



MARKAUDIO



## CHN 110

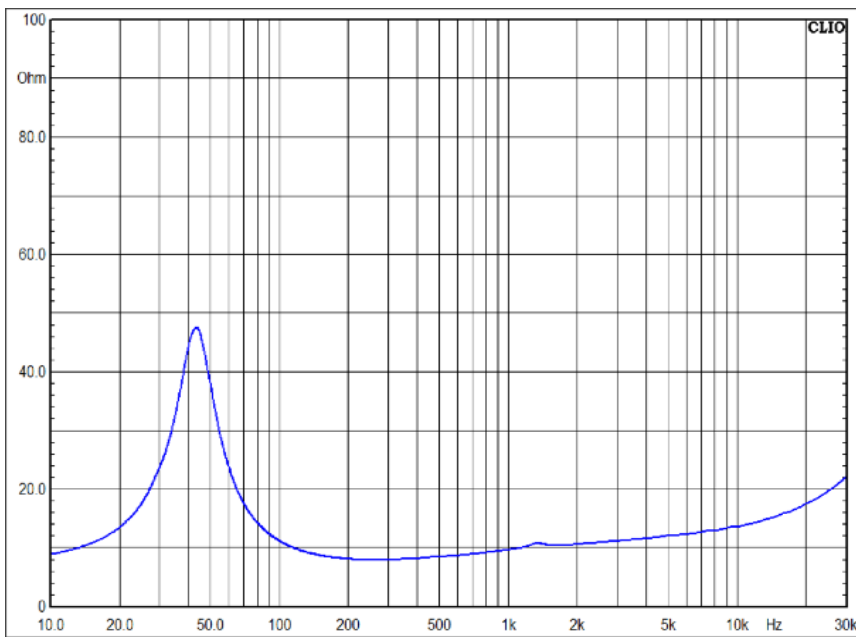
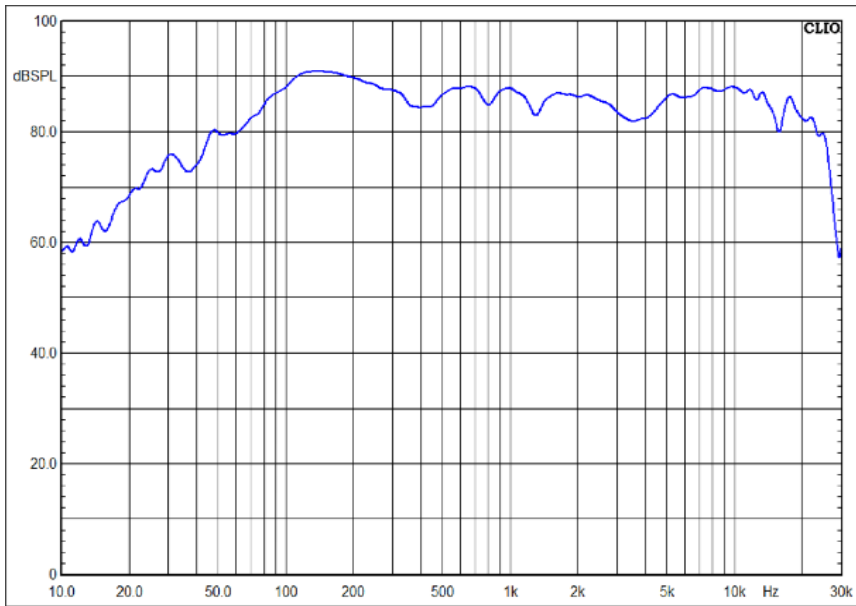
The CHN110 is a brand-new 5 ¾ inch driver high fidelity multi-purpose design.

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.

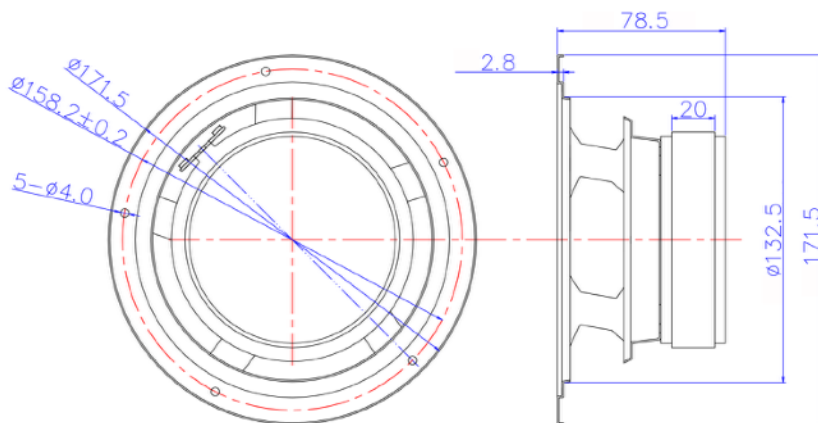
The CHN110 cone exploits a high-strength series aerospace grade alloy designed to cope with high bending stress loads. Based upon the shallow, wide-dispersion multiform cone concept, the material thickness has been increased to allow greater operational low frequency load capacity. The all-new long-stroke 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.





FS: 44.1601 Hz  
 VAS: 24.7335 L  
 RE: 6.8000  $\Omega$   
 QMS: 2.86  
 QES: 0.4884  
 QTS: 0.4172  
 Bxl: 5.8206  
 dB SPL: 88.4186  
 SD: 0.0109 m<sup>2</sup>  
 CMS: 1.4811  
 MMS: 8.7700 g  
 RMS: 0.8508 WM  
 RMT: 5.8330 WM  
 MMD: 8.1228 g  
 h<sub>0</sub>: 0.42%  
 L1kHz: 0.2771 mH  
 L10kHz: 0.1229 mH  
 X Max 8mm 1 way  
 Pwr: 45watts Nom



# CHN 110 plans



CHN110 FB45-18 DF vented box  
Designer: Dr Scott Lindgren  
Measurements: S.I. metric and Imperial

- 18 litre vented box standmount enclosure
- 18mm [3/4in] build material. Quality plywood recommended
- Vent 50mm [2in] diameter x 125mm [5in] long on rear baffle
- All internal surfaces damped 15mm - 20mm [3/4in] wool felt or similar [blue on drawing]. Avoid acoustic foam.
- Chamfer (round off) inside edge of driver cut-out

## Design notes:

Enclosure provides damped alignment to 45Hz. Voltage-source / high damping factor amplifier assumed.

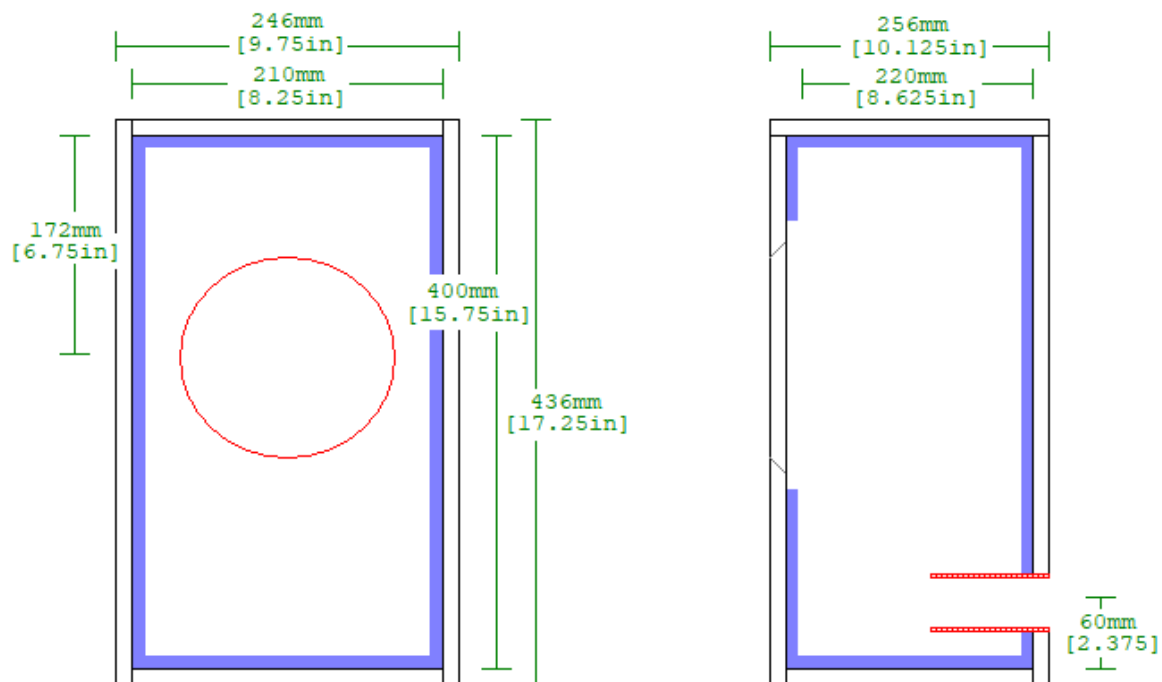
Alignment incorporates 0.25 - 0.5 ohm series resistance for wire, connections &c.

Rear vent location employed for reduced noise. Speaker is suitable for use relatively near boundaries & in small spaces due to well-damped acoustic alignment and broad tuning.

Fb = 45Hz

F3 = 46Hz (nominal anechoic)

F6 = 39Hz (nominal anechoic)



CHN110 FB41-24 DF vented box  
 Designer: Dr Scott Lindgren  
 Measurements: S.I. metric and Imperial

- 24 litre vented box standmount enclosure
- 18mm [3/4in] build material. Quality plywood recommended
- Doubled front and top panels for increased rigidity / structural stability
- Vent 50mm [2in] diameter x 110mm [4.375in] long on rear baffle
- All internal surfaces apart from front baffle damped 15mm - 20mm [3/4in] wool felt or similar [blue on drawing]. Avoid acoustic foam.
- Chamfer (round off) inside edge of driver cut-out

Design notes:

Enclosure provides damped alignment to 40Hz. Voltage-source / high damping factor amplifier assumed.

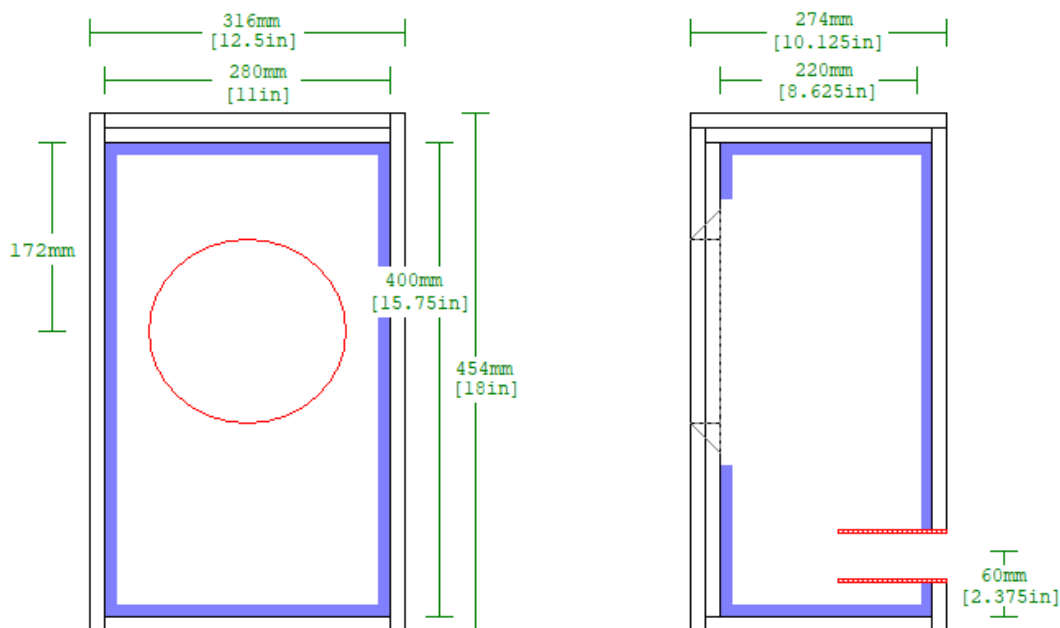
Alignment incorporates 0.25 - 0.5 ohm series resistance for wire, connections &c.

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.

Fb = 41Hz

F3 = 40Hz (nominal anechoic)

F6 = 36Hz (nominal anechoic)



CHN110 FB40-30 DF vented box  
 Designer: Dr Scott Lindgren  
 Measurements: S.I. metric and Imperial

- 30 litre vented box standmount enclosure
- 18mm [3/4in] build material. Quality plywood recommended
- Doubled front and top panels for increased rigidity / structural stability
- Vent 50mm [2in] diameter x 92mm [3.625in] long on rear baffle
- All internal surfaces damped 15mm - 20mm [3/4in] wool felt or similar [blue on drawing]. Avoid acoustic foam.
- Chamfer (round off) inside edge of driver cut-out

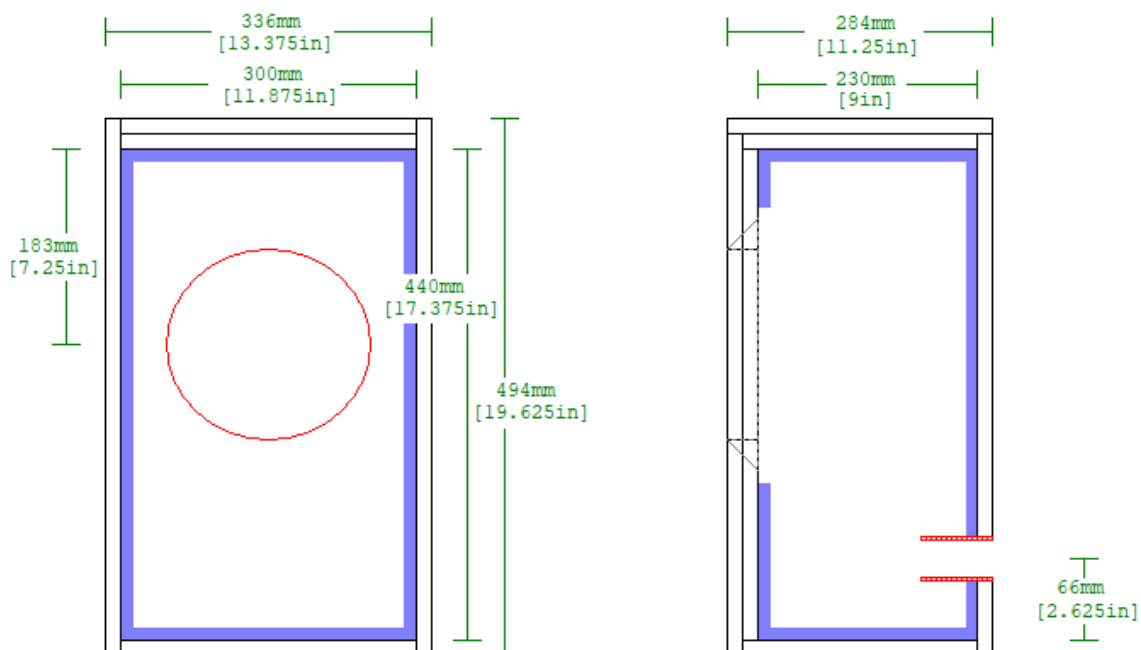
Design notes:

Enclosure provides near maximally-flat alignment to 40Hz. Voltage-source / high damping factor amplifier assumed.

Alignment incorporates 0.25 - 0.5 ohm series resistance for wire, connections &c.

Rear vent location employed for reduced noise. Avoid use near boundaries or bass gain may become excessive.

- Fb = 40Hz
- F3 = 36Hz (nominal anechoic)
- F6 = 32Hz (nominal anechoic)



CHN110 FV37-18 Mass-loaded Voigt  
 Designer: Dr Scott Lindgren  
 Measurements: S.I. metric and Imperial

- Mass-loaded Voigt horn enclosure
- 18mm [3/4in] build material. Quality plywood recommended
- Vent 75mm [2in] diameter x 88mm [3.5in] long on front baffle
- 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.
- Chamfer (round off) inside edge of driver cut-out

Design notes:

Mass-loaded Voigt horn provides relatively flat alignment to 41Hz. Voltage-source / high damping factor amplifier assumed.

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.

Fb = 41Hz

F3 = 37Hz (nominal anechoic)

F6 = 32Hz (nominal anechoic)

