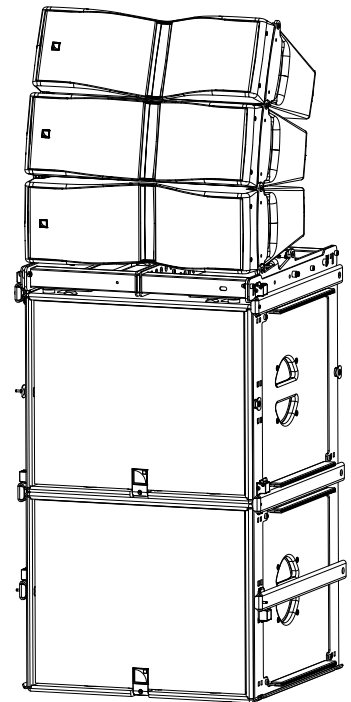
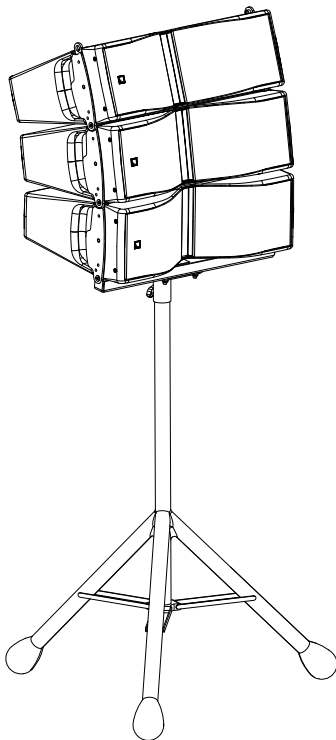
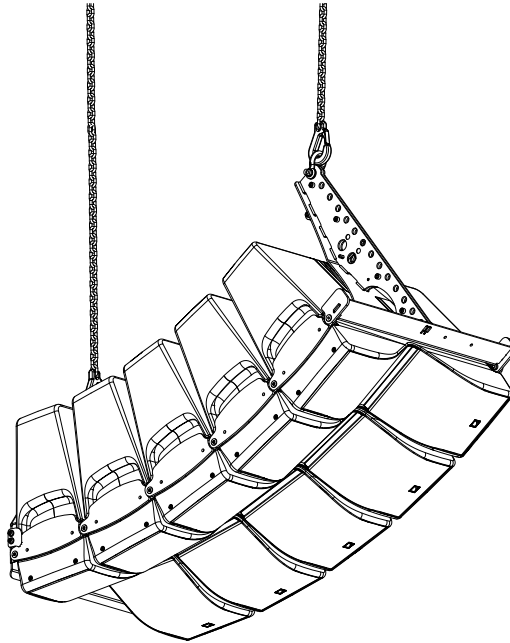


KIVA II



rigging manual (EN)



Document reference: Kiva II rigging manual (EN) version 2.0

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Safety

Instructions



Inspect the product before operation.

If any sign of defect or damage is detected, immediately withdraw the product from use for maintenance.



Never incorporate equipment or accessories not approved by L-Acoustics.

Read all the related PRODUCT INFORMATION documents shipped with the products before exploiting the system.



Do not store the product on an unstable cart, stand, tripod, bracket, or table.



Work with qualified personnel for rigging the system

Installation should only be carried out by qualified personnel that are familiar with the rigging techniques and safety recommendations outlined in this manual.

Ensure personnel health and safety

During installation and set-up personnel must wear protective headgear and footwear at all times. Under no circumstances is personnel allowed to climb on a loudspeaker assembly.

Respect the Working Load Limit (WLL) of third party equipment.

L-Acoustics is not responsible for any rigging equipment and accessories provided by third party manufacturers. Verify that the Working Load Limit (WLL) of the suspension points, chain hoists and all additional hardware rigging accessories is respected.

Respect the maximum configurations and the recommended safety precautions.

For safety issue, respect the maximum configurations outlined in this manual. To check the conformity of any configuration in regards with the safety precautions recommended by L-Acoustics, model the system in Soundvision and refer to the warnings in Mechanical Data section.

Be cautious when flying a loudspeaker configuration.

Always verify that no one is standing underneath the loudspeaker array when it is being raised. As the array is being raised, check each individual element to make sure that it is securely fastened to the adjacent element. Never leave the array unattended during the installation process.

As a general rule, L-Acoustics recommends the use of safety slings at all times.

Be cautious when ground-stacking a loudspeaker array.

Do not stack the loudspeaker array on unstable ground or surface. If the array is stacked on a structure, platform, or stage, always check that the latter can support the total weight of the array.

As a general rule, L-Acoustics recommends the use of safety straps at all times.

Risk of falling objects

Verify that no unattached items remain on the array.

Risk of tipping

Remove all rigging accessories before transporting an array.

Take into account the wind effects on dynamic load.

When a loudspeaker assembly is deployed in an open air environment, wind can produce dynamic stress to the rigging components and suspension points.

If the wind force exceeds 6 bft (Beaufort scale), lower down and/or secure the loudspeaker array.



This system is intended for professional use.



Read the USER MANUAL before operating the system.

Use the loudspeaker system components described in the user manual and follow the operating instructions.

**Do not expose the product to extreme conditions.**

Do not expose the product to rain or sea spray.

Do not expose the product to moisture (mist, steam, humidity, condensation...) or excessive heat (direct sun, radiator...) for a long period of time.

**Contact L-Acoustics for advanced maintenance.**

Any unauthorized maintenance operation will void the product warranty.

Symbols

The following symbols are used in this document:



This symbol indicates a potential risk of harm to an individual or damage to the product.

It can also notify the user about instructions that must be strictly followed to ensure safe installation or operation of the product.



This symbol notifies the user about instructions that must be strictly followed to ensure proper installation or operation of the product.



This symbol notifies the user about complementary information or optional instructions.

Welcome

Thank you for purchasing the L-Acoustics Kiva II.

This document contains essential information on rigging the system properly.

As part of a continuous evolution of techniques and standards, L-Acoustics reserves the right to change the specifications of its products and the content of its document without prior notice. Please check www.l-acoustics.com on a regular basis to download the latest document and software updates.

System components

Loudspeaker enclosures

Kiva II	2-way passive WST enclosure: 2 x 6.5" LF + 1.75 HF diaphragm
SB15m	High power compact subwoofer : 1 x 15"

Rigging elements

KIBU II	Rigging frame for flying or stacking KIVA II/KIVA
KIBU-SB	Rigging frame for flying or stacking KIVA II/KIVA and SB15m
KIET II	Rigging plate for ceiling or pole-mount of 3 KIVA II/KIVA maximum
KIVA-PULLBACK	Pullback accessory for KIVA II/KIVA

Software applications

Soundvision	3D acoustical and mechanical modeling software
-------------	--



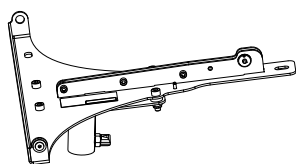
Refer to the **Soundvision** help.



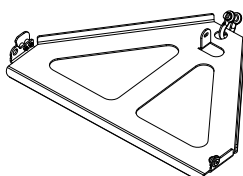
Other Kiva II system components

Other components of the system are presented in the Kiva II user manual along with the enclosure configurations and connection schemes.

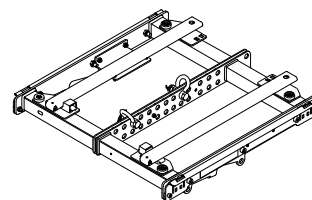
Rigging elements



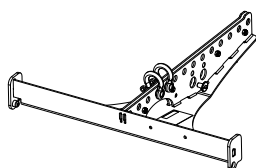
KIET II



KIVA-PULLBACK



KIBU-SB



KIBU II

Mechanical safety

Flown configurations

The Kiva II rigging system complies with 2006/42/EC: Machinery Directive. It has been designed following the guidelines of BGV-C1.

2006/42/EC: Machinery Directive specifies a safety factor of 4 against the rupture. The flown deployments described in this manual achieve a safety factor of **4 or higher**.

Refer to Soundvision for the safety factor of a specific deployment.

The **safe limit** gives the maximum number of elements for which the safety factor is always compliant with the 2006/42/EC: Machinery Directive, regardless of the other deployment parameters (site angles, inter-enclosure angles, etc.)

The **maximum limit** gives the maximum number of elements for which the safety factor can be compliant with the 2006/42/EC: Machinery Directive, when the other deployment parameters provide the best mechanical conditions.

For mixed arrays refer to your Soundvision model.

Kiva II

Configuration	Rigging accessory	Safe limit	Maximum limit
Flown	KIBU-SB	12	20
Flown	KIBU II	12	20
Pullback	KIBU II / KIBU-SB + KIVA-PULLBACK	9	
Ceiling-mounted	KIET II	3	

SB15m

Configuration	Rigging accessory	Maximum / Safe limit
Flown	KIBU-SB	8

Kiva II + SB15m

Configuration	Rigging accessory	Maximum / Safe limit
Pullback	KIBU-SB + KIVA-PULLBACK	9 Kiva II + 3 SB15m

Other configurations

For other configurations, respect the recommended maximum limit for optimal stability.

Kiva II

Configuration	Rigging accessory	Safe limit	Maximum limit
Stacked	KIBU-SB	4	9
Pole-mounted	KIET II + 35 mm pole	3	
Pole-mounted	KIET II + 35 mm pole + SB15m	2	

SB15m

Configuration	Rigging accessory	Maximum / Safe limit
Ground-stacked	No rigging accessory	4



Mechanical safety of the rigging system

Before any installation, always model the system in Soundvision and check the **Mechanical Data** section for any stress warning or stability warning.

Assessing mechanical safety

In order to assess the actual safety of any array configuration before implementation, refer to the following warnings:



Rated working load limit (WLL) is not enough

The rated WLL is an indication of the element resistance to tensile stress. For complex mechanical systems such as loudspeaker arrays, WLLs cannot be used per se to determine the maximum number of enclosures within an array or to assess the safety of a specific array configuration.

Maximum pullback angle

If a pullback accessory is available, the pullback angle must not exceed a 90° negative site angle.

Mechanical modeling with Soundvision

The working load applied to each linking point, along with the corresponding safety factor, will depend on numerous variables linked to the composition of the array (type and number of enclosures, splay angles) and the implementation of the flying or stacking structure (number and location of flying points, site angle). This cannot be determined without the complex mechanical modeling and calculation offered by Soundvision.

Assessing the safety with Soundvision

The overall safety factor of a specific mechanical configuration always corresponds to the lowest safety factor among all the linking points. Always model the system configuration with the Soundvision software and check the **Mechanical Data** section to identify the weakest link and its corresponding working load. By default, a stress warning will appear when the mechanical safety goes beyond the recommended safety level.

Safety of ground-stacked arrays in Soundvision

For ground-stacked arrays, a distinct stability warning is implemented in Soundvision. It indicates a tipping hazard when the array is not secured to the ground, stage or platform. It is the user's responsibility to secure the array and to ignore the warning.

Additional safety for flown arrays

When flying an array, use available holes to implement a secondary safety.

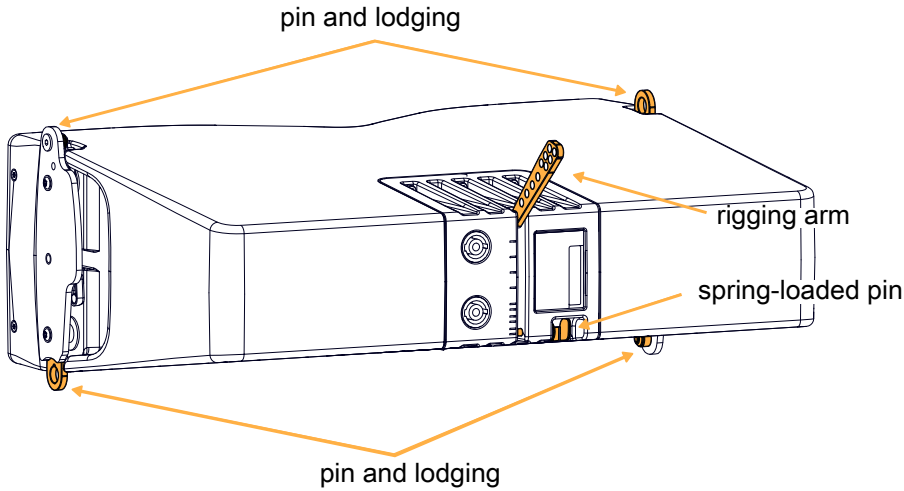
Considerations must be given to unusual conditions

Soundvision calculations are based on usual environmental conditions. A higher safety factor is recommended with factors such as extreme high or low temperatures, strong wind, prolonged exposition to salt water, etc. Always consult a rigging specialist to adopt safety practices adapted to such a situation.

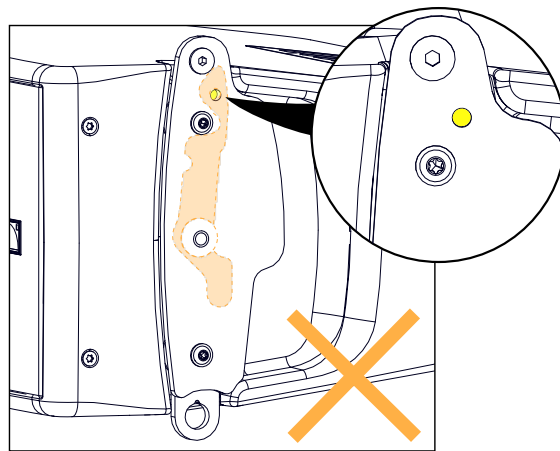
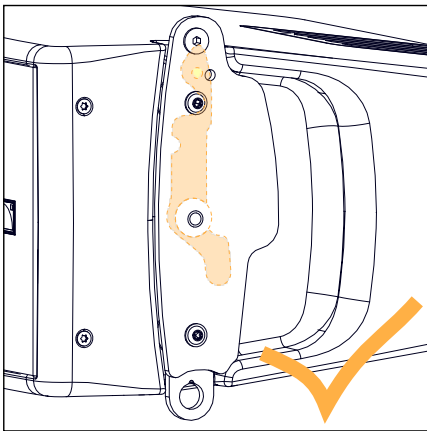
Rigging system description

Kiva II

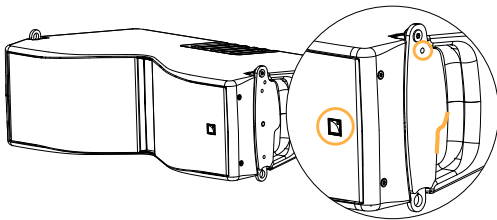
Kiva II features a three-point rigging system composed of a rigging arm and a spring-loaded pin at the back and two pairs of pin and lodging at the front.



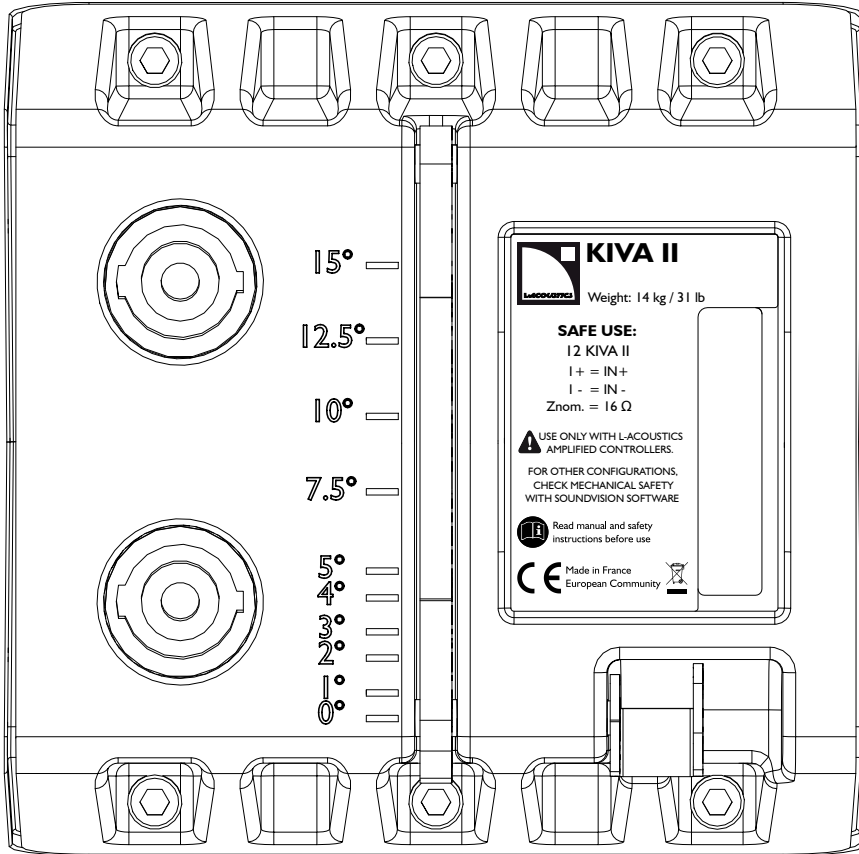
The front linking points are locked with a spring-loaded safety mechanism inside the right handle. A yellow safety label is visible if the mechanism is not fully engaged.



! On every Kiva II, check that the logo is on the same side as the safety mechanism (identifiable by the eyelet and the handle shape).

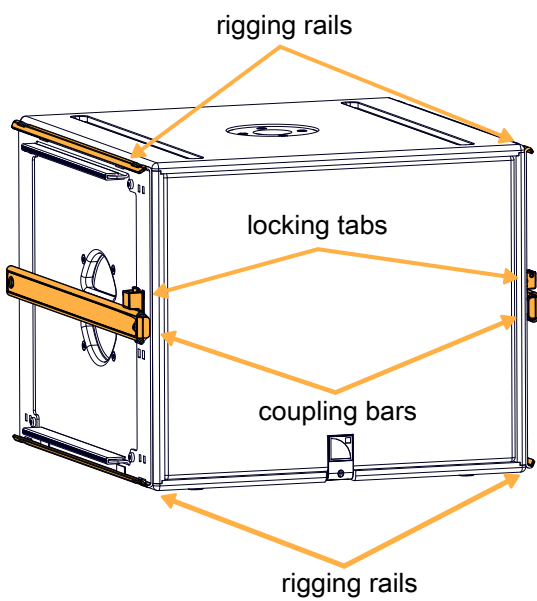


Kiva II can be connected to other Kiva II or to dedicated rigging accessories. The inter-enclosure angle can be set between 0° and 15°.

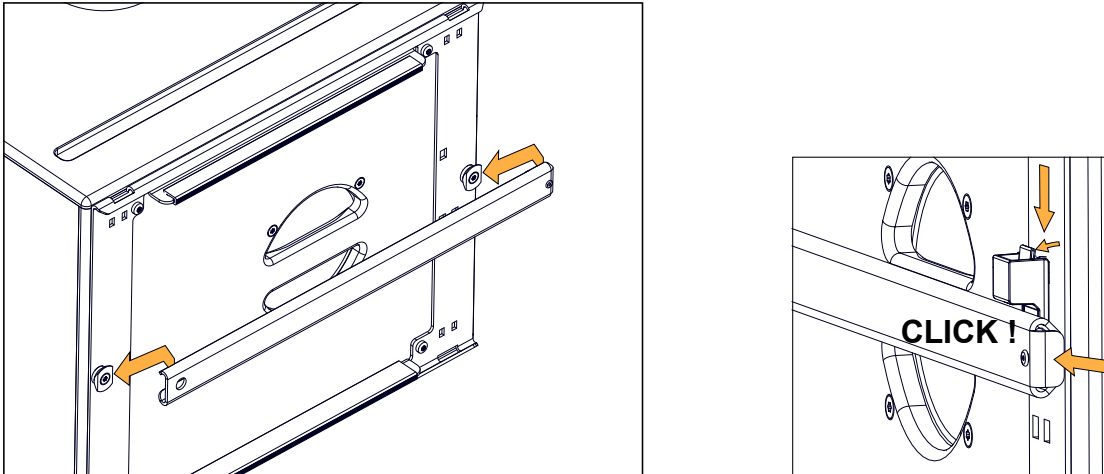


SB15m

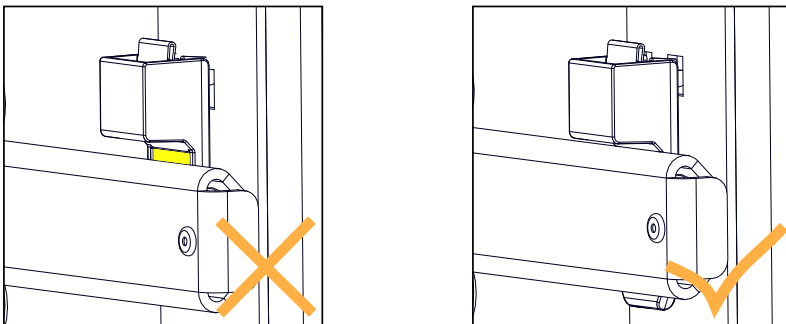
SB15m features four rigging rails on top and bottom faces. Connection with other elements is ensured by two coupling bars with locking tabs.



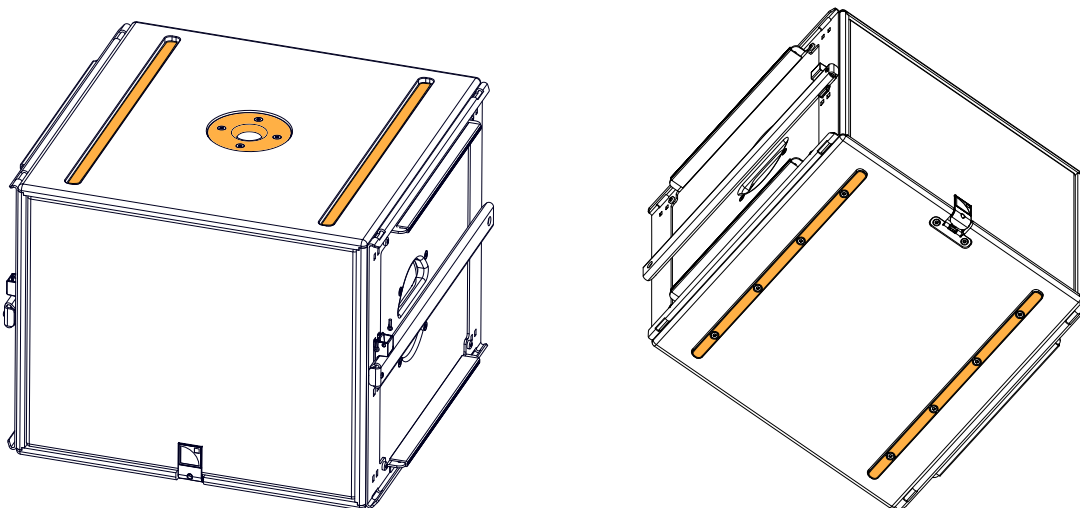
The coupling bars can be stored on both sides on the storage pins. The locking tabs slide inside the coupling bars to keep them in place.



The locking tabs lugs fit into notches. A yellow safety label is visible if the locking tabs are not fully engaged.



The top face is equipped with a 35 mm pole socket. Two stacking runners meet two runner tracks in stacked deployments.



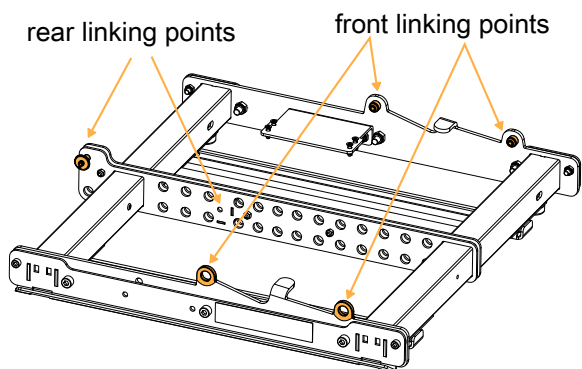
SB15m rigging is compatible with KIBU-SB.

KIBU-SB

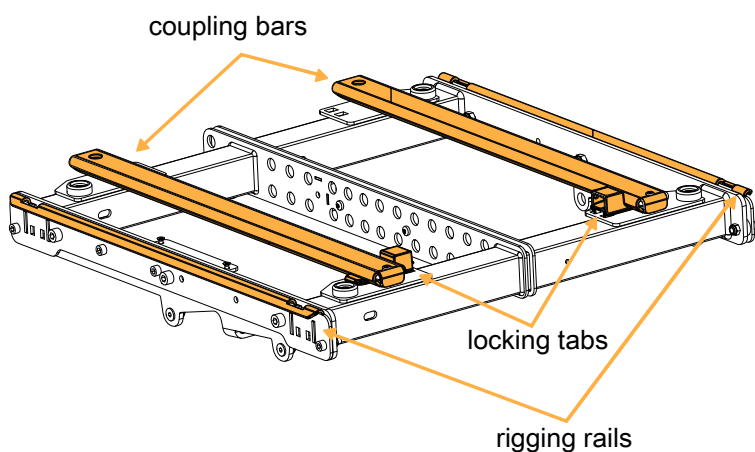
Kiva II/SB15m rigging interface

KIBU-SB is a rigging interface to connect Kiva II to SB15m. Each side of the rigging structure is designed to fit one enclosure type.

One side is compatible with the Kiva II three-point rigging system.

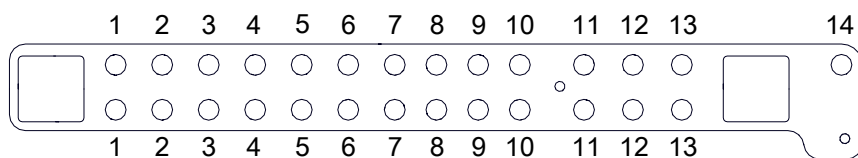


The other side features two rigging rails and two coupling bars with two locking tabs for securing the SB15m.



Flying frame

KIBU-SB provides 13 pickup points for flying SB15m and 14 pickup points for flying Kiva II.



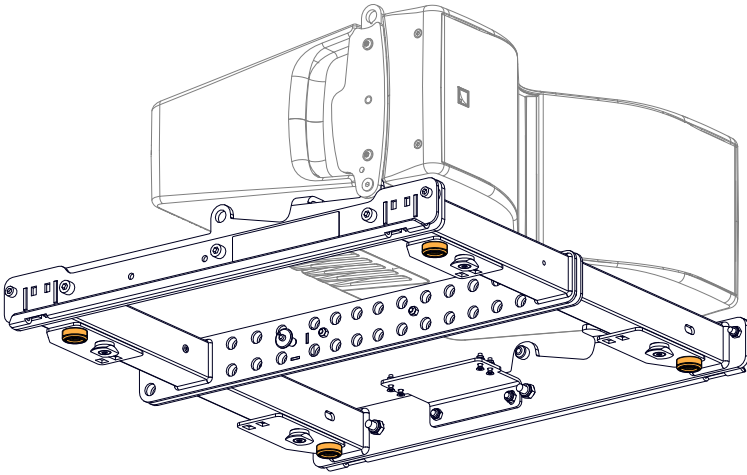
i Refer to the Soundvision configuration to choose the pickup point.

Stacking platform

KIBU-SB features four runners for stacking Kiva II.

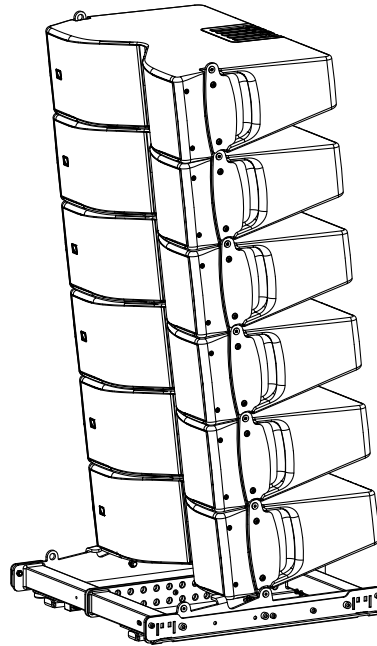
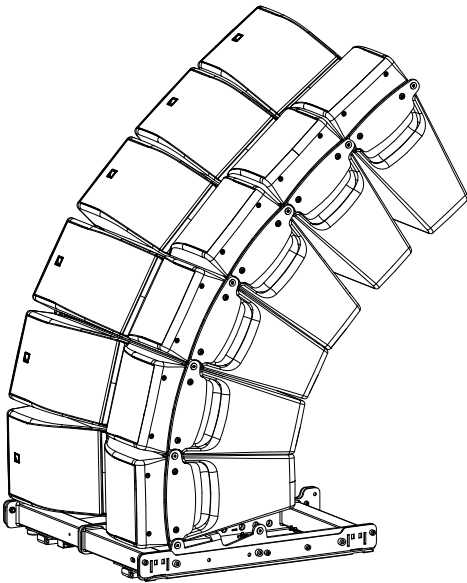


The coupling bars must be removed.



In stacked configuration, Kiva II can be secured in front or rear position on KIBU-SB.

For optimal stability, the array must be secured in front position when tilted towards the rear, and in rear position when tilted towards the front.



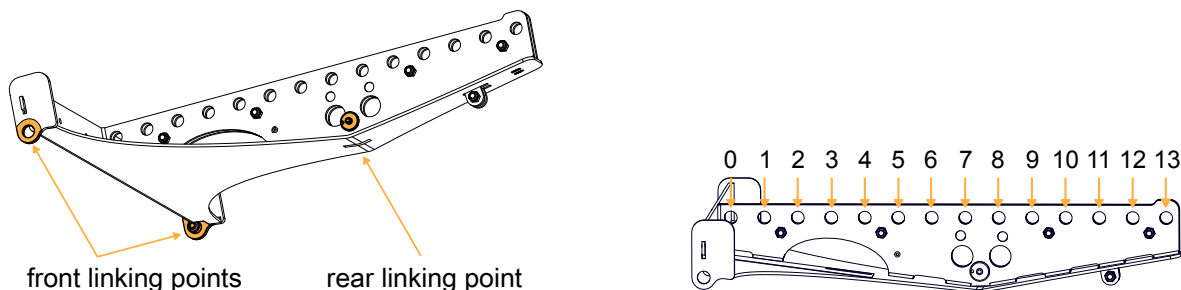
Kiva II in rear position with a positive 7.5° angle

The positive 7.5° angle is only available when Kiva II and KIBU-SB are stacked on SB15m. When Kiva II and KIBU-SB are ground-stacked, the rigging arm cannot be secured at 7.5°.

KIBU II

Flying frame

KIBU II is a rigging structure designed to fit the Kiva II rigging system in flown configuration. 13 pickup points are available.



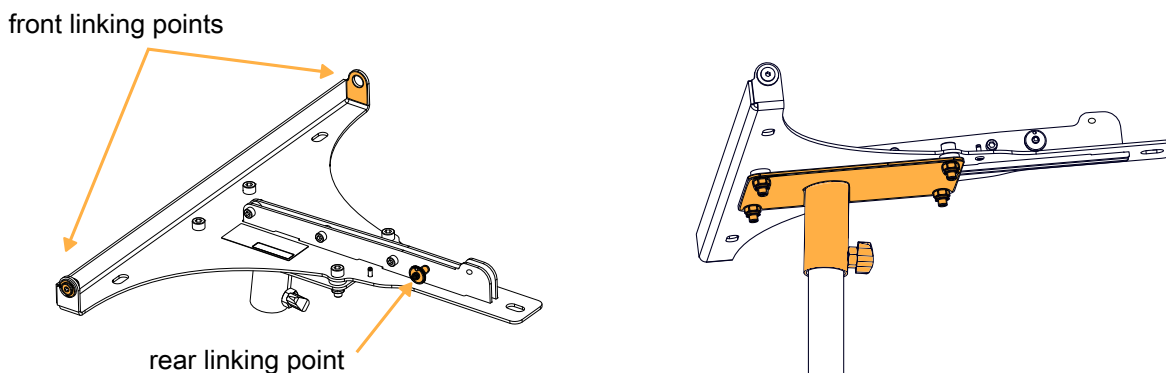
KIET II

! KIET II rear linking point

KIET II features two dedicated rear linking points, one for pole-mounting and one for ceiling-mounting deployment.

Pole-mount

KIET II is a rigging accessory compatible with the Kiva II rigging system. It is delivered with a removable 35 mm pole socket. It allows to mount up to three Kiva II on a pole.



! Pole-mounting on SB15m

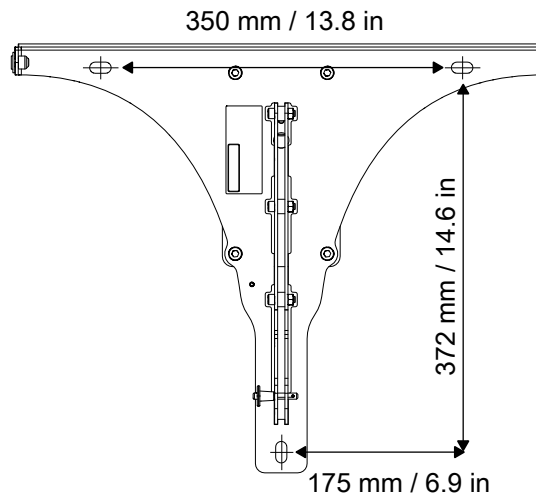
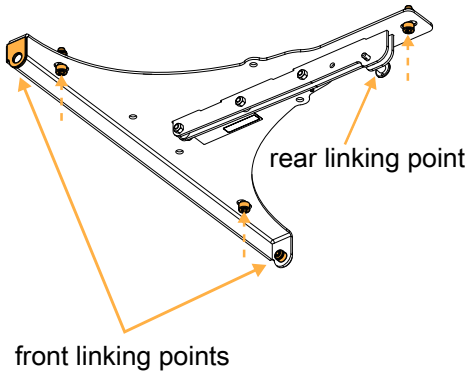
A maximum of two Kiva II can be pole-mounted on a SB15m

Ceiling-mount

KIET II can be used to secure up to three Kiva II under a ceiling, a balcony or structure.

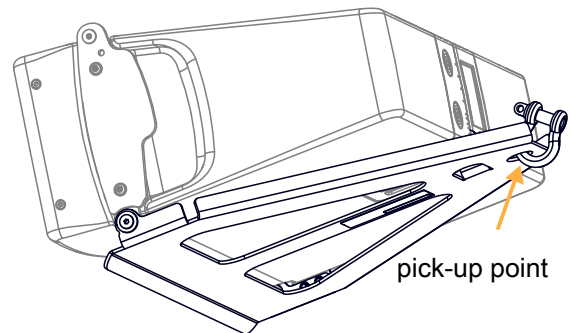
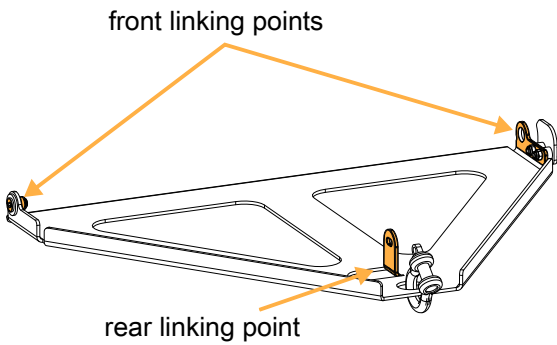


Use the spacers provided with the pole-mount socket.



KIVA-PULLBACK

KIVA-PULLBACK is used to implement pull-back configurations with up to nine Kiva II.



Rigging procedures


Flying

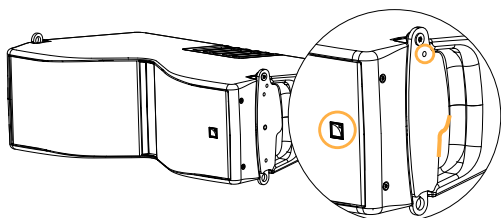
Flying a Kiva II array

type of deployment	flown array
rigging accessory	KIBU II / KIBU-SB
	2 x Ø12 mm shackles WLL 1 t (provided)
min number of operators	2

Risk of falling objects

Verify that no unattached items remain on the array.

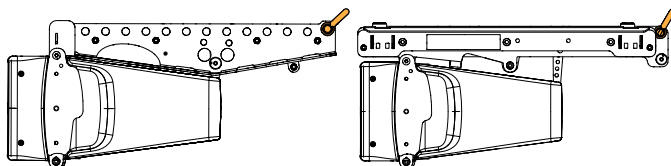
 On every Kiva II, check that the logo is on the same side as the safety mechanism (identifiable by the eyelet and the handle shape).



Pickup point for pullback deployment

Use hole 13 on KIBU II.

Use hole 14 on KIBU-SB for Kiva II.



Assembly

Procedure

1. Bring a stack of four Kiva II (logos on the right-hand side) under the lifting point.
All angles must be at 0°.
2. Secure the rigging frame on top of the stack.

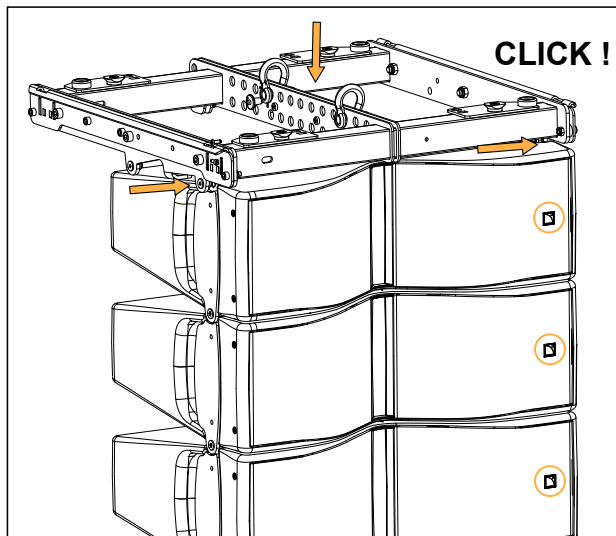
- With KIBU-SB

Use the front or rear position.

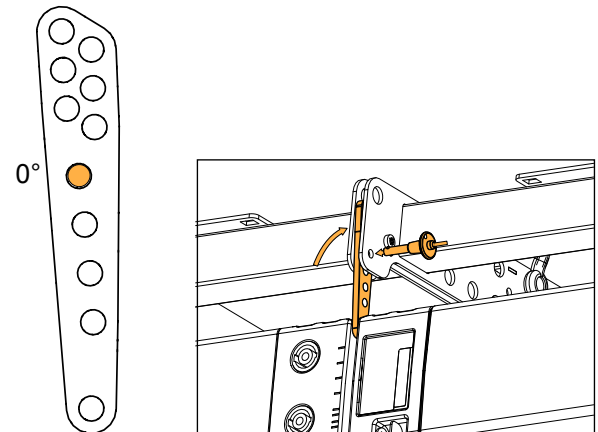
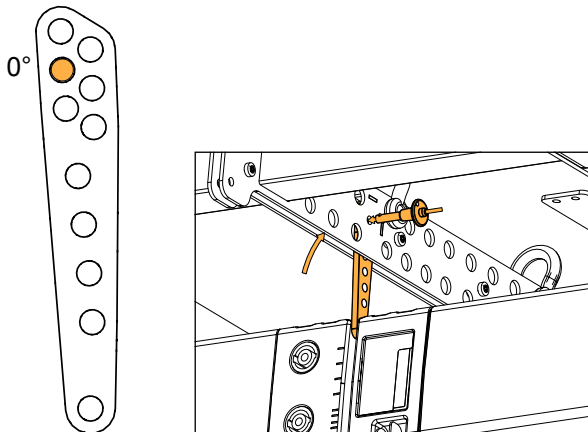
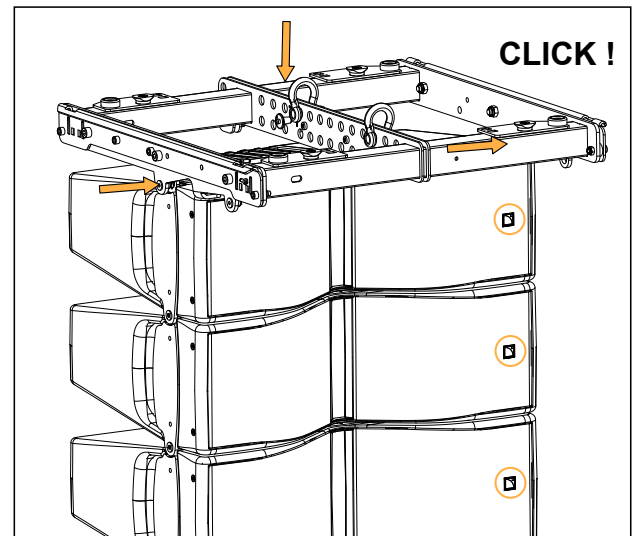
Select the 0° angle on the rigging arm.

Secure the rigging arm with the ball-locking pin.

Front position



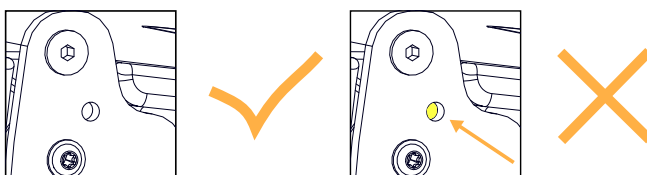
Rear position



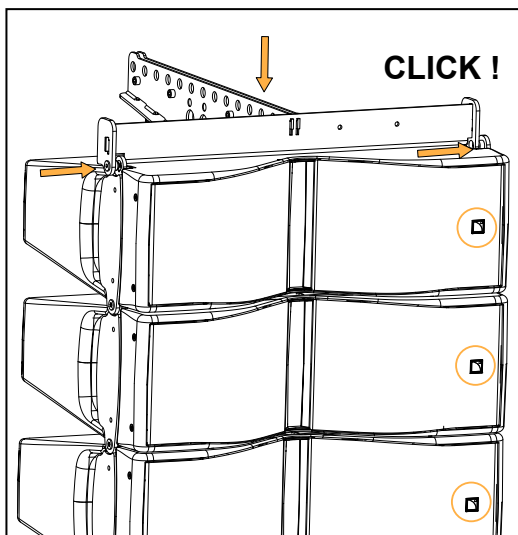
Final check

The yellow label is not visible on the logo side.

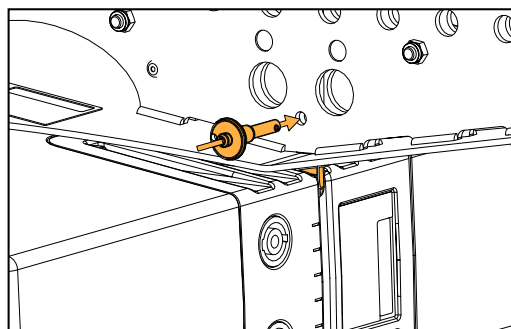
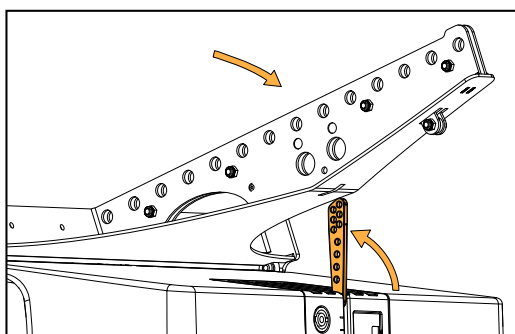
Shake the assembly up and down and from side to side to verify that all linking points are secured.



- With KIBU II



Insert the rigging arm in the slot. Lower the KIBU II until it rests on the enclosure to ensure a 0° angle. Secure the rigging arm with the ball-locking pin.



Final check

The yellow label is not visible on the logo side. Shake the assembly up and down and from side to side to verify that all linking points are secured.

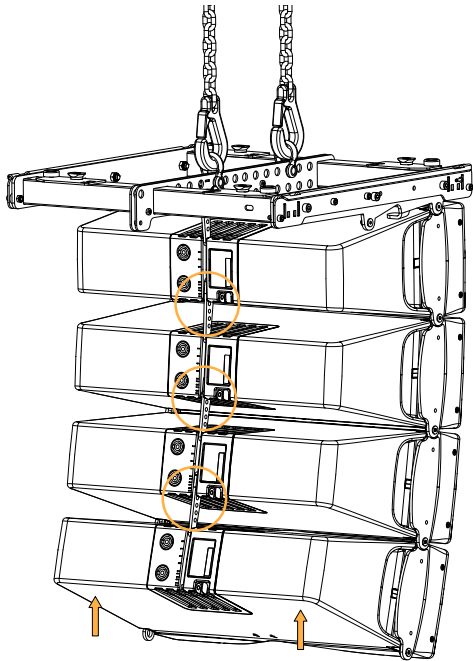


3. Choose the pickup point(s) and fly the assembly.

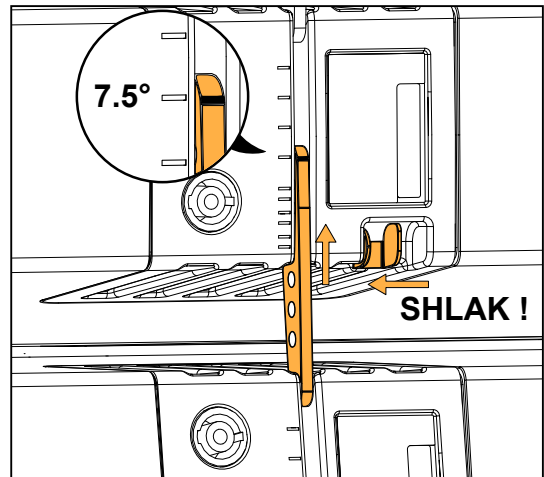
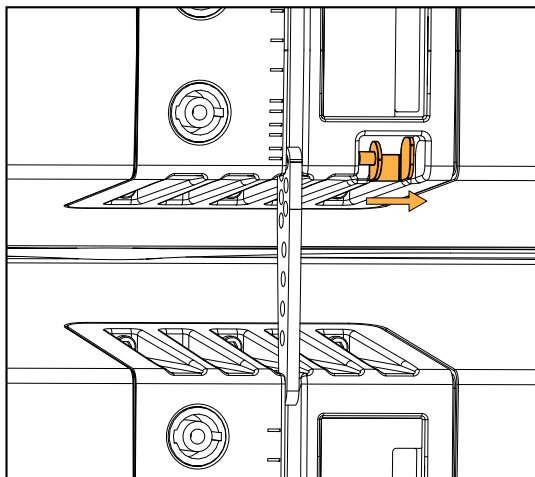


Hold the bottom enclosure at all times.

4. Set each inter-enclosure angle by lifting the array.



Align the mark on the rigging arm with the chosen angle mark.

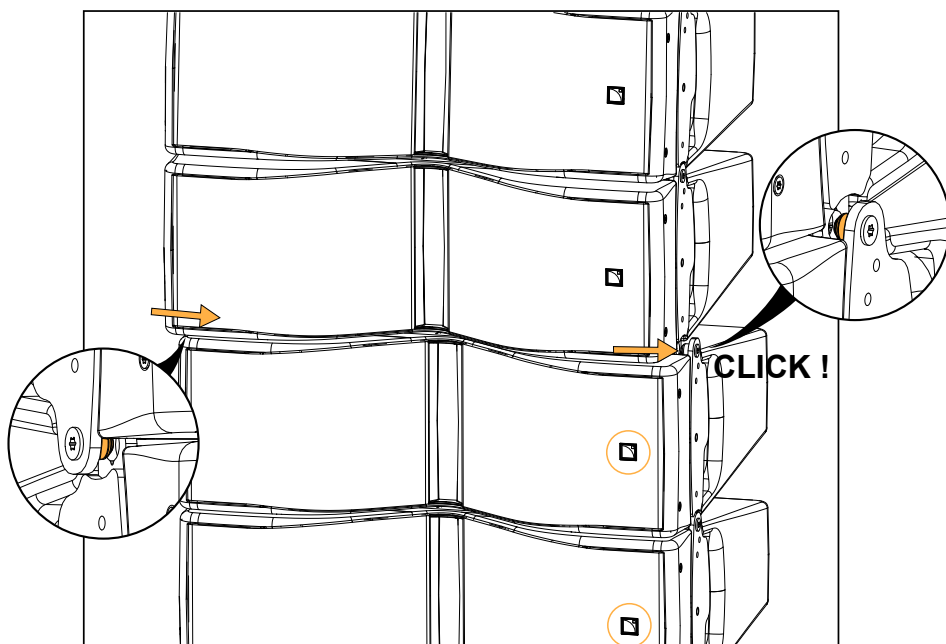


5. Bring a second stack of four Kiva II (logos on the right-hand side) under the array.
All angles must be at 0°.

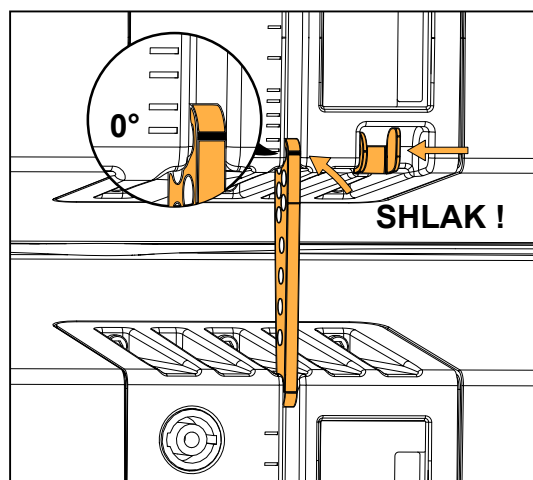
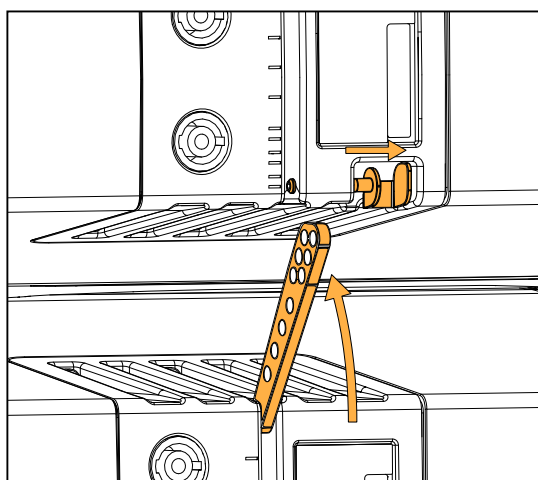
! **Risk of trapping hand/fingers**

! **Do not rest the array completely on the stack**
 Make adjustments to align the rigging points.

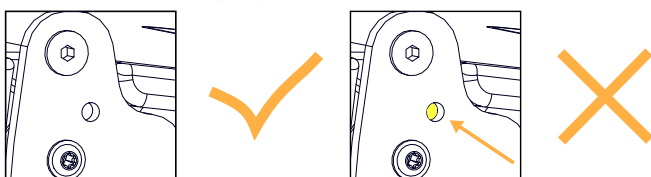
6. Lower the array and connect it to the stack.



Set the inter-enclosure angle at 0°.



! **Final check**
 The yellow label is not visible on the logo side.
 Shake the assembly up and down and from side to side to verify that all linking points are secured.



! **Do not stand behind the array.**
 The array swings backward when it is raised.

7. Raise the assembly.

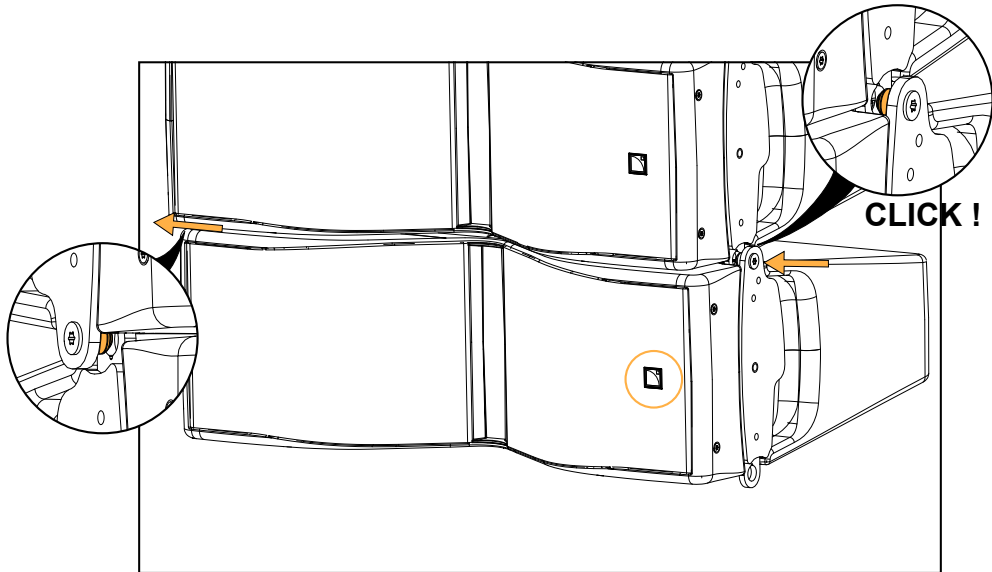
8. Set the inter-enclosure angles.



Do not use this method for an array bigger than eight enclosures.

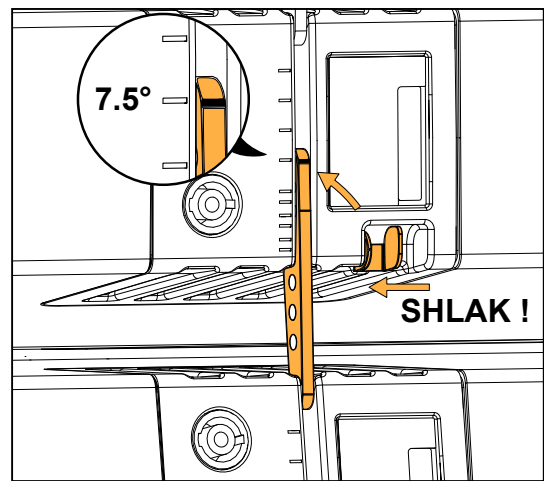
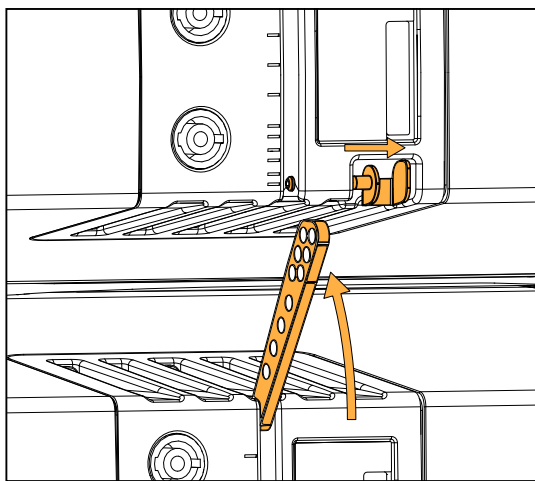
Any additional enclosure must be connected one by one as follows.

9. Connect a Kiva II (logo on the right-hand side) under the array.



Set the inter-enclosure angle.

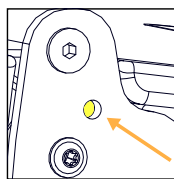
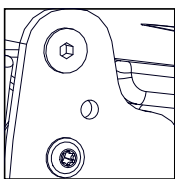
Align the mark on the rigging arm with the chosen angle mark.



Final check

The yellow label is not visible on the logo side.

Shake the assembly up and down and from side to side to verify that all linking points are secured.




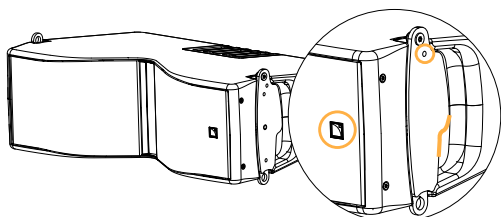
Flying a Kiva II / SB15m array

type of deployment	flown array
rigging accessory	KIBU-SB
	2 x Ø12 mm shackles WLL 1 t (provided)
min number of operators	2

Risk of falling objects

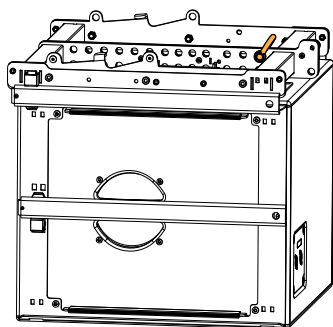
Verify that no unattached items remain on the array.

 On every Kiva II, check that the logo is on the same side as the safety mechanism (identifiable by the eyelet and the handle shape).



Pickup point for pullback deployment

Use hole 13 on KIBU-SB for SB15m.



Maximum negative site angle with SB15m

The negative site angle is limited by the lifting element.

The element must not come in contact with KIBU-SB

Cardioid configuration

A cardioid configuration is an array of four subwoofers with one reversed element.

Refer to the subwoofer user manual and to the **Cardioid configurations** technical bulletin for details about the use of this configuration.

Any of the following subwoofer arrays can be set in cardioid configuration.

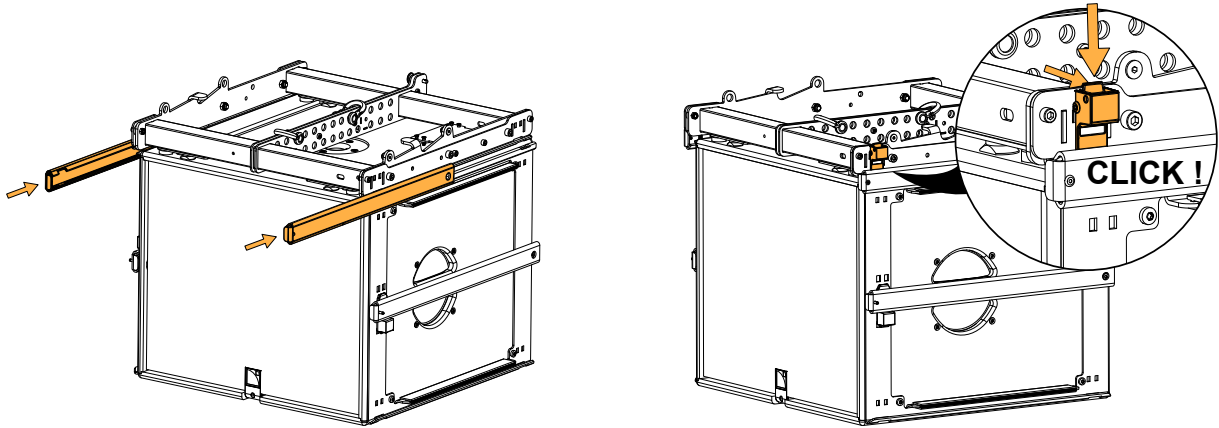
Assembly

Procedure

1. Secure KIBU-SB on SB15m.

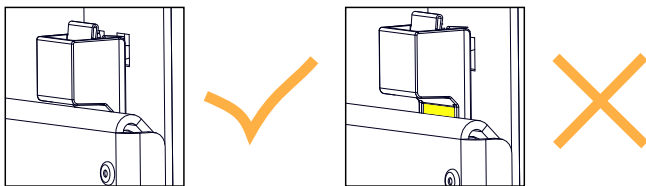
Use the coupling bars provided with the KIBU-SB.

Secure the coupling bars with the locking tabs.



Make sure the safety label on each locking tab is fully covered.

Make sure the lugs are in the notches.

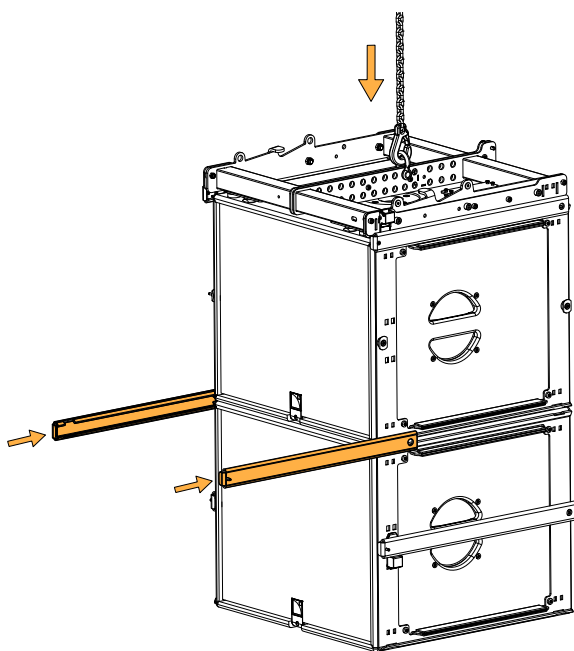


2. Lift the array.

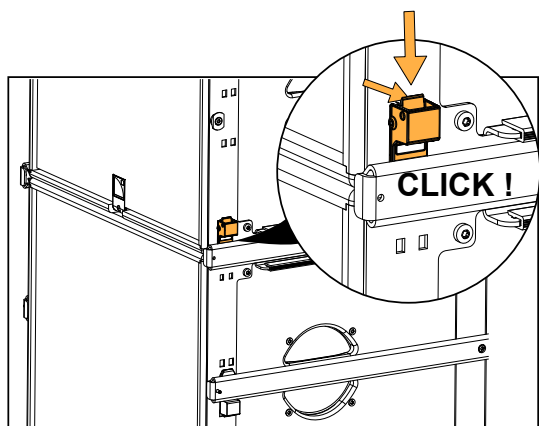
3. Position a SB15m under the assembly.

4. Lower the array until it rests on the subwoofer

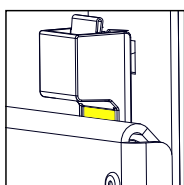
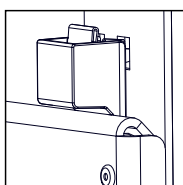
5. Secure the SB15m under the array.
Use the coupling bars from the top subwoofer.



Secure the coupling bars with the locking tabs.



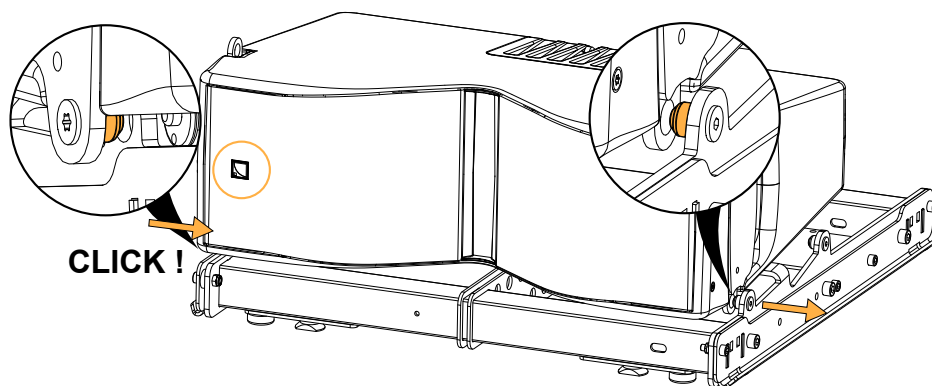
Make sure the safety label on each locking tab is fully covered.
Make sure the lugs are in the notches.



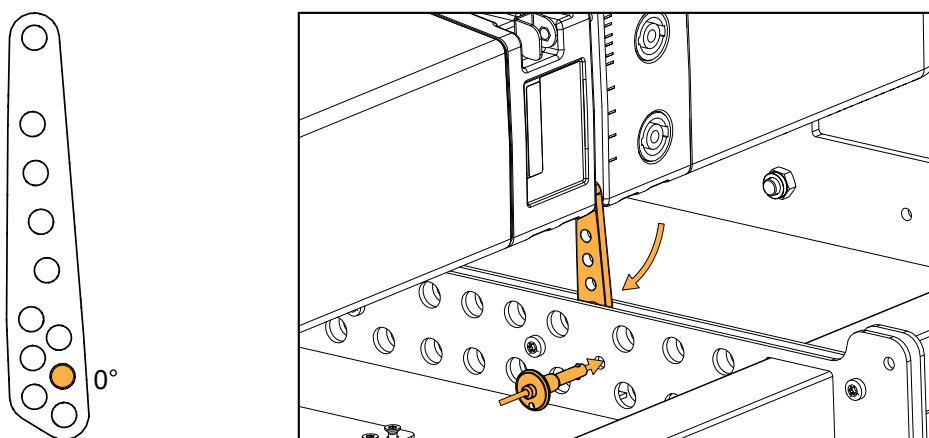
6. Repeat steps 2 (p.24) to 5 (p.25) until the subwoofer array is complete.

7. Secure a Kiva II (logo on the left-hand side) on a KIBU-SB (coupling bars removed).

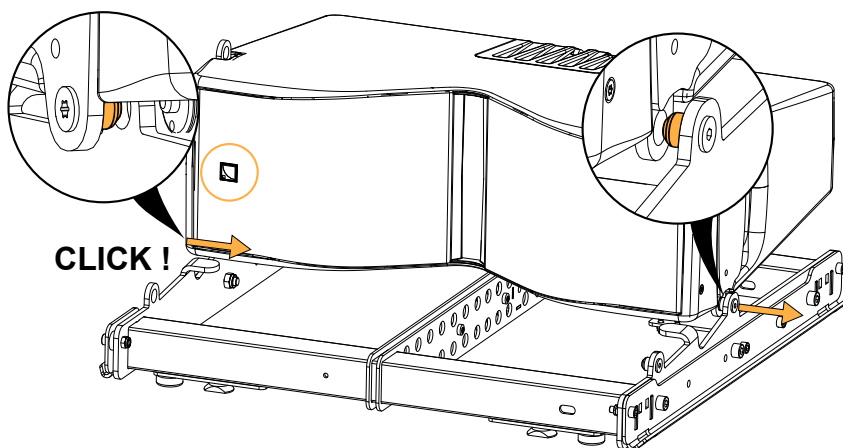
- Front position



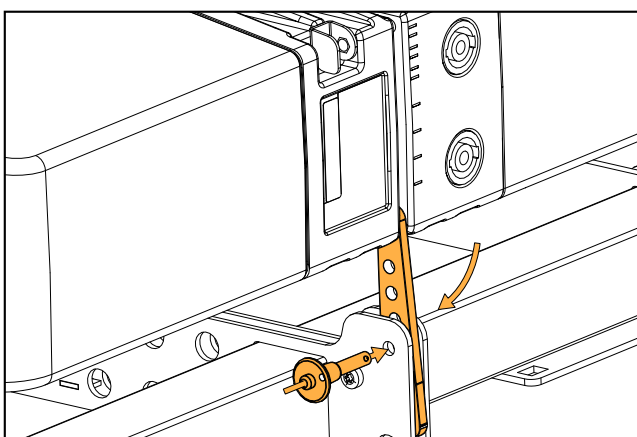
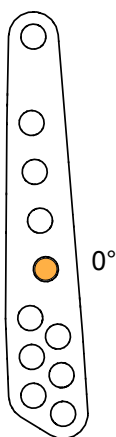
Select the 0° angle on the rigging arm.



- Rear position



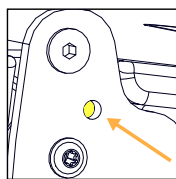
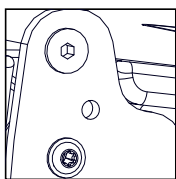
Select the 0° angle on the rigging arm.



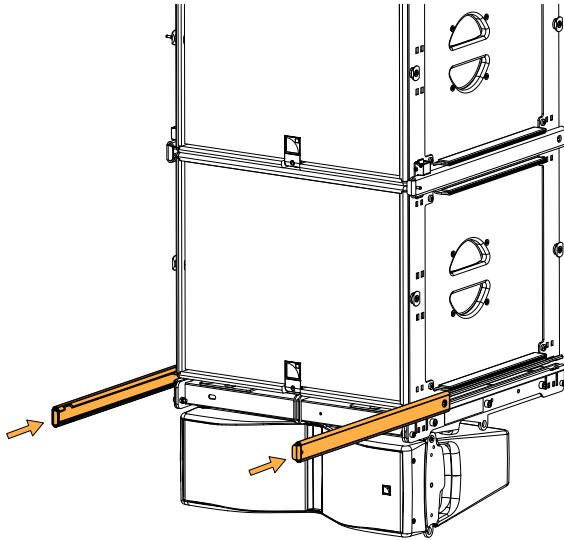
Final check

The yellow label is not visible on the logo side.

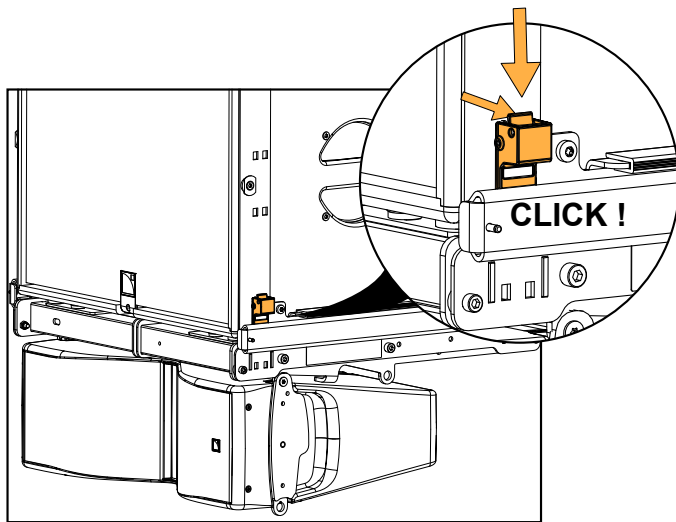
Shake the assembly up and down and from side to side to verify that all linking points are secured.



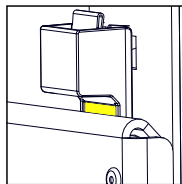
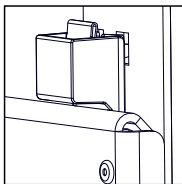
8. Turn the assembly upside-down and secure it under the SB15m array with coupling bars.



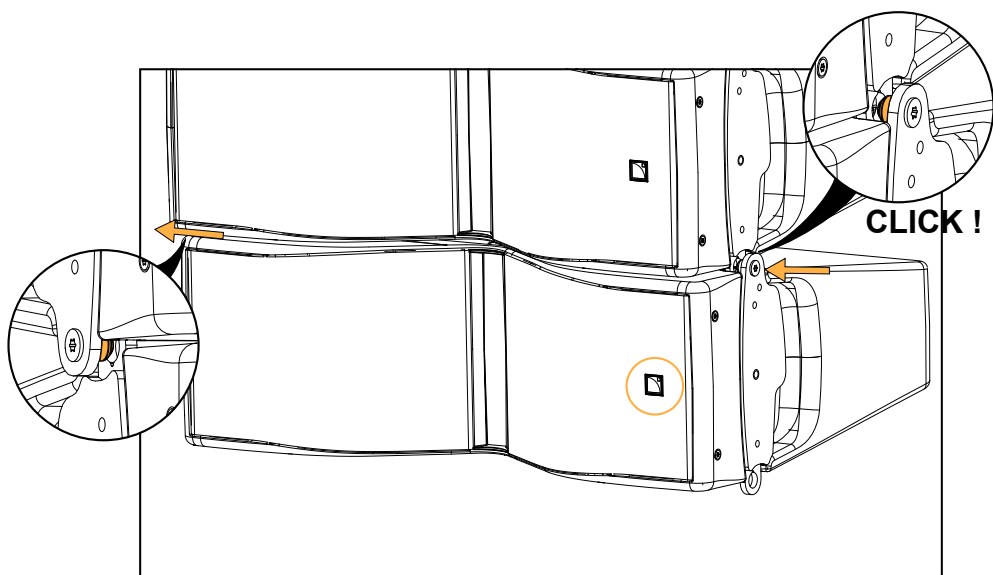
Secure the coupling bars with the locking tabs.



Make sure the safety label on each locking tab is fully covered.
Make sure the lugs are in the notches.

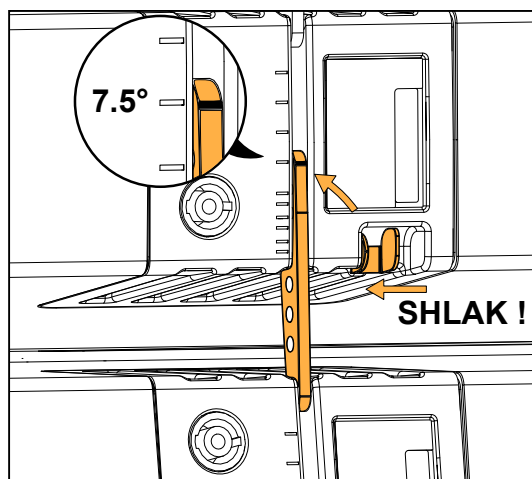
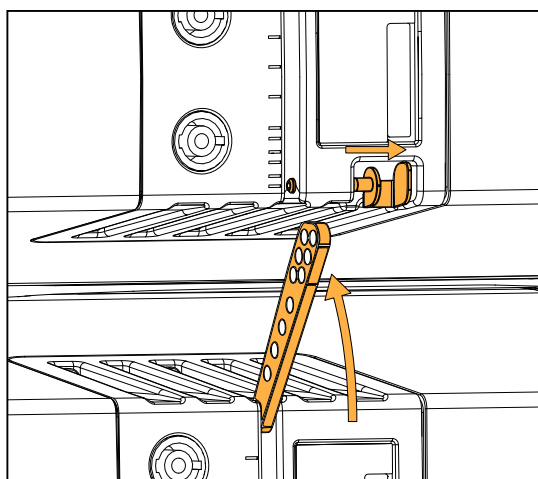


9. Connect a Kiva II (logo on the right-hand side) under the array.



Set the inter-enclosure angle.

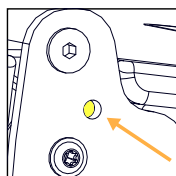
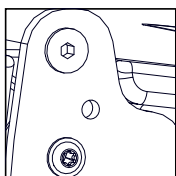
Align the mark on the rigging arm with the chosen angle mark.



Final check

The yellow label is not visible on the logo side.

Shake the assembly up and down and from side to side to verify that all linking points are secured.

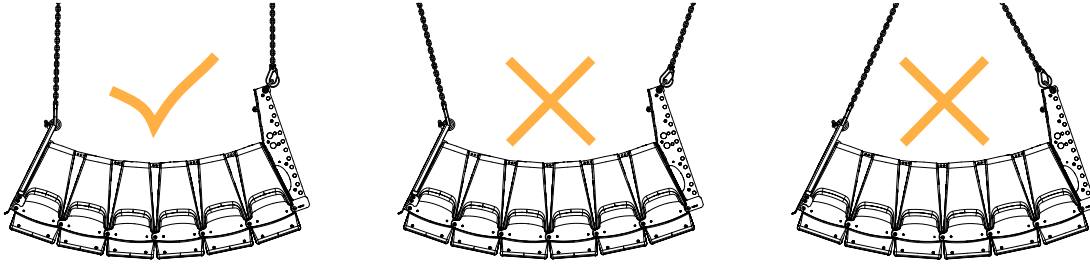



Adding a pull-back under Kiva II

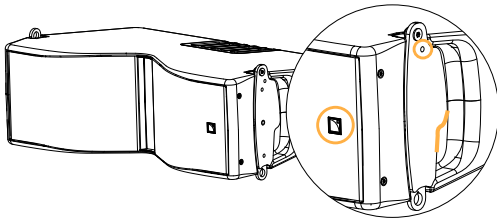
type of deployment	flown array
rigging accessory	KIVA-PULLBACK
	1 x Ø12 mm shackle WLL 1 t
min number of operators	1

Space between lifting points

The space between the two lifting points must be aligned with the array pickup points. The deployment load-bearing lines must be parallel to each other.

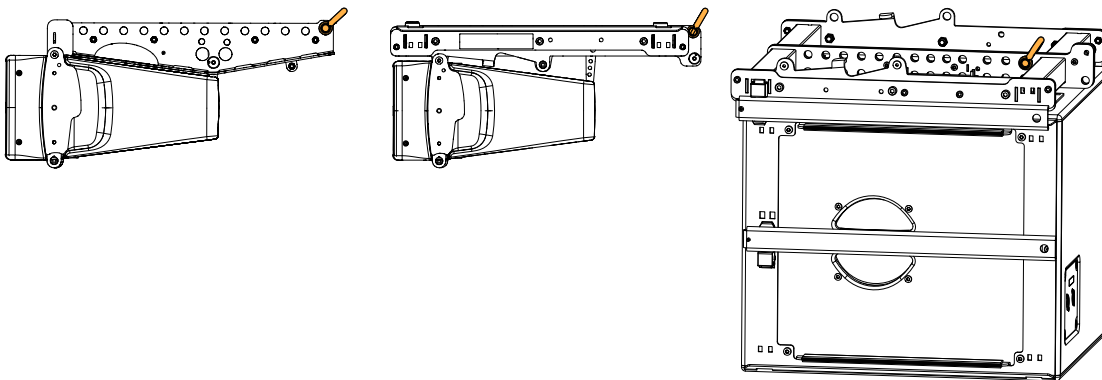


 On every Kiva II, check that the logo is on the same side as the safety mechanism (identifiable by the eyelet and the handle shape).



Pickup point for pullback deployment

Use hole 13 on KIBU II.
Use hole 14 on KIBU-SB for Kiva II.
Use hole 13 on KIBU-SB for SB15m.



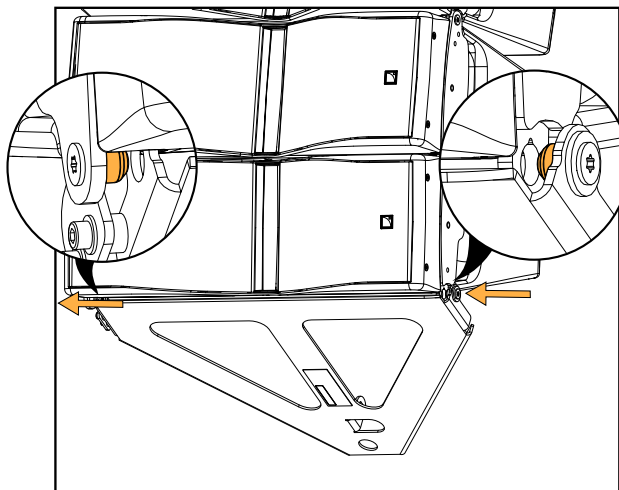
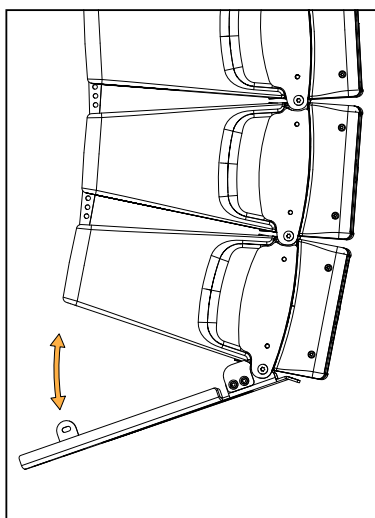
Maximum negative site angle with SB15m

The negative site angle is limited by the lifting element. The element must not come in contact with KIBU-SB

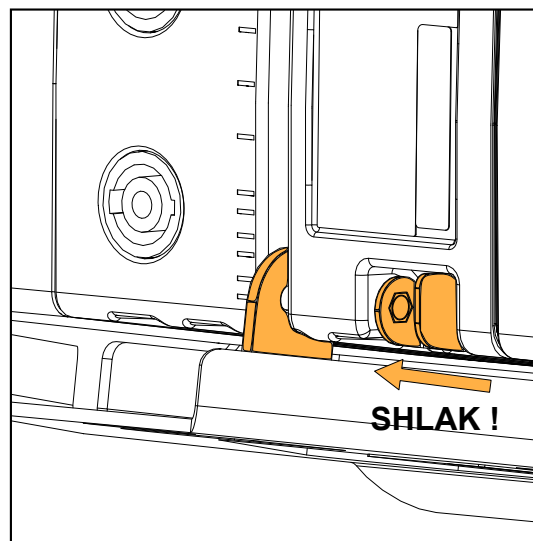
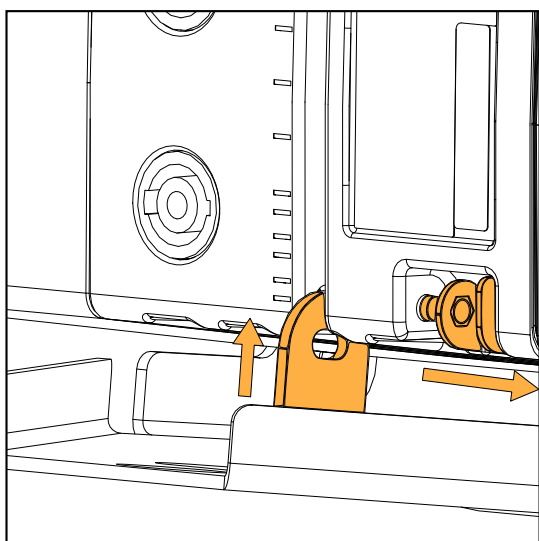
Assembly

Procedure

1. Secure a KIVA-PULLBACK under the bottom enclosure.
Rotate the accessory to find the correct locking position.



Secure the rear piece in the spring-lock safety of the bottom enclosure.

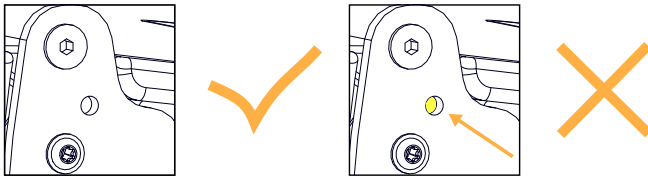




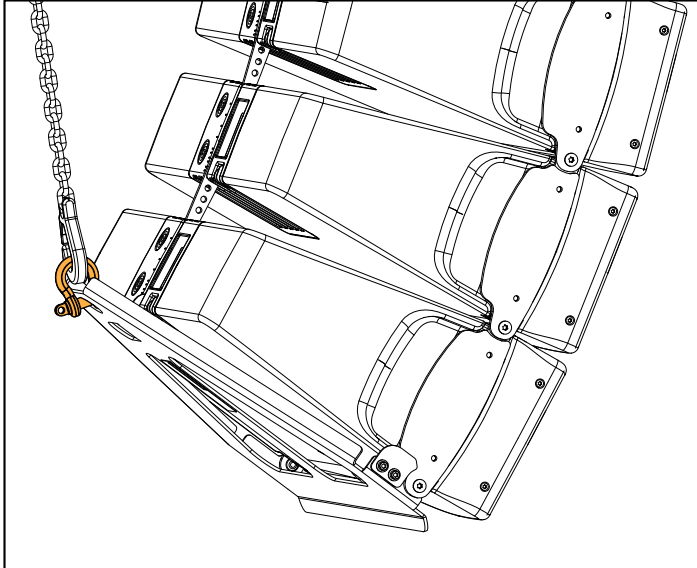
Final check

The yellow label is not visible on the logo side.

Shake the assembly up and down and from side to side to verify that all linking points are secured.



2. Secure a shackle to KIVA-PULLBACK and lift it with an additional motor.

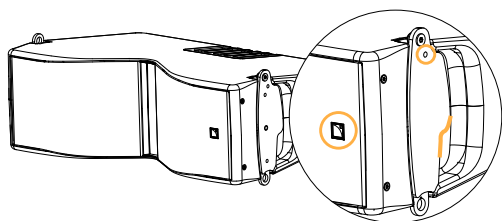


Ceiling-mounting Kiva II

type of deployment	ceiling-mount
rigging accessory	KIET II
	3 M8 spacers (provided)
	3 M8 screws (depending on the ceiling material)
min number of operators	2



On every Kiva II, check that the logo is on the same side as the safety mechanism (identifiable by the eyelet and the handle shape).



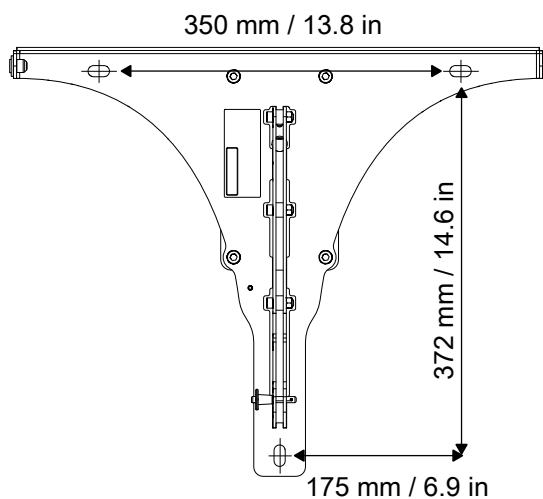
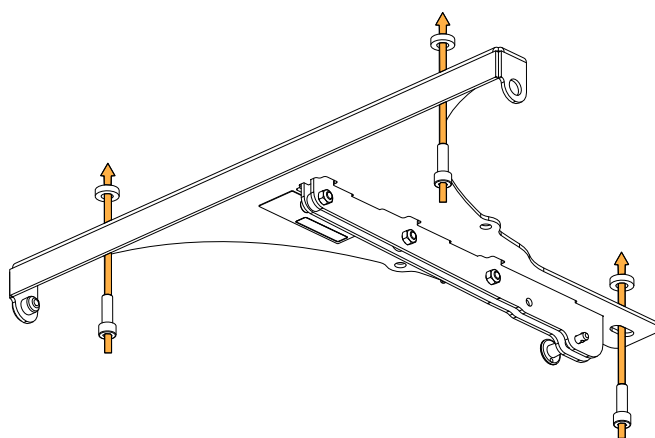
Assembly

Procedure

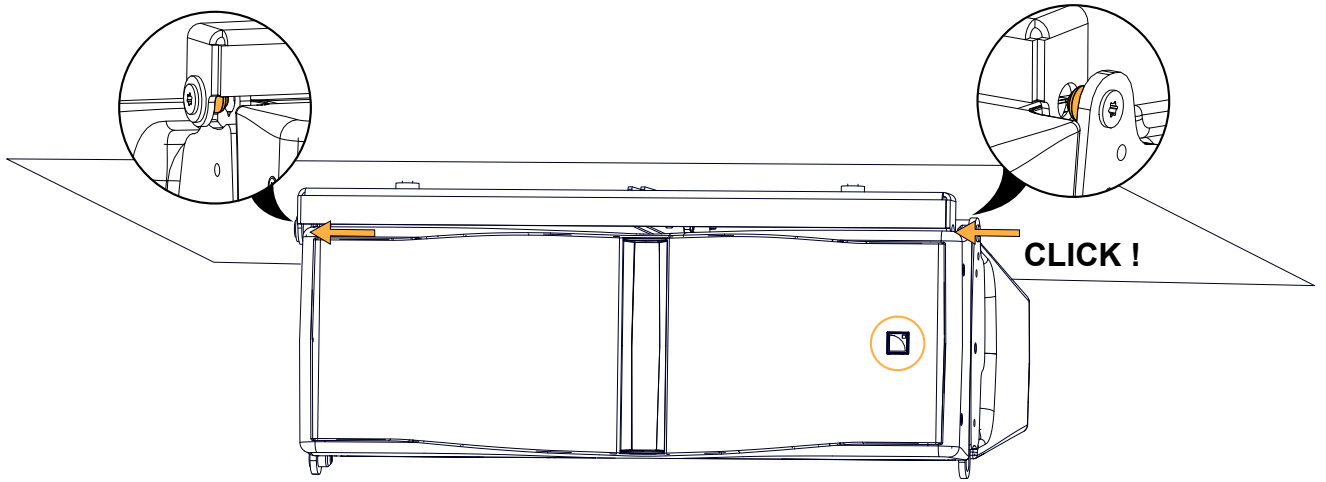
1. Secure KIET II (pole socket removed) with the three M8 screws and spacers.



Use the spacers provided with the pole-mount socket.

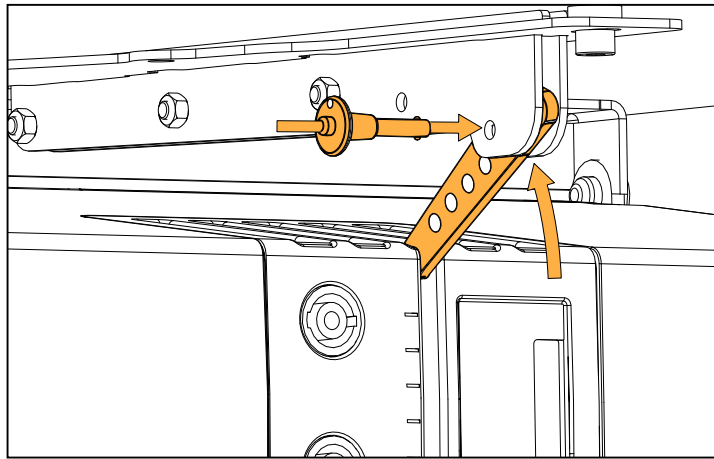
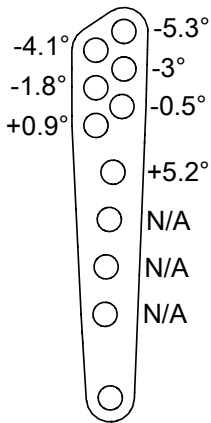


2. Secure Kiva II (logo on the right-hand side) under KIET II.



Select the site angle on the rigging arm.

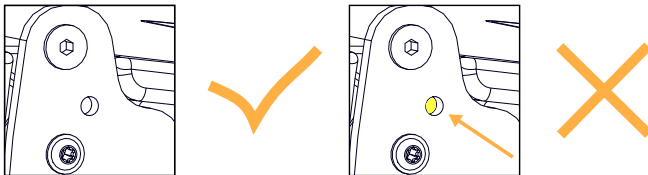
! Use the applicable rear linking point, as illustrated.



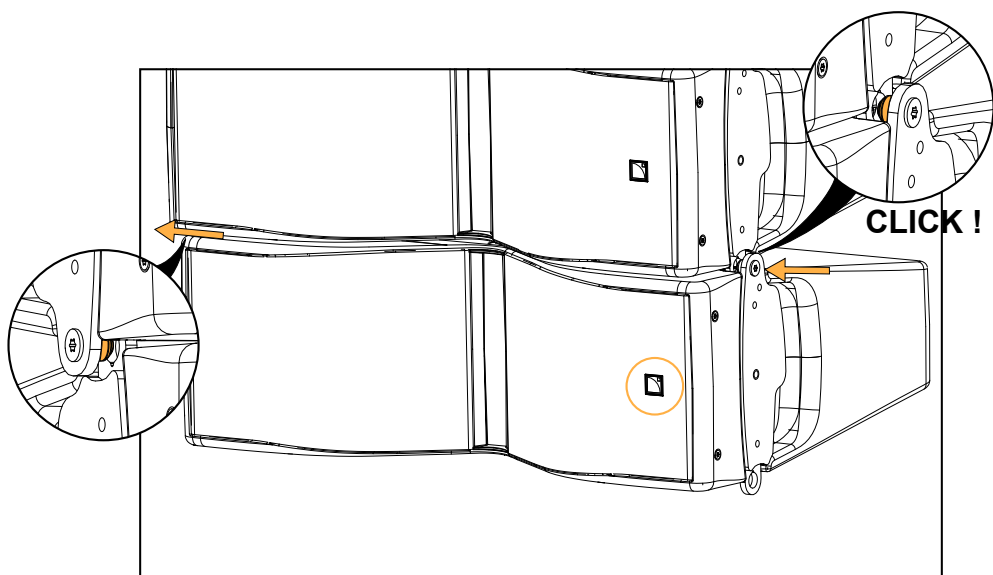
! **Final check**

The yellow label is not visible on the logo side.

Shake the assembly up and down and from side to side to verify that all linking points are secured.

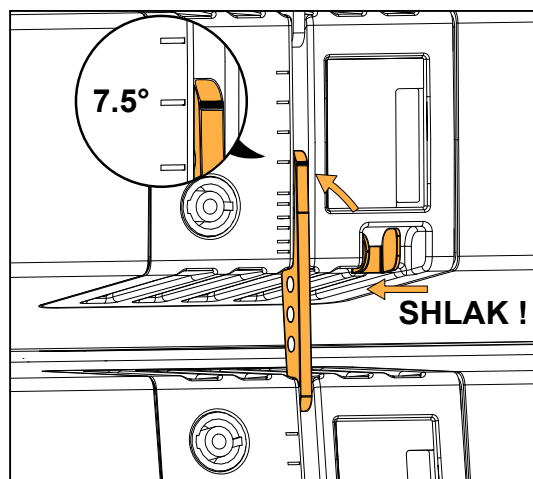
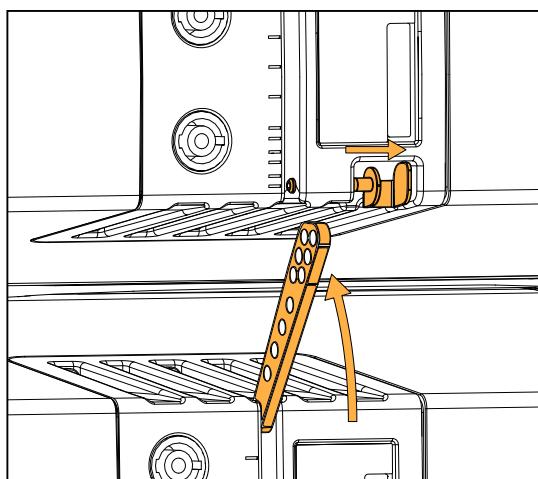


3. Connect a Kiva II (logo on the right-hand side) under the array.



Set the inter-enclosure angle.

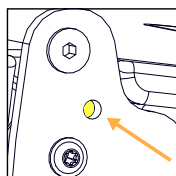
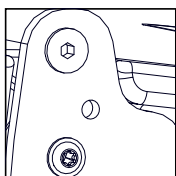
Align the mark on the rigging arm with the chosen angle mark.



Final check

The yellow label is not visible on the logo side.

Shake the assembly up and down and from side to side to verify that all linking points are secured.

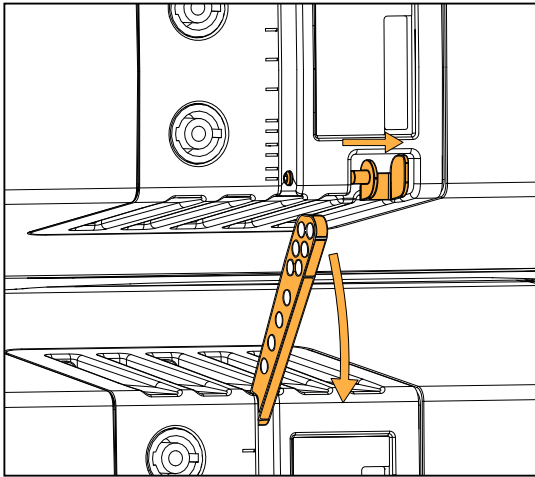


Disassembly

Removing one Kiva II

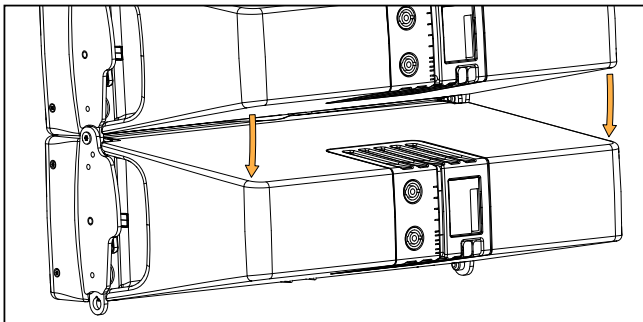
Procedure

1. Release the rigging arm of the bottom enclosure.
Slightly lift the enclosure if necessary.



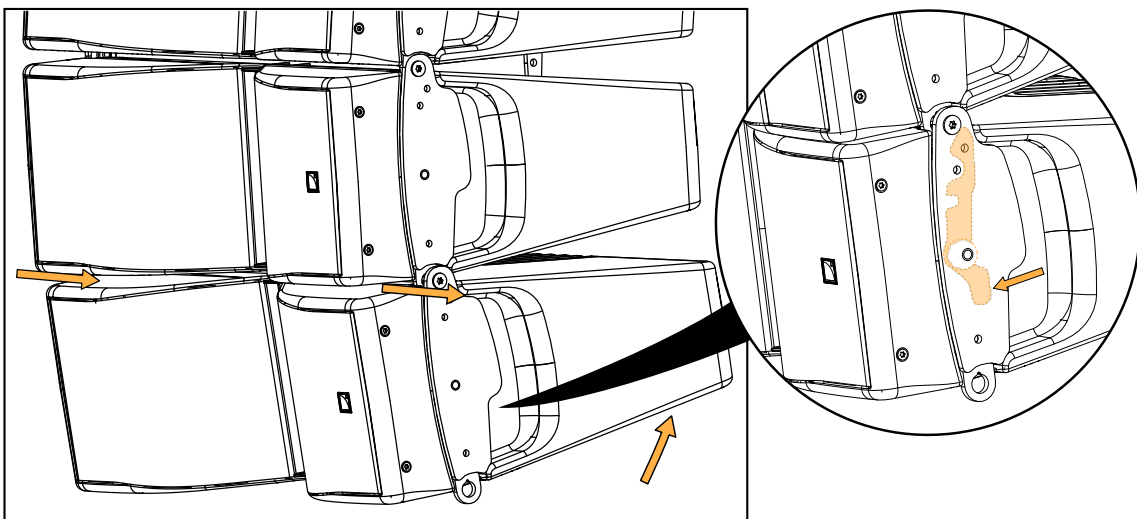
Risk of fall

Carefully lower the rear of the enclosure.



2. Release the enclosure.

Slightly lift the rear of the enclosure if necessary.



Removing a stack of four Kiva II

About this task

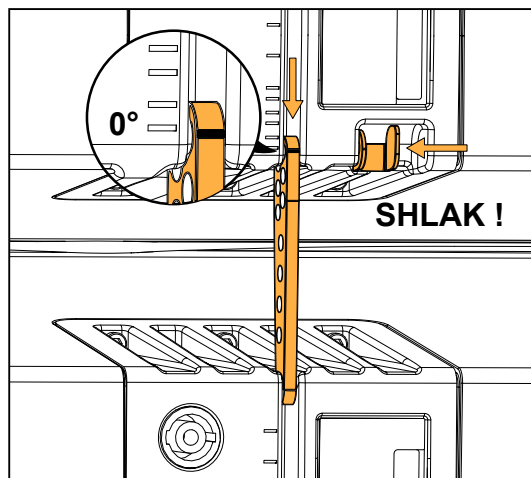
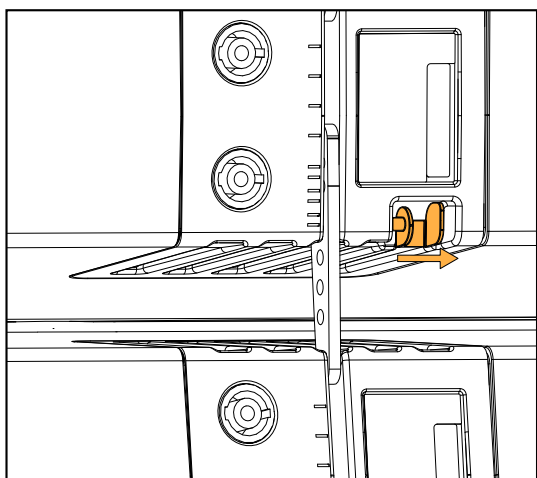
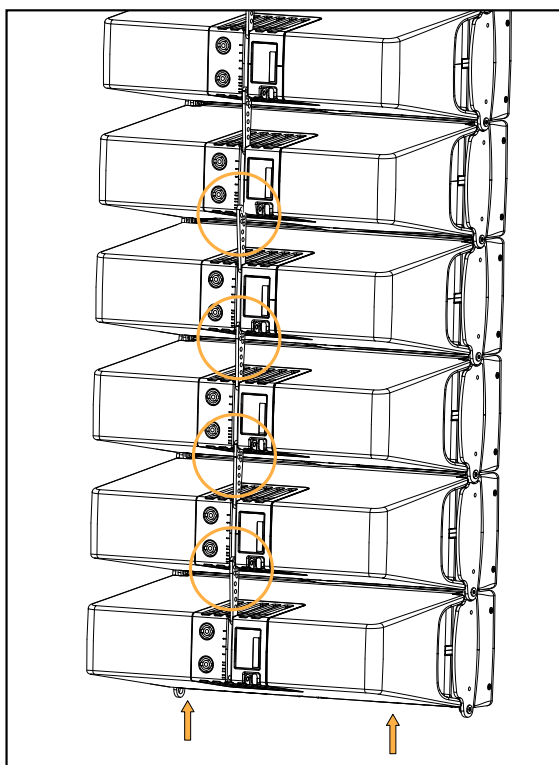
! Use this method for an array of eight or less Kiva II.
Any additional enclosure must be removed one by one.

! Minimum number of operators: 2

Procedure

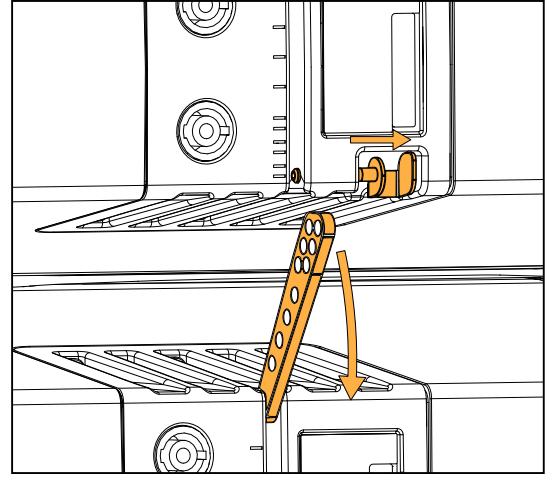
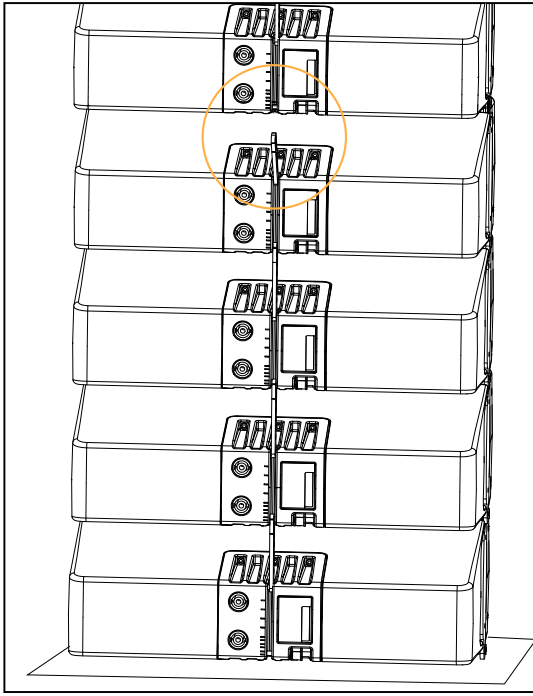
! Hold the bottom enclosure at all times.

1. Set the inter-enclosure angles at 0° for the four bottom enclosures.

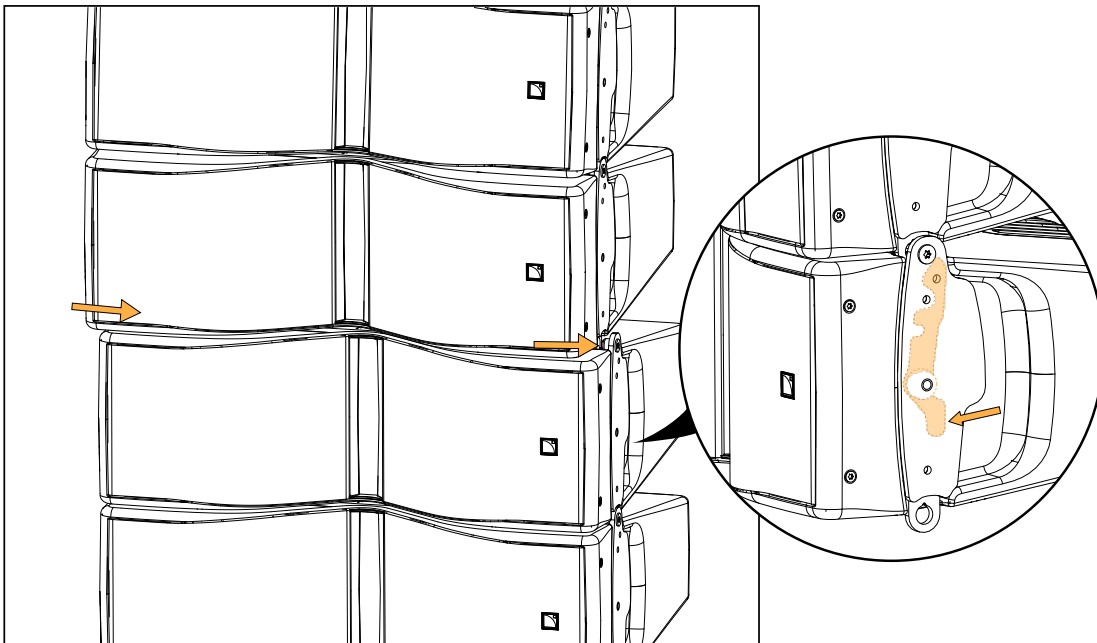


2. Lower the array onto a platform or a chariot.

3. Release the rigging arm of the upper enclosure to disconnect the stack at the rear.



4. Release the top enclosure.



5. Raise the array and put the stack aside.

Stacking

Stacking Kiva II on SB15m

type of deployment	stacking
rigging accessory	KIBU-SB
min number of operators	1

! Additional safety
Secure the stack with straps.

! Risk of falling objects
Verify that no unattached items remain on the array.

i Cardioid configuration
A cardioid configuration is an array of four subwoofers with one reversed element.
Refer to the subwoofer user manual and to the **Cardioid configurations** technical bulletin for details about the use of this configuration.
Any of the following subwoofer arrays can be set in cardioid configuration.

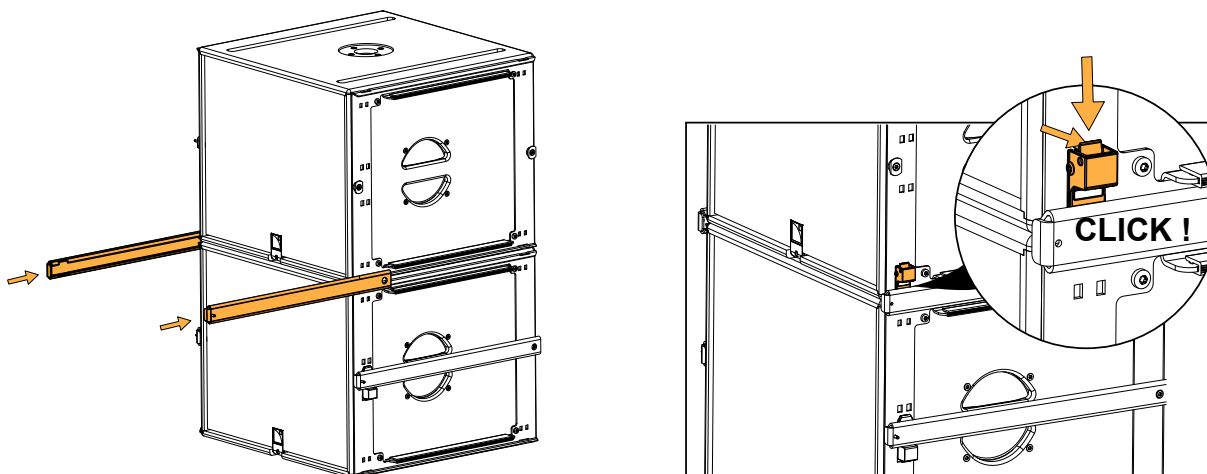
Assembly

About this task

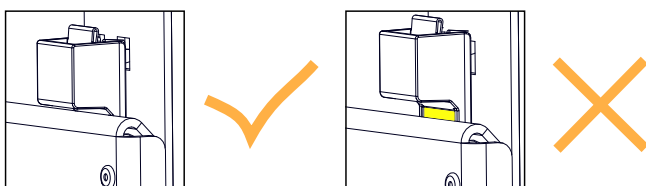
To ground-stack Kiva II on KIBU-SB, start at step 3 (p.41).

Procedure

1. Prepare a stack of SB15m.
Secure the coupling bars with the locking tabs.

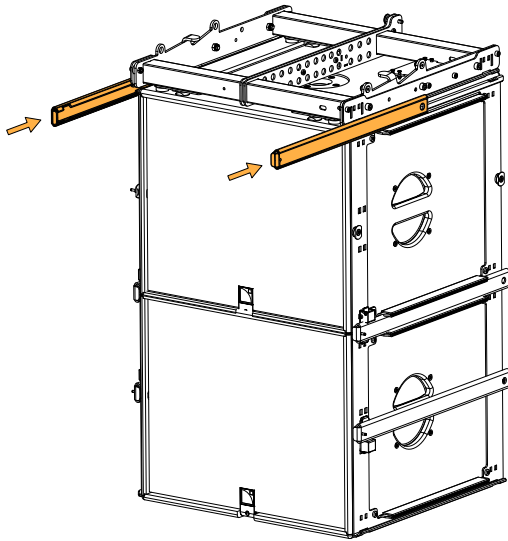


**! Make sure the safety label on each locking tab is fully covered.
Make sure the lugs are in the notches.**

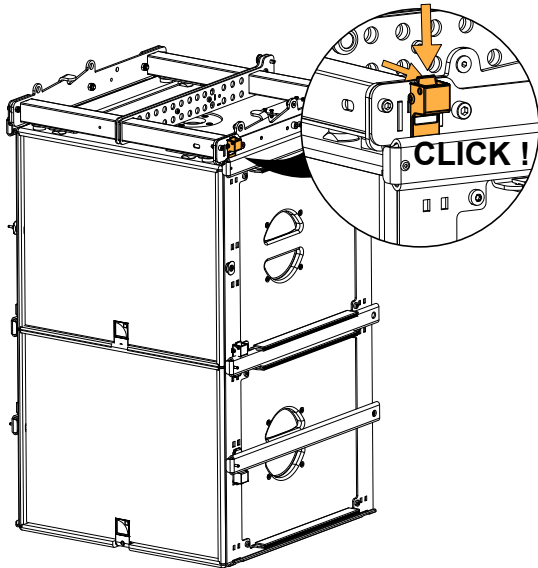


2. Secure KIBU-SB on top of the SB15m stack.

Use the KIBU-SB coupling bars.

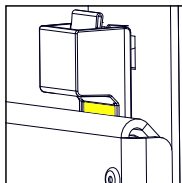
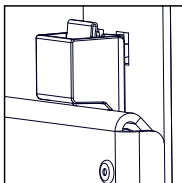


Secure the coupling bars with the locking tabs.



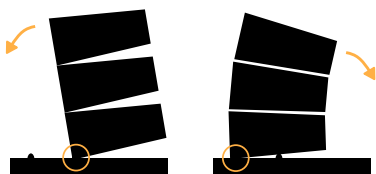
Make sure the safety label on each locking tab is fully covered.

Make sure the lugs are in the notches.

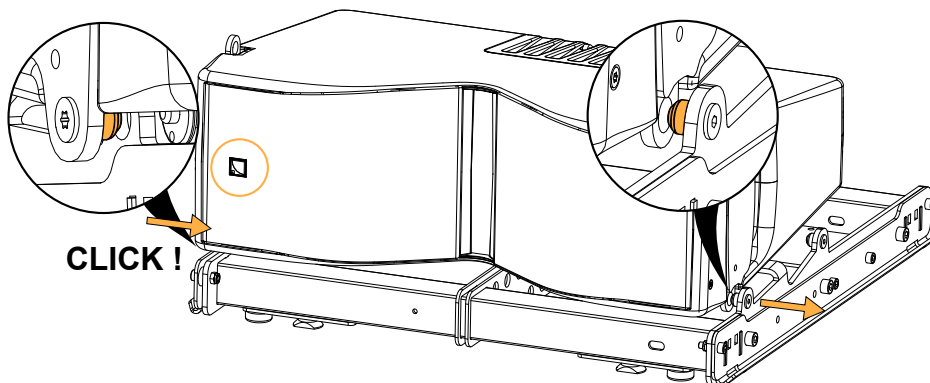


3. Secure Kiva II (logo on the left-hand side) on KIBU-SB (coupling bars removed).

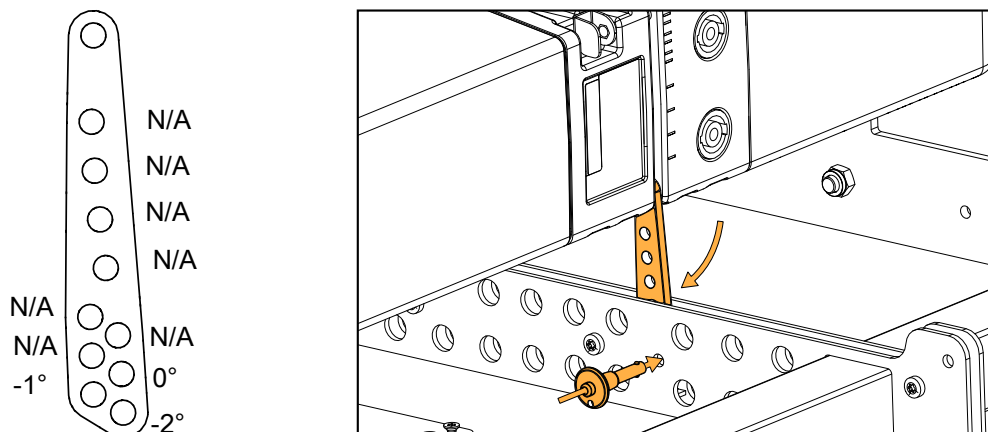
! For optimal stability, prefer the rear position for a front-tilting array and the front position for a rear-tilting array.



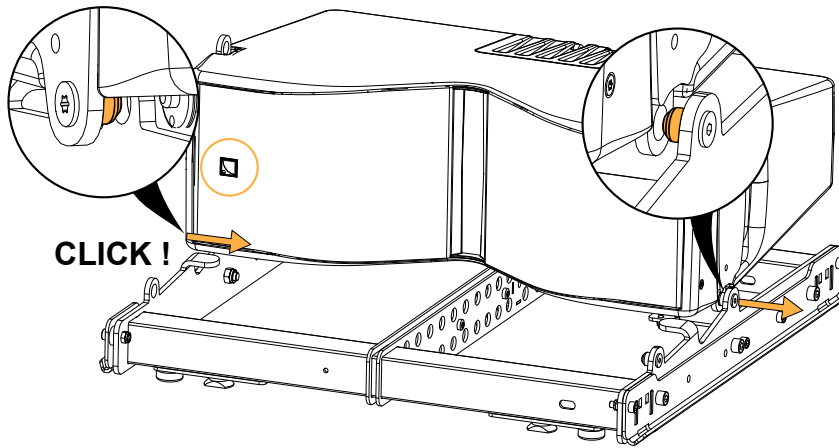
- Front position



Select the site angle on the rigging arm.



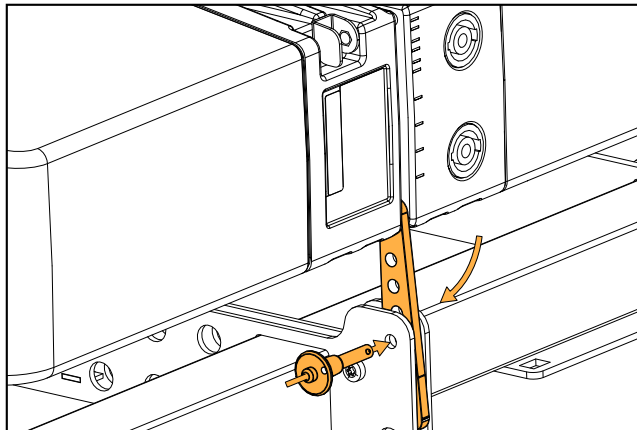
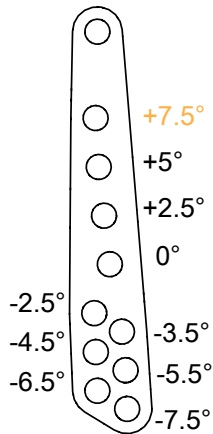
- Rear position



Select the site angle on the rigging arm.

! Kiva II in rear position with a positive 7.5° angle

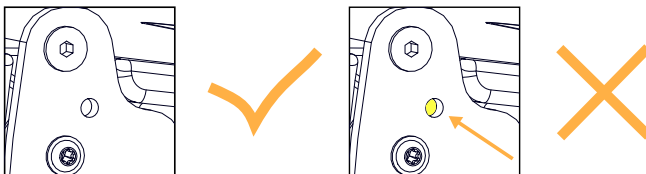
The positive 7.5° angle is only available when Kiva II and KIBU-SB are stacked on SB15m. When Kiva II and KIBU-SB are ground-stacked, the rigging arm cannot be secured at 7.5°.



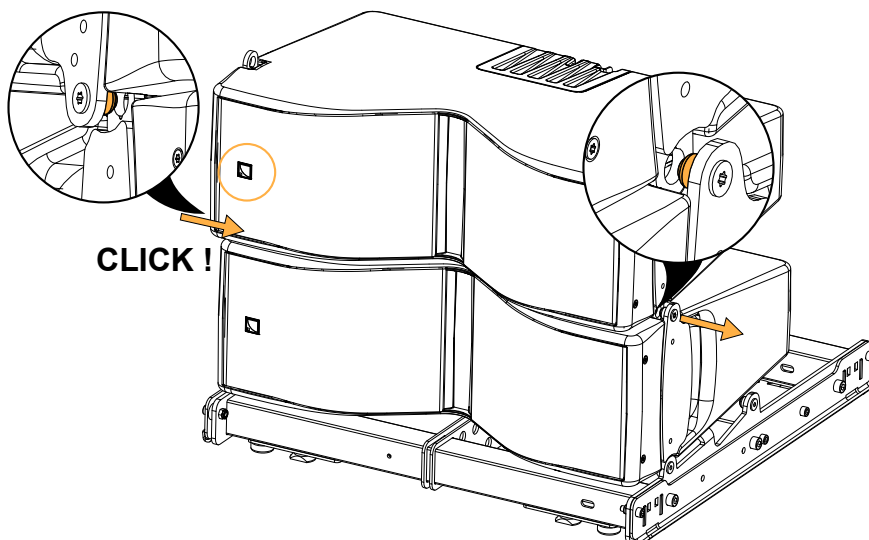
! Final check

The yellow label is not visible on the logo side.

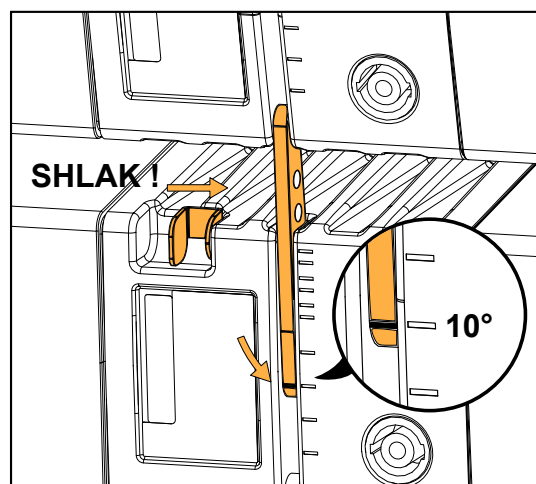
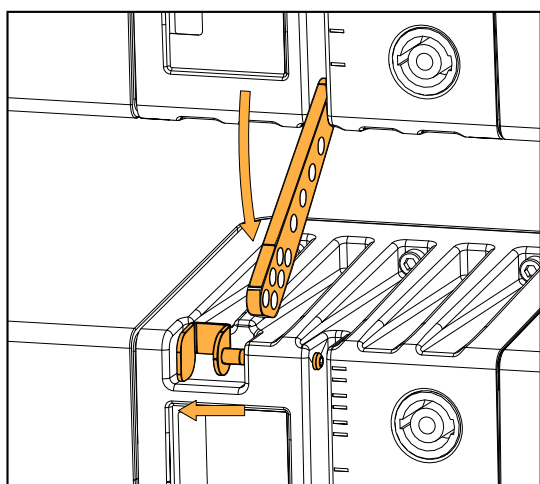
Shake the assembly up and down and from side to side to verify that all linking points are secured.



4. Secure a Kiva II (logo on the left-hand side) on top of the first one.



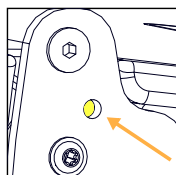
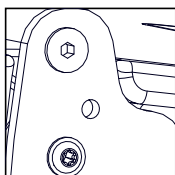
Align the mark on the rigging arm with the chosen angle mark on the bottom enclosure.



Final check

The yellow label is not visible on the logo side.

Shake the assembly up and down and from side to side to verify that all linking points are secured.



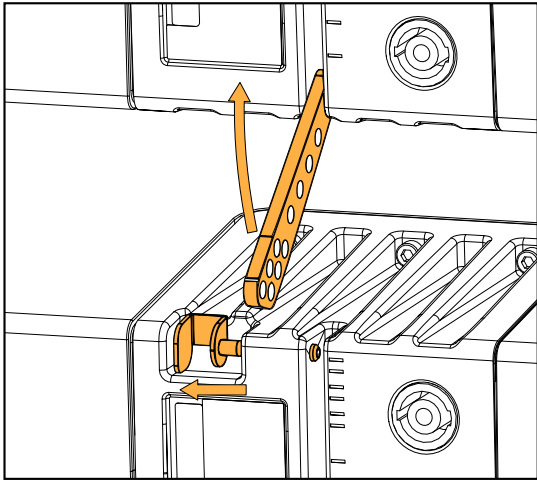
5. Repeat the previous step until the array is complete.

Disassembly

Removing Kiva II

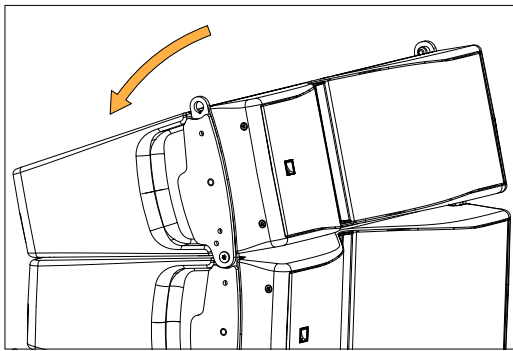
Procedure

1. Release the rigging arm of the top enclosure.

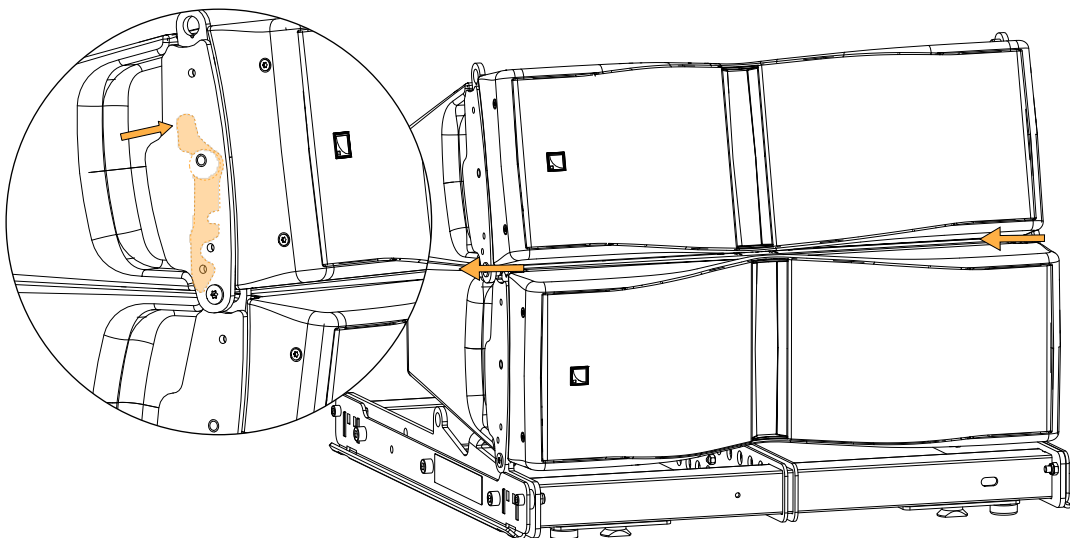


Risk of trapping hand/fingers

Carefully release the back of the enclosure until it rests on the assembly.



2. Unlock the mechanism inside the left handle of the top enclosure and slide the enclosure to the left.



3. Repeat until all enclosures are removed.

Pole-mounting

Pole-mounting Kiva II

type of deployment	pole-mount
rigging accessory	KIET II
	4 x M8 screws, nuts and spacers (provided)
additional material	35 mm / 1.4" pole
	torque screwdriver
	6 mm hex bit
	13 mm hex key
min number of operators	1

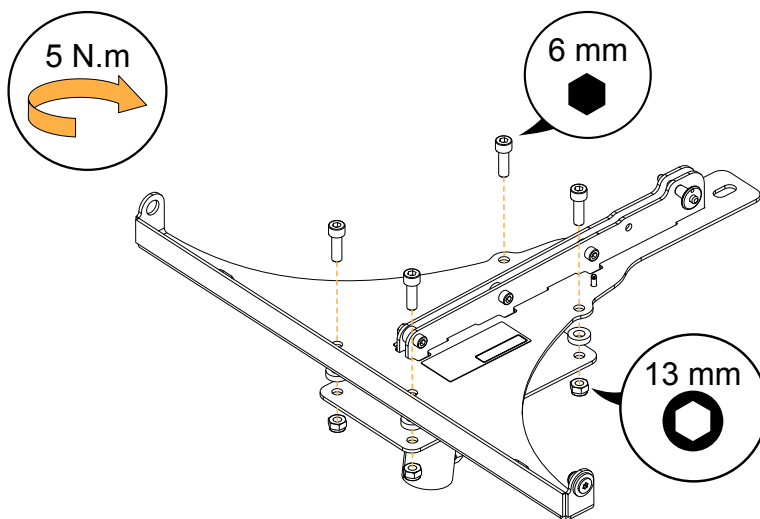
! Pole-mounting on SB15m
 A maximum of two Kiva II can be pole-mounted on a SB15m

! Risk of falling objects
 Verify that no unattached items remain on the array.

Assembly

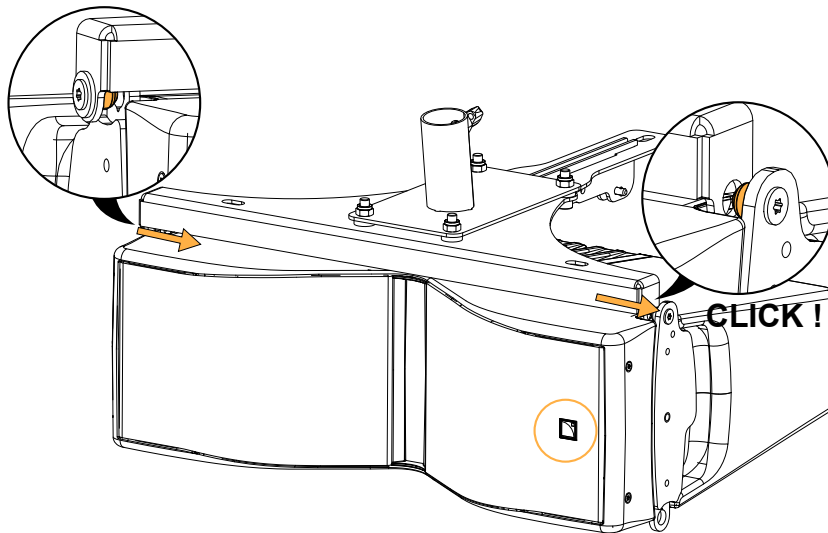
Procedure

1. Assemble KIET II and the pole-socket with the four M8 hex bolts, spacers and nuts.



2. Place Kiva II on a stable surface with the logo on the right.

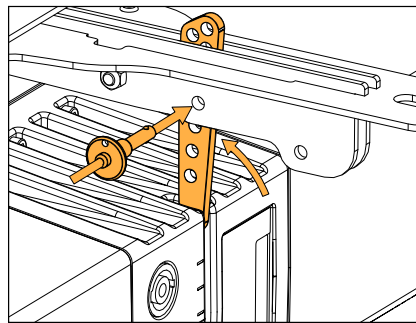
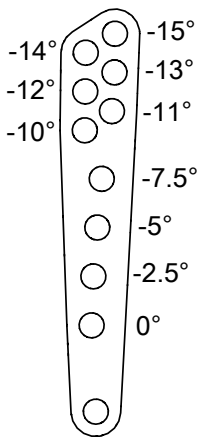
3. Secure KIET II on top of Kiva II.



Select the site angle on the rigging arm.



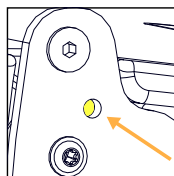
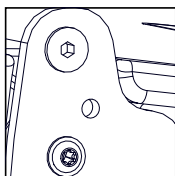
Use the applicable rear linking point, as illustrated.



Final check

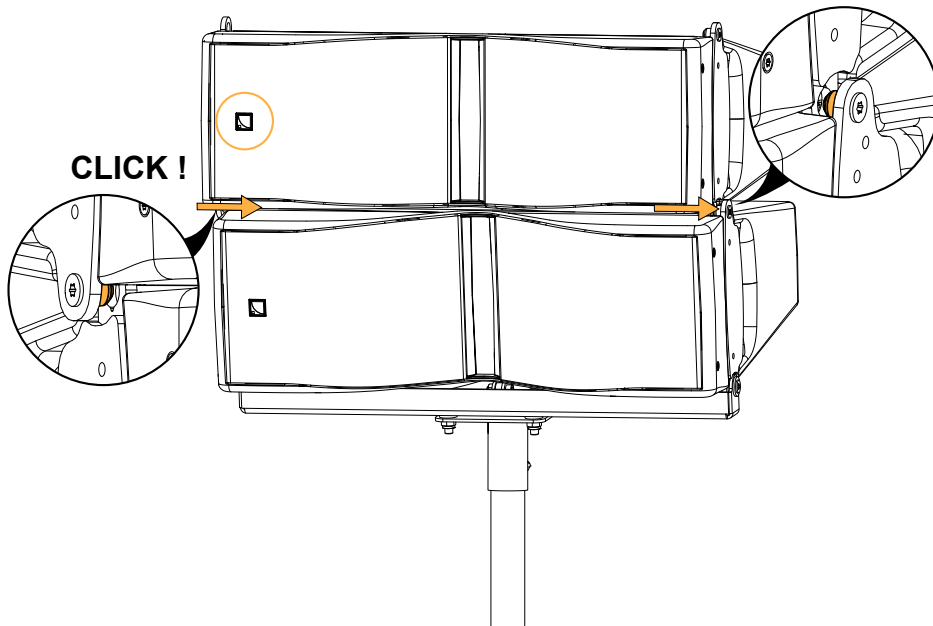
The yellow label is not visible on the logo side.

Shake the assembly up and down and from side to side to verify that all linking points are secured.

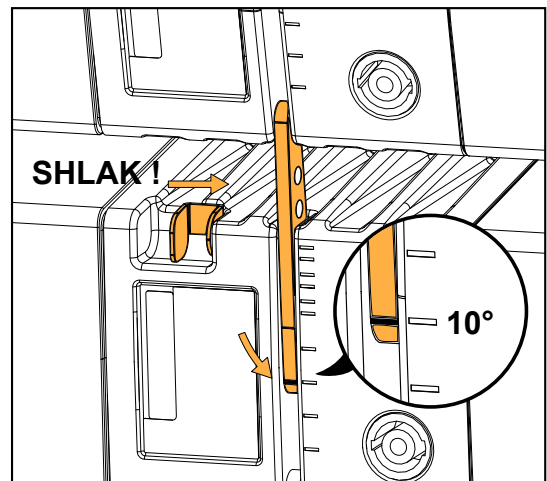
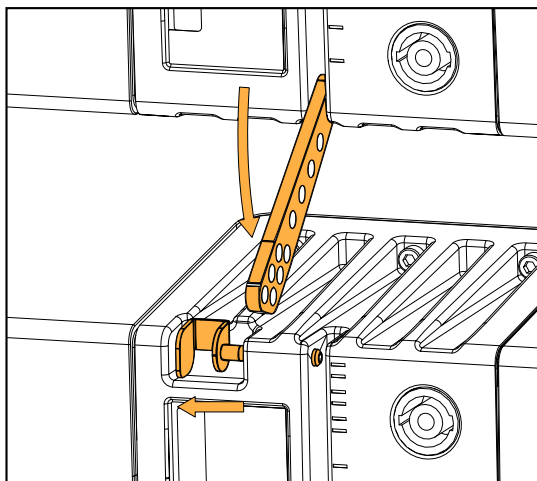


4. Reverse the assembly and mount it on the pole.

5. Secure a Kiva II (logo on the left-hand side) on top of the assembly.



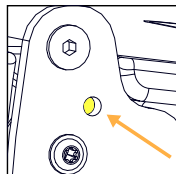
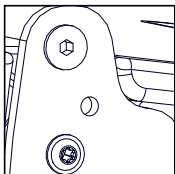
Align the mark on the rigging arm with the chosen angle mark on the bottom enclosure.



Final check

The yellow label is not visible on the logo side.

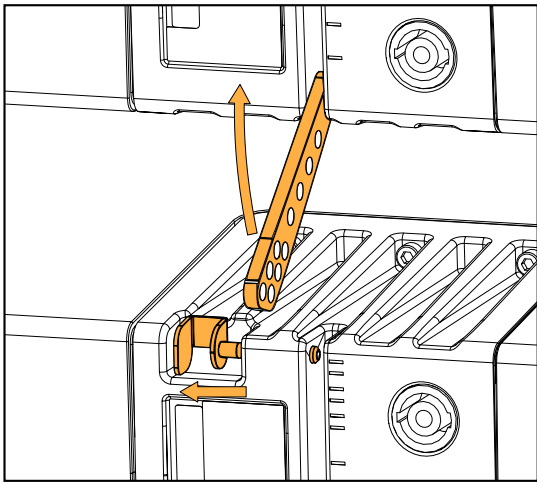
Shake the assembly up and down and from side to side to verify that all linking points are secured.



6. Repeat the previous step until the array is complete.

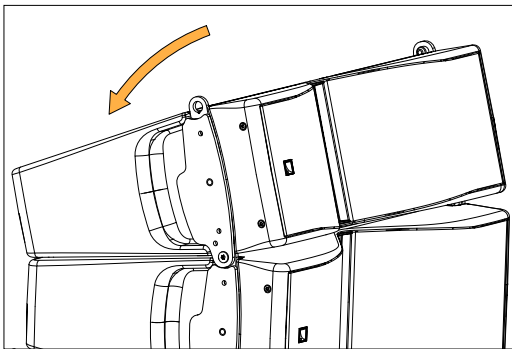
Disassembly

1. Lower the pole.
2. Release the rigging arm of the top enclosure.

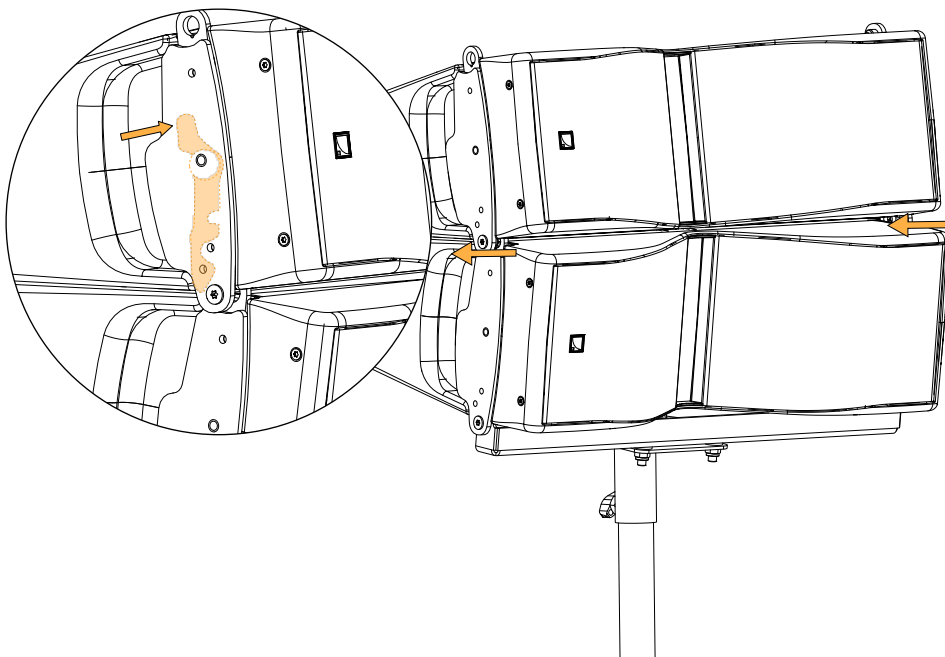


Risk of trapping hand/fingers

Carefully release the back of the enclosure until it rests on the assembly.



3. Unlock the mechanism inside the left handle of the top enclosure and slide the enclosure to the left.



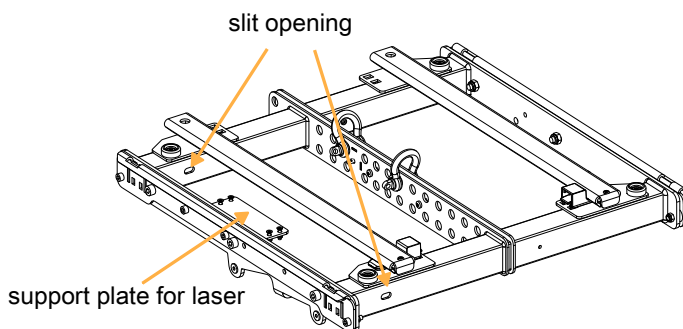
APPENDIX A: Installing the LAP-TEQ inclinometer on KIBU-SB

Tools

- torque screwdriver
- T20 Torx bit
- 7 mm wrench

About this task

KIBU-SB is equipped with a support plate for installing the TEQSAS LAP-TEQ inclinometer provided in the TECH TOOLCASE.



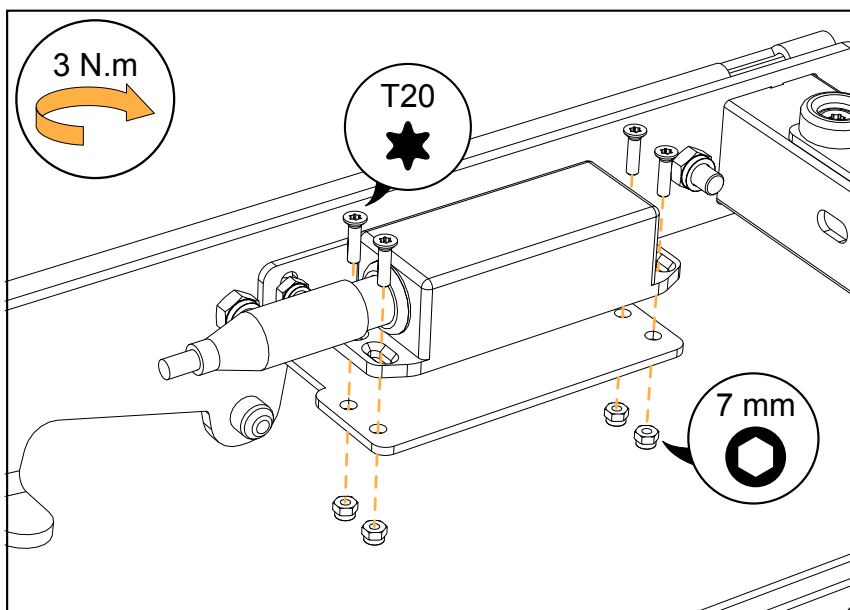
i Calibrating the LAP-TEQ

Refer to the manufacturer instructions in the L-Acoustics TECH TOOLCASE.
An additional XLR3 cable is needed.

Exploded view

Use the screws and nuts provided with the KIBU-SB.

Before tightening the screws, align the laser with the slit opening.



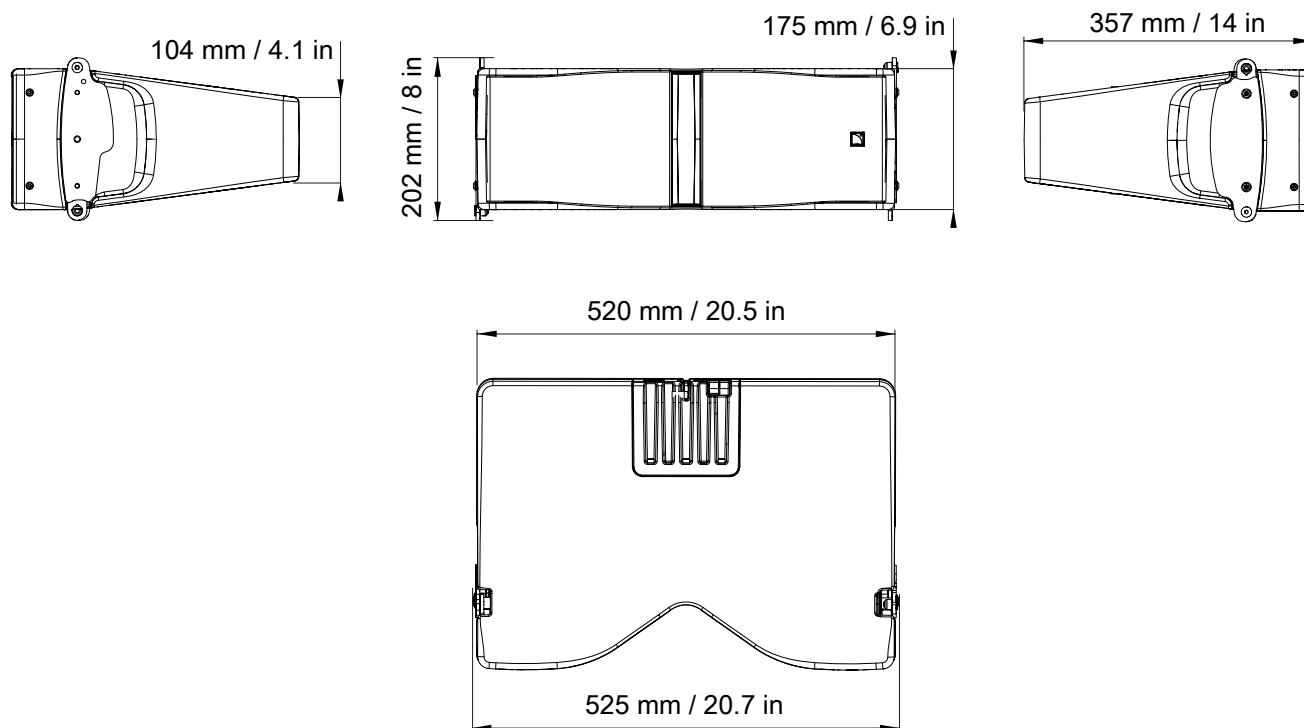
Specifications

Kiva II specifications

Description	2-way passive WST enclosure: 2 x 6.5" LF + 1.75" HF diaphragm, amplified by LA4X / LA8 / LA12X
Usable bandwidth (-10 dB)	70 Hz - 20 kHz ([KIVA II])
Maximum SPL¹	138 dB ([KIVA II])
Nominal directivity	horizontal: 100° vertical: depending on the number of elements and array curvature
Transducers	LF: 2 x 6.5" neodymium HF: 1 x 1.75" neodymium compression driver
Acoustical load	LF: bass-reflex enclosure HF: DOSC waveguide and L-Fins
Nominal impedance	16 Ω
Connectors	IN: 1 x 4-point speakON LINK: 1 x 4-point speakON
Rigging and handling	flush-fitting 3-point rigging system inter-enclosure angles: 0, 1, 2, 3, 4, 5, 7.5, 10, 12.5, 15° 2 handles
Weight (net)	14 kg / 31 lb
Cabinet	composite sandwich structure
Front	composite grill with anti-corrosion coating acoustically neutral 3D fabric
Rigging components	high grade steel
Finish	dark grey brown (Pantone 426C) pure white RAL 9010 custom RAL code on special order
IP	IP55

¹Peak level measured at 1 m under free field conditions using pink noise with crest factor 4 (preset specified in brackets).

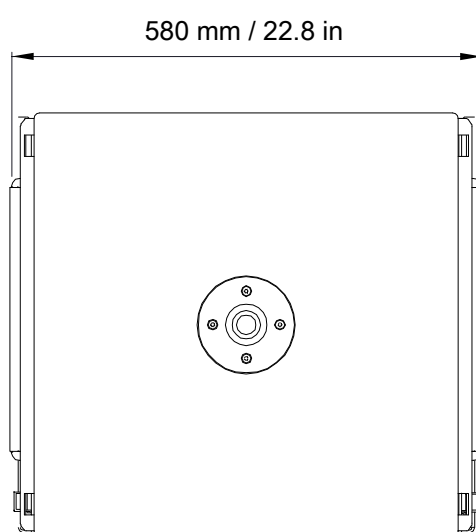
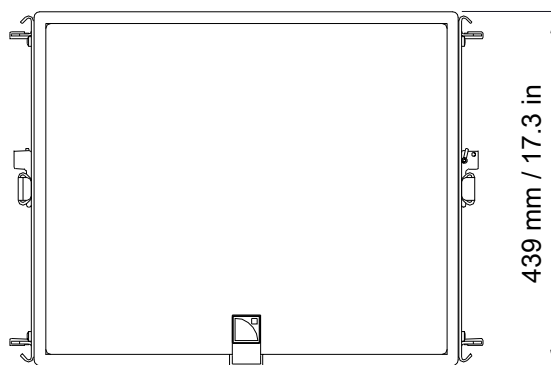
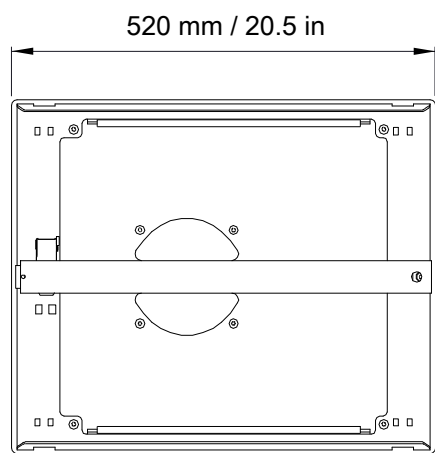
Kiva II dimensions



SB15m specifications

Description	high power compact subwoofer, amplified by LA4X / LA8 / LA12X
Low frequency limit	40 Hz ([SB15_100])
Maximum SPL¹	137 dB ([SB15_100])
Directivity	standard or cardioid
Transducers	1 x 15"
Acoustical load	bass-reflex enclosure, L-Vents
Nominal impedance	8 Ω
Connectors	IN: 4-point speakON LINK: 4-point speakON
Rigging and handling	2 handles 2 coupling bars and 2 locking tabs 1 x 35 mm pole socket
Weight (net)	36 kg / 79.4 lb
Cabinet	first grade Baltic birch plywood
Front	steel grill with anti-corrosion coating acoustically neutral 3D fabric
Rigging components	high grade steel
Finish	dark grey brown Pantone 426C pure white RAL 9010 custom RAL code on special order

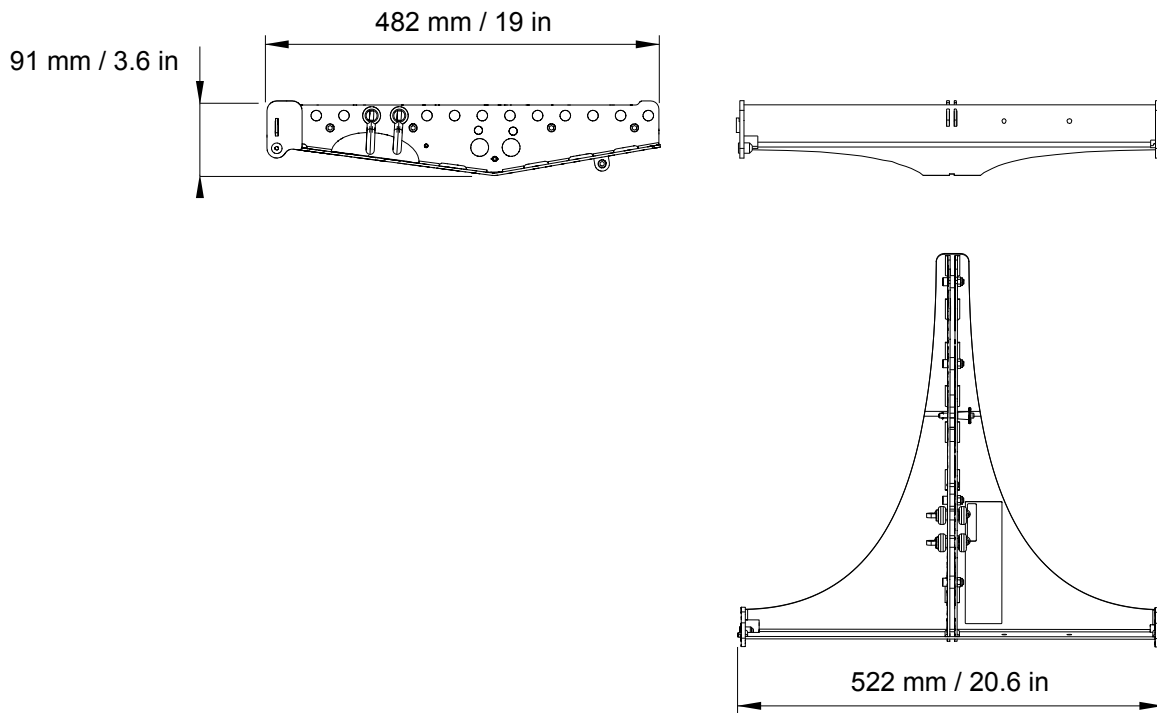
¹ Peak level at 1 m under half space conditions using pink noise with crest factor 4 (preset specified in brackets).

SB15m dimensions

KIBU II specifications

Description	rigging frame for flying Kiva / Kiva II 2 × Ø12 mm shackles WLL 1 t
Weight (net)	3.8 kg / 8.4 lb
Material	high grade steel with anti-corrosion coating

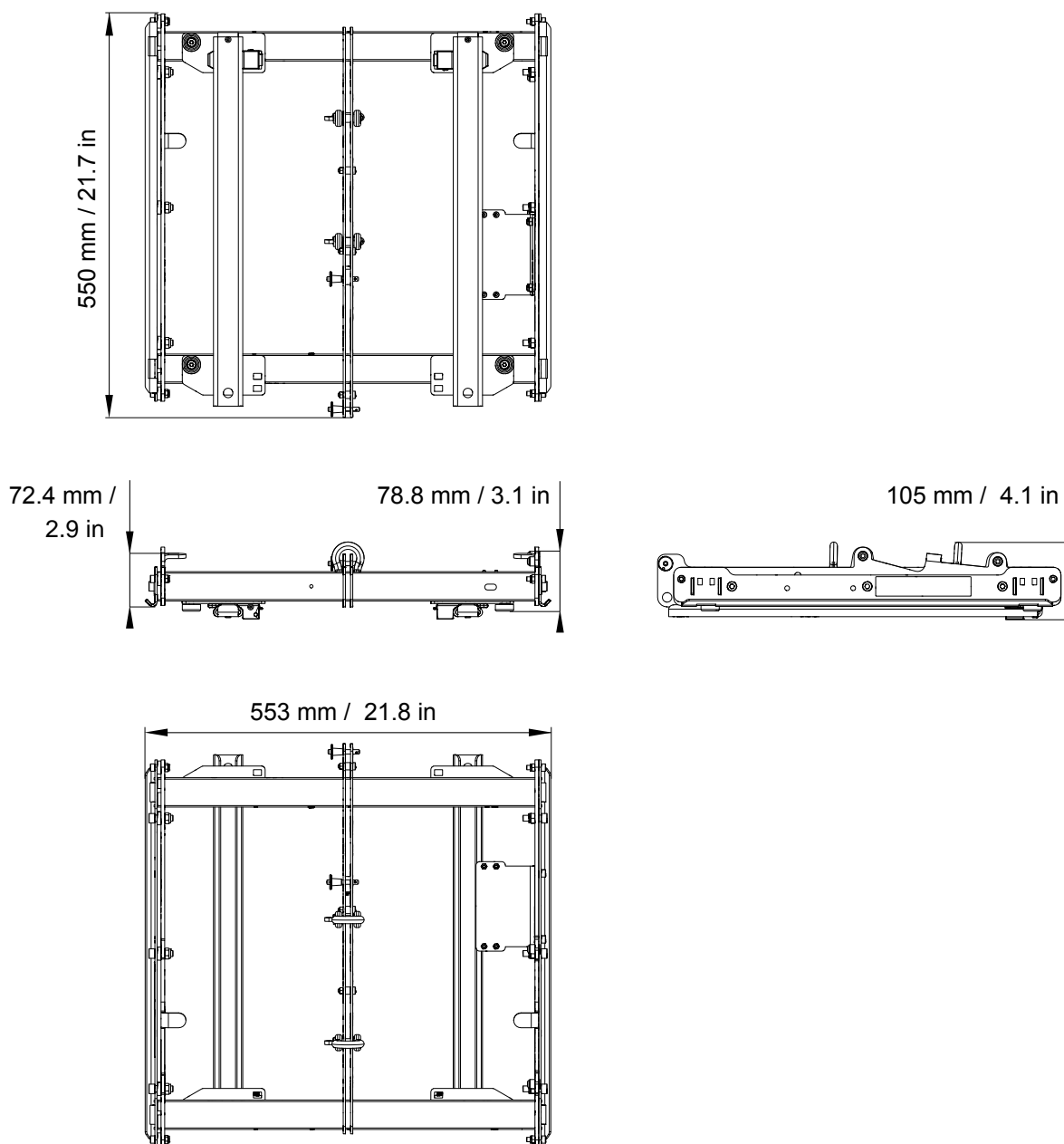
KIBU II dimensions



KIBU-SB specifications

Description	rigging frame for flying or stacking Kiva / Kiva II and SB15m 2 x Ø12 mm shackles WLL 1 t
Weight (net)	10.7 kg / 23.6 lb
Material	high grade steel with anti-corrosion coating

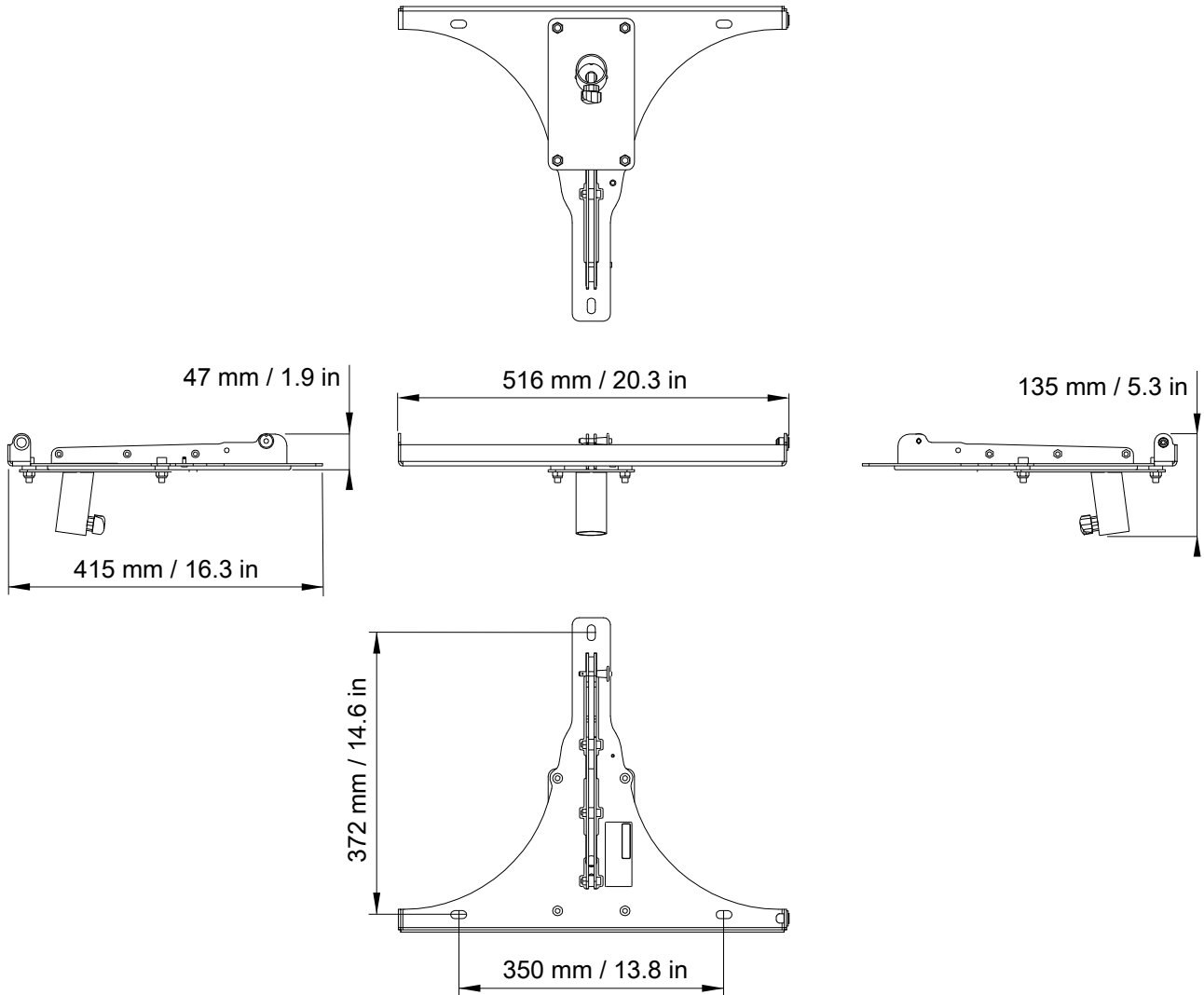
KIBU-SB dimensions



KIET II specifications

Description	rigging plate for ceiling or pole-mount of 3 Kiva / Kiva II maximum
Weight (net)	3.2 kg / 7.1 lb
Material	high grade steel with anti-corrosion coating

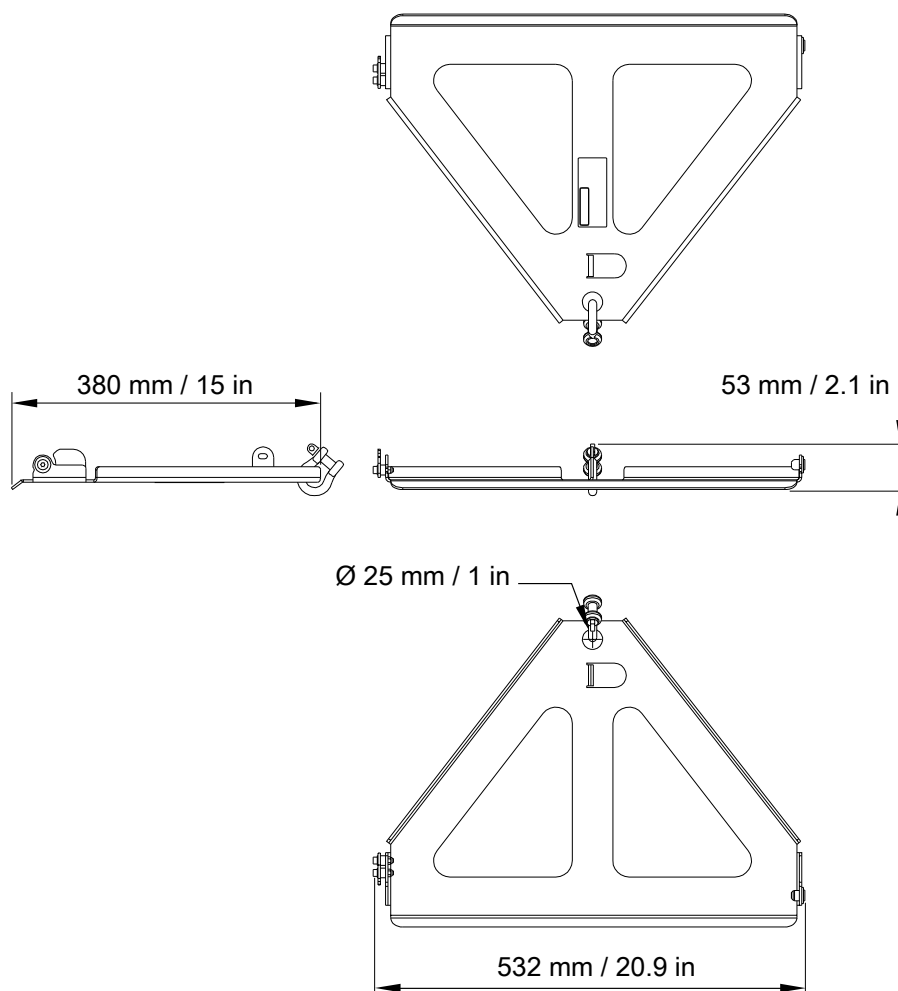
KIET II dimensions



KIVA-PULLBACK specifications

Description	pullback accessory for Kiva / Kiva II 1 x Ø12 mm shackle WLL 1 t
Weight (net)	2.6 kg / 5.7 lb
Material	high grade steel with anti-corrosion coating

KIVA-PULLBACK dimensions





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