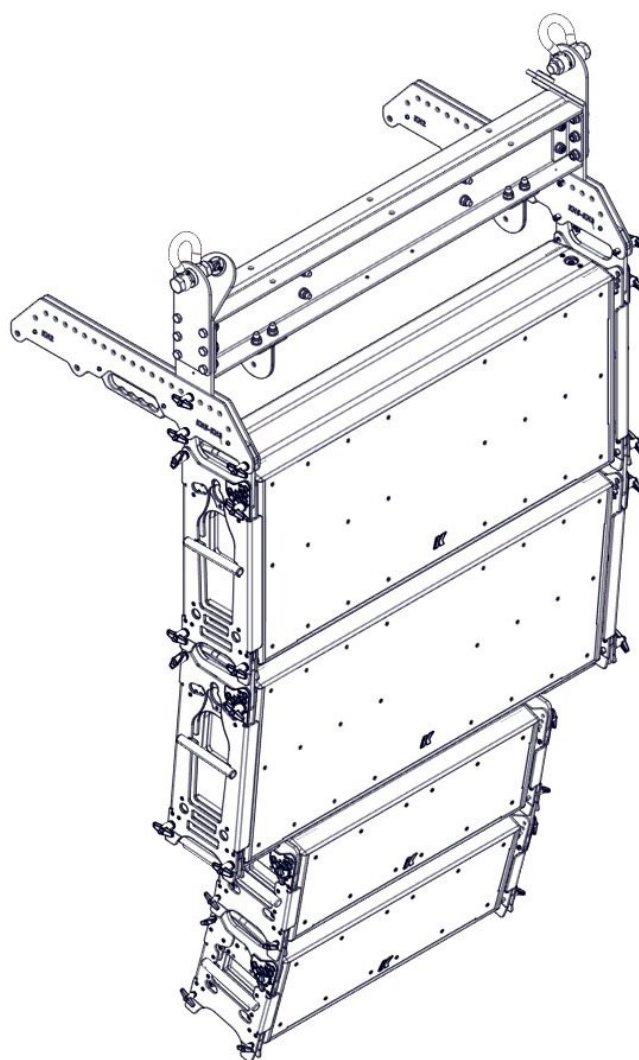




# ***SUSPENDING THE CONCERT SERIES***

English



## TABLE OF CONTENTS

SYMBOLS .....	3
1. INTRODUCTION .....	4
2. SYSTEM COMPONENTS .....	4
2.1 LOUDSPEAKER ENCLOSURES.....	4
2.2 SUSPENDING HARDWARE.....	5
3. SAFETY INFORMATION.....	6
4. PRODUCT OVERVIEW.....	7
5. SUSPENDING A CLUSTER.....	10
5.1 SUSPENDING KH5/KH3 UNITS.....	11
5.2 SUSPENDING KH2 UNITS .....	19
5.3 THE K-HCLINK2/35 ACCESSORY .....	27
6. INSTALLING ON A POLE .....	31
7. SERVICE .....	32

## SYMBOLS



K-array declares that this device is in compliance with applicable CE standards and regulations. Before putting the device into operation, please observe the respective country-specific regulations!

---



Waste Electrical and Electronic Equipment (WEEE)  
Please dispose of this product at the end of its operational lifetime by bringing it to your local collection point or recycling center for such equipment.

---



This symbol alerts the user to the presence of recommendations about the product's use and maintenance.

---



Warning: DANGEROUS VOLTAGE.  
Terminals marked with this symbol carry a risk of **electric shock**, therefore external wiring connected to these terminals requires installation by a qualified professional or the use of ready-made leads or cords.

---



This symbol alerts the user to the presence of recommendations about product's use and maintenance.

---



This device complies with the Restriction of Hazardous Substances Directive.

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# 1. INTRODUCTION

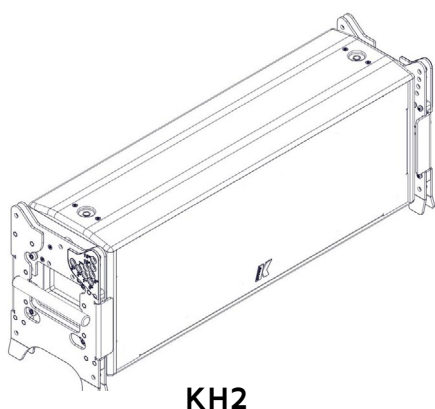
The following pages will instruct how to suspend a KH5/KH3/KH2 cluster. Although this manual contains an ample amount of useful information on rigging in general, it does not claim to be a comprehensive resource on the subject. This manual assumes that the owner(s) and/or user(s) of a K-array system are knowledgeable and experienced in the areas of rigging and flying loudspeaker systems.

Many points, such as the determination of appropriateness and condition of venue rigging points, cannot be addressed here. Therefore, the user must assume all responsibility for the appropriate use of K-array systems, in any particular location or circumstance.

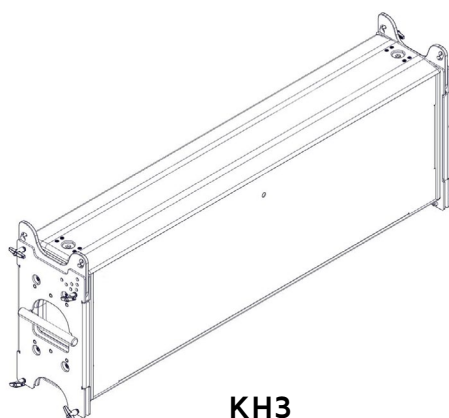
It is recommended to attend the training courses offered by K-array before proceeding with the installation of the system.

## 2. SYSTEM COMPONENTS

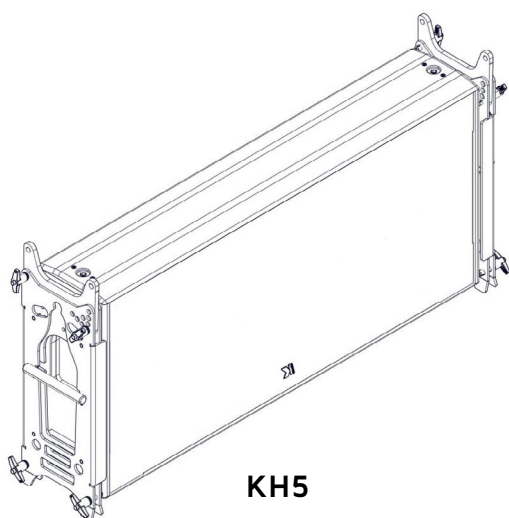
### 2.1 LOUDSPEAKER ENCLOSURES



**KH2**



**KH3**

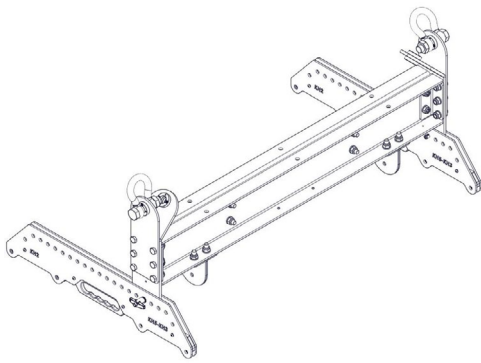


**KH5**



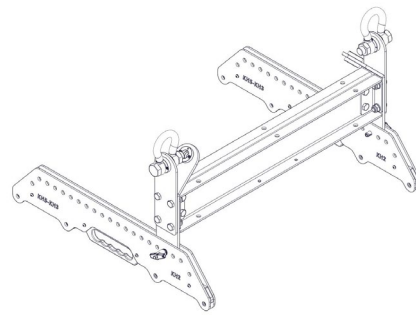
Please read the KH5, KH3 and KH2 User Guides carefully for important safety information and operation details

## 2.2 SUSPENDING HARDWARE



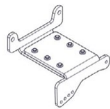
**K-HCFLY**

Fly bar for up to 12 KH5, up to 12 KH3  
or up to 16 KH2



**K-HCFLY2**

Fly bar for up to 12 KH2



**K-HCLINK2/35**

Accessory to connect KH2 units  
under KH5/KH3 units

### 3. SAFETY INFORMATION

Read these instructions - Keep these instructions - Heed all warnings



Warning: failure to follow these safety instructions could result in fire, shock or other injury or damage to the device or other property.

**Laws and regulations:** The suspension of large, heavy objects in public places is subject to numerous laws and regulations at the national, federal, state, provincial, and local levels. This manual does not address the specifics of any such applicable laws and government regulations. This manual details procedures and practices consistent with those generally acknowledged as allowable and safe in Europe. However, the user must assume responsibility for making sure that use of any K-array system and its components in any particular circumstance or venue conforms to all applicable laws and regulations in force at the time.

**Safety factor:** K-HCFLY and K-HCFLY2 are in conformity with UNI EN 13155:2009. The safety factor is equal to 7:1 on the breaking load (up to 12 KH5 or 12 KH3 or 16 KH2 can be suspended with a K-HCFLY and up to 12 KH2 can be suspended with a K-HCFLY2). However, there are wide variations internationally in the regulations and practices applying to suspension of sound systems in public places. Government officials in one location may have a stricter interpretation than another local official, even when operating under the same regulations and in the same legal jurisdiction. Consequently, users of K-array rigging systems should be prepared to take additional safety assurance measures beyond those outlined in this manual. In all cases, it is the responsibility of the user to make certain that any K-array loudspeaker system is suspended in accordance with all applicable national, federal, state, provincial, and local regulations.

**Attachment point:** In most touring applications, the touring sound provider is normally responsible for ensuring the safety of the suspension system only below the attachment point. The safety and suitability of the attachment point is generally seen as the responsibility of the venue owner or operator. However, touring system operators should double check to make certain that attachment points are approved and suitably load rated and that the points used are those identified as such by the venue owner or operator.

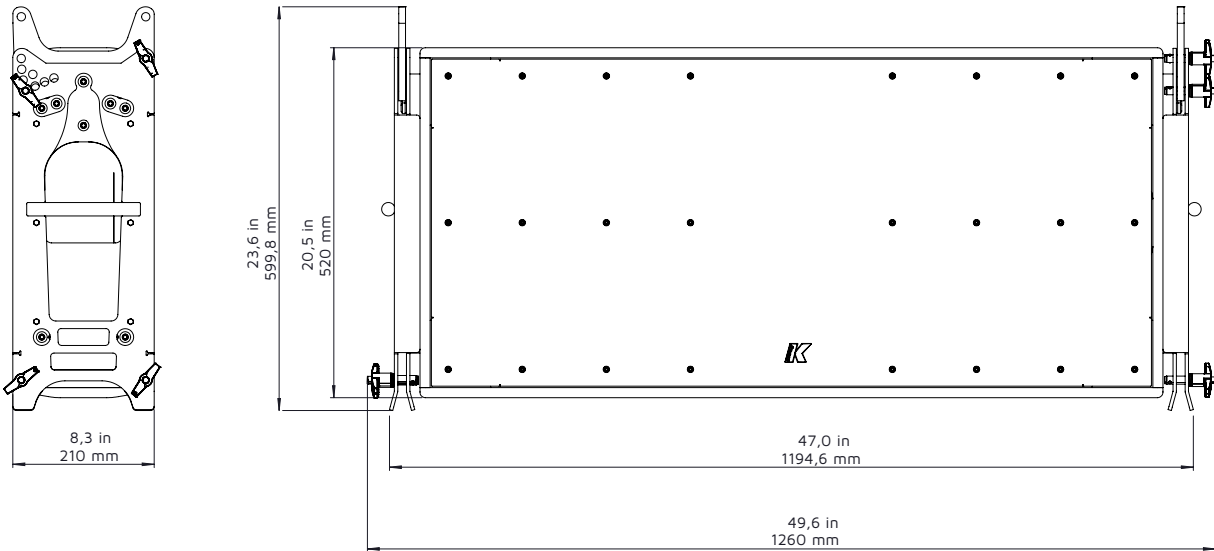
**Personnel health and safety:** During installation and setup, personnel should wear protective headgear and footwear at all times. Under no circumstances should personnel climb on the loudspeaker assembly.

**Wind loads:** In case of outdoor installation, assure that wind does not interfere with the system's stability, taking extra securities like chains, weights, ropes or any other certified anchoring systems.

**Ground stacking:** Do not ground stack a cluster on uneven ground or platform. If the system is ground stacked on a structure, platform or stage always check that it can support the total weight of the system.

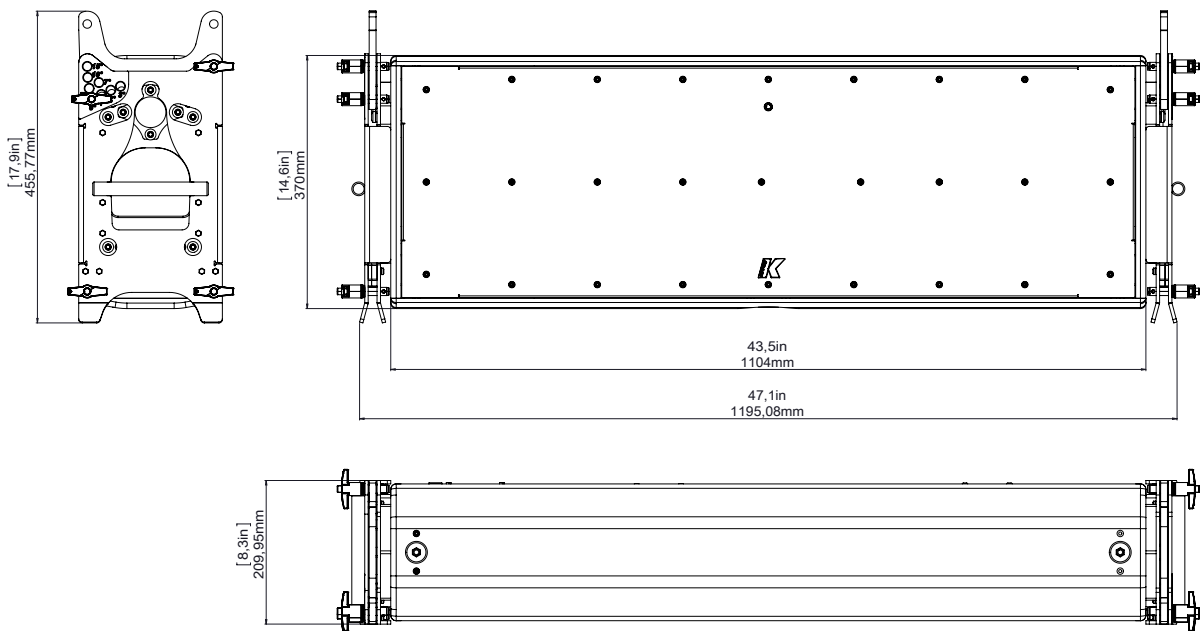
## 4. PRODUCT OVERVIEW

### KH5 UNIT



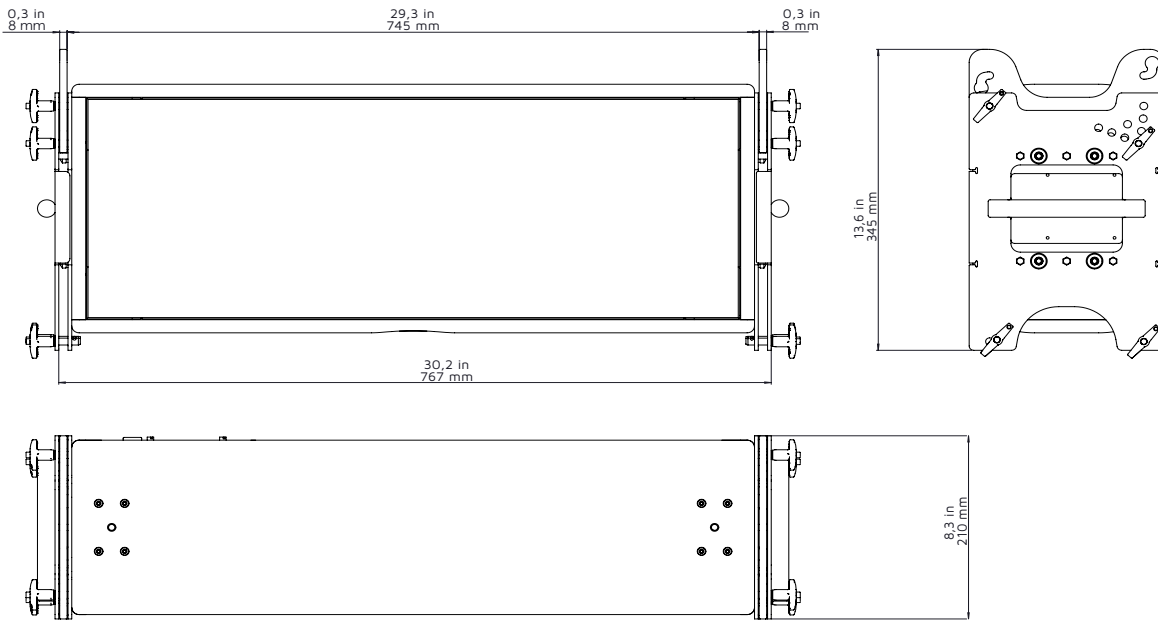
Weight  
61.2 kg (134.9 lbs)

### KH3 UNIT



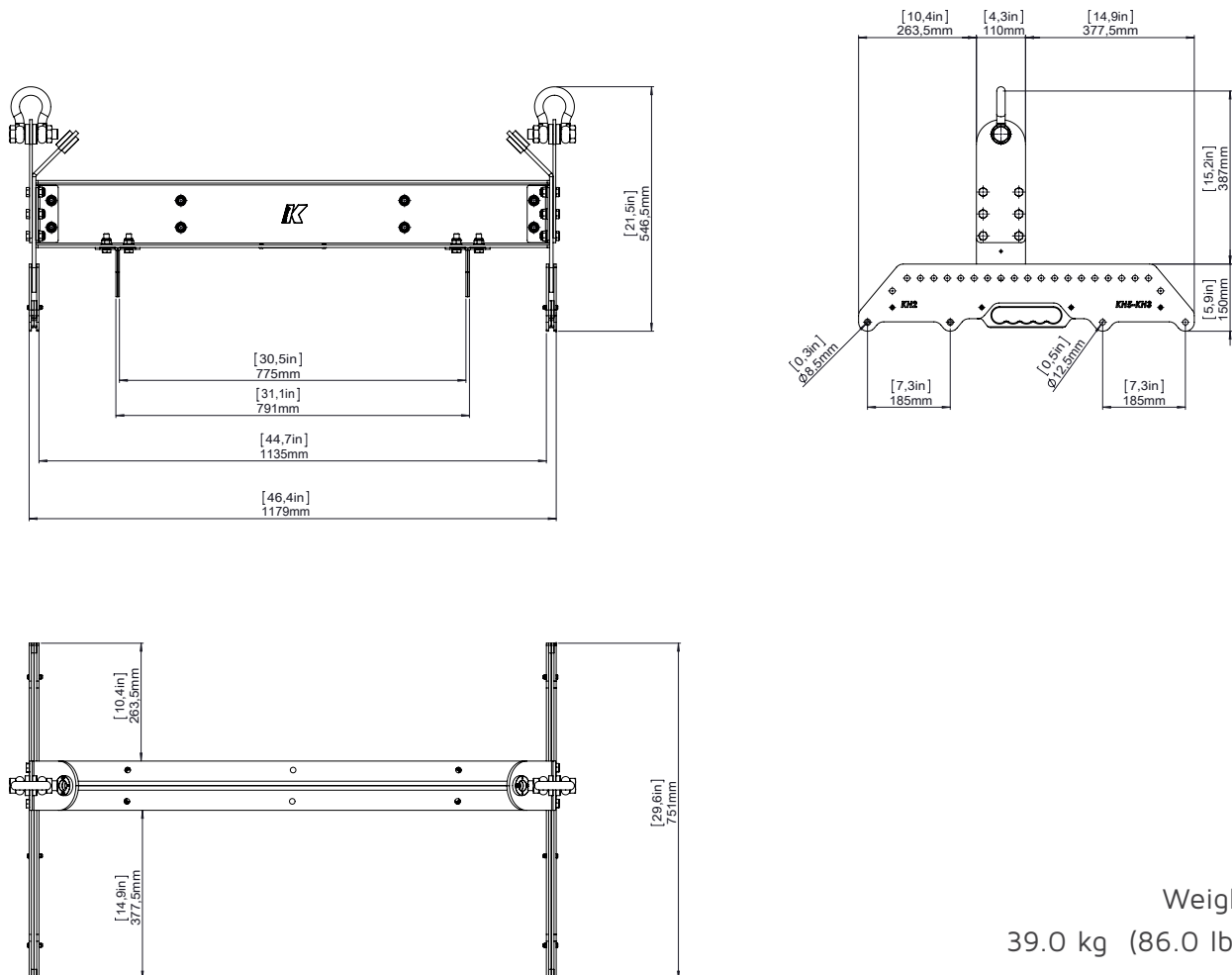
Weight  
46 kg (101.4 lbs)

### KH2 UNIT



Weight  
31.2 kg (68.8 lbs)

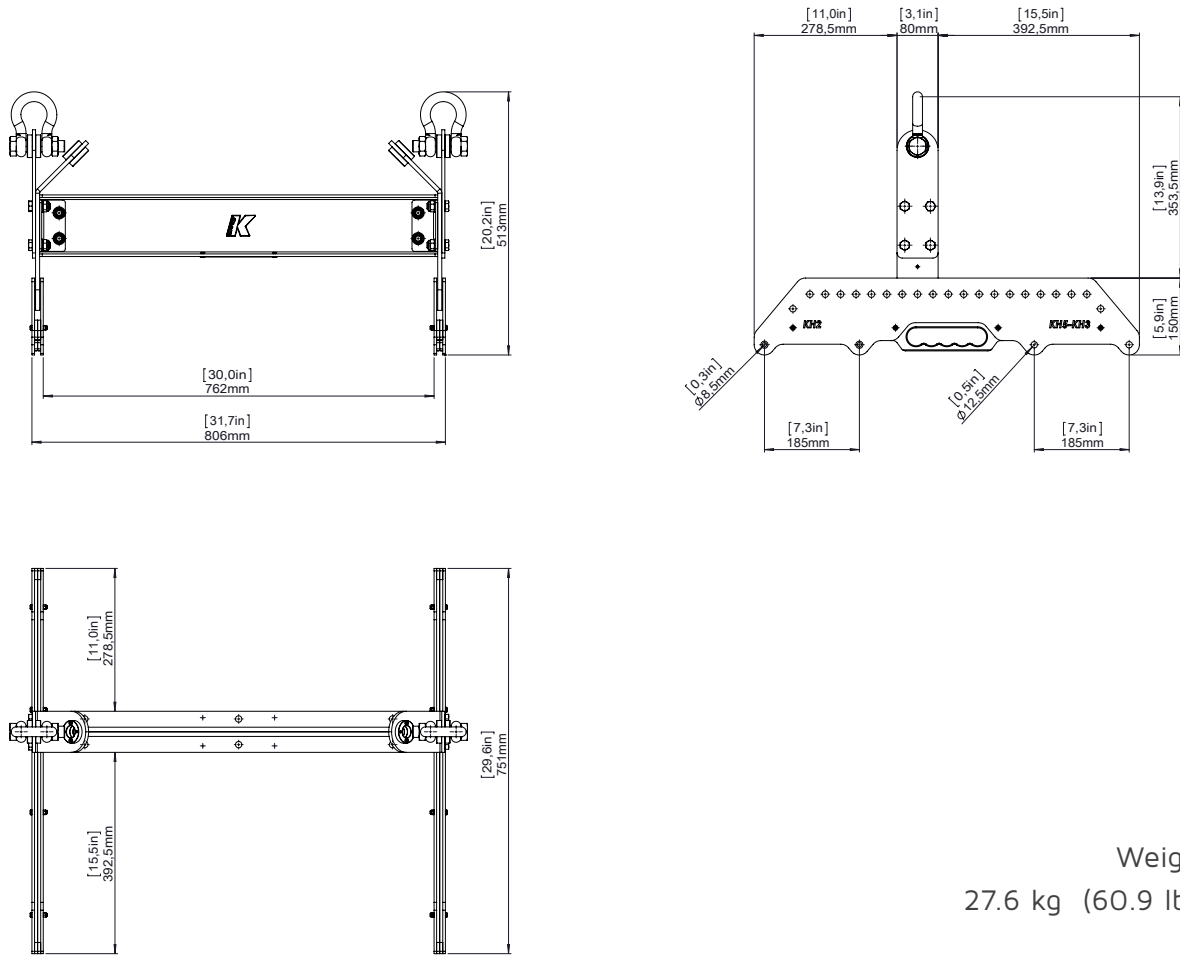
### K-HCFLY



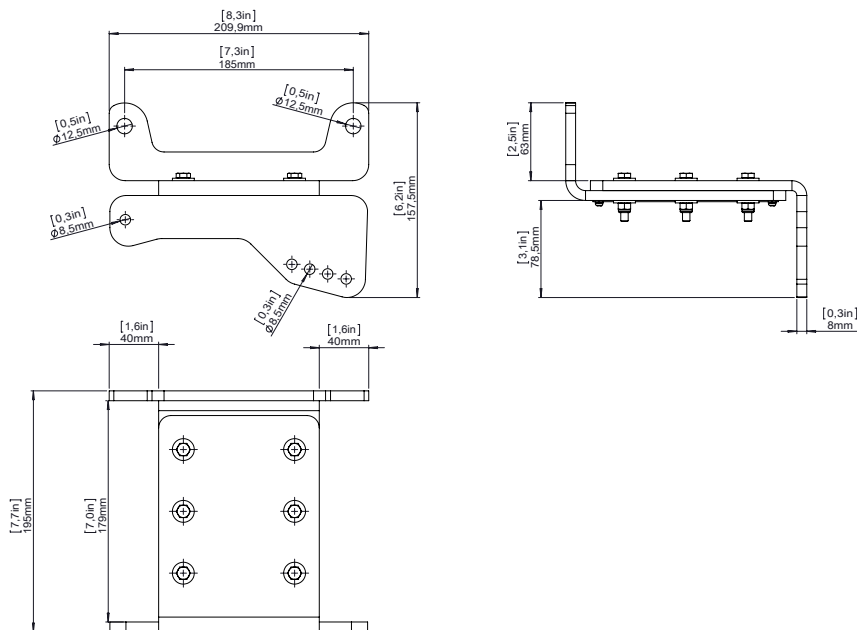
Weight  
39.0 kg (86.0 lbs)



### K-HCFLY2

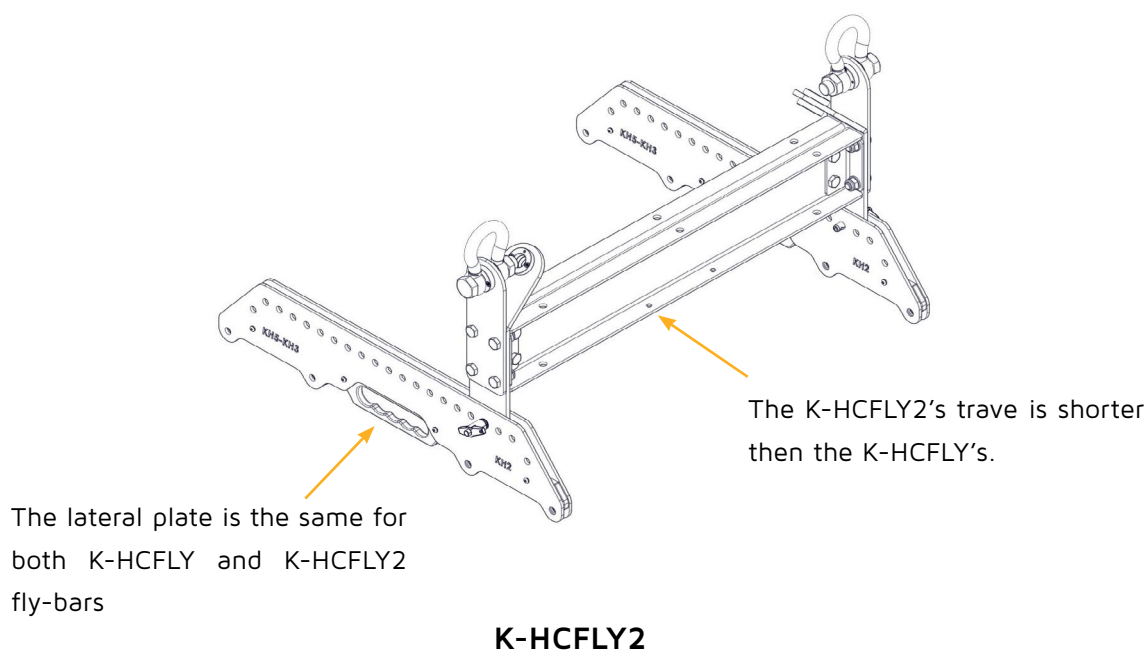
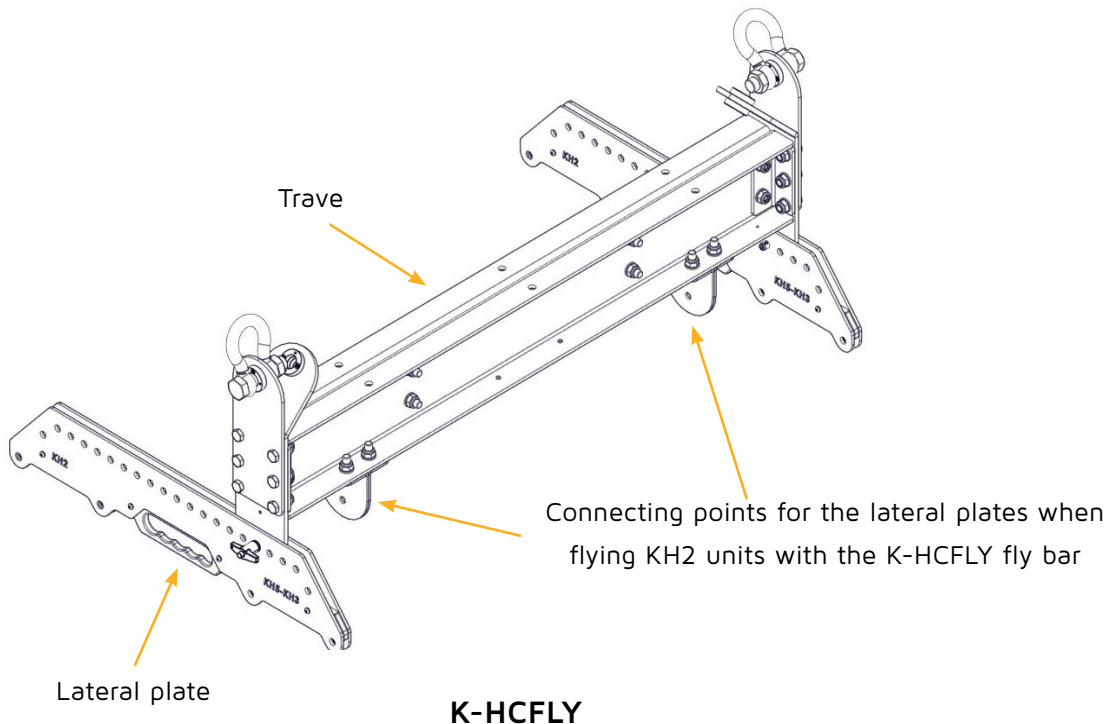


### K-HCLINK2/35



## 5. SUSPENDING A CLUSTER

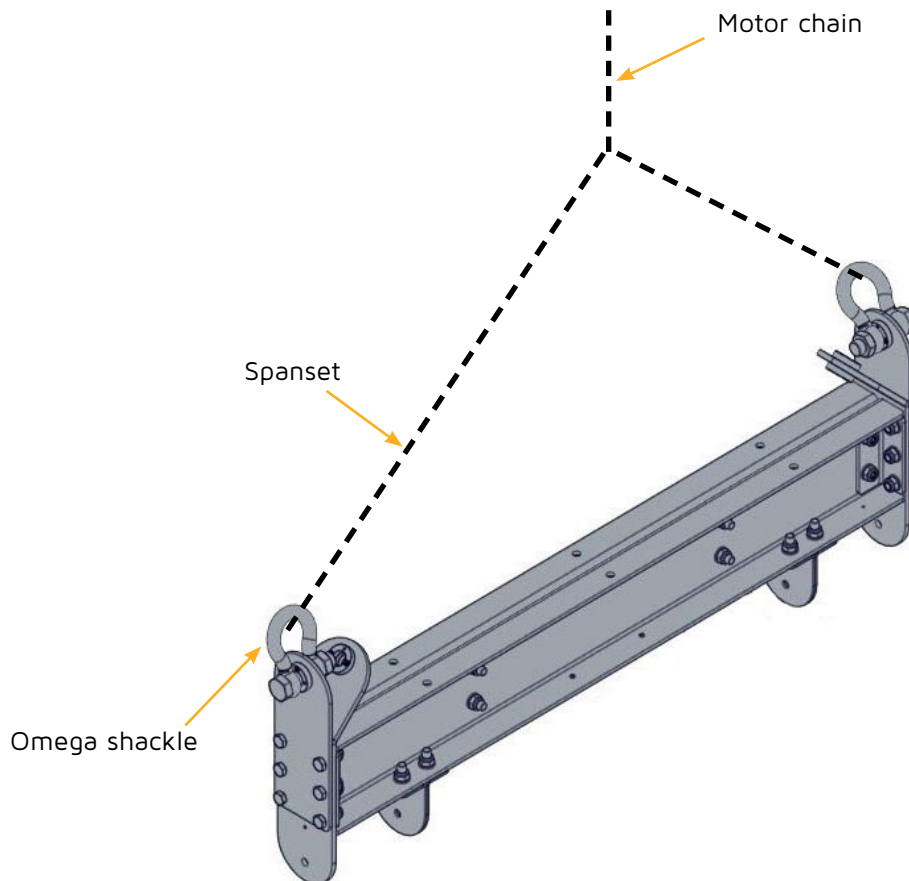
The K-HCFLY accessory can suspend up to 12 KH5/KH3 or up to 16 KH2. The K-HCFLY2 accessory can suspend up to 12 KH2.



## 5.1 SUSPENDING KH5/KH3 UNITS

The following step-by-step instructions instruct how to fly a cluster composed of KH5/KH3 units. Please note that the mounting hardware for KH5 and KH3 is exactly the same. This connects a KH3 below a KH5 unit without any additional hardware.

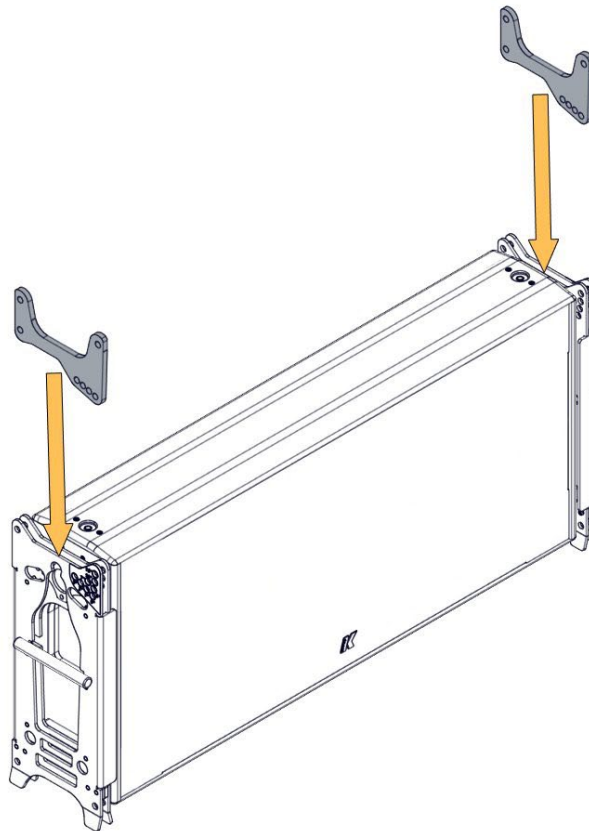
1. Position the K-HCFLY fly bar near the motor point. Insert the two round sling spansets supplied with the system into the Omega shackles and hook them to the motor chain. Move the fly bar up to about 1m.



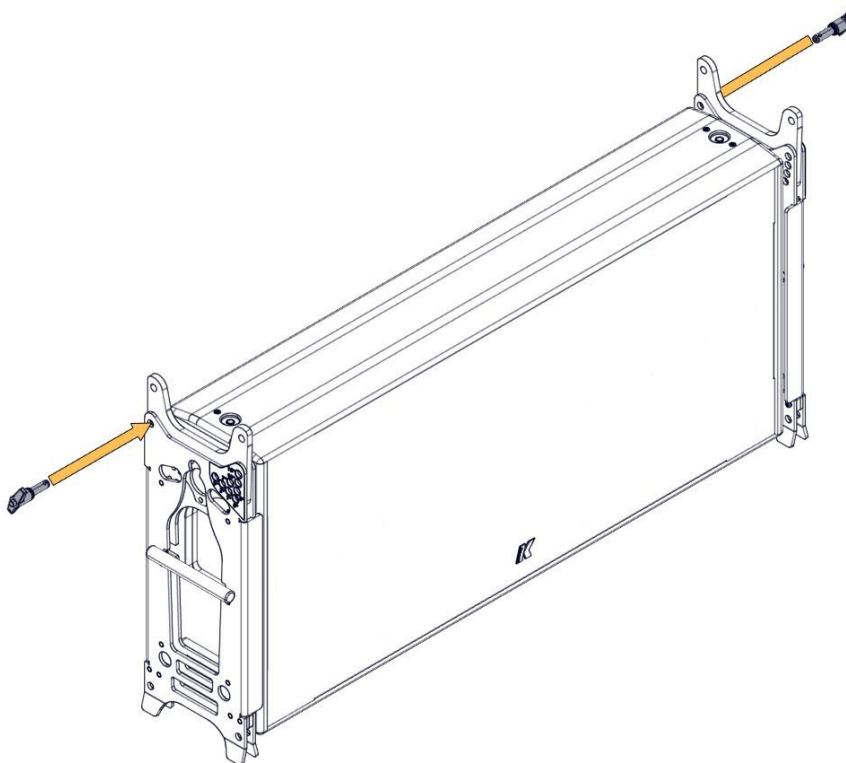
- Each KH5 unit is approximately 61 kg. Each KH3 unit is approximately 46 kg. Check the total weight of the cluster and use appropriate motors.
- Use the Omega shackles supplied with the system. Check that the thread-locking compound is in a locked position.
- Use stainless steel hooks with security fastening (not supplied). Check that the lock is securely fastened.



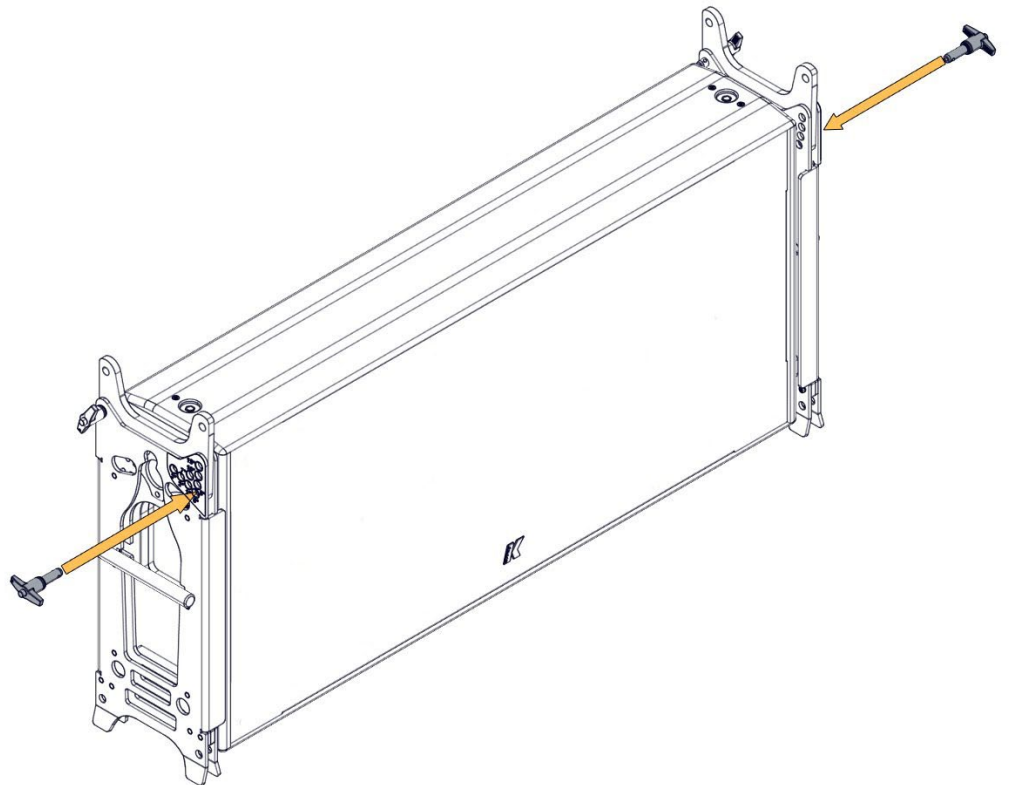
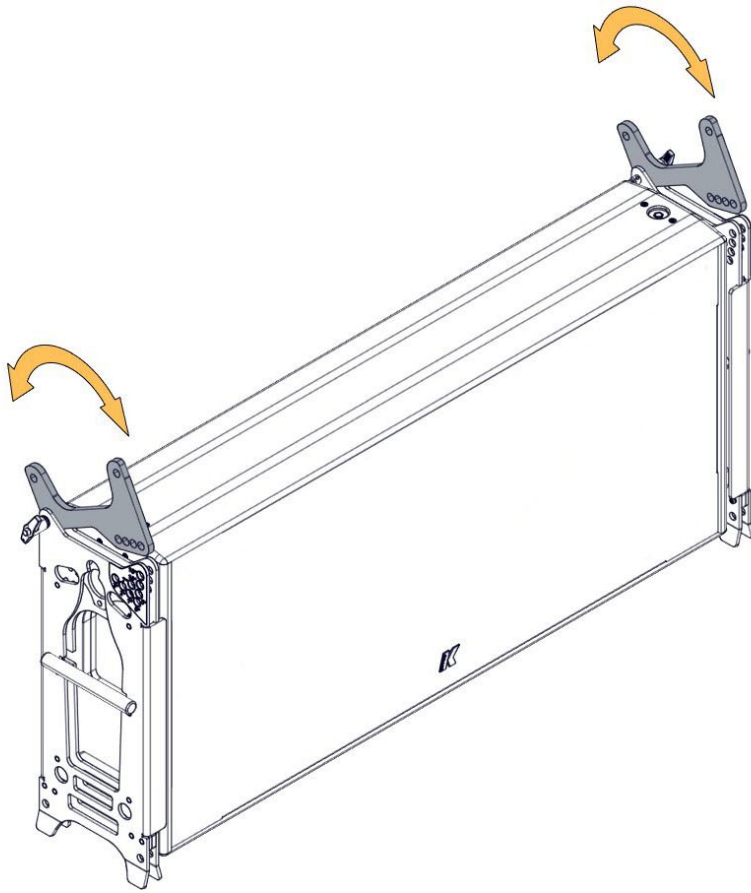
2. Position the first unit on a flat surface and insert the two plates supplied with the system as shown in the picture below.



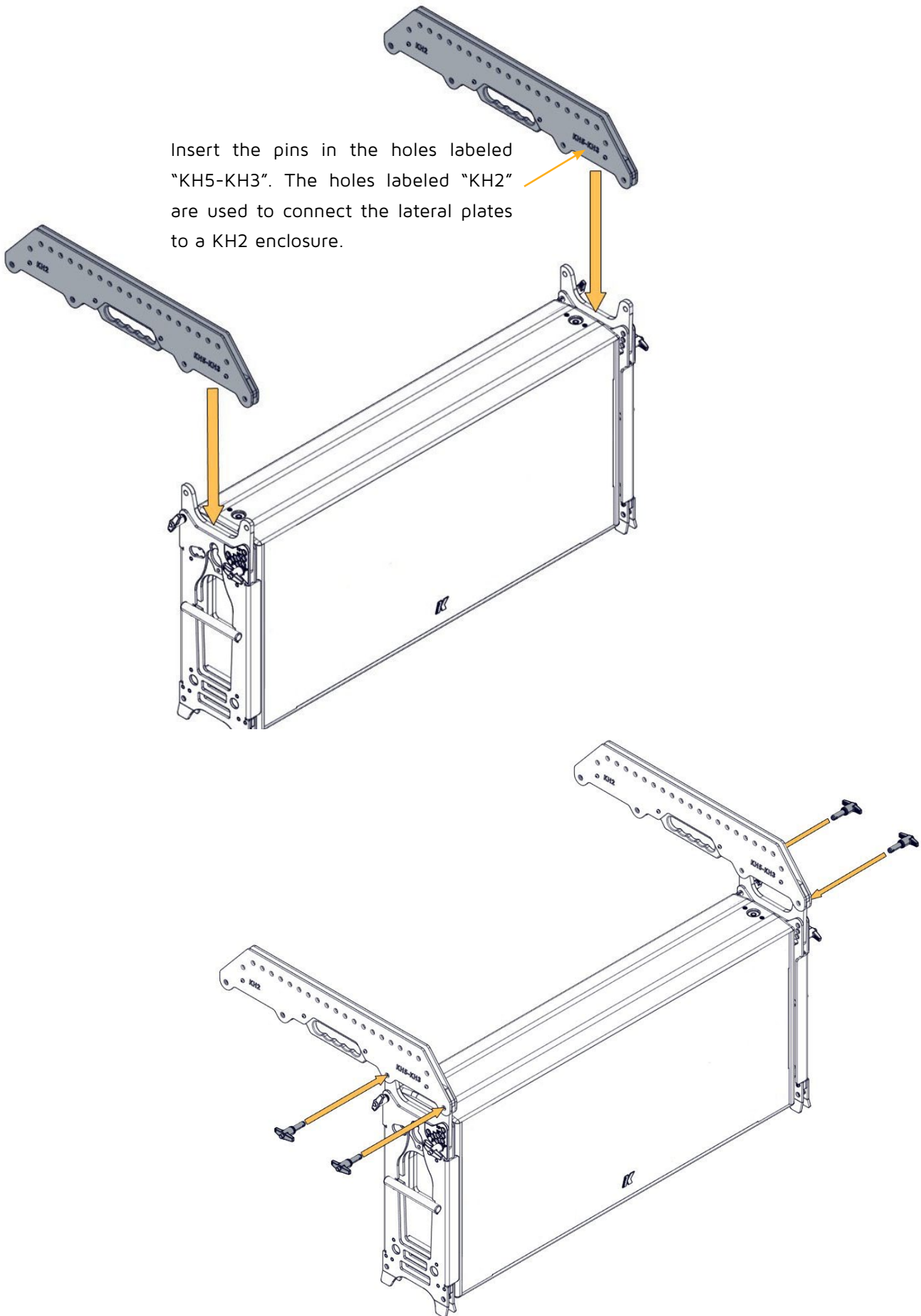
3. Plug the two 12x25 quick-release pins supplied with the system into the rear holes to secure the plates to the KH5/KH3 enclosure.



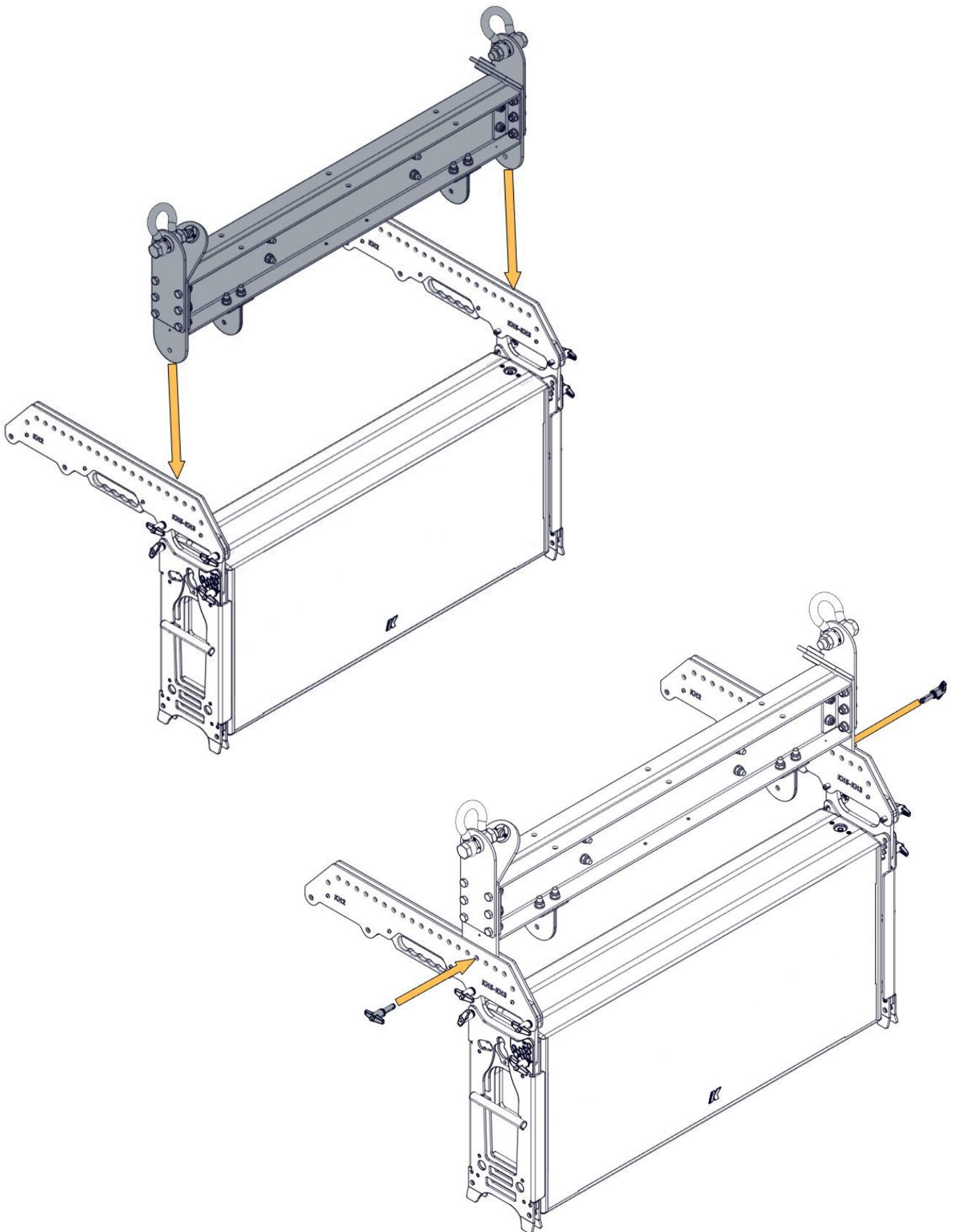
4. Insert two 12x25 quick release pins into the front holes corresponding to the angle you want to create between the fly bar and the first unit. We suggest to set this angle at 0°.



5. Insert the fly bar's lateral plates and secure them to the KH5/KH3 plates with four 12x25 quick release pins.

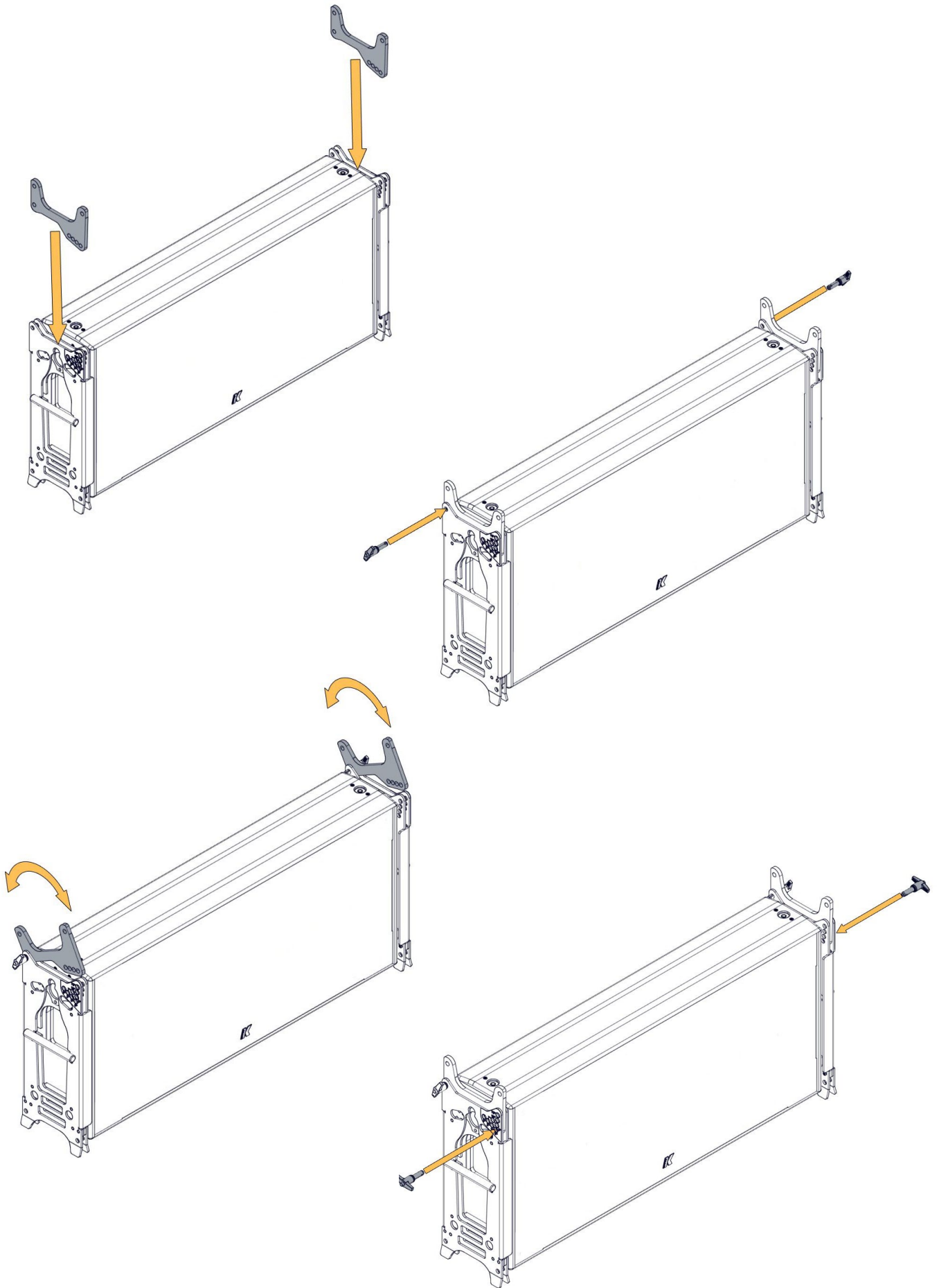


6. Insert the fly bar's trave. Its position with reference to the lateral plates will affect the vertical angle of the cluster. We recommend using the software EASE Focus (downloadable from our website [www.k-array.com](http://www.k-array.com)) to check the pinpoint number corresponding to the desired vertical angle. Secure with two 12x25 quick release pins.



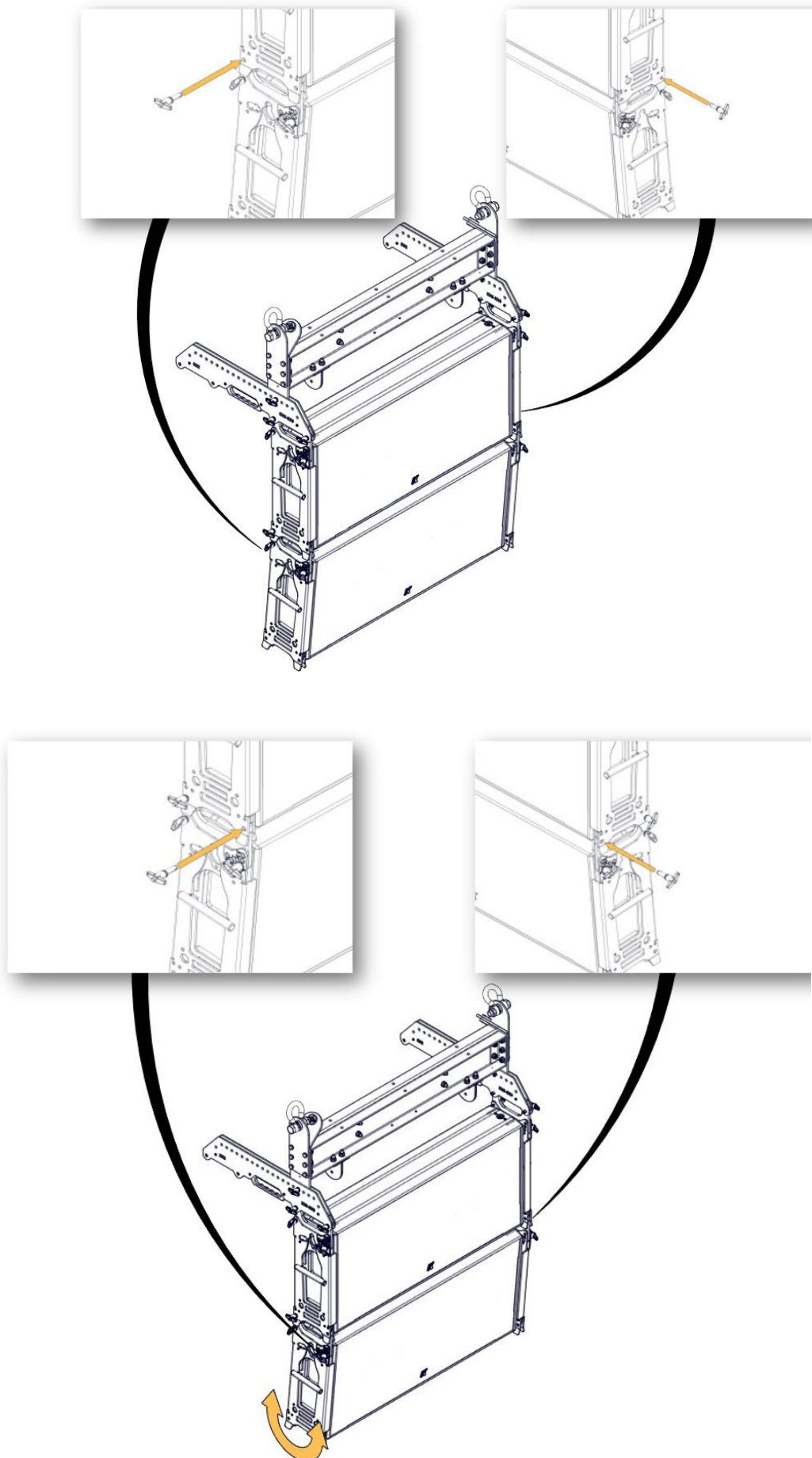


7. Move up the first unit just enough to position the second one below it. Follow the same procedure described in Step 3 to insert the plates and adjust the angles.

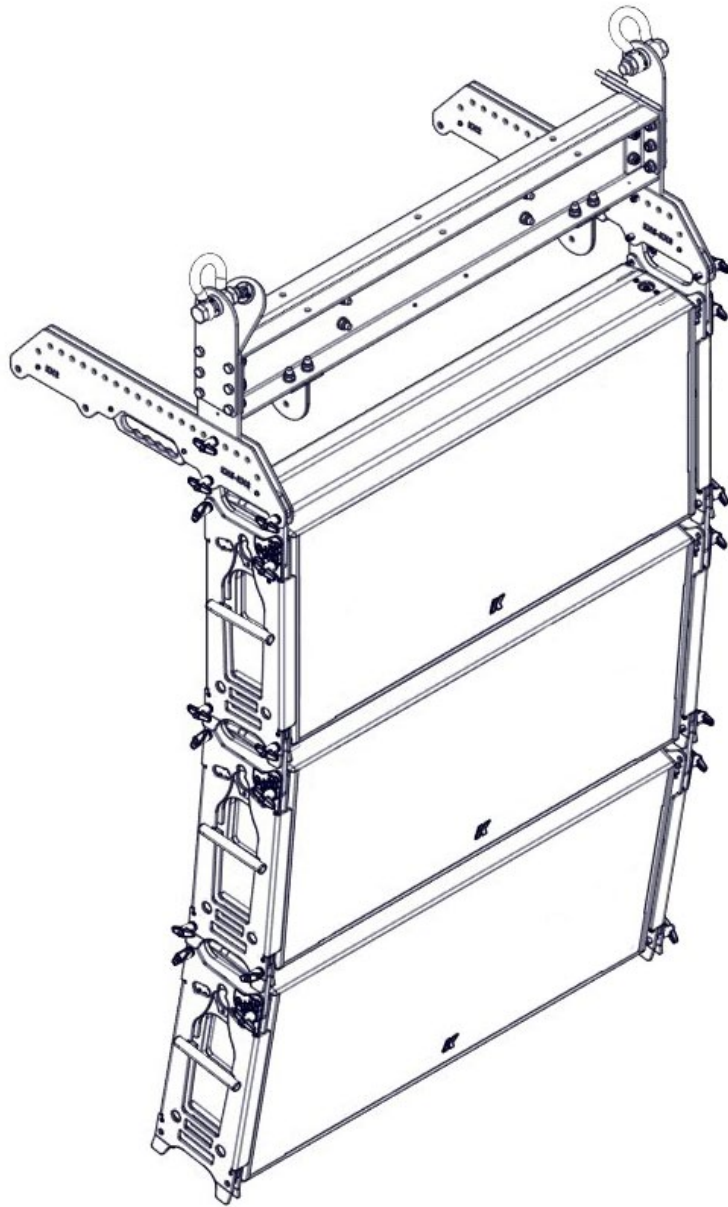




8. Insert four 12x25 quick release pins to connect the units. We suggest inserting the rear pins first then the front pins second.



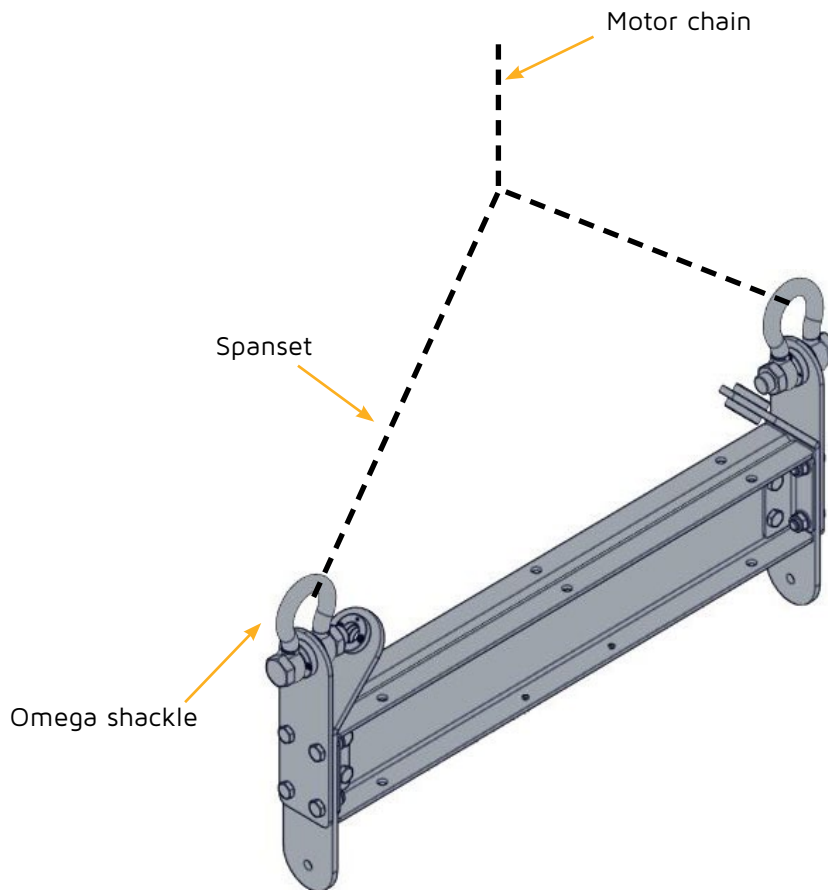
9. Repeat Steps 6 and 7 to connect the other units. Once complete, the system is ready to go up.



## 5.2 SUSPENDING KH2 UNITS

The following step-by-step instructions instruct how to fly a cluster composed of KH2 units. Please note that both the K-HCFLY and the K-HCFLY2 accessories allow a KH2 cluster to fly.

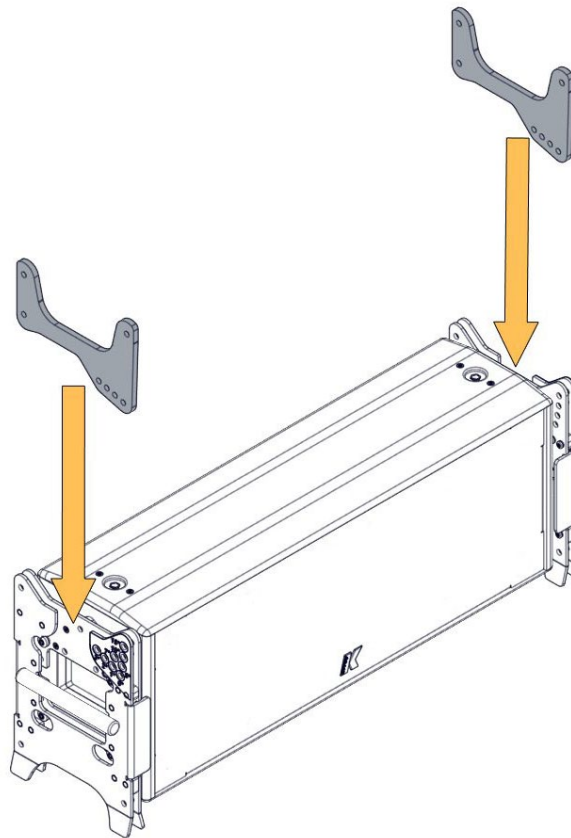
1. Position the fly bar near the motor point. Insert the two round sling spansets supplied with the system into the Omega shackles and hook them to the motor chain. Move the fly bar up at about 1m.



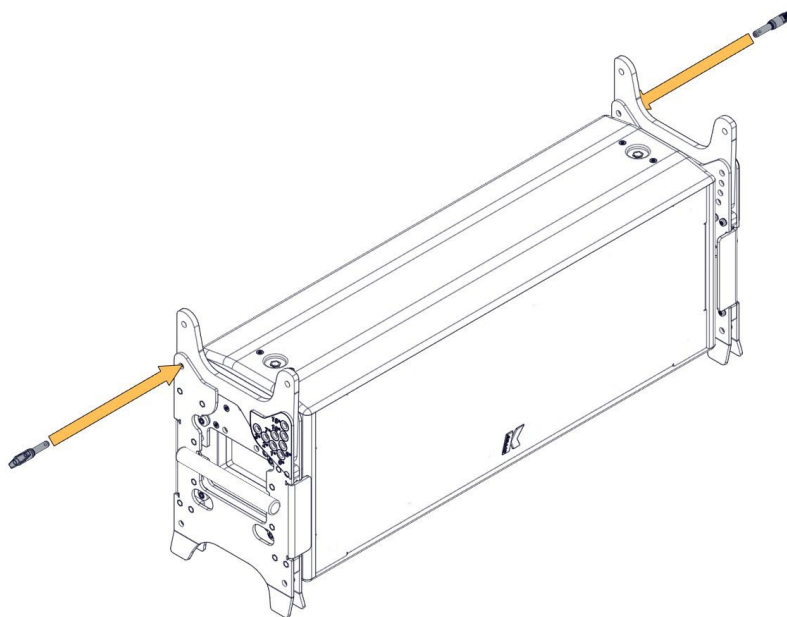
- Each KH2 unit weighs approximately 31 kg. Check the total weight of the cluster and use appropriate motors.
- Use the Omega shackles supplied with the system. Check that the thread-locking compound is in a locked position.
- Use stainless steel hooks with security fastening (not supplied). Check that the lock is securely fastened.



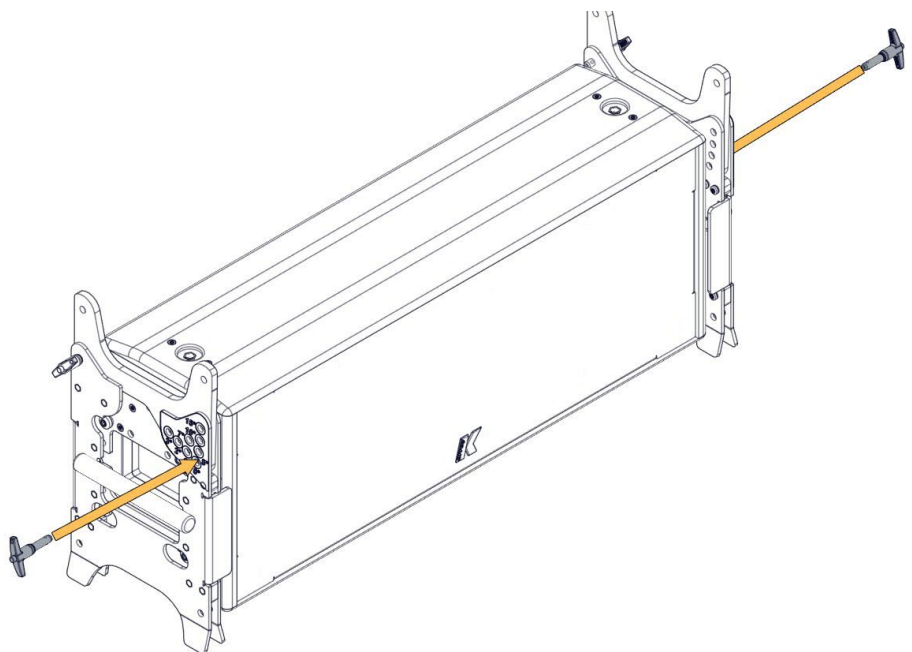
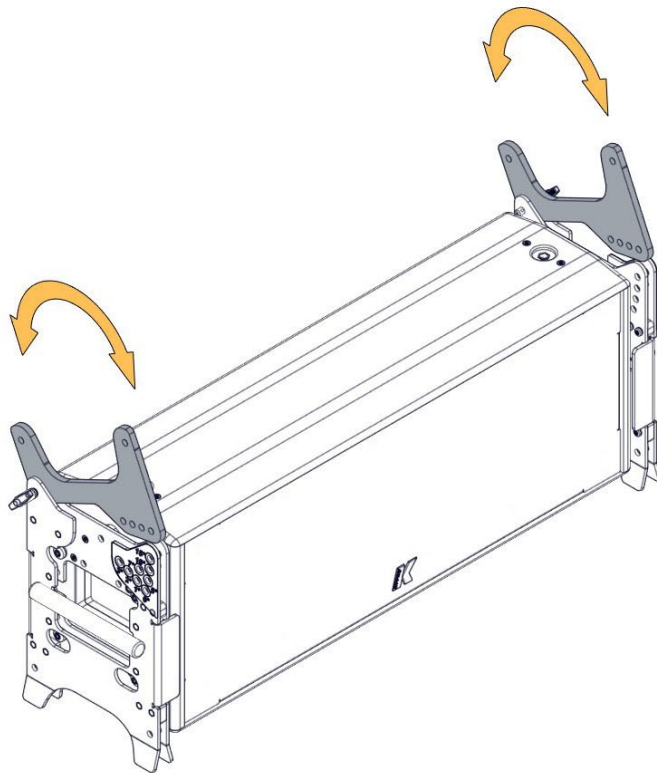
2. Position the first unit on a flat surface and insert the two plates supplied with the system as shown in the picture below.



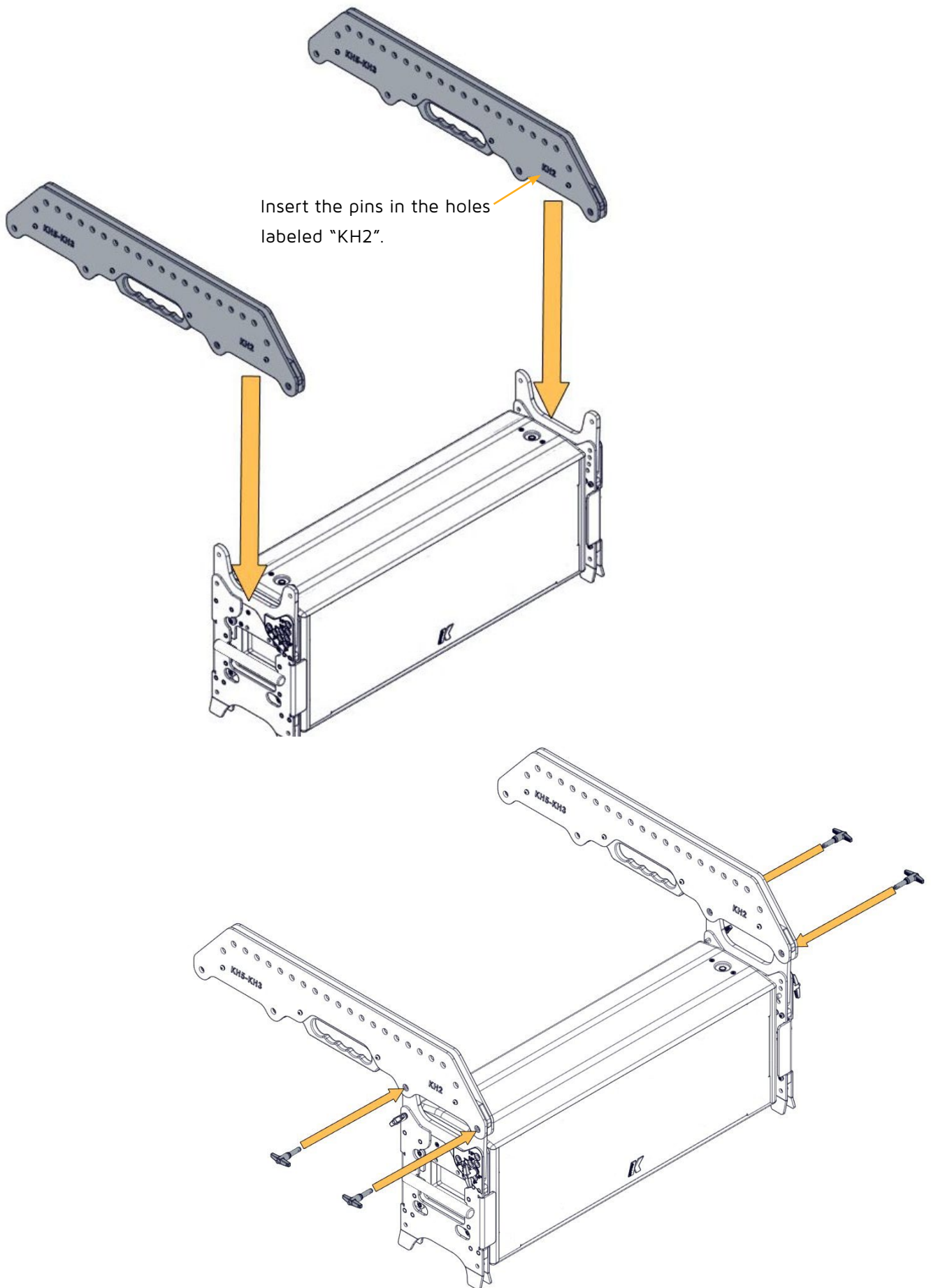
3. Plug the two 8x20 quick release pins supplied with the system into the rear holes to secure the plates to the KH2 enclosure.



4. Insert two 8x20 quick release pins into the front holes corresponding to the angle you want to be between the fly bar and the speaker. We suggest to set this angle at 0°.

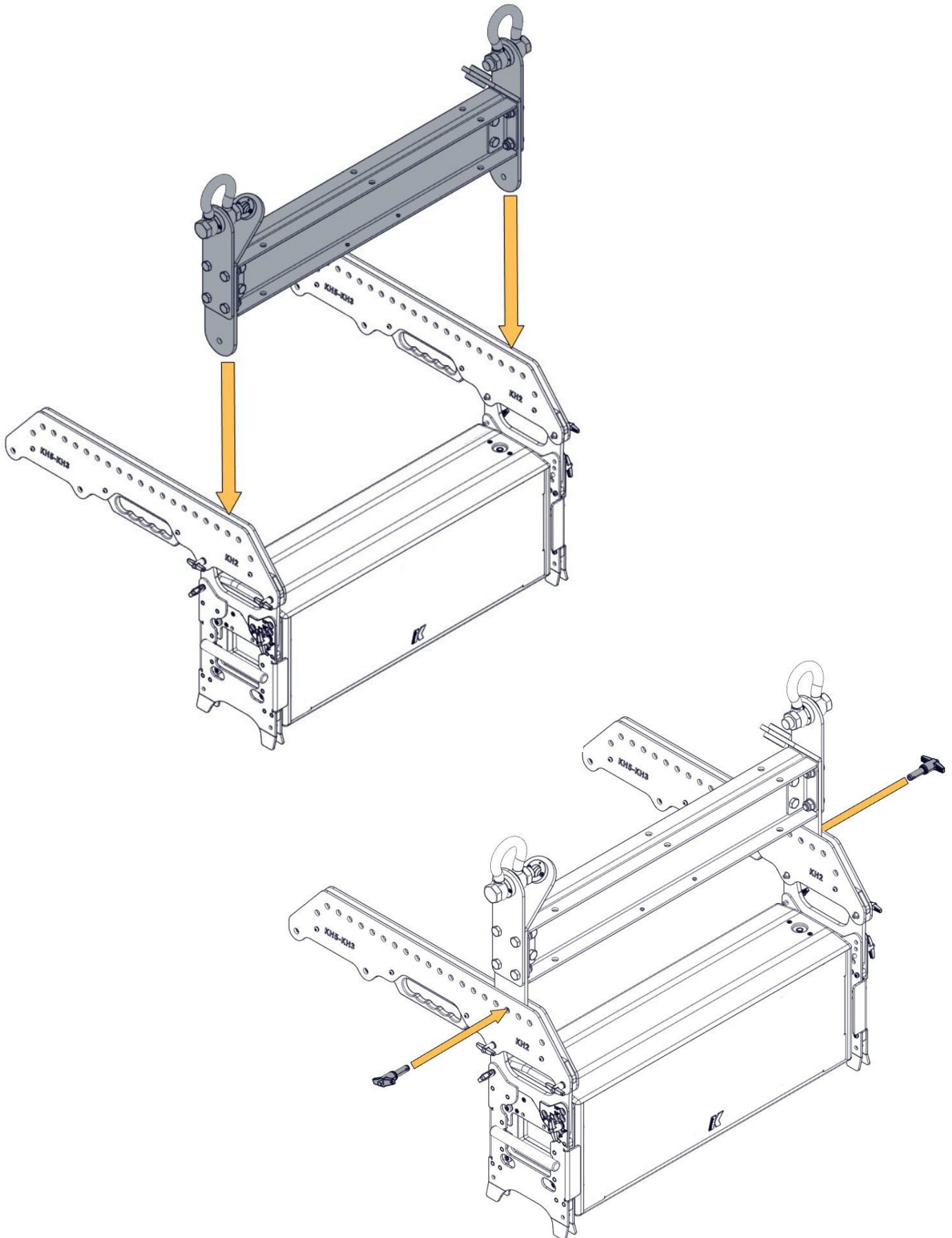


5. Insert the fly bar's lateral plates and secure them to the KH2 plates with four 8x20 quick release pins.

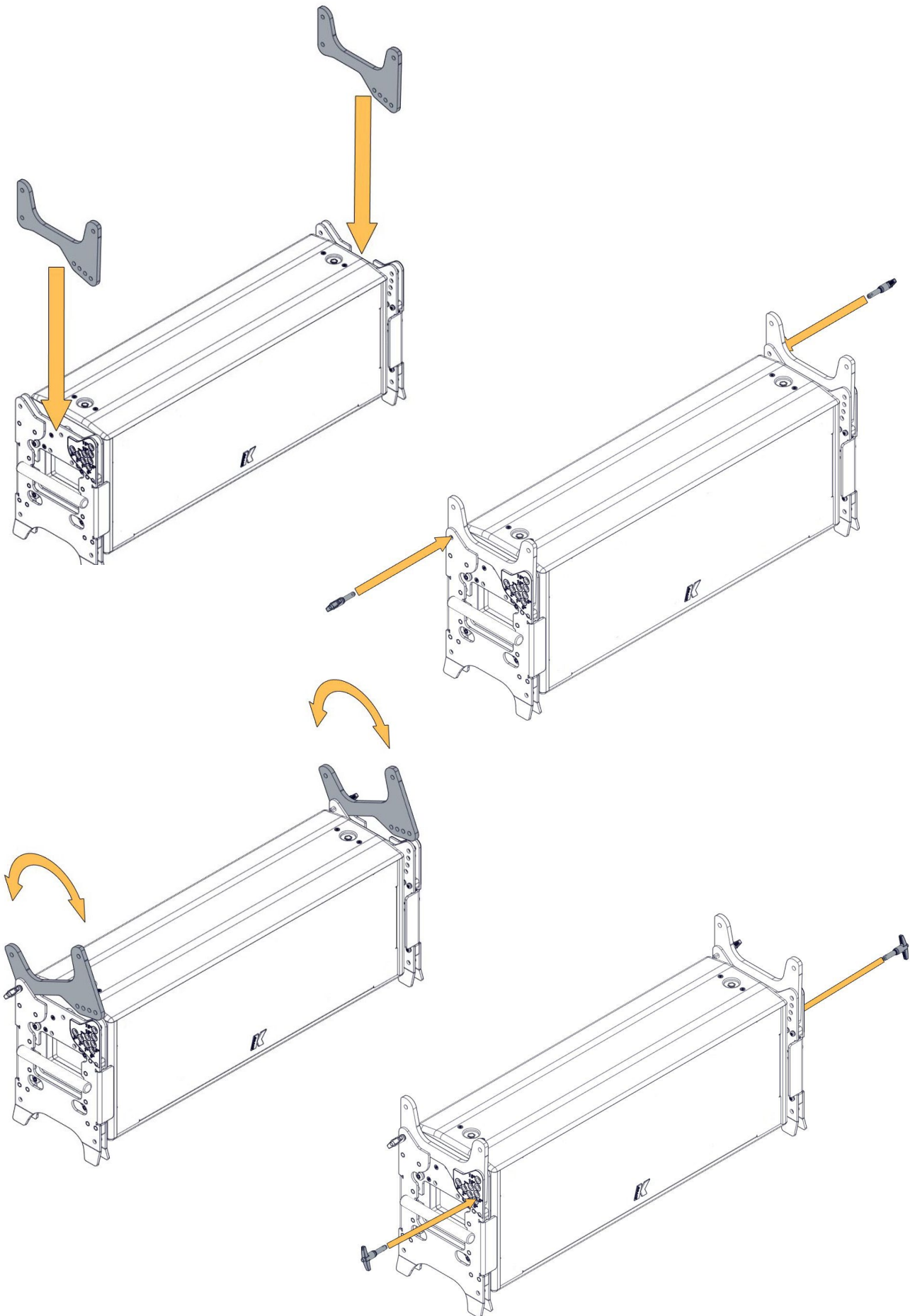




6. Insert the fly bar's trave. Its position with reference to the lateral plates will affect the vertical angle of the cluster. We recommend using the software, EASE Focus (downloadable from our website [www.k-array.com](http://www.k-array.com)) to check the pinpoint number corresponding to the desired vertical angle. Secure with two 8x20 quick release pins.

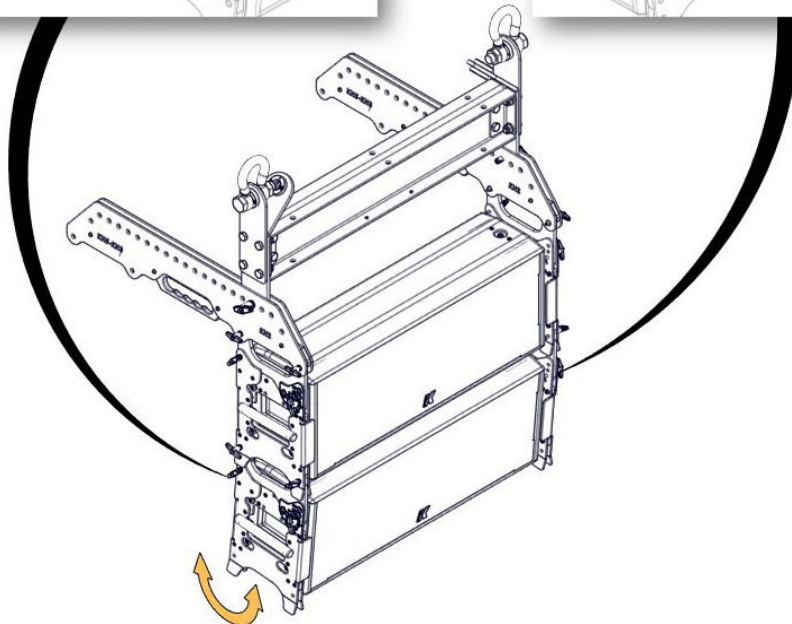
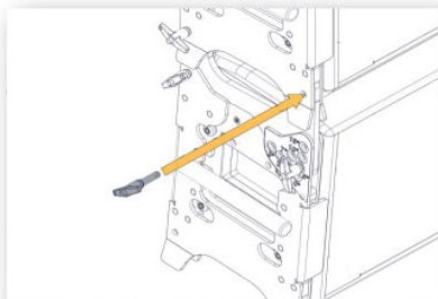
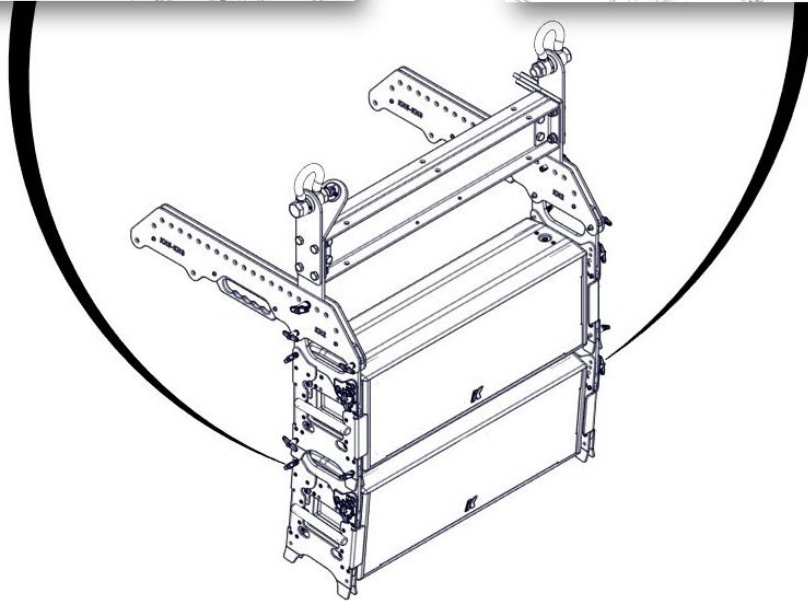
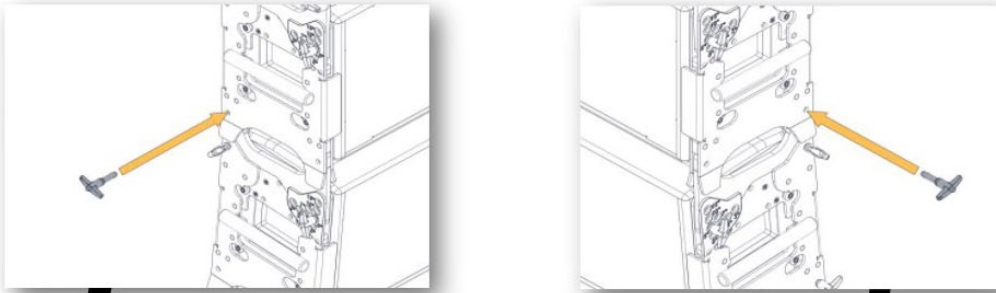


7. Move up the first unit just enough to position the second one below. Follow the same procedure described in Step 3 to insert the plates and adjust the angles.

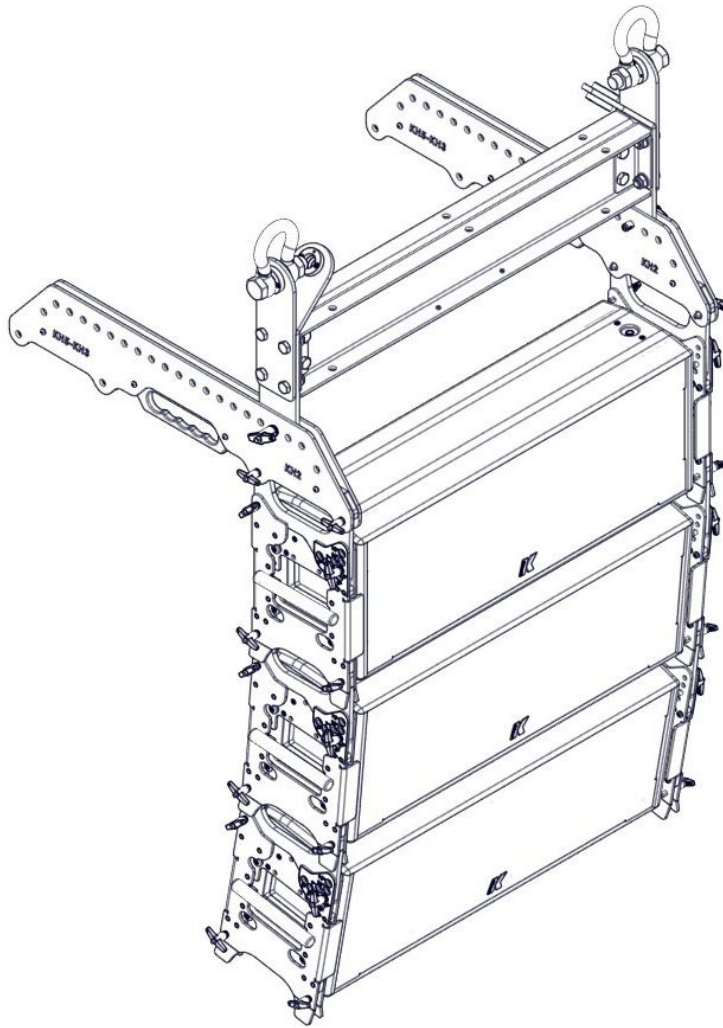




8. Insert four 8x20 quick release pins to connect the units. We suggest inserting the rear pins first, then the front pins second.



9. Repeat Steps 6 and 7 to connect the other units. Once complete, the system is ready to be flown.

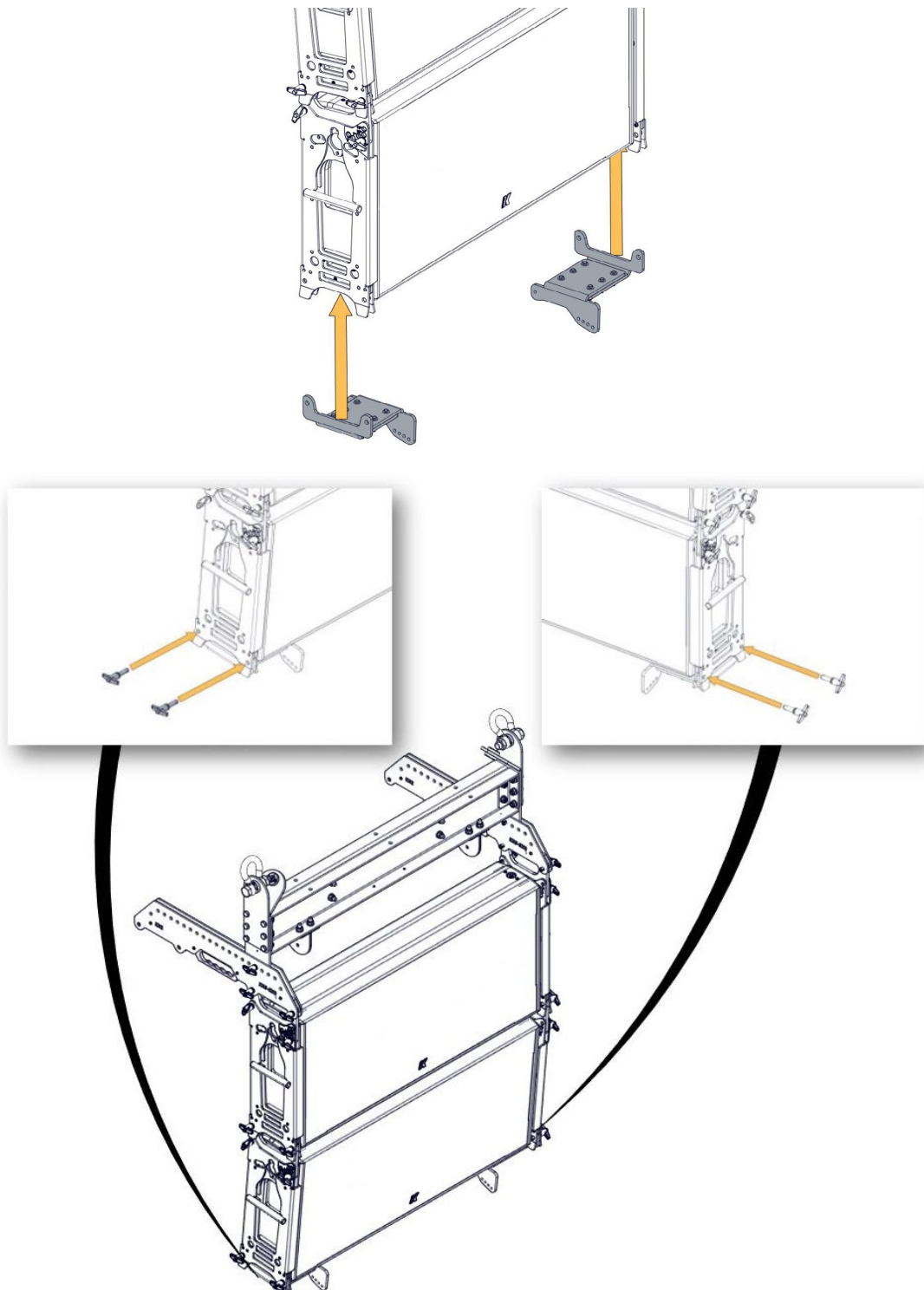


### 5.3 THE K-HCLINK2/35 ACCESSORY

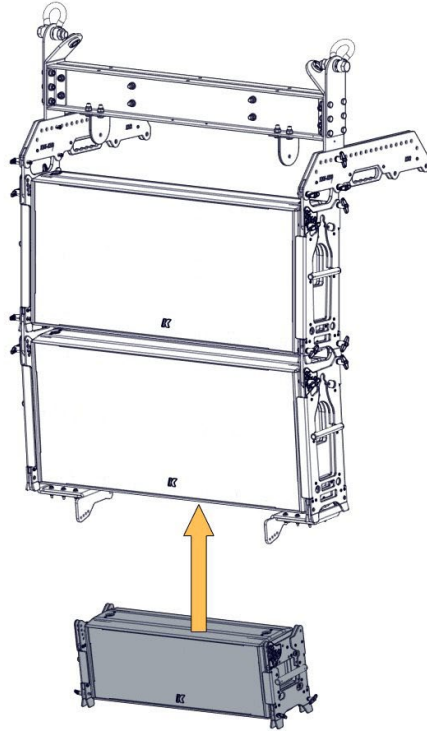
The K-HCLINK2/35 accessory connects a KH2 unit under a KH3 or a KH5 unit. This can be useful for down-fill applications.

The following step-by-step instructions instructs how to to connect a KH2 unit under a KH5 unit. The same procedure can be followed to connect a KH2 under a KH3.

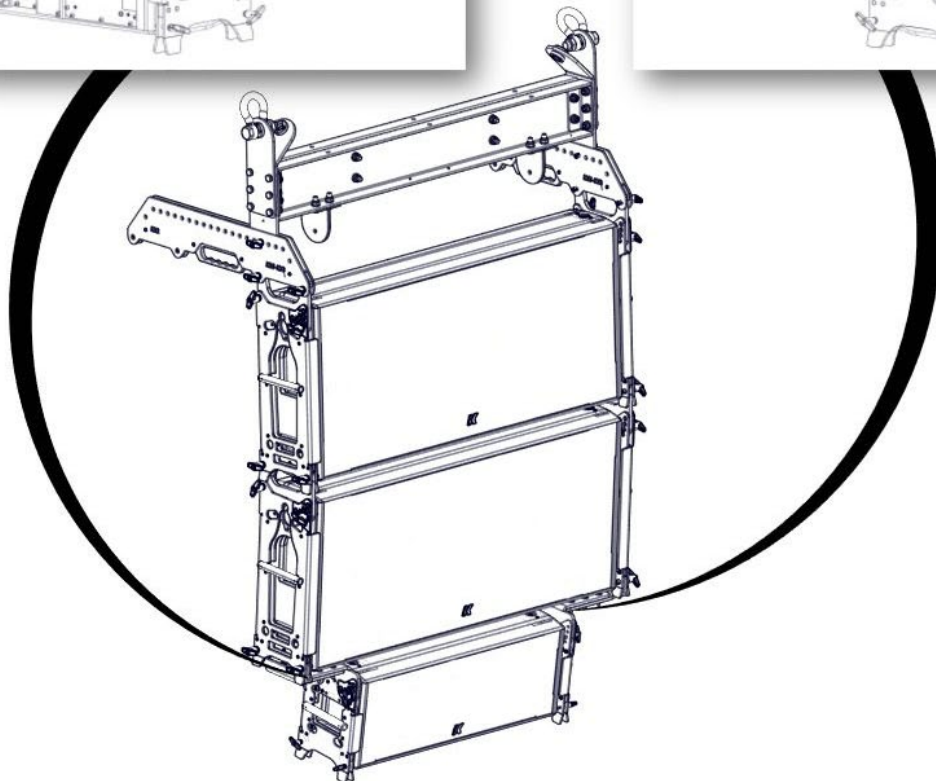
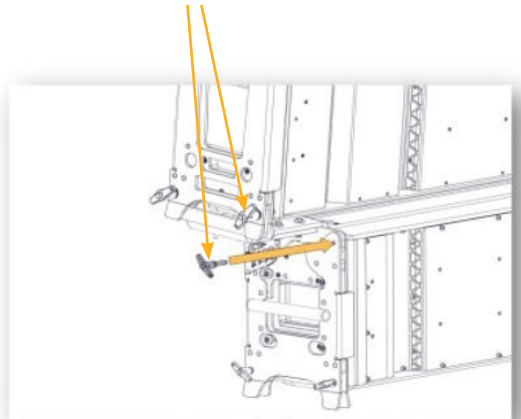
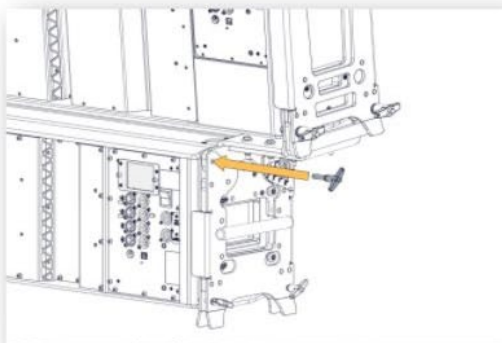
1. Insert the connecting plates as shown in the picture below. Secure them to the KH5/KH3 enclosure with four 12x25 quick release pins.



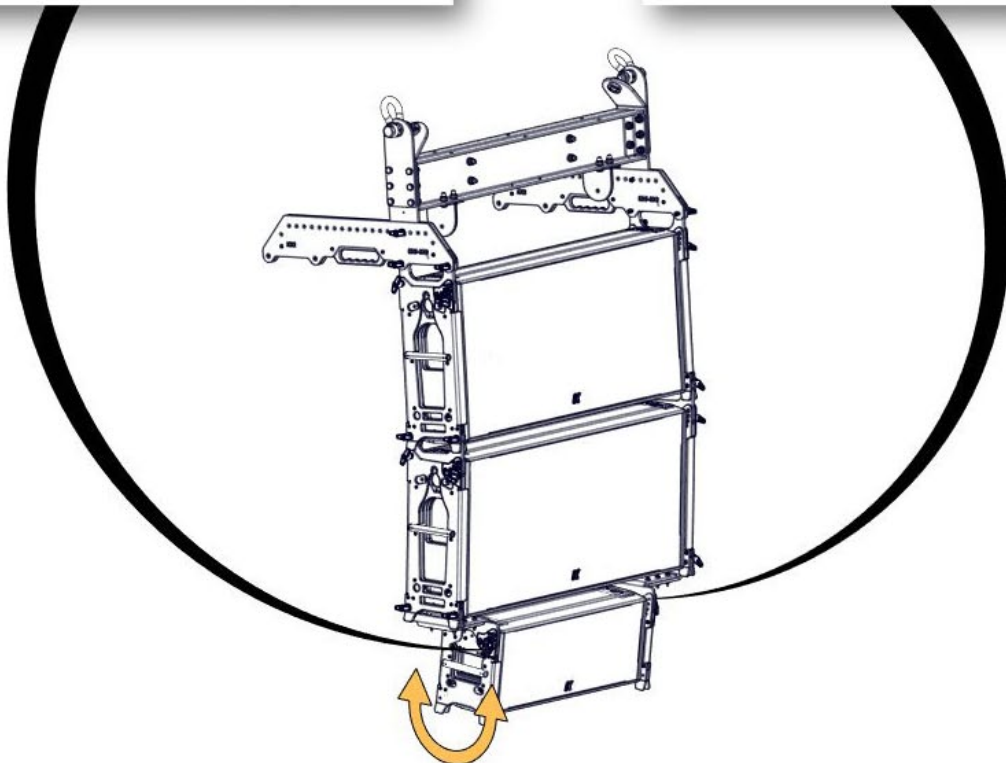
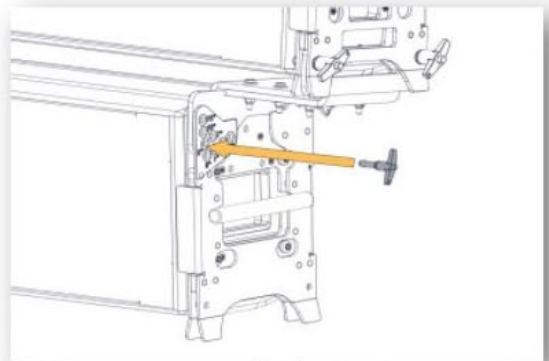
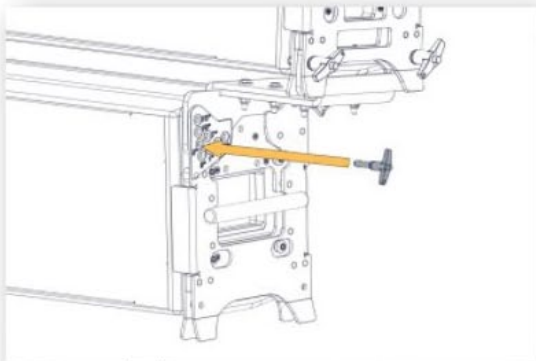
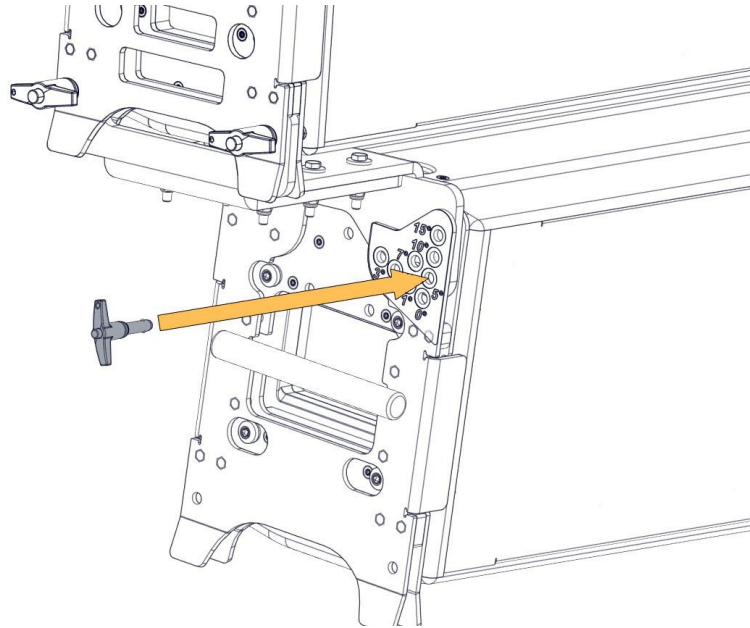
2. Connect the KH2 enclosure to the cluster by inserting the two 8x20 rear pins, as shown in the picture below.



Please note that these quick release pins have different dimensions! Use the 12x25 pins on the KH5/KH3 and the 8x20 pins on the KH2.

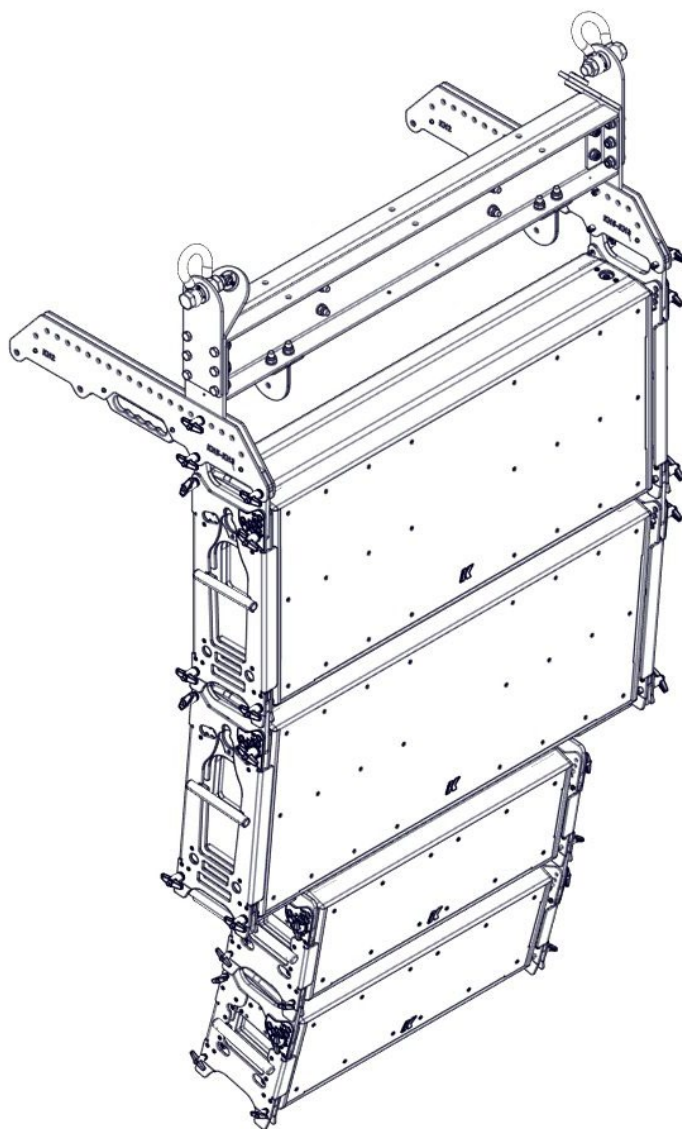


3. Insert two 8x20 pins into the front holes corresponding to the angle you would like to maintain between the KH2 and the KH5.



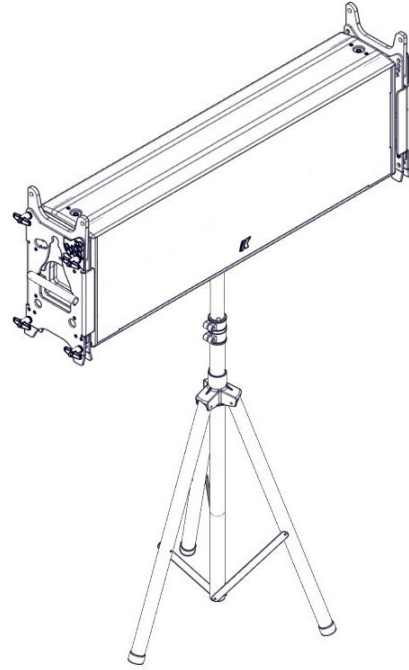
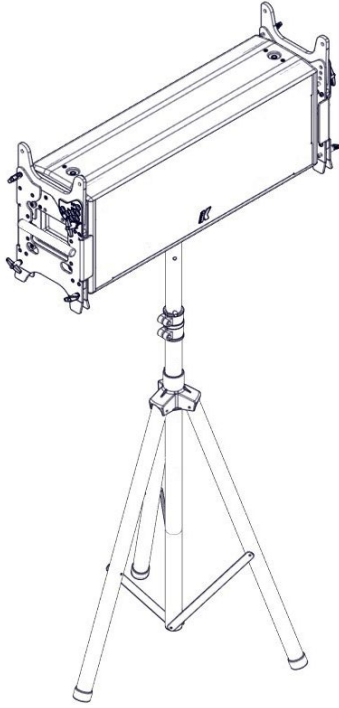


5. Connect the other KH2 units following the procedure described in Paragraph 5.2.



## 6. INSTALLING ON A POLE

KH3 and KH2 feature a 35mm hole that allows the units to be installed using an extendable pole. Check that the hardware you are using can support the weight of the speakers.



## 7. SERVICE

To obtain service:

- 1) Contact the official K-array distributor in your country. Your local distributor will direct you to the appropriate service center.
- 2) If you are calling for service, please have the serial number(s) of the unit(s) available for reference. Ask for Customer Service, and be prepared to describe the problem clearly and completely.
- 3) If the problem cannot be resolved over the phone, you may be required to send the unit in for service. In this instance, you will be provided with an RA (Return Authorization) number which should be included on all shipping documents and correspondence regarding the repair. Shipping charges are the responsibility of the purchaser.

Any attempt to modify or replace components of the device will invalidate your warranty. Service must



Cleaning:

Use only a soft, dry cloth to clean the unit. Do not use any solvents, chemicals, or cleaning solutions containing alcohol, ammonia, or abrasives. Do not use any sprays near the product or allow liquids to spill into any openings.