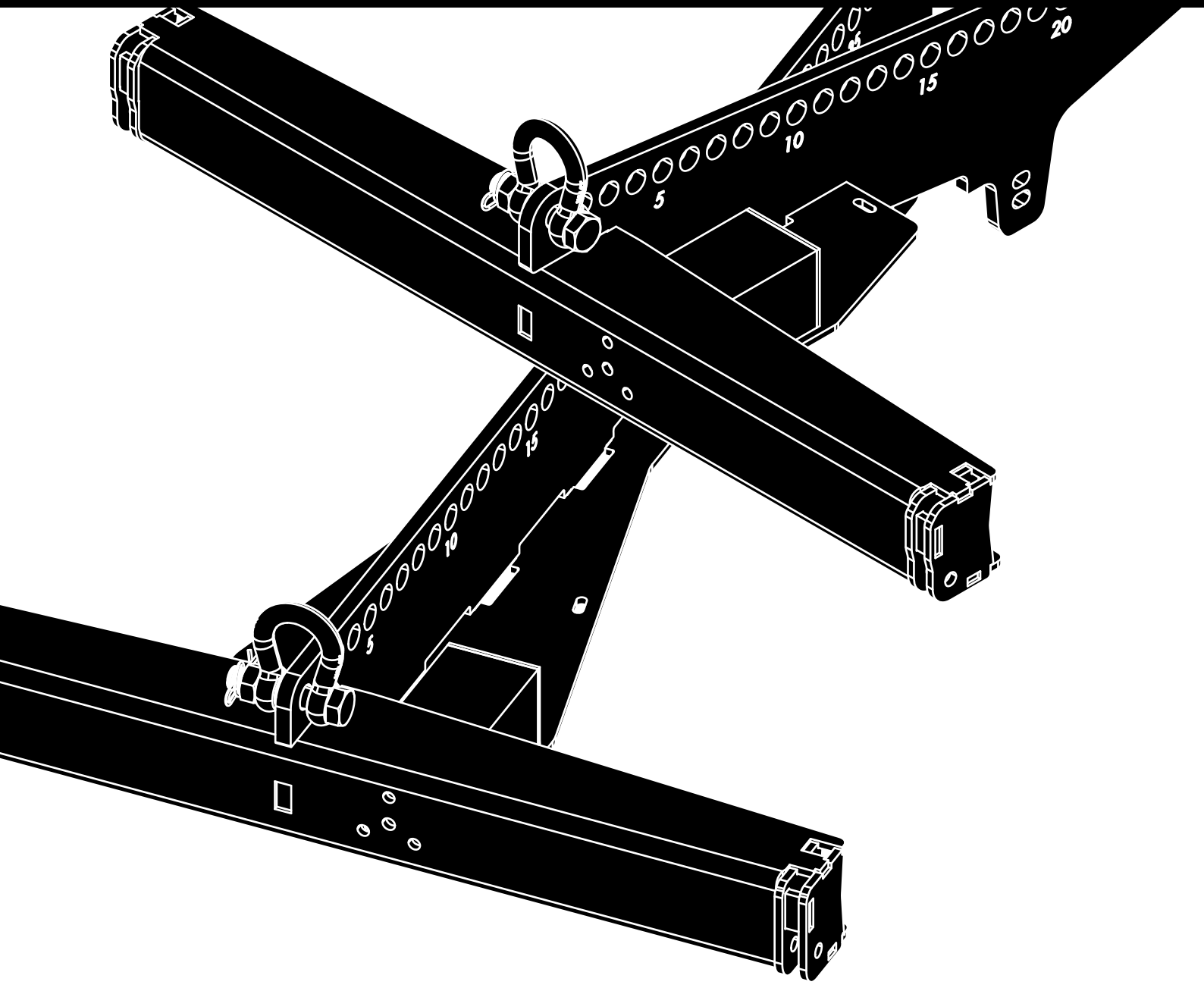
CL

Z5821/Z5822
Rigging manual
1.1 en



d&b audiotechnik

Notes on document version

Version 1.1:
Initial edition.

General information

Z5821/Z5822 Rigging manual

Version: 1.1 en, 04/2025, D2783.EN .01

Keep this document with the product or in a safe place so that it is available for future reference.

We recommend you to regularly check the d&b website for the latest version of this document.

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If you supply d&b products, please draw the attention of your customers to this document. Enclose the relevant documents with the systems. If you require additional documents for this purpose, you can order them from d&b.

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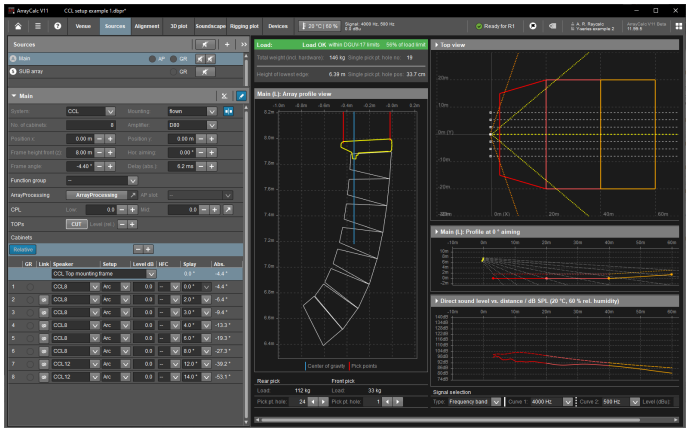


d&b ArrayCalc

1.1 Intended use

The d&b CCL rigging components must only be used in conjunction with d&b CCL loudspeakers, as described in this manual.

1.2 d&b ArrayCalc

For both safety and acoustic reasons, d&b line arrays must be designed using the d&b ArrayCalc simulation software. The software is available as a native stand-alone application for both Microsoft Windows and Mac OS X operating systems and can be downloaded at www.dbaudio.com.

Detailed information on how to use and operate ArrayCalc is provided by the Help system of the software. To access the Help system, press F1 or select the Help button () from the ArrayCalc toolbar. This will launch the HelpViewer which provides an overview of the program as well as a search function and direct access to the related topics.

In addition, ArrayCalc will provide you with typical array configurations within the permitted load limits and will help you get familiar with the mechanical load conditions and limitations.

d&b TI 385

Further information on line array design can be found in "TI 385 d&b Line array design, ArrayCalc". The TI is supplied with the software or can be downloaded from the d&b website at www.dbaudio.com.

d&b Seminar

We also recommend you to attend the regularly hosted d&b Line array training seminars. Further information regarding the d&b seminars and a seminar schedule can also be found on the d&b website at www.dbaudio.com.

d&b Video tutorials

1.3 General safety

- Installation and setup should only be carried out by qualified and authorized personnel observing the valid national Rules for the Prevention of Accidents (RPA).
- It is the responsibility of the person installing the assembly to ensure that the suspension/fixing points are suitable for the intended use.
- Always carry out a visual and functional inspection of the items before use. In case there is any doubt as to the proper functioning and safety of the items, these must be withdrawn from use immediately.

Please also refer to ⇒ Chapter 6 “Care and maintenance” on page 24.

System components and weights

Loudspeaker

Z0880/Z0882 CCL8/CCL12 cabinets ..... 17.6 kg (38.8 lb)

Z0884 CCL-SUB cabinet ..... 44.5 kg (98 lb)

Rigging components

Z5821 CCL top mounting frame ..... 5.6 kg (12.4 lb)

Z5822 CCL-SUB mounting frame ..... 8 kg (17.6 lb)

Z5820.000 CCL Flying frame with Beam extension ..... 15.5 kg (34.2 lb)

1.4 System components and weights/Load capacity

Load capacity

NOTICE!

Z5821 CCL top mounting frame

The Z5821 CCL top mounting frame is designed to support a total system weight of 250 kg (551 lb) - SWL including all rigging components.
This allows the suspension of a maximum of 12 x CCL-TOP cabinets.

Z5822 CCL-SUB mounting frame

The Z5822 CCL-SUB mounting frame is designed to support a total system weight of 250 kg (551 lb) - SWL including all rigging components.
This allows the suspension of a maximum of 6 x CCL-SUB cabinets.

Z5820 CCL Flying frame with Beam extension

In connection with a mixed array configuration, the Z5820 CCL Flying frame together with its Beam extension is used as adapter frame between SUB and TOP cabinets.
With the Z5822 CCL-SUB mounting frame as suspension device this allows mixed array configurations with a total system weight of 250 kg (551 lb) - SWL including all rigging components.

1.5 Wind loads

WARNING!
Potential risk of personal injury and material damage!

When setting up fixed outdoor installations, unpredictable wind loads must be taken into account.

- For this reason, arrays must not be suspended using hoisting chains or steel wire ropes.
- The arrays must be firmly attached to the onsite roof construction.

1.6 Operational safety

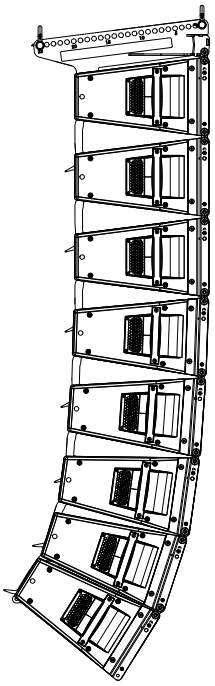
- The assembly should always be carried out by two persons.
- During assembly, pay attention to the possible risk of crushing. Wear suitable protective clothing.
- Observe all instructions given on the respective instruction labels of the rigging components, such as flying frames, load adapters, touring carts, and loudspeaker cabinets.
- Observe all instructions given on the respective instruction labels of the rigging components and loudspeaker cabinets.
- When chain hoists are in operation, ensure that there is nobody directly underneath or in the vicinity of the load.

- The assembly should always be carried out by two persons.
- During assembly, pay attention to the possible risk of crushing. Wear suitable protective clothing.
- Observe all instructions given on the respective instruction labels of the rigging components, such as load beams, flying and compression frames, touring carts, and loudspeaker cabinets.
- In connection with the d&b Z5711 ArraySight sender unit (laser inclinometer), take precautions to prevent anyone from looking directly into the laser beam, and wear appropriate eye protection.
- Be aware that any object or tool left on the top of the array during setup may fall when the array is operated. Always check that no tools or other objects are left on the array before final hoisting.
- When chain hoists are in operation, ensure that there is nobody directly underneath or in the vicinity of the load.
- Do not under any circumstances climb on the array.

2.1 Mounting frames

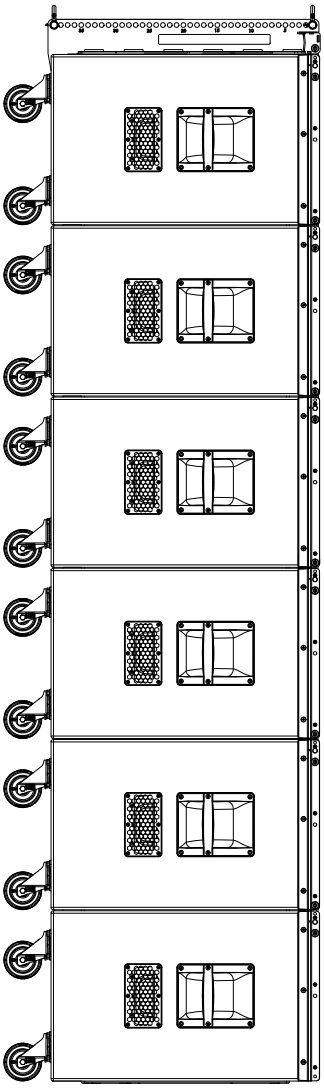
The d&b CCL cabinets are supplemented by two dedicated mounting frames (Z5821 CCL top mounting frame and Z5822 CCL-SUB mounting frame) and in addition the Z5820 CCL Flying frame.

These components allow setting up the following array configurations*:



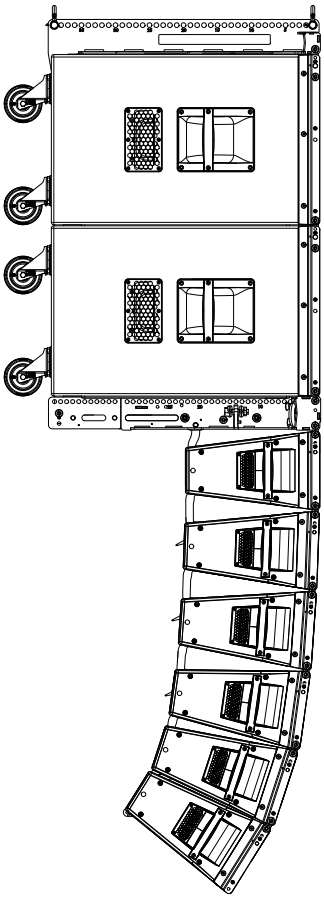
CCL-TOP array, 8-deep with:
Z5821 CCL top mounting frame

Refer to ⇒ Chapter 4.2 “CCL-TOP array” on page 15.



CCL-SUB column, 6-deep with:
Z5822 CCL-SUB mounting frame

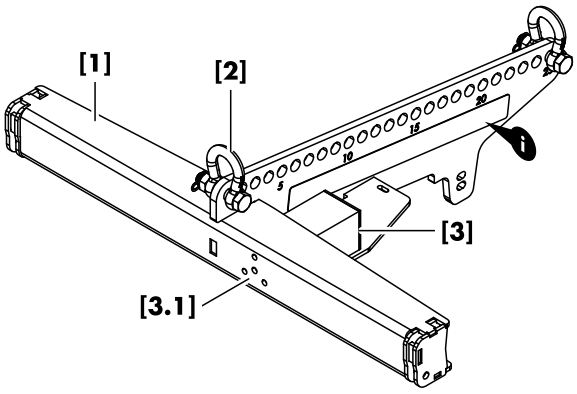
Refer to ⇒ Chapter 4.3 “CCL-SUB column” on page 17.



Mixed array with:
Z5822 CCL-SUB mounting frame
Z5820 CCL Flying frame used as adapter frame

Refer to ⇒ Chapter 4.4 “Mixed array configuration” on page 19.

* **Example configurations**



2.1.1 Z5821 CCL top mounting frame

Intended use

The Z5821 CCL top mounting frame is designed to support a total system weight of 250 kg (551 lb) - SWL including all rigging components.
This allows the suspension of a maximum of 12 x CCL-TOP cabinets.

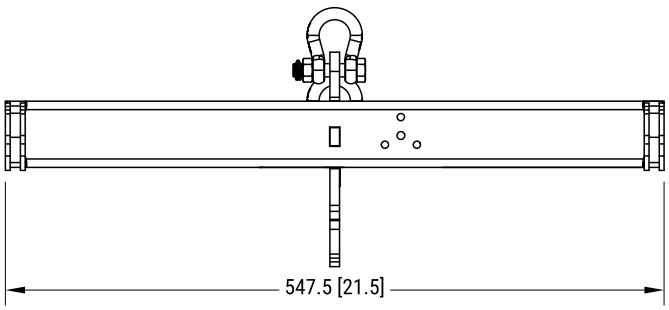
Scope of supply

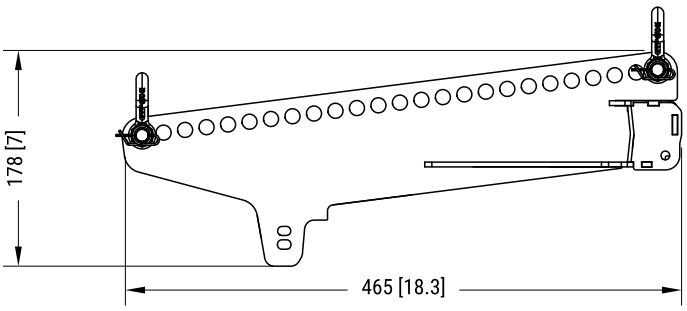
Please verify the shipment for completeness and proper condition of the items.

The CCL top mounting frame is equipped and supplied with the following rigging components:

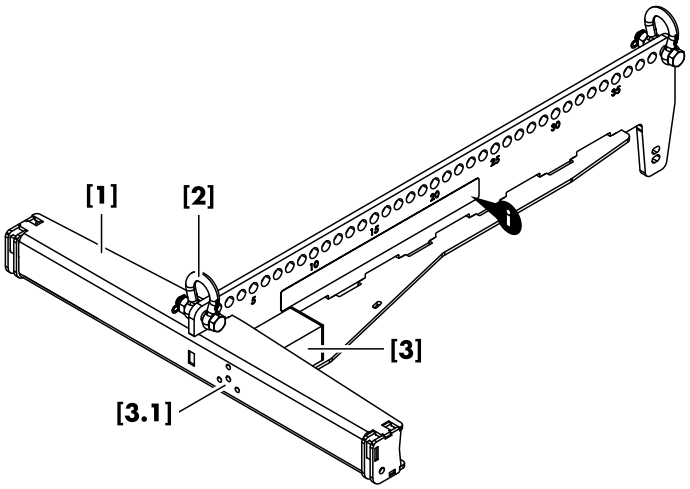
Pos.	Component	Description
[1]	Z5821	CCL top mounting frame.
[2]	Shackle	Two 1 t shackles are provided for hoisting purposes.
[3]	Mounting plate	The Mounting plate is used to attach the d&b Z5711 ArraySight sender unit.
[3.1]		Four dedicated holes are provided at the front of the frame. The center hole serves as the exit for the laser beam, while the three surrounding holes allow for the adjustment of the ArraySight sender unit, if necessary.
i		Instruction label providing vital safety and rigging instructions.
	D2783.EN .01	Z5821/Z5822 Rigging manual

Weight ..... 10 kg (22 lb)





Z5821 CCL top mounting frame dimensions in mm [inch]



2.1.2 Z5822 CCL-SUB mounting frame

Intended use

The Z5822 CCL-SUB mounting frame is designed to support a total system weight of 250 kg (551 lb) - SWL including all rigging components.
This allows the suspension of a maximum of 6 x CCL-SUB cabinets.

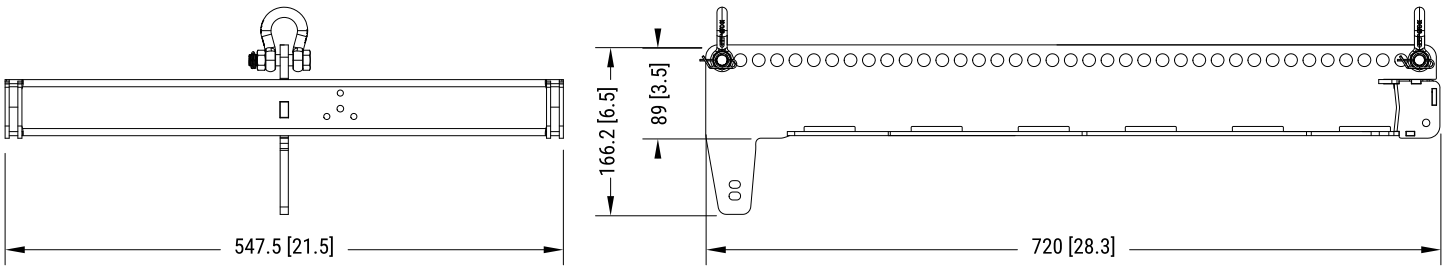
Scope of supply

Please verify the shipment for completeness and proper condition of the items.

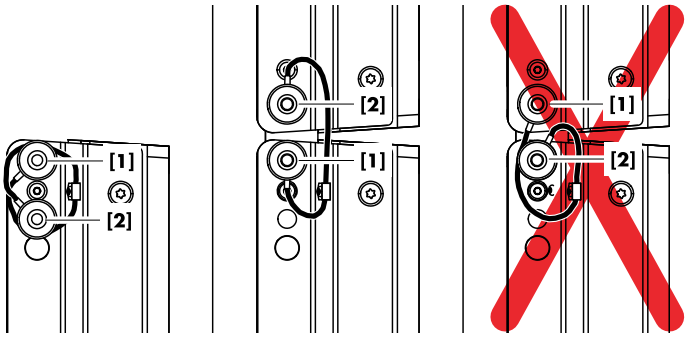
The Z5822 CCL-SUB mounting frame is equipped and supplied with the following rigging components:

Pos.	Component	Description
[1]	Z5822	CCL-SUB mounting frame.
[2]	Shackle	Two 1 t shackles are provided for hoisting purposes.
[3]	Mounting plate	The Mounting plate is used to attach the d&b Z5711 ArraySight sender unit.
[3.1]		Four dedicated holes are provided at the front of the frame. The center hole serves as the exit for the laser beam, while the three surrounding holes allow for the adjustment of the ArraySight sender unit, if necessary.
ⓘ		Instruction label providing vital safety and rigging instructions.
	D2783.EN .01	Z5821/Z5822 Rigging manual

Weight ..... 8 kg (17.6 lb)



Z5822 CCL-SUB mounting frame dimensions in mm [inch]



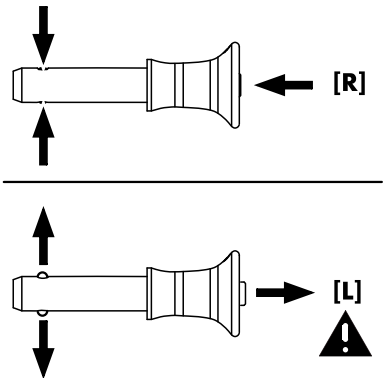
2.2 Locking pins

WARNING!
Potential risk of personal injury and/or damage to material!

The steel wires between the Locking pins of the cabinets and rigging components are not intended to carry any load. The cabinet's weight must only be carried by the Front and Splay/Rear links in connection with the front and rear rigging strands of the loudspeaker cabinets and the Flying frame.

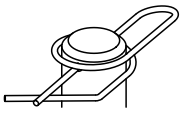
Please observe the following:

- The steel wire must run from the upper to the lower Locking pin.
- Do not cross the Locking pins to avoid twisting of the steel wires.
- Ensure all Locking pins are fully inserted and securely locked before lifting any load by briefly pulling the Locking pin towards you.



Functionality (Quick lock mechanism)
The quick lock mechanism applies to all types of Locking pins. Proceed as follows:

1. Press the button to **R**elease the locking mechanism (◀ **[R]**).
2. Remove the Locking pin through the respective link or socket.
3. Insert the Locking pin through the respective link or socket until it is fixed in place.
4. Release the button to **L**ock the pin (▶ **[L]**).
5. ⚠ Recheck the Locking pin is securely locked by briefly pulling the Locking pin towards you.



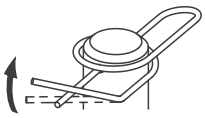
Ring cotter locked

2.3 Ring cotters

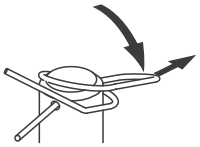
Function of the ring cotter
By default, the ring cotters are "locked" to prevent them from loosening.

For modification reasons such as altering a position or exchanging a rigging component, it may be necessary to temporarily remove the ring cotter and reattach it afterwards.

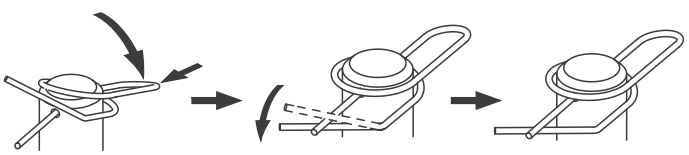
For this purpose, proceed as follows:



1. **Unlock**
   Unlock the ring cotter by pushing up the front wire loop over the straight wire shaft.



2. **Release and remove**
   Push down the rear wire loop until the ring cotter snaps over the edge of the bolt and remove the ring cotter.



3. **Refit and lock**
   Refit the ring cotter by pushing the straight wire shaft through the hole and pressing the front wire loop underneath the straight wire shaft.

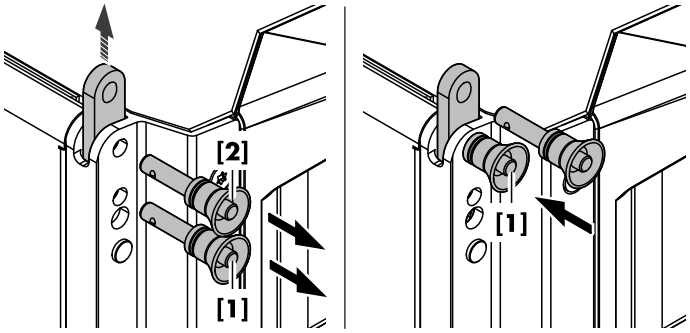
2.4 Cabinet rigging mechanism

The cabinets are mechanically connected to the Flying frame and subsequent loudspeakers using the Front links attached to both sides of the cabinet front and the central Splay/Rear link at the rear of the cabinet.

All necessary rigging components are mounted to the cabinet and slide out when needed.

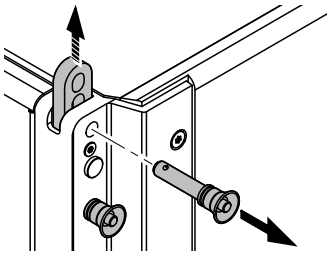
In principle, the Front link mechanism applies to both the TOP and SUB cabinets. The Front links are spring loaded and therefore extend automatically as soon as the respective Locking pins are released and pulled out.

2.4.1 Front link mechanism



TOP cabinets

1. Release both Locking pins.
   ↳ The Front link extends automatically.
2. Reinsert and lock Locking pin **[1]** to fix the Front link in place.



SUB cabinets

⇒ Release the upper Locking pin.
↳ The Front link extends automatically.

The Front link mechanism of the SUB cabinets provides four different settings:

1. SUB to Frame (⇒ Fig. 1).
2. SUB to SUB with 0° splay between the cabinets (⇒ Fig. 2).
3. SUB to SUB with 2.5° splay (free) between the cabinets (⇒ Fig. 3).
4. SUB to SUB with 2.5° splay (blocked) between the cabinets (⇒ Fig. 4).
   This setting is used to prevent the cabinets from folding up.

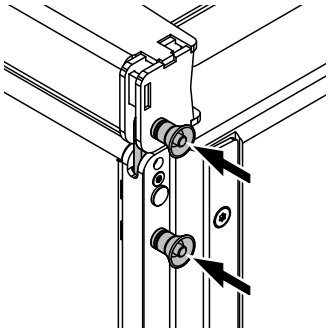


Fig. 1: SUB to Frame

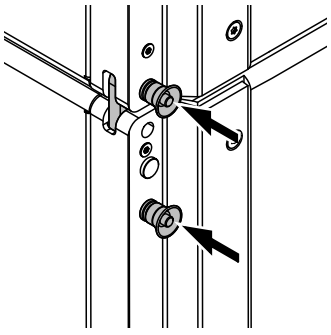


Fig. 2: SUB to SUB 0° splay

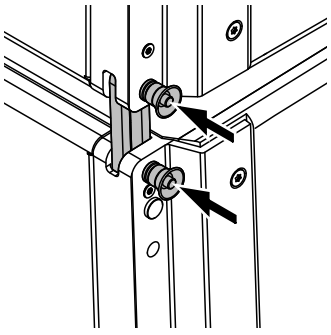


Fig. 3: SUB to SUB 2.5° splay, free

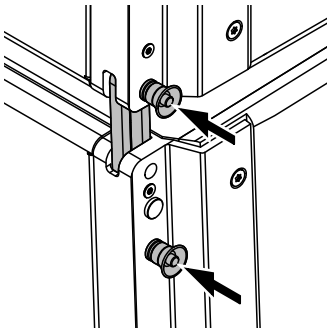
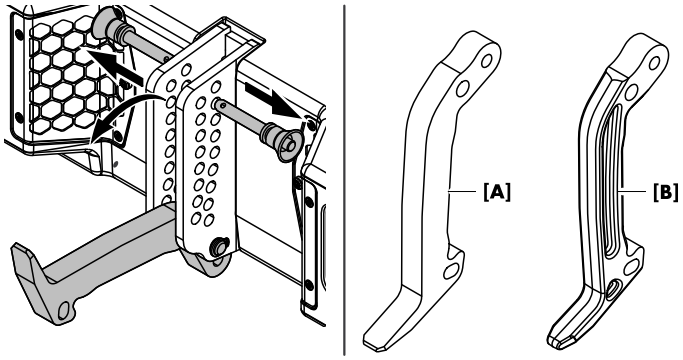


Fig. 4: SUB to SUB 2.5° splay, blocked

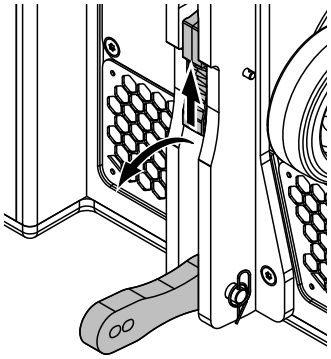


2.4.2 Splay/Rear link mechanism

TOP cabinets

On CCL-TOP cabinets, release the respective Locking pins and fold out the Splay link.

> **Note:** For CCL-TOP speakers of the first series batch, the Splay link is cut from solid steel **[A]** (high pressure water jet cut), while for the following series batches, the Splay link will be a forged variant **[B]**.
>
> As function and handling of both variants are identical, the Splay link is shown in its solid metal variant throughout this manual.**[A]**.



SUB cabinets

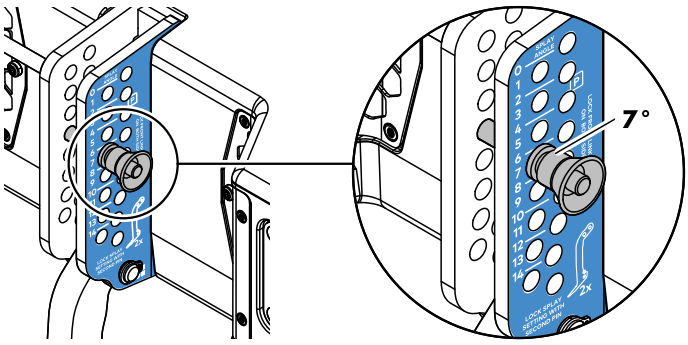
The Rear link of the CCL-SUB cabinets is fixed in its park position by a spring loaded slider mechanism.

To release the link, simply push the slider upwards.

2.4.3 Preset splay angles on CCL8/CCL12 cabinets

The splay angles are set on the central rear rigging strands of the cabinets and can be set in the range from 0° to 14° in 1° detends.

⇒ Insert and lock the Locking pin to the respective hole.

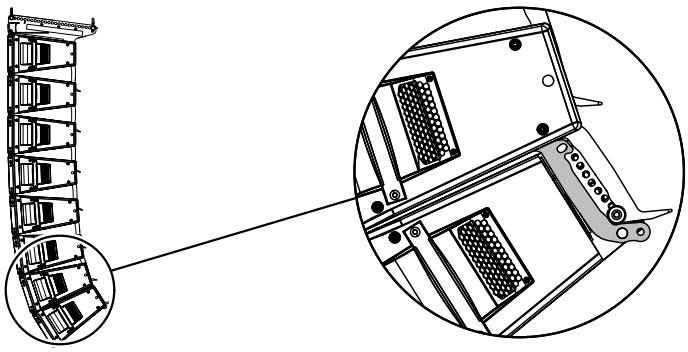


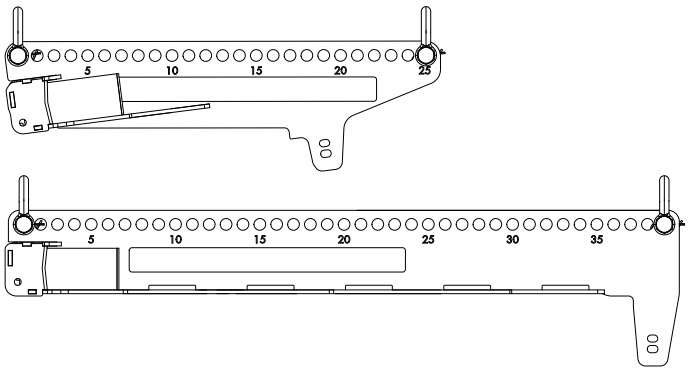
Preset splay angle (for example 7°)

2.4.4 Park position CCL8/CCL12 Splay link

The Splay link of the last cabinet of an array can be kept in its park position.

> **Note:** In this case, splay angles of 0...3° for the cabinet above are not applicable.





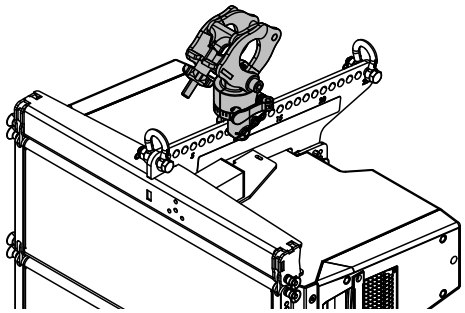
Mounting frame center bar hole grid

- Top mounting frame: 25 holes
- SUB mounting frame: 39 holes

Z5821 CCL top mounting frame
Z5822 CCL-SUB mounting frame

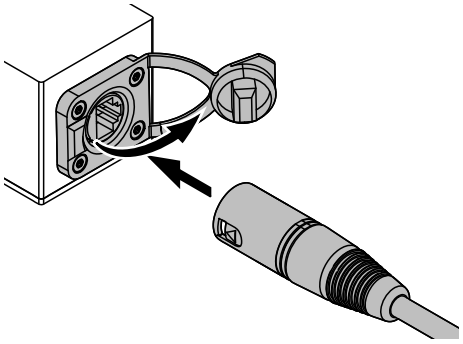
The center bars of the mounting frames are equipped with a hole grid allowing either single or dual pickpoint suspension using the enclosed 1 t shackles.

With single pickpoint suspension, the position of the shackle defines the vertical aiming of the entire array.
The corresponding hole position is calculated using ArrayCalc.



3.1 Z5147 Rota clamp option

Alternatively, a CCL array with a total system weight of up to 500 kg (1100 lb) can be suspended and horizontally aligned from a single flying point using the d&b Z5147 Rota clamp. The clamp allows the load to be attached to overhead bars or truss with a tube diameter of up to 50 mm (2″).
The corresponding hole position is calculated using ArrayCalc.



4.1 Setup preparation

Check the acoustical and mechanical setup using ArrayCalc and prepare enough printouts for each array. Alternatively, the ArrayCalc Viewer App can be used for this purpose.

The plan enables the riggers to set up the suspension points, the securing points and the chain hoists.

When on site first:

- Always carry out the assembly with a second person.
- Clear the working areas and ensure there is enough space to set up and lift the array.
- Check that the hoists are exactly in the specified position.
- Ensure the chains are not twisted.

Inspections before setup

Before setting up the array, carry out a visual inspection of all system components for faults. This also includes the loudspeakers and in particular the rigging parts of the cabinets (Front and Splay/Rear links).
Damaged components must be withdrawn from use immediately.

Please follow the instructions given in ⇒ Chapter 6 “Care and maintenance” on page 24.

4.1.1 Connecting the d&b ArraySight sender unit

WARNING!
Potential risk of personal injury!

Please observe the safety instructions provided in the ArraySight manual.

If in use (applicable), proceed as follows:

⇒ Connect the ArraySight sender unit using the enclosed d&b K6006.200.00 CAT5e 1:1 cable (or an appropriate similar cable) and perform a basic test of the laser unit.

↳ For detailed information on the d&b ArraySight laser inclinometer system, please refer to the ArraySight manual.

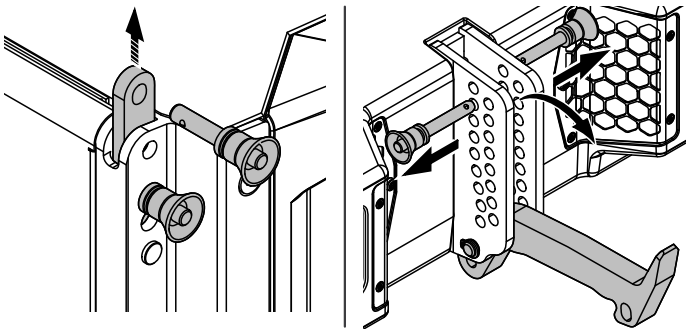
4.2 CCL-TOP array

4.2.1 Remarks and limitations

NOTICE!

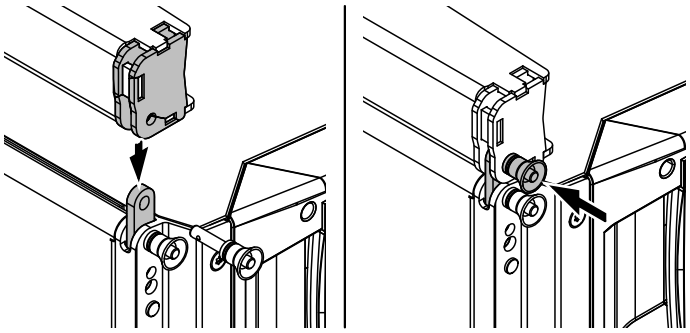
In combination with the Z5821 CCL top mounting frame, a maximum 12 x CCL-TOP cabinets can be flown.

4.2.2 Order of assembly



1. Prepare the first cabinet

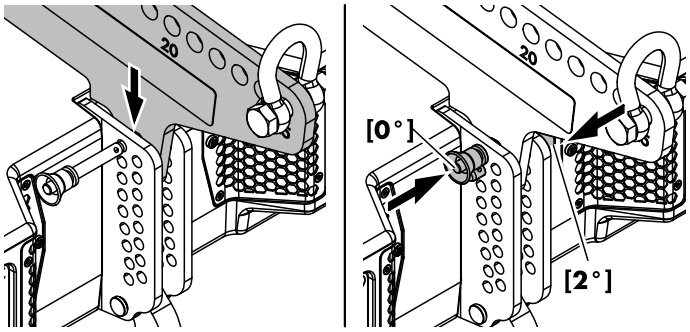
⇒ Extend the Front links and release the Splay link of the first cabinet.



2. Attach the mounting frame to the first cabinet

To attach the frame to the first cabinet, proceed as follows:

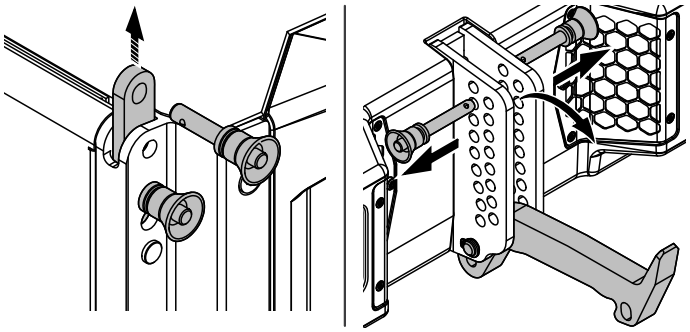
1. Attach the frame onto the cabinet until the Front links of the cabinet fit into the slots at the front of the frame on both sides.
2. Insert the Locking pins to the frame on both sides and ensure both pins are fully inserted and locked.

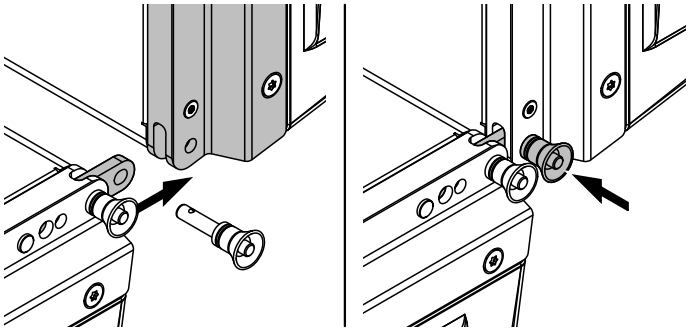


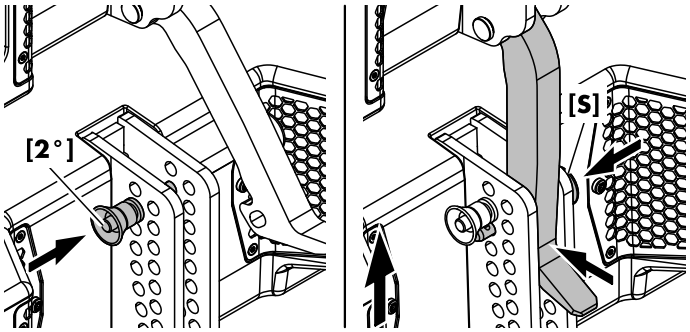
3. At the rear, insert the first Locking pin into the **[0°]** hole.
4. Insert the second Locking pin into the hole below (**[2°]** hole) and ensure both pins are fully inserted an locked.

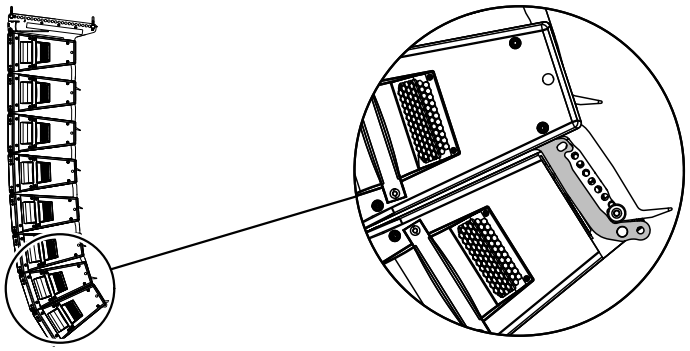
3. Suspend the Mounting frame

1. Suspend the Mounting frame according to your onsite requirements.
2. Lift the assembly to a suitable working height.









4. Add further TOP cabinets

1. Extend the Front links and release the Splay link of the first cabinet.
2. With the front grill facing upwards, attach the front links of the prepared cabinet to the corresponding slots at the front of the upper cabinet on both sides.
3. Insert the Locking pins to the upper cabinet's front rigging strands on both sides and ensure both pins are fully inserted an locked.
4. On the second cabinet preset the desired splay angle (e.g. **[2°]**).
5. Raise the bottom cabinet until the Splay link of the upper cabinet has engaged into the preset Locking pin of the bottom cabinet.
6. Insert the second Locking pin (Safety pin **[S]**) and ensure both pins are fully inserted and locked.

To add further cabinets, proceed in the same manner until the assembly is completed.

5. Splay link of the last TOP cabinet

The Splay link of the last cabinet of an array can be kept in its park position.

> **Note:** In this case, splay angles of 0...3° for the cabinet above are not applicable.

6. Check the assembly

Before hoisting the array to its operating position, recheck the actual status of the entire assembly according to the check list given in ⇒ Chapter 5 “Rechecking, hoisting and secondary safety” on page 23.

7. Rig the cabling

Connect the cables and link cables according to the number of amplifier channels and cabinets used.

- If the amplifiers are already wired and powered on, use their System check functions or Channel mute switches and a test signal to check the correct operation and routing of all channels and cabinets.
- Alternatively, check the wiring using the Array verification function in R1.

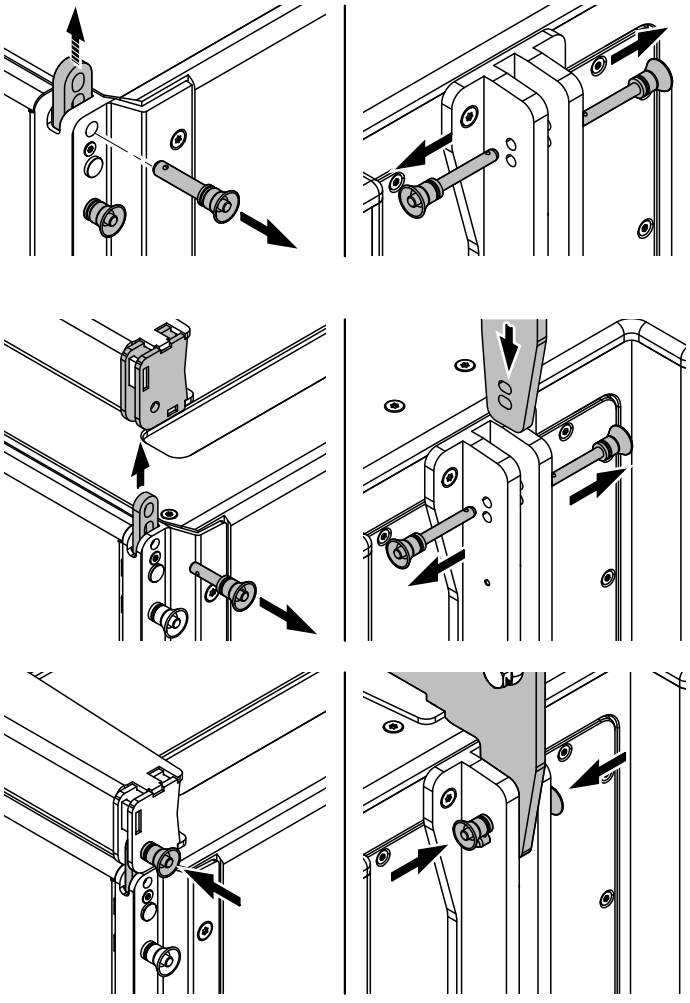
4.3 CCL-SUB column

4.3.1 Remarks and limitations

NOTICE!

In connection with the Z5822 CCL-SUB mounting frame, a maximum of 6 x CCL-SUB cabinets can be flown.

4.3.2 Order of assembly



1. Prepare the first cabinet

⇒ Extend the Front links and at the rear, release the upper Locking pins of the first cabinet.

2. Attach the mounting frame to the first SUB cabinet

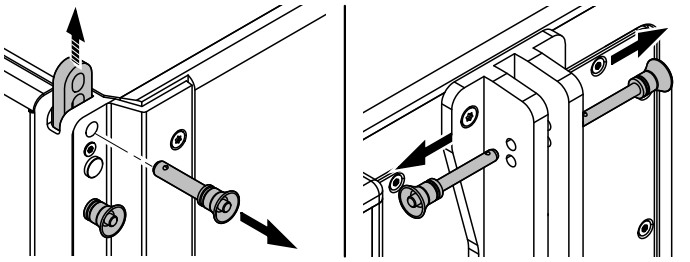
To attach the frame to the first cabinet, proceed as follows:

1. Lower the frame onto the cabinet until the Front links of the cabinet fit into the slots at the front of the frame and the Rear link of the frame fits into the rear rigging strand of the cabinet.

2. Insert the Locking pins of the Front links on both sides and both Locking pins at the rear and ensure all pins are fully inserted and locked.

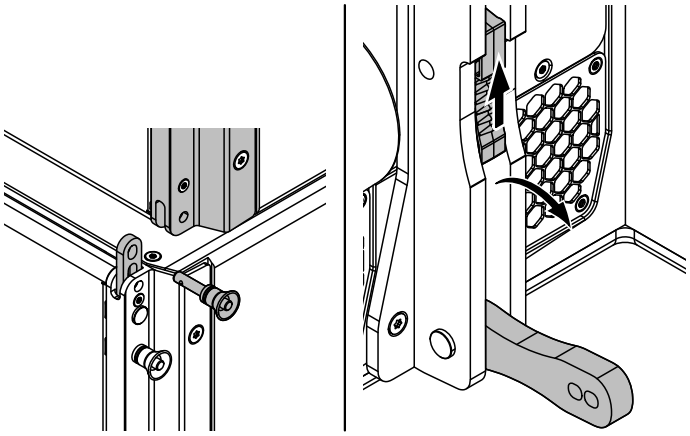
3. Suspend the mounting frame

1. Suspend the mounting frame according to your onsite requirements.
2. Lift the frame to a suitable working height.

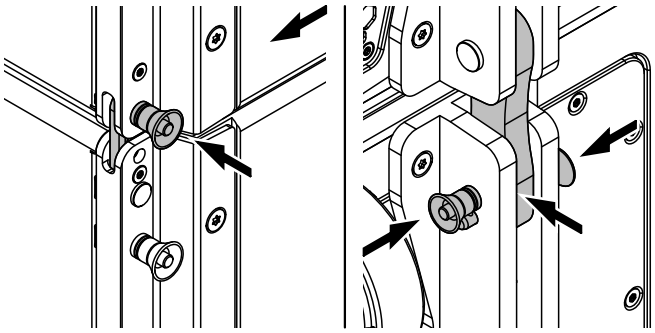


4. Add further SUB cabinets

1. Extend the Front links and at the rear, release the upper Locking pins of the next cabinet.



2. Lift the first SUB cabinet to a suitable working height and position the next SUB cabinet underneath.
3. On the upper cabinet release the Rear link.



4. Lower the assembly onto the cabinet until the Front links of the cabinet fit into the slots at the front of the frame and the Rear link of the first fits into the rear rigging strand of the second cabinet.
5. Insert the Locking pins of the Front links on both sides and both Locking pins at the rear and ensure all pins are fully inserted and locked.

To add further cabinets, proceed in the same manner until the assembly is completed.

5. Rear link of the last SUB cabinet

The Rear link of the last cabinet can be kept in its park position.

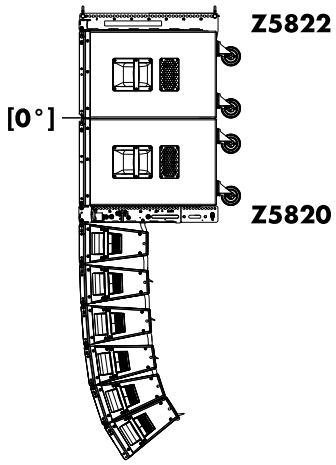
6. Check the assembly

Before hoisting the array to its operating position, recheck the actual status of the entire assembly according to the check list given in ⇒ Chapter 5 “Rechecking, hoisting and secondary safety” on page 23.

7. Rig the cabling

Connect the cables and link cables according to the number of amplifier channels and cabinets used.

- If the amplifiers are already wired and powered on, use their System check functions or Channel mute switches and a test signal to check the correct operation and routing of all channels and cabinets.
- Alternatively, check the wiring using the Array verification function in R1.



4.4 Mixed array configuration

4.4.1 Remarks and limitations

NOTICE!

For a mixed setup, the Z5822 CCL-SUB mounting frame is used as a suspension device while the Z5820 CCL Flying frame is required in addition as adapter frame between SUB and TOP cabinets.

The Z5822 CCL-SUB mounting frame allows mixed array configurations with a maximum total system weight of 250 kg (551 lb) - SWL including all rigging components.

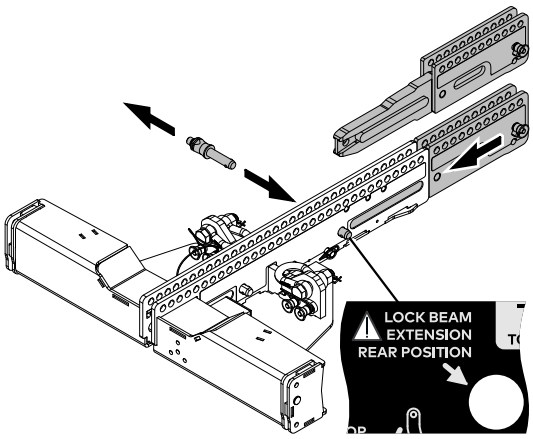
The SUB cabinets must always be interconnected with **0°** splay. Please also refer to ⇒ "1. Set up the SUB assembly" on page 20.

4.4.2 Preparing the Flying frame

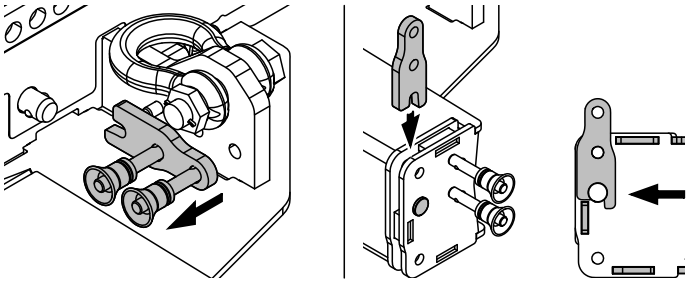
For mixed array configurations consisting of SUB cabinets on top of the array and TOP cabinets underneath, the Z5820.000 CCL Flying frame is required as adapter frame between SUB and TOP cabinets.
For this purpose the Flying frame must be modified as follows:

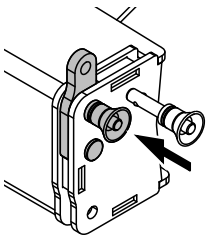
Attaching the Beam extension to REAR POSITION

1. On the Flying frame, release the corresponding Locking pin.
2. Fully insert the Beam extension into the rear slot of the frame.
3. Reinsert the Locking pin on the frame.



Assembly procedure
Beam extension in REAR POSITION





Additional Front links

To allow the Flying frame to be mounted underneath SUB cabinets in a mixed array configuration, two additional Front links together with corresponding Locking pins are enclosed with the Flying frame.

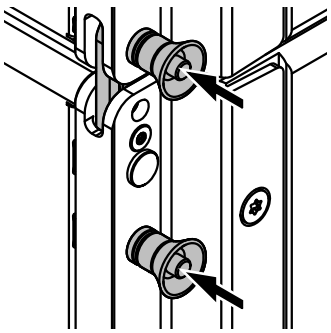
1. Release the Locking pins and take off the Front links from their park position.
2. Insert the Front links to the corresponding slots on the front tie bar of the frame on both sides.
   ↳ Observe the direction of the Front links as shown in the graphic opposite.
3. Finally insert one Locking pin to fix the Front link in place and ensure the pin is fully inserted and locked.
   ↳ The second Locking pin is used to fix the frame to the front rigging strand of the SUB cabinet.

4.4.3 Order of assembly

Setting up a mixed array configuration is split into four assembly procedures:

1. Set up the SUB assembly.
2. Attach the Flying frame.
3. Attach the first TOP cabinet to the Flying frame.
4. Add further TOP cabinets.

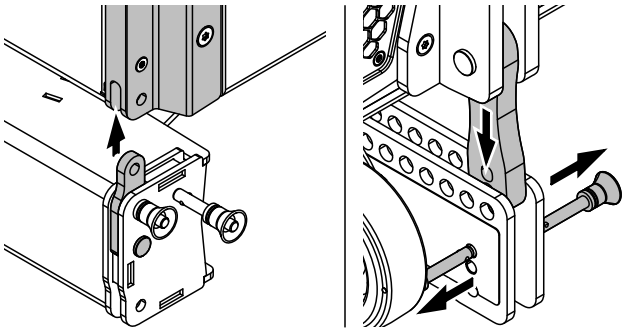
1. Set up the SUB assembly



NOTICE!

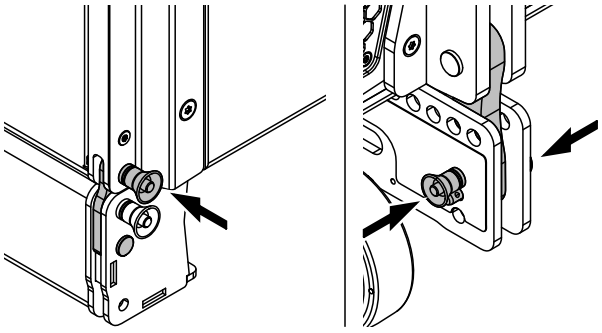
In connection with a mixed array configuration with SUB cabinets at the top of the array, subsequent SUB cabinets must always be connected with **0°** splay.

Setting up the SUB assembly is performed in the same manner as described in ⇒ Chapter 4.3 "CCL-SUB column" on page 17.



2. Attach the Flying frame underneath SUB cabinet

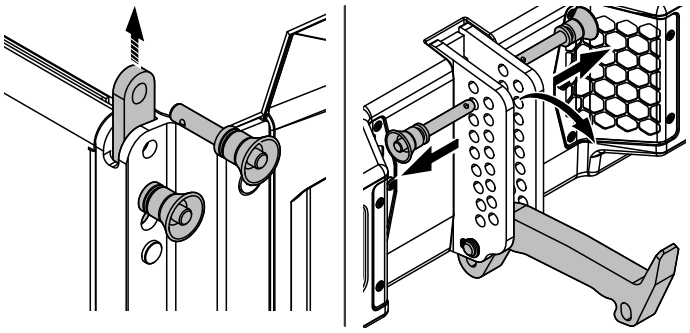
1. Attach the frame underneath the SUB cabinet until the additional Front links of the frame fit into the slots on the front rigging strands of the cabinet.
2. At the rear, release both Locking pins of the Beam extension and align the Rear link of the SUB cabinet.



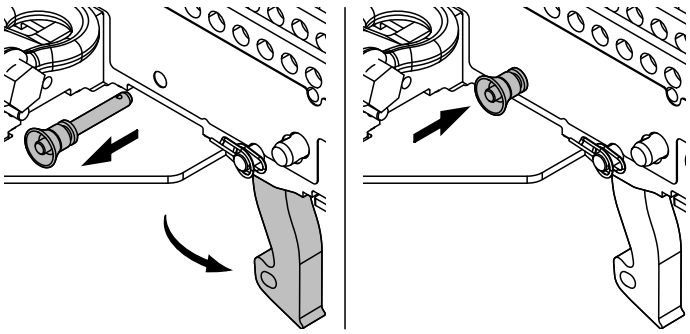
3. At the front insert the Locking pins on both sides and ensure the pins are fully inserted an locked.
4. On the rear insert both Locking pins on the Beam extension and ensure the pins are fully inserted an locked.

3. Attach the first TOP cabinet to the Flying frame

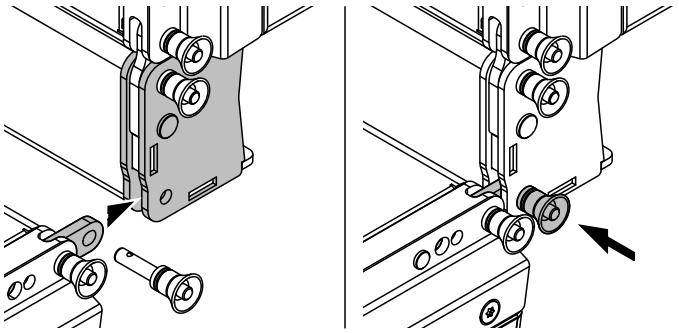
To attach the first cabinet to the frame, proceed as follows:



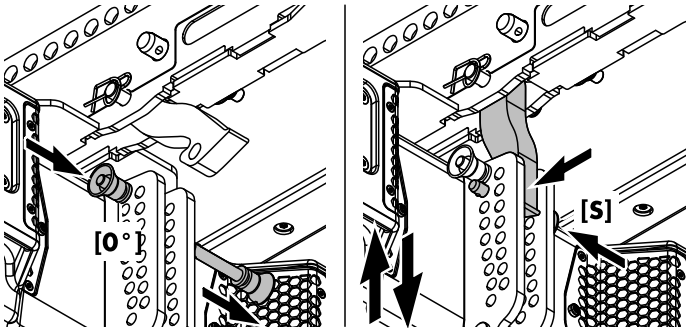
1. Lift the assembly to a suitable working height.
2. Extend the Front links and release the Splay link of the first cabinet.



3. On the frame release the Locking pin holding the frame's Rear link in its park position.
4. Fold out the Rear link and reinsert the Locking pin.



5. With the front grill facing upwards, attach the front links of the prepared cabinet to the corresponding slots at the front of the frame on both sides.
6. Insert the Locking pins to the frame's front slots on both sides and ensure both pins are fully inserted an locked.



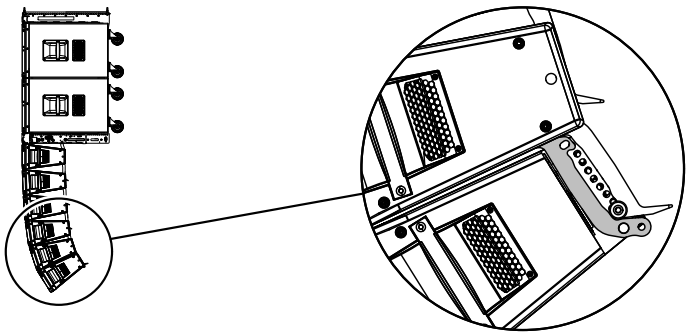
7. At the rear of the cabinet, reinsert one Locking pin into the **[0°]** hole and ensure the pin is fully inserted and locked.
8. Raise the bottom cabinet until the Rear link of the frame has engaged into the preset Locking pin of the cabinet.
9. Lower the cabinet and insert the second Locking pin (Safety pin **[S]**) into the **[2°]** hole and ensure the pin is fully inserted and locked.

4. Add further TOP cabinets

To add further cabinets, proceed in the same manner as described in ⇒ Chapter 4.2 “CCL-TOP array” on page 15, until the assembly is completed.

5. Splay link of the last TOP cabinet

The Splay link of the last cabinet of an array can be kept in its park position.



Note: In this case, splay angles of 0...3° for the cabinet above are not applicable.

6. Check the assembly

Before hoisting the array to its operating position, recheck the actual status of the entire assembly according to the check list given in ⇒ Chapter 5 “Rechecking, hoisting and secondary safety” on page 23.

7. Rig the cabling

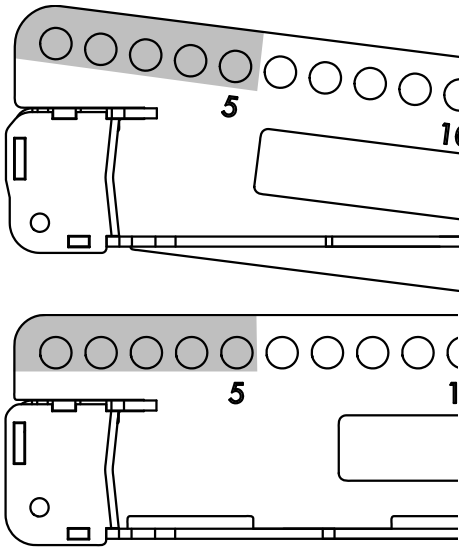
Connect the cables and link cables according to the number of amplifier channels and cabinets used.

- If the amplifiers are already wired and powered on, use their System check functions or Channel mute switches and a test signal to check the correct operation and routing of all channels and cabinets.
- Alternatively, check the wiring using the Array verification function in R1.

Safety and system checks
Before hoisting the array to its operating position, recheck the actual status of the assembly as follows:

Mechanical setup
- Check the attachment of the Mounting frame(s) and/or adapter frame to the cabinets:
  - Ensure all Fixing bolts are properly fitted and secured with their ring cotters.
- Check the attachment of all Front links on both sides of the cabinets and ensure all Fixing bolts are fully inserted and tightened.
- Check the splay angles and the attachment of the Splay/Rear links at the rear of the cabinets:
  - Ensure all Fixing bolts are properly fitted and secured with their ring cotters.

Wiring
- If the amplifiers are already wired and powered on, use their System check functions or channel mute switches and a test signal to check the correct operation and routing of all channels and cabinets.
- Alternatively, check the wiring using the Array verification function in R1.



Hoisting

WARNING!
Potential risk of personal injury and/or damage to material!

Always ensure that each of the hoists is able to carry the total weight of the array.

When hoisting the array, unpredictable dynamic forces as well as swinging of the array must be taken into account. This may lead to personal injury and/or damage to the rigging components and loudspeaker cabinets.

Ensure there is nobody directly underneath or in the vicinity of the load who is not involved in the setup.

When all the mechanical adjustments, safety checks and system checks have been made, the array can be hoisted up to its operating position and firmly attached to the onsite construction.

The chain hoist motors must raise the array slowly and evenly so that it does not swing or move from side to side during hoisting.

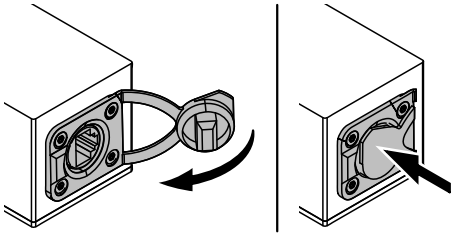
5.1 Secondary safety

Once the array is in its final operating position and if applicable, the secondary safety device must be applied.

WARNING!
Potential risk of personal injury and/or damage to material!

- The secondary safety suspension must be independent of the primary suspension points and capable of carrying the total system weight.
- The additional safety device must be mounted in a way that, if the primary suspension fails, the array is caught by the safety device without any drop or swing.

The secondary safety device **must** be attached to the front of the frames using one of the first five holes as indicated in the graphic opposite.



6.1 Transport/Storing

During transport ensure the rigging components are not stressed or damaged by mechanical forces.

Due to their surface treatment the rigging components are temporarily protected against moisture. However, ensure the components are in a dry state while stored or during transport.

6.2 ArraySight etherCON® protection

To prevent corrosion of the etherCON® connector socket's spring contacts, always make sure to properly attach (close) the connector socket's dust cap during transport or when it is not in use.

6.3 Visual and functional inspections

WARNING!
Potential risk of personal injury and/or damage to material.

To eliminate the risk of accident due to malfunctioning of a component, regularly inspect all system components.

Cabinet enclosure

- Visual inspection of all fitting plates for obvious damage (e.g. cracks or corrosion).
- Visual inspection of the rear rigging strand for obvious damage (e.g. cracks, deformation or corrosion) including all drilled holes of the component.
- Inspection of all fitting plates including front grills to ensure they are securely attached.

Front and Splay (Rear) links

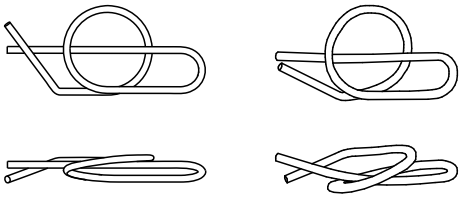
Visual inspection regarding deformation and damage (e.g. cracks and corrosion) including all drilled holes of the component.

Locking pins

- Visual inspection for deformation, cracks and corrosion of the component.
- Inspection for missing ball bearings and damage.
- Functional inspection of the release mechanism to ensure it operates properly.

Mounting frames and adapter frame

Visual inspection regarding deformation and damage (e.g. cracks and corrosion) including all drilled holes of the component.



[a] **[b]**

Condition of the ring cotter
[a]: Ring cotter OK
[b]: Exchange the ring cotter

Ring cotters

- Visual inspection for obvious damage and deformation.
- Functional test of the locking mechanism as described in ⇒ Chapter 2.3 “Ring cotters” on page 10.
  If a ring cotter can no longer be properly fitted to the fixing bolt and locked, it must be exchanged.

7.1 Conformity of rigging components

This declaration applies to:

d&b CCL loudspeaker cabinets
(with integrated rigging components.)

- Z0880 CCL8
- Z0882 CCL12
- Z0884 CCL-SUB

d&b CCL rigging components
(including all additional components.)

- Z5821 CCL top mounting frame
- Z5822 CCL-SUB mounting frame
- Z5820 CCL Flying frame with Beam extension

by d&b audiotechnik GmbH & Co. KG.

All product variants are included, provided they correspond to the original technical version and have not been subject to any later design or electromechanical modifications.

We herewith declare that said products are in conformity with the provisions of the respective directives including all applicable amendments.

Detailed and applicable declarations are available on request and can be ordered from d&b or downloaded from the d&b website at www.dbaudio.com.

7.2 Disposal

WEEE-Reg.-Nr. DE: 13421928

When out of use, the rigging components must be disposed of in accordance with the national environmental regulations.

Ensure that damaged rigging components are disposed of in a way that they cannot be used again.

d&b audiotechnik