VOICE ACOUSTIC
professional german loudspeaker systems

MANUAL
IKARRAY-8

Passive Plug & Play
Line-Array



QUALITY MADE IN GERMANY

Thank you very much,
for purchasing a Voice-Acoustic product.
Since 2006 we have been developing our
products in the firm belief that details matter.
May we wish you a lot of pleasure with this product.

Herzlichen Dank,
dass Sie ein Voice-Acoustic Produkt gekauft haben.
Seit dem Jahr 2006 entwickeln wir unsere Produkte
in der Überzeugung, dass es auf die Details ankommt.
Wir wünschen Ihnen viel Freude mit diesem Produkt.

Muchas gracias
por haber comprado un producto de Voice-Acoustic.
Desdel año 2006 estamos desarrollando nuestros productos
estando convencidos, que son los detalles que cuentan.
Le(s) deseamos mucha alegría usando este producto.

Merci beaucoup
d´avoir acheté un produit Voice-Acoustic.
Depuis 2006, nous développons des produits
avec la ferme conviction que les détails comptent.
Nous vous souhaitons beaucoup de plaisir à utiliser ce produit.

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Introduction

General Safety Instructions:
Loudspeakers produce a static magnetic field even if they are not connected or are not in use. Therefore make sure when erecting and transporting loudspeakers that they are nowhere near equipment and objects which may be impaired or damaged by an external magnetic field. Persons with cardiac pacemakers must maintain a safe distance.

The minimum recommended safety clearance is 1 m.

Never stand in the immediate vicinity of loudspeakers driven at a high level. Professional loudspeaker systems are capable of causing a sound pressure level detrimental to human health. Seemingly non-critical sound levels (from approx. 90 dB SPL) can cause hearing damage if people are exposed to it over a long period.

All connected cables must be laid in such a way that they cannot be crushed by objects and that nobody can step on them! Replace damaged cables immediately and do not use them!

Use only accessory parts specified by Voice-Acoustic or original accessory parts from Voice-Acoustic. Check all cabinets and accessories regularly for wear and replace them if necessary.

Do not set up the loudspeakers in places where they are permanently exposed to moisture, dust, dirt or direct sunlight.

Care
Wipe the surface of loudspeakers only with a damp cloth and pure water. In case of heavy pollution, repeat the above procedure several times if necessary. Do not use any chemical additives or aggressive detergents, as these may harm and damage the surfaces.

Transport and storage
When transporting and storing the unit, it is important to ensure that the surface and front grill of the loudspeaker are not damaged. Moisture can penetrate through exposed wood surfaces and cause the wood to swell. A bent or broken front grill will no longer adequately protect the sensitive speaker membranes. In addition, appreciable dust deposits may considerably impair the functionality of a loudspeaker membrane. For this reason, the loudspeakers should be transported and stored in a safe, careful, dry and largely dust-free manner.

The following accessory parts for transport and storage are available from Voice-Acoustic:

- Transport cover for Ikarray-8/15° and Ikarray-8/5° (Art.-Nr. 501801000)

Note: *The original packaging is unsuitable as permanent storage and transport packaging!*

Warranty
The warranty period is 24 months from date of delivery.

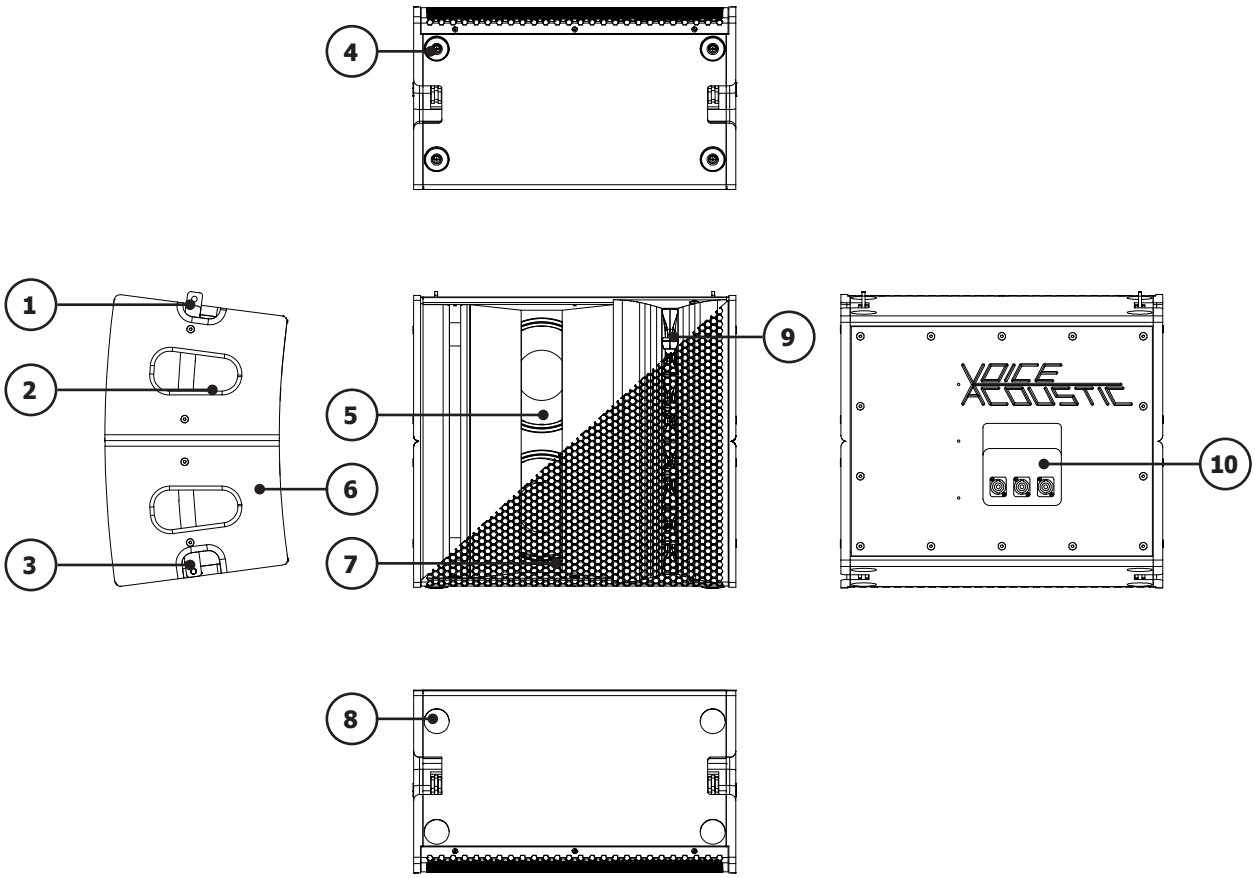
On our choice we will eliminate any lack of conformity with repair or with replacement of the faulty goods. The place of performance for warranty services is Voice-Acoustic headquarters in Dörverden. In case of remedy of defects, the buyer shall bear all costs resulting from transportation of the goods to Voice-Acoustic headquarters in Dörverden.

The ordering party is not entitled to remedy the defect by itself or to organise a replacement and to charge such activities to Voice-Acoustic. In case of self remedy by the ordering party the warranty given by Voice-Acoustic becomes void.

Warranty doesn't apply to parts of wear and tear, such as threaded points, rubber feets and the SpeakON® connectors.

Introduction

Components



1. Upper connection point flight mechanics
2. Recessed grips on both sides
3. Lower connection point flight mechanics
4. 4 x rubber feet on the underside
5. 8“ Neodym woofer
6. 15 and 12 mm multiplex cabinet, polyurea coating in RAL 9005
7. Front grille 1 mm with 10 mm acoustic foam
8. 4 x stacking trays in the top
9. 1“ Ferrit compression driver
10. Connector panel with two SpeakON® connectors and type plate with serial number

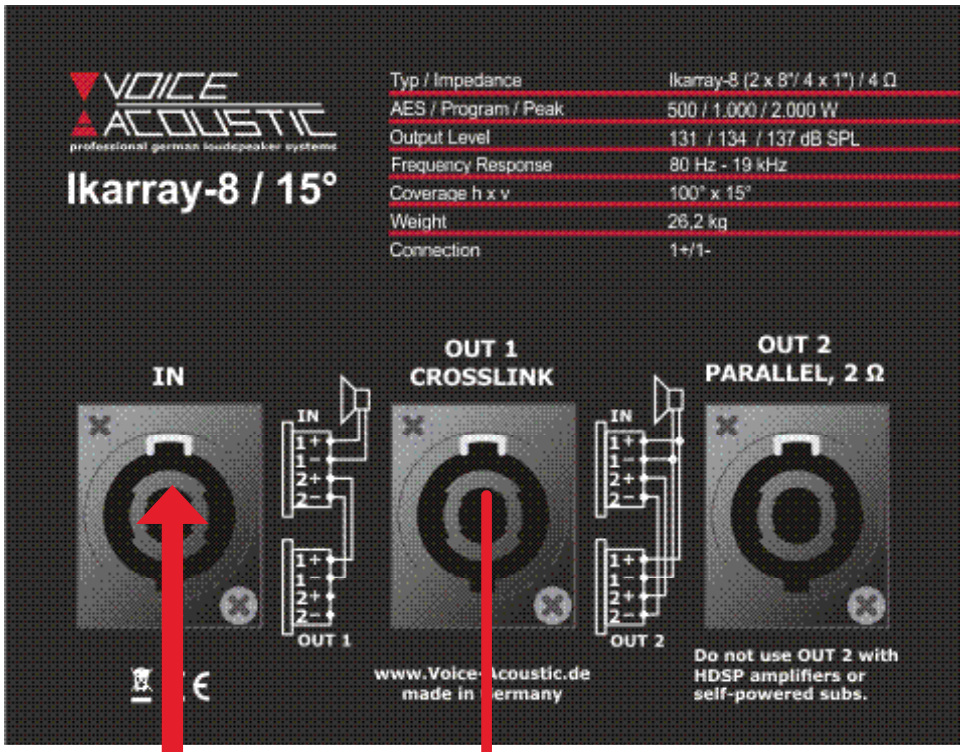
Introduction

Technical data

Components	2 x 8“ Neodym LF with 65 mm (2,5“) voice coil 4 x 1“ Neodym compression driver with 44 mm (1,75“) voice coil
Frequency response 15° **Frequency response 5°**	80 Hz - 18 kHz (- 10 dB) 117 Hz - 16 kHz (+/- 3 dB) 80 Hz - 19 kHz (- 10 dB) 117 Hz - 16 kHz (+/- 3 dB)
Coverage range (h x v)	100° x 15° or 100° x 5° depending on the housing version
Powerhandling	500 W AES / 1.000 W program / 2.000 W peak at 4 Ω
Sound pressure 15° **Sound pressure 5°**	131 dB SPL AES / 134 dB SPL program / 137 dB SPL peak 133 dB SPL AES / 136 dB SPL program / 139 dB SPL peak
Dimensions / Weight	465 (h) x 513 (w) x 291 mm (d) / 26,2 kg
Finish	Polyurea coating in RAL 9005

Introduction

Input and output socket

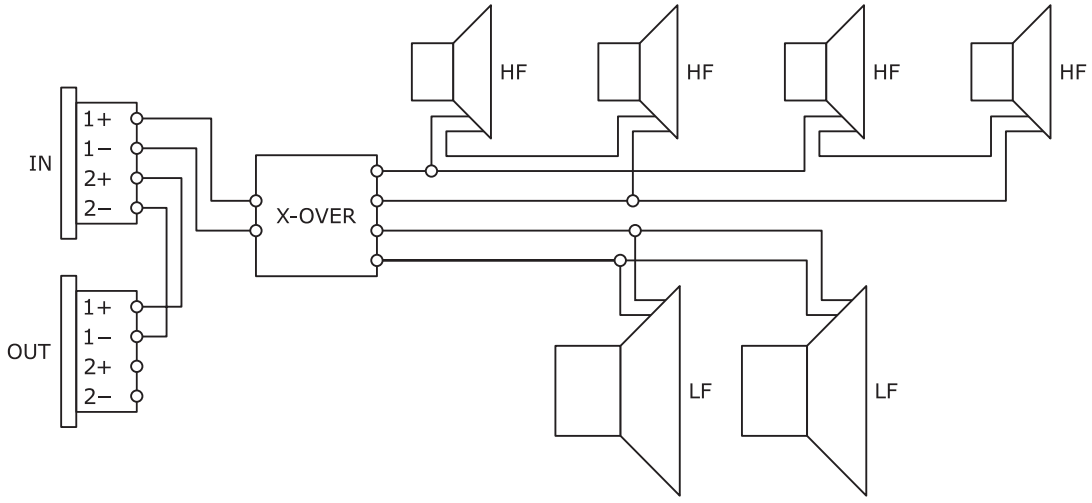


Cable from amplifier to first Ikarray-8 element

4-pole cable
Speakon 1+/1- Amp CH3, 800 W
Speakon 2+/2- Amp CH2, 800 W

Cable to the second Ikarray-8 Element

2- or 4-pole cable
Speakon 1+/1- Amp CH2, 800 W



Note: *The Ikarray-8 element has one Neutrik NL4 SpeakON® IN and two OUT connectors. The SpeakON® IN and OUT 1 are used with HDSP amplifiers and self-powered basses from Voice-Acoustic. The SpeakON® IN occupies the connection pins 1+/1- (CH3, 800 W). The connection pins 2+/2- are connected to the SpeakON® OUT 1 1+/1- (CH2, 800 W). Therefore, the first Ikarray-8 element must always be connected with a 4-pole cable. The two Ikarray-8 elements can then be connected with a 2-pole cable. The SpeakON® IN and OUT 2 is used with amplifiers from manufacturers with 2 Ω.*

Introduction

Setup

The Ikarray-12sp line array is designed for vertical operation. A variety of accessories is available from Voice-Acoustic to securely attach the loudspeaker safely on tripods, distance rods or hanging it from on trusses, ceilings and walls. Ensure that the loudspeakers are securely attached to prevent personal injury and damage of property.

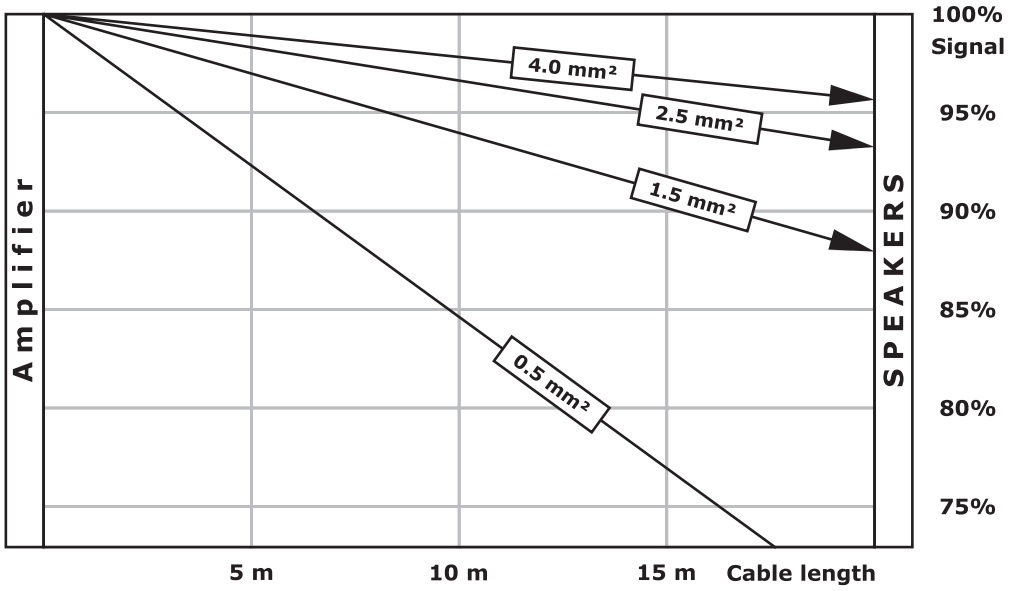
Connecting cables

When connecting the cables to the loudspeaker, ensure that the polarity (+/-) and pin assignment (1/2) is correct. Incorrect connection results in a significant change in the loudspeaker sound characteristics and may damage the compression driver.

The two connection sockets on the back of the loudspeaker can be used to link multiple loudspeakers on a single amplifier. Note that parallel connection reduces the total impedance (Ω) seen by the amplifier. The total impedance of loudspeakers connected in parallel must not drop below the minimum operating impedance of the amplifier.

Voice-Acoustic recommends to use the available 4 x 4 mm² Speakon cables for mobile use.

We recommend wiring the basses with at least 4 mm² in installations. The cables of the tops in installations must be sufficiently dimensioned according to impedance, power and cable length.



Simplified display without consideration of loudspeaker impedances

Operation

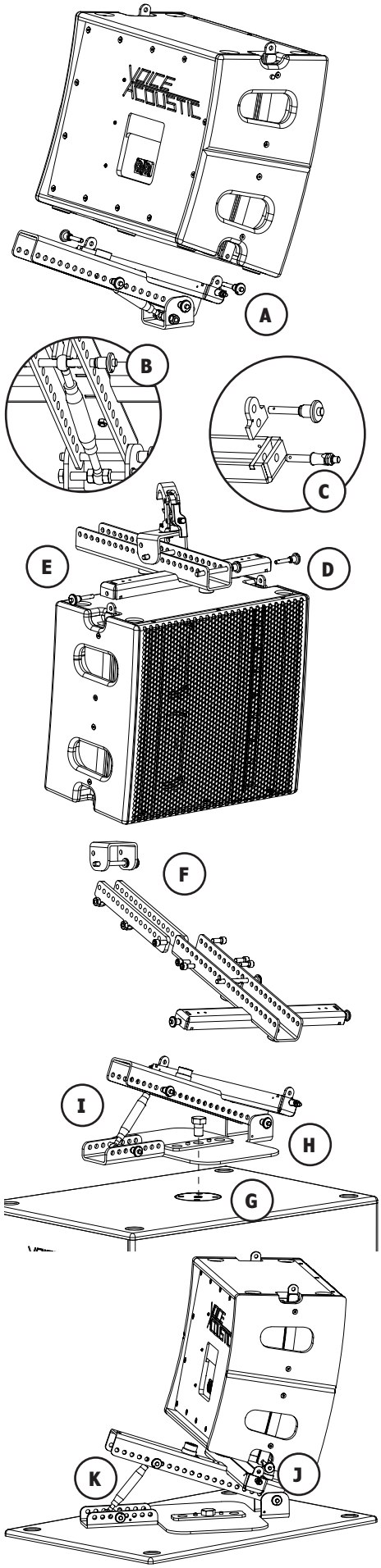
The Ikarray-8 is exclusively intended for operation with Voice-Acoustic system electronics with internal DSP controller: the HDSP power amplifiers or powered by the free 800 W amplifier channels of the self-powered subwoofers.

Make sure the appropriate preset has been selected before connecting the speaker to the system power amp or self-powered subwoofer.

Using the wrong preset can damage parts of the loudspeaker.

Note: *If the Ikarray-8 is not operated on the intended Voice-Acoustic system electronics, the manufacturer's warranty for the loudspeaker expires!*

Working with Ikarray-8



Operation on tripod or spacer rod
max. load: one Ikarray-8.

The Ikarray-8 Line Array is designed for flight and tripod operation. The flight and tripod mechanical parts are supplied with two U-brackets. The U-bracket for tripod operation has a pre-assembled threaded spindle for later fine adjustment of the inclination. Any mount can be attached to this U-bracket to place the mechanism on a tripod or spacer rod.

The second U-bracket is intended for flight operations and can be equipped with a ring eye or traverse clamp, for example, to fly the line array with the flight mechanics.

1. Fix the U-bracket at the foremost mounting point (A) of the perforated rail with ball locking pins.
2. Fix threaded spindle with ball locking bolt (B).
3. Mount the connecting straps with ball lock pin (C).
4. Mount the holder for tripod/distance rod on the mechanics.
5. Place the loudspeaker on the mechanics and connect it with ball lock pins. Then connect the second speaker to the lower speaker at the connection points.

Ikarray-8 in flight operation
max. load: four Ikarray-8 elements.

1. Connect Ikarray-8 elements to each other.
2. Mount the flight mechanism with ball lock pin (D).
3. Align the flight mechanics by fixing the U-bracket on the upper hole rail (E) with the ball locking bolt. How the center of gravity behaves depends on the number of Ikarray-8 elements attached to the flight mechanics.

Note: *For installations (e.g. on high ceilings) where the radiation is particularly steep downwards, there is an optional extension (F) of the perforated rail.*

Operation on Ground Stacking Adapter
max. load: three Ikarray-8 elements.

1. Fasten the ground stacking adapter with M20 screws in the M20 flange (G) of the subwoofer.
2. Mount the flight mechanism with ball lock pin (H).
3. Fix threaded spindle or spacer with ball locking bolt (I).
4. Place Ikarray-8 element on the mechanics and connect with ball lock pin (J).
5. Adjust the inclination with the threaded spindle (K) or spacer.
6. Now up to two Ikarray-8 elements can be added as needed.

Working with Ikarray-8

Overview Accessories



Transport cover for Ikarray-8/15° and Ikarray-8/5° (Art.-Nr. 501801000)



Heavy-Duty Flightcase for up to 2 x Ikarray-8/15° or Ikarray-8/5°* (Art.-Nr. 501803000)



Ikarray-8 flight mechanics (Art.-Nr. 401802000)



Ikarray-8 flight tripod option (Art.-Nr. 401803000)



Ikarray-8 extension of flight mechanics (Art.-Nr. 401804000)



Ground Stacking Adapter (Art.-Nr. 401805000)



Carrying bag for Ikarray-8 mechanics (Art.-Nr. 501802000)



Self lock clamp for pipe 48-51mm, 30mm wide, max. 250 kg (Art.-Nr. 999950731)



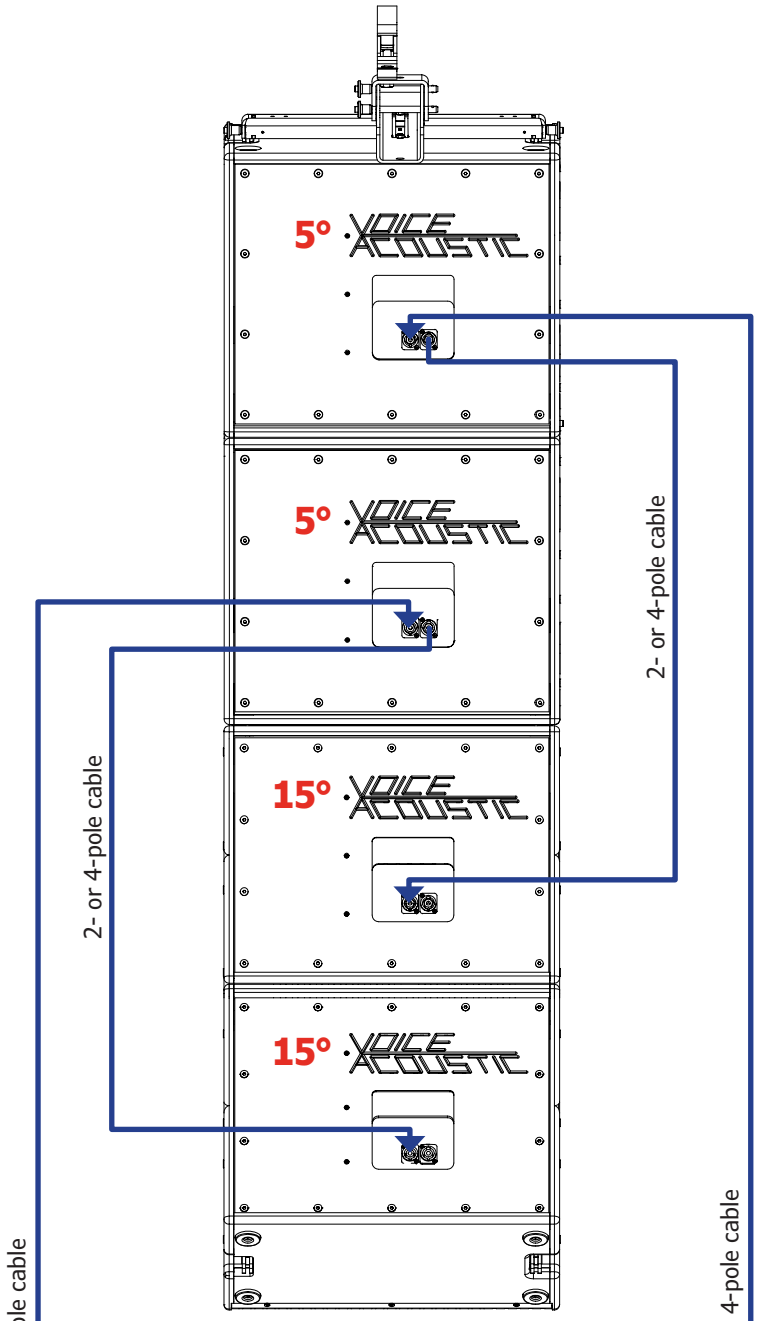
Tripod transducer with M10 threaded connection (Art.-Nr. 999924528)



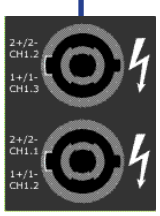
Universal suspension arrangement for flight mechanics (Art.-Nr. 409992001)

Configurations

Connection of 4 elements to HDSP-6 amplifier



Module 1



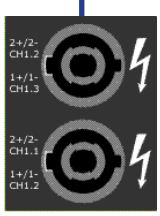
Pin assignment upper socket:
Speakon 1+/1- OUT CH3, 800 W (**5°**)
Speakon 2+/2- OUT CH2, 800 W (**15°**)

Pin assignment lower socket:
Speakon 1+/1- OUT CH2, 800 W
Speakon 2+/2- OUT CH1, 2.400 W

Preset



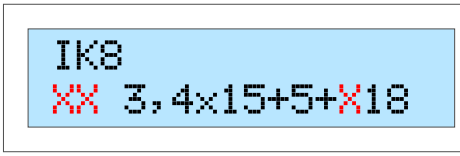
Module 2



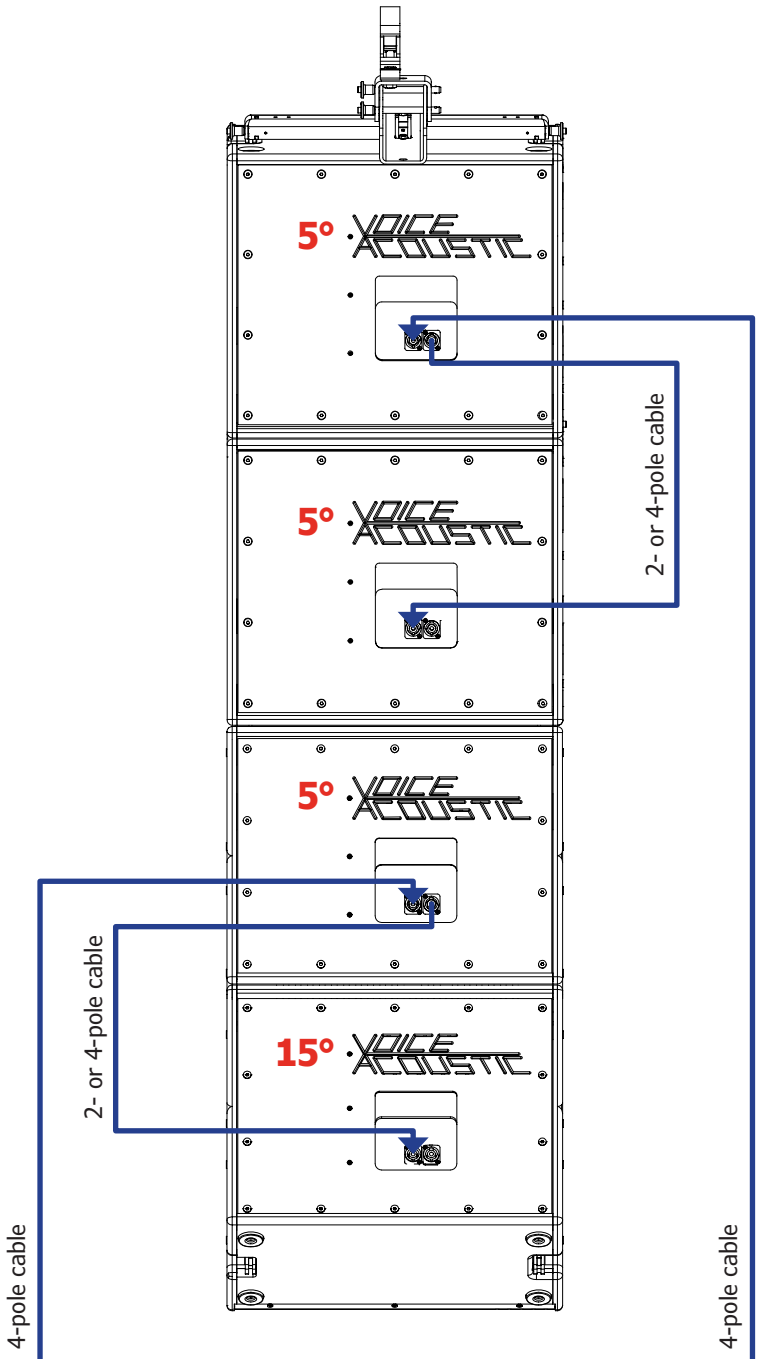
Pin assignment upper socket:
Speakon 1+/1- OUT CH3, 800 W (**5°**)
Speakon 2+/2- OUT CH2, 800 W (**15°**)

Pin assignment lower socket:
Speakon 1+/1- OUT CH2, 800 W
Speakon 2+/2- OUT CH1, 2.400 W

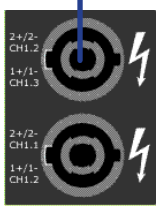
Preset



Configurations



Module 1



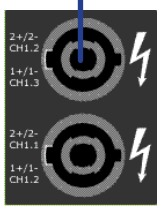
Pin assignment upper socket:
Speakon 1+/1- OUT CH3, 800 W (**5°**)
Speakon 2+/2- OUT CH2, 800 W (**15°**)

Pin assignment lower socket:
Speakon 1+/1- OUT CH2, 800 W
Speakon 2+/2- OUT CH1, 2.400 W

Preset

IK8
XX 3,4x15+5+X18

Module 2



Pin assignment upper socket:
Speakon 1+/1- OUT CH3, 800 W (**5°**)
Speakon 2+/2- OUT CH2, 800 W (**5°**)

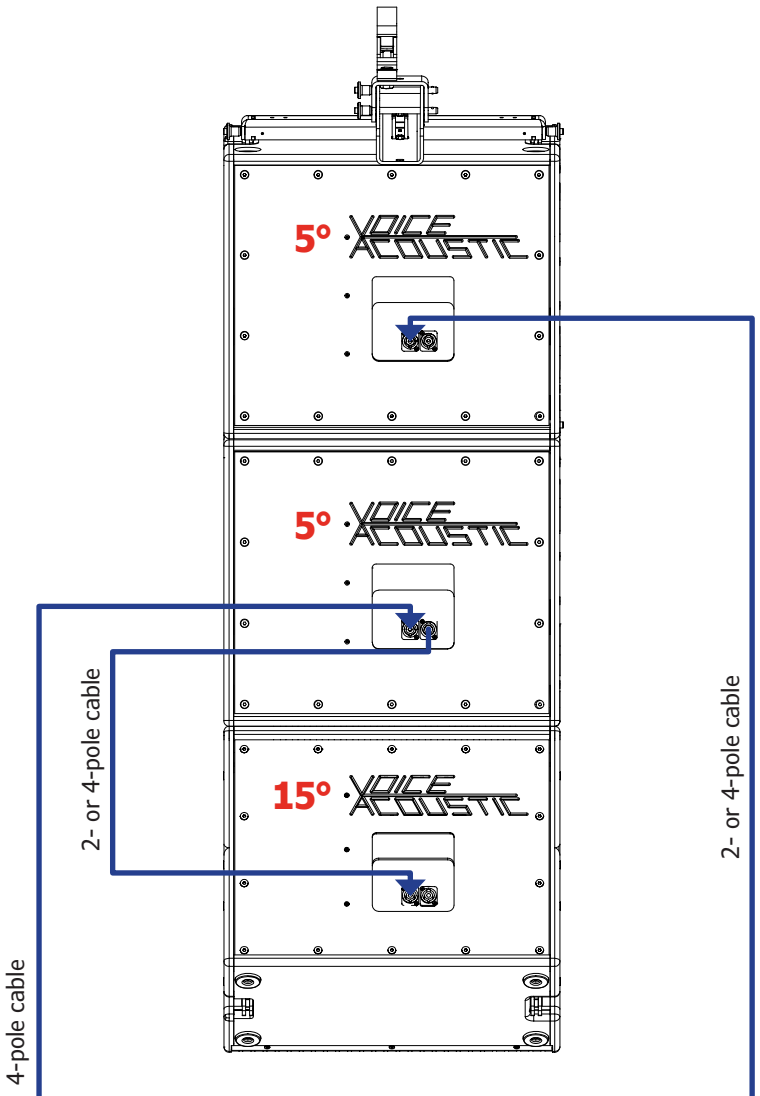
Pin assignment lower socket:
Speakon 1+/1- OUT CH2, 800 W
Speakon 2+/2- OUT CH1, 2.400 W

Preset

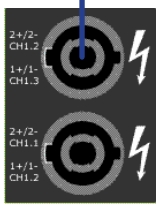
IK8
XX 3,4x5+5+X18

Configurations

Connection of 3 elements to HDSP-6 amplifier



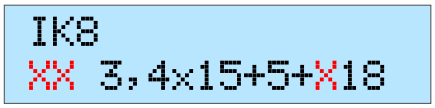
Module 1



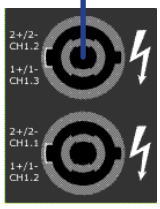
Pin assignment upper socket:
Speakon 1+/1- OUT CH3, 800 W (**5°**)
Speakon 2+/2- OUT CH2, 800 W (**15°**)

Pin assignment lower socket:
Speakon 1+/1- OUT CH2, 800 W
Speakon 2+/2- OUT CH1, 2.400 W

Preset



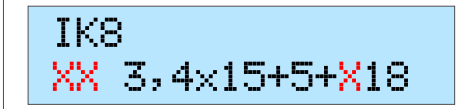
Module 2



Pin assignment upper socket:
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Speakon 2+/2- OUT CH2, 800 W

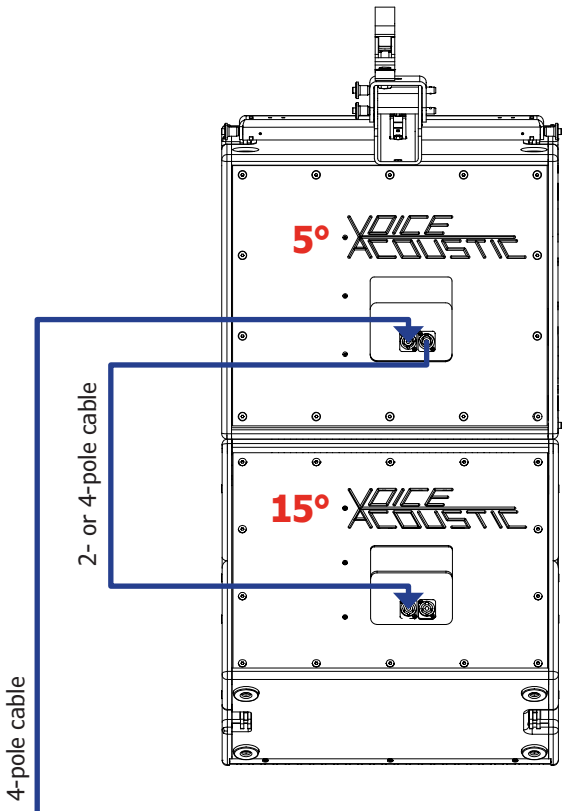
Pin assignment lower socket:
Speakon 1+/1- OUT CH2, 800 W
Speakon 2+/2- OUT CH1, 2.400 W

Preset

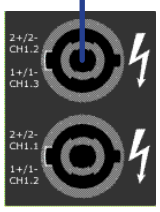


Configurations

Connection of 2 elements to HDSP-3 amplifier



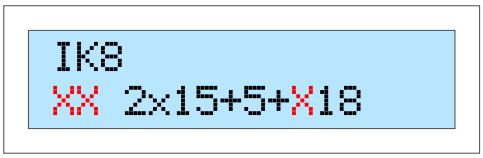
Module 1

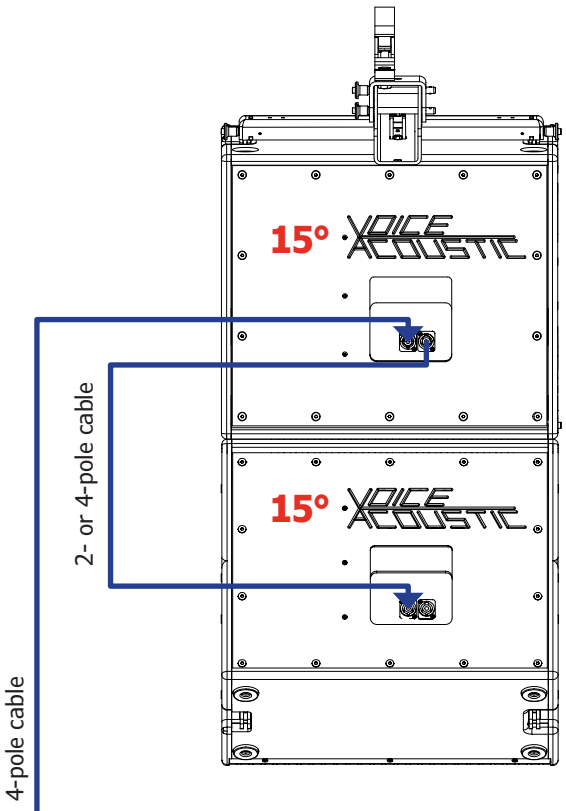


Pin assignment upper socket:
Speakon 1+/1- OUT CH3, 800 W (**5°**)
Speakon 2+/2- OUT CH2, 800 W (**15°**)

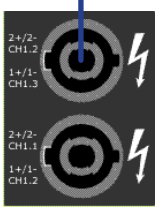
Pin assignment lower socket:
Speakon 1+/1- OUT CH2, 800 W
Speakon 2+/2- OUT CH1, 2.400 W

Preset





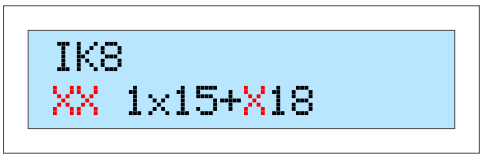
Module 1



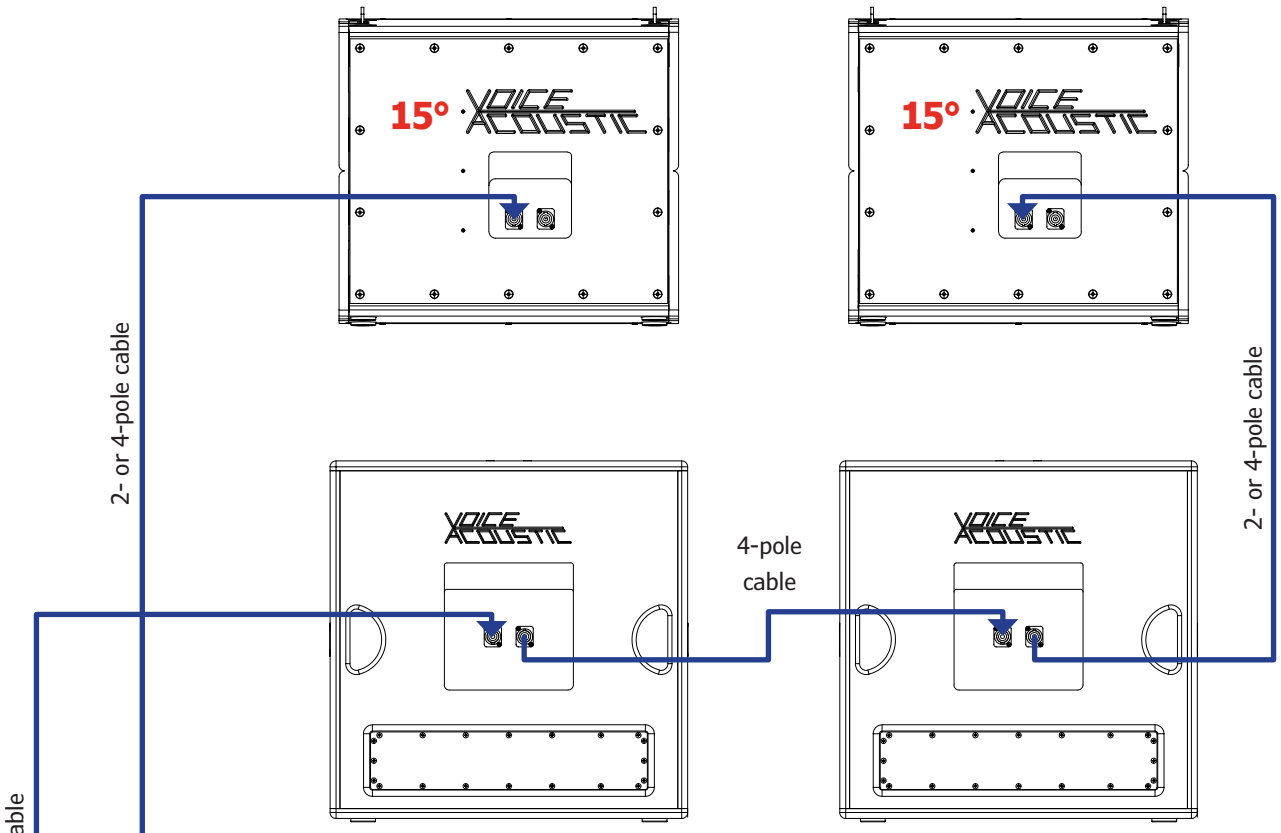
Pin assignment upper socket:
Speakon 1+/1- OUT CH3, 800 W (**15°**)
Speakon 2+/2- OUT CH2, 800 W (**15°**)

Pin assignment lower socket:
Speakon 1+/1- OUT CH2, 800 W
Speakon 2+/2- OUT CH1, 2.400 W

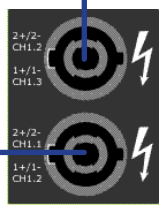
Preset



Connection of 2 elements and subwoofers to HDSP-3 amplifier



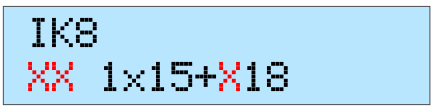
Module 1



Pin assignment upper socket:
Speakon 1+/1- OUT CH3, 800 W (**15°**)
Speakon 2+/2- OUT CH2, 800 W

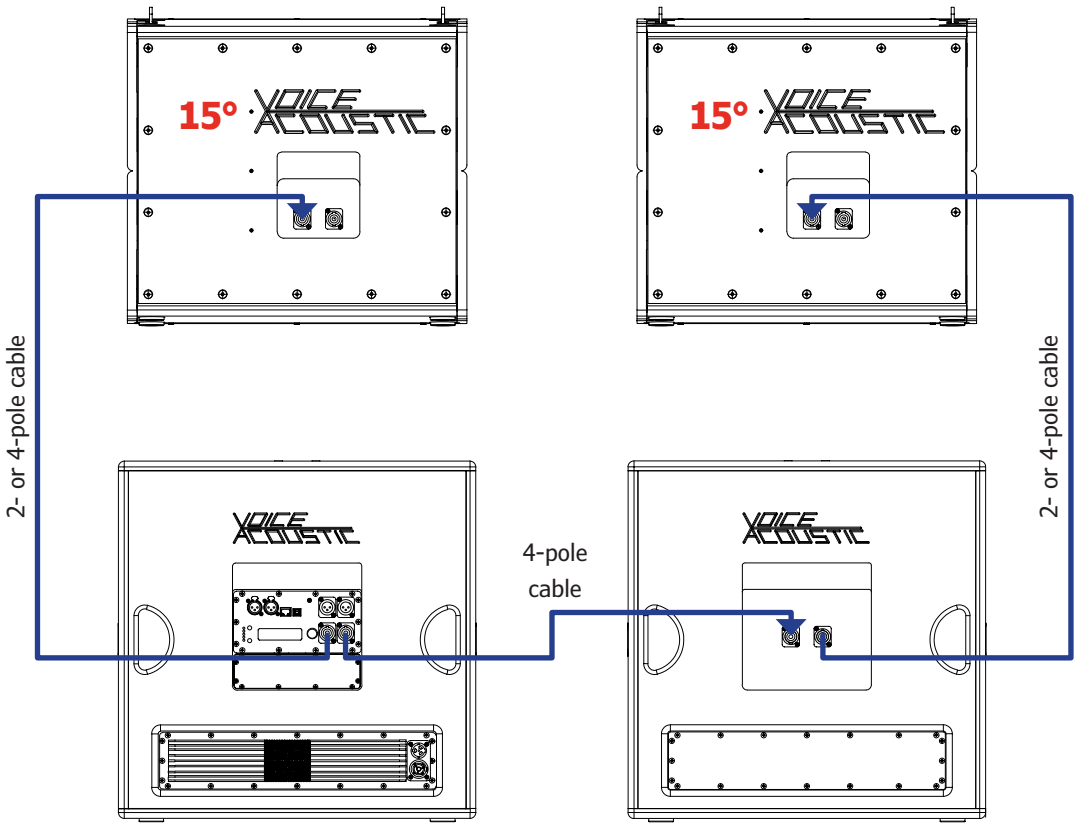
Pin assignment lower socket:
Speakon 1+/1- OUT CH2, 800 W (**15°**)
Speakon 2+/2- OUT CH1, 2.400 W

Preset

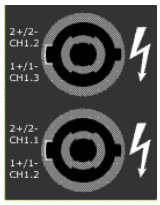


Configurations

Connection of 2 elements to a self powered subwoofer



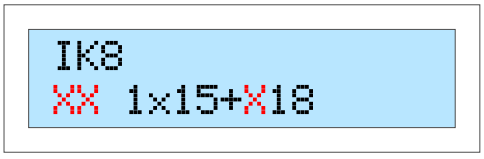
Module 1



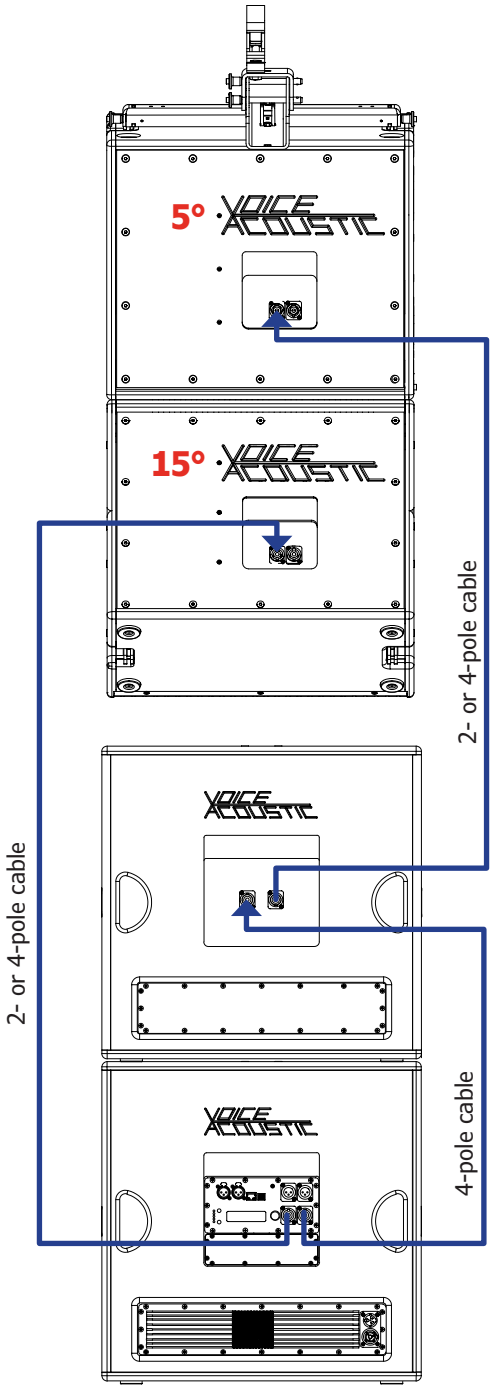
Pin assignment left socket:
Speakon 1+/1- OUT CH3, 800 W (**15°**)
Speakon 2+/2- OUT CH2, 800 W

Pin assignment right socket:
Speakon 1+/1- OUT CH2, 800 W (**15°**)
Speakon 2+/2- OUT CH1, 2.400 W

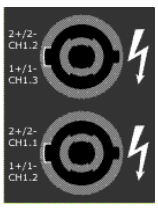
Preset



Configurations



Module 1



Pin-Belegung linke Buchse:
Speakon 1+/1- OUT CH3, 800 W
Speakon 2+/2- OUT CH2, 800 W (**15°**)

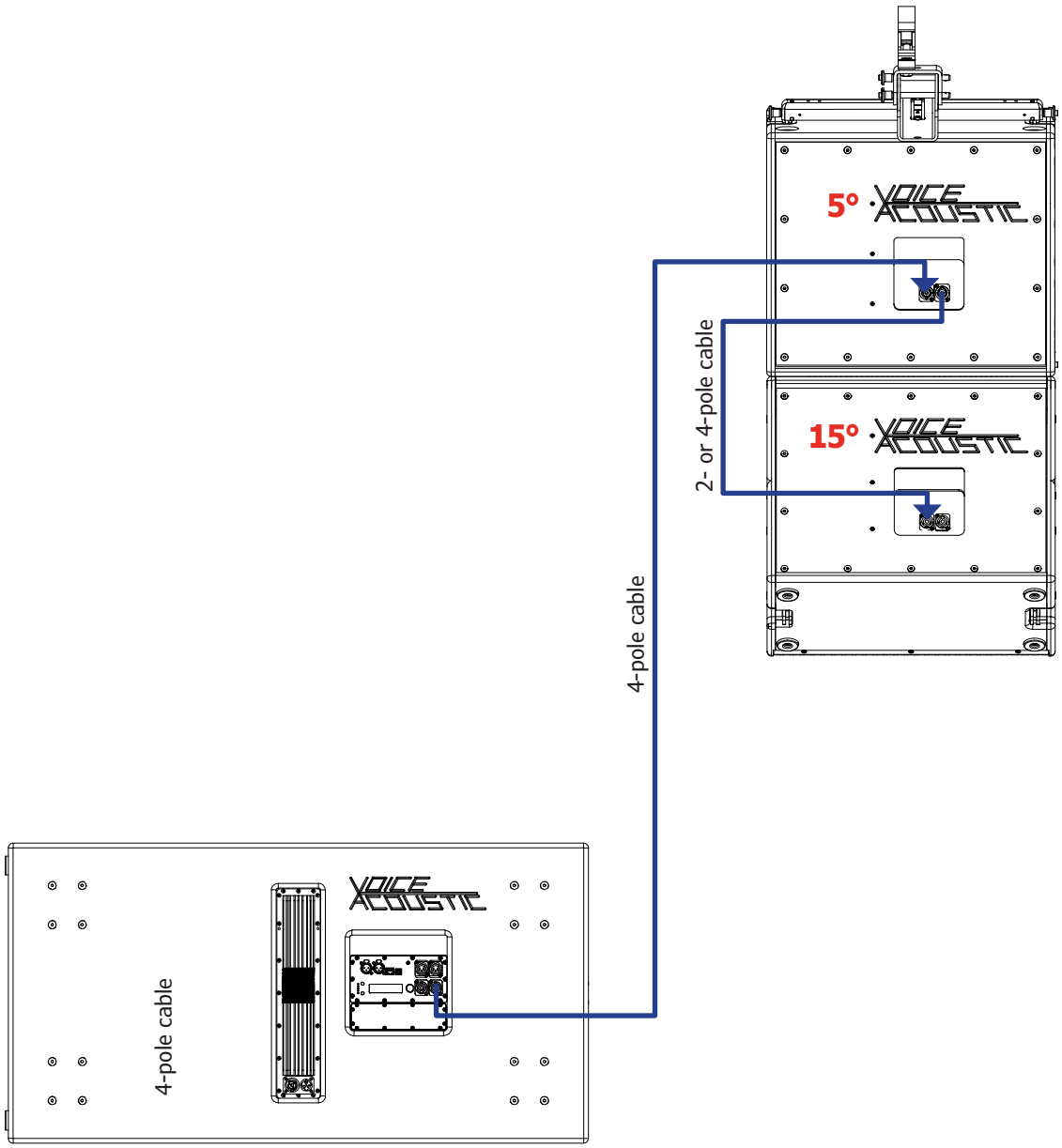
Pin-Belegung rechte Buchse:
Speakon 1+/1- OUT CH2, 800 W (**5°**)
Speakon 2+/2- OUT CH1, 2.400 W

Preset

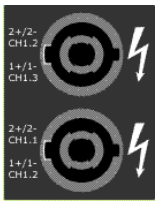


Configurations

Connection of 2 elements to a Paveosub-218sp



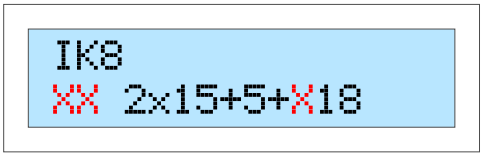
Module 1



Pin assignment left socket:
Speakon 1+/1- OUT CH3, 800 W (**5°**)
Speakon 2+/2- OUT CH2, 800 W (**15°**)

Pin assignment right socket:
Speakon 1+/1- OUT CH2, 800 W
Speakon 2+/2- OUT CH1

Preset



Manufacturer‘s declaration

Imprint
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All specifications in this manual are based on information available at the time of publishing for the features and safety guidelines of the described products. Technical specifications, measurements, weights and properties are not guaranteed.

The manufacturer reserves the right to make technical modifications according to legal regulations stipulating the continual improvement of product features. For the safe operation of the unit, this manual and all other required information must be available to all users at the time of assembly and disassembly of the unit, and during operation. Assemble or operate the unit only after reading and understanding this manual, and keeping it at hand at all times at the site.

We are happy to receive your suggestions and proposals for the enhancement of this manual.

Please send us your ideas to the following address:

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