SAFETY INSTRUCTIONS

Read this user manual and keep it with the product.

Always follow all safety instructions and local security regulations.

Never use accessories not manufactured or approved by Aura Audio with Aura Audio products.

Make sure no audience or crew member is too close to loudspeakers when operating with high sound pressure levels (SPL). Professional loudspeaker systems are capable of producing sound pressure levels high enough to cause permanent hearing damage even at exposure times less than couple of minutes.

Please check the Aura Audio website on a regular basis for latest downloads and updates.

In case of any questions please don´t hesitate to contact us for more information via info@auraaudio.fi
We also welcome all comments and system pics from you!

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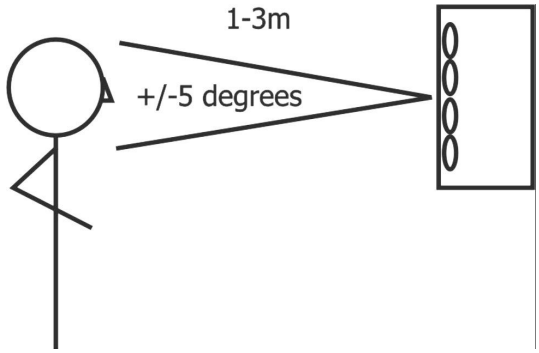
INTRODUCTION

F2 is a passive high-end monitor speaker with lowest possible colouration. Based on acoustic principles developed for F1, it features a unique combination of high output, high directivity, extremely well defined stereo image with very low harmonic distortion.

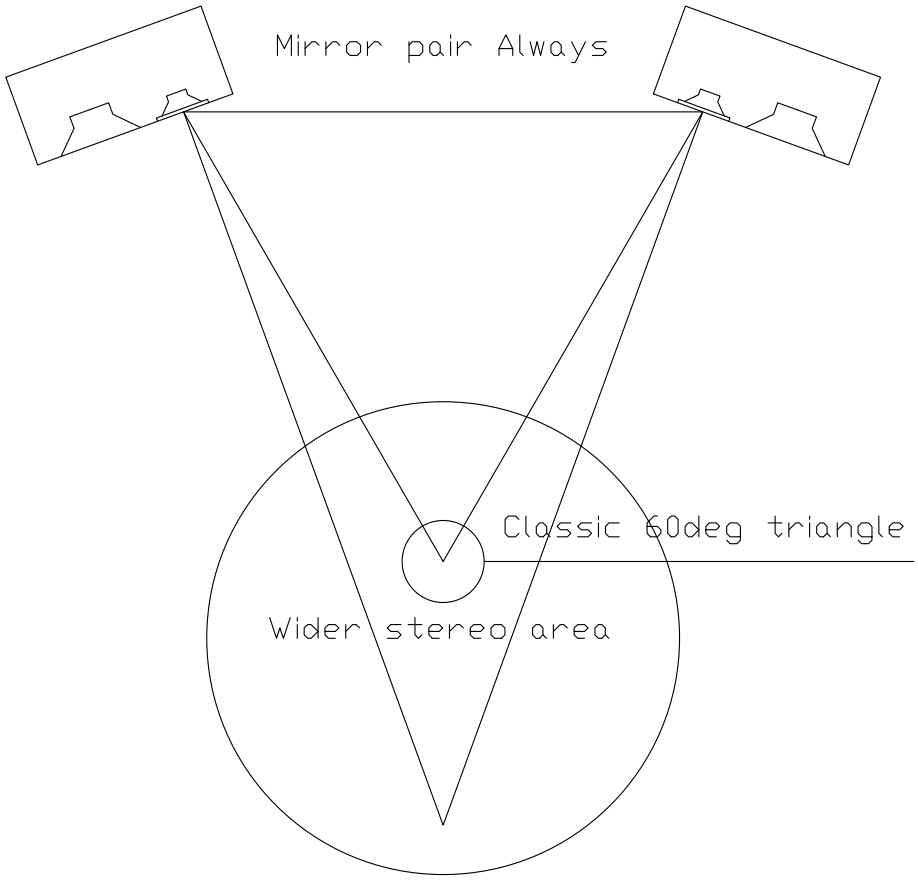
It consists of four (4) 3” cone drivers loaded with dedicated high directivity multi-unit waveguide and two 6" long excursion bass drivers joined together with low order crossover. Low crossover point of 250Hz means wider phase-shift-free frequency band and even higher directivity. With 60x15 degree nominal dispersion F2 makes it easy to cover only a specific area according to installation with lowest possible room interference.

AIMING TIPS AND DIRECTIVITY



F2 vertical aiming principle

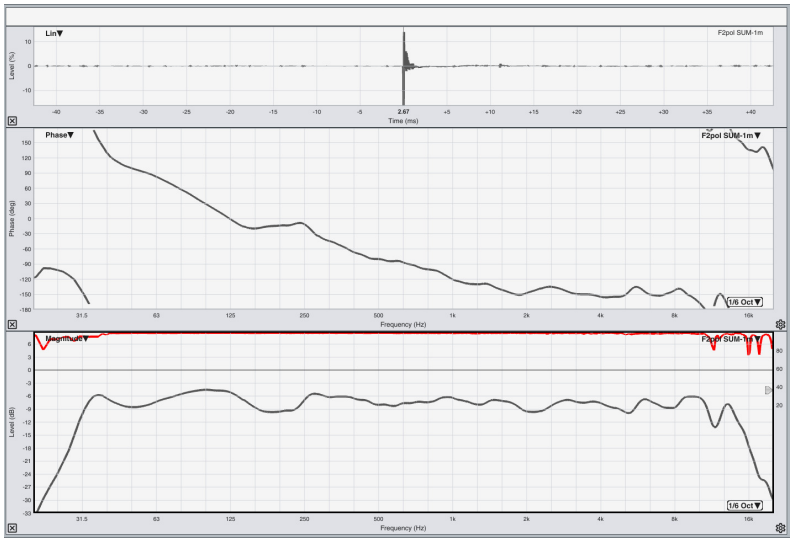
Setting up F2 monitors differs from the most studio monitors in that due to its narrow vertical directivity it is crucial that the center point (tangent) faces the listener directly. Similarly in horizontal plane both speakers should be aimed inwards to avoid reduction of high frequencies.



F2 horizontal aiming preference

PERFORMANCE EXPLAINED

Due to the unique 1-way design approach F2 performs like reflex-tuned full range speaker. It means nearly perfect impulse response (highs and lows arrive to the listening position precisely at the same time) and very linear phase response. This contributes to well defined and precise stereo imaging, sense of depth and natural transient reproduction.

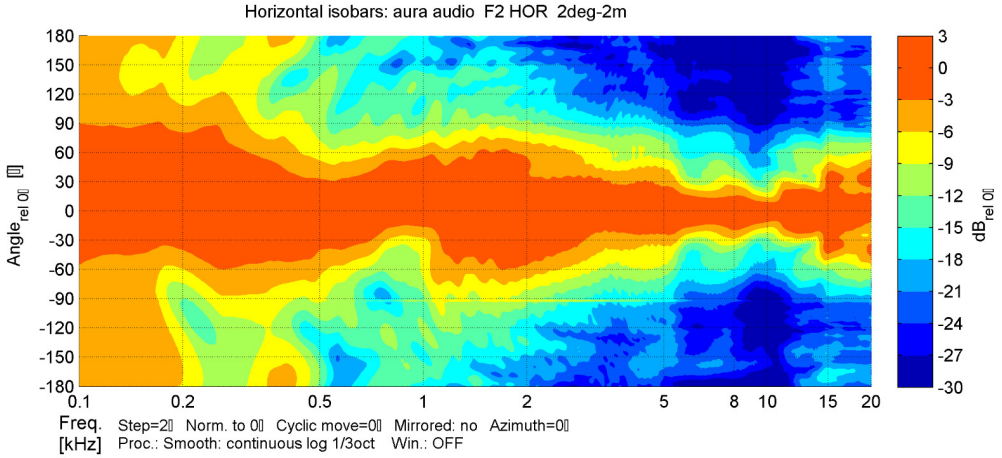


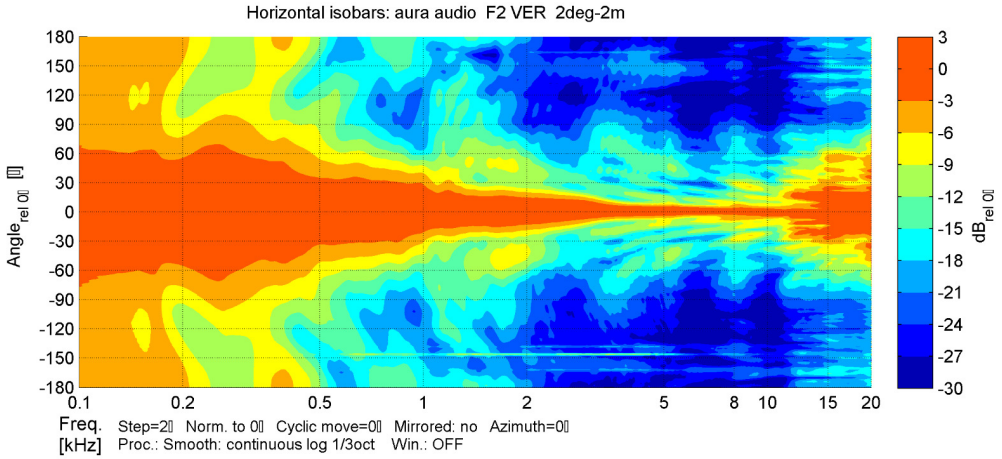
F2 impulse, phase and frequency responses (1/6oct average)

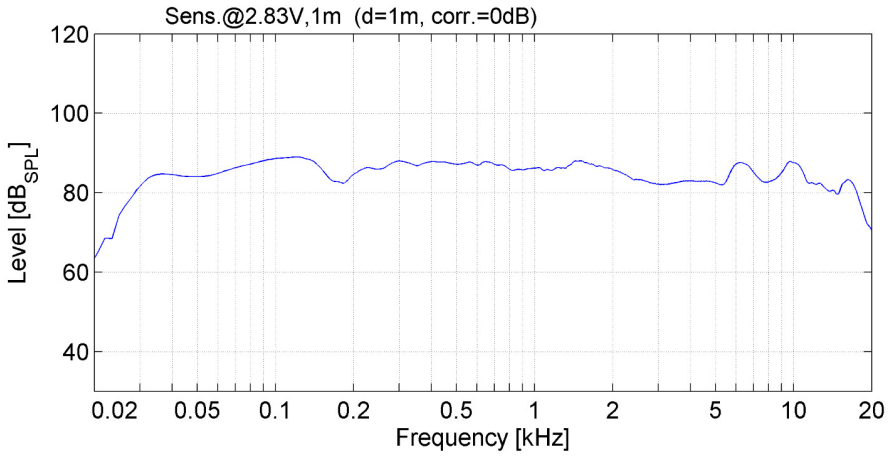
The main benefit of narrow directivity pattern is less room interaction. In other words, we get more direct sound from the speaker to listening position and less room reflections from walls, ceiling, floor and other surfaces such as mixing console or a table for example. All speaker systems radiate to all directions but when the dispersion concentrates more direct sound to the listening position the relative amount of reflections is automatically reduced. Therefore, F2 is easy and simple monitoring system and requires less room correction no matter what kind of room it has been installed.

With a good room acoustics design and speaker placement it should be possible to get well balanced frequency response without any additional room EQ which in most cases leads to most natural listening experience. However, EQ should be used when needed but a good starting point to any project should be measuring and listening F2 system without any additional EQ first!

F2 DIRECTIVITY MEASUREMENTS



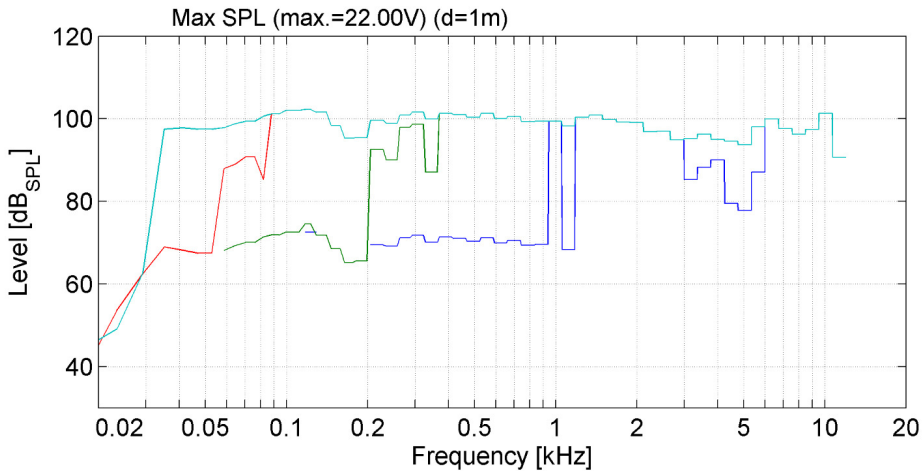




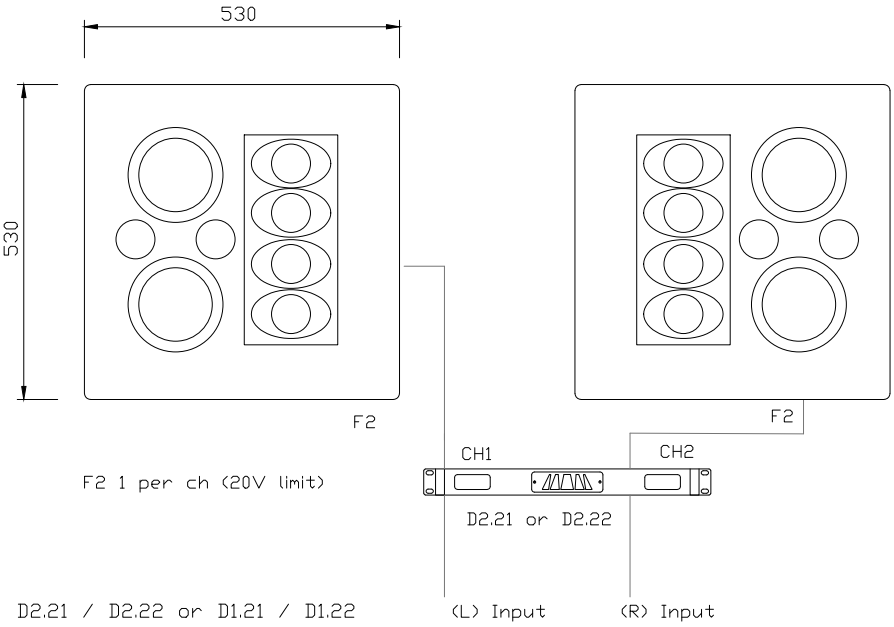
HARMONIC DISTORTION MEASUREMENTS

F2 features ultra low harmonic distortion levels, specially from 200Hz upwards even at full power. This is achieved by careful driver design and overlapping the low frequency drivers with the high frequency drivers perfectly from 200Hz to close to 1kHz minimizing power and cone excursion requirement.

Low distortion contributes to low listening fatigue even after long periods of listening at high levels.



F2 maximum continuous sound pressure level at 0.1% (blue), 0.3% (green), 1% (red) THD and at limit (light blue)



Example diagram of F2 stereo system with D2.21 amplifier

SPECIFICATIONS

Frequency Response (-6 dB): 30 Hz – 20 kHz

Horizontal Coverage (-6 dB): 60 degrees

Vertical Coverage (-6 dB): 15 degrees

Max SPL(cont/peak): 108/114 dB (free space)

Sensitivity 1w/1m: 88 dB (free space)

Impedance: 3 ohms

Crossover: passive at 250Hz (6dB/oct HP and 12dB/oct LP)

Power handling: 100 W cont, 400 W peak

Recommended HP-filter: -

DRIVERS

LF: (2) x 6" long-excursion cone driver, reflex-tuned

HF: (4) x 3" neodymium magnet cone driver, horn-loaded

ENCLOSURE

Enclosure material: Plywood

Grille: -

Connectors: Speakon

Dimensions: 530 mm x 530 mm x 280 mm

Weight: 20 kg

EC declaration of conformity Manufacturer:

Aura Audio Oy
Pääskykalliontie 3
21420 Lieto
Finland

We declare the under our sole responsibility the following product models:
A-Series,
C-series,
F-Series,
XD-series,
XQ-series,
i-series and
S-series products are intended to be used as loudspeakers and are in conformity with the following EC Directives, including all amendments, and with national legislation implementing these directives:

BS EN 60065:2002

BS EN 55103-1/-2

March 2024

Mika Isotalo
Managing Director