



MARKAUDIO



CHN 110

The CHN110 is a brand-new 5 ¾ inch driver high fidelity multi-purpose design.

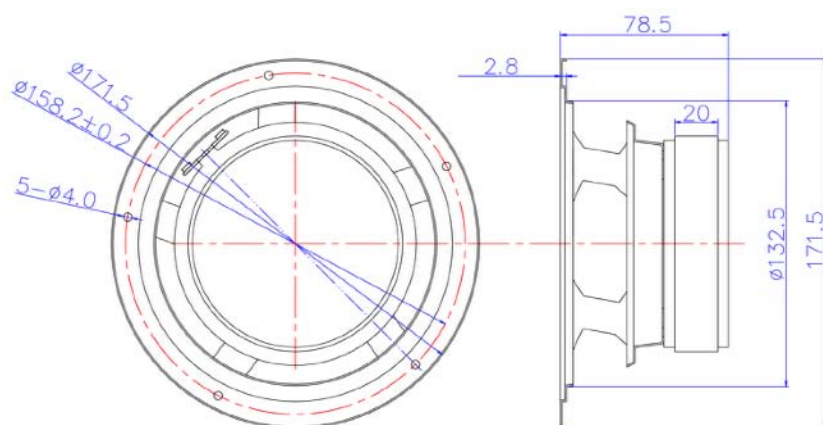
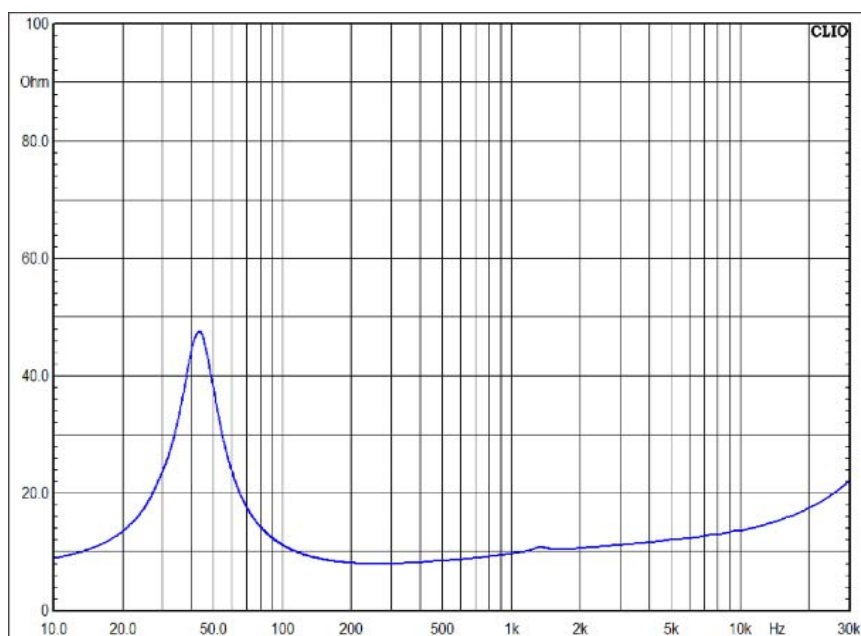
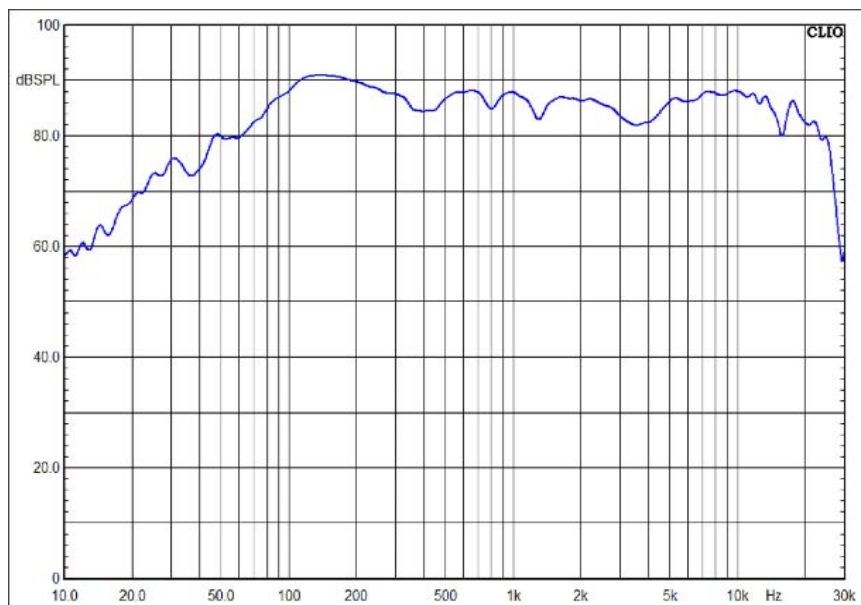
Exploiting technologies and features from Markaudio's continuous research, it has been carefully optimised to provide exceptional bass extension beyond what many 5 ½ inch to 6 ½ inch mid-bass units can deliver combined with full-range frequency output.

The CHN110 cone exploits a high-strength series aerospace grade alloy designed to cope with high bending stress loads. Based upon the shallow, wide-dispersion multiform cone concept, the material thickness has been increased to allow greater operational low frequency load capacity. The all-new long-stroke suspension has been optimised to enhance and support the remarkable low-frequency load capacity, and has an air volume compliance of almost 25 litres. With a new low-distortion motor designed to provide a medium Q, the CHN110 is intended for use in larger enclosures where it can produce significant bass extension for a driver of its size, while providing a sensitivity of over 88dB 1m/w, and a smooth high frequency range extending to 25KHz at +80dB.

Other features include an "easy install" heavy duty steel frame for both surface and recessed mounting. The CHN110 provides custom builders with wide operational flexibility at an affordable price, allowing use either as a genuine, high-performance full-range driver, or as a wide-range mid-bass with simple filtering. Ideal for use in high-fidelity, home-theatre, commercial A/V applications, and suiting a wide range of enclosure types, it continues Markaudio's reputation for providing qualitative excellence and advanced mechanical engineering at an accessible level.

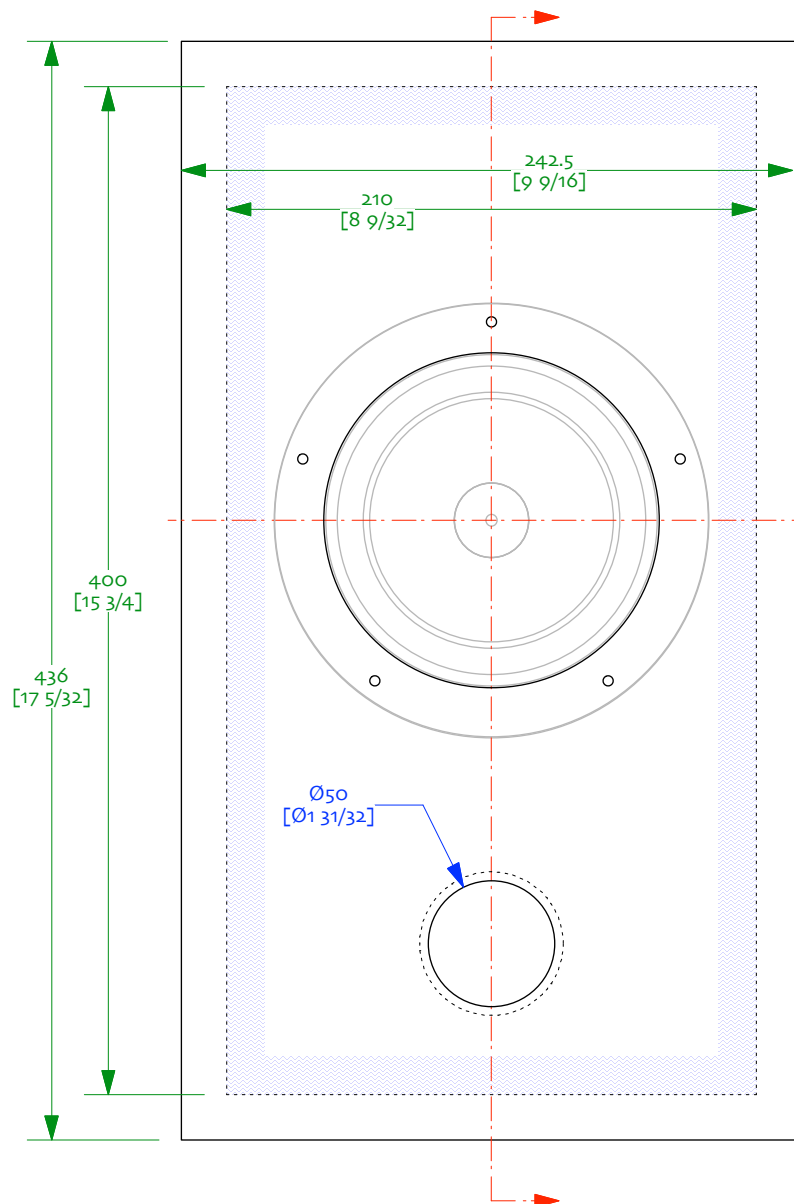


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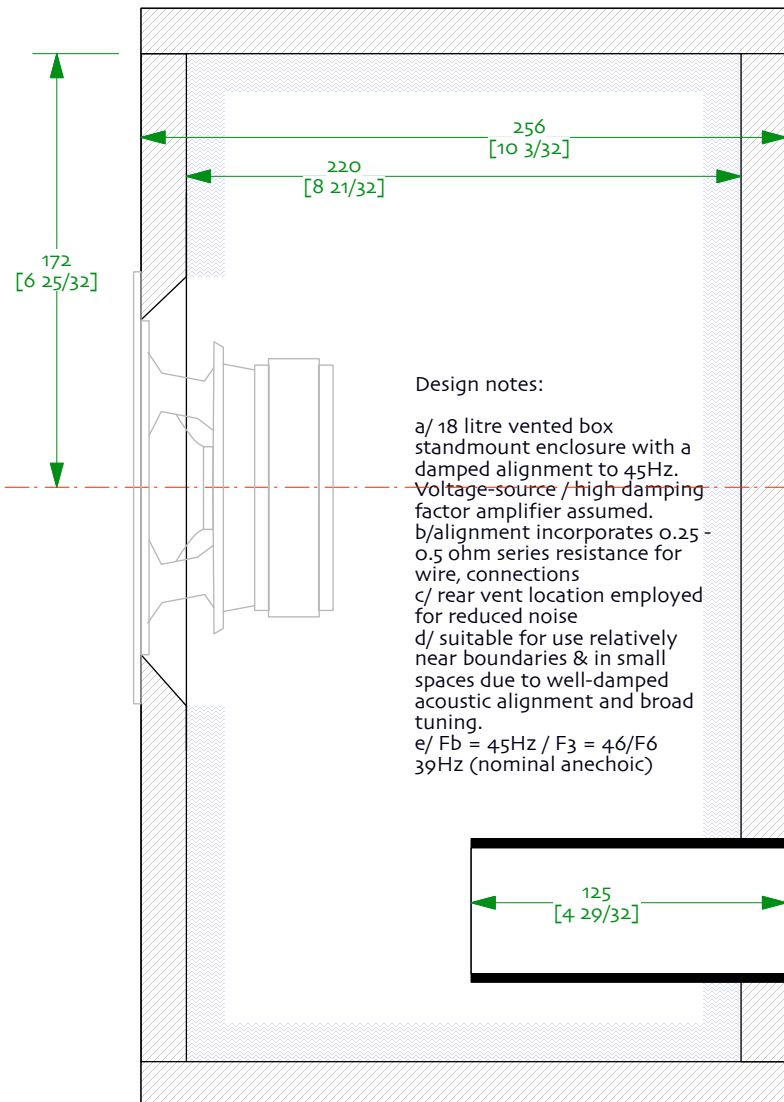
FS: 44.1601 Hz
 VAS: 24.7335 L
 RE: 6.8000 Ω
 QMS: 2.86
 QES: 0.4884
 QTS: 0.4172
 Bxl: 5.8206
 dB SPL: 88.4186
 SD: 0.0109 m²
 CMS: 1.4811
 MMS: 8.7700 g
 RMS: 0.8508 WM
 RMT: 5.8330 WM
 MMD: 8.1228 g
 h₀: 0.42%
 L_{1kHz}: 0.2771 mH
 L_{10kHz}: 0.1229 mH
 X Max 8mm 1 way
 Pwr: 45watts Nom





Notes

- 0/ drawn with 18 mm material
- 1/ good multi-ply recommended
- 2/ optional bracing not shown (necessary if MDF used). Orient braces vertically
- 3/ line all internal faces with damping 15mm - 20mm [3/4in] wool felt or similar [blue on drawing]. Avoid foam.
- 4/ If 2in vent used it should be 5in
- 5/ open up back-side of driver cutout (45° bevel shown)

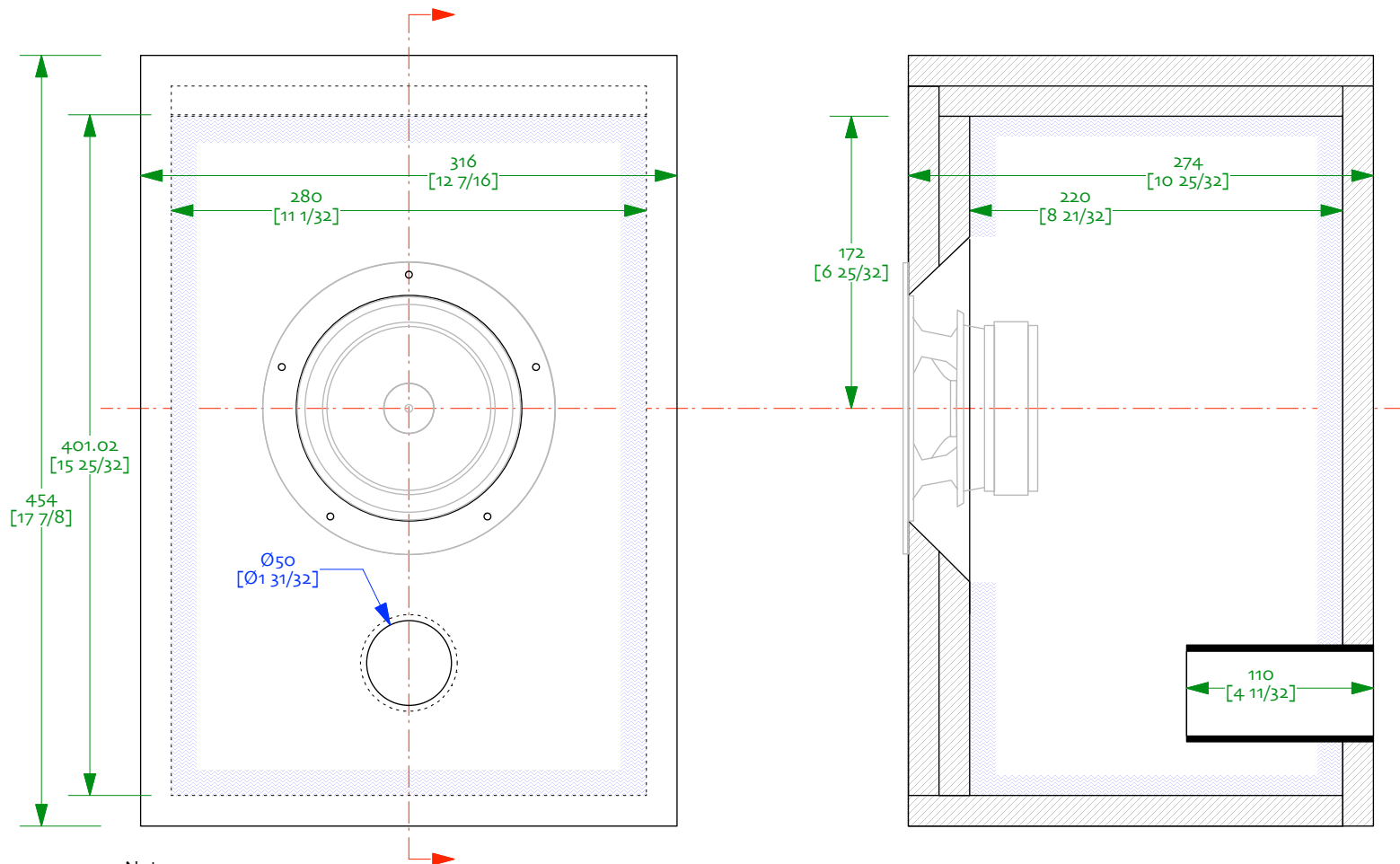


Design notes:

- a/ 18 litre vented box standmount enclosure with a damped alignment to 45Hz. Voltage-source / high-damping factor amplifier assumed.
- b/alignment incorporates 0.25 - 0.5 ohm series resistance for wire, connections
- c/ rear vent location employed for reduced noise
- d/ suitable for use relatively near boundaries & in small spaces due to well-damped acoustic alignment and broad tuning.
- e/ Fb = 45Hz / F3 = 46/F6 39Hz (nominal anechoic)



Pactolus OV93
Mark Audio CHN-110
Sheet 0 - 18mm plan
designed by Scott Lindgren
drawn by dld / 14-november-2019
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Notes

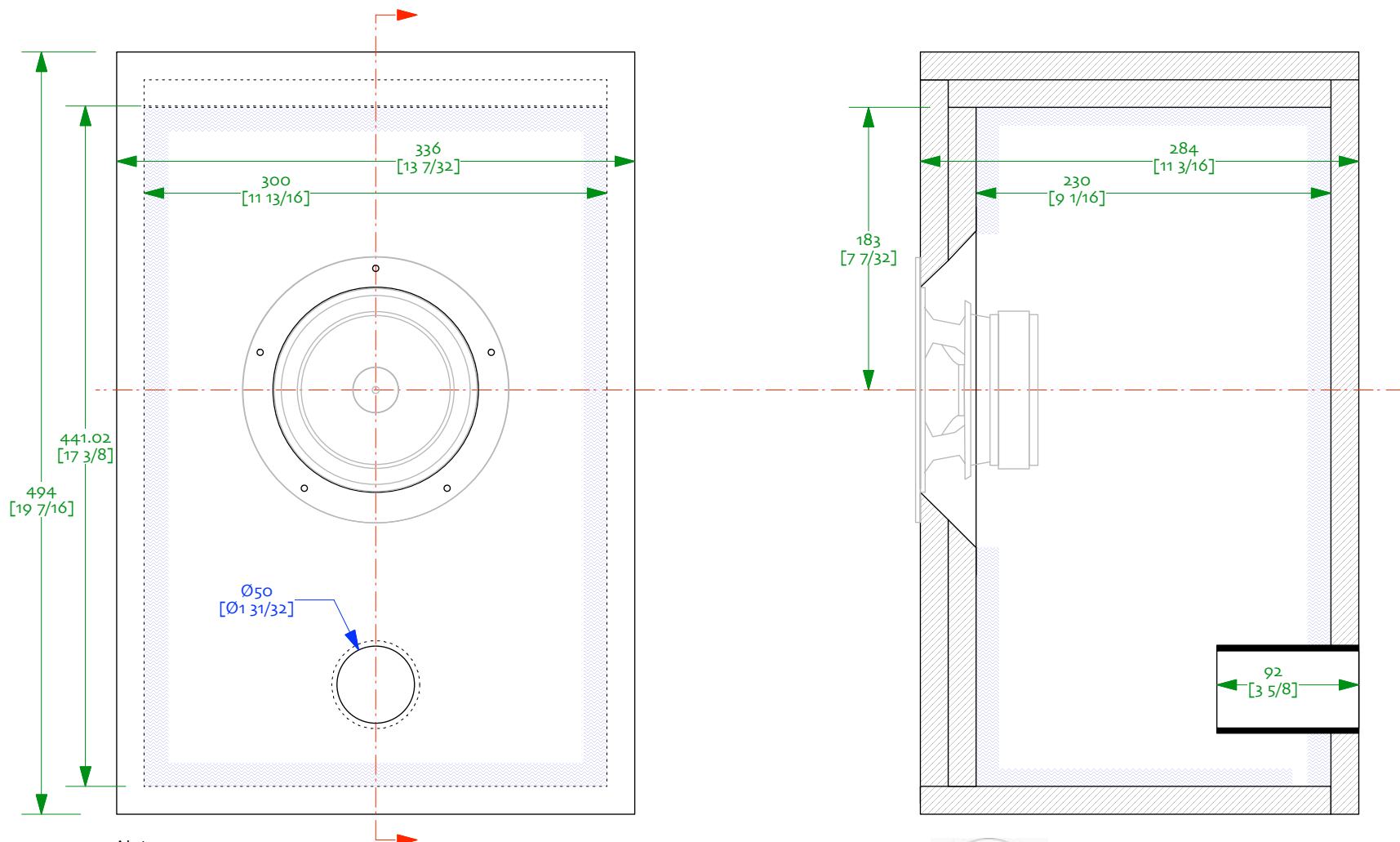
- 0/ drawn with 18 mm material
- 1/ good multi-ply recommended
- 2/ optional bracing not shown (necessary if MDF used).
- Orient braces vertically
- 3/ line all internal faces with damping 15mm - 20mm [3/4in] wool felt or similar [blue on drawing]. Avoid foam.
- 4/ If 2in vent used it should be 4.375in
- 5/ open up back-side of driver cutout (45° bevel shown)

Design notes:

- a/ 24 litre vented box standmount enclosure with a damped alignment to 45Hz. Voltage-source / high damping factor amplifier assumed.
- b/alignment incorporates 0.25 - 0.5 ohm series resistance for wire, connections
- c/ rear vent location employed for reduced noise. d/ istance for wire, connections
- Rear vent location employed for reduced noise. Speaker is suitable for use nearer boundaries than 30 litre FB-40-30 enclosure due to damped acoustic alignment and slightly broader tuning.
- e/ Fb = 41Hz / F3 = 40/F6 36Hz (nominal anechoic)



Pelorus ov92
 Mark Audio CHN-110
 Sheet 0 - 18mm plan
 designed by Scott Lindgren
 drawn by dld / 14-november-2019
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Notes

- o/ drawn with 18 mm material
- 1/ good multi-ply recommended
- 2/ optional bracing not shown (necessary if MDF used). Orient braces vertically
- 3/ line all internal faces with damping 15mm - 20mm [3/4in] wool felt or similar [blue on drawing]. Avoid foam.
- 4/ If 2in vent used it should be 3.625in
- 5/ open up back-side of driver cutout (45° bevel shown)

Design notes:

- a/ 30 litre vented box standmount enclosure with a damped alignment to 45Hz. Voltage-source / high damping factor amplifier assumed.
- b/ alignment incorporates 0.25 - 0.5 ohm series resistance for wire, connections
- c/ enclosure provides near maximally-flat alignment to 40Hz. Voltage-source / high damping factor amplifier assumed. Rear vent location employed for reduced noise. Avoid use near boundaries or bass gain may become excessive.
- e/ $F_b = 40\text{Hz}$ / $F_3 = 36/F_6$ 32Hz (nominal anechoic)



Perseus ov91
 Mark Audio CHN-110
 Sheet 0 - 18mm plan
 designed by Scott Lindgren
 drawn by dld / 13-november-2019
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Imbolc ML-V ov91

CHN-110 | plan (18mm)

designed by Scott Lindgren | drawn by dld

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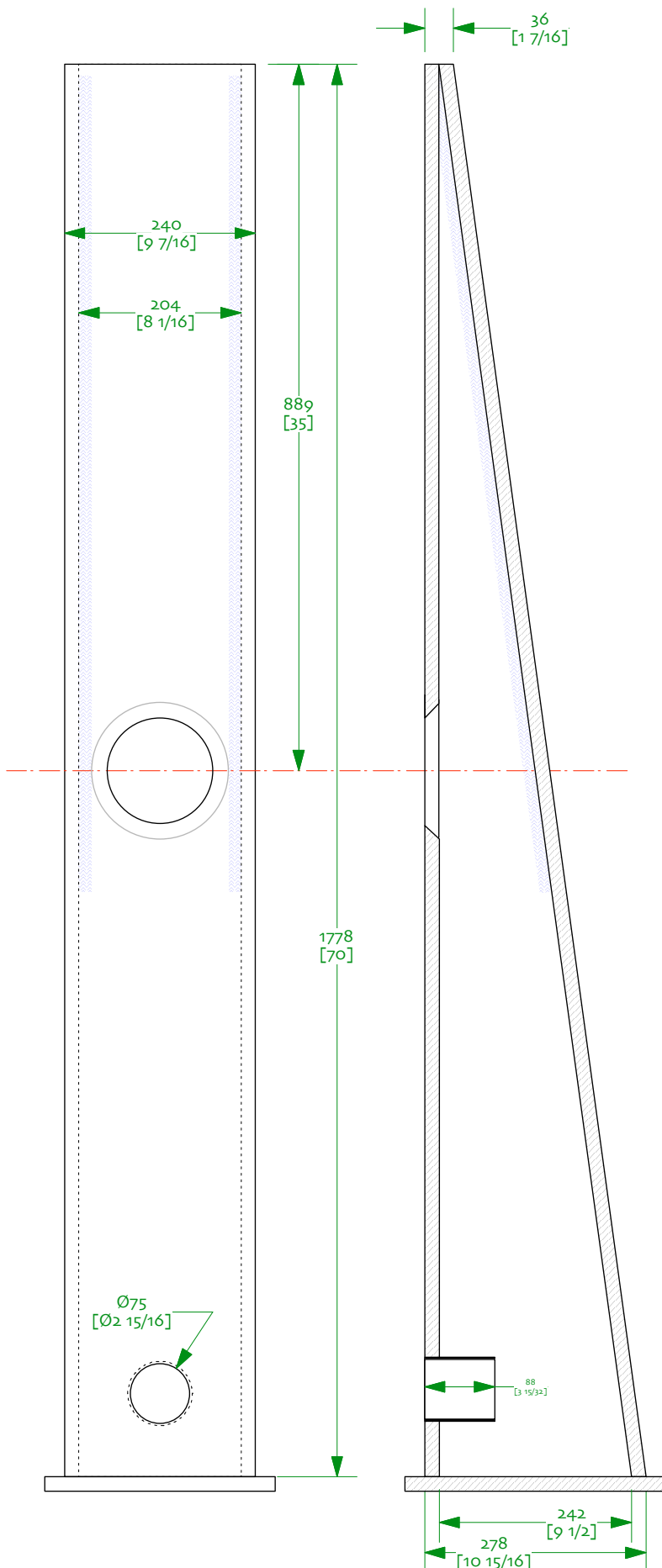
Notes

- 0/ drawn with 18 mm material
- 1/ good multi-ply recommended
- 2/ optional bracing not shown (necessary if MDF used). Orient braces vertically
- 3/ damping applied back and side walls to 152mm [6in] below driver. 15mm - 20mm [3/4in] wool felt or similar [blue on drawing] recommended. Avoid acoustic foam
- 4/ If 3in vent used it should be 3.5in
- 5/ open up back-side of driver cutout (45° bevel shown)

Design notes:

- a/ mass-loaded Voigt horn provides relatively flat alignment to 41Hz. Voltage-source / high damping factor amplifier assumed.
- b/ alignment incorporates 0.25 - 0.5 ohm series resistance for wire, connections
- c/ driver and vent may be positioned on the vertical or sloping baffle
- e/ $F_b = 41\text{Hz}$ / $F_3 = 37/F_6$ 32Hz (nominal anechoic)

This is a free example of a member of the Woden Festival Series

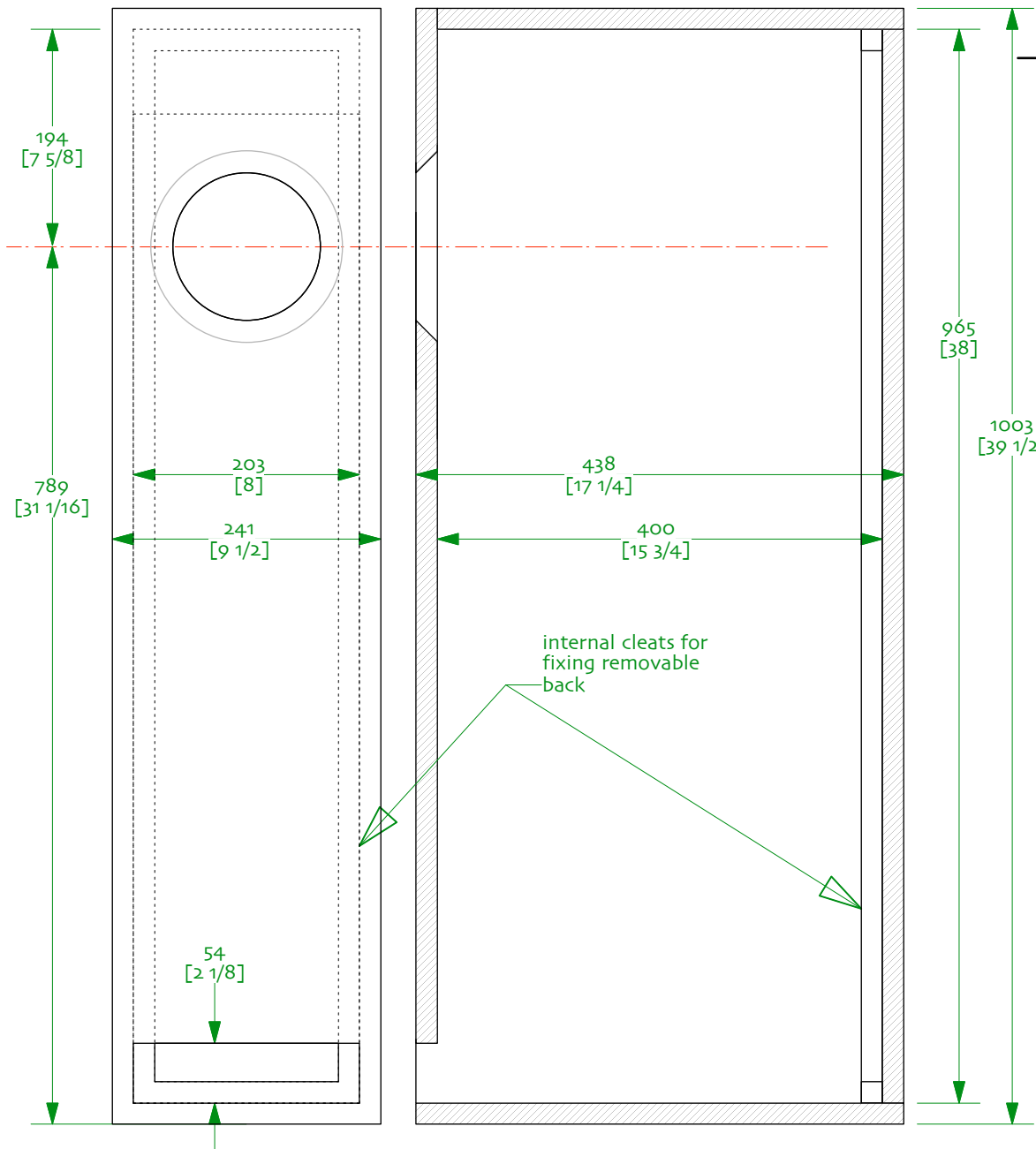




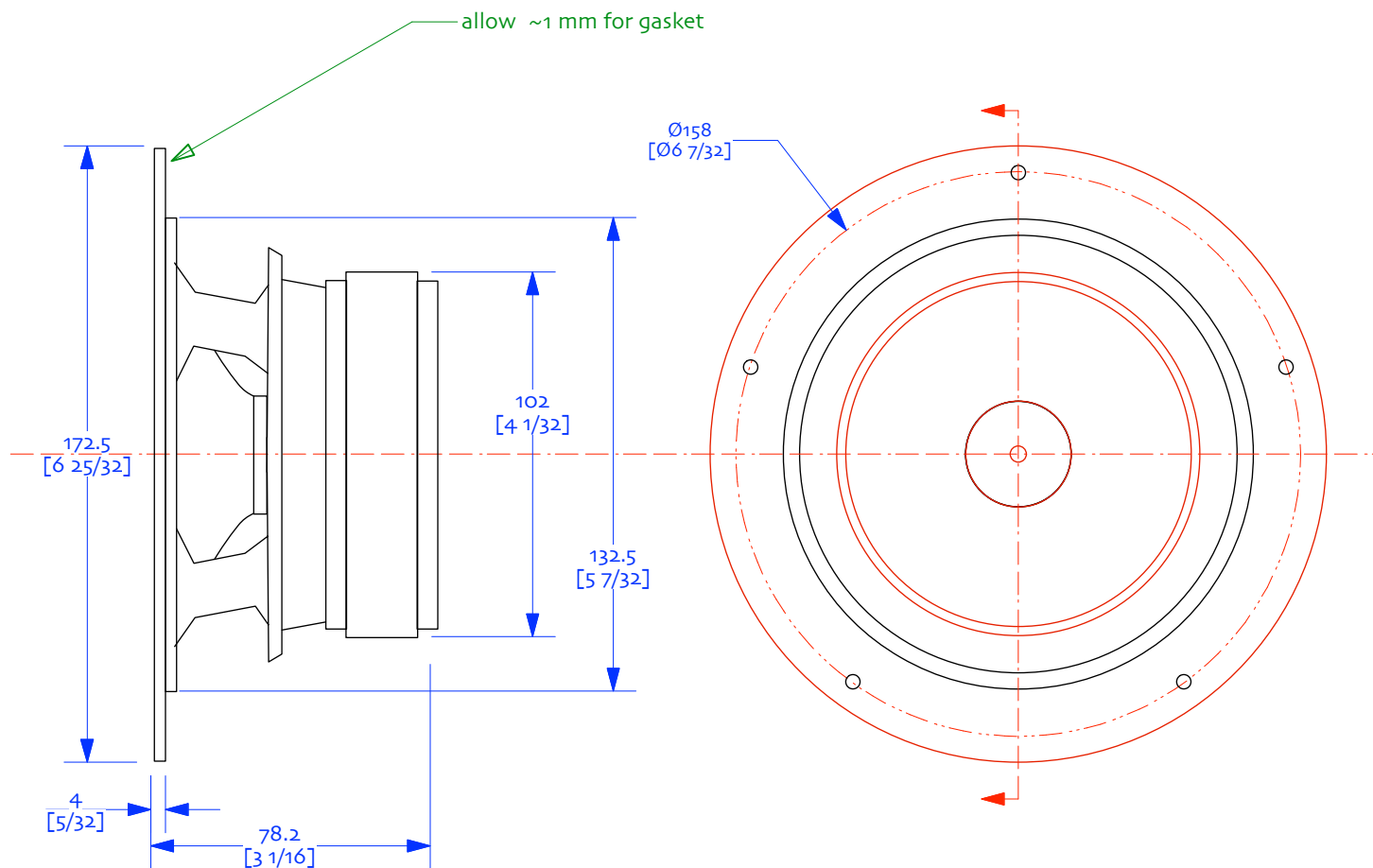
markaudio
New Audio Fidelity

Pensil CHN-110

designed by S Lindgren drawn by dld
14-november-2019
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written approval from Markimage Limited



Notes:
0/ drawing uses 3/4" (19.05mm) material. 18-20mm OK. Quality multi-ply recommended
1/ stuff with 1 lbs / ft³ (44 ounces = 1.256 kg) of polyfill
2/cleats on back to allow for removable back, useful for adjusting the stuffing
3/ bracing is optional but recommended. For bracing ideas please see the bracing sheet in the superPensil12 plans



CHN 110

driver dimensions
drawn by dld | 14-december-2019