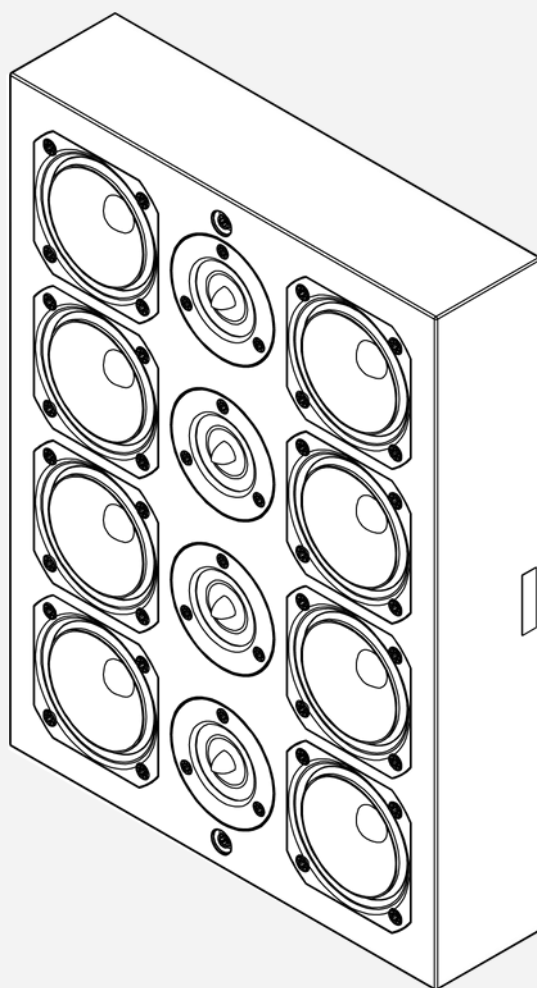


# Artcoustic<sup>AI</sup>

## SL EVOLVE SERIES

Owners manual



# WELCOME TO THE WORLD OF ARTCOUSTIC

Congratulations on your purchase of the Artcoustic SL Evolve Series.

The SL Evolve Series is Artcoustic's most versatile range of products. Its slimline profile, combined with a powerful and articulated performance, makes it the ideal choice for high-end cinema, Hi-Fi and, multi-room audio installations. For an even more impressive performance, partner it with one of the Artcoustic subwoofers - an ideal setup for small and medium-size cinema rooms.

The SL Evolve Series has been engineered to produce exceptional sound pressure level, normally only associated with typical professional audio products, and has been designed to ensure the utmost aesthetic residential pleasing options, all combined with literally thousands of cabinet and front screens colours.

The SL Evolve Series is a true all-rounder, whether you are looking for high-end sound from two speakers in a stereo music setup, or multiple speakers for cinemas and multi-room audio, the SL Evolve Series will full fill all your audio needs.

Thank you for purchasing the Artcoustic SL Evolve Series.

All the best,  
The Artcoustic Team

# FEATURES

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At Artcoustic, our product development team are always looking for innovative and ground-breaking ways to improve our products. We continually invest a huge amount Of time and effort to make sure that Artcoustic deliver products at the top of their class, with regards to technological excellence and refined Scandinavian design.

Introducing the latest edition of the Evolve series – the Evolve Time Aligned Array (ETAA). The ETAA is a precise and well-designed solution for dealing with high-frequency array phase overlap. By carefully placing high-frequency transducers within a mathematical and geometric calculated formula, the acoustically impossible is now possible.

The design has been optimised to allow the product to achieve a near-perfect response curve, without compromising on any of the existing high-end features including extreme sound pressure levels, sensitivity, extended frequency response, controlled directivity, exceptional speed, and transient response. All arranged within a well-designed, slimline cabinet.

## ETAA ADVANTAGES

EXTENDED FLAT FREQUENCY RESPONSE UP TO

40KHZ DETAILED AND TRANSPARENT SWEET SPOT,  
with an almost magical ability to make the actual speakers acoustically disappear.

A SOPHISTICATED AND MINIMAL CABINET DESIGN

with endless options to customise your speaker. Choose from an unlimited range of colours, matching screen covers or select your own artwork.

HIGH SENSITIVITY AND EXCEPTIONAL SOUND PRESSURE LEVEL

LOW DISTORTION

BENCH MARK TRANSIENT RESPONSE

GUIDED DIRECTIVITY

with near perfect response curve +/- 3dB over long distances

PLUG AND PLAY EASY TO INSTALL APPROACH

eliminating installation mistakes and misunderstandings

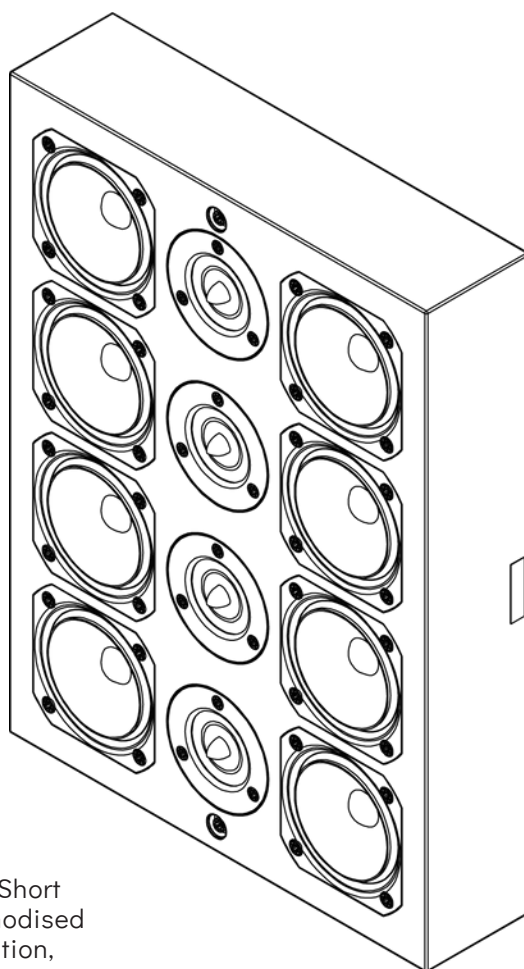
Overall, the ETAA delivers incredible detail and airy sound that typical high-end Hi-Fi speakers only offer at short distances. The Artcoustic ETAA delivers above and beyond providing a throw distance of well beyond 40 meters making this product a natural evolution within the Artcoustic portfolio of industry-leading products.

# FEATURES

## COMPONENTS OVERVIEW

### HIGH FREQUENCY DRIVER

Dual Ring Radiator diaphragm with highly linear suspension and low loss surrounds for high clarity and clean transient response. Copper caps for better HF extension and lower distortion and wave-guide center plug, copper-clad aluwire.



### WOOFER

Extra long excursion and aluminium Short Circuiting Ring, 4-layer voice coil, anodised aluminium for improved heat dissipation, combined with Distortion Reduced Motor.

### CROSSOVER

6 dB/octave low pass and 12 dB/octave high pass filter.

# SPECIFICATIONS

## SL EVOLVE 3-1

### TRANSDUCER

LF-MF 3 x 3 inch cone, Symmetric Phase Aligned  
HF 6 x 1 inch Dual Ring Radiator, Symmetric Phase Aligned

### CROSSOVER

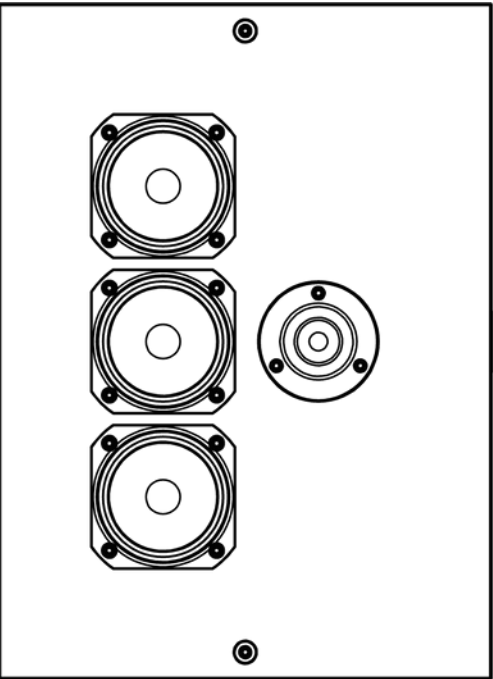
Low Pass Filter 6 dB/octave 1000 Hz  
High Pass 12 dB/octave 4000Hz

### CONNECTION

Single amped Gold Plated Push Terminals

### PERFORMANCE

Operating Range 60 Hz (-3dB) to 40 kHz  
Nominal Beamwidth Horizontal 80° Vertical 80°  
Input Impedance Nominal 4 ohms  
Sensitivity 1 Watt @ 4 ohm 91 dB Full Space, 94 dB Half Space  
Long Term SPL 90 Watt 102 dB Full Space, 105 dB Half Space  
Short Term (Damage) SPL 220 watt 105 dB Full Space, 108 dB Half Space  
Space Recommended High Pass Filter - 100 Hz, 24 dB/octave



### TRANSDUCER



LF-MF 3 x 3 inch cone  
HF 1 x 1 inch Dual Ring  
Radiator

### OPERATING RANGE

60 Hz — 40 kHz

-3dB 60 Hz

### NOMINAL BEAM WIDTH



Horizontal 80°  
Vertical 80°

### INPUT IMPEDANCE



4 ohm

### FINISH

Cabinet: Black, White,  
RAL, NCS.

Screen: Black, White,  
RAL, NCS,  
Artcoustic Art Gallery

### DIMENSIONS



H: 370 W: 270 D: 67mm

### WEIGHT



3.5kg

# SPECIFICATIONS

## SL EVOLVE 4-2

### TRANSDUCER

LF-MF 4 x 3 inch cone, Symmetric Phase Aligned  
HF 2 x 1 inch Dual Ring Radiator, Symmetric Phase Aligned

### CROSSOVER

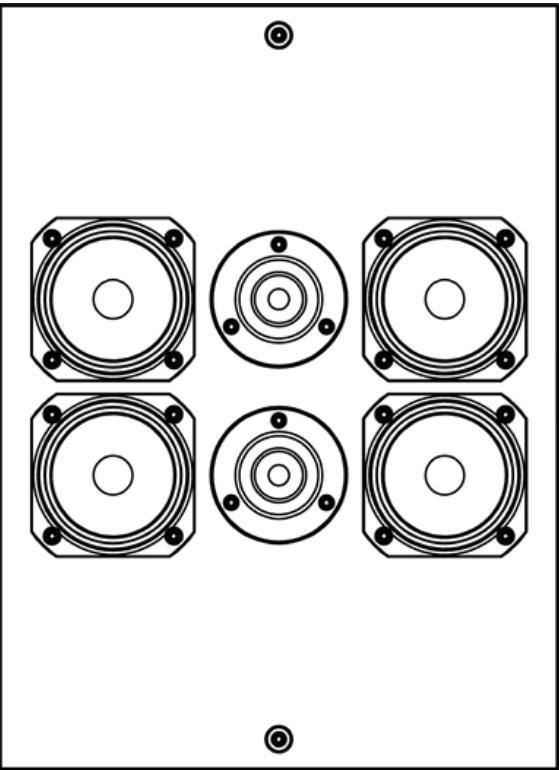
Low Pass Filter 6 dB/octave 1000 Hz  
High Pass 12 dB/octave 4000Hz

### CONNECTION

Single amped Gold Plated Push Terminals

### PERFORMANCE

Operating Range 60 Hz (-3dB) to 40 kHz  
Nominal Beamwidth Horizontal 80° Vertical 40°  
Input Impedance Nominal 4 ohms  
Sensitivity 1 Watt @ 4 ohm 93 dB Full Space, 96 dB Half Space  
Long Term SPL 90 Watt 108 dB Full Space, 111 dB Half Space  
Short Term (Damage) SPL 90 watt 111 dB Full Space, 114 dB Half Space  
Recommended high pass filter - 100 Hz 24 dB / Octave



#### TRANSDUCER



LF-MF 4 x 3 inch cone  
HF 2 x 1 inch Dual Ring  
Radiator

#### OPERATING RANGE

60 Hz — 40 kHz

-3dB 60 Hz

#### NOMINAL BEAM WIDTH



Horizontal 80°  
Vertical 40°

#### INPUT IMPEDANCE



4 ohm

#### FINISH

Cabinet: Black, White,  
RAL, NCS.

Screen: Black, White,  
RAL, NCS,  
Artcoustic Art Gallery

#### DIMENSIONS



H: 370 W: 270 D: 67mm

#### WEIGHT



4kg

# SPECIFICATIONS

## SL EVOLVE 6-3

### TRANSDUCER

LF-MF 6 x 3 inch cone, Symmetric Phase Aligned  
HF 3 x 1 inch Dual Ring Radiator, Symmetric Phase Aligned

### CROSSOVER

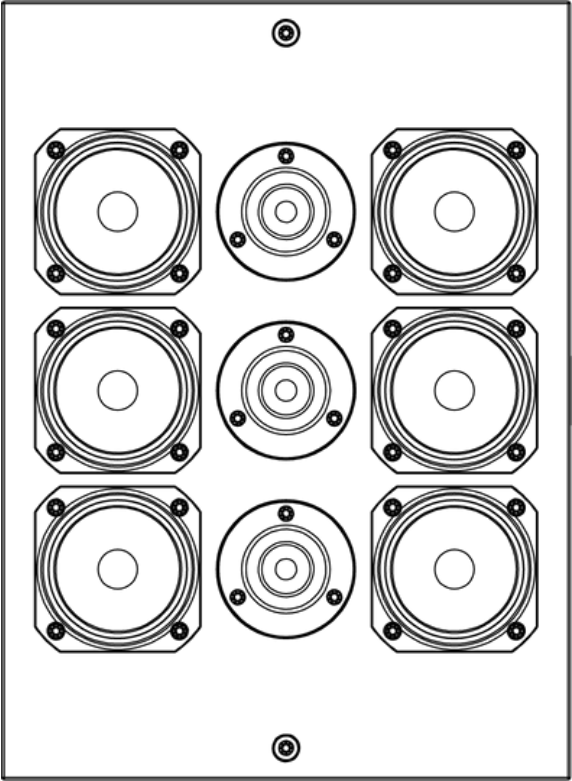
Low Pass Filter 6 dB/octave 1000 Hz  
High Pass 12 dB/octave 4000Hz

### CONNECTION

Single ampd Gold Plated Push Terminals

### PERFORMANCE

Operating Range 65 Hz (-3dB) to 40 kHz  
Nominal Beamwidth Horizontal 80° Vertical 30°  
Input Impedance Nominal 5 ohms  
Sensitivity 1 Watt @ 5 ohm 95 dB Full Space, 98 dB Half Space  
Long Term SPL 180 Watt 113 dB Full Space, 116 dB Half Space  
Short Term (Damage) SPL 220 watt 116 dB Full Space, 119 dB Half Space  
Space Recommended High Pass Filter - 100 Hz, 24 dB/octave



### TRANSDUCER



LF-MF 6 x 3 inch cone  
HF 3 x 1 inch Dual Ring  
Radiator

### OPERATING RANGE

65 Hz — 40 kHz

-3dB 65 Hz

### NOMINAL BEAM WIDTH



Horizontal 80°  
Vertical 30°

### INPUT IMPEDANCE



5 ohm

### FINISH

Cabinet: Black, White,  
RAL, NCS.

Screen: Black, White,  
RAL, NCS,  
Artcoustic Art Gallery

### DIMENSIONS



H: 370 W: 270 D: 67mm

### WEIGHT



4.5kg

# SPECIFICATIONS

## SL EVOLVE 8-4

### TRANSDUCER

LF-MF 8 x 3 inch cone, Symmetric Phase Aligned  
HF 4 x 1 inch Dual Ring Radiator, Symmetric Phase Aligned

### CROSSOVER

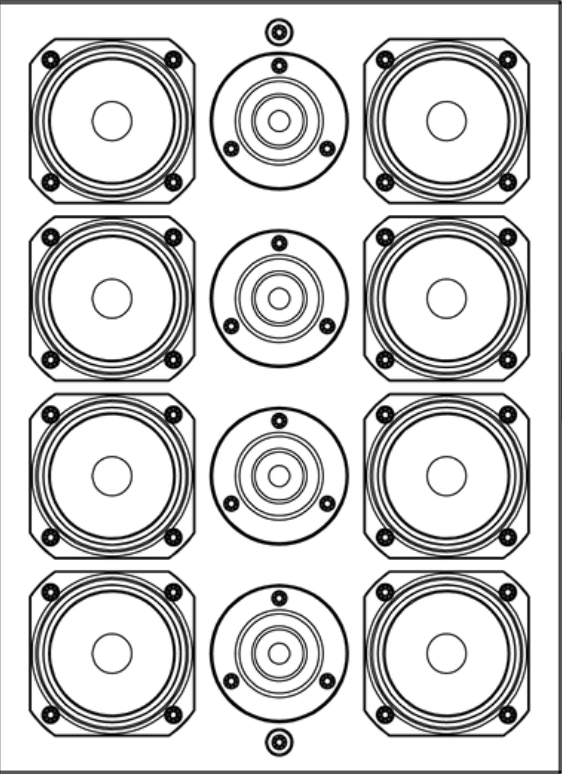
Low Pass Filter 6 dB/octave 1000 Hz  
High Pass 12 dB/octave 4000Hz

### CONNECTION

Single amped Gold Plated Push Terminals

### PERFORMANCE

Operating Range 70 Hz (-3dB) to 40 kHz  
Nominal Beamwidth Horizontal 80° Vertical 25°  
Input Impedance Nominal 3.5 ohms  
Sensitivity 1 Watt @ 3.5 ohm 96 dB Full Space, 99 dB Half Space  
Long Term SPL 240 Watt 117 dB Full Space, 120 dB Half Space  
Short Term (Damage) SPL 280 watt 120 dB Full Space, 123 dB Half Space  
Recommended High Pass Filter - 100 Hz, 24 dB/octave



### TRANSDUCER



LF-MF 8 x 3 inch cone  
HF 4 x 1 inch Dual Ring  
Radiator

### OPERATING RANGE

70 Hz — 40 kHz

-3dB 70 Hz

### NOMINAL BEAM WIDTH



Horizontal 80°  
Vertical 25°

### INPUT IMPEDANCE



5 ohm

### FINISH

Cabinet: Black, White,  
RAL, NCS.

Screen: Black, White,  
RAL, NCS,  
Artcoustic Art Gallery

### DIMENSIONS



H: 370 W: 270 D: 67mm

### WEIGHT



5kg

# SPECIFICATIONS

## SL EVOLVE 12-6

### TRANSDUCER

LF-MF 12 x 3 inch cone, Symmetric Phase Aligned  
HF 6 x 1 inch Dual Ring Radiator, Symmetric Phase Aligned

### CROSSOVER

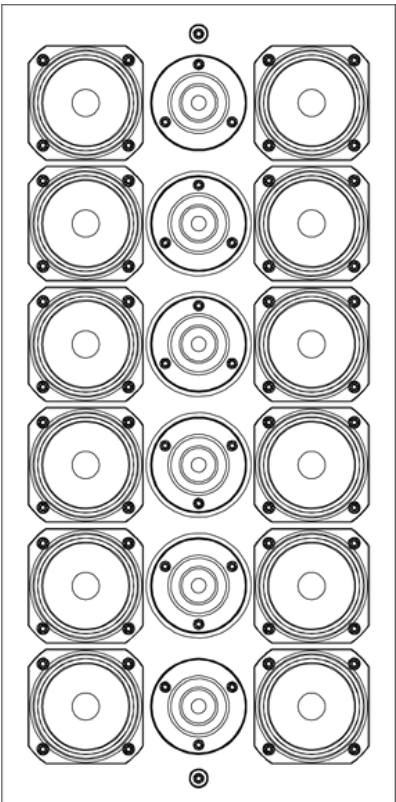
Low Pass Filter 6 dB/octave 1000 Hz  
High Pass 12 dB/octave 4000Hz

### CONNECTION

Single ampd Gold Plated Push Terminals

### PERFORMANCE

Operating Range 65 Hz (-3dB) to 40 kHz  
Nominal Beamwidth Horizontal 80° Vertical 20°  
Input Impedance Nominal 7 ohms  
Sensitivity 1 Watt @ 7 ohm 98 dB Full Space, 101 dB Half Space  
Long Term SPL 360 Watt 118 dB Full Space, 121 dB Half Space  
Short Term (Damage) SPL 400 watt 121 dB Full Space, 124 dB Half Space  
Recommended High Pass Filter - 100 Hz, 24 dB/octave



#### TRANSDUCER



LF-MF 12 x 3 inch cone  
HF 6 x 1 inch Dual Ring  
Radiator

#### OPERATING RANGE

65 Hz — 40 kHz

-3dB 65 Hz

#### NOMINAL BEAM WIDTH



Horizontal 80°  
Vertical 20°

#### INPUT IMPEDANCE



4 ohm

#### FINISH

Cabinet: Black, White,  
RAL, NCS.

Screen: Black, White,  
RAL, NCS,  
Artcoustic Art Gallery

#### DIMENSIONS



H: 550 W: 270 D: 72mm

#### WEIGHT



9kg

# SPECIFICATIONS

## SL EVOLVE 16-8

### TRANSDUCER

LF-MF 16 x 3 inch cone, Symmetric Phase Aligned  
HF 8 x 1 inch Dual Ring Radiator, Symmetric Phase Aligned

### CROSSOVER

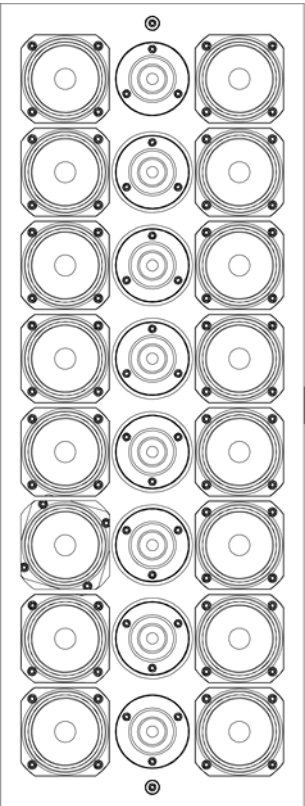
Low Pass Filter 6 dB/octave 1000 Hz  
High Pass 12 dB/octave 4000Hz

### CONNECTION

Single amped Gold Plated Push Terminals

### PERFORMANCE

Operating Range 75 Hz (-3dB) to 40 kHz  
Nominal Beamwidth Horizontal 80° Vertical 18°  
Input Impedance Nominal 7 ohms  
Sensitivity 1 Watt @ 7 ohm 100 dB Full Space, 103 dB Half Space  
Long Term SPL 480 Watt 120 dB Full Space, 123 dB Half Space  
Short Term (Damage) SPL 520 watt 123 dB Full Space, 126 dB Half Space  
Recommended High Pass Filter - 100 Hz, 24 dB/octave



### TRANSDUCER



LF-MF 16 x 3 inch cone  
HF 8 x 1 inch Dual Ring  
Radiator

### OPERATING RANGE

75 Hz — 40 kHz  
-3dB 75 Hz

### NOMINAL BEAM WIDTH



Horizontal 80°  
Vertical 18°

### INPUT IMPEDANCE



4 ohm

### FINISH

Cabinet: Black, White,  
RAL, NCS.

Screen: Black, White,  
RAL, NCS,  
Artcoustic Art Gallery

### DIMENSIONS



H: 716 W: 270 D: 72mm

### WEIGHT



14kg

# SPECIFICATIONS

## SL EVOLVE 24-12

### TRANSDUCER

LF-MF 24 x 3 inch cone, Symmetric Phase Aligned  
HF 12 x 1 inch Dual Ring Radiator, Symmetric Phase Aligned

### CROSSOVER

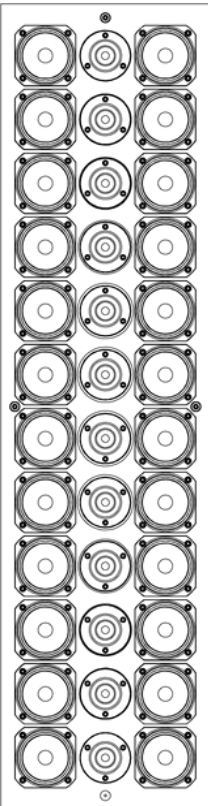
Low Pass Filter 6 dB/octave 1000 Hz  
High Pass 12 dB/octave 4000Hz

### CONNECTION

Single ampd Gold Plated Push Terminals

### PERFORMANCE

Operating Range 75 Hz (-3dB) to 40 kHz  
Nominal Beamwidth Horizontal 80° Vertical 17°  
Input Impedance Nominal 5 ohms  
Sensitivity 1 Watt @ 5 ohm 104 dB Full Space, 107 dB Half Space  
Long Term SPL 720 Watt 124 dB Full Space, 127 dB Half Space  
Short Term (Damage) SPL 760 watt 127 dB Full Space, 130 dB Half Space  
Recommended High Pass Filter - 100 Hz, 24 dB/octave



### TRANSDUCER



LF-MF 24 x 3 inch cone  
HF 12 x 1 inch Dual Ring Radiator

### OPERATING RANGE

75 Hz — 40 kHz

-3dB 75 Hz

### NOMINAL BEAM WIDTH



Horizontal 80°  
Vertical 17°

### INPUT IMPEDANCE



4 ohm

### FINISH

Cabinet: Black, White,  
RAL, NCS.

Screen: Black, White,  
RAL, NCS,  
Artcoustic Art Gallery

### DIMENSIONS



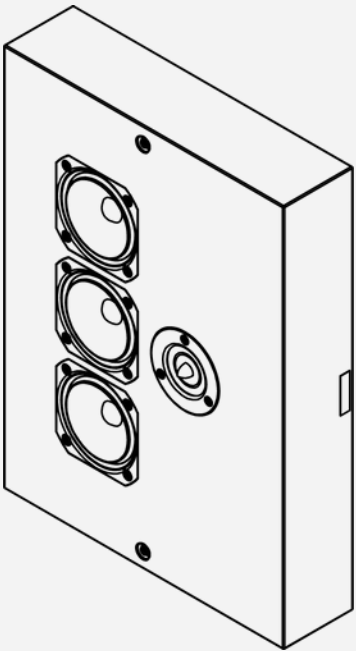
H: 1048 W: 270 D: 72mm

### WEIGHT

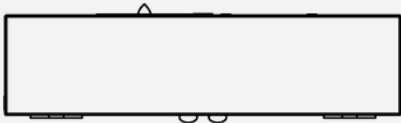


19kg

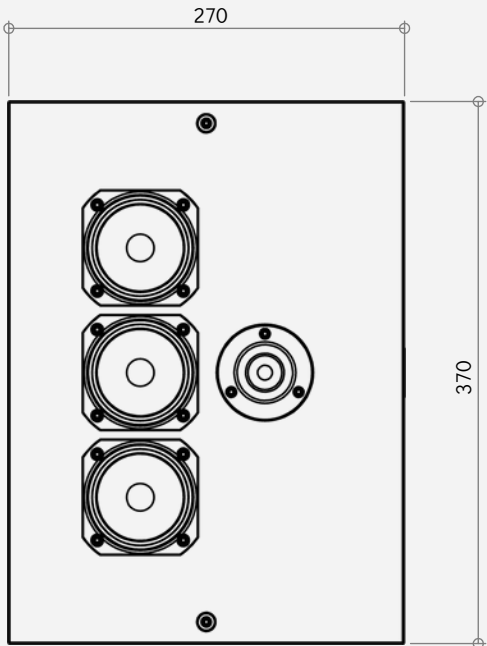
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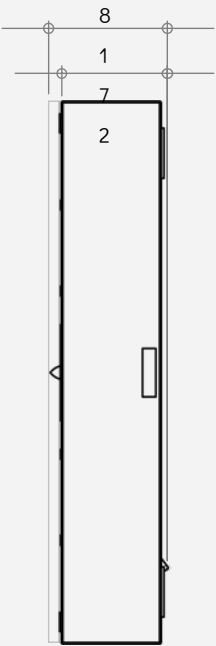
isometric view



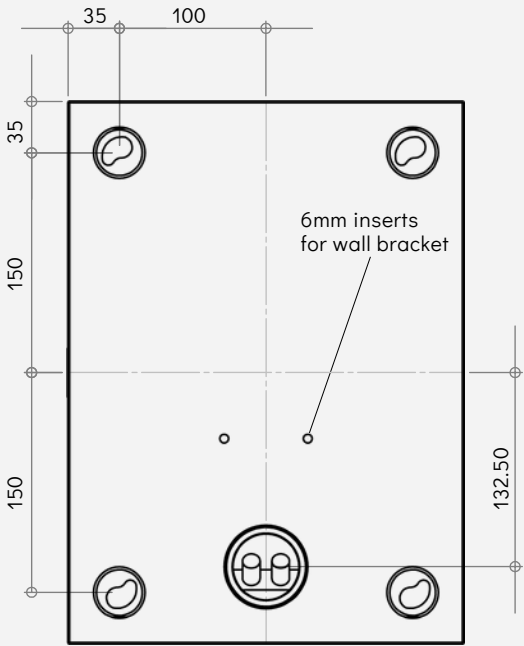
top view



front view

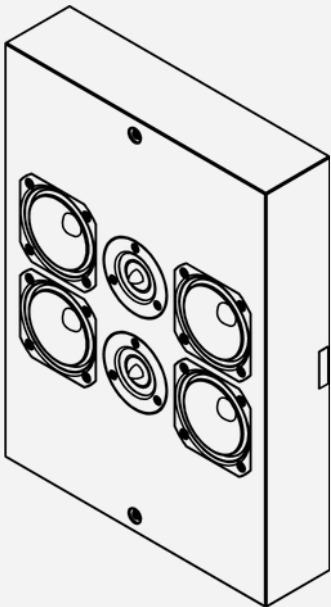


side view

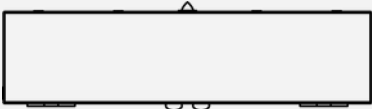


rear view

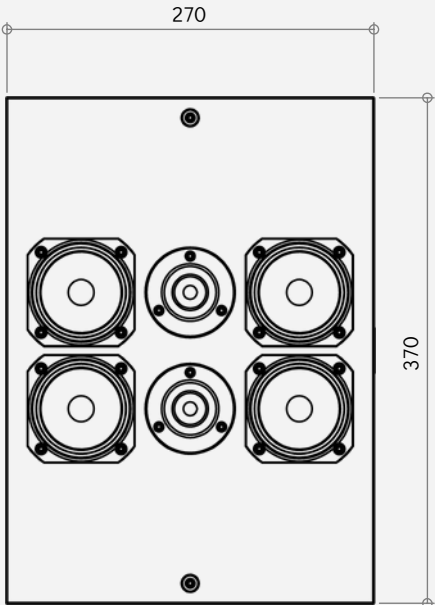
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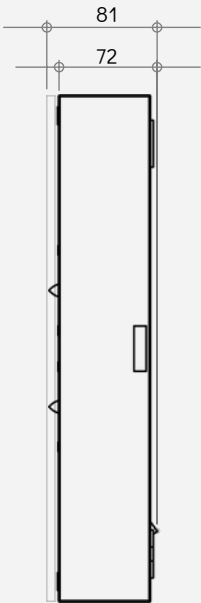
isometric view



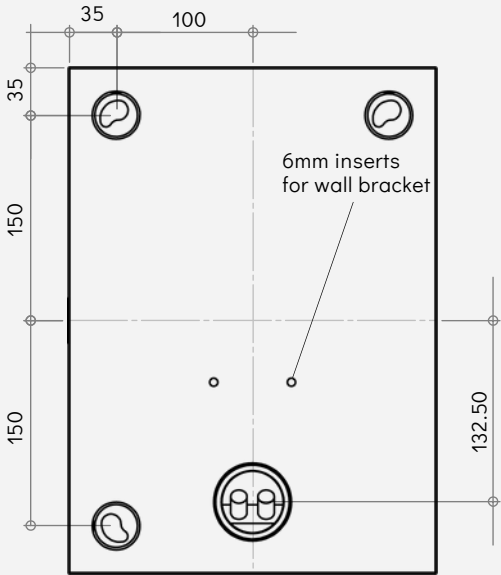
top view



front view



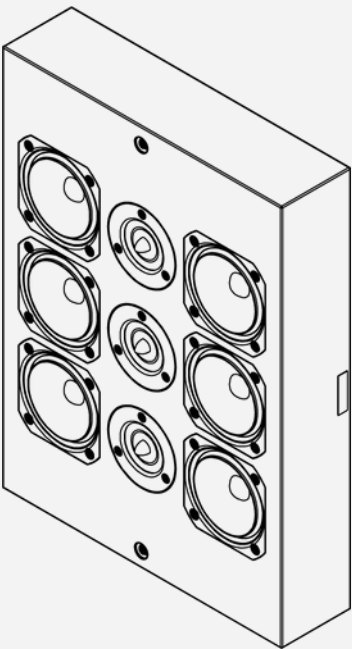
side view



rear view



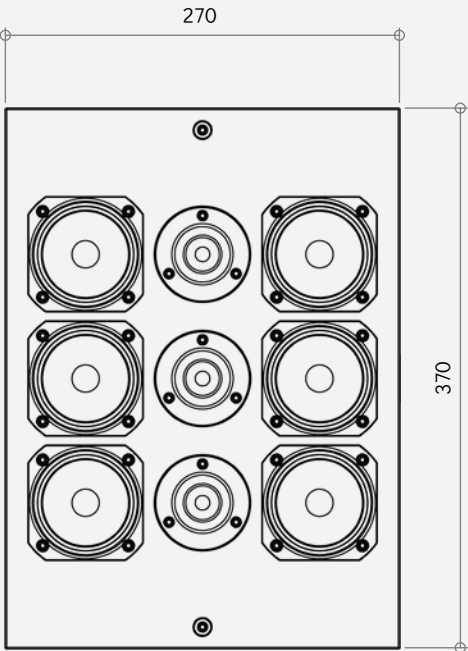
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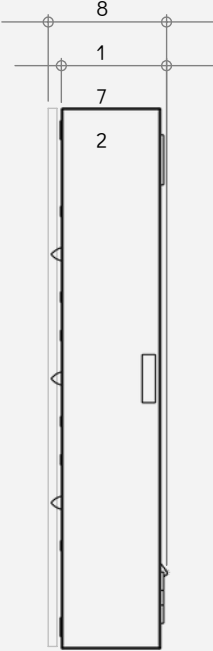
isometric view



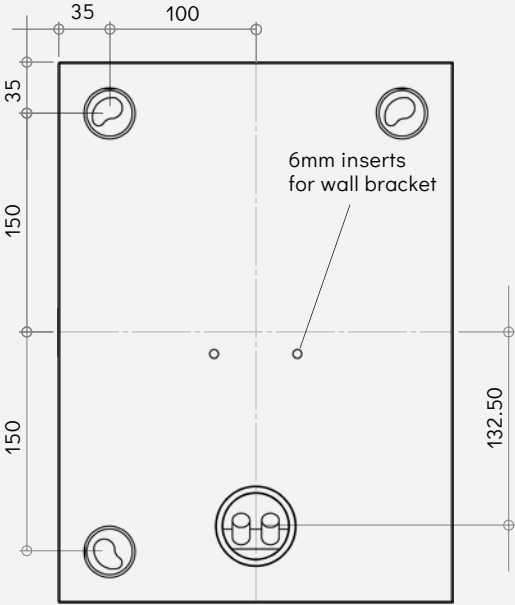
top view



front view

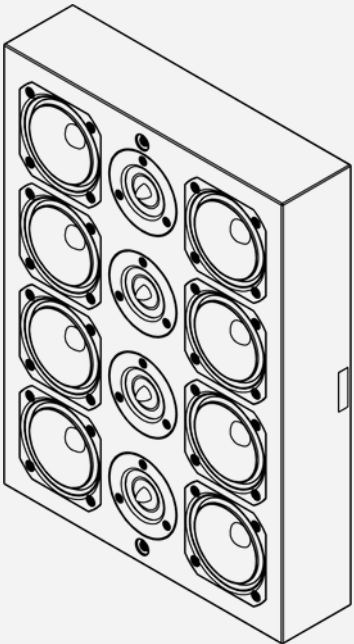


side view

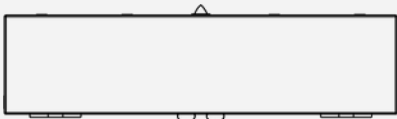


rear view

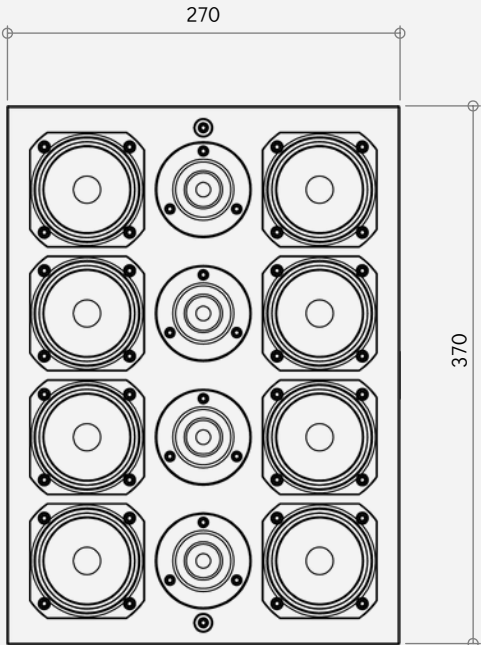
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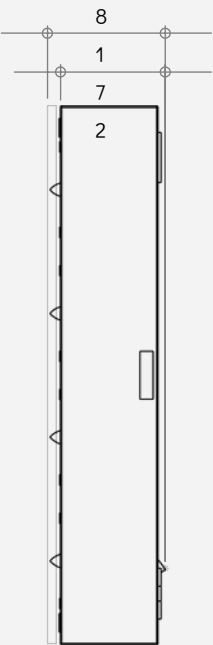
isometric view



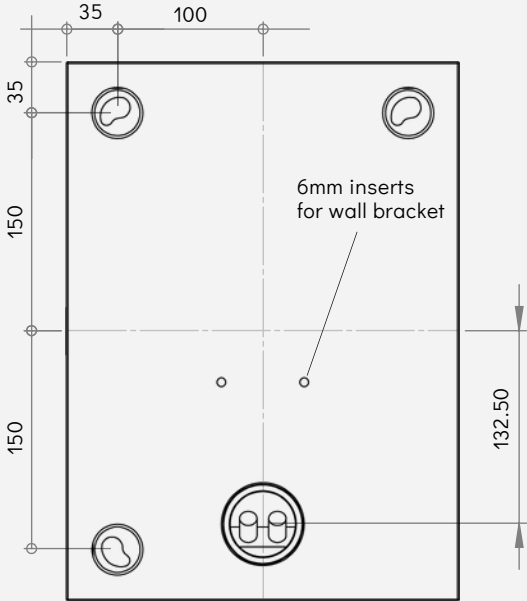
top view



front view

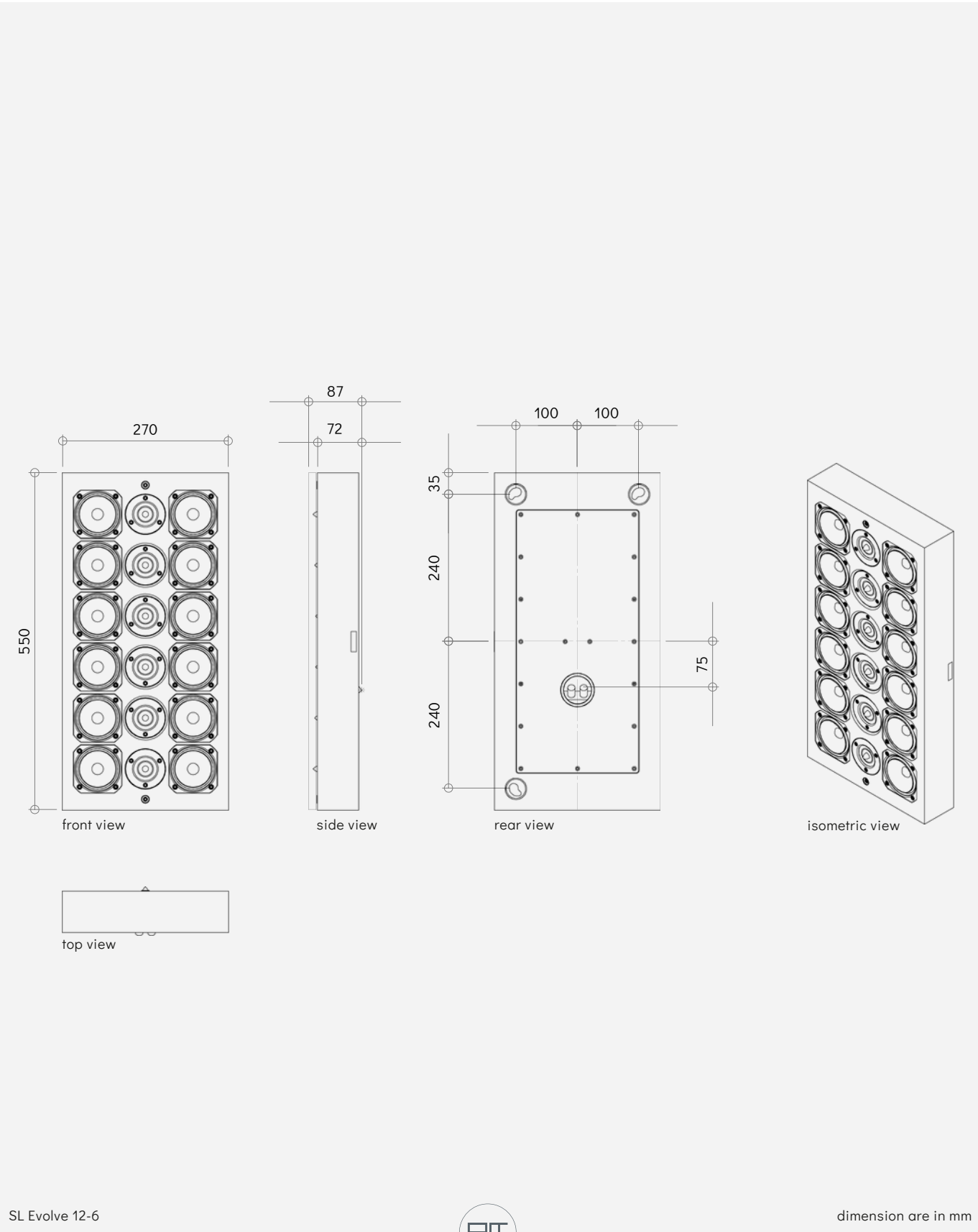


side view

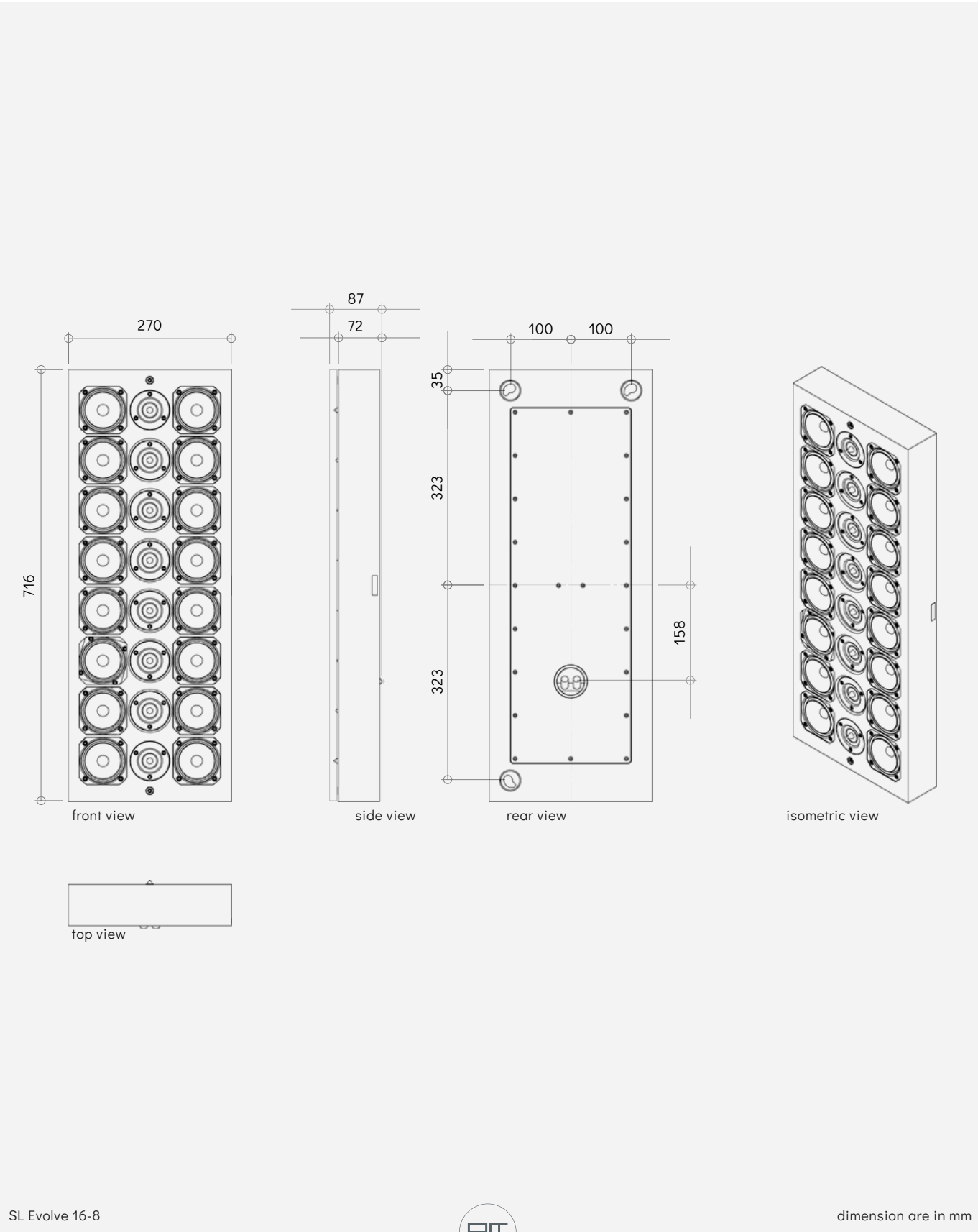


rear view

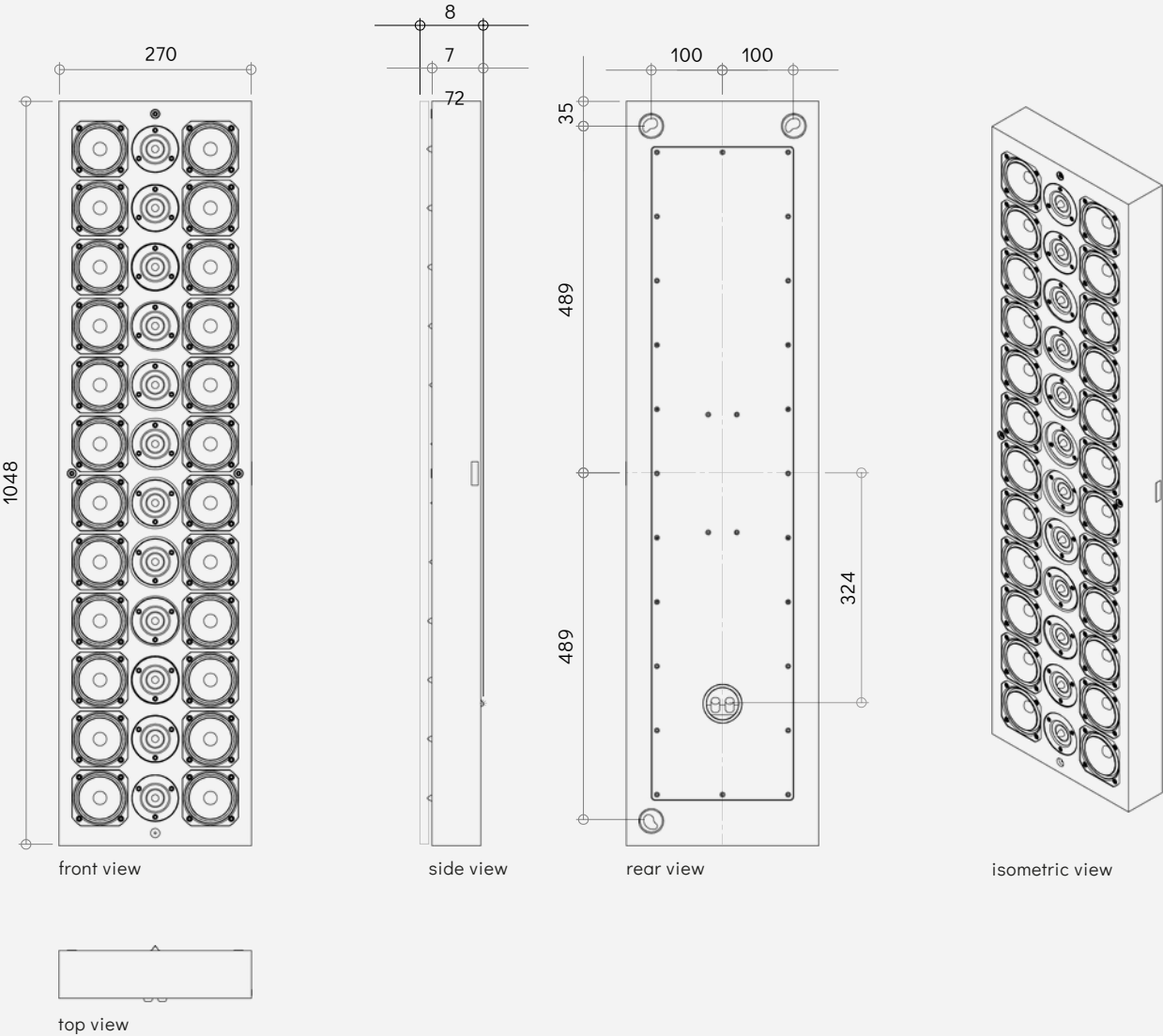
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# SCHEMATICS



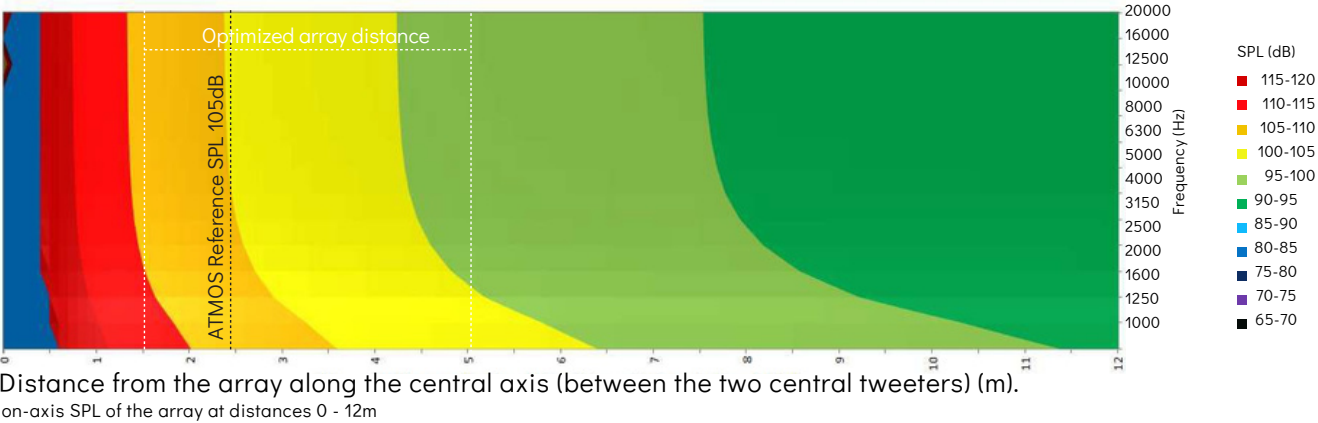
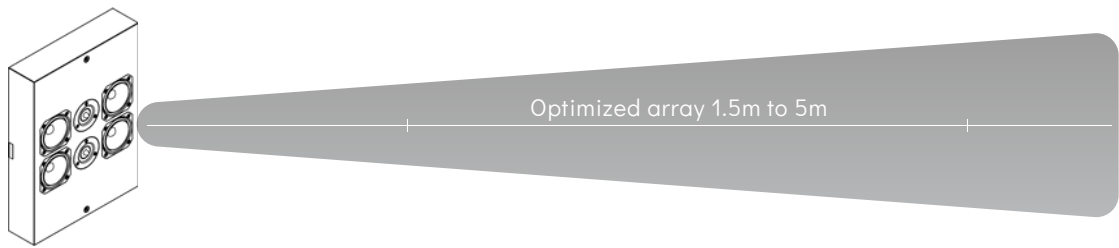
# SCHEMATICS



# TIME ALIGNED ARRAY VS. DISTANCE

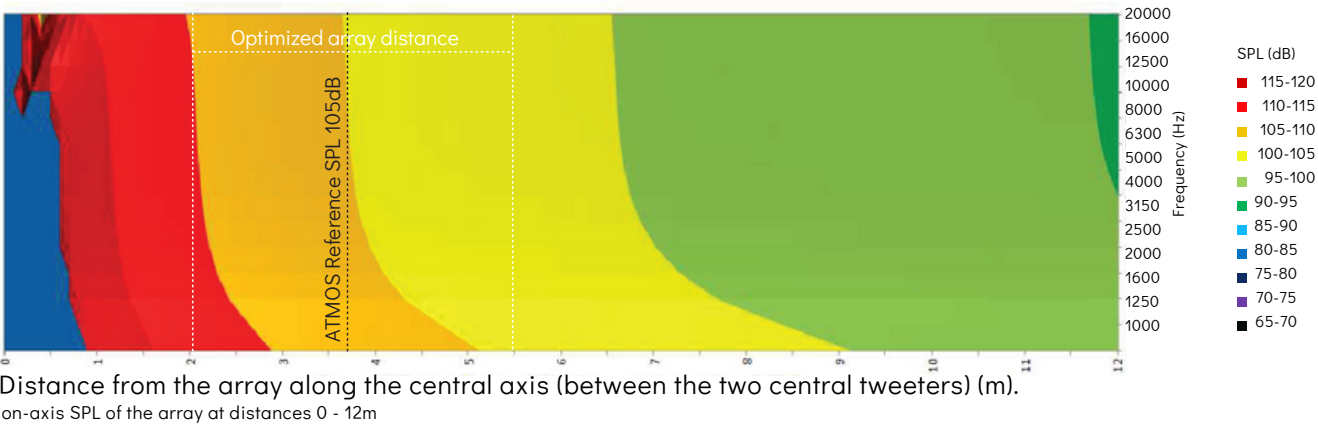
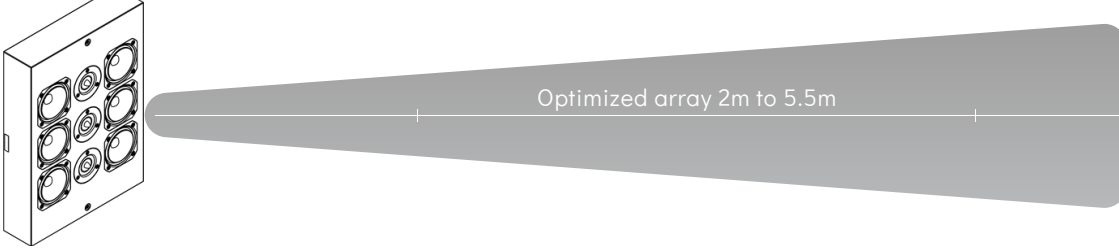
## SL EVOLVE 4-2 ARRAY

VERTICAL ARRAY



## SL EVOLVE 6-3 ARRAY

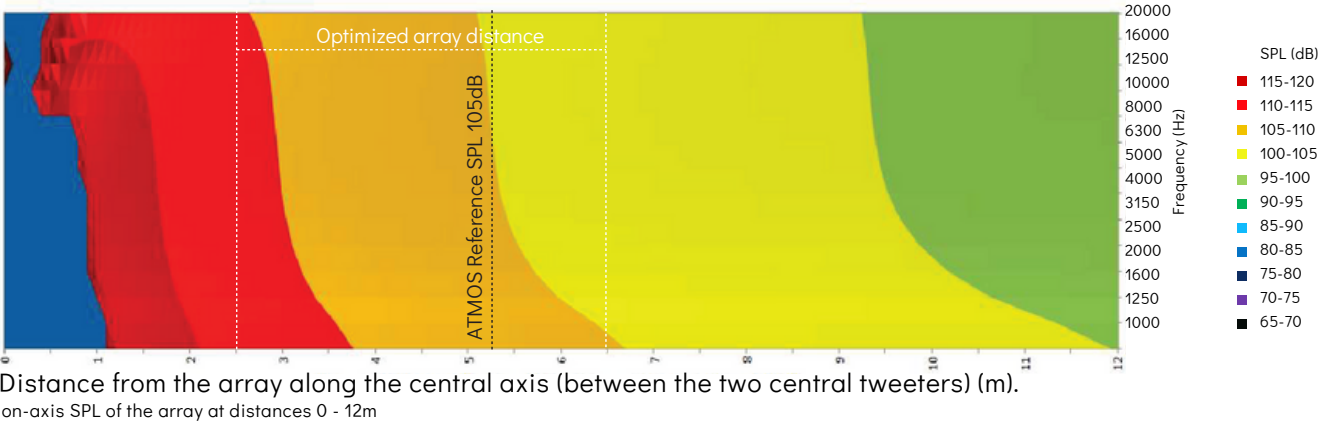
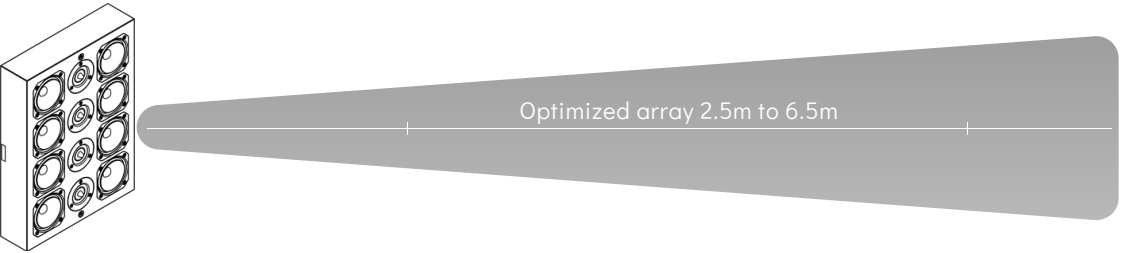
VERTICAL ARRAY



# TIME ALIGNED ARRAY VS. DISTANCE

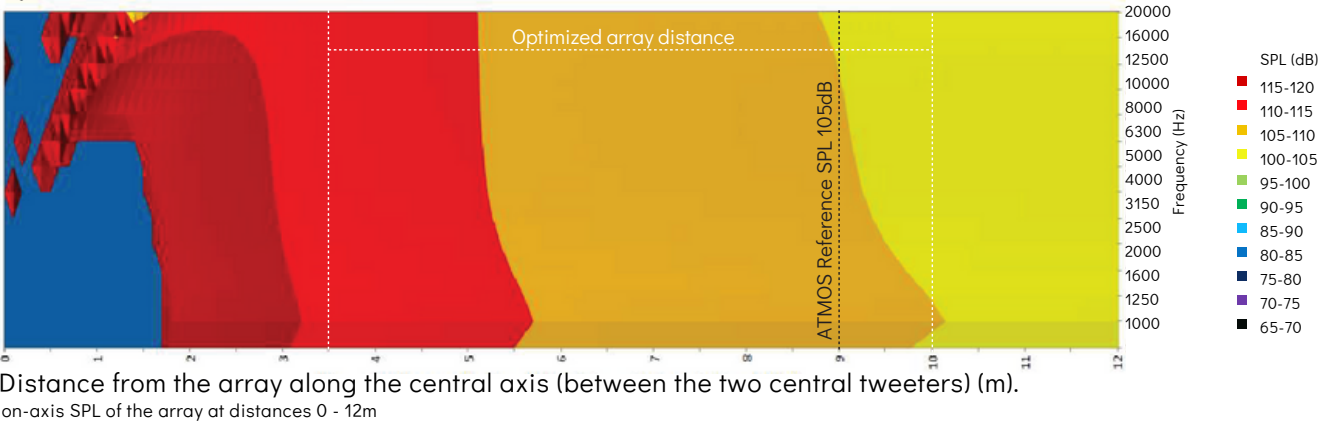
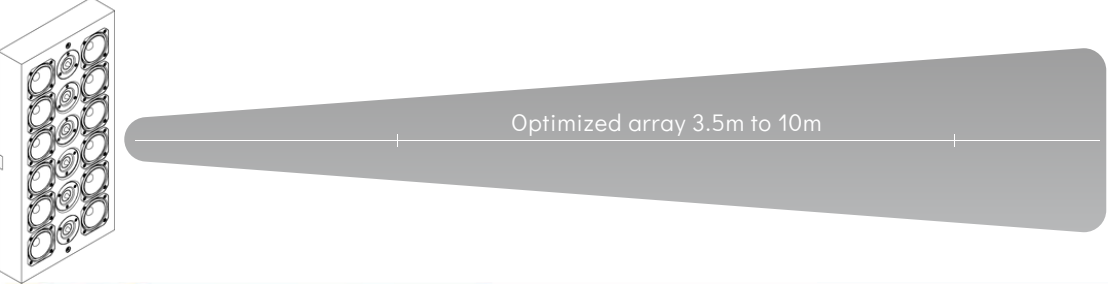
## SL EVOLVE 8-4 ARRAY

VERTICAL ARRAY



## SL EVOLVE 12-6 ARRAY

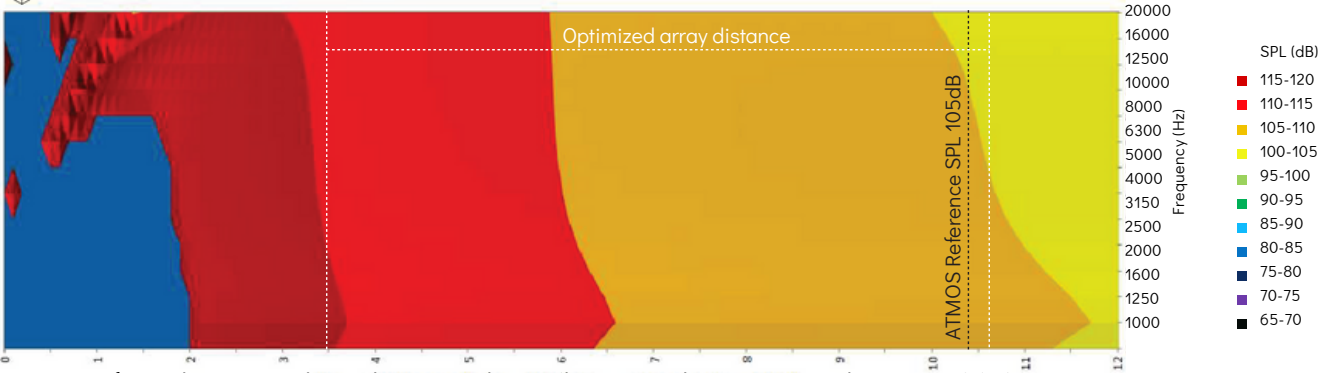
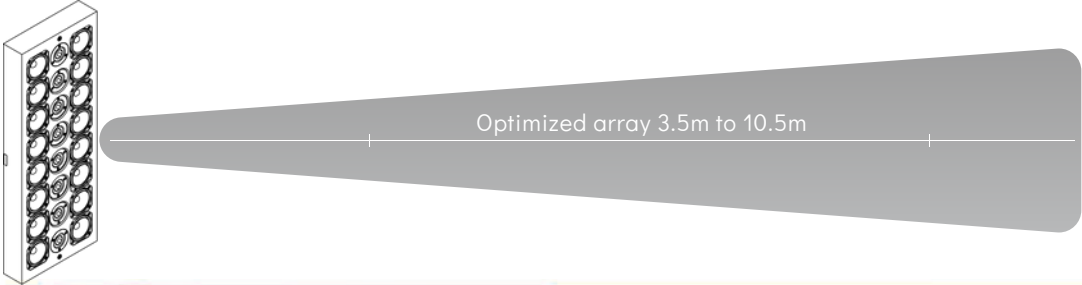
VERTICAL ARRAY



# TIME ALIGNED ARRAY VS. DISTANCE

## SL EVOLVE 16-8 ARRAY

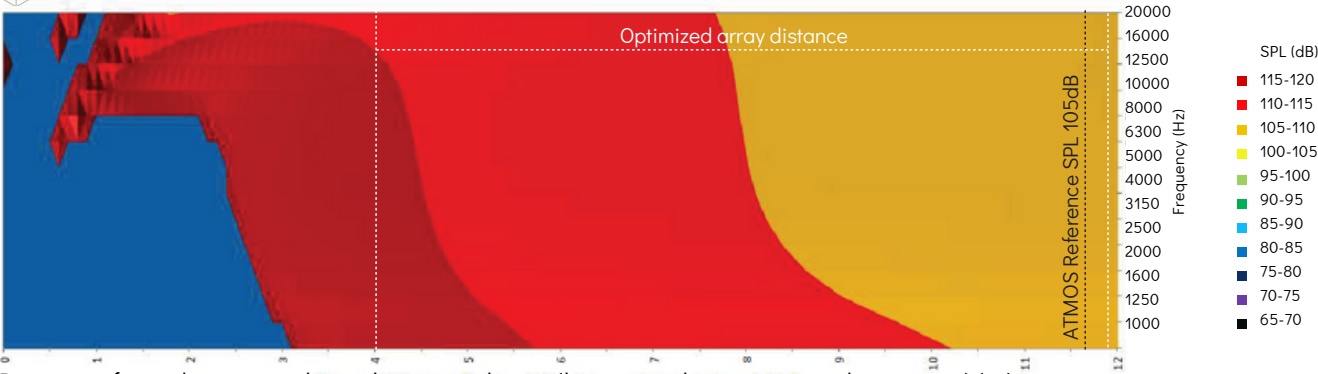
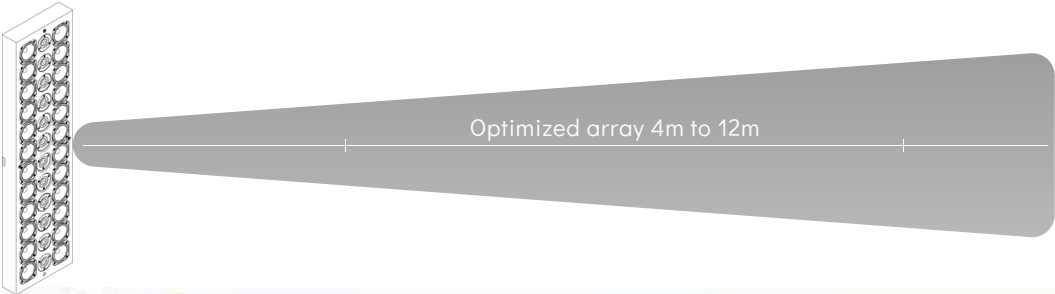
VERTICAL ARRAY



Distance from the array along the central axis (between the two central tweeters) (m).  
on-axis SPL of the array at distances 0 - 12m

## SL EVOLVE 24-12 ARRAY

VERTICAL ARRAY



Distance from the array along the central axis (between the two central tweeters) (m).  
on-axis SPL of the array at distances 0 - 12m

# ARTCOUSTIC LINE ARRAY EXPLAINED

As sound is invisible to the human eye, it can for many come across is a bit abstract and difficult to understand, where on the other hand light is visible to the human eye and therefore easier to explain. However, sound and light have many things in common, it is an energy which reflects and absorbs, according to its surroundings, shape boundaries and boundaries materials.

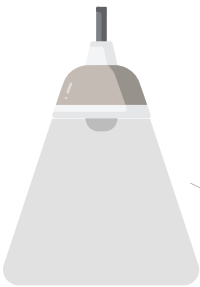
With the diagrams shown here, we try to explain the fundamental differences between the typical omnidirectional light bulb, which in many ways is similar to the typical HI-FI dome tweeter. A more controlled light source, with guided directivity from a lampshade, illustrating the more professional audio-oriented horn-loaded design and finally the use of multiple light sources, placed in a straight vertical line, illustrating the different types of line array designs used by Artcoustic.

illustration with a 30W light bulb



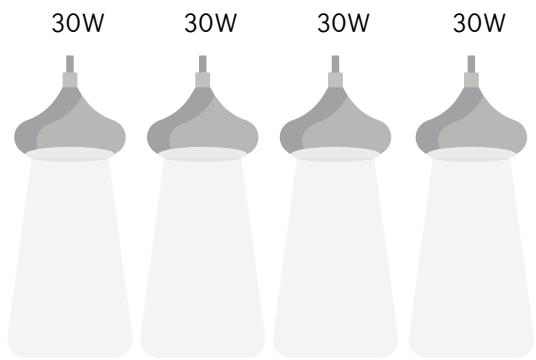
30W wide dispersion typical HI-FI design

illustration with a ceiling lamp



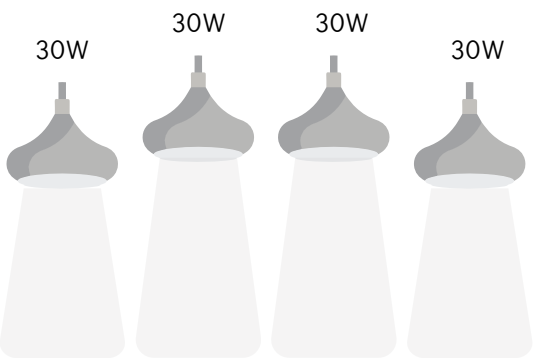
Controlled dispersion typical horn design

illustration of a 120W straight line array



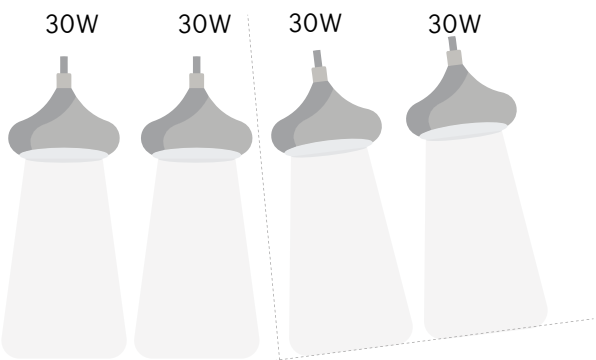
\*using Spitfire A6/A4 and smaller Evolve speakers

illustration of a 120W time aligned line array



\*using larger Evolve speakers

illustration of a 120W angled line array



\*using Spitfire array speakers



# ARTCOUSTIC LINE ARRAY EXPLAINED

## ARTCOUSTIC LINE ARRAY ADVANTAGES

As it is with lighting design and methods, all of these audio design solutions has advantages and disadvantages, we have listed out some of the obvious advantages we find important using line array type of designs.

EXTENDED FLAT FREQUENCY RESPONSE UP TO 20KHZ  
over a wide horizontal and vertical angle.

DETAILED AND TRANSPARENT SWEET SPOT  
with an almost magical ability of making the actual speakers acoustically disappear.

HIGH SENSITIVITY AND EXCEPTIONAL SOUND PRESSURE

LEVEL LOW DISTORTION

BENCH MARK TRANSIENT RESPONSE

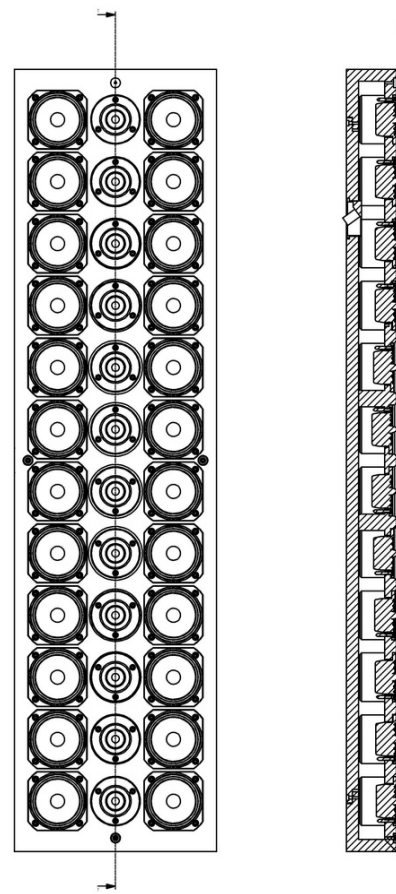
GUIDED DIRECTIVITY  
with near perfect response curve  $\pm 3$  dB over long distance.

PLUG AND PLAY EASY TO INSTALL APPROACH  
eliminating installation mistakes and misunderstandings.

MINIMUM LOSS OF ACOUSTIC ENERGY  
over double distance -2 dB.

MINIMUM ROOM ACOUSTIC INTERFERENCE  
less room treatment needed.

PREDICTABLE AND CONSISTENT PERFORMANCE



## ARTCOUSTIC TIME ALIGNED ARRAY

With the Artcoustic Time Aligned Array, we have managed to solve a number of typical array problems, by placing an even number of high frequency transducers in a precise, mathematically calculated position.

We achieve near perfect frequency response, minimized phase overlap and comb filtering, coupled with exceptional high sound pressure level and reduced acoustic loss over double listening distance.

We have also managed to control the energy output on the vertical axis, reducing floor and ceiling reflections, resulting in a constant and highly predictable performance, so basically with the Artcoustic array speakers, every room will sound the same without the use of extensive acoustic room correction material.

# SAFETY INSTRUCTIONS

## SAFETY



Do not use this product near water



Clean rear panel with dry cloth only



Do not block any ventilation opening



Do not install near any heat sources



If wall mounted, ensure the use of matching screws and rawl plugs

## WARNING

This product complies with Part 15 of the FCC Rules. Its operation is subject to the following two conditions:

This product may not cause harmful interference.

This product must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

To reduce the risk of fire and electric shock do not expose this product to rain or moisture.



Do not place product filled with liquids such as vases on the product .



Do not open product. There are no user-serviceable parts inside.



Always use the power supply shipped with this product. Using a power supply with the wrong voltage or polarity can damage the electronics.



# WARRANTY

## IS APPLICABLE



Is valid only for products purchased from an authorised Artcoustic retailer or dealer.



Is valid from the date of purchase for a period of 3-years for passive loudspeakers, and 2-years for powered loudspeakers and electronics.



Is limited to the repair of the equipment (which could be a repair or replacement at our discretion, neither of which affects your original warranty).



Neither transportation, nor any other costs, nor any risk for removal, transportation and installation of products is covered by this warranty.

## IS NOT APPLICABLE

Will not be applicable in cases other than defects in materials and/or workmanship at the time of purchase and will not be applicable:

- For deterioration of component parts, the nature of which is to become worn or depleted with use, such as batteries.
- For damages caused by incorrect installation, connection or packing.
- For damages caused by accidents, lightning, water, fire heat, war, public disturbances or any other cause beyond the reasonable control of Artcoustic and its appointed distributors.
- For damages caused by any use other than correct use described in the user manual, negligence, modifications, or use of parts that are not made or authorized by Artcoustic UK Ltd.

If it is found necessary to return the product for repair, you will be given a form to fill out and return. You should not return the product without previous acceptance. To validate your warranty, you will need to produce the original sales invoice or other proof of ownership and date of purchase.

The Artcoustic Team

