C1

center

- ✔ For reference level playback in small home-theater and media rooms
- ✔ Sculptural design integrates well into home environment
- ✔ Controlled directivity sound radiation for seamless coverage of large listening area
- ✔ Radiation pattern and sound character matches F1 main front speakers
- ✔ High dynamic capacity due to limited low frequency extension intended for integration with subwoofer system

C1 Center Loudspeaker

voices

are firmly positioned in the center of the screen, independent of listener position. No fighting for the sweetspot - all seats have great sound.

The smooth horisontal radiation pattern ensures equal tonal balance and great sound across a wide seating area.

The best placement for the C1 is above the screen. Great care has been taken in the design process to ensure the sound image always appear to come from the screen, the speaker itself disappears completely.

In the vertical direction there is just enough coverage to ensure you still have great sound when lying down on the sofa, while reflections from ceiling and floor are much reduced.

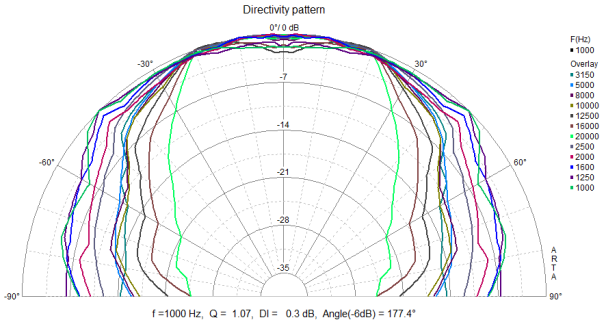
C1 Center Loudspeaker

engineering

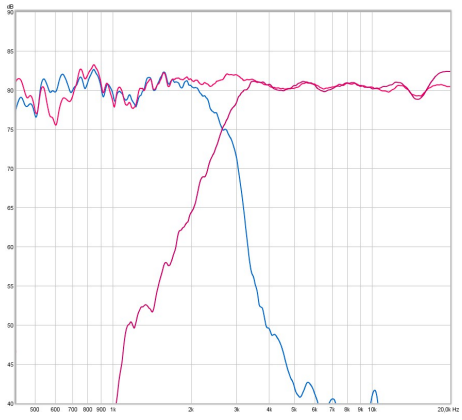
sometimes becomes a combination of art and science.

It was a true challenge to meet the design requirements for the C1, and the seemingly quite ordinary two-way speaker contain several technical innovations.

The waveguide with carefully adopted acoustic damping is the key to achieve the controlled and very smooth radiation pattern.



This type of configuration requires pushing the 8" bass driver to work quite high up in frequency. A sophisticated very-high-slope crossover filter was developed, all sound from the bass driver is removed above the crossover.



The result is a speaker with very good midrange clarity, and with proper source material voices always appear to originate from the screen – the speaker itself is never noticeable.

C1 Center Loudspeaker

LF driver

Carbon reinforced cone is stiff and less resonant, yet still offers the open and lively sound character of a good paper cone.

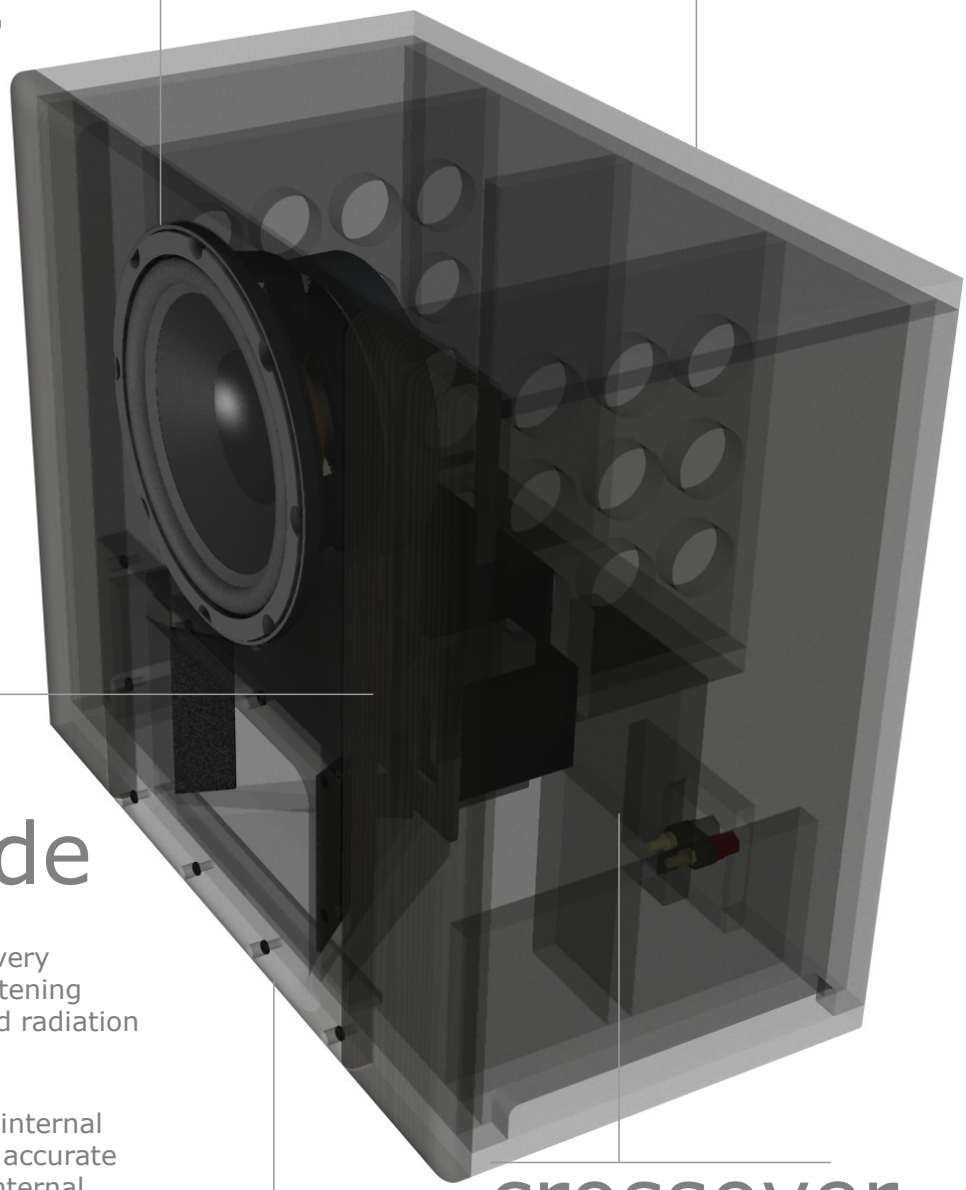
Very high thermal capacity, large displacement and oversized motor reduces dynamic compression.

cabinet

Simulation optimized internal shape for resonance control and reduced midrange leakage through acoustic ports.

HF driver

Waveguide horn loading increases headroom significantly at lower treble frequencies; makes it possible to use a small ribbon driver for best possible sound quality.



waveguide

Controlled directivity with very smooth response across listening area and reduced undesired radiation into reflective surfaces.

The shape of the horn and internal acoustic damping provides accurate directivity control and no internal reflections.

crossover

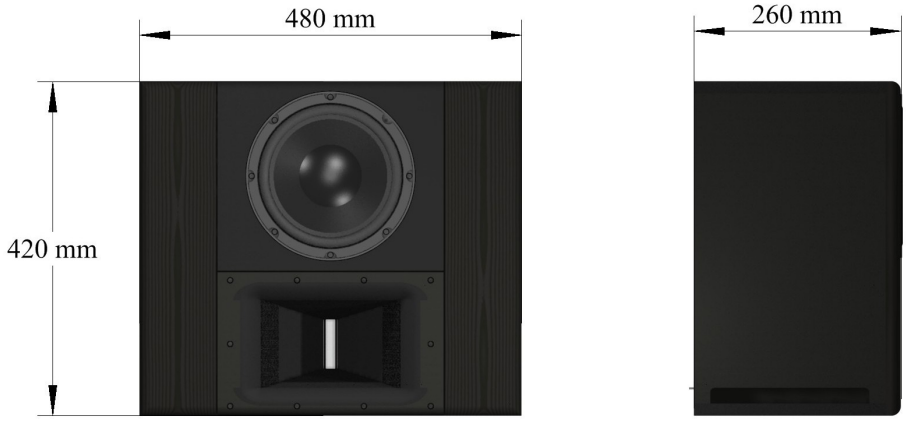
New high-slope technology removes all undesired output from drivers and gives very smooth response with controlled phase and time-domain characteristics.

C1 Center Loudspeaker

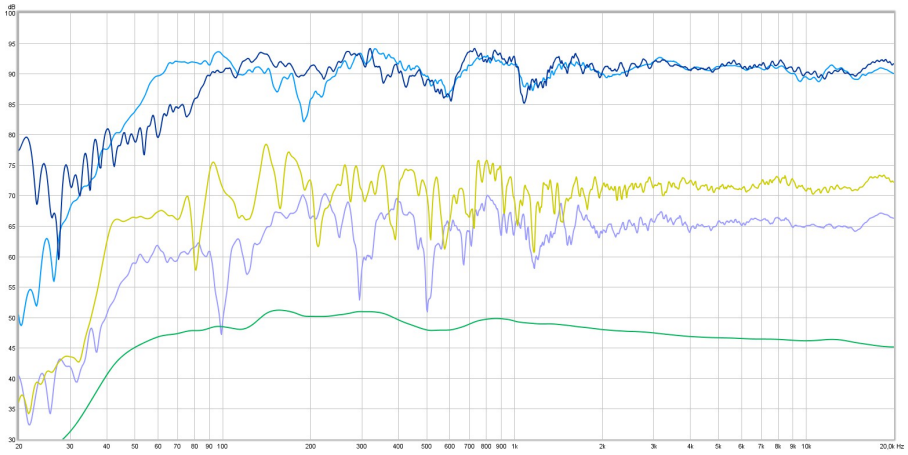
specifications

C1 Center Loudspeaker

Type	
Configuration	2-way with controlled directivity waveguide
Enclosure	Ported, simulation optimized shape for internal resonance control and radiation pattern
Drivers	Waveguide horn loaded ribbon HF driver, 8" low frequency
Crossover	Crossover 2.8KHz, simulation optimized high-slope, smooth phase
Output Capacity	115dB 1m/2π at 100Hz
Usable frequency range	60Hz – 20KHz
Recommended frequency range	>80Hz – 20KHz
Nominal impedance	8 Ω
Minimum impedance	6.2 Ω at 220Hz
Sensitivity	92dB 2.83V/1m/2π
Recommended amplification	10W – 400W 8 Ω
Maximum power	250W (8 Ω) AES <2KHz, 20W AES >2KHz
Recommended listening distance	1.8m – 3.5m
Radiation Coverage	
Horisontal	80° (+-40°) linear coverage
Vertical	+5°/-12°
Dimensions	
Height/Width/Depth	420mm/480mm/260mm
Weight	17.9kg



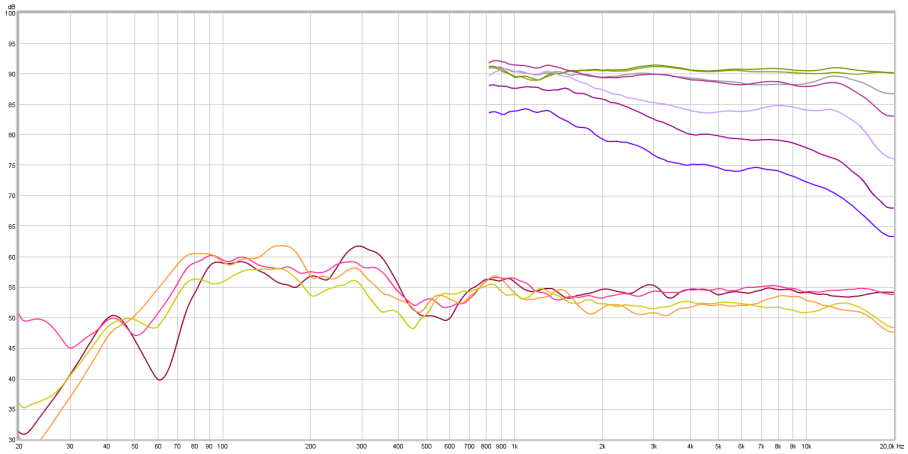
Frequency Response



2Π and free field
- 1m 2Π
- 1m free-field

1m and 2m
- 1m in-room mounted above screen
- 2m free-field with floor boundary

Sound power
- 2Π power response estimated from 2Π angular measurements



Off-axis horisontal
- 0° on-axis
- 5° 15° 30°
- 45° 60° 90°

In-room listening positions
- 0° on-axis, seat #1
- 15°, seat #2
- 30°, seat #3
- 40°, seat #4

To provide more useful and complete information about the loudspeakers performance, measurements from different acoustic surroundings and off-axis are presented.

Since the loudspeaker will be used in a room, it is more useful to see how it performs in a typical placement in a real room.

Observe that the C1 is not affected by placement or room above 1-2KHz. The response below 1KHz depends on speaker and listener placement relative to boundaries and the acoustic absorption characteristics of those boundaries.

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