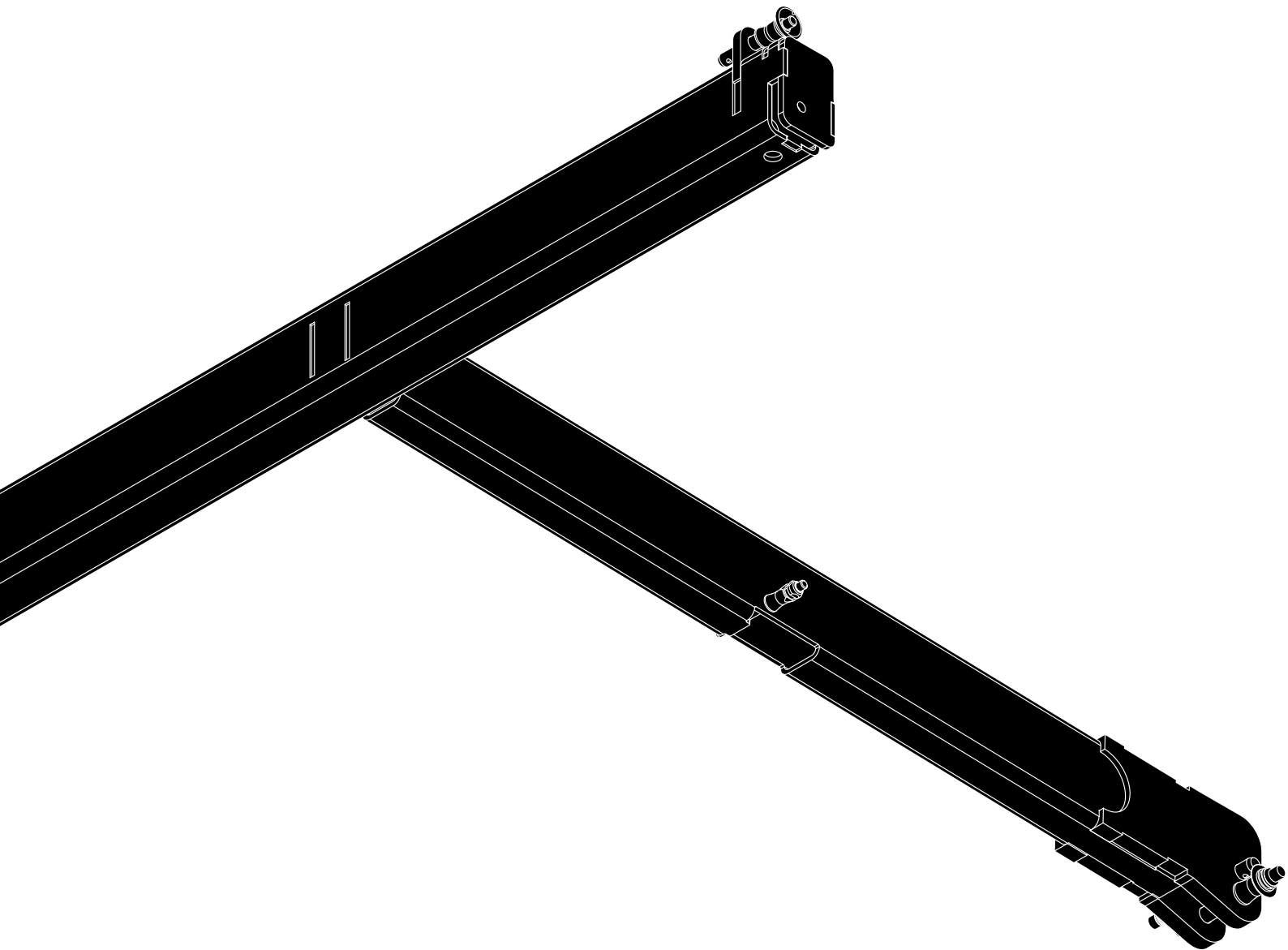


Z

Z5461 Rigging manual 1.2 en



General information

Z5461 Rigging manual

Version: 1.2 en, 03/2021, D2751.EN .01

Copyright © 2021 by d&b audiotechnik GmbH & Co. KG; all rights reserved.

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

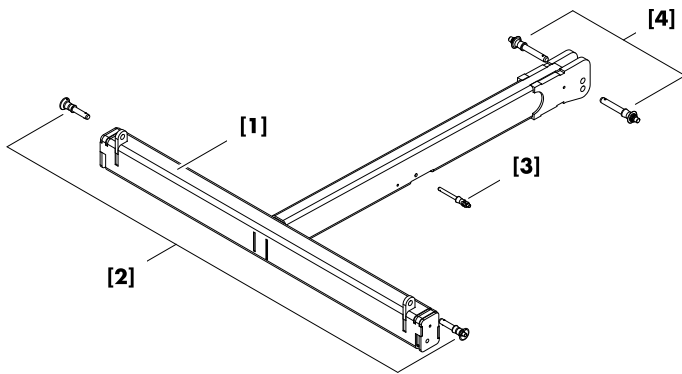
We recommend you to regularly check the d&b website for the latest version of this document.

When reselling this product, hand over this document to the new owner.

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.

d&b audiotechnik GmbH & Co. KG
Eugen-Adolff-Str. 134, D-71522 Backnang, Germany
T +49-7191-9669-0, F +49-7191-95 00 00
docadmin@dbaudio.com, www.dbaudio.com

1	Z5461 AL V-SUB adapter	4
1.1	Scope of supply.....	4
1.2	Intended use.....	4
1.2.1	Safety precautions.....	4
2	Rigging components	5
2.1	Locking pins.....	5
2.2	Ring cotter.....	6
2.3	Cabinet rigging mechanism.....	7
2.3.1	Front link mechanism.....	7
2.3.2	Splay link mechanism.....	7
2.3.3	Setting the splay angle(s).....	8
3	Rigging/Derigging	10
3.1	Preparing the setup.....	10
3.2	Attaching the adapter to the SUB cabinet.....	10
3.3	Attaching the cabinets.....	11
3.4	Derigging.....	12
4	Care and maintenance	13
4.1	Visual and functional inspection.....	13
5	Manufacturer's declarations	14
5.1	EU conformity (CE symbol).....	14
5.2	Disposal.....	14

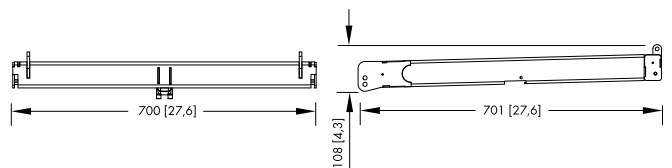


1.1 Scope of supply

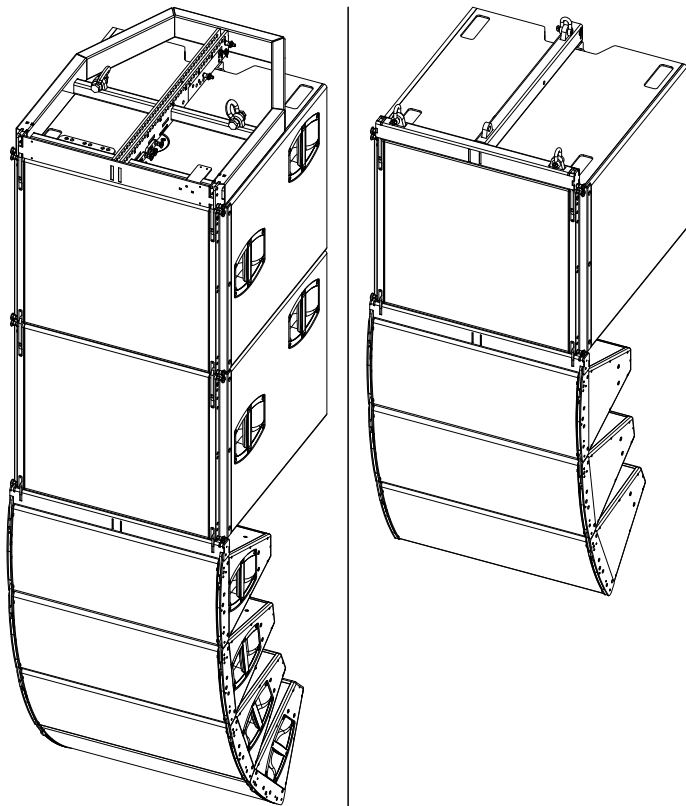
Please verify the shipment for completeness and proper condition of the items.

Pos.	Qty.	d&b Code	Description
[1]	1	Z5461	AL V-SUB adapter
Including:			
[2]	2		Locking pin 8 x 32 mm
[3]	1		Locking pin 5 x 35 mm
[4]	2		Locking pin 9 x 40 mm
	1	D2751.EN .01	Z5461 Rigging manual

Weight 8 kg (17.6 lb)



Dimensions in mm [inch]



Maximum array configurations with:
Z5380 V Flying frame | Z5387.000 Vi Mounting frame top

1.2 Intended use

The Z5461 AL V-SUB adapter must only be used in conjunction with the Z5380 V Flying frame or the Z5387.000 Vi Mounting frame top, which act as suspension devices.

1.2.1 Safety precautions

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.

Load safety information

NOTICE!

The Z5461 AL V-SUB adapter is designed to carry a maximum of up to **four (4x)** AL60/AL90 or ALi60/ALi90 cabinets.

- With the Z5380 V Flying frame as suspension device, array configurations of up to **two (2x)** V-SUB or Vi-SUB cabinets and up to **four (4x)** AL60/AL90 or ALi60/ALi90 cabinets can be set up.
- With the Z5387.000 Vi Mounting frame top as suspension device, array configurations of **one (1x)** V-SUB or Vi-SUB cabinet and up to **three (3x)** AL60/AL90 or ALi60/ALi90 cabinets can set up.

2.1 Locking pins

**WARNING!**

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

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

Ensure all Locking pins are fully inserted and securely locked before lifting any load.

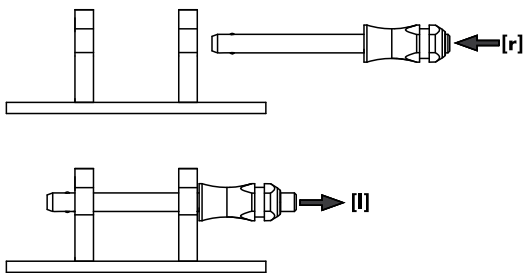
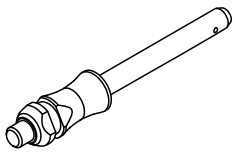
The A-Series loudspeaker cabinets and rigging components are equipped with dedicated Locking pins.

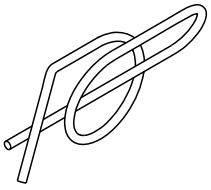
Note: The Locking pins are undetachably attached to the different rigging components on the cabinet using steel wires. Throughout this manual these steel wires are not shown in the corresponding illustrations.

Functionality (Quick lock mechanism)

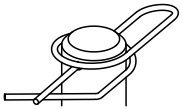
Proceed as follows:

1. Press the button to **release** 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 **lock** the pin (→ [l]).
5. Recheck the Locking pin is securely locked by briefly pulling the Locking pin towards you.

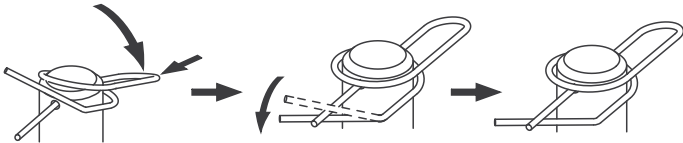
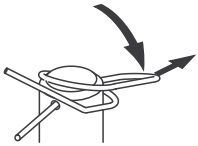
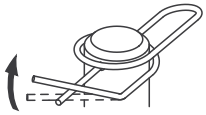




Ring cotter



Ring cotter locked



2.2 Ring cotter

In connection with the A-Series rigging system, ring cottes are used for the following items to prevent the respective item from slackening and/or loosening:

- Fixing bolt of the cabinet's splay link.

Function of the ring cotter

By default, the ring cottes are "locked" to prevent them from loosening.

For modification reasons such as altering the position of the Frame's Rear link or exchanging a shackle, 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.

2.3 Cabinet rigging mechanism

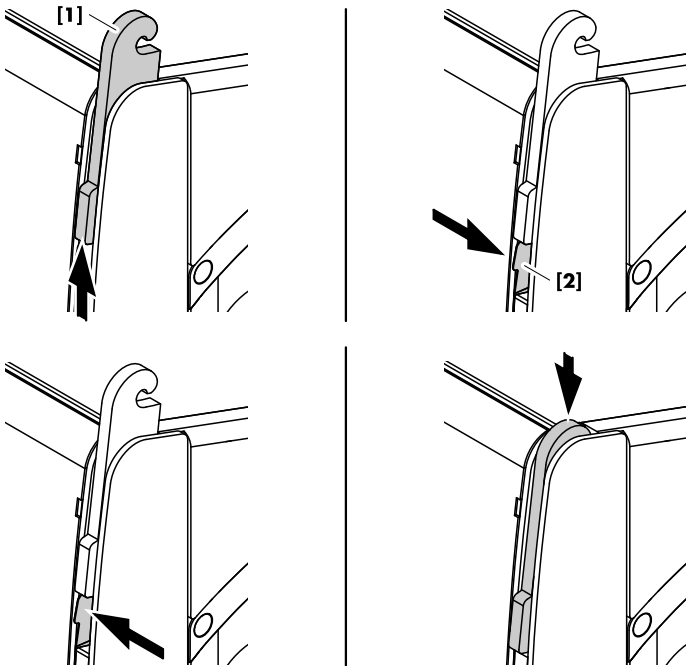
The cabinets are mechanically connected to the Flying frame and subsequent loudspeakers using the Front links on both sides of the cabinet front and the central Splay link on the rear rigging strand of the cabinet.

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

2.3.1 Front link mechanism

To extend and/or park the Front link, proceed as follows:

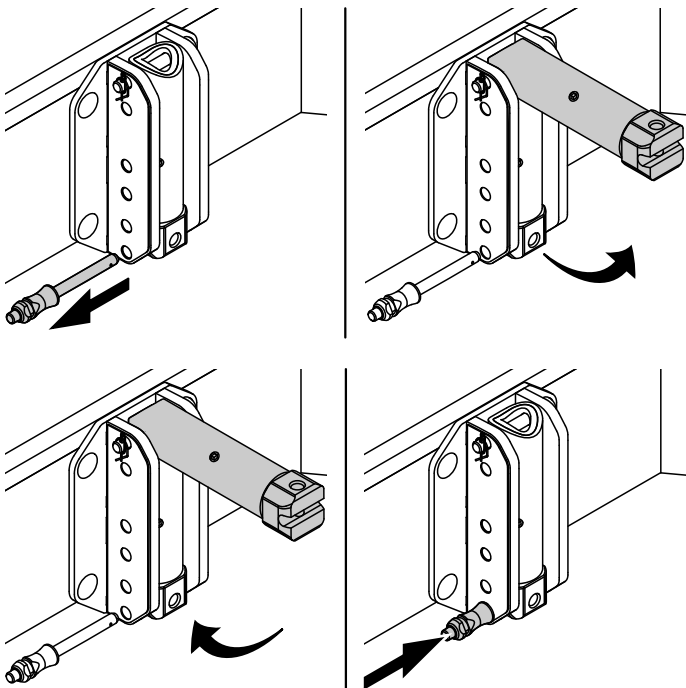
1. Slide out the Front link **[1]** up to its stop position.
 - ↳ Once the Front link is fully extended, it will be automatically fixed in place by the spring steel sheet **[2]**.
2. To slide the Front link back into its park position, press the spring steel sheet towards the front grill.
3. Slide the Front link back into its park position.

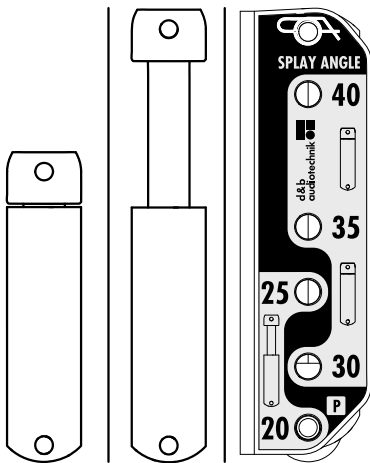


2.3.2 Splay link mechanism

The Splay link is fixed in its park position (P) by a Locking pin.

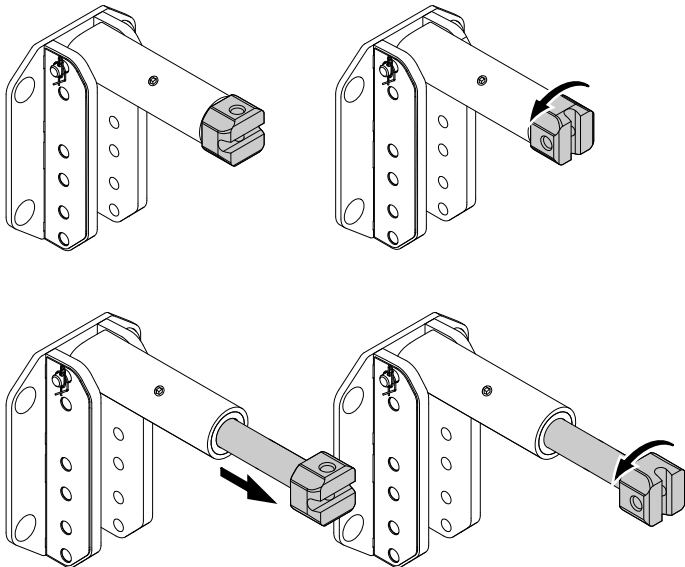
1. Release the Locking pin and fold out the Splay link.
2. To park the Splay link, proceed in reverse order and ensure the extension tube is fully pushed in and the head is aligned correspondingly, as shown in the graphic opposite.





Standard | Extended | Hole grid

Splay link lengths and correlation to the hole grid on the rear rigging strand.



2.3.3 Setting the splay angle(s)

Splay angles between adjacent cabinets can be set in the range from 20° to 40° in 5° increments resulting in a total coverage of 50° up to 70° for two cabinets, with a maximum total coverage of 150° for four cabinets.

Splay angles can also be set symmetrically or asymmetrically, depending on the application.

For this purpose, the Splay link provides two different lengths: **Standard** or **Extended**.

Together with the corresponding **Hole grid** on the rear rigging strand, the desired splay angles can be set in the range from 20° to 40° in 5° increments.

The Splay link is constructed as a cylindrical extender (we call it the 'Trombone');. The extension tube head can be turned counter clockwise by 90° and back again.

To change between the Standard and Extended positions, proceed as follows:

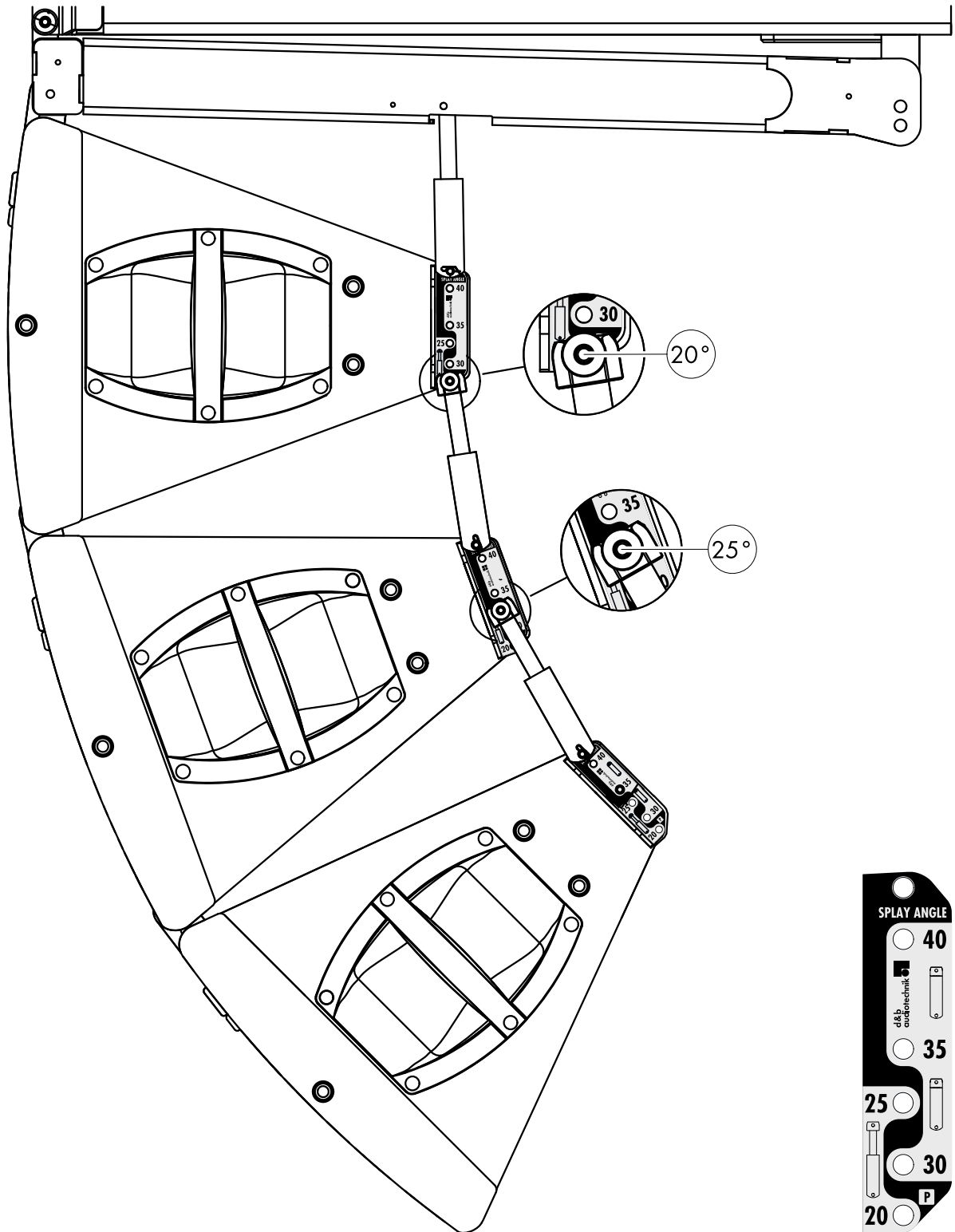
Standard length

1. Fold out the Splay link as previously described.
2. Turn the extension tube head counter clockwise by 90° to fix the standard length of the Splay link.

Extended length

1. Fold out the Splay link as previously described.
2. Pull out the extension tube to its stop position.
3. Turn the extension tube head counter clockwise by 90° to fix the extended length of the Splay link.

Overview chart - Splay angle settings



3.1 Preparing the setup

General

Check the acoustical and mechanical setup using ArrayCalc and prepare enough printouts for each array. Alternatively, the d&b 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:

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

Please also follow the instructions given in ⇒ Chapter 4 "Care and maintenance" on page 13.

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.

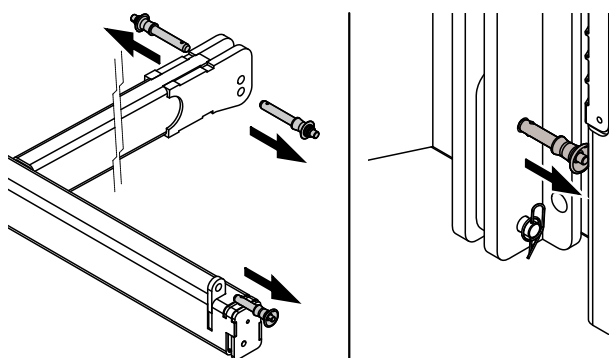
Preparing the SUB assembly

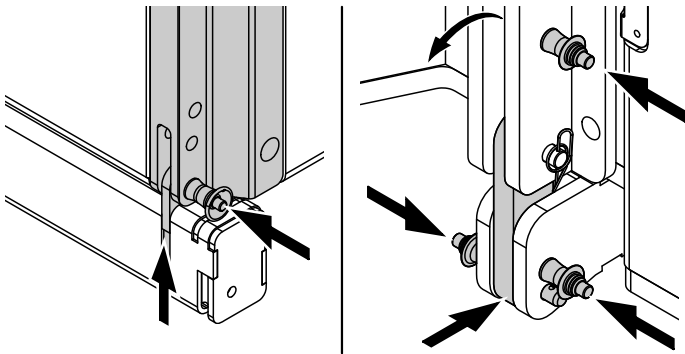
For further information on how to set up the SUB assembly, please refer to the V-Series (Z5380) or Vi (Z5387.000) Rigging manuals, which are available for download from the d&b website at www.dbaudio.com.

3.2 Attaching the adapter to the SUB cabinet

1. Prepare the adapter and the SUB cabinet

1. Lift the SUB cabinet to a suitable working height.
2. On the adapter, release the Locking pins at the front tie bar and at the Rear link slot of the center bar.
3. At the rear of the SUB cabinet, release the Locking pin holding the Rear link in its park position.





2. Attach the adapter to the SUB cabinet

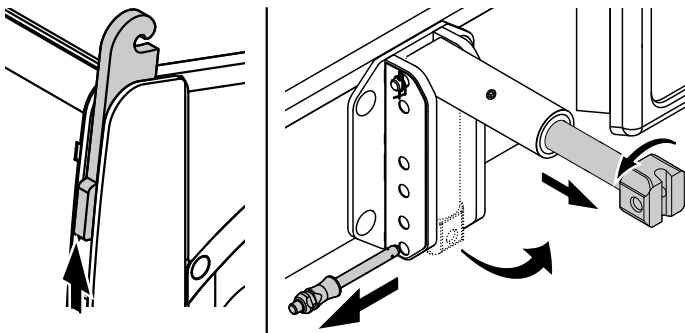
To attach the adapter to the SUB cabinet, proceed as follows:

1. Attach the adapter underneath the SUB cabinet until the front links of the adapter fit into the corresponding slots of the SUB cabinet.
2. Insert the Locking pins at the front on both sides and ensure the pins are fully inserted and properly locked.
3. Fold the Rear link into the corresponding slot of the adapter and insert both Locking pins and ensure the pins are fully inserted and properly locked.
4. Finally reinsert the Locking pin of the SUB cabinet into the park position hole of the Rear link.

3.3 Attaching the cabinets

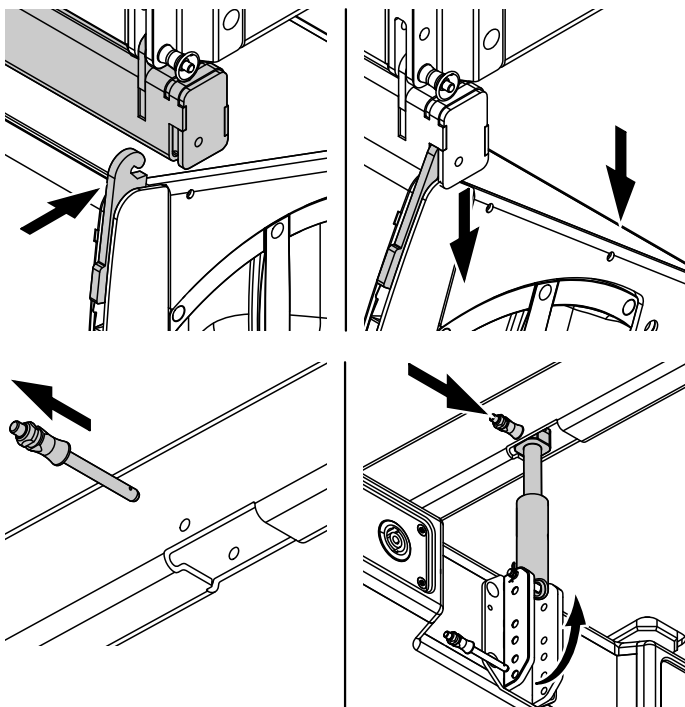
1. Prepare the first cabinet

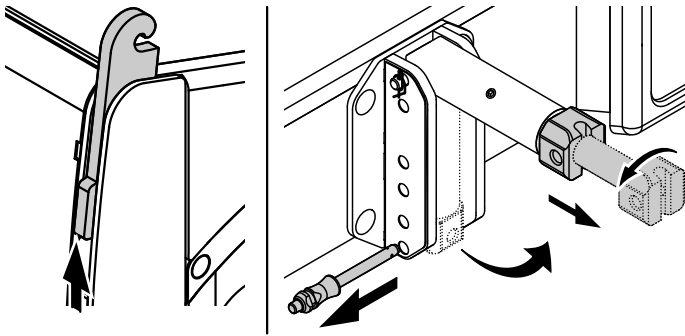
1. Extend both Front links.
2. At the rear, release the Locking pin of the Splay link.
3. Fold out the Splay link.
4. Pull out the link to the "Extended" length and turn the extension tube head counter clockwise by 90°.



2. Attach the first cabinet to the adapter

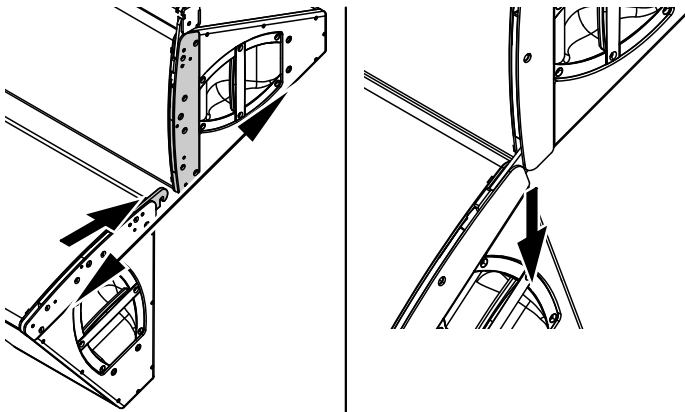
1. With one person on each side, attach the first cabinet to the adapter until the Front links of the cabinet fit into the slots at the front tie bar of the adapter, as shown in the graphic opposite.
2. Slightly lower the cabinet until the Front links are engaged.
3. On the adapter, release the Locking pin of the Splay link slot.
4. Raise the back of the cabinet and insert the cabinet's Splay link into the Splay link slot of the adapter.
5. Insert the Locking pin and ensure the pin is fully inserted and properly locked.





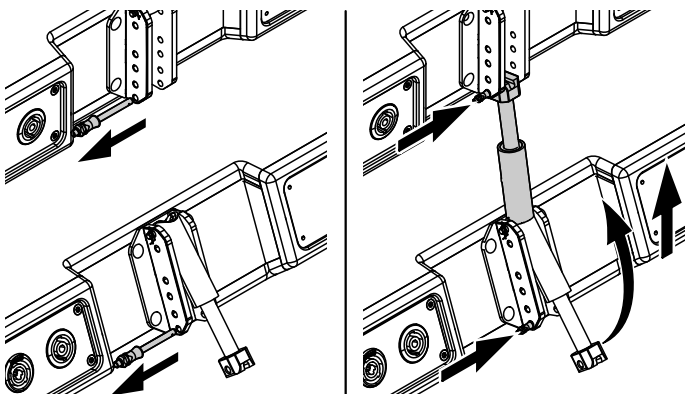
3. Prepare the next cabinet

1. Extend both Front links.
2. At the rear, release the Locking pin of the Splay link.
3. Fold out the Splay link.
4. Set the link to the required length (Standard or Extended) and turn the extension tube head counter clockwise by 90°.



4. Attach the next cabinet

1. Lift the assembly to a suitable working height.
2. With one person on each side, attach the prepared cabinet at an angle of approx. 90° to the corresponding slots at the front of the upper cabinet, as shown in the graphic opposite.
3. Slightly lower the cabinet until the Front links are engaged.



4. On the rear rigging strand, release the corresponding Locking pins on the top and bottom cabinets.
5. Raise the back of the bottom cabinet.
6. Align the prepared Splay link with the corresponding hole of the rear rigging strand of the upper cabinet.
7. Insert the Locking pins and ensure the pins are fully inserted and properly locked.

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

5. Rig the cabling

Connect the flying cables and link cables according to the number of amplifier channels and cabinets used. Observe the related loudspeaker setups for the inner (In) and outer (Out) cabinets.

6. Check the assembly

Before hoisting the array to its operating position, recheck the entire assembly.

3.4 Derigging

The same safety instructions apply.

To dismantle any of the assemblies, follow the corresponding rigging and setup instructions in reverse order.

4.1 Visual and functional inspection

**WARNING!**

Potential risk of personal injury and/or damage to material

To eliminate the potential 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.
- Regularly lubricate the sockets using WD-40® or a similar product.

Front and Splay 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.
- Regularly lubricate the Locking pins using WD-40® or a similar product.

Z5461 AL V-SUB adapter

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



5.1 EU conformity (CE symbol)

This declaration applies to:

d&b Z5461 AL V-SUB adapter

manufactured 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 EC directives including all applicable amendments.

A detailed declaration is available on request and can be ordered from d&b or downloaded from the d&b website at www.dbaudio.com.

5.2 Disposal

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.

