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CORA-A Line array
Datasheet

CORA is a self powered 2 kW, compact dual 8" line array system. Designed for medium size projects, boasting extreme SPL and extended low frequency capabilities for its compact design when used with the CORA-SUB flying subwoofer. CORA integrates a 4-point rigging system into both models, making CORA-A a flexible solution for both install and touring alike.

Using high-power Class D amplifiers with integrated DSP, this self-powered cabinet has 4 dedicated amplification channels allowing each component to be directly driven, this removes crossover distortion and increases audio quality. Full FIR filtering adds further detail and definition, this coupled with RMS and Peak limiters ensure the system stays within safe working parameters.

Featuring 2 x 8" proprietary Ohm woofers in a reflex tuned enclosure with dual 4" neodymium planer wave drivers. An SPL of 143dB (peak), or in a concert array of 8 boxes SPL of 156dB (peak). CORA-A's frequency response is from 75 Hz to 21 kHz. This can be extended down to 29Hz when used with CORA-S subwoofer. An exposed phase plug design provides a smooth linear response and dispersion free of lobes over the entire frequency range. The waveguide generates a symmetrical horizontal dispersion of 100° x 12° vertical.

Made of high-grade Baltic birch plywood coated in tough Polyurea ensures mechanical and acoustical integrity. A fully integrated 4-point rigging system designed with various angles of up to 12˚ per cabinet, which ensure a perfect acoustic coupling between multiple cabinets forming an array. The Cora array frame is a single and multi-point flying frame which is perfect for ground stacking or flying CORA-A, CORA-S and self-powered versions. The same hardware can be used when ground-stacking CORA-A on TRS-118/218.

Each CORA-A is a lightweight 22.4 Kg reducing transportation and rigging weight. With a system hang of 9 Cora flying on a Cora-array frame weighs 222 Kg. which is far below most maximum load points from small portable stages and theatres. Each Cora Array frame C-AF weighs 27.23 Kg.

The robust enclosure has a unique exposed phase plug design front, hardwearing Polyurea paint finish and two butterfly handles on each side.

The rear connection plate has an input (female XLR), a link (male XLR) connector and a powerCON® True1 connector input and link fitted as standard.

Key features:

- Medium throw, full range line array component
- Touring grade cabinet
- Dual layer thermal relief driver technology
- Phase-plug controlled LF driver with Integrated HF waveguide
- Advanced active dispersion gives 100° x 12° coverage
- Easy ground-stacking of up to 6 cabinets per frame
- Fly up to 12 cabinets per frame.
- Integrated Class D Power module
- World-wide voltage compatibility
- Full FIR-filtered DSP with linear phase outputs
- Fully integrated Look-Ahead and RMS limiters
- Full input and output protection modes
- 32 bit floating-point signal processing
- Analog Devices Sharc processor
- Wide dynamic range 128dB(A) input converter

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Technical Specifications

Design
Active Linearray with integrated FIR-DSP, 2 x 8 " Mid-bassunits phaseplug coupled to a common waveguide with 2 x 4" Mid-high Planar Wave Drivers

Internal Power Amps
1000w +1000w

Internal DSP
Full FIR-DSP with linear phase X-over and linear phase loudspeaker equalization

Sensitivity Chassis 1w/1m
102 dB LF / 115 dB HF

Max. SPL
135 dB cont. / 143 dB peak (frequency dependent)

Frequency Response (±3 dB)
82 Hz - 20 kHz

Usable Frequency Range (-10 dB)
75 Hz - 21 kHz

Dispersion
100 x 12°

SYSTEM OPERATION

System Controller
Ohm DSP Solutions

Input connection
Sym . XLR input, 2 x 10 K ohm Impedance with parallel link out

Protection
Internal multiband Peak and RMS Limiter, thermal limiter and protection on Amplifier

PRODUCT FEATURES

Components
2 x 8" OHM Driver on phaseplug coupler
2 x 4" planar wave drive

Crossover
1.15 kHz FIR Filter

Connectors
1 x XLR female, 1 x XLR male and 1 x powerCON® True1 connector.

Dimensions (H x W x D mm)
250 x 576 x 300

Weight (kg)
22.4

Shipping Weight (kg)
24.3 (1 cabinet per carton)

Colour
Black

Options
Available in white or RAL colours on request

Rigging
2 x Flying Hardware sides for hanging or ground stacking

HARDWARE

Fitted as Standard
Cora Flying Hardware

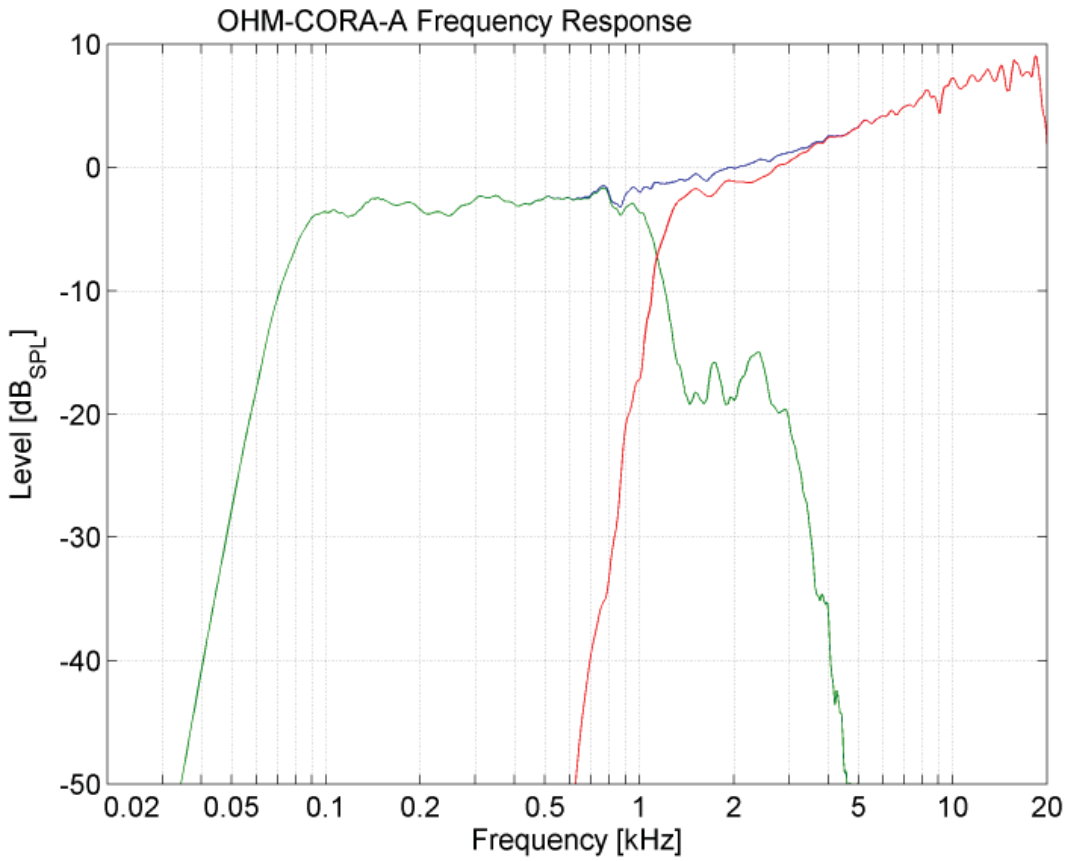
Optional
C-AF Cora array frame

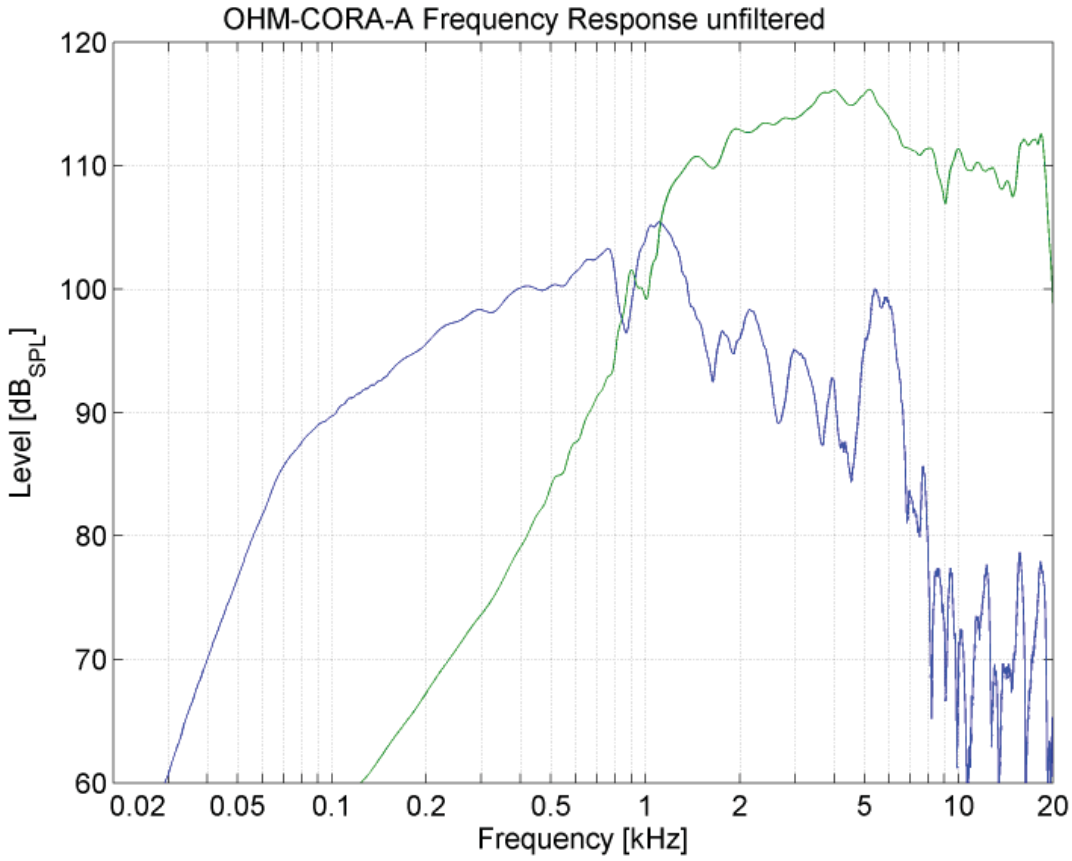
Additional Descriptive Data
Birch plywood construction, with durable scratch resistant black polyurea paint finish with Ohm logo.

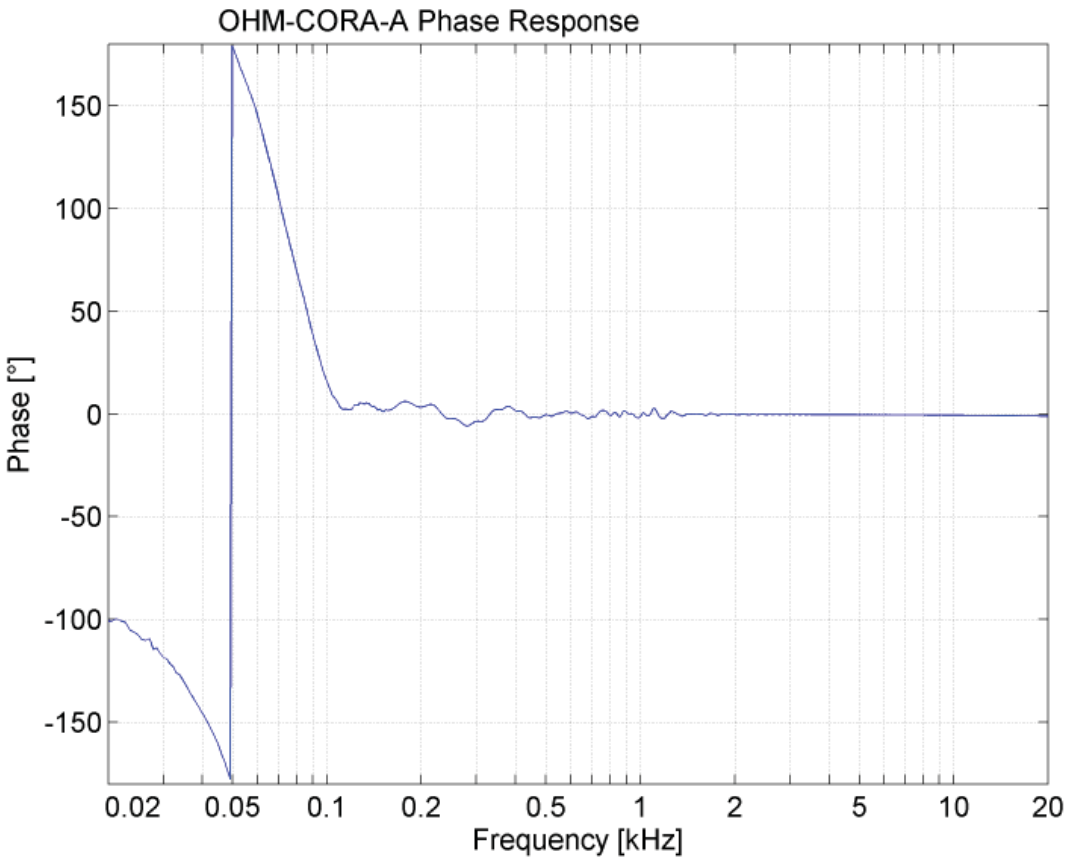
Recommended filter settings are available on the website ohm.co.uk/downloads

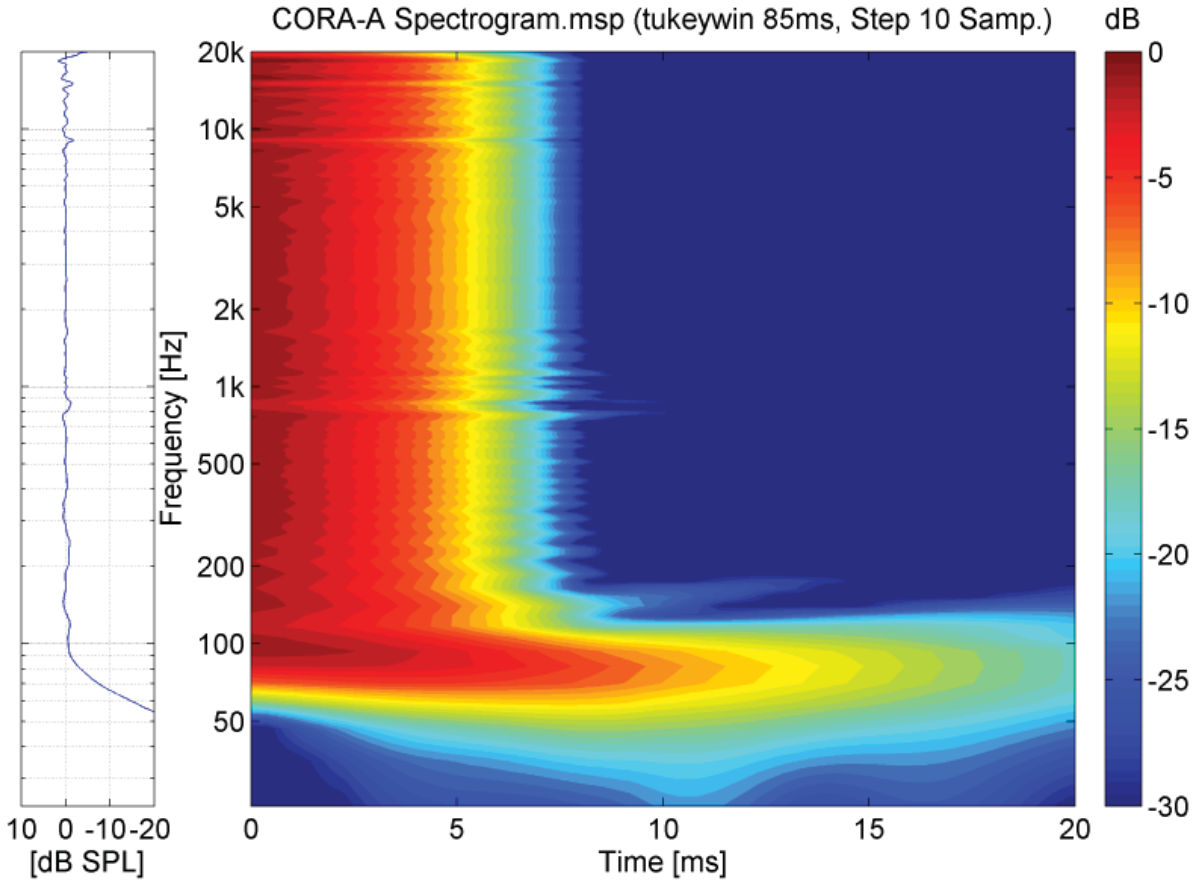
* All presets from the OHM library.

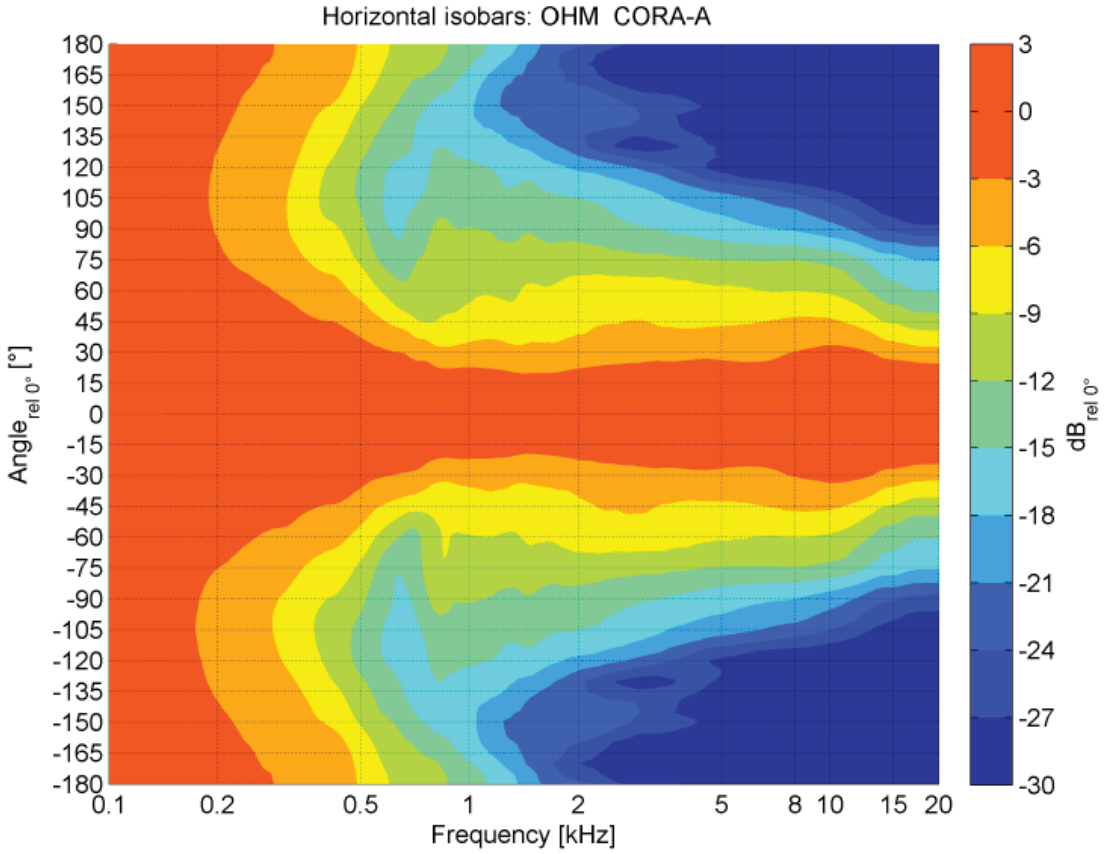
CORA-A Measurements

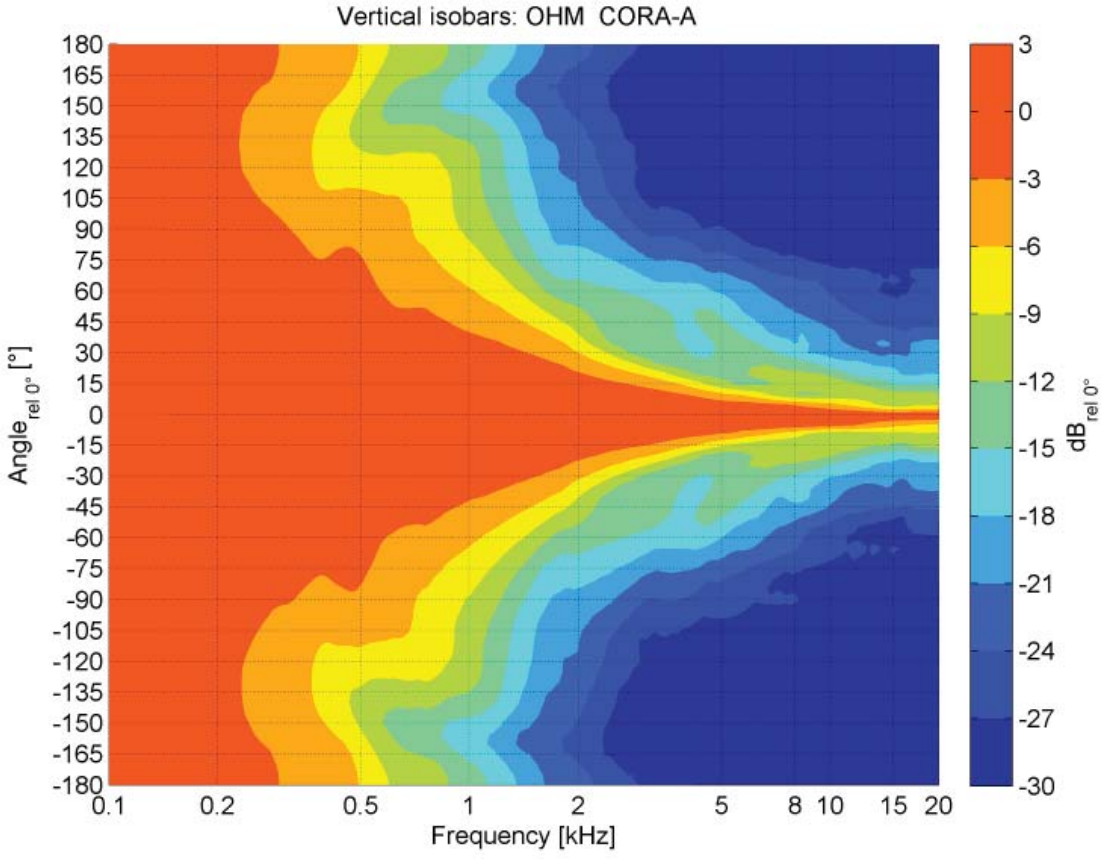





OHM-CORA-A Phase Response
Phase [°]
150
100
50
0
-50
-100
-150
0.02
0.05
0.1
0.2
0.5
1
2
5
10
20
Frequency [kHz]


CORA-A Spectrogram.msp (tukeywin 85ms, Step 10 Samp.)
dB
0
-5
-10
-15
-20
-25
-30
Frequency [Hz]
20k
10k
5k
2k
1k
500
200
100
50
10 0 -10 -20
[dB SPL]
0
5
10
15
20
Time [ms]





All Measurements are executed by the IFAA Institute for Acoustics in Aachen, Germany

measurement conditions 4PI environment for full range cabinets, 2Pi environment for subwoofers.

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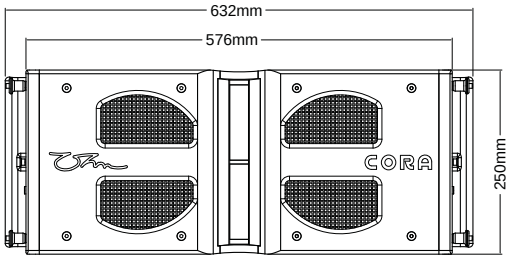
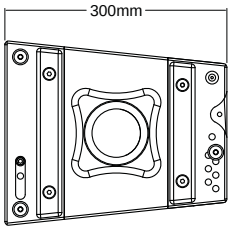
CORA-A Dimensions

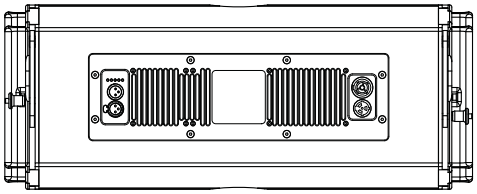
Front

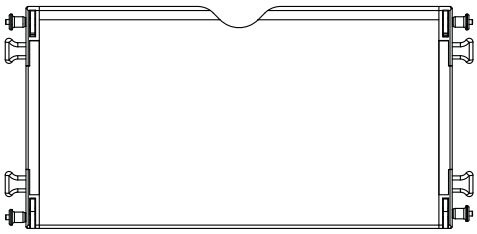


Side

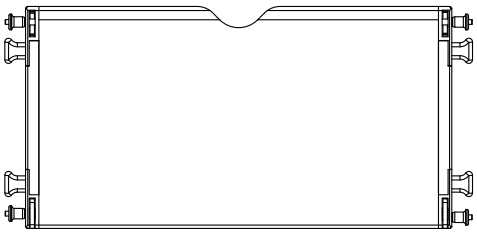


Back





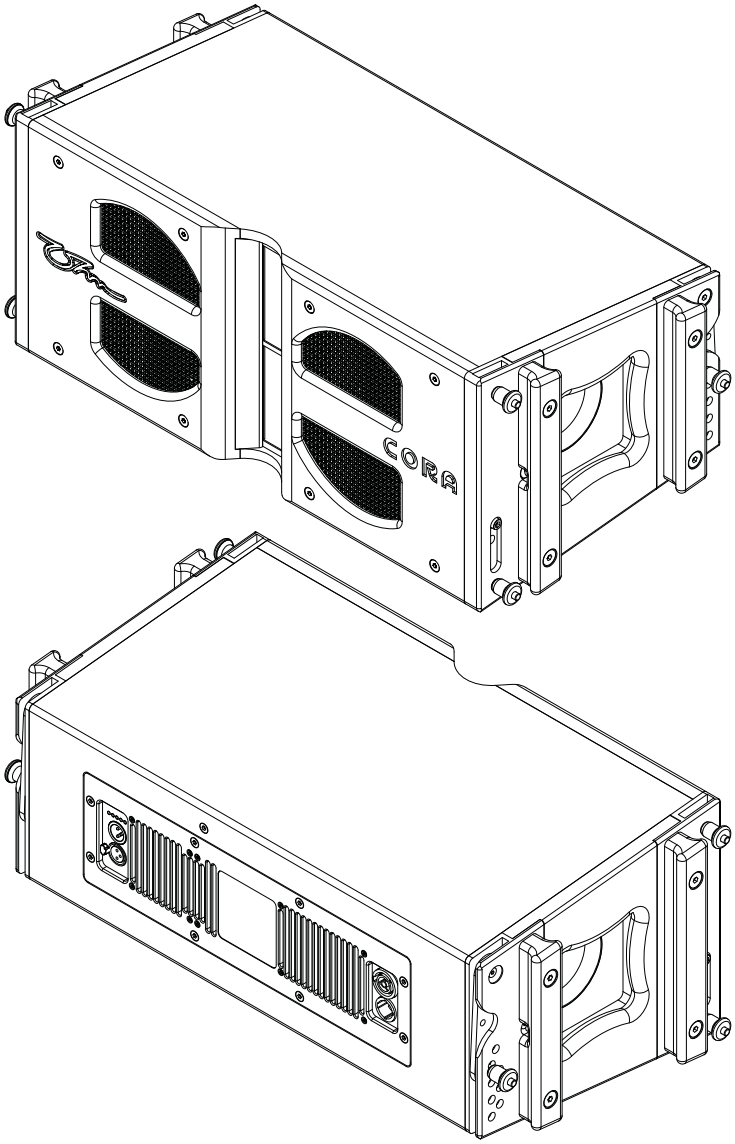
Bottom



Top

Further technical drawings for architectural requirements are available in DXF and DWG format for download on the website.

CORA-A 3D View



Accessories and Spare Parts

- CORA Flying Hardware
- C-AF CORA Flying Array Frame
- CORA steel grill assembly
- CORA amplifier
- 8" low frequency driver
- 4" planar wave
- Steel OHM logo

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Architects' & Engineers' specifications:

2 way dynamic line array cabinet incorporating a phase-plug controlled waveguide. Housing 2 x 8" proprietary Ohm drivers, internally and externally ventilated double sided high temperature voice coil, 2 x 4" planar wave drivers mounted to a 100° x °12 waveguide integrated LF & HF drivers for a fully coherent phase response. Homogeneous radiating behaviour and linear response from 200 Hz. Integrated active amplifier. Constructed from different multi-laminated wood, eco friendly scratch resistant polyurea paint. Integrated Flying hardware for hanging or ground stacking. Ergonomic butterfly carry handles and recessed Ohm logo.

Technical Data:

Frequency Response: 75 Hz - 21 kHz (-10dB), 82 Hz - 20 kHz (±3 dB), Continuous SPL: 129 LF / 137 HF dB/1m, Program SPL 132 LF / 140 HF dB/1m. Peak SPL 135 LF / 143 HF dB/1m cont. IEC268 AES, Maximum Output: 1000 Watt RMS LF + 1000 Watt HF, Dispersion Nominal: 100° x 12° (hor. x vert.), Connectors: 1 x XLR female, 1 x XLR male and 1 x powerCON® True1 connector. Dimensions (H x W x D): 250 mm x 576 mm x 300 mm Weight: 22.3 kg, Options: Durable scratch resistant black textured paint finish. RAL colours available to order.

Safety Instructions

Professional speaker systems are able to produce sound pressure levels that could harm your health.

Never stand directly in front of loudspeakers for long periods. Whilst not immediately apparent to the listener, sound pressure levels in excess of 90dB@1m can be hazardous to the hearing.

Please refer to the following advice when setting up or dismantling OHM speaker systems.

1. Be sure to leave adequate distance between speakers and the public. Refer to your local authority for Health and Safety guidance when using loudspeaker systems.

2. Be sure to have safe and stable ground for your speakers, particularly when using speaker stands.

3. When stacking speaker systems, ensure they are secured to prevent individual speakers from falling down or moving around.

4. Only use OHM mounting hardware, as this has been specified and approved by AURAL LTD, OHM (UK) LTD for use with OHM speakers.

5. When flying speakers, appropriate materials and techniques must be employed in order to safely suspend enclosures, taking care to allow for specified enclosure weight.

6. Please observe any special instructions that appear on specific loudspeaker data-sheets.

7. Check your speaker hardware and flying material regularly for any visual or mechanical failure. Replace damaged or suspect items when necessary.

Safety Instructions Cont.

8. Only use OHM DSP Solutions. Only technicians authorised by AURAL LTD, OHM (UK) LTD are qualified to program digital controllers. Take note of recommended controllers as specified on the datasheets. Do not use OHM loudspeaker systems without the correct controller. If a system fails due to incorrect controller use, warranty is void.

9. Protect your speakers and electronics from freezing and do not expose them to humidity, water or rain without protection.

OHM loudspeakers and electronics are covered against defects in workmanship or materials for a period of two (2) years from original date of purchase. At the discretion of AURAL LTD, OHM (UK) LTD, the defective item will be repaired/replaced with no charge for materials or labour. The item is to be adequately packed and dispatched, pre-paid, to an OHM authorised distributor/service centre. Unauthorised repair shall void the warranty. The OHM warranty does not cover cosmetics or finish and does not apply to any item which in OHM's opinion has failed due to user abuse, accident, modifications or any type of misuse.

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