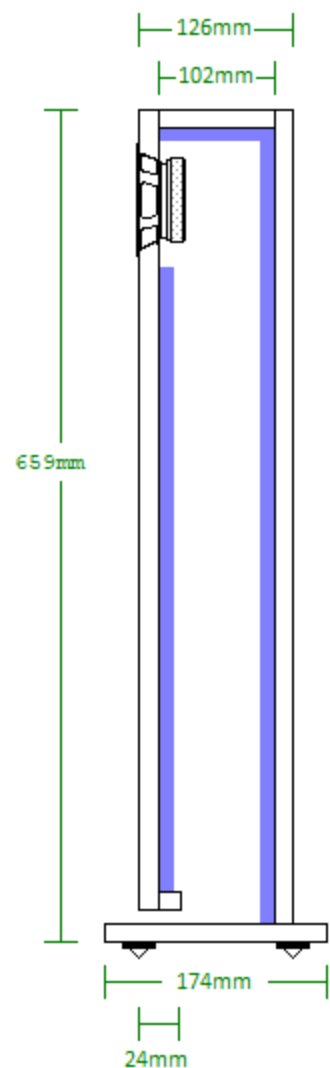
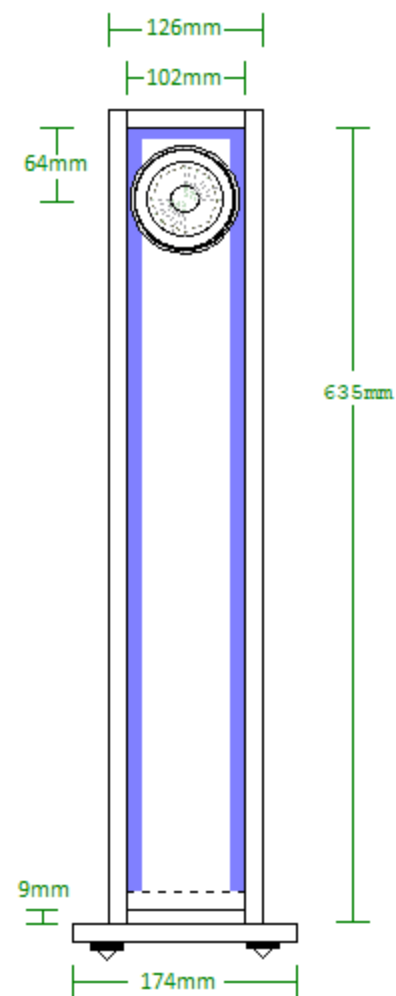
Notes:

- 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 walls 10mm - 12mm acoustic fibreglass board, wool felt, jute, recycled denim or similar. Avoid acoustic foam
- 3/ Chamfer driver cutout to improve airflow and reduce reflections

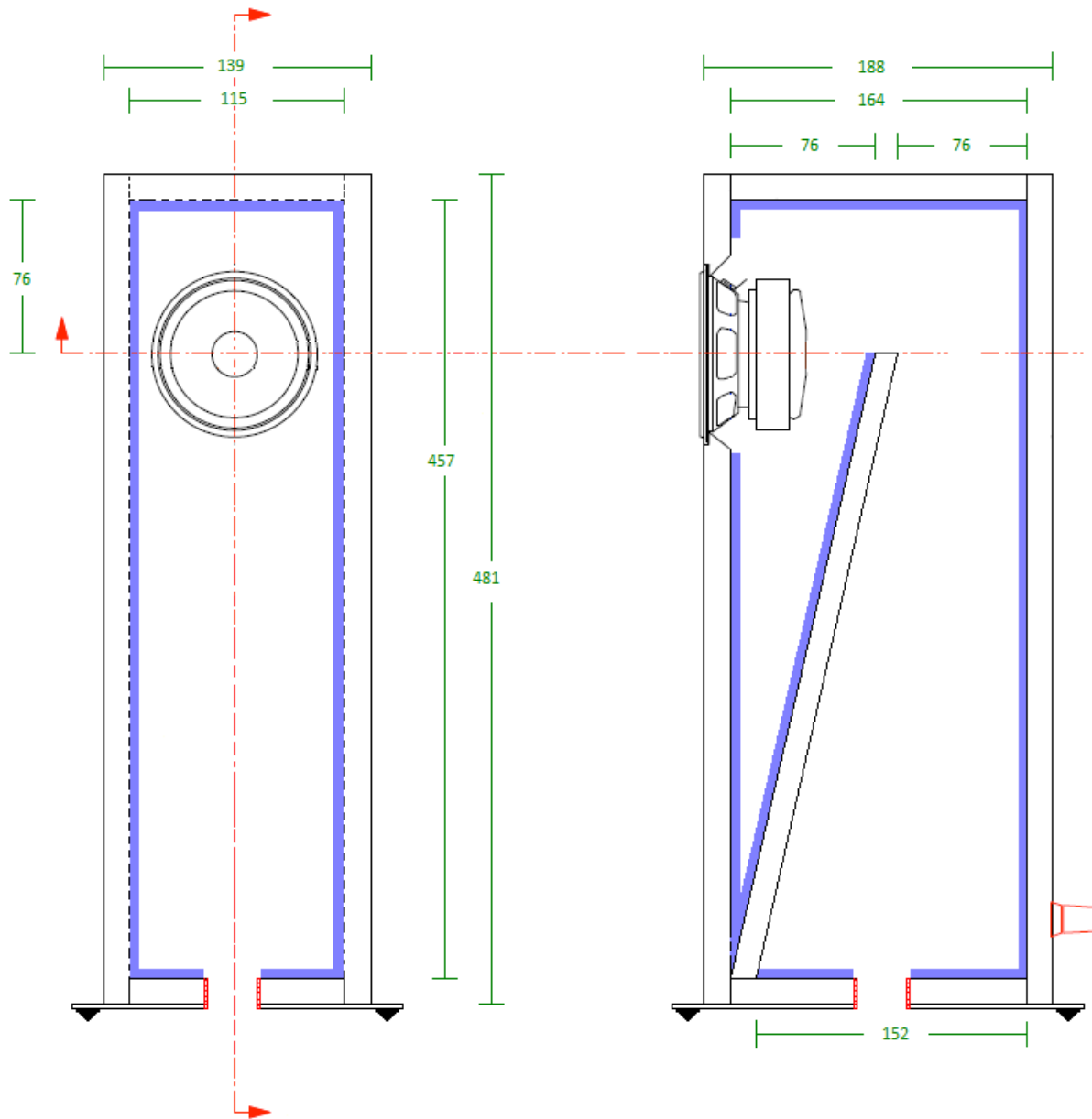
Fb = 74Hz

F3 = 62Hz [nominal anechoic]

F6 = 59Hz [nominal anechoic]



Compact Mass-loaded Horn for Markaudio CLN50



Notes:

0/ Diagram to left not to scale

1/ 12mm build material assumed. MDF acceptable, quality void-free multiply (baltic birch, apple, marine, bamboo etc.) recommended

2/ Cylindrical vent in base 31mm diameter x 12mm long. Spiked plinth necessary to space vent from supporting surfaces. Experiment with spike length or distance from surface to adapt tuning to taste

3/ Lag all internal faces apart from rear of internal panel 10mm - 12mm SAE-F10 wool felt, jute, recycled denim or similar. Avoid acoustic foam

4/ Design optimised for small spaces & modest SPLs

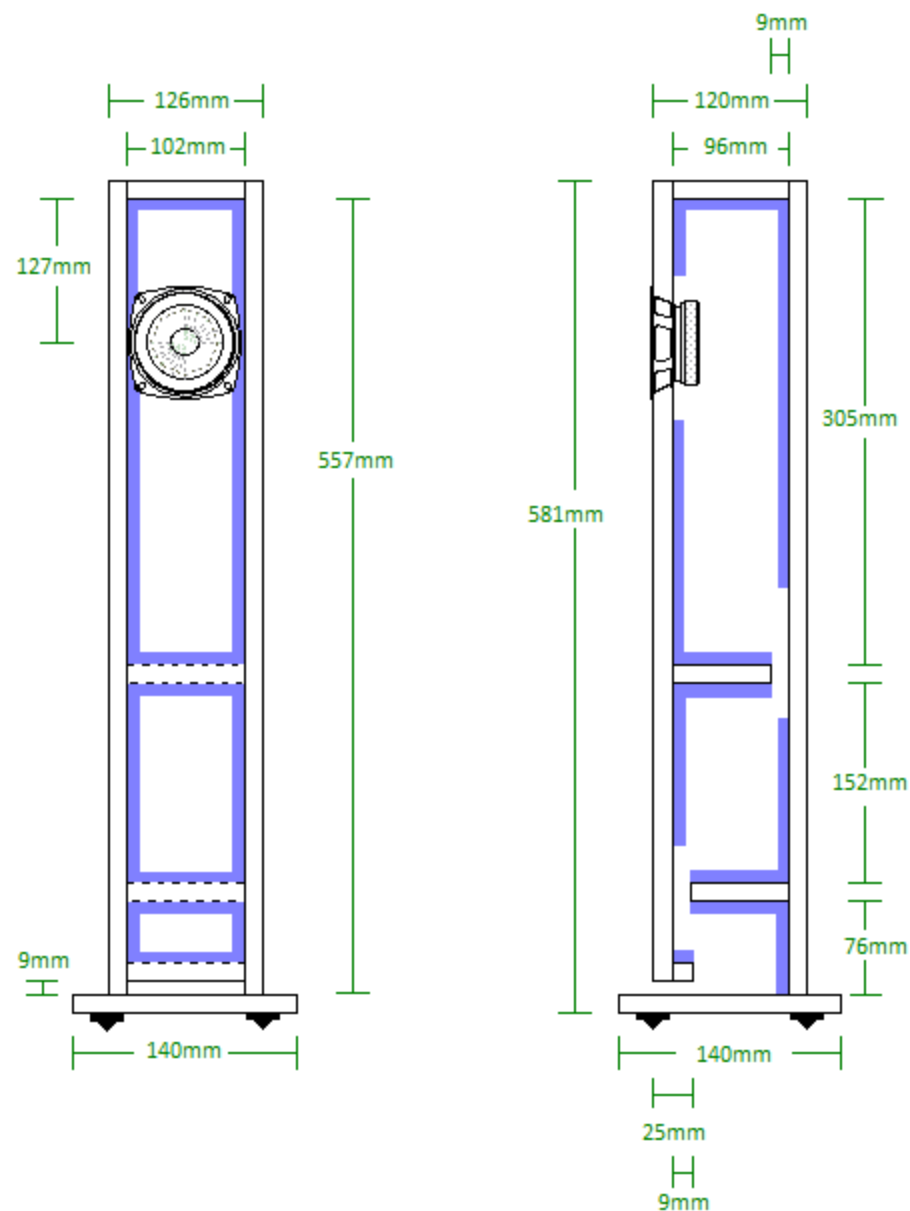
Alignment assumes 1/2ohm series resistance for typical wire loop and contact resistance.

Fb = 76Hz

F3 = 70Hz [nominal anechoic]

F6 = 64Hz [nominal anechoic]

Compact series chamber tuned floorstander for Markaudio CHN50 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

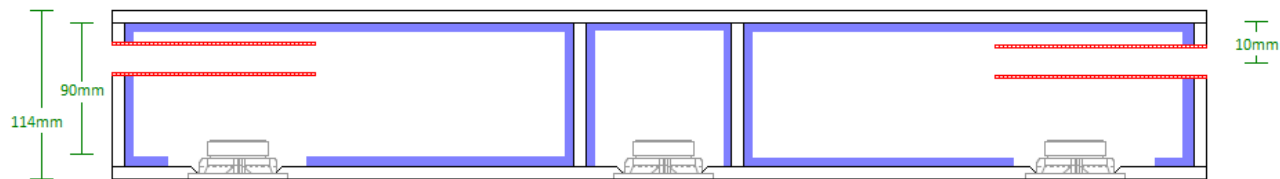
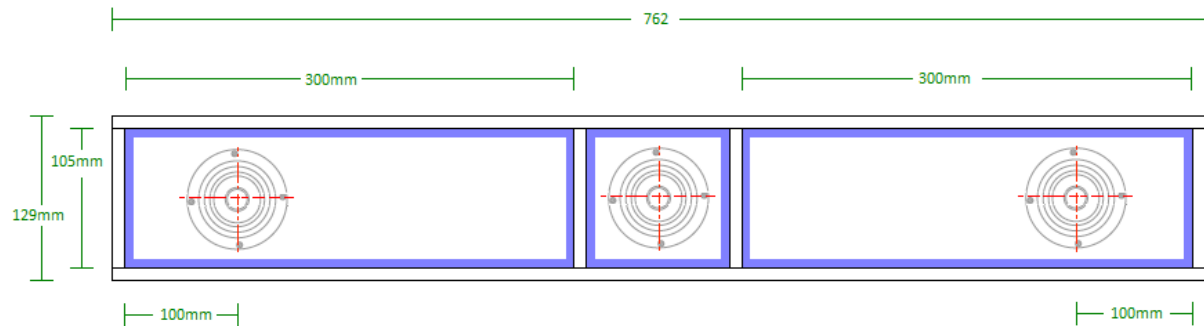
3/ Chamfer driver cutout to improve airflow & reduce reflections

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

Fb = 80Hz

F3 = 70Hz [nominal anechoic]

F6 = 74Hz [nominal anechoic]



*Simple 3-driver soundbar for
Markaudio C.R.N50 3 1/2in wideband drive unit*

Notes:

- 0/ Sealed and vented alignment options. For former, delete ducts
- 1/ 12mm sheet build material
- 2/ All internal faces lagged 15mm - 20mm BAF, SAE-F10, jute or equivalent
- 3/ Vent 30mm diameter x 92mm long
- 4/ Design assumes HT receiver with dedicated central channel. Matrix center may be used if amplifier not internally bridged type

1/2ohm series R assumed for typical wire loop, connection resistance

Fb = 82Hz

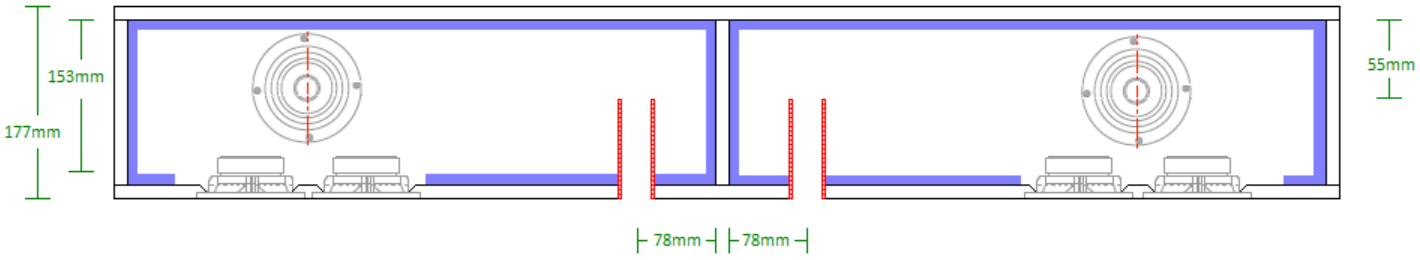
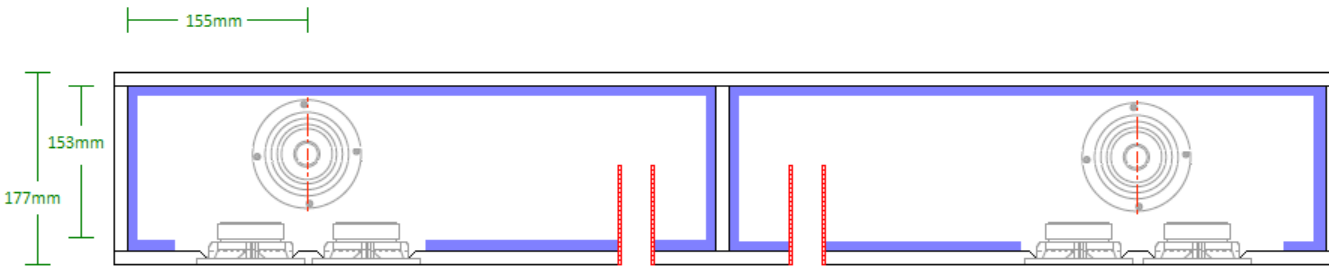
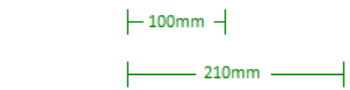
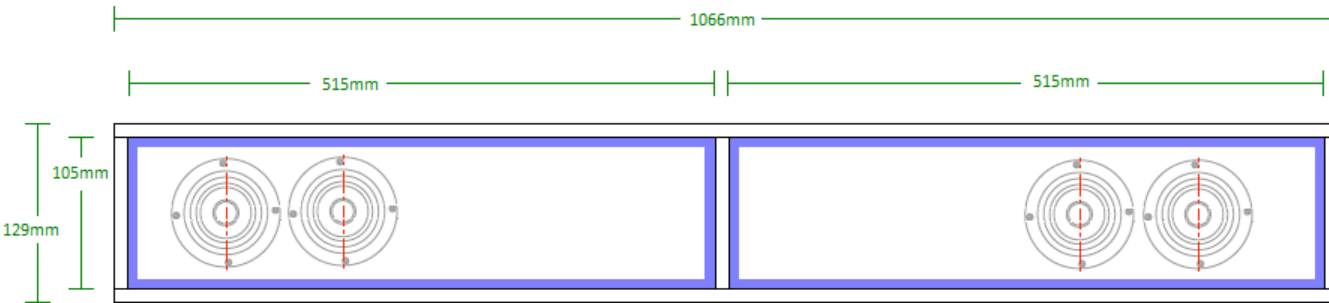
F6 = 64Hz [nominal anechoic]

Six-unit soundbar for Markaudio CKN50 3 1/2" wideband drive unit

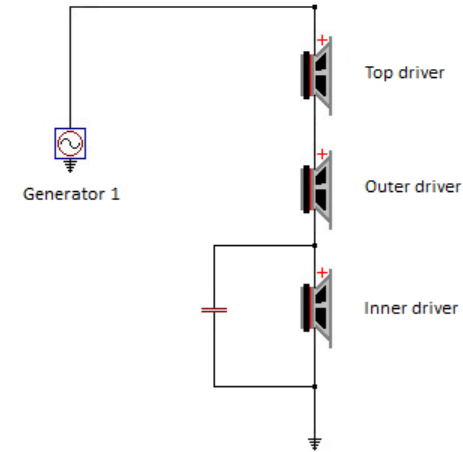
Notes:

- 0/ 12mm sheet build material assumed
- 1/ All internal faces lagged 15mm - 20mm BAF, SAE-F10, jute or equivalent wool felt. Avoid acoustic foam
- 2/ Vents 30mm diameter x 22mm 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 = 82Hz
F6 = 64Hz [nominal anechoic]

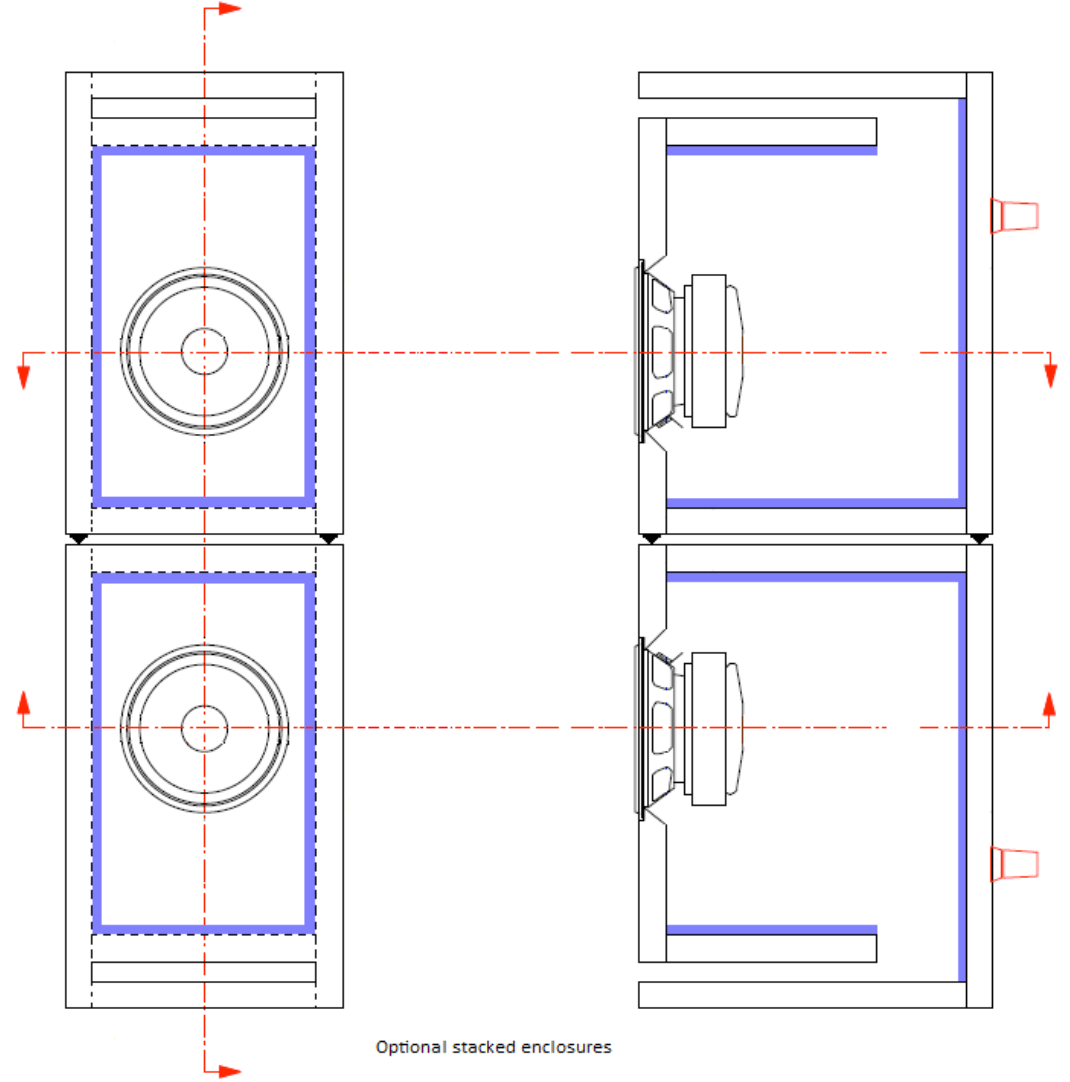
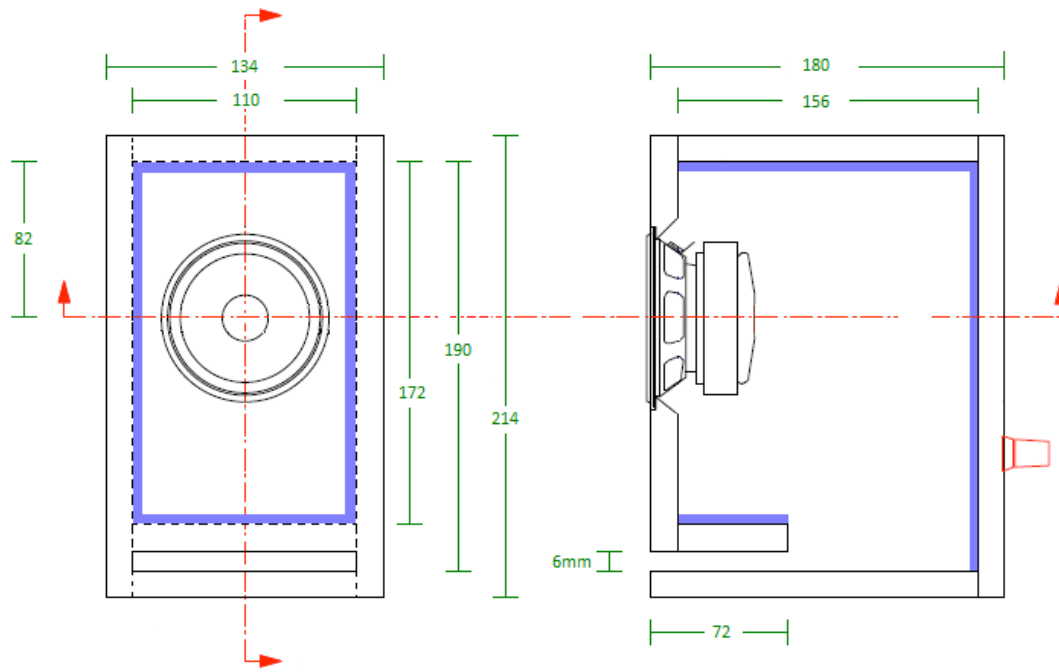


Vent options for target tuning / alignment:
[Assumes untapered ducts]
30mm diameter x 22mm long
35mm diameter x 33mm long
40mm diameter x 46mm long
50mm diameter x 78mm long



Optional low pass for inner driver
33uF bipolar electrolytic
[adjust value as desired]

Slot vent compact for Markaudio CHN50



Notes:

- 0/ Partially resistive-vent alignment for CHN50
- 1/ 12mm build material assumed. MDF acceptable, quality void-free multiply (Baltic birch, apple, marine, bamboo etc.) recommended
- 2/ Internal faces lagged per diagram 12mm acoustic fibreglass board, SAE-F10 wool felt, jute, recycled denim or similar. Avoid acoustic foam
- 3/ Chamfer driver cutout to improve airflow

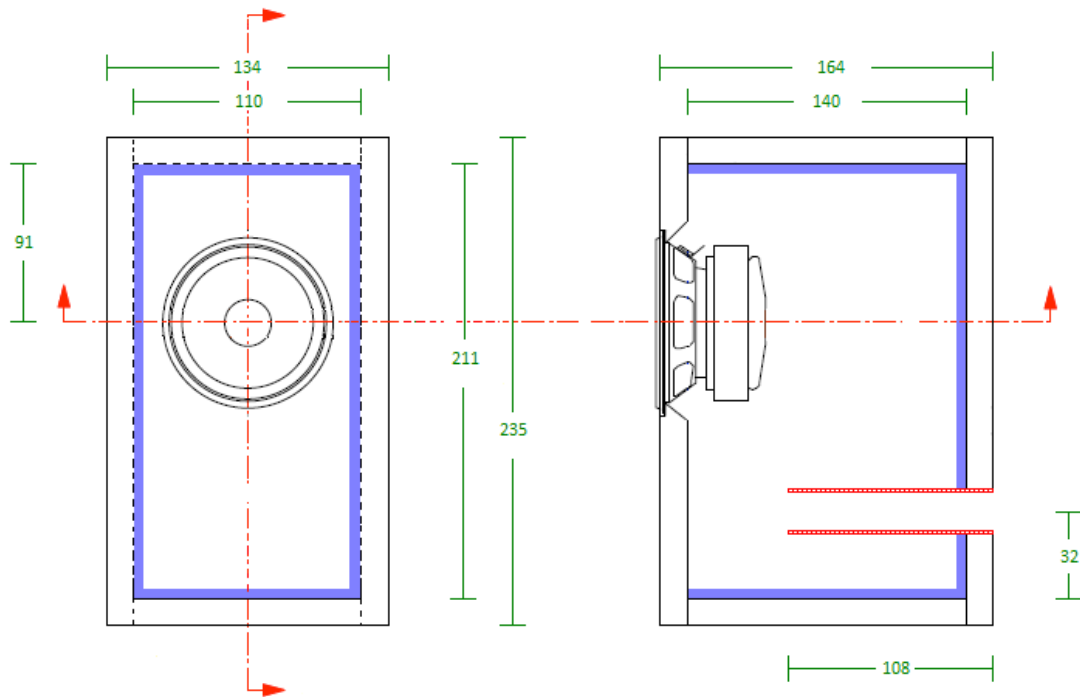
Alignment assumes 1/2ohm series resistance to account for typical wire, connection resistance with voltage-source amplifier.

- Fb = 85Hz
- F3 = 71Hz [nominal anechoic]
- F6 = 66Hz [nominal anechoic]

Builders may wish to experiment with two stacked enclosures. Wire in series for 6.8ohm nominal load. With stacked enclosures, suggest short adjustable spikes or similar are used between to focus driver output at listening distance

Optional stacked enclosures

Compact vented box standmount for Markaudio CHN50



Notes

0/ Diagram to left in mm (not to scale)

1/ 12mm build material assumed. MDF acceptable, quality grade void-free plywood (Baltic birch, apple, marine, bamboo) recommended

2/ Vent unflared 35mm diameter x 108mm long

3/ Box lagged all internal faces apart from front baffle 12mm acoustic fibreglass, wool felt, jute or equivalent. Avoid acoustic foam

4/ Chamfer driver cutout to improve airflow

Design assumes 1/2ohm series resistance for typical wire loop, connection resistance

Fb = 85Hz

F3 = 71.5Hz [nominal anechoic, rising LF response]

F6 = 65.5Hz [nominal anechoic]

Fenlon 50



markaudio
New Audio Fidelity

- Simple vented box designed by Mark Fenlon for CHN50 driver!
- Industry norm front port!
- Projects bass forwards for interesting and captivating sound characteristic!
- Simple construction!
- Port 1.8cm wide and 2.7cm long for powerful bass performance!
- Line box apart from front panel with 1cm - 1.5cm thick wool or polyester damping

