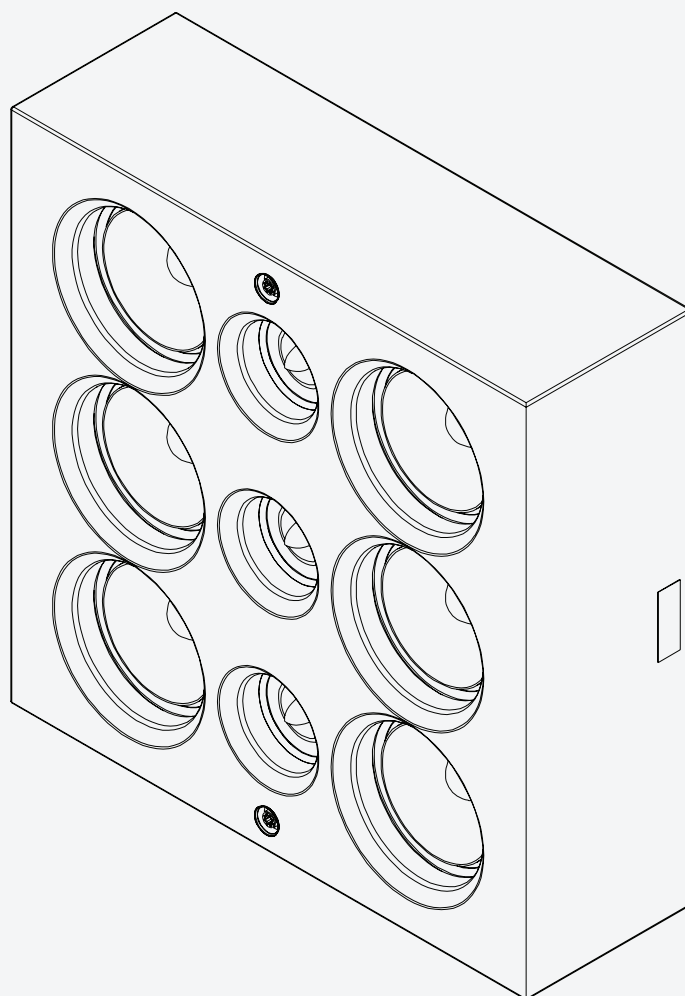


Artcoustic^{ACC}

SPITFIRE SERIES

Owners manual



WELCOME TO THE WORLD OF ARTCOUSTIC

Congratulations with your purchase of the Artcoustic Spitfire Series.

The Spitfire Series is Artcoustic's dedicated cinema products. Its slimline profile, adjustable vertical and horizontal array, combined with a powerful and articulated performance, makes it the ideal choice for high-end cinema rooms and commercial installations, such as bars and clubs and in general high SPL, but discrete professional applications.

For an impressive performance, partner the Spitfire speakers with one of the powerful Artcoustic subwoofers - an ideal setup for small, medium and large size rooms.

The Spitfire Series has been engineered to produce exceptional sound pressure level, normally only associated with typical professional audio products. The Spitfire 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 Spitfire Series will fulfill all your audio needs.

Thank you for purchasing the Artcoustic Spitfire Series.

All the best,

The Artcoustic Team

FEATURES

At Artcooustic, 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 Artcooustic deliver products at the top of their class, with regards to technological excellence and refined Scandinavian design.

Introducing the latest edition of the Spitfire series – the Spitfire Series vertical array. A precise and well designed solution for dealing with high-frequency dispersion patterns. By carefully pointing each speaker element in a laser accurate position, the acoustically impossible is now possible.

The design has been optimized in a way that allows the product to achieve a near perfect response curve at any seat in room, all achieved 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 easy to fit cabinet.

ADJUSTABLE DISPERSION ADVANTAGES

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.

A SOPHISTICATED AND MINIMAL CABINET DESIGN

HIGH SENSITIVITY AND EXCEPTIONAL SOUND PRESSURE LEVEL

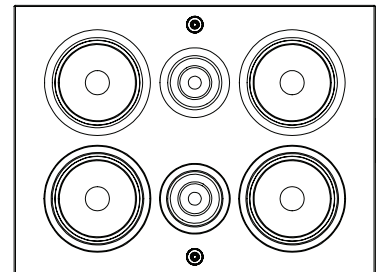
LOW DISTORTION

BENCHMARK TRANSIENT RESPONSE

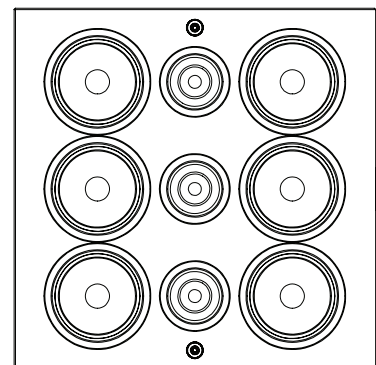
GUIDED DIRECTIVITY
with near perfect response curve +/- 3dB over long distances

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

MINIMUM LOSS OF ENERGY OVER DOUBLE DISTANCE -2DB



Spitfire A4 front view



Spitfire A6 front view

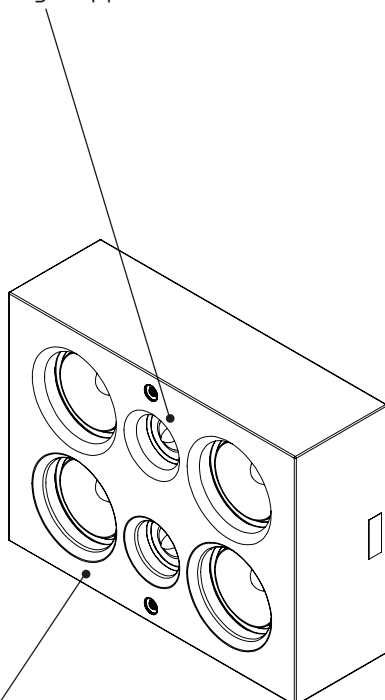
All in all, the adjustable array delivers incredible detail and airy sound which typical high-end HIFI speakers only offer at short distances. The Artcooustic Spitfire Series delivers above and beyond providing a throw distance of well beyond 40 meters making this product a natural evolution within the Artcooustic portfolio of industry leading products.

FEATURES

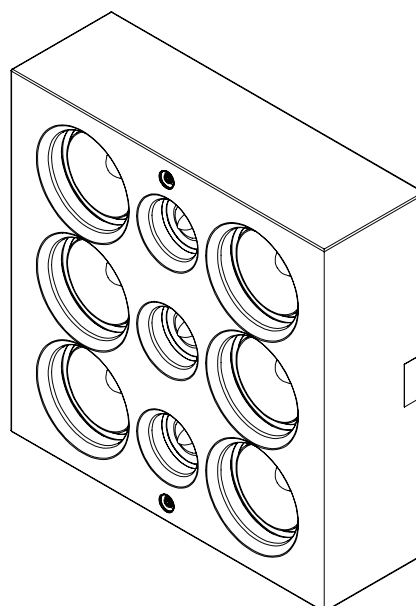
COMPONENTS OVERVIEW

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.



isometric view Spitfire A4



isometric view Spitfire A6

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

SPITFIRE A4

TRANSDUCER

LF-MF 4 x 3 inch cones, 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 Filter 12 dB/octave 4000 Hz

CONNECTION

Single amp'd Gold Plated Push Terminals

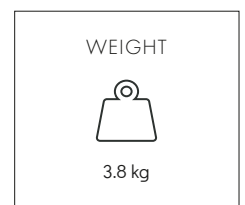
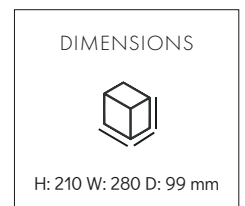
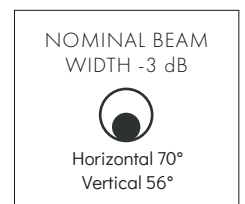
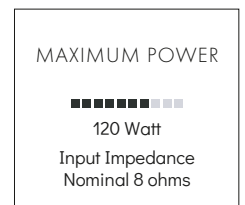
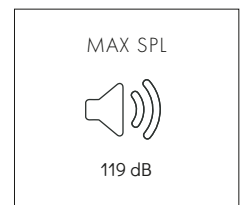
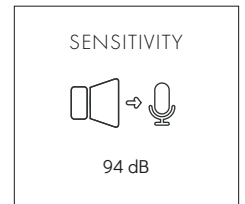
PERFORMANCE

Operating Range 70 Hz (-6dB) to 20 kHz
Axial Sensitivity (Half Space SPL) LF/MF-HF 94 dB
Calculated Axial Output Limit (Half Space SPL) Average Peak 119 dB
Maximum Power Handling 2 hours of 6 dB crest factor pink noise,
120 Watt RMS (AES Standard)
Input Impedance Nominal 8 ohms
Nominal Beamwidth -3 dB Horizontal 70° Vertical 56°

Recommended High Pass Filter 100 Hz, 24 dB/octave

DESIGN

Cabinet: Black Satin Finish (SL), RAL, NCS



SPECIFICATIONS

SPITFIRE A6

TRANSDUCER

LF-MF 6 x 3 inch cones, 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 Filter 12 dB/octave 4000 Hz

CONNECTION

Single Amped Speakon and Binding Posts Terminals

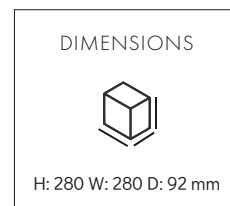
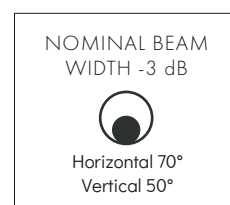
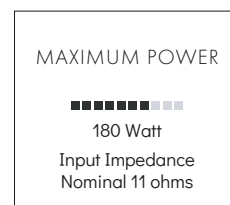
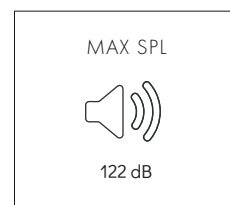
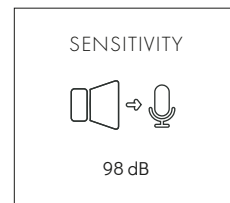
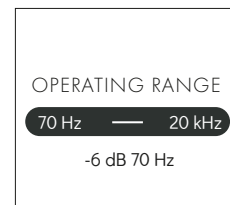
PERFORMANCE

Operating Range 70 Hz (-6dB) to 20 kHz
Axial Sensitivity (Half Space SPL) LF/MF-HF 98 dB
Calculated Axial Output Limit (Half Space SPL) Average Peak 122 dB
Maximum Power Handling 2 hours of 6 dB crest factor pink noise,
180 Watt RMS (AES Standard)
Input Impedance Nominal 11 ohms
Nominal Beamwidth -3 dB Horizontal 70° Vertical 50°

Recommended High Pass Filter 100 Hz, 24 dB/octave

DESIGN

Cabinet: Black Satin Finish (SL), RAL, NCS



SPECIFICATIONS

SPITFIRE A10

TRANSDUCER

LF-MF 10 x 3 inch cones, Symmetric Phase Aligned
HF 5 x 1 inch Dual Ring Radiator, Symmetric Phase Aligned

CROSSOVER

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

CONNECTION

Single Amped Speakon and Binding Posts Terminals

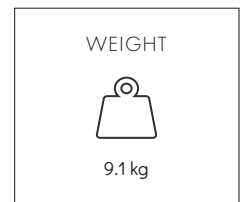
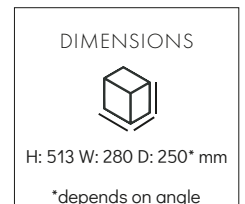
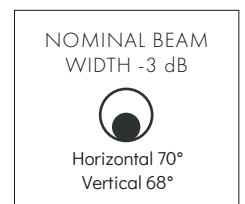
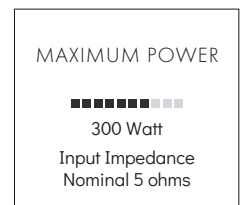
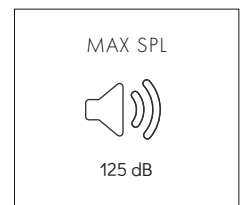
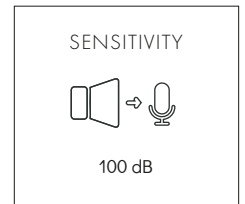
PERFORMANCE

Operating Range 70 Hz (-6dB) to 20 kHz
Axial Sensitivity (Half Space SPL) LF/MF-HF 100 dB
Calculated Axial Output Limit (Half Space SPL) Average Peak 125 dB
Maximum Power Handling 2 hours of 6 dB crest factor pink noise,
300 Watt RMS (AES Standard)
Input Impedance Nominal 5 ohms
Nominal Beamwidth -3 dB Horizontal 70° Vertical 68°

Recommended High Pass Filter 100 Hz, 24 dB/octave

DESIGN

Cabinet: Black Satin Finish (SL), RAL, NCS



SPECIFICATIONS

SPITFIRE A12

TRANSDUCER

LF-MF 12 x 3 inch cones, 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 Filter 12 dB/octave 4000 Hz

CONNECTION

Single Amped Speakon and Binding Posts Terminals

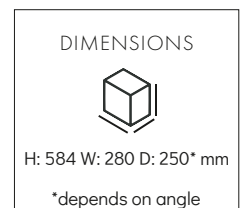
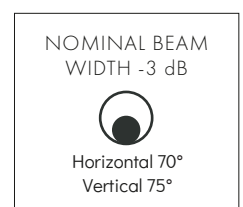
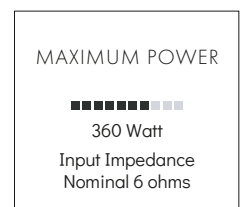
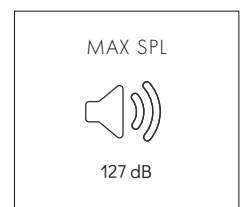
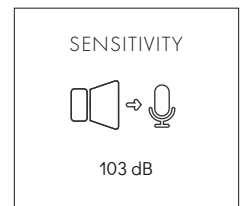
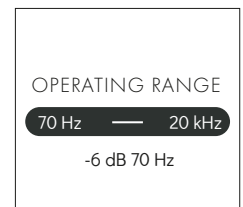
PERFORMANCE

Operating Range 70 Hz (-6dB) to 20 kHz
Axial Sensitivity (Half Space SPL) LF/MF-HF 103 dB
Calculated Axial Output Limit (Half Space SPL) Average Peak 127 dB
Maximum Power Handling 2 hours of 6 dB crest factor pink noise,
360 Watt RMS (AES Standard)
Input Impedance Nominal 6 ohms
Nominal Beamwidth -3 dB Horizontal 70° Vertical 75°

Recommended High Pass Filter 100 Hz, 24 dB/octave

DESIGN

Cabinet: Black Satin Finish (SL), RAL, NCS



SPECIFICATIONS

SPITFIRE A14

TRANSDUCER

LF-MF 14 x 3 inch cones, Symmetric Phase Aligned
HF 7 x 1 inch Dual Ring Radiator, Symmetric Phase Aligned

CROSSOVER

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

CONNECTION

Single Amped Speakon and Binding Posts Terminals

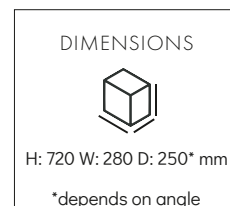
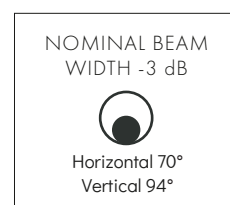
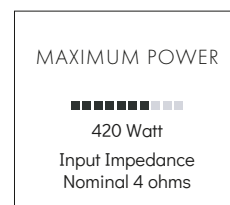
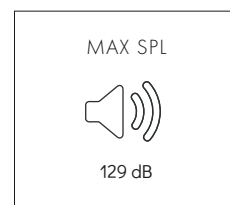
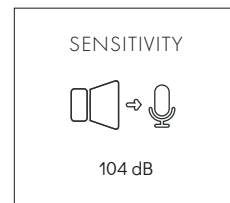
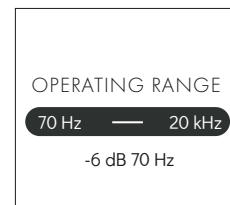
PERFORMANCE

Operating Range 70 Hz (-6dB) to 20 kHz
Axial Sensitivity (Half Space SPL) LF/MF-HF 104 dB
Calculated Axial Output Limit (Half Space SPL) Average Peak 129 dB
Maximum Power Handling 2 hours of 6 dB crest factor pink noise,
420 Watt RMS (AES Standard)
Input Impedance Nominal 4 ohms
Nominal Beamwidth -3 dB Horizontal 70° Vertical 94°

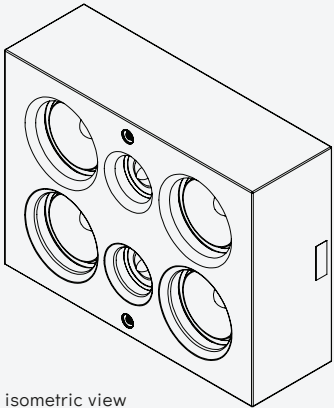
Recommended High Pass Filter 100 Hz, 24 dB/octave

DESIGN

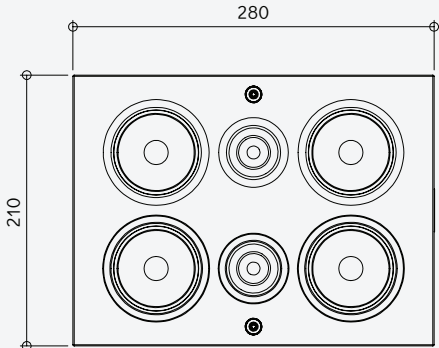
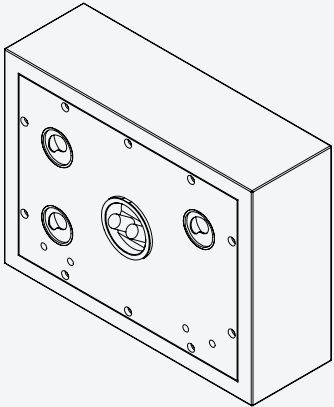
Cabinet: Black Satin Finish (SL), RAL, NCS



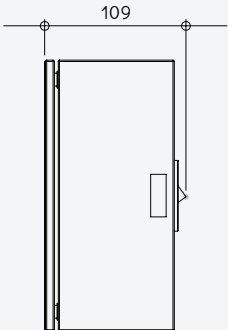
SCHEMATICS



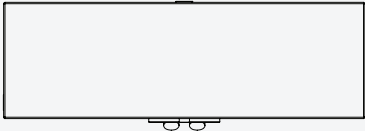
isometric view



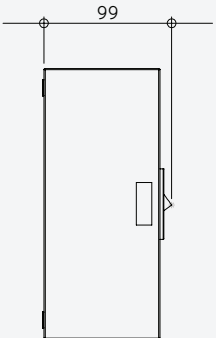
front view



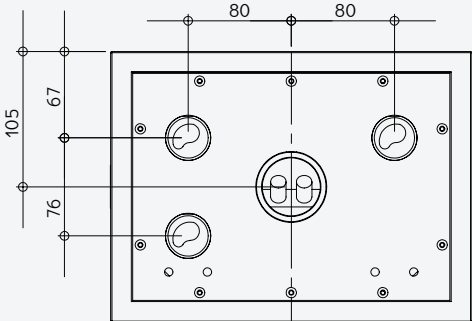
side view with screen



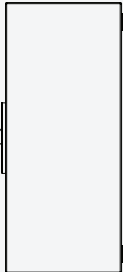
bottom view



right view



rear view

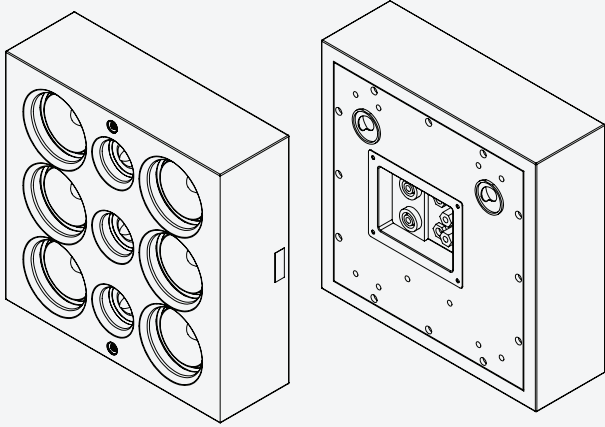


left view

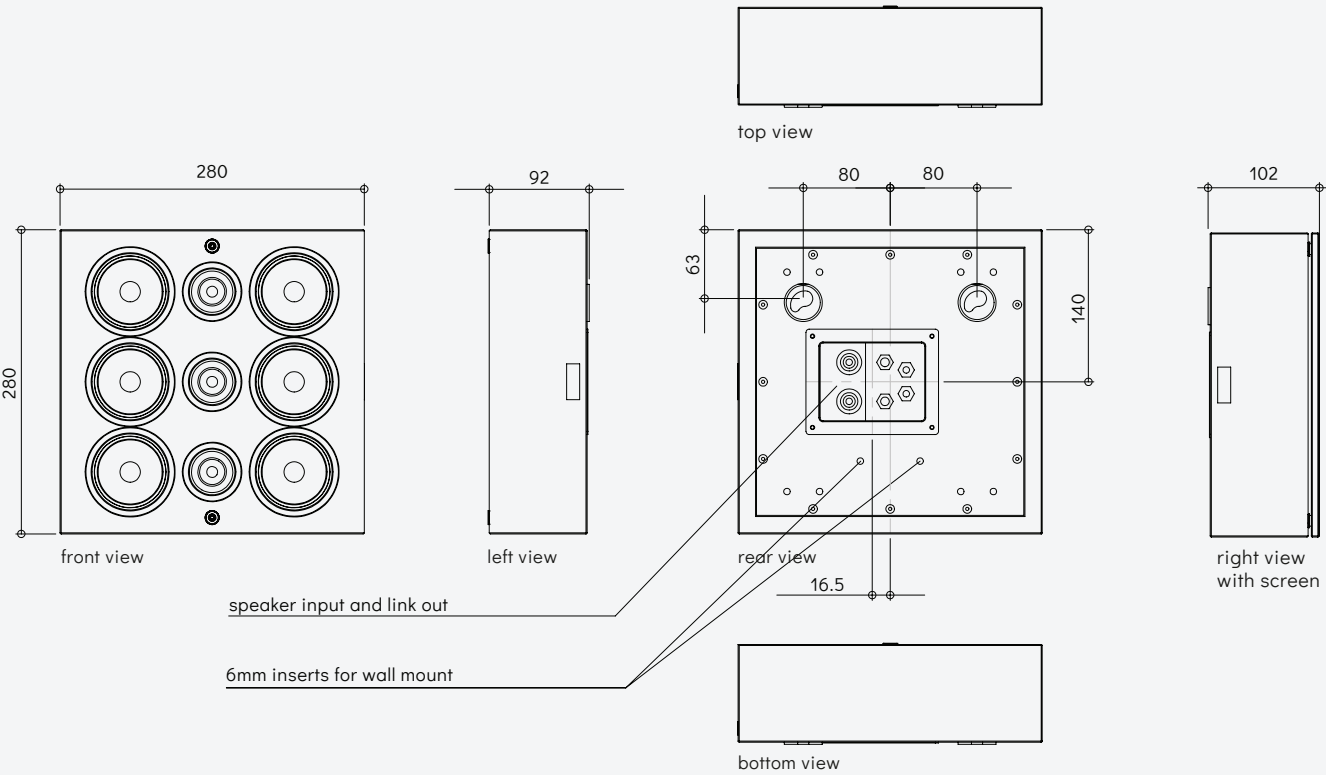


top view

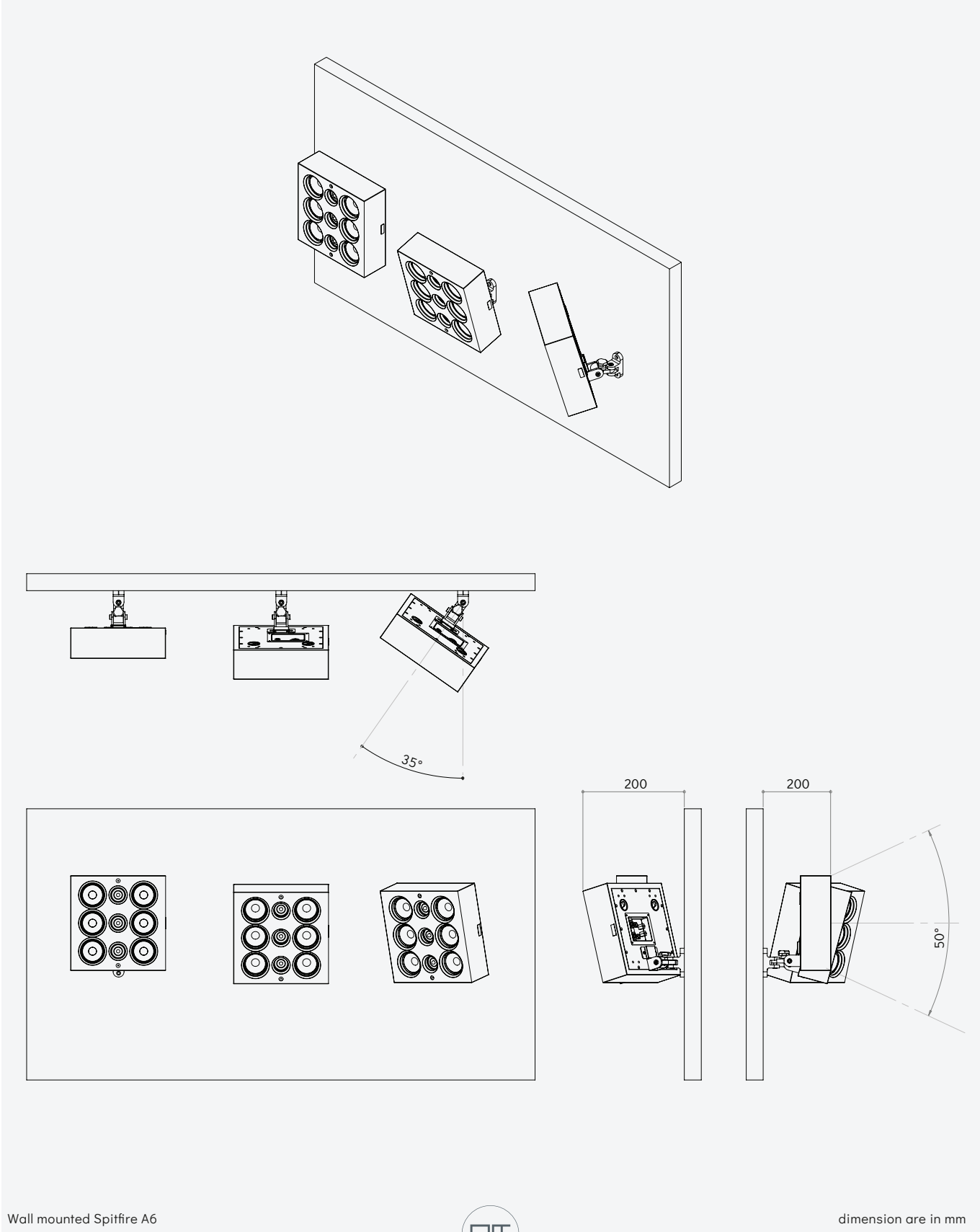
SCHEMATICS



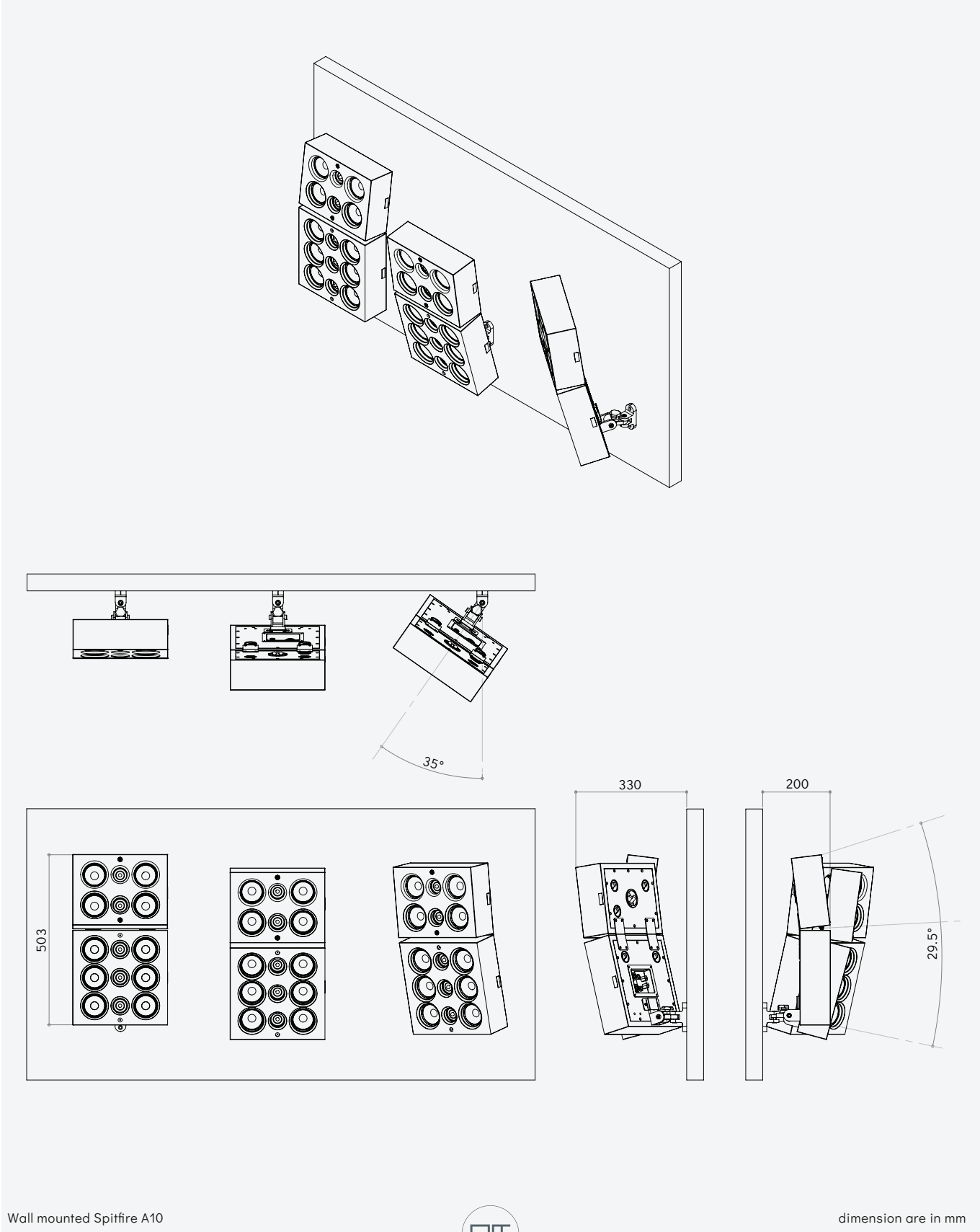
isometric view



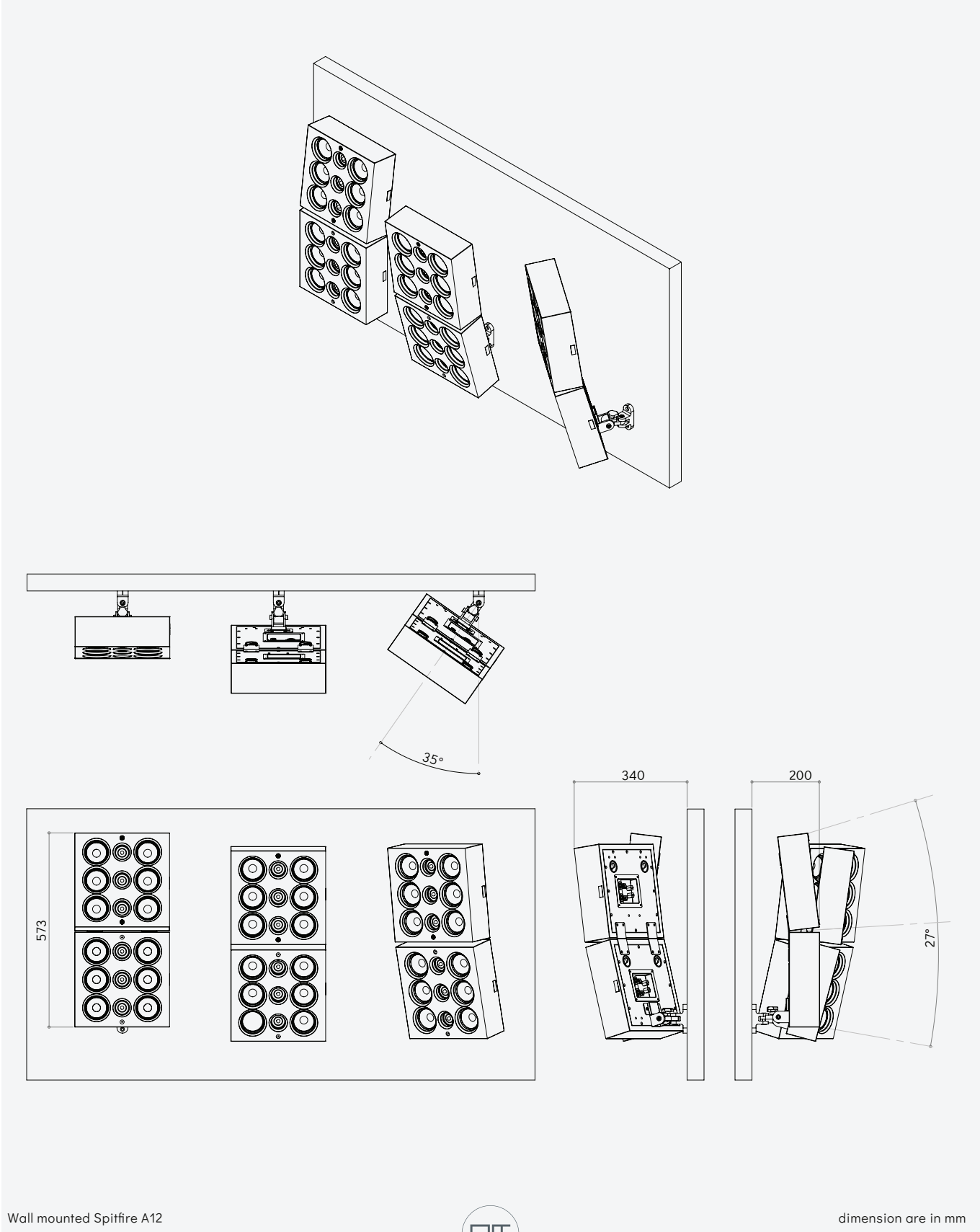
SCHEMATICS



SCHEMATICS



SCHEMATICS

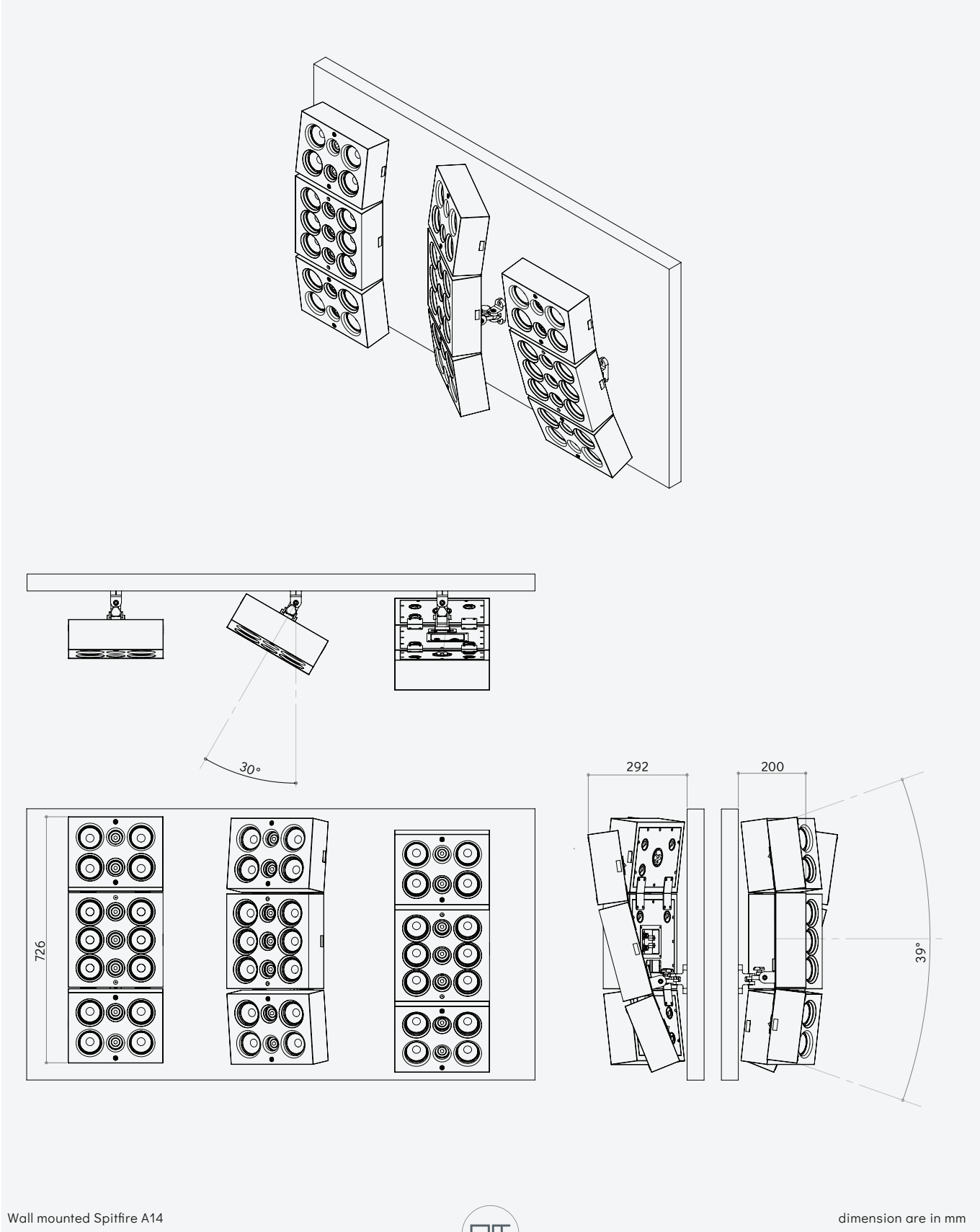


Wall mounted Spitfire A12

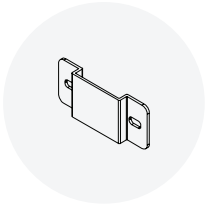


dimension are in mm

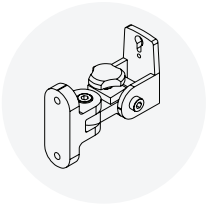
SCHEMATICS



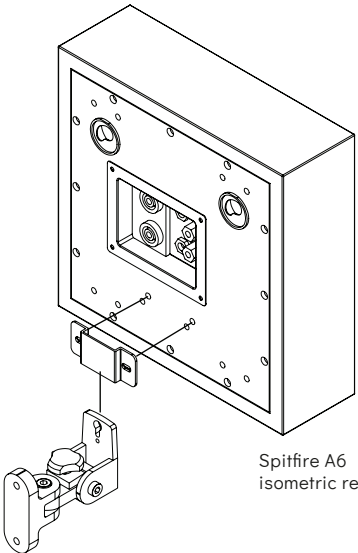
MOUNTING INSTRUCTION



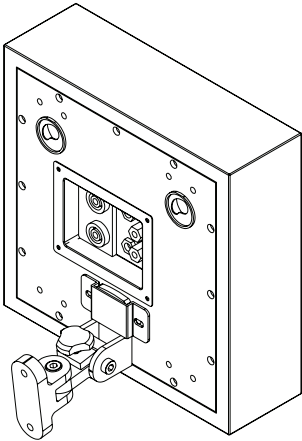
Universal Bracket Mount
Attach bracket mount to
speaker rear side



Artcoustic Universal Bracket
Mount Bracket to wall,
with suitable screws



Spitfire A6
isometric rear view



Spitfire A6
Fit speaker on bracket mounted on wall



MOUNTING INSTRUCTION

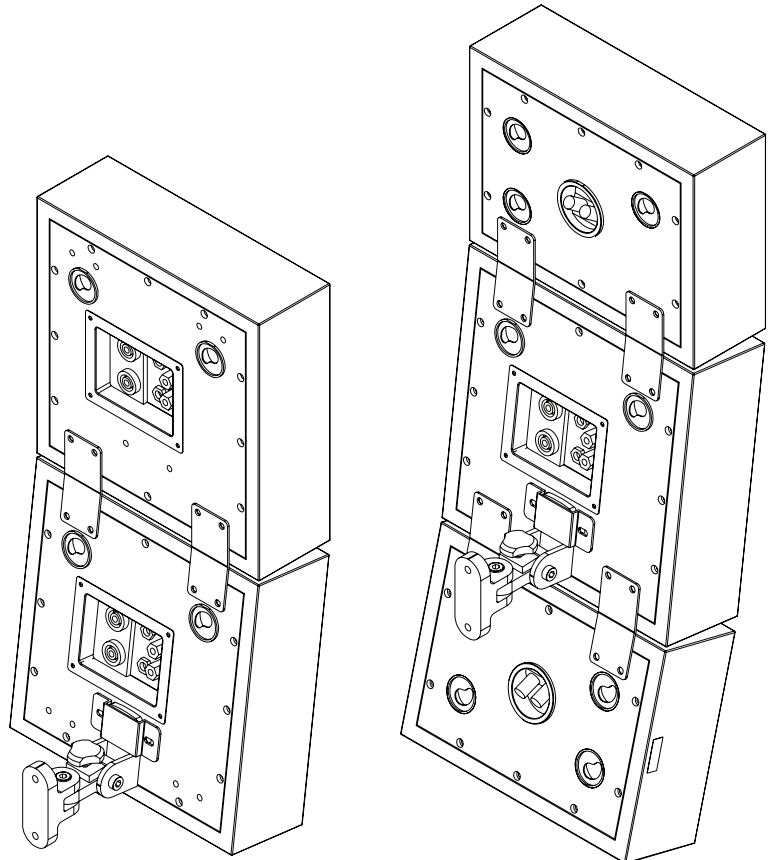
ARTCOUSTIC NARROW DISPERSION ARRAY

With the Artcoustic Narrow Dispersion Array, we have managed to solve a number of typical problems associated with angled arrays. This has been achieved by placing identical high frequency transducers in a precise, mathematically calculated angled 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.

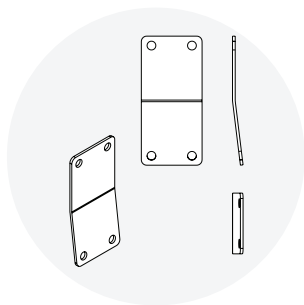
We have also managed to control the energy output on the vertical axis, reducing floor and ceiling reflections, resulting in a constant and highly predictable performance.

So basically with the Artcoustic Spitfire array speakers, every room will sound the same without the use of extensive acoustic room correction material.

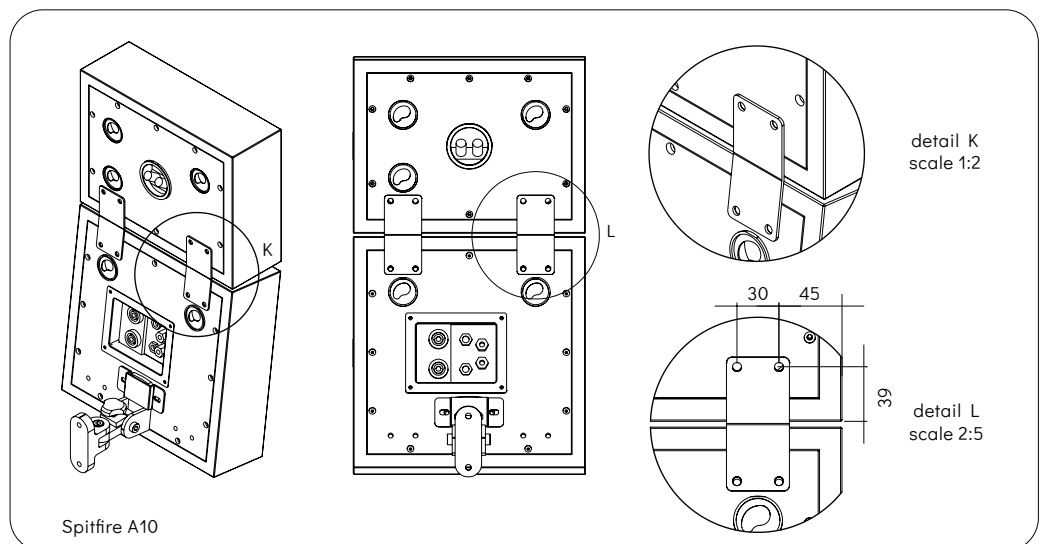


Spitfire A12

Spitfire A14



2mm sheet metal
painted black



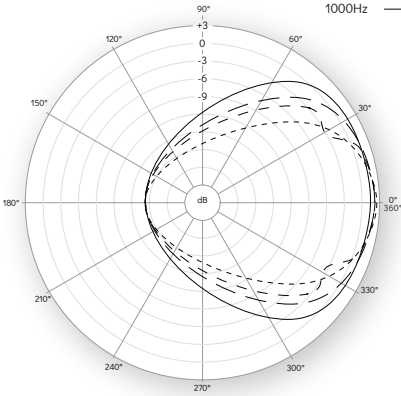
Spitfire A10

POLAR RESPONSE

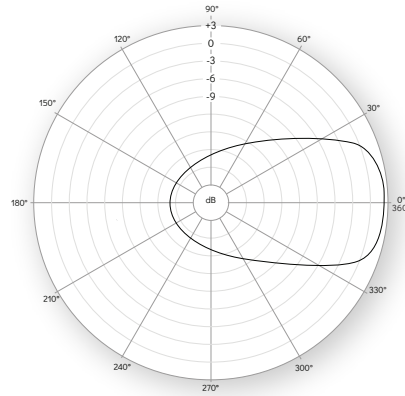
SPITFIRE A4

horizontal polar response 2m

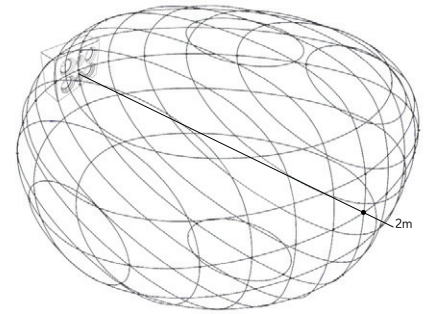
16000Hz - - - - -
 6500Hz - - - - -
 2500Hz - - - - -
 1000Hz - - - - -



vertical polar response 2m



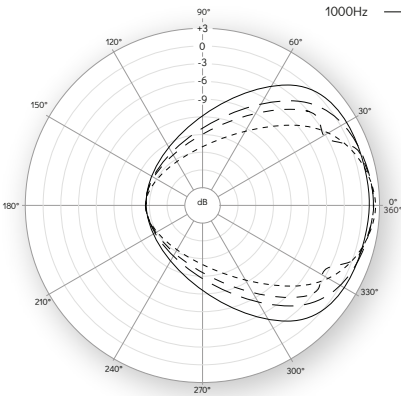
3D polar response 2m



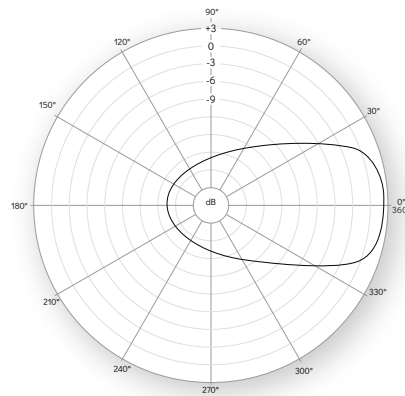
SPITFIRE A6

horizontal polar response 2m

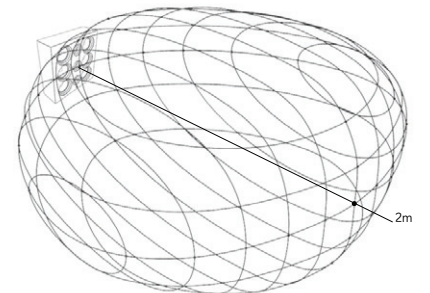
16000Hz - - - - -
 6500Hz - - - - -
 2500Hz - - - - -
 1000Hz - - - - -



vertical polar response 2m



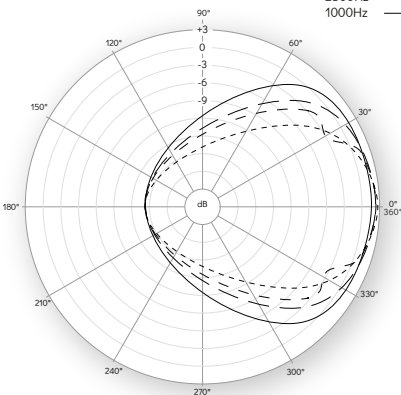
3D polar response 2m



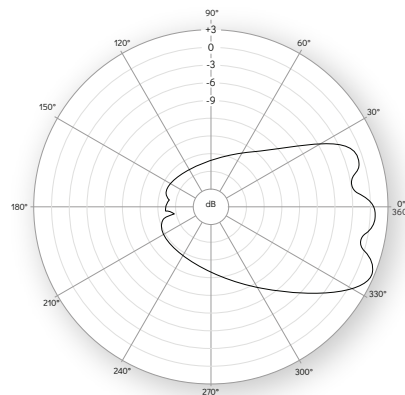
SPITFIRE A10

horizontal polar response 2m

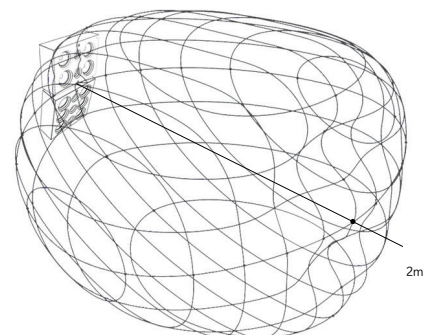
16000Hz - - - - -
 6500Hz - - - - -
 2500Hz - - - - -
 1000Hz - - - - -



vertical polar response 2m



3D polar response 2m

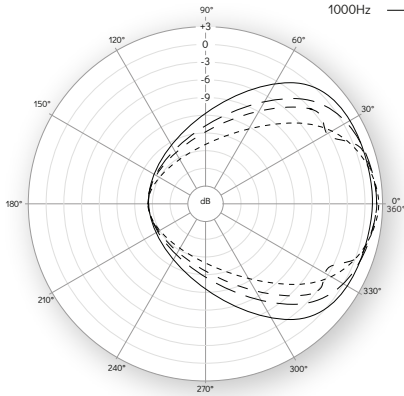


POLAR RESPONSE

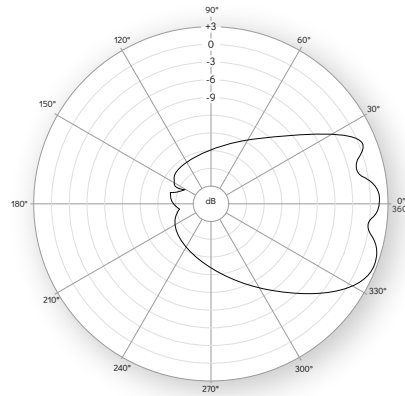
SPITFIRE A12

horizontal polar response 2m

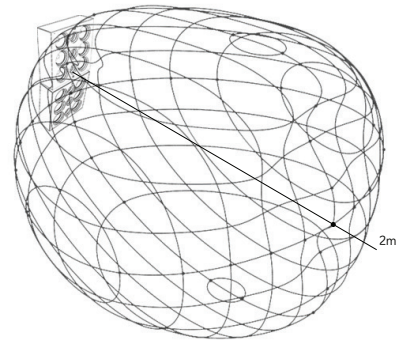
16000Hz - - - - -
 6500Hz - - - - -
 2500Hz - - - - -
 1000Hz - - - - -



vertical polar response 2m



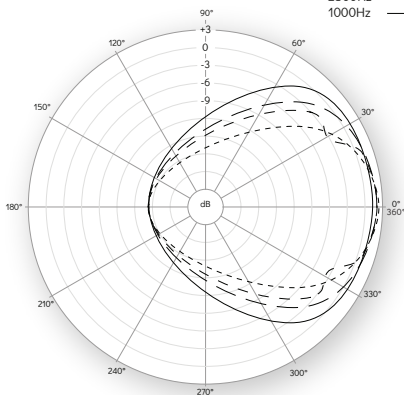
3D polar response 2m



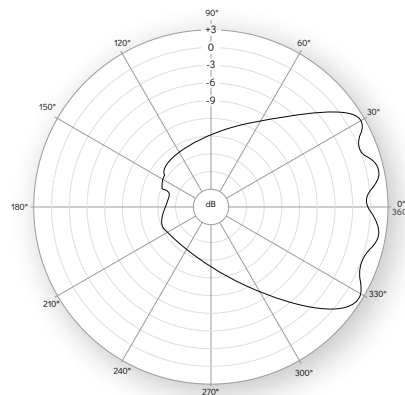
SPITFIRE A14

horizontal polar response 2m

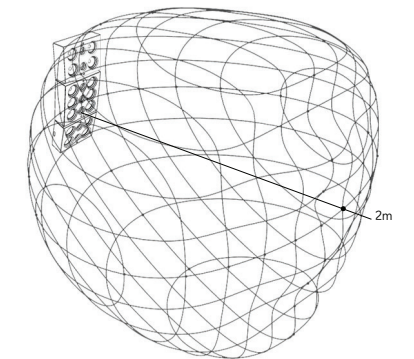
16000Hz - - - - -
 6500Hz - - - - -
 2500Hz - - - - -
 1000Hz - - - - -



vertical polar response 2m



3D polar response 2m



ARTCOUSTIC LINE ARRAY EXPLAINED

ARTCOUSTIC LINE ARRAY ADVANTAGES

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.

A SOPHISTICATED AND MINIMAL CABINET DESIGN

HIGH SENSITIVITY AND EXCEPTIONAL SOUND PRESSURE LEVEL

LOW DISTORTION

BENCH MARK TRANSIENT RESPONSE

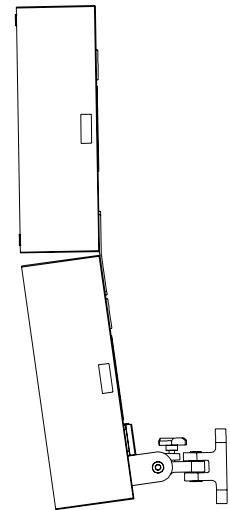
GUIDED DIRECTIVITY
with near perfect response curve +/- 3dB over long distances

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

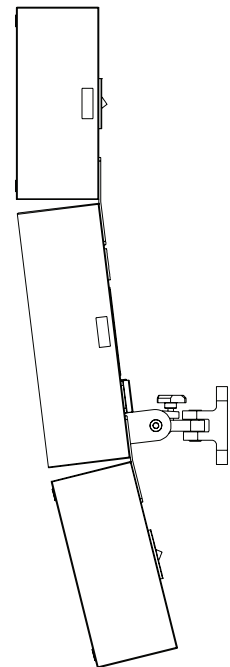
MINIMUM LOSS OF ENERGY
over double distance -5dB

MINIMUM ROOM ACOUSTIC INTERFERENCE
less room treatment

PREDICTABLE AND CONSISTENT PERFORMANCE



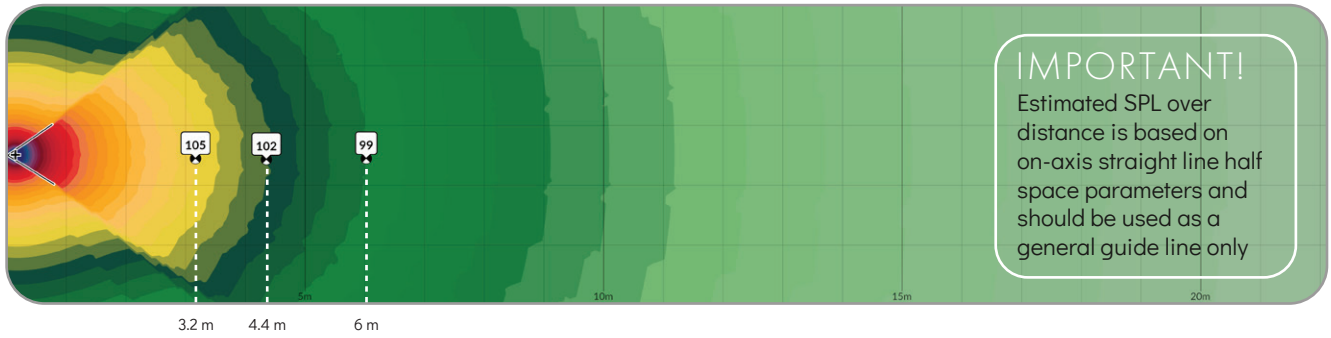
Spitfire A12 left view



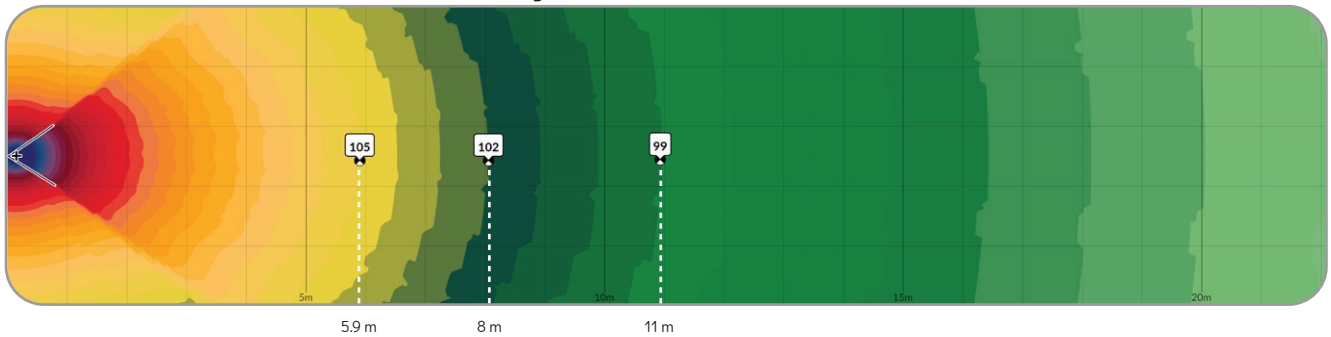
Spitfire A14 left view

ARRAY SPL VS DISTANCE, HALF SPACE

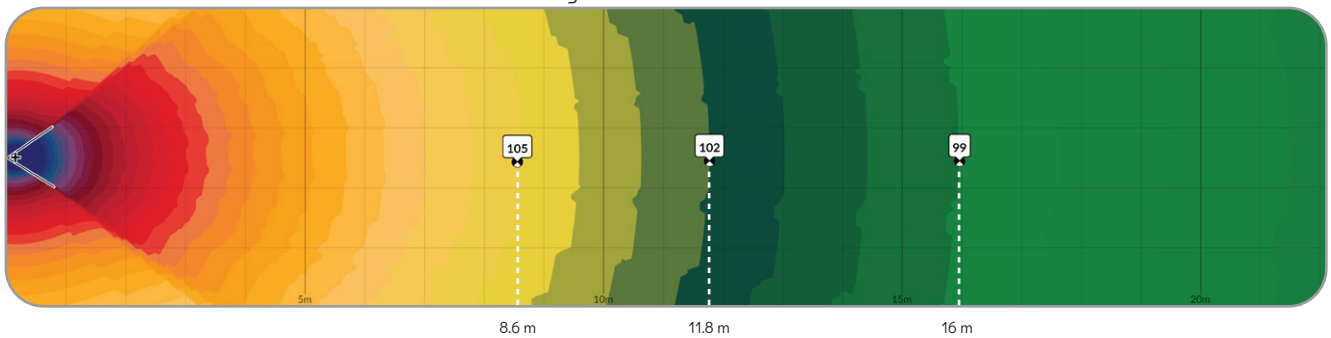
SPITFIRE A4 at 120 Watt (Max Power Handling)



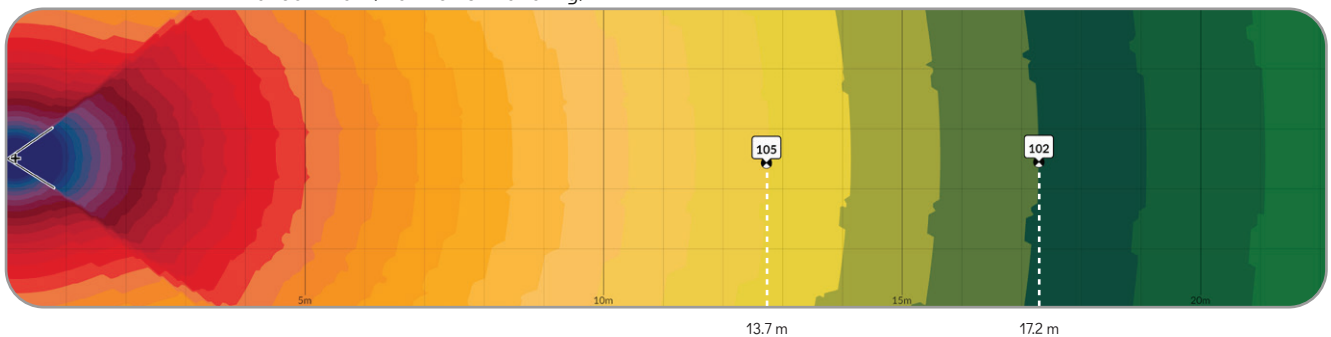
SPITFIRE A6 at 180 Watt (Max Power Handling)



SPITFIRE A10 at 300 Watt (Max Power Handling)

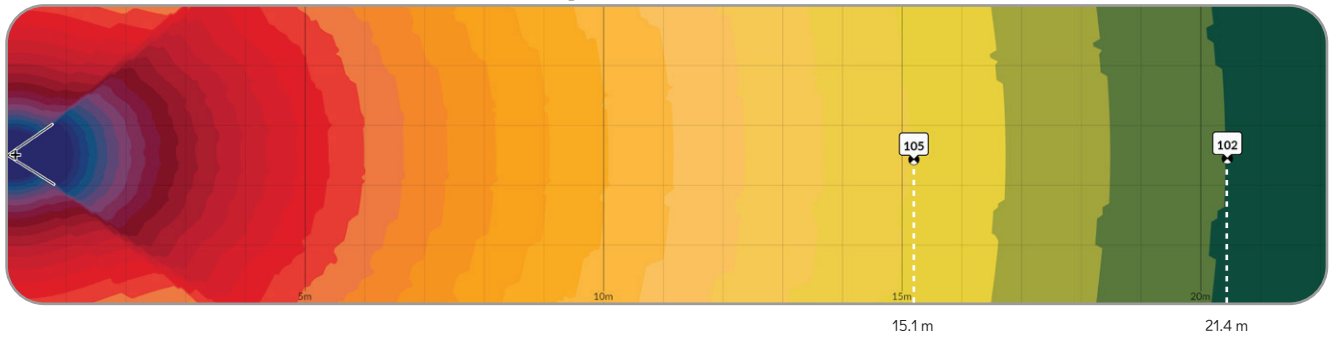


SPITFIRE A12 at 360 Watt (Max Power Handling)








ARRAY SPL VS DISTANCE, HALF SPACE

SPITFIRE A14 at 420 Watt (Max Power Handling)



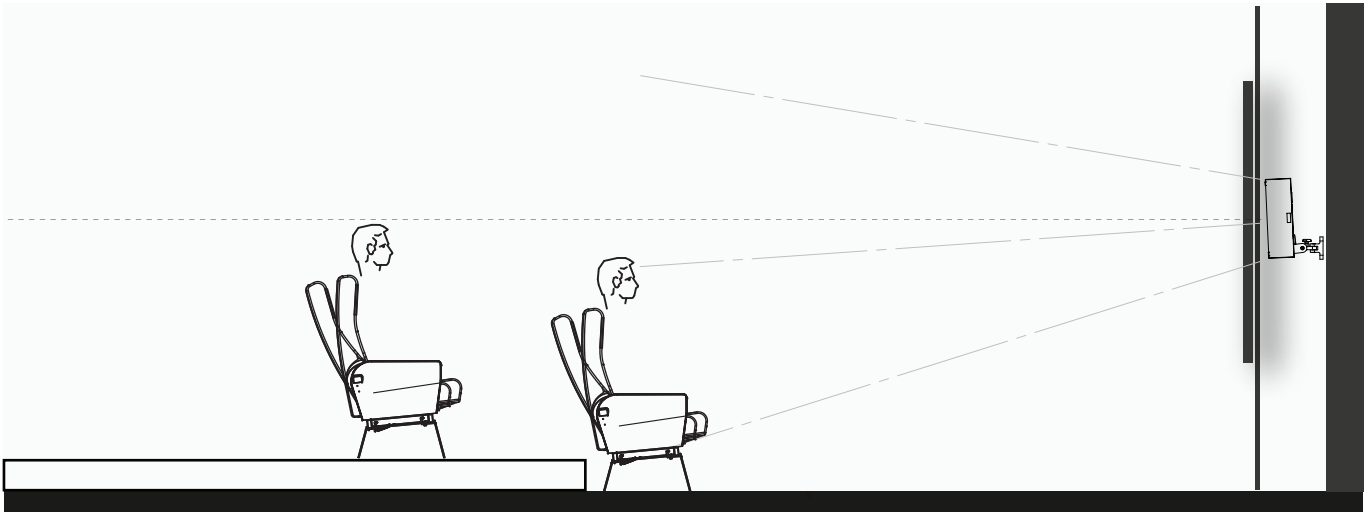
HIGHLIGHTS

Distance (m) at which reference is achieved Max Power reference					
Reference Level	Spitfire A4	Spitfire A6	Spitfire A10	Spitfire A12	Spitfire A14
105 dB	3.2	5.9	8.6	13.7	15.1
102 dB (105 dB ref -3dB)	4.4	8	11.8	17.2	21.4
99 dB (105 dB ref -6dB)	6	11	16	-	-
Dispersion - vertical/horizontal -3 dB	56° / 70°	50° / 70°	68° / 70°	75° / 70°	94° / 70°

HOME CINEMA ARRAY EXAMPLE

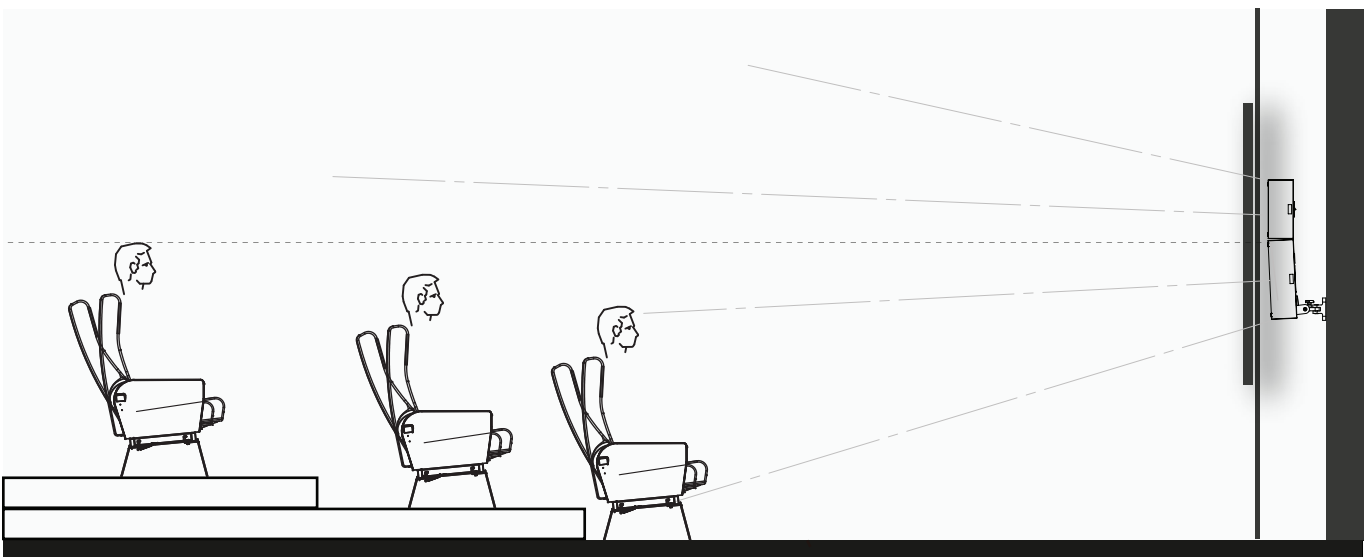
SPITFIRE A6

example: 2 seats elevated, place Spitfire A6 center screen, aiming at front seat listening height.



SPITFIRE A10 ARRAY

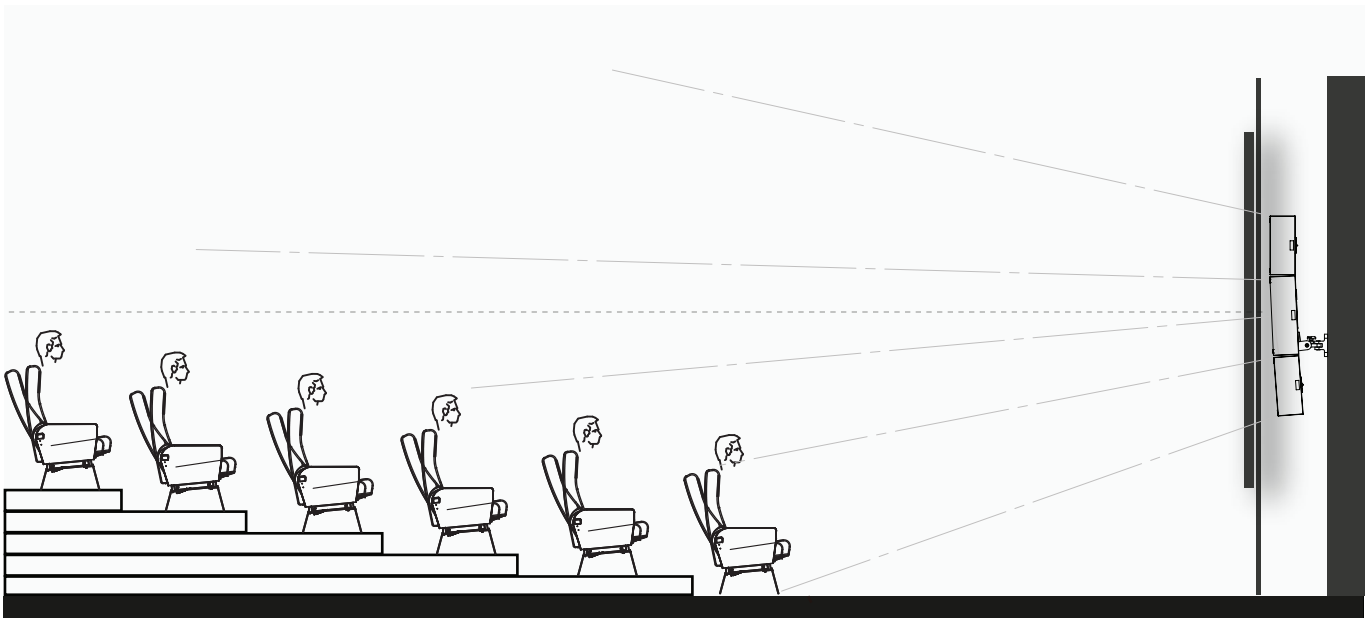
Array example: 3 seats elevated. place Spitfire A6 center screen, aiming at center seat 2nd row listening height.



HOME CINEMA ARRAY EXAMPLE

SPITFIRE A14 ARRAY

Array example: multiple seats elevated. Place Spitfire A6 center screen, aiming at center seat. Example 6 rows: aim at 3rd row listening height. Example 8 rows: aim at 4th row.



SAFETY INSTRUCTIONS

SAFETY



Do not use this product near water



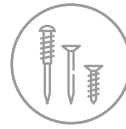
Clean rear panel with dry cloth only



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 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.

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.