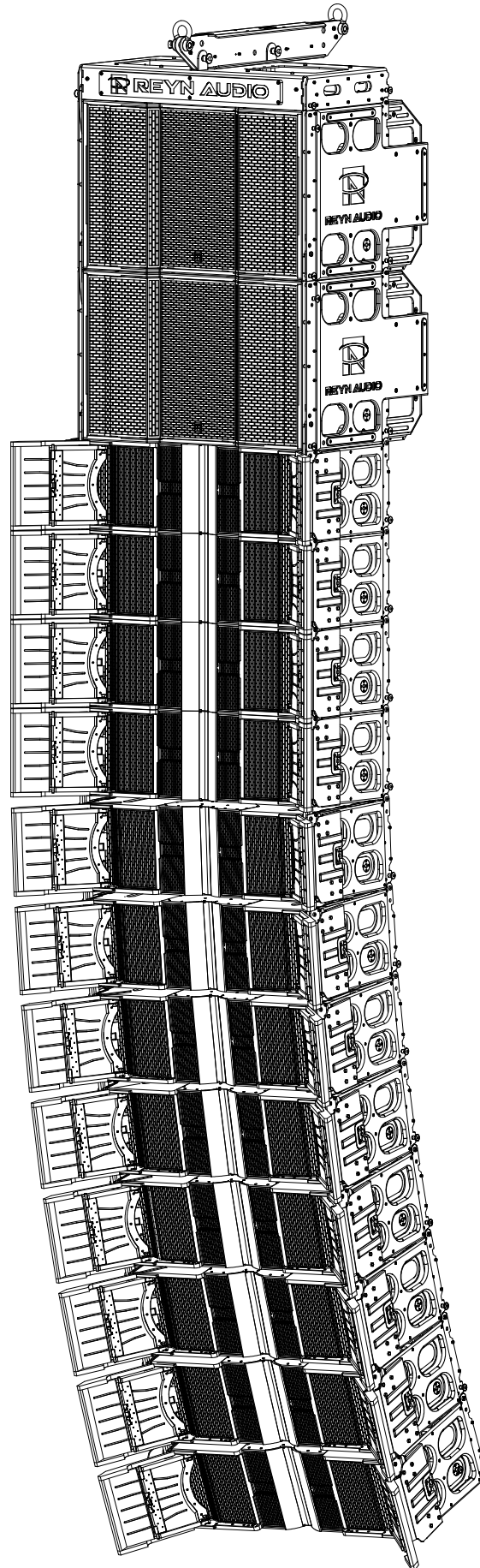


RAFALE 1 RAPTOR

RIGGING PROCEDURES



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1. Safety Warnings

1.1 Important Safety Instructions

1. Read this manual.
2. Heed all safety warnings and follow all safety instructions.
3. Never incorporate equipment or accessories not approved by REYN AUDIO.
4. Read all related product information documents before exploiting the system.
5. Personnel qualification

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

6. Personnel health and safety

During installation and set-up personnel should wear protective headgear and footwear at all times. Under no circumstances personnel should climb on the loudspeaker assembly.

7. System parts and rigging inspection

All system components must be inspected before use, in order to detect any possible defects. Any part showing any sign of defect must immediately be put aside and withdrawn from use to be inspected by qualified service personnel.

8. Additional rigging equipment

REYN AUDIO is not responsible for any rigging equipment and accessories that are not manufactured by REYN AUDIO. It is the user's responsibility to ensure that the Working Load Limit (WLL) of all additional hardware rigging accessories is greater than the total weight of the loudspeaker assembly in use.

9. Suspension points

It is the user's responsibility to ensure that the Working Load Limit (WLL) of the suspension points and/or chain hoists is greater than the total weight of the loudspeaker assembly in use.

10. Respect the maximum configurations and the recommended safety level

For safety issue, respect the maximum configurations outlined in this manual. Check the conformity of any configuration in regards with the safety level recommended by REYN AUDIO.

11. Flying a loudspeaker assembly

Always ensure that nobody is standing underneath the loudspeaker assembly when it is being raised. As the system is being raised check each individual component to make sure that it is securely fastened to the component above. Never leave the system unattended during the installation process. As a general rule, REYN AUDIO recommends the use of safety slings at all times.

12. 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, REYN AUDIO recommends the use of safety straps at all times.

13. Dynamic load

When a loudspeaker assembly is deployed in an open air environment, wind effect should be taken into account. Wind can produce dynamic stress to the rigging components and suspension points. If the wind force exceeds 6 bft (Beaufort scale) it is highly recommended to lower down and/or secure the loudspeaker assembly.

14. Local regulations

Some countries require higher Ultimate Strength Safety Factors and specific rigging approvals. It is the user's responsibility to ensure that any overhead suspension of REYN AUDIO systems has been made in accordance with all applicable local regulations.

15. Manual

Keep this manual in a safe place during the product lifetime. This manual forms an integral part of the product. Reselling of the product is only possible if the user manual is available. Any changes made to the product have to be documented in writing and passed on to the buyer in the event of resale.

1.2 EU Declaration of Conformity (DoC)

We

REYN AUDIO

898 Gaoming Avenue East,

Foshan City

China

0757-8832-5006

www.reynaudio.com



declare that the DoC is issued under our sole responsibility and belongs to the following product:

RAFALE1、RAPTOR、M600、RL0.5、RL0.5 SUB enclosure

The object of the declaration described above is in conformity with the relevant Union harmonization legislation:

2006/42/EC: Machinery Directive

2014/35/EU: The Low Voltage Directive and its amending Directives

2011/65/EU: Restriction of Hazardous Substances (RoHS2) directive AND its amending Directives

The following harmonized standards and technical specifications have been applied:

EN ISO 12100:2010 Safety of machinery

EN 62368-1:2014+A11:2017 Audio/video, information and communication technology equipment -

Part 1: Safety requirements

EN/IEC 63000:2018 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

Technical file compiled by:

REYN AUDIO

898 Gaoming Avenue East,

Foshan City

China

Year CE marking was first affixed: 2009

issued in China

For and on behalf of
YIFENG LIGHTING CO. LTD.

Amos
.....
Authorised Signature(s)

Director of Sound System Design

2. Introduction

Thank you for purchasing the REYN AUDIO RAFALE1 & RAPTOR loudspeaker system.

This manual contains essential information on the REYN AUDIO RAFALE1 & RAPTOR rigging procedures. Read this manual carefully in order to become familiar with these procedures.

As part of a continuous evolution of techniques and standards, REYN AUDIO reserves the right to change the specifications of the product and the content of this manual without prior notice.

Should the product requires repair or if information about the warranty is needed, please contact an approved REYN AUDIO distributor. The address of the nearest distributor is available on the REYN AUDIO web site.

3. RAFALE1 & RAPTOR Loudspeaker System

3.1 Unpacking

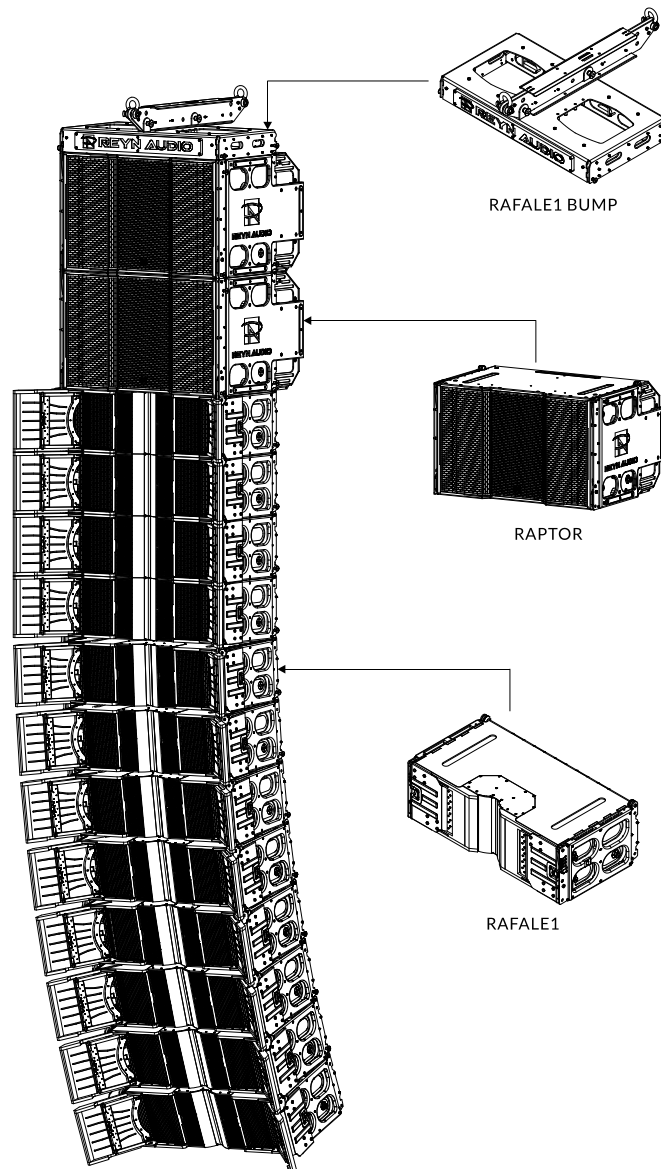
Carefully open the shipping carton and check the product for any noticeable damage. Each REYN AUDIO product is tested and inspected before leaving the factory and should arrive in perfect condition.

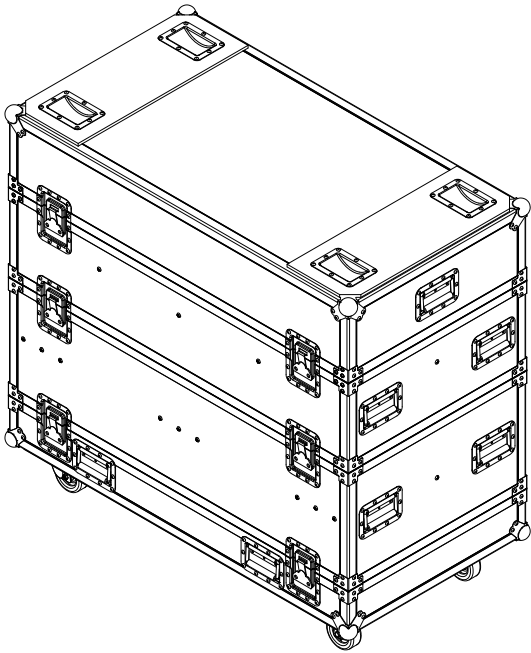
If found to be damaged, notify the shipping company or the distributor immediately. Only the consignee may initiate a claim with the carrier for damage incurred during shipping. Be sure to save the carton and packing materials for the carrier's inspection.

3.2 System Components

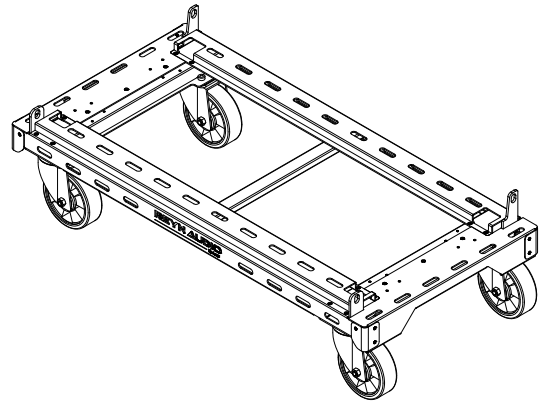
The main system components are as follows:

RAFALE1	Full range, 3 way line array speaker.
RAPTOR	High power subwoofer.
RAFALE1 BUMP	Rigging frame for flying RAFALE1 and/or RAPTOR.
RAFALE1 BUMP-FLIGHT	Rackmount flight case for 2 x RAFALE1 BUMP.
RAFALE1 DOLLY	Cart for an array of 4 RAFALE1 enclosures.
RAPTOR DOLLY	Cart for an array of 2 RAPTOR enclosures.
DOLLY-COVER	The cushiony packaging for RAFALE1 and/or RAPTOR.
ARRAY-COVER	The cushiony packaging for RAFALE1 and/or RAPTOR array.
ArmoníaPlus	Remote control software.
TURANDOT	Acoustic simulation software. It can establish acoustic models in three-dimensional space.

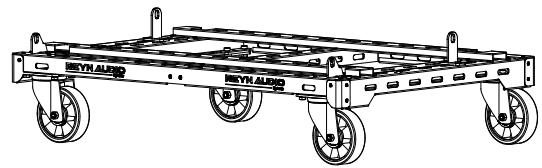




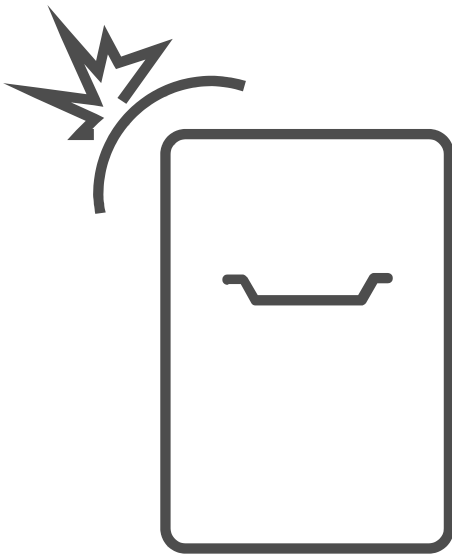
RAFALE1 BUMP-FLIGHT



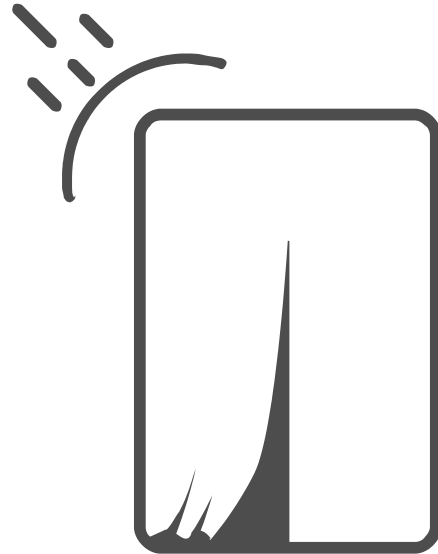
RAFALE1 DOLLY



RAPTOR DOLLY



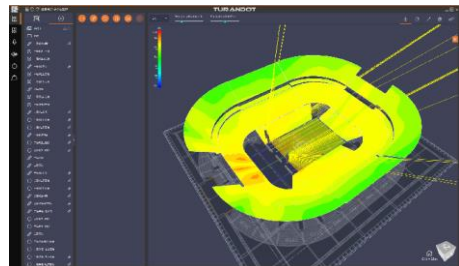
DOLLY-COVER



ARRAY-COVER



ArmoníaPlus



TURANDOT

4. RAFALE1 & RAPTOR Rigging Components

4.1 RL1 BUMP Flying Structure, RL1 DELTA Plate

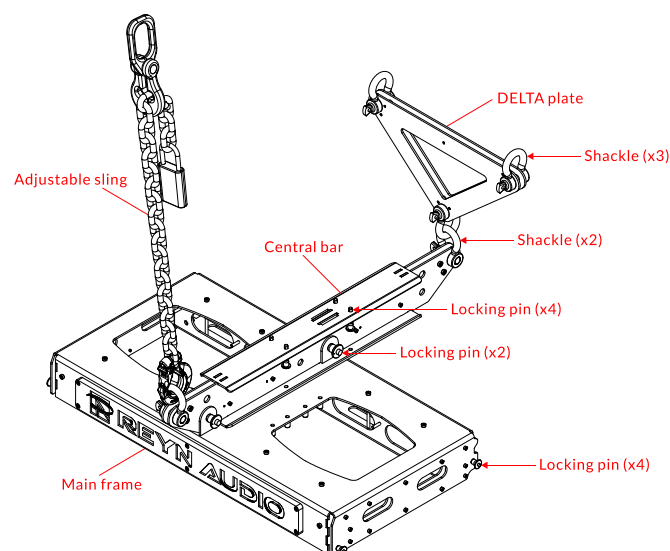
The RAFALE1 BUMP flying structure and RAFALE1 DELTA plate have been exclusively designed to fly the RAFALE1 and/or RAPTOR enclosures as a variable-curvature, vertical line source array. The RAFALE1 DELTA plate is for azimuth angle setting.

The RAFALE1 BUMP is composed of the following elements:

- ▶ One main frame.
- ▶ One central bar.
- ▶ Four locking pins: used for connecting the RAFALE1 BUMP and RAFALE1 and/or RAPTOR.
- ▶ Two locking pins: used for connecting the RAFALE1 BUMP main frame and the central bar.
- ▶ Four locking pins: used to fix the central bar on the RAFALE1 BUMP main frame when shipping.
- ▶ Two shackles: ready for two-point hang and two-point safety attachment.
- ▶ One adjustable sling to be used in case of climbing-hoist setup.

The RAFALE1 DELTA is composed of the following elements:

- ▶ One delta plate.
- ▶ Three shackles.

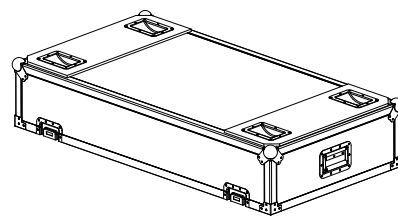


4.2 RAFALE1 BUMP-FLIGHT case

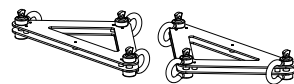
The RAFALE1 BUMP-FLIGHT case has been exclusively designed to transport the RAFALE1 BUMP flying structure.

The RAFALE1 BUMP-FLIGHT is composed of the following elements:

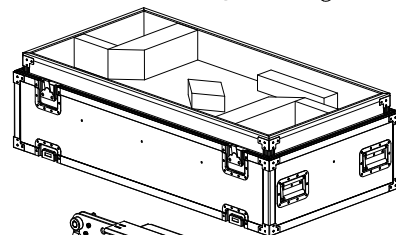
- ▶ One wheeled bottom tray.
- ▶ Two RAFALE1 BUMP.
- ▶ Two compartments.
- ▶ Two RAFALE1 DELTA plates.
- ▶ One lid.



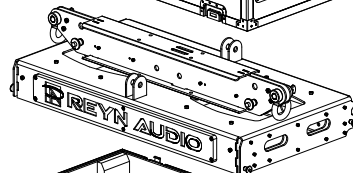
Lid



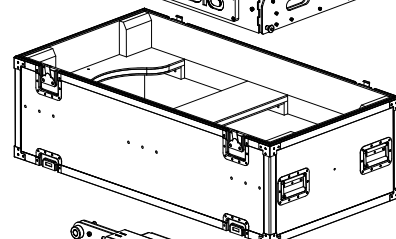
RAFALE1 DELTA PLATES



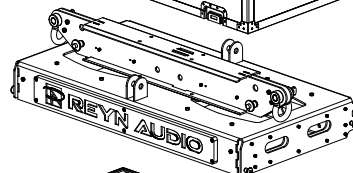
Compartment



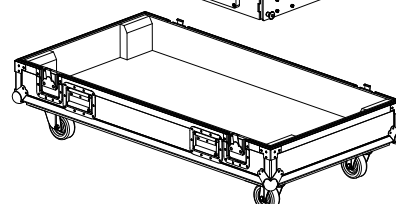
RAFALE1 BUMP



Compartment



RAFALE1 BUMP



Wheeled bottom tray

5. Installation

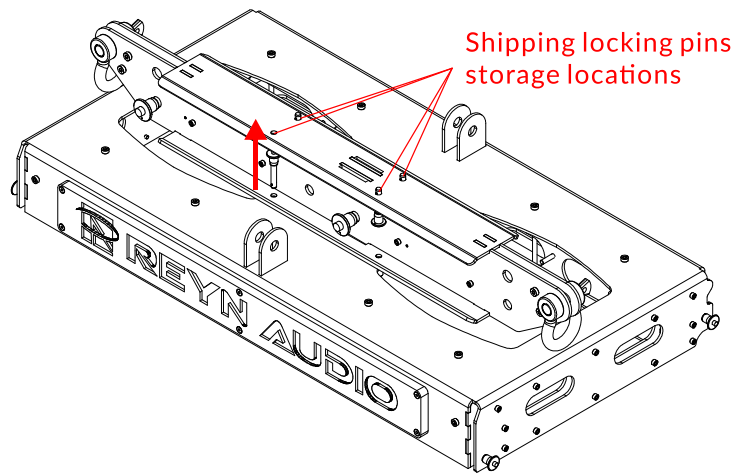
All along the procedure:

- ▶ Strictly follow the sequence of the successive steps.
- ▶ Systematically ensure that each locking pin is fully inserted by pulling on it.
- ▶ Systematically ensure that each shackle anchor has screw bolt secured and safety pin inserted.

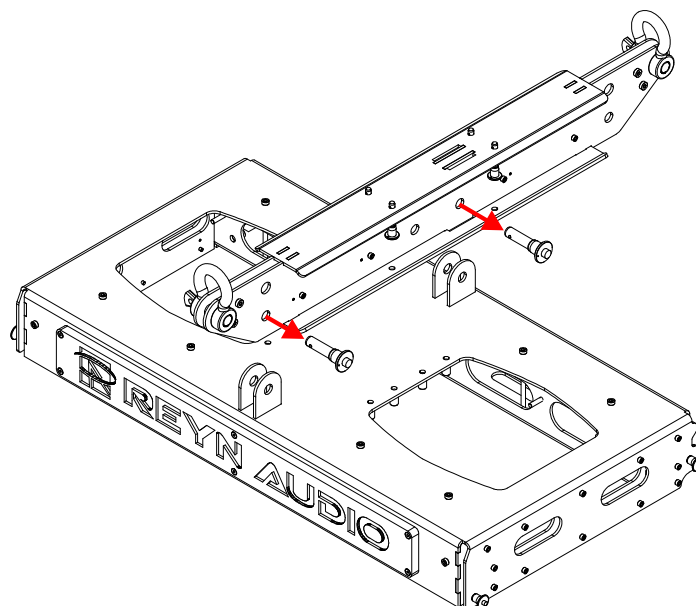
5.1 RAFALE1 BUMP Preparation

1. Put the central bar from shipping to rigging position:

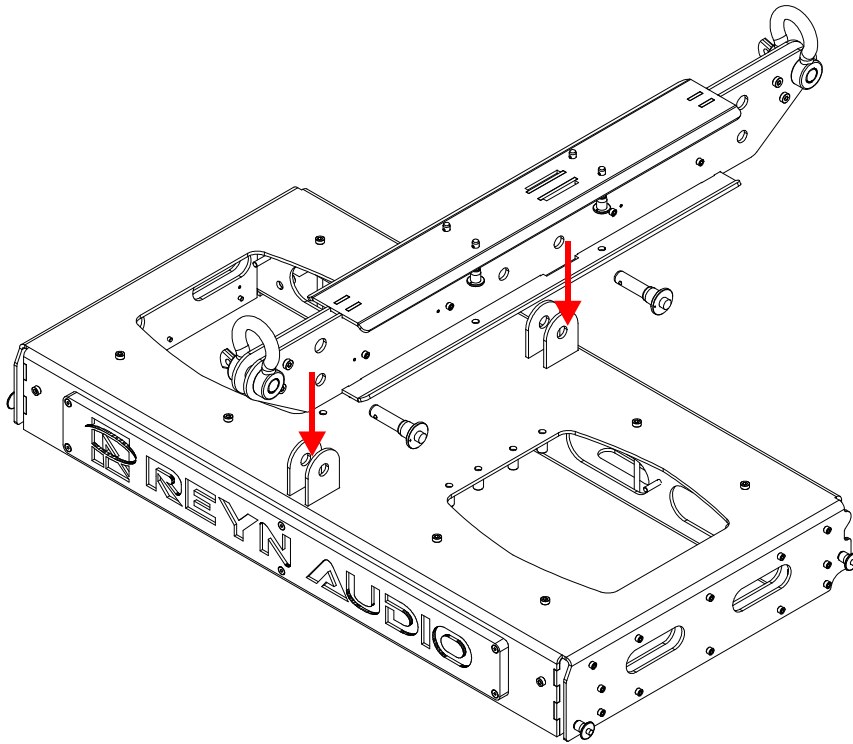
- ▶ Remove four shipping locking pins and put them in their storage locations.



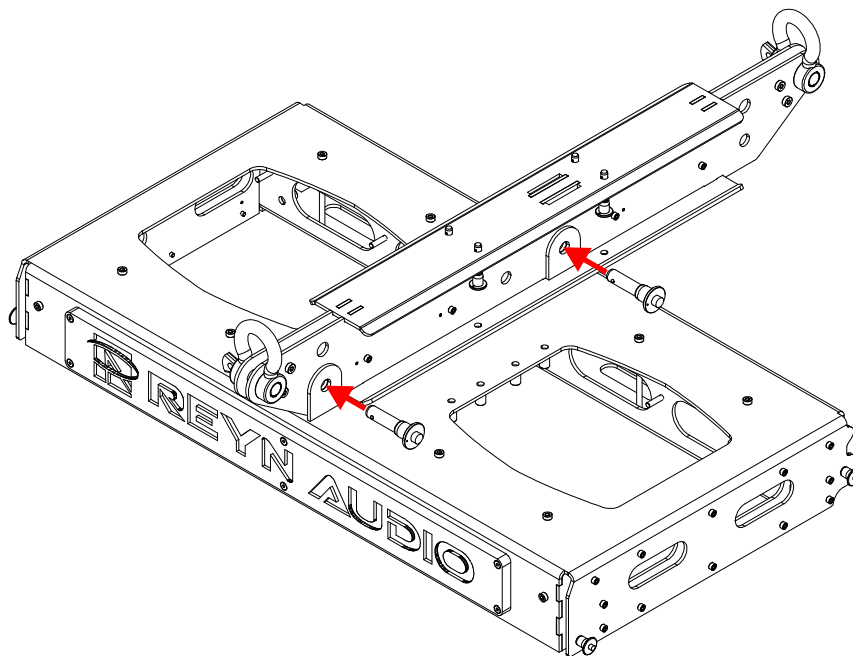
- ▶ Remove both rigging locking pins.



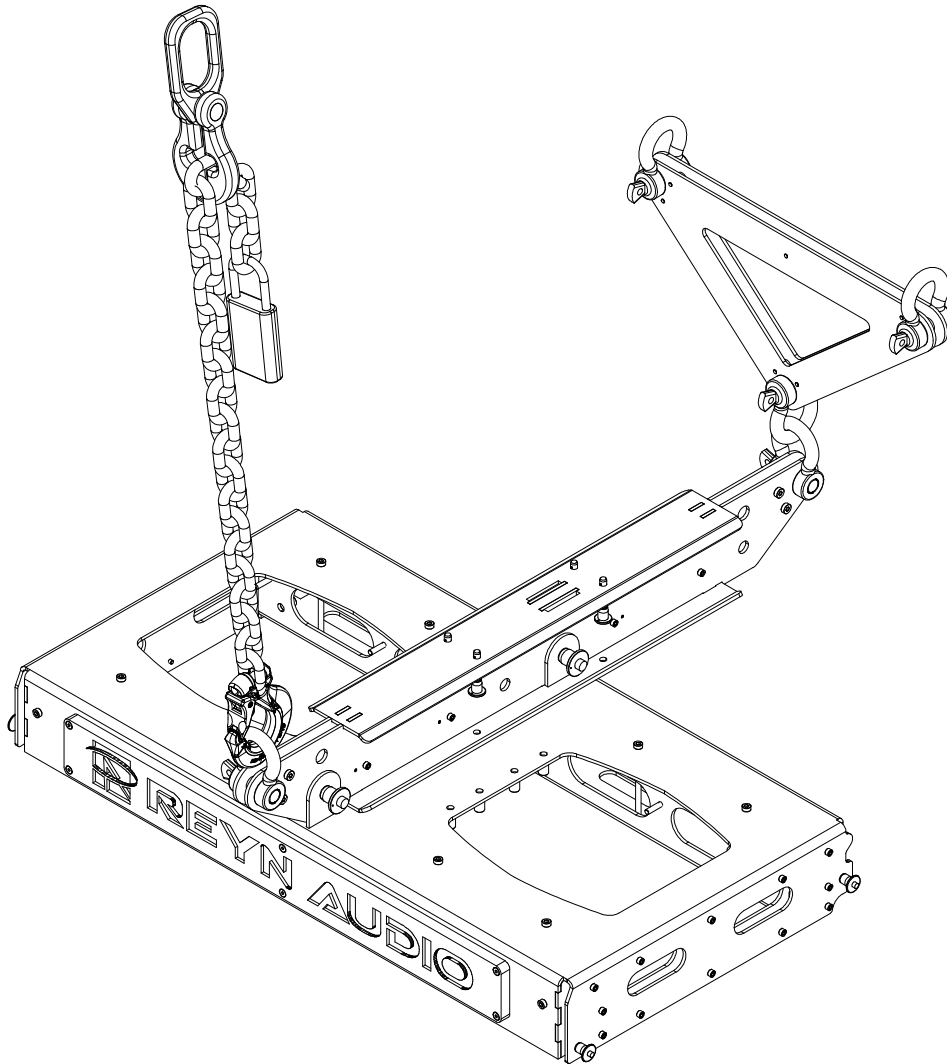
- ▶ Lift up, rotate, and align the central bar with the RAFALE1 BUMP main frame holes.



- ▶ Attach both rigging locking pins to the central bar and RAFALE1 BUMP main frame holes.



2. Check if the two shackles are well secured to the central bar.
3. If necessary, attach the adjustable sling to the front external shackle.
4. If necessary, attach the RAFALE1 DELTA to the rear external shackle.



5.2 Flying a Vertical Array by Using the TOWER Method

5.2.1 Modeling and Safety

Any system must be modeled before installation so as to ensure acoustical and mechanical conformity. This can be done using TURANDOT Software which will assist the user to:

- ▶ Determine the number of required RAFALE1 and/or RAPTOR enclosures.
- ▶ Calculate the RAFALE1 BUMP site angle and inter-enclosure angles.
- ▶ Check the mechanical conformity of the system.

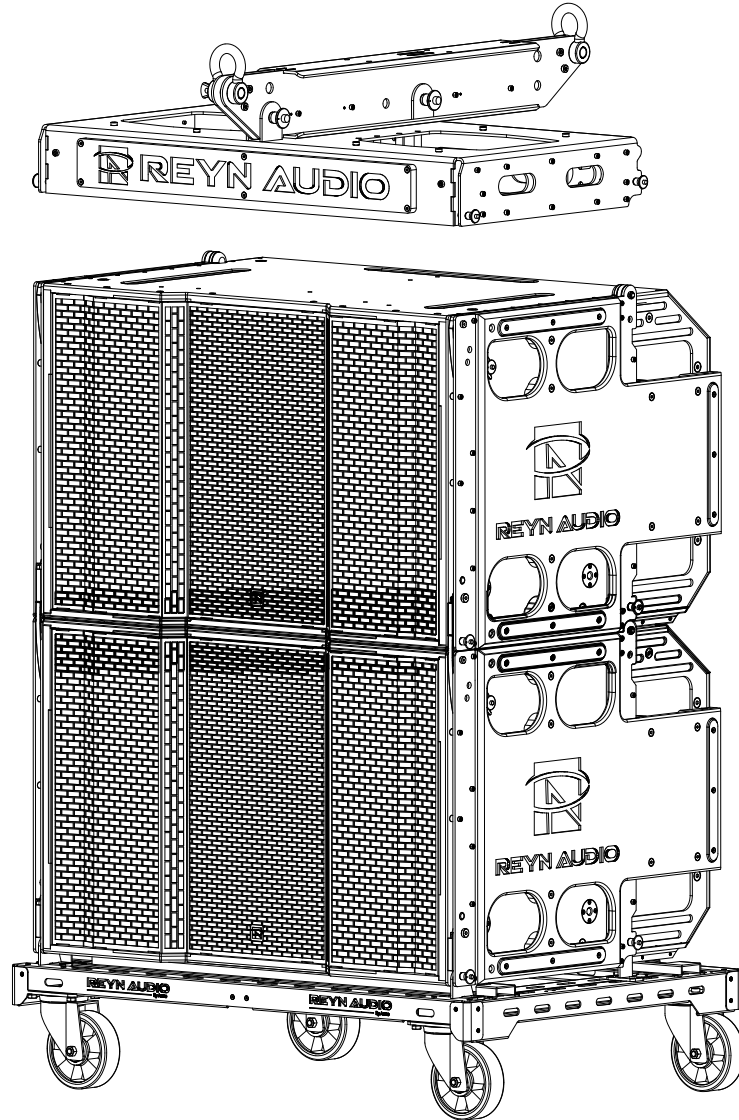
5.2.2 Array Mounting

The TOWER method consists in building the array by successively adding 3-enclosure blocks. Each block, called TOWER, ships onto an REYN AUDIO RAPTOR DOLLY cart.

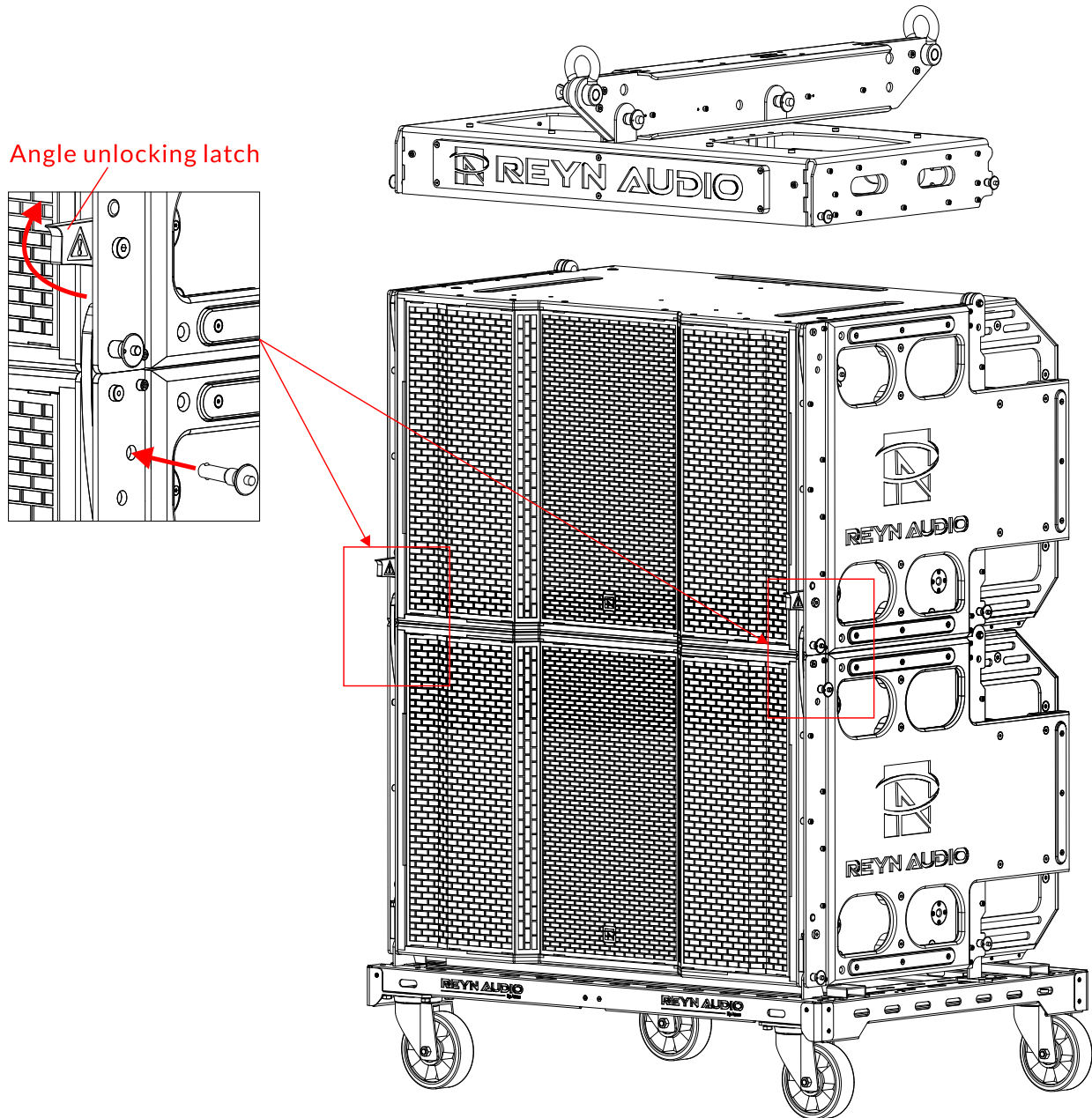
The fully integrated rigging system on RAPTOR allows assembling the enclosures and RAFALE1 BUMP with no need for any external fastening accessory. The following procedure describes how to fly a vertical array of six RAPTOR by using the TOWER method. By convention the first TOWER will be called TOWER#1, the second TOWER#2.

- ▶ For clarity purposes the loudspeaker cabling procedure will not be described.
- ▶ The loudspeaker cables will not be represented on the figures.
- ▶ Use a strain relief to avoid mechanical stress at the connector locations due to cable weight.

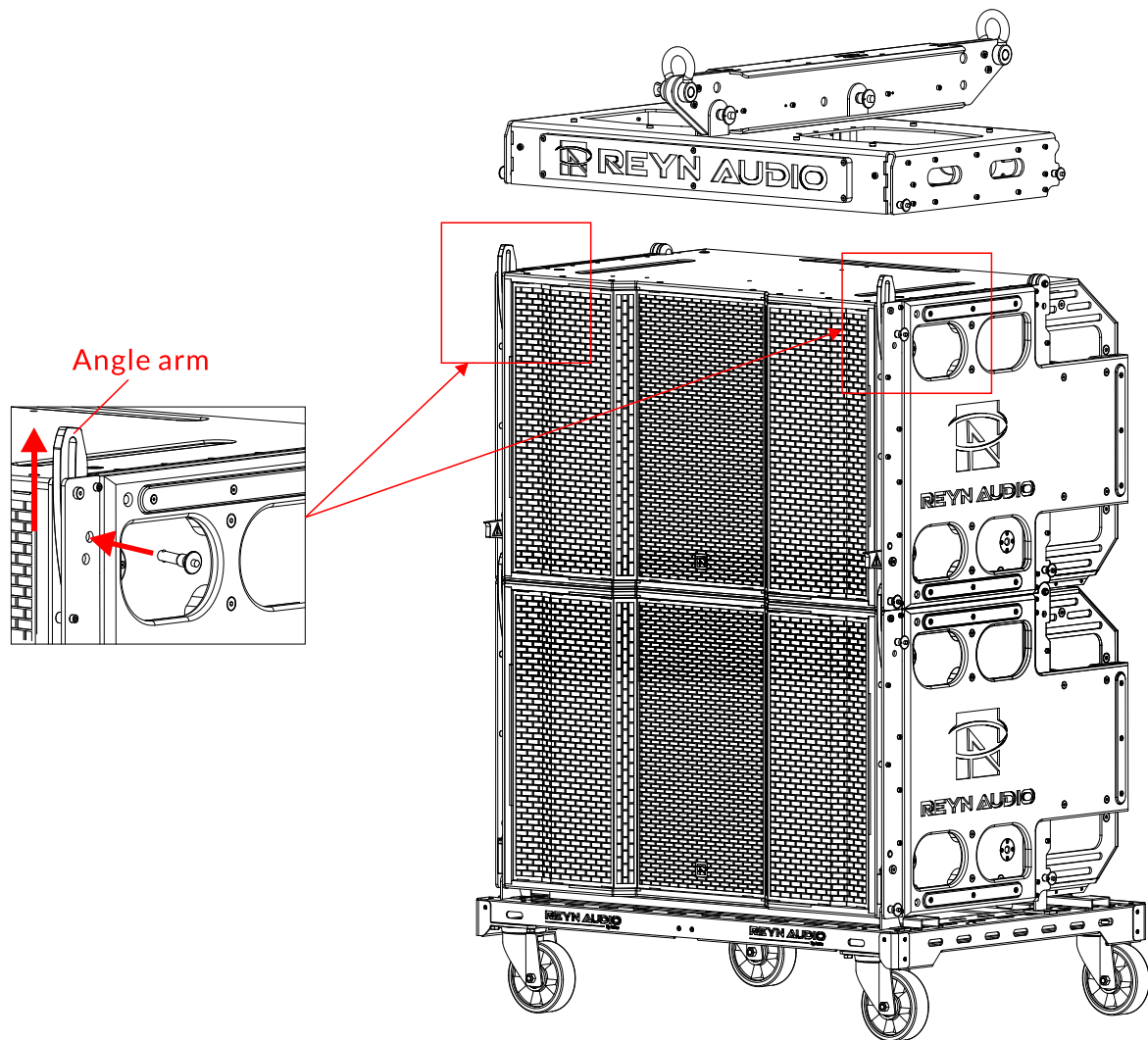
1. Prepare the RAFALE1 BUMP and attach the motor hooks.
2. Raise the RAFALE1 BUMP to a certain height in the vertical orientation.
3. Place the TOWER#1 beneath the RAFALE1 BUMP.



4. Pull on the angle unlocking latch until a click is heard. Remove the locking pin from the shipping location on both sides of the bottom enclosure, hold it facing to the 0° angle hole, and slide the angle arm until the locking pin enters and locks.

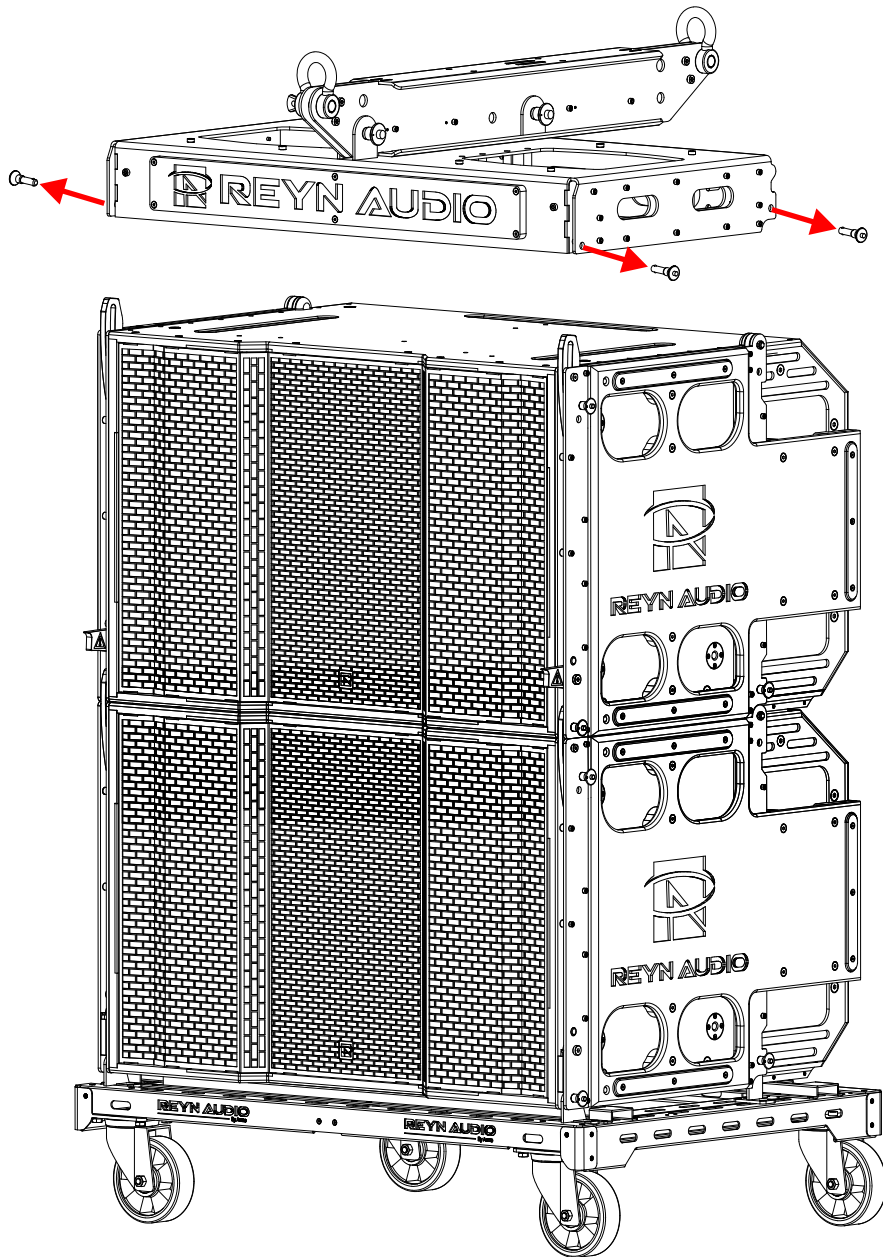


5. Remove the locking pin from the shipping location, hold it facing to the 0° angle hole, and slide out the angle arms on top of TOWER#1 until the locking pin enters and locks.

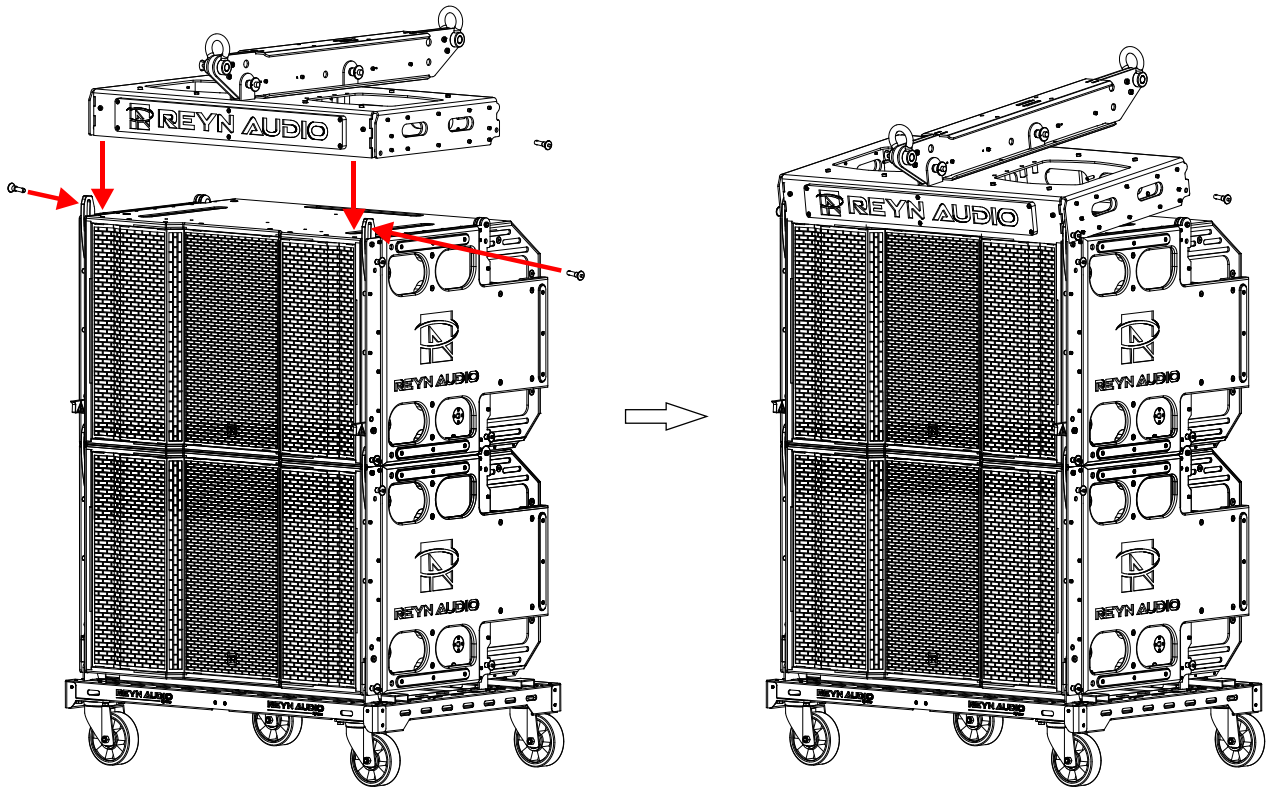


6. Attach the RAFALE1 BUMP to the TOWER#1 as described below:

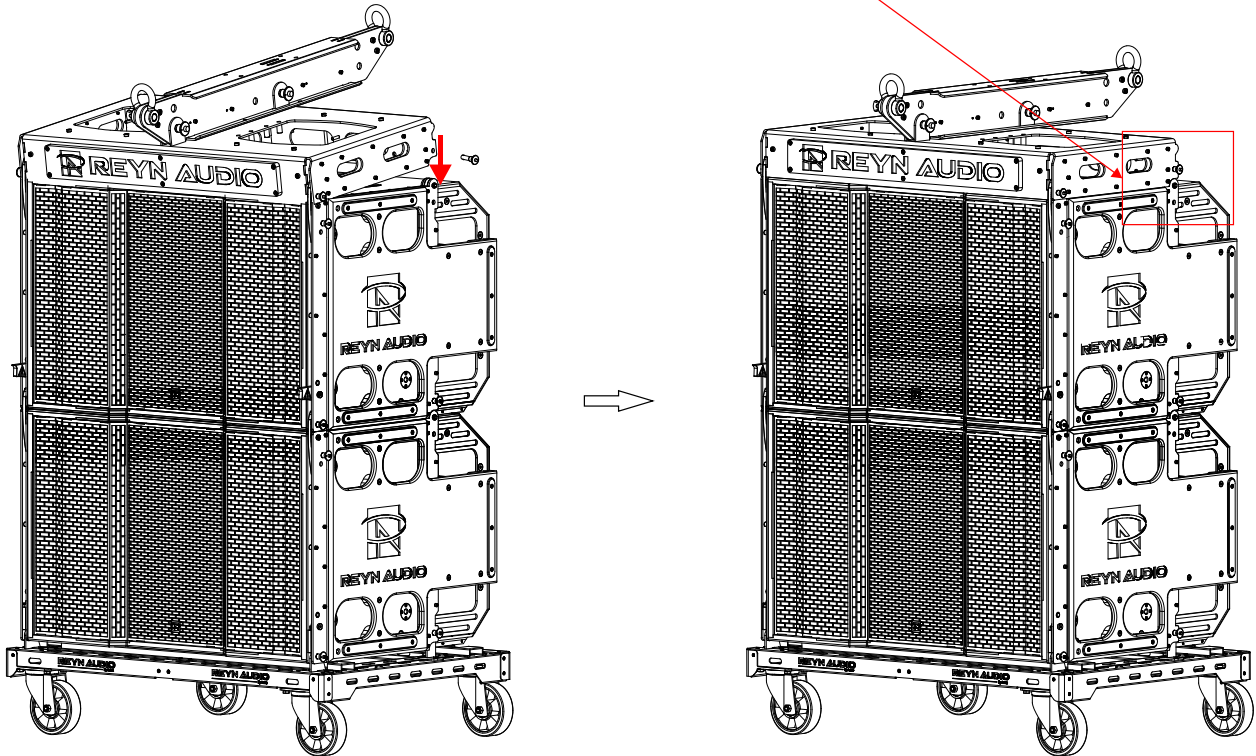
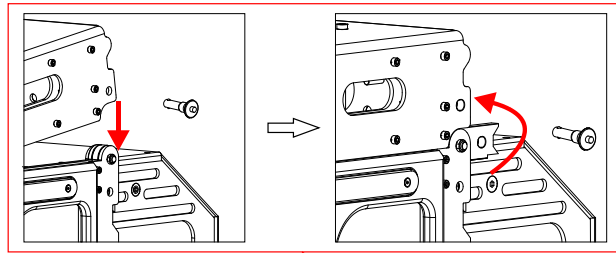
- ▶ Remove the four locking pins from the RAFALE1 BUMP main frame and let them hang.



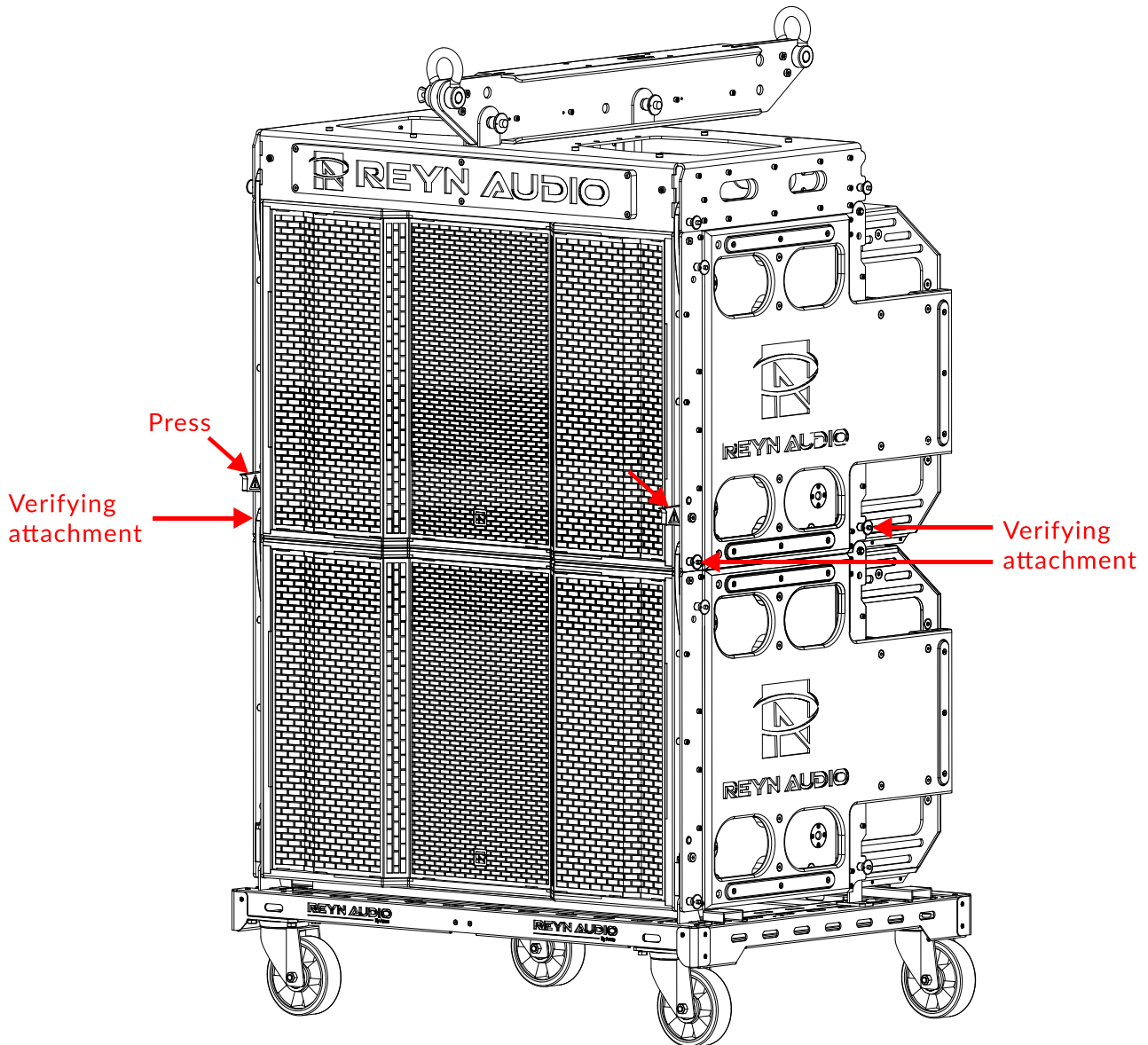
- ▶ Lower the RAFALE1 BUMP so as to align the front rigging points with both angle arm oblong holes on the TOWER#1 and attach them (use two locking pins).



- ▶ Lift both rear arms out of TOWER#1 and attach them to the RAFALE1 BUMP (use two locking pins).

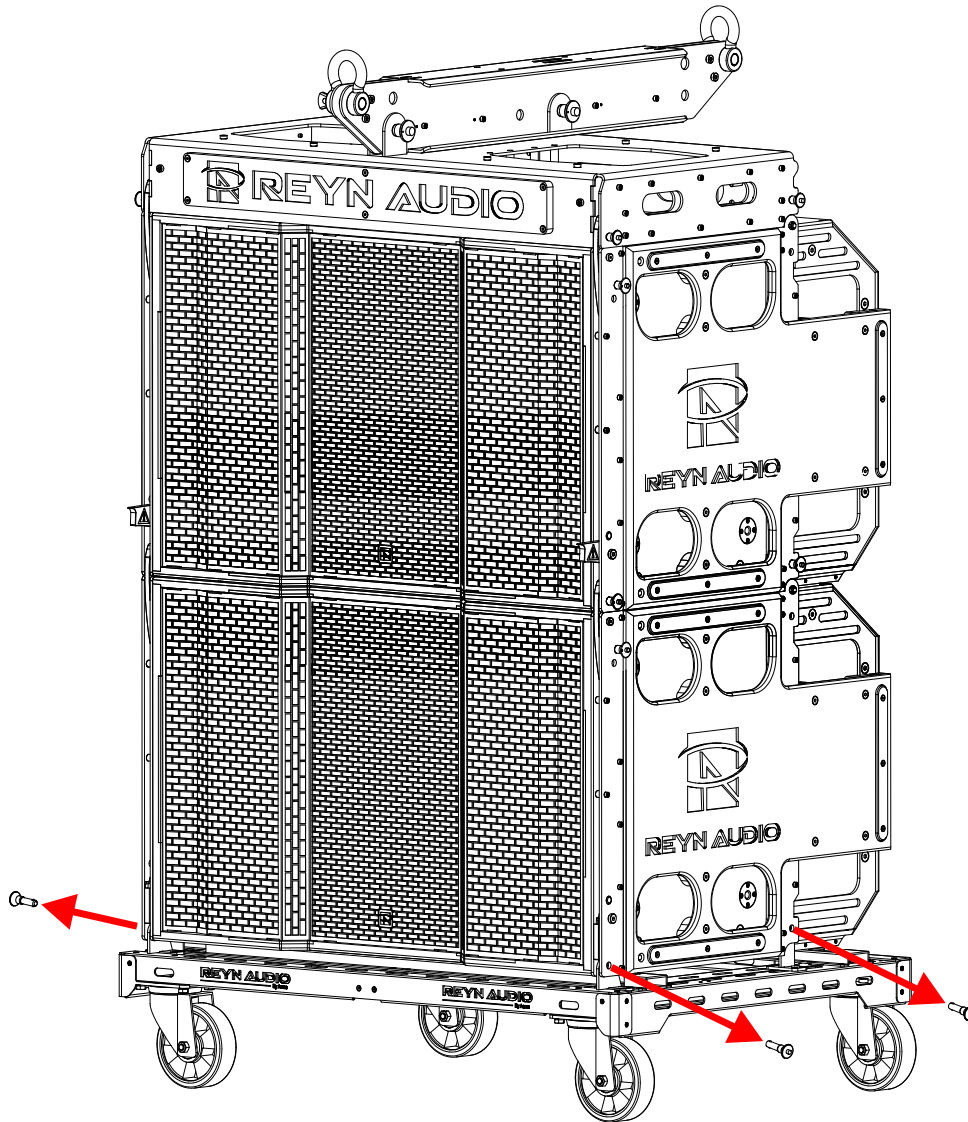


7. Verify that the bottom enclosure of TOWER#1 is attached to the enclosure above: ensure that both rear and angle arms are attached to the enclosure above. Then press the angle unlocking latch on both sides of the enclosure.

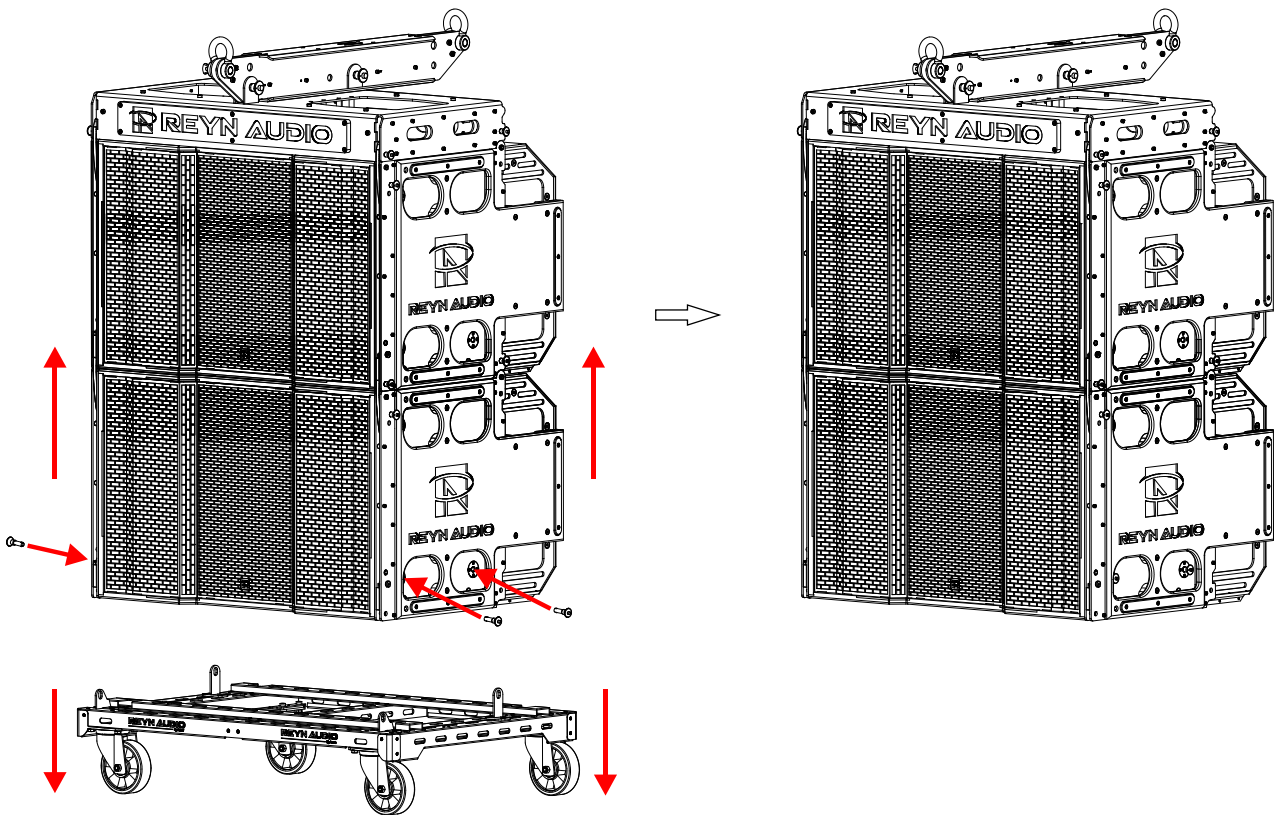


8. Remove the RAPTOR DOLLY from TOWER#1 as described below:

- ▶ Remove both rear locking pins from the bottom enclosure while holding the RAPTOR DOLLY.
- ▶ Remove both front locking pins.



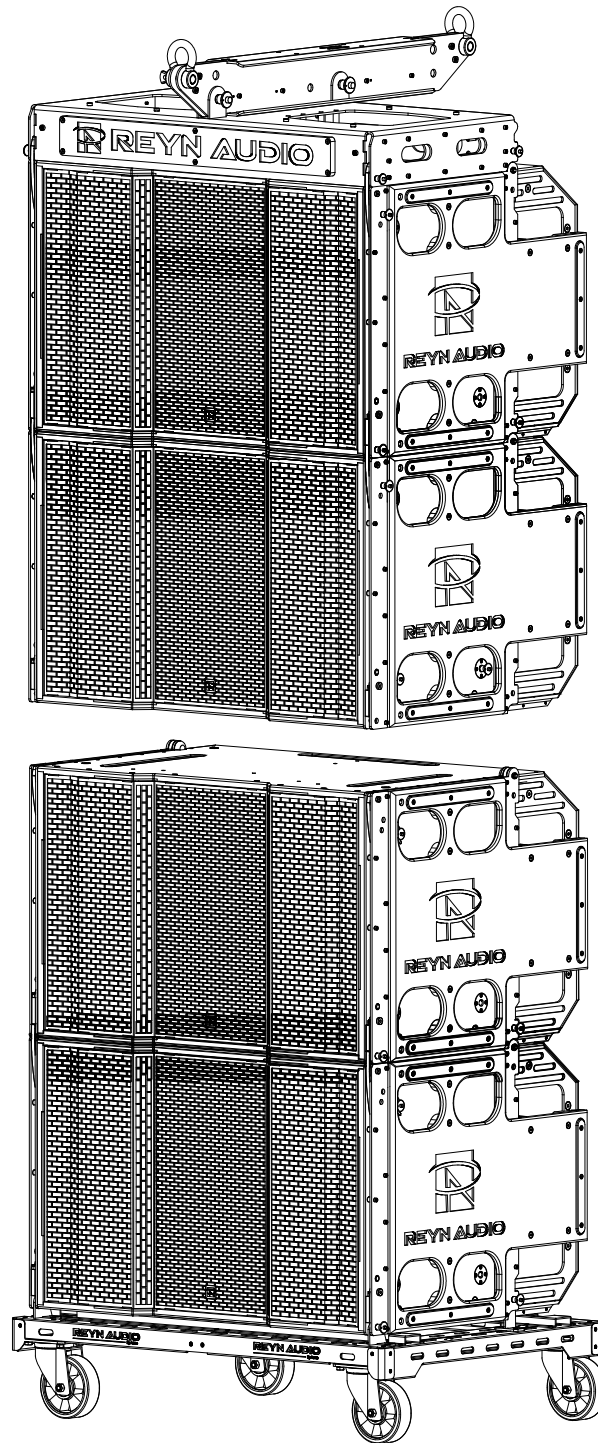
- ▶ Place the locking pins back into their storage locations on the bottom enclosure and raise the TOWER#1 to remove the RAPTOR DOLLY.



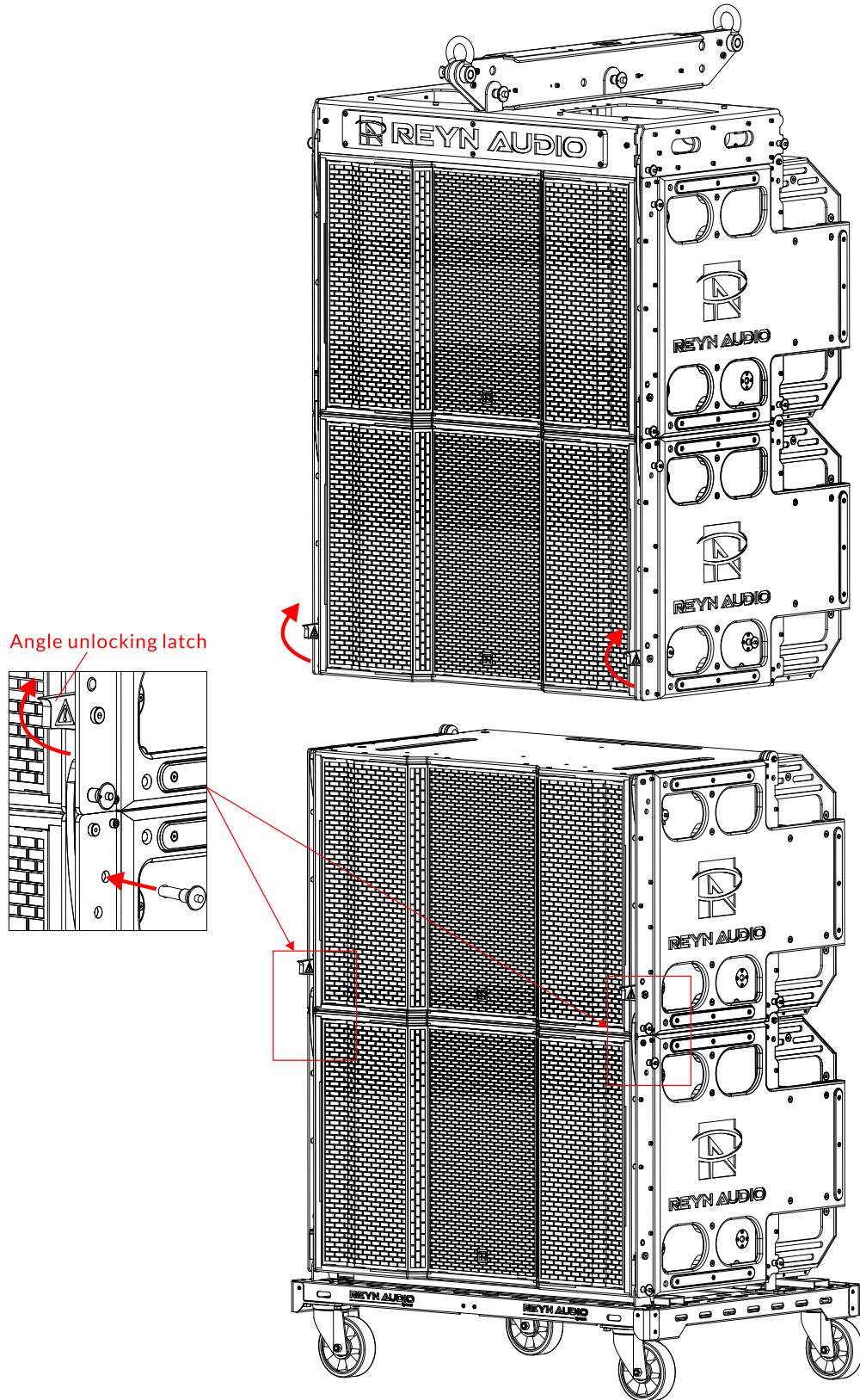
9. Raise the TOWER#1 to a certain height.

Note: As the array is raised all angle unlocking latches should subsequently take their locking position and a “shlack” noise should be heard.

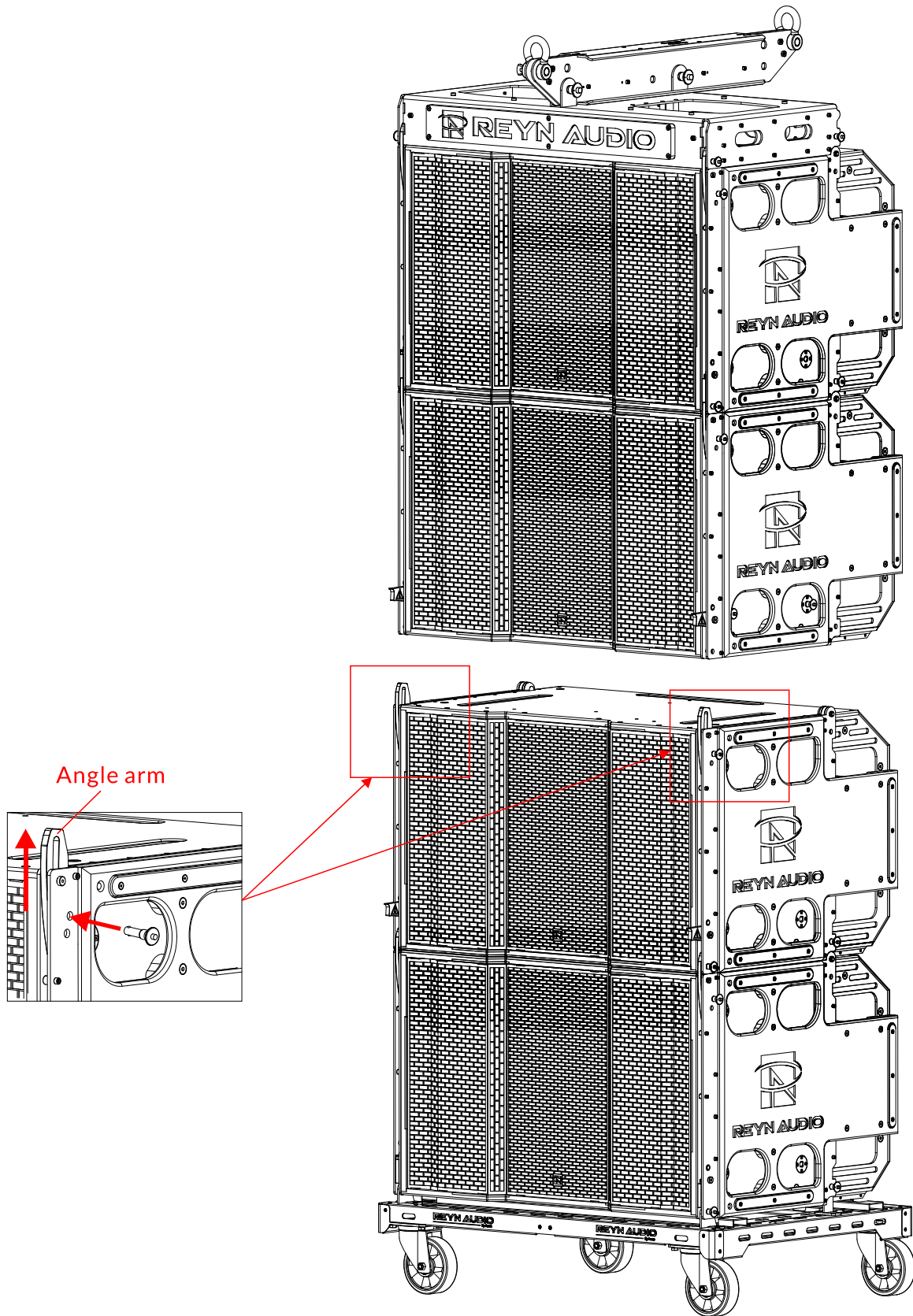
10. Place the TOWER#2 beneath the TOWER#1.



11. Pull on the angle unlocking latch until a click is heard. Remove the locking pin from the shipping location on both sides of the bottom enclosure, hold it facing to the 0° angle hole, and slide the angle arm until the locking pin enters and locks.

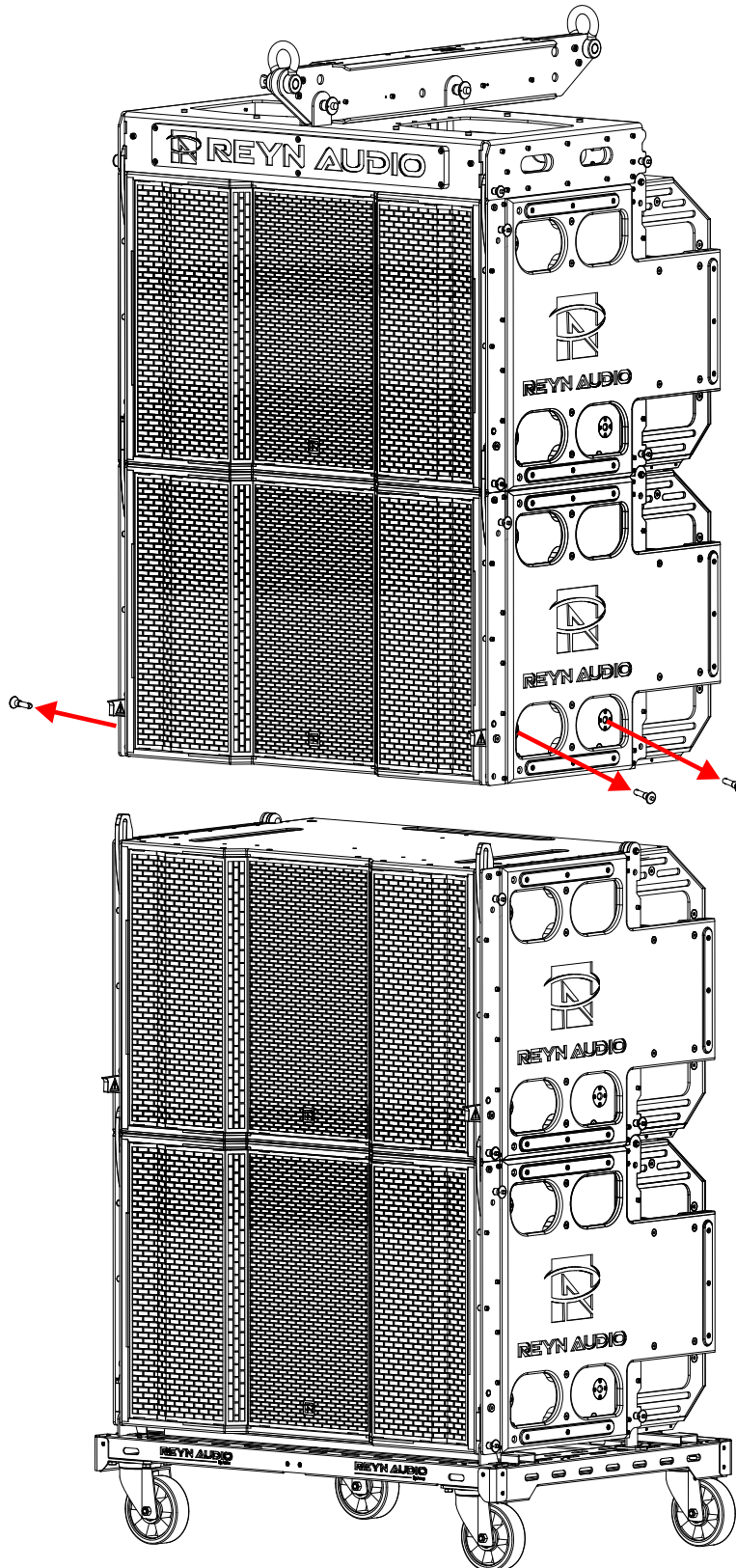


12. Remove the locking pin from the shipping location, hold it facing to the 0° angle hole, and slide out the angle arms on top of TOWER#2 until the locking pin enters and locks.

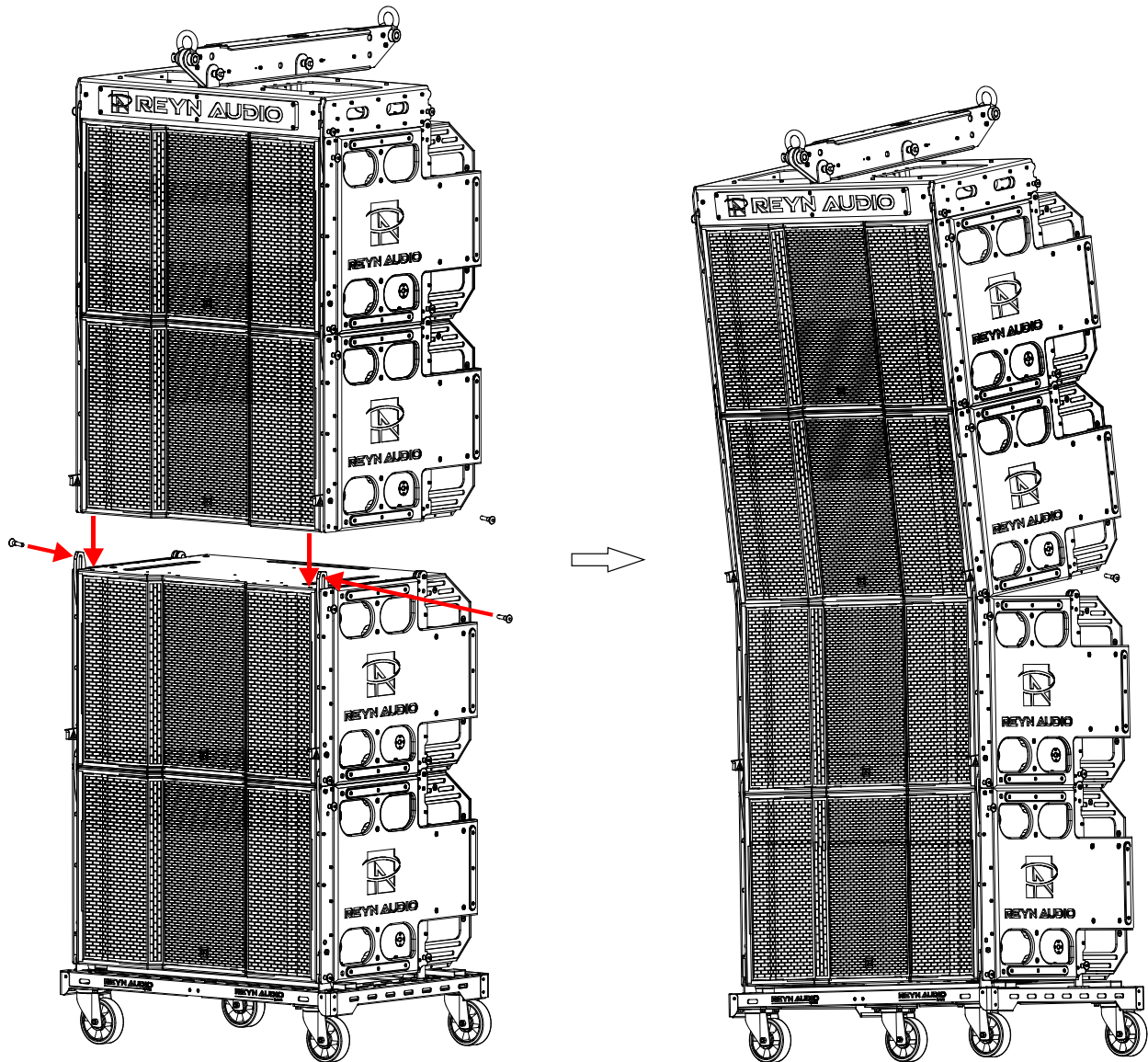


13. Attach the TOWER#1 to the TOWER#2 as described below:

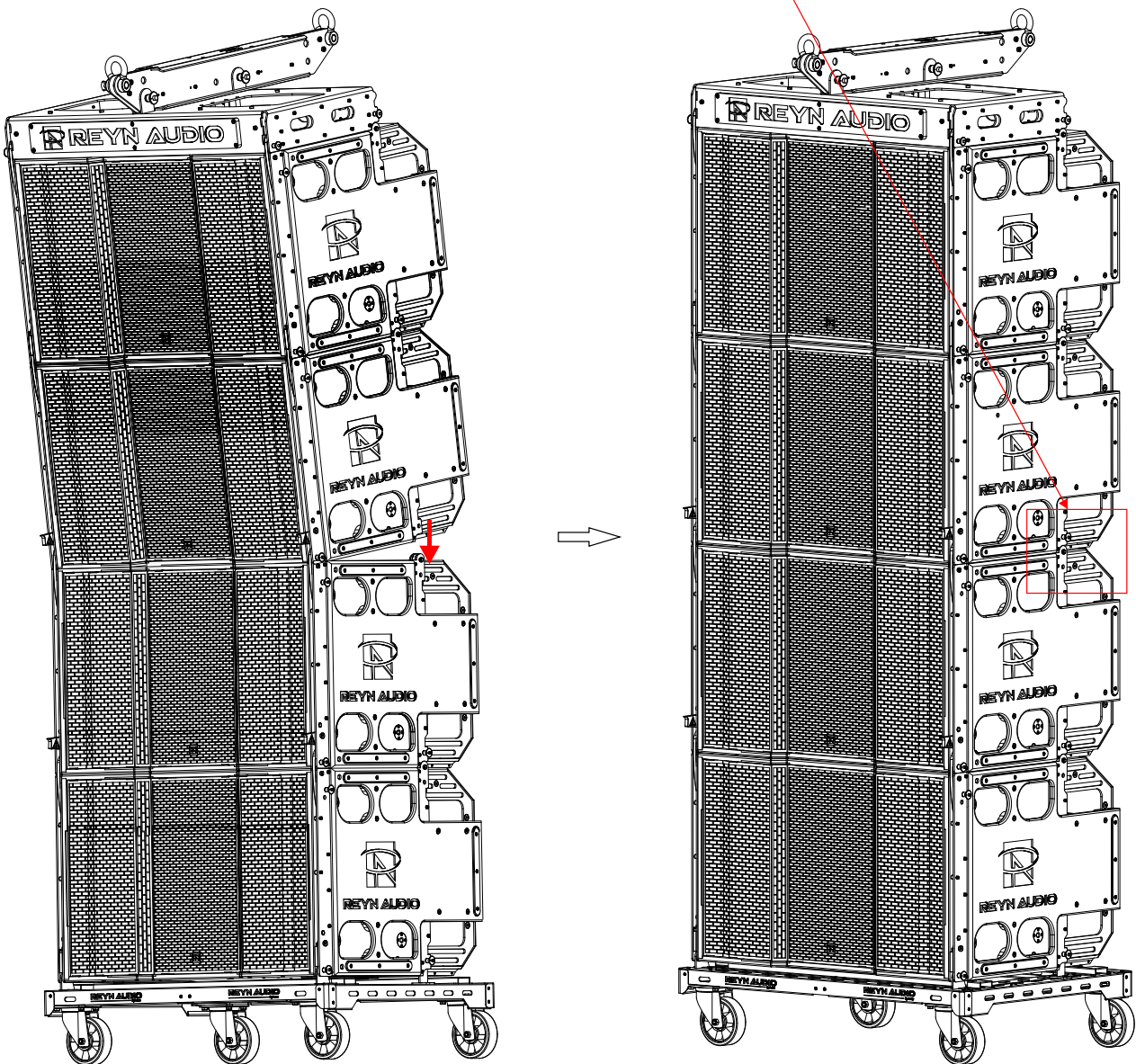
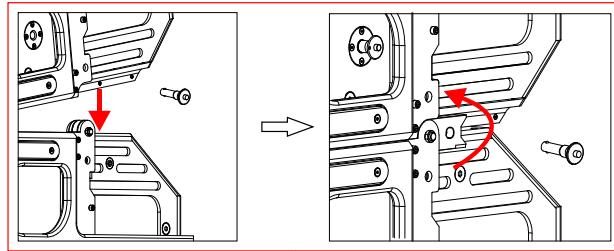
- ▶ Remove the four locking pins from the bottom enclosure of the TOWER#1 and let them hang.



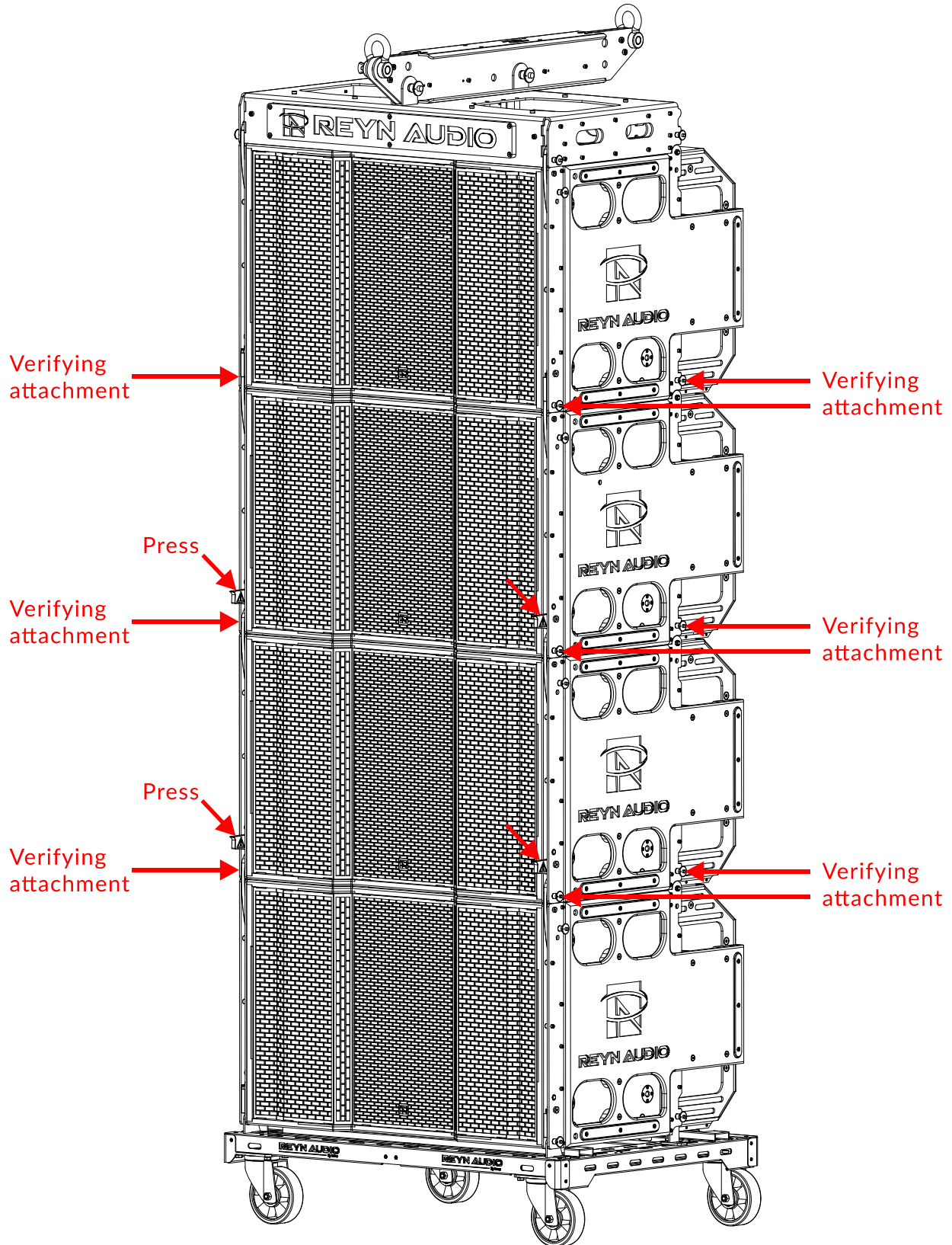
- ▶ Lower the TOWER#1 so as to align the front rigging points with both angle arm oblong holes on the TOWER#2 and attach them (use two locking pins).



- ▶ Lift both rear arms out of TOWER#2 and attach them to the TOWER#1 (use two locking pins).

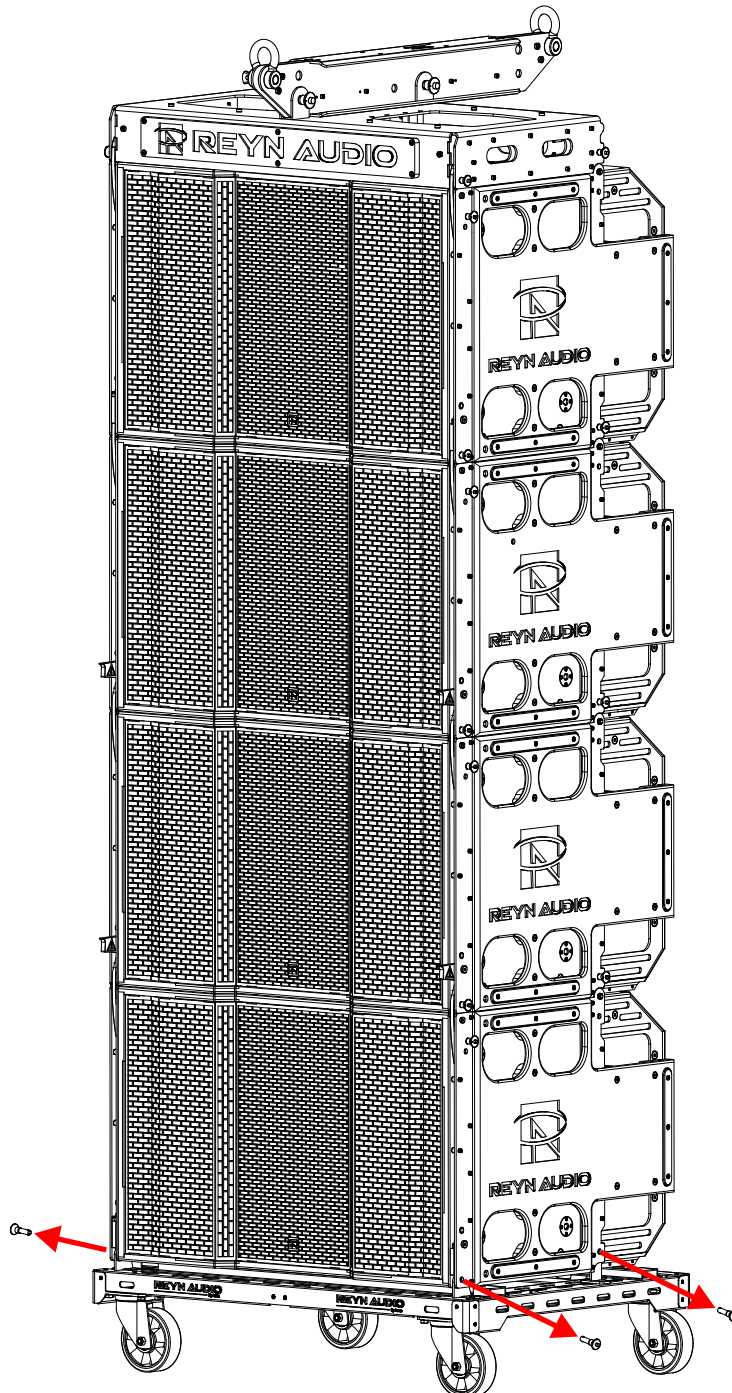


14. Verify that each enclosure is attached to the enclosure above: ensure that both rear and angle arms are attached to the enclosure above. Then press the angle unlocking latch on both sides of the enclosures.

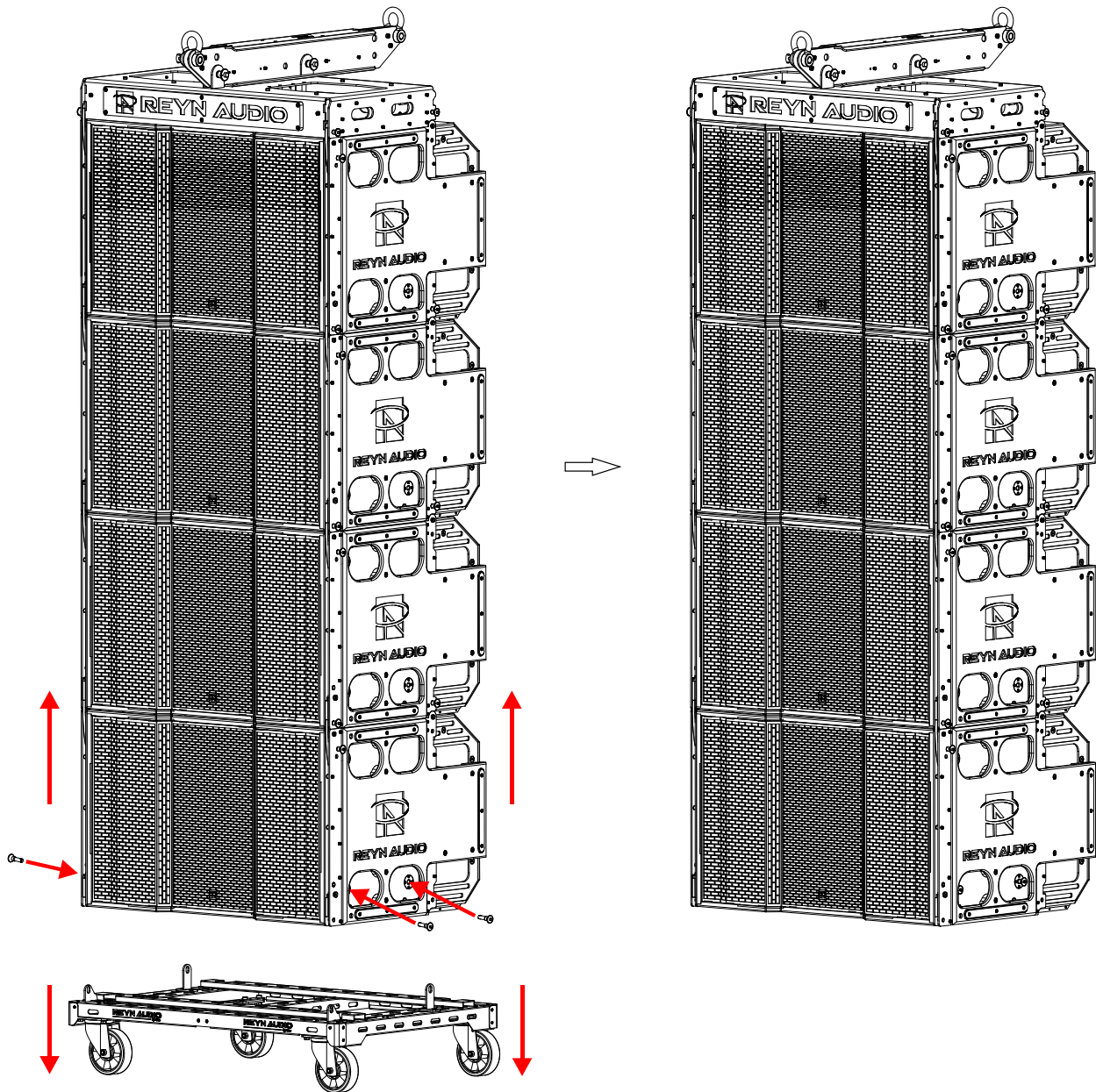


15. Remove the RAPTOR DOLLY from TOWER#2 as described below:

- ▶ Remove both rear locking pins from the bottom enclosure while holding the RAPTOR DOLLY.
- ▶ Remove both front locking pins.



- ▶ Place the locking pins back into their storage locations on the bottom enclosure and raise both TOWERS to remove the RAPTOR DOLLY.

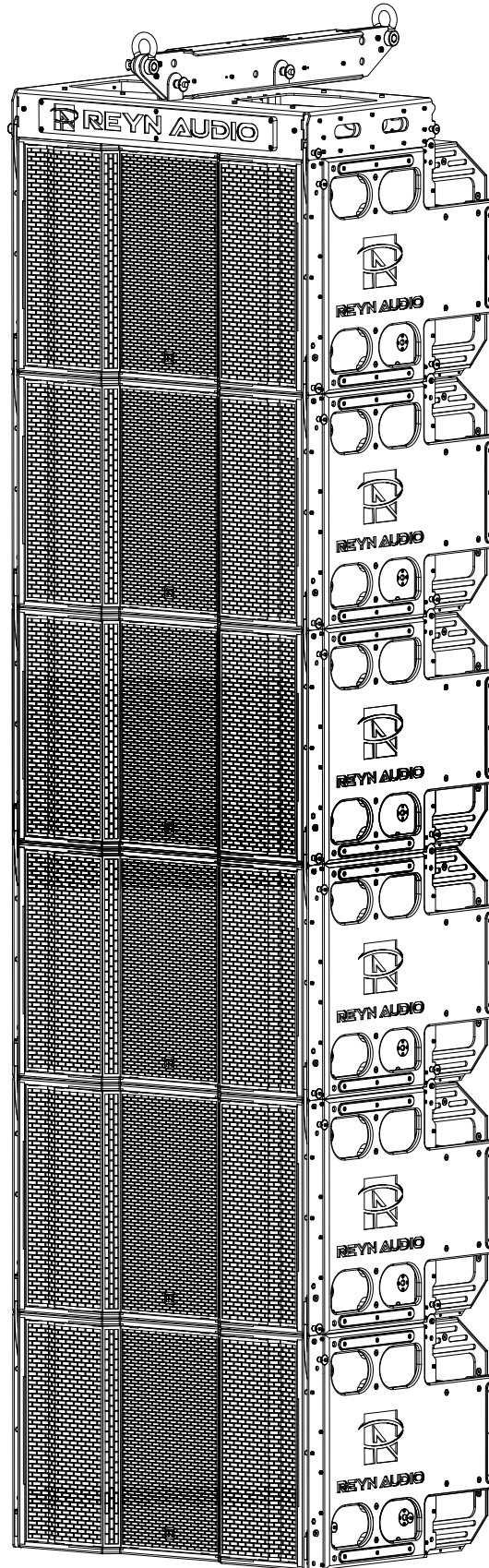


16. Raise both TOWERS to a certain height.

Note: As the array is raised all angle unlocking latches should subsequently take their locking position and a “shlack” noise should be heard.

17. For arrays of more than 4 enclosures repeat steps 10 to 16 until all TOWERS composing the array are flown.

18. The figure below shows the array built by successively adding 3-enclosure blocks.



5.3 Rigging a RAFALE1 Downfill Array to the RAPTOR Array

5.3.1 Modeling and Safety

Any system must be modeled before installation so as to ensure acoustical and mechanical conformity. This can be done using TURANDOT Software which will assist the user to:

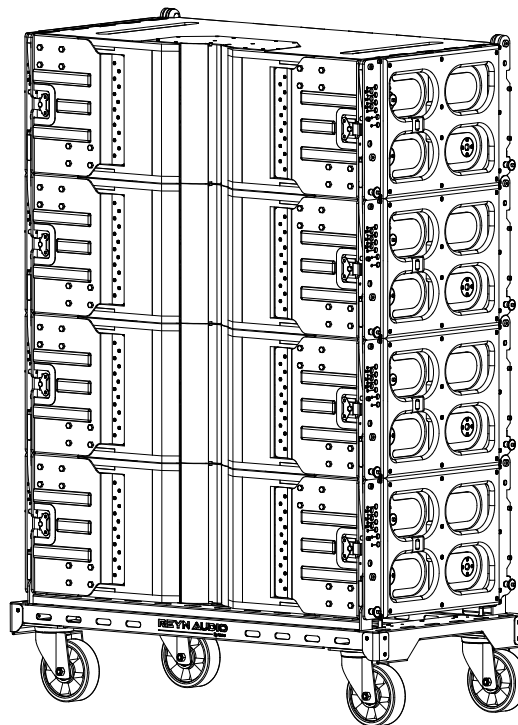
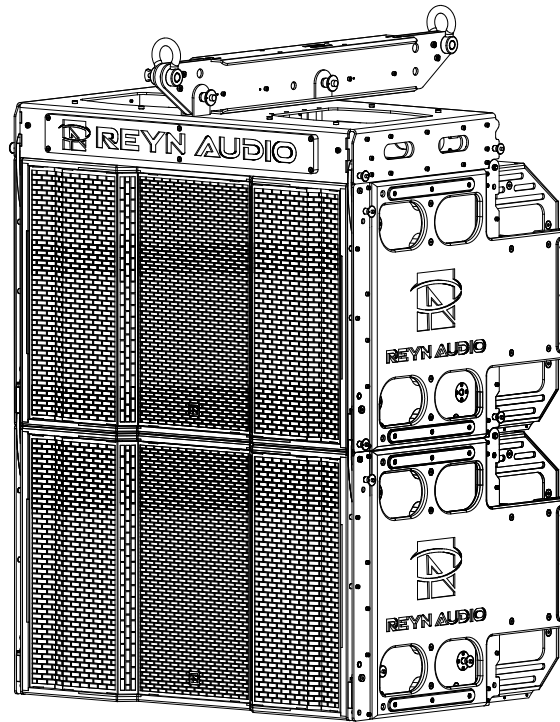
- ▶ Determine the number of required RAFALE1 and/or RAPTOR enclosures.
- ▶ Calculate the array site angle and inter-enclosure angles.
- ▶ Check the mechanical conformity of the system.

5.3.2 Array Mounting

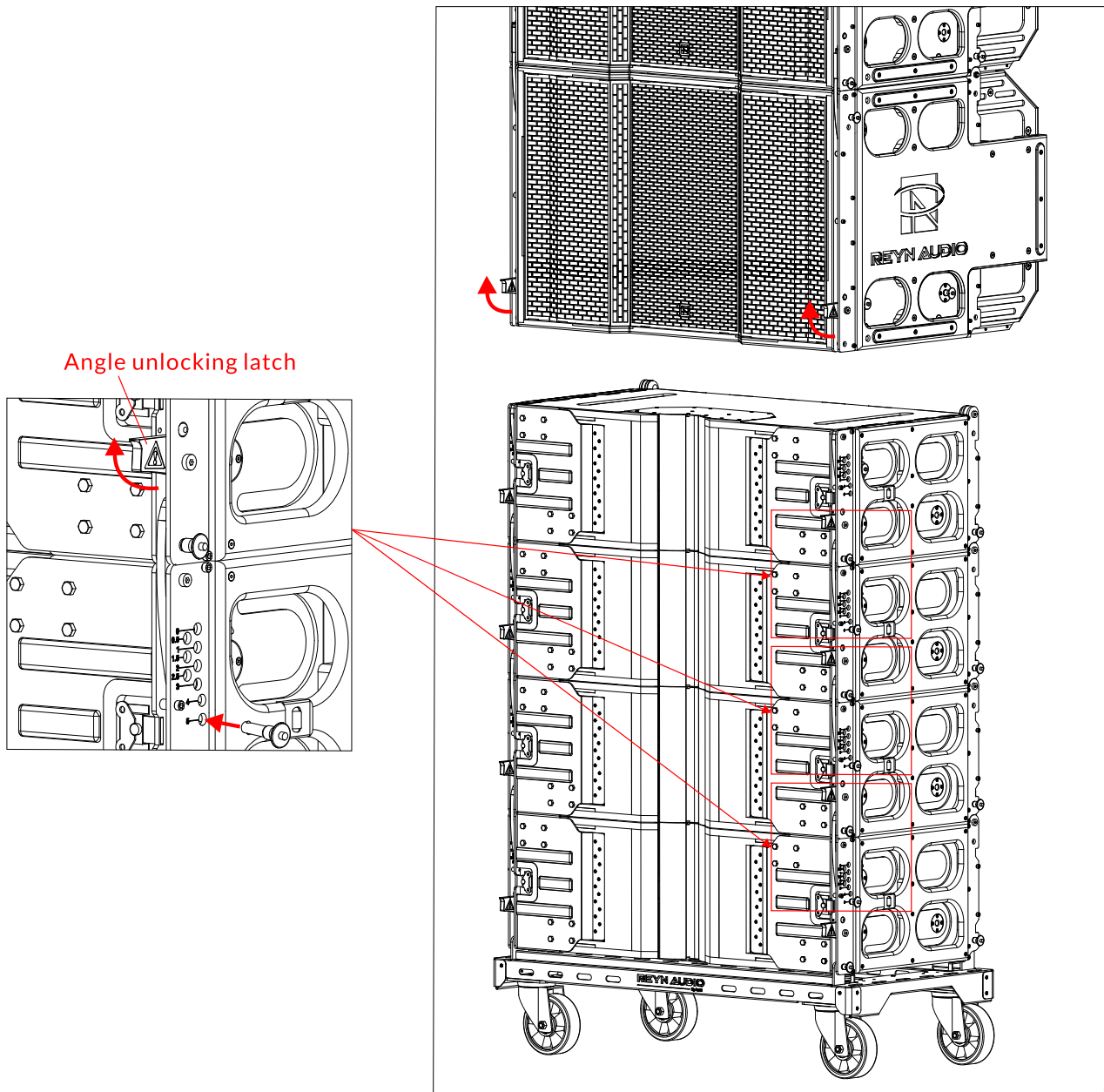
The fully integrated rigging system on RAFALE1 and/or RAPTOR allows assembling the array with no need for any external accessory. The following procedure describes how to mount a vertical array of twelve RAFALE1 under a 2-RAPTOR enclosure block by successively adding three 4-RAFALE1 arrays, called ARRAY#1, ARRAY#2 and ARRAY#3 in the order of appearance.

- ▶ For clarity purposes the loudspeaker cabling procedure will not be described.
- ▶ The loudspeaker cables will not be represented on the figures.
- ▶ Use a strain relief to avoid mechanical stress at the connector locations due to cable weight.

1. Raise the 2-RAPTOR enclosure block to a certain height.
2. Place the ARRAY#1 beneath the RAPTOR enclosure block.

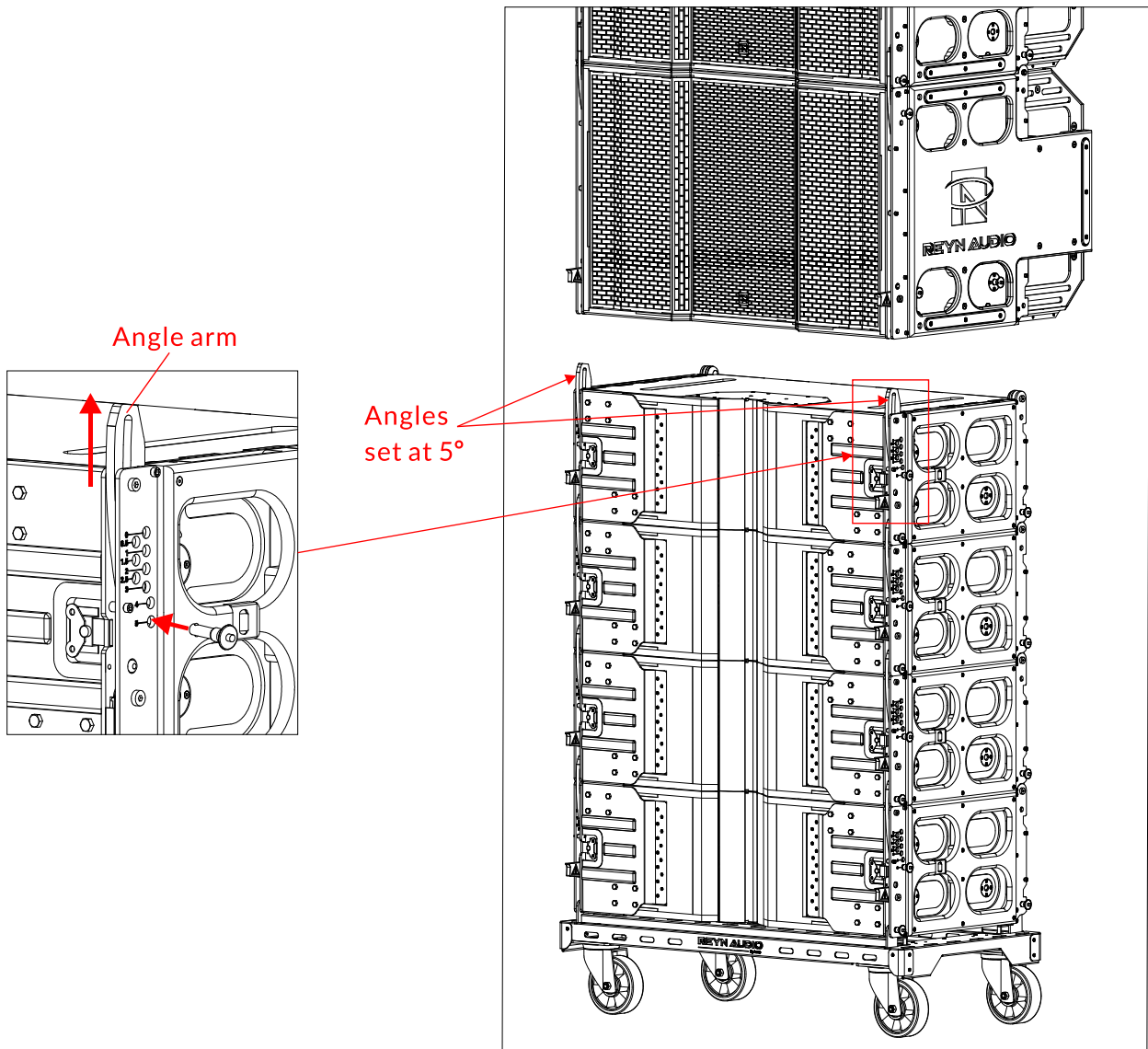


3. Pre-select the desired angle for both angle arms of each enclosure of ARRAY#1 (except for the top one): pull on the angle unlocking latch until a click is heard. Remove the locking pin from the shipping location on both sides of each enclosure, hold it facing to the desired angle hole, and slide the angle arm until the locking pin enters and locks.



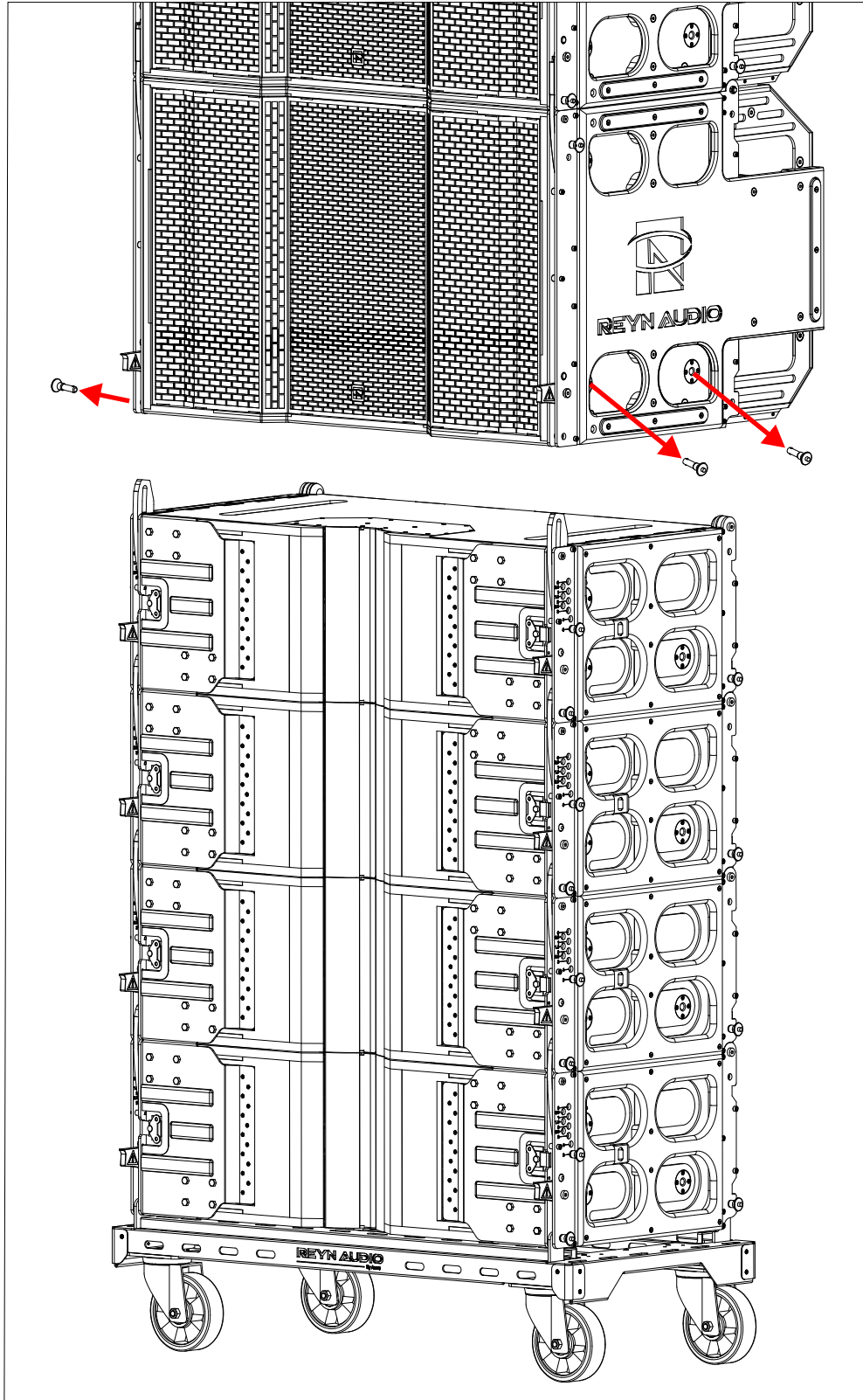
4. Select the 5° angle for both angle arms on top of ARRAY#1: remove the locking pin from the shipping location, hold it facing to the 5° angle hole, and slide out the angle arm until the locking pin enters and locks.

Note: This step is only for the convenience of attaching the RAPTOR enclosure block to the ARRAY#1. After attachment, please reselect the desired angle as needed.

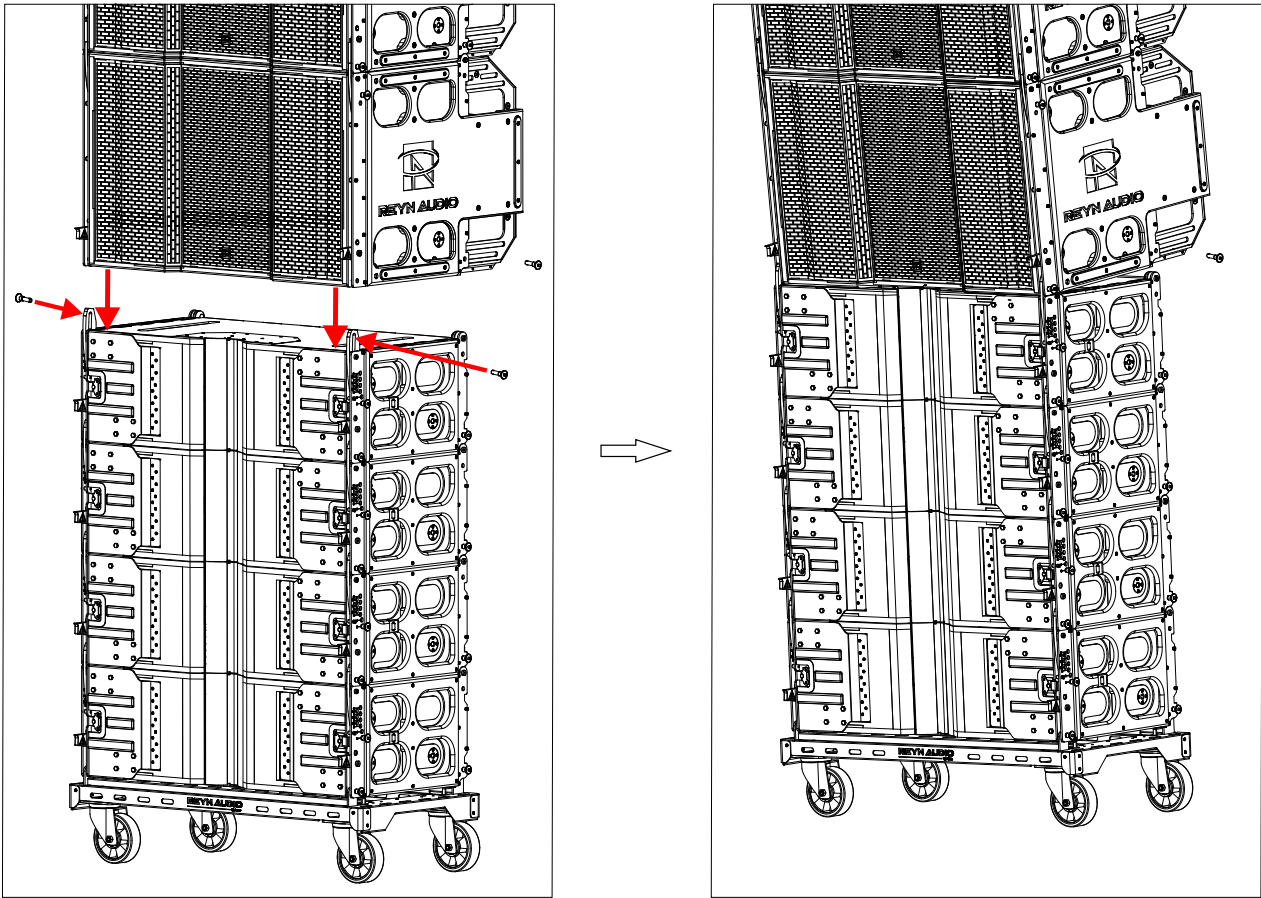


5. Attach the RAPTOR enclosure block to the ARRAY#1 as described below:

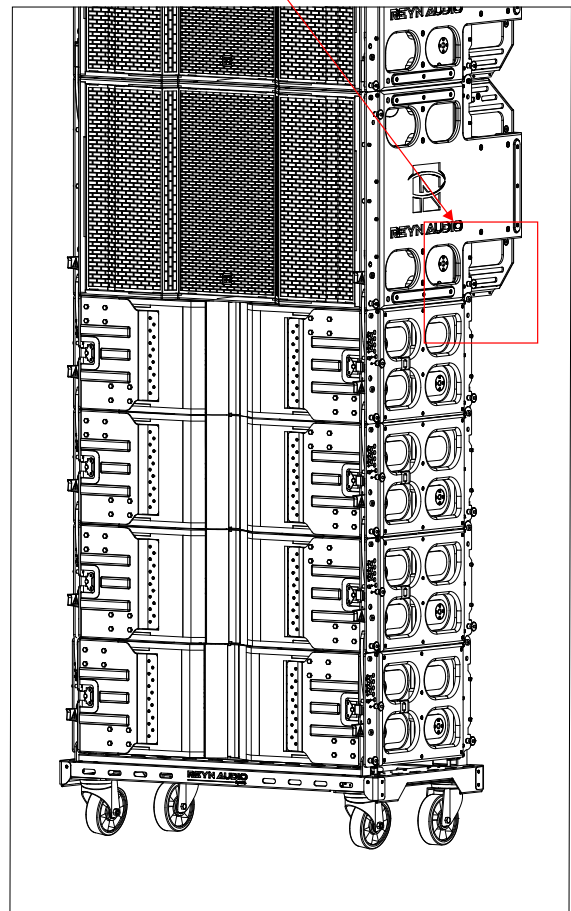
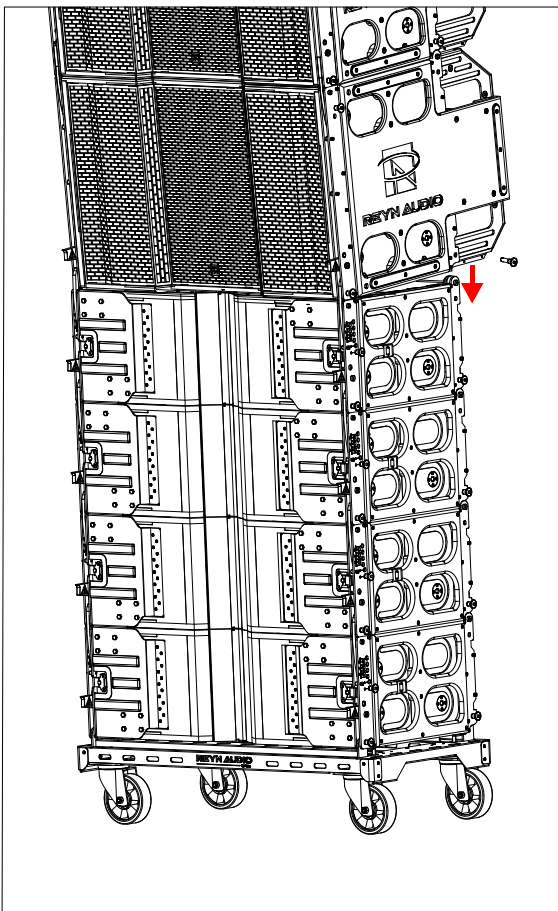
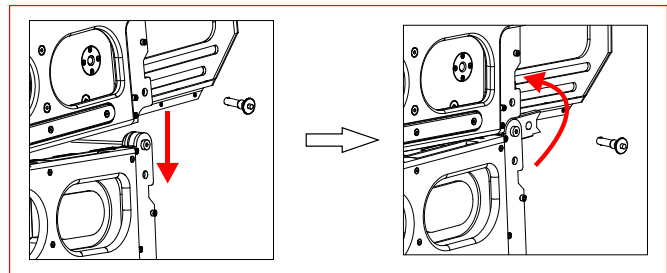
- ▶ Remove the four locking pins from the bottom enclosure of the RAPTOR enclosure block and let them hang.



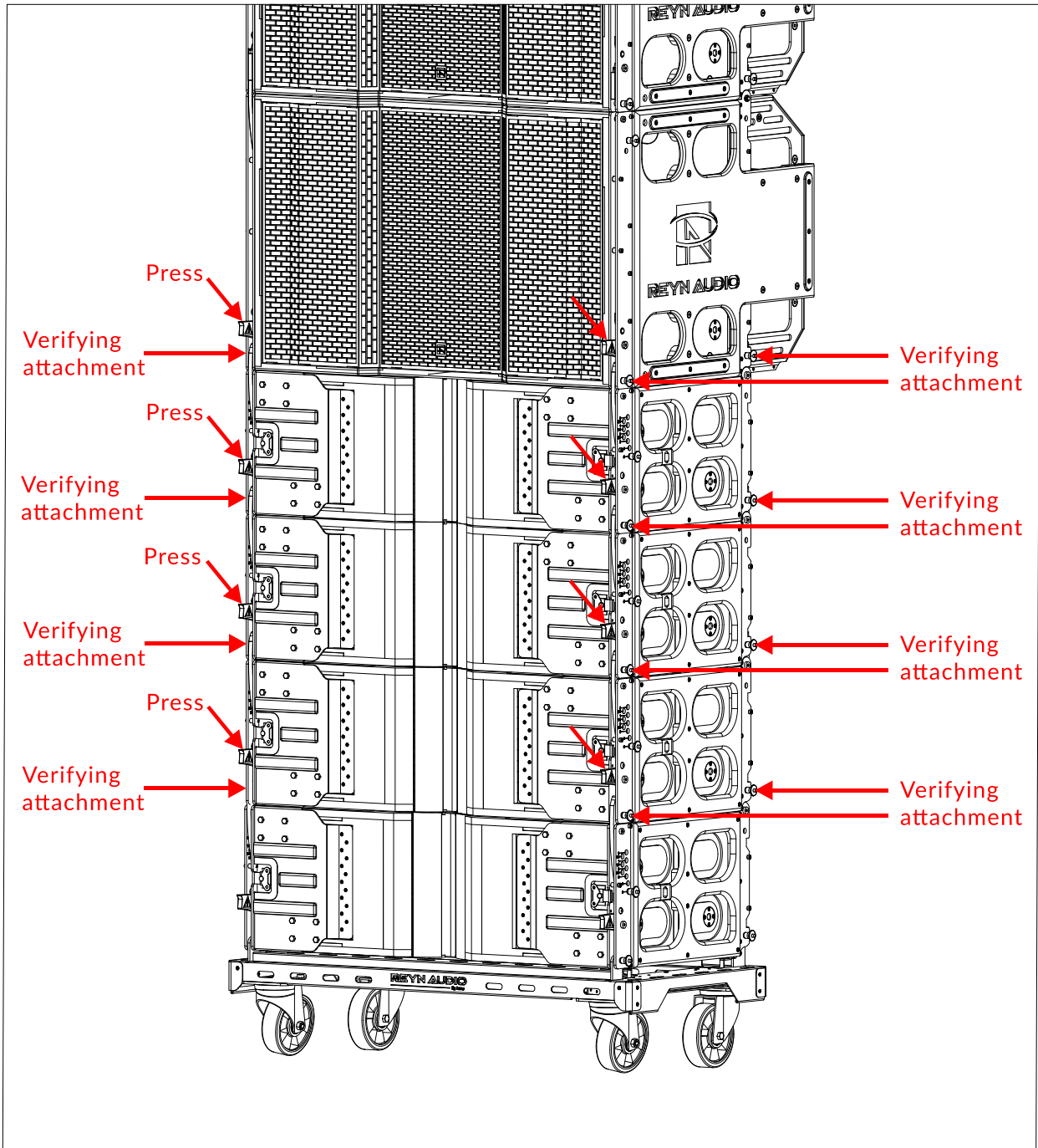
- ▶ Lower the RAPTOR enclosure block so as to align the front rigging points with both angle arm oblong holes on the ARRAY#1 and attach them (use two locking pins).



- ▶ Lift both rear arms out of ARRAY#1 and attach them to the RAPTOR enclosure block (use two locking pins).

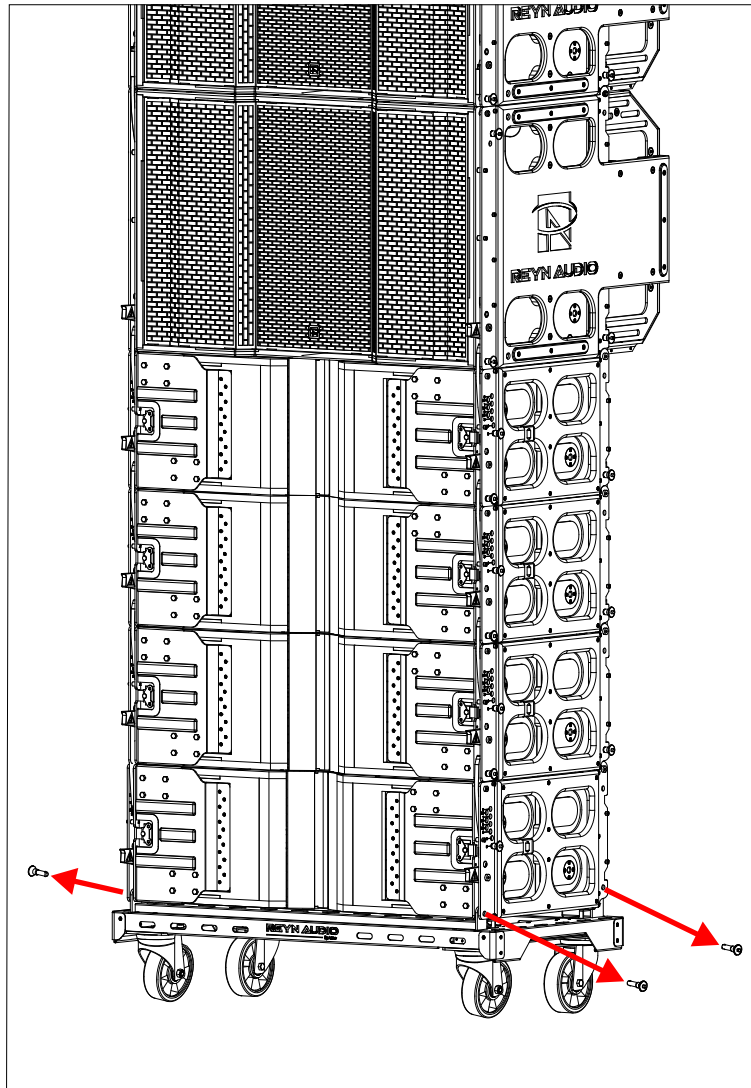


6. Verify that each enclosure is attached to the enclosure above: ensure that both rear and angle arms are attached to the enclosure above. Then press the angle unlocking latch on both sides of each enclosure (except for the bottom one).

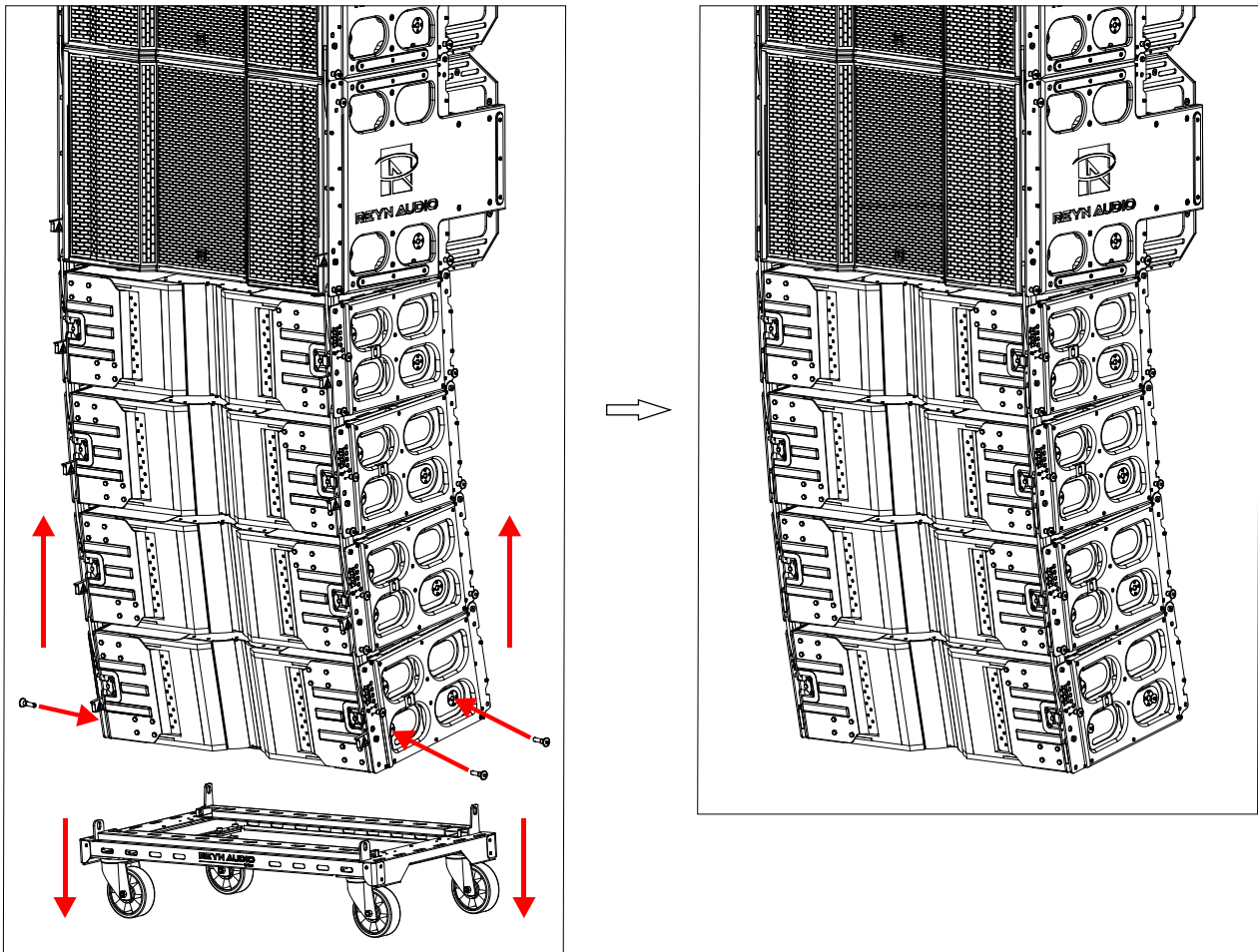


7. Remove the RAFALE1 DOLLY from the ARRAY#1 as described below:

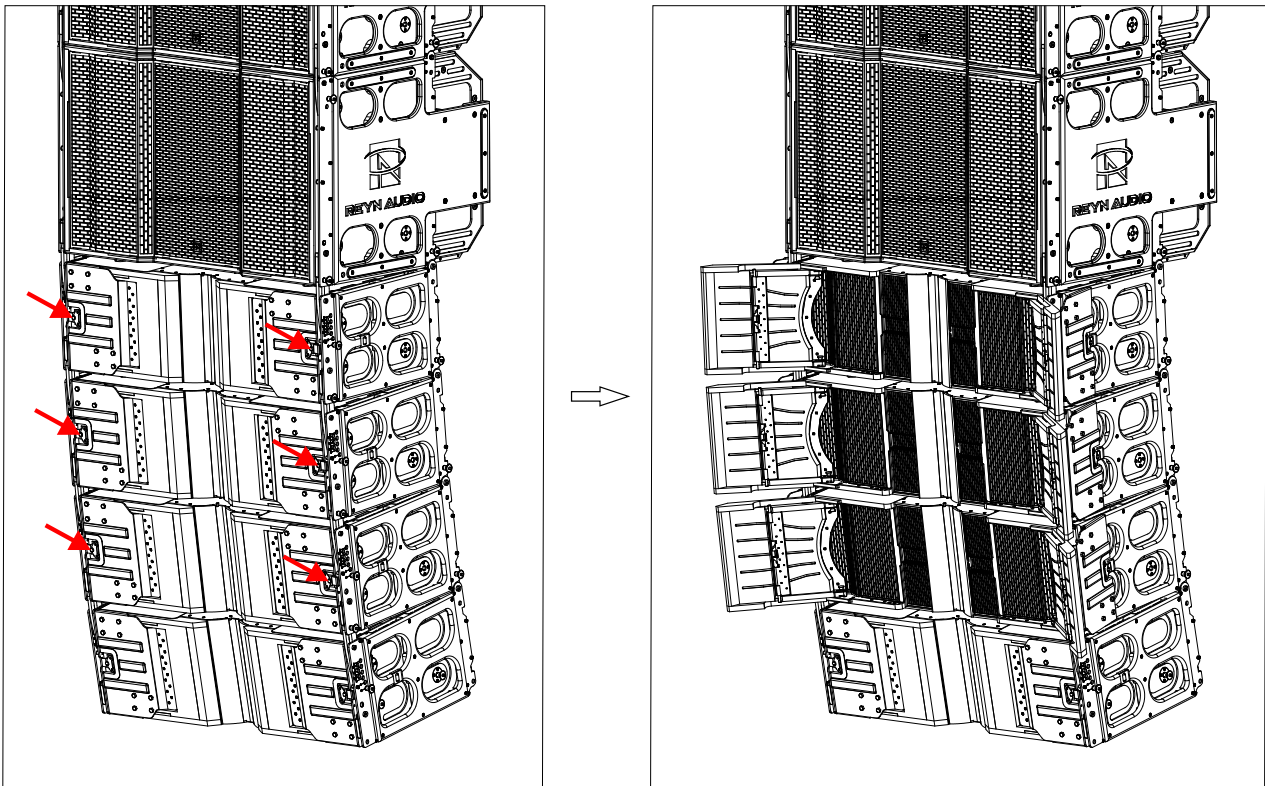
- ▶ Remove both rear locking pins from the bottom enclosure while holding the RAFALE1 DOLLY.
- ▶ Remove both front locking pins.



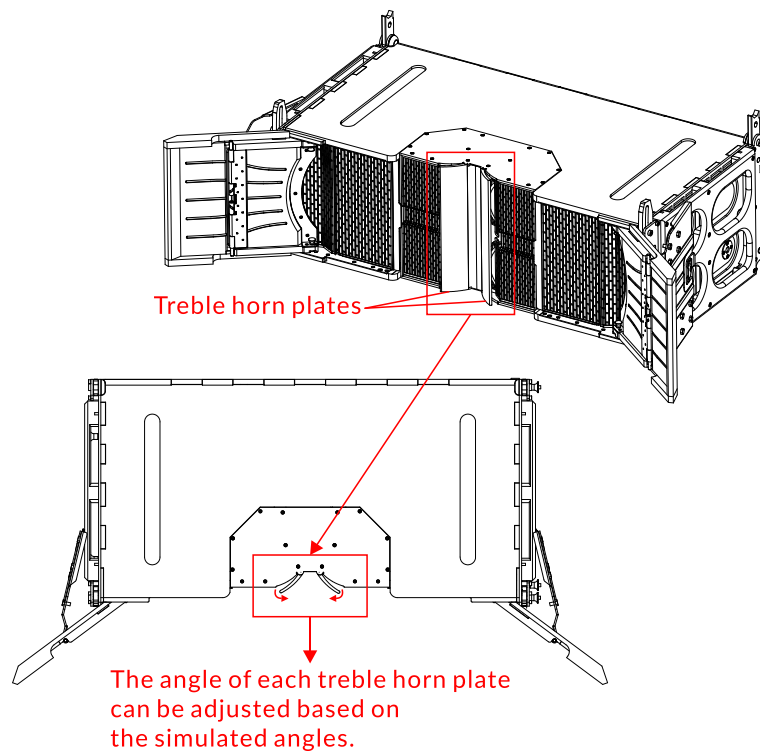
- ▶ Place the locking pins back into their storage locations on the bottom enclosure and raise the array to remove the RAFALE1 DOLLY.



8. Twist the lock catch on both sides of each enclosure (except for the bottom one) to open the metal grilles of all speakers.



Note: The treble horn plates in the middle of each enclosure of the ARRAY#1 can be adjusted between 90° and 110° to be suitable for different places.

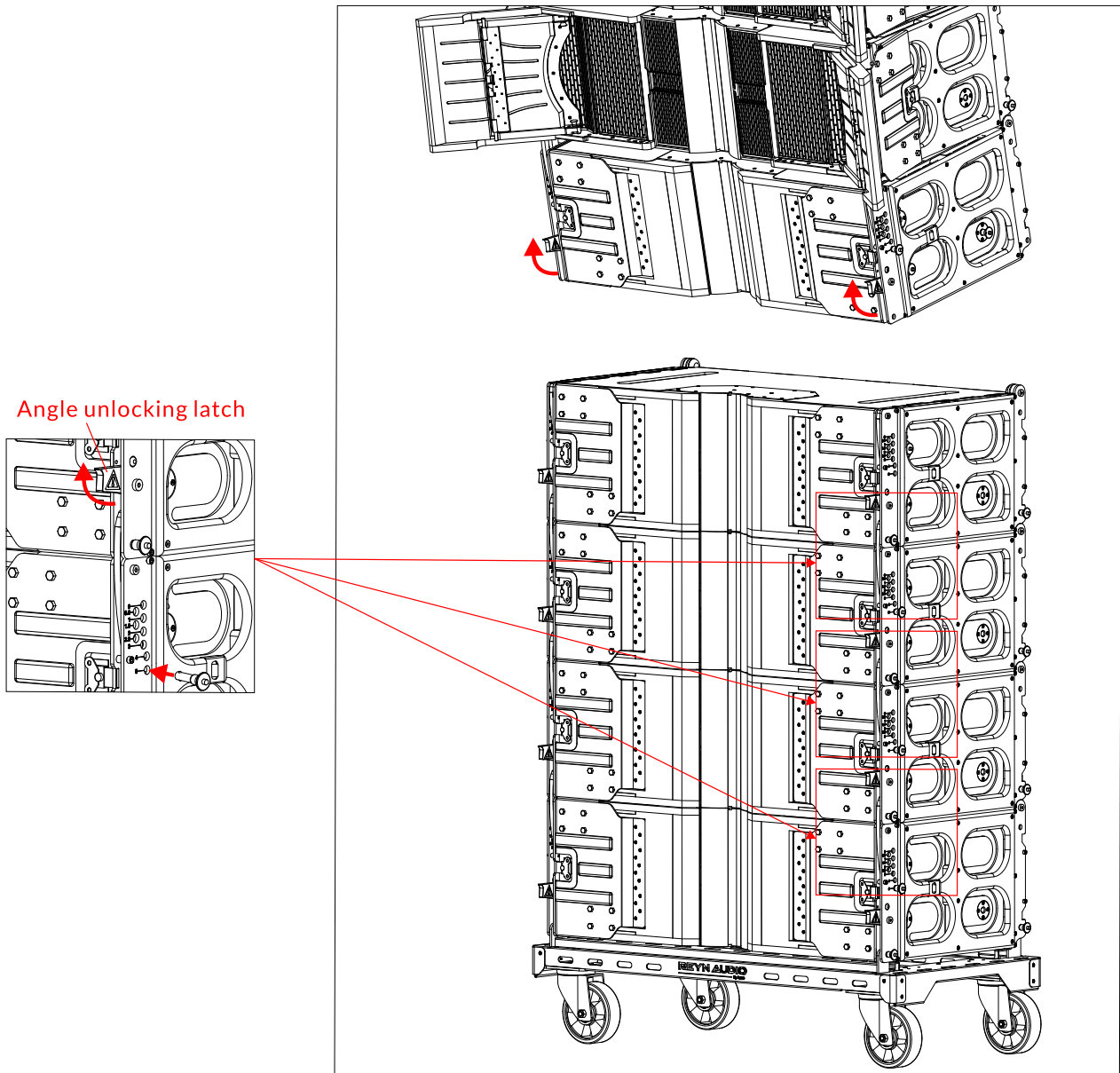


9. Raise the array to a certain height.

Note: As the array is raised all angle unlocking latches should subsequently take their locking position and a “shlack” noise should be heard.

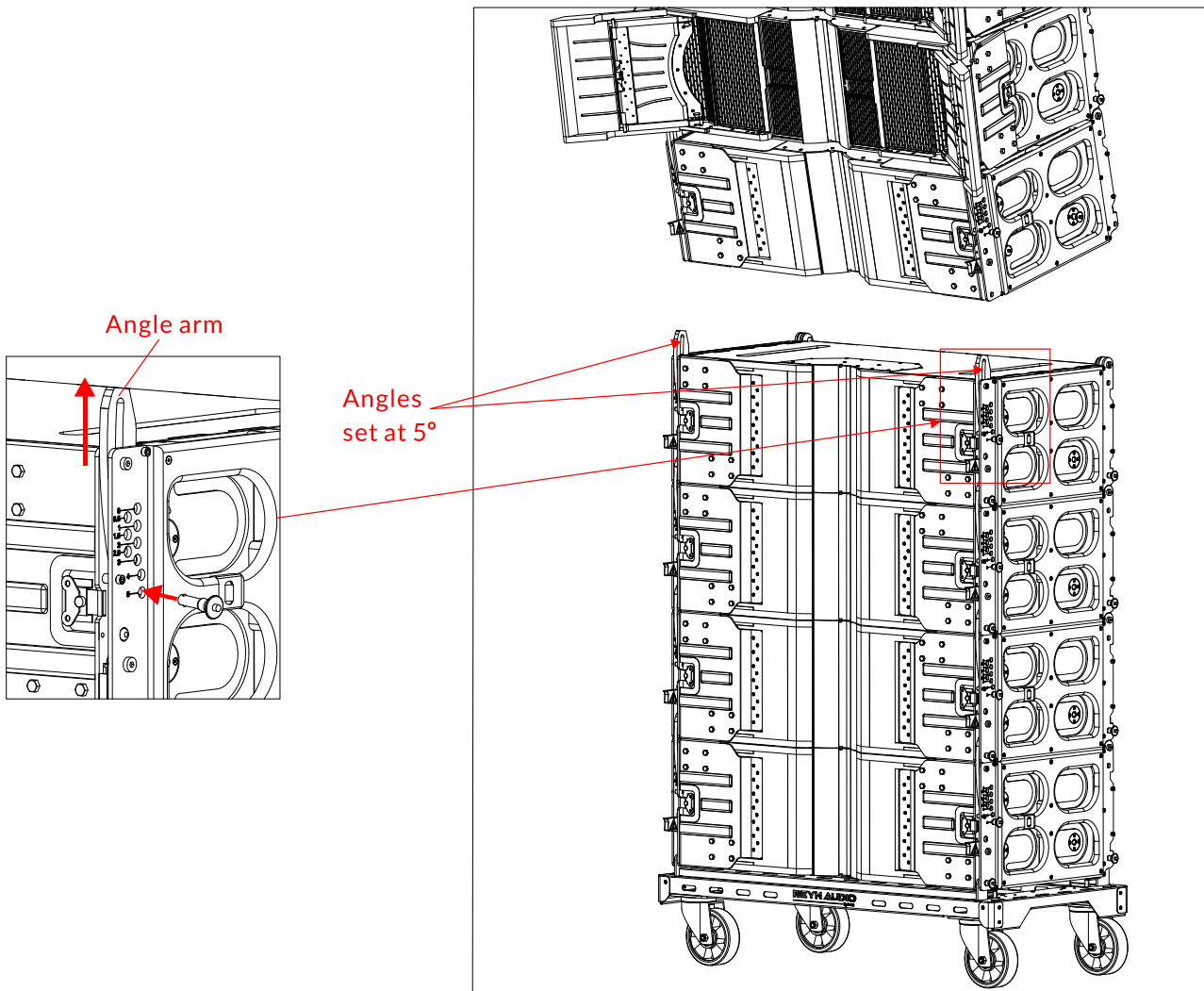
10. Place the ARRAY#2 beneath the ARRAY#1.

11. Pre-select the desired angle for both angle arms of each enclosure of ARRAY#2 (except for the top one): pull on the angle unlocking latch until a click is heard. Remove the locking pin from the shipping location on both sides of each enclosure, hold it facing to the desired angle hole, and slide the angle arm until the locking pin enters and locks.



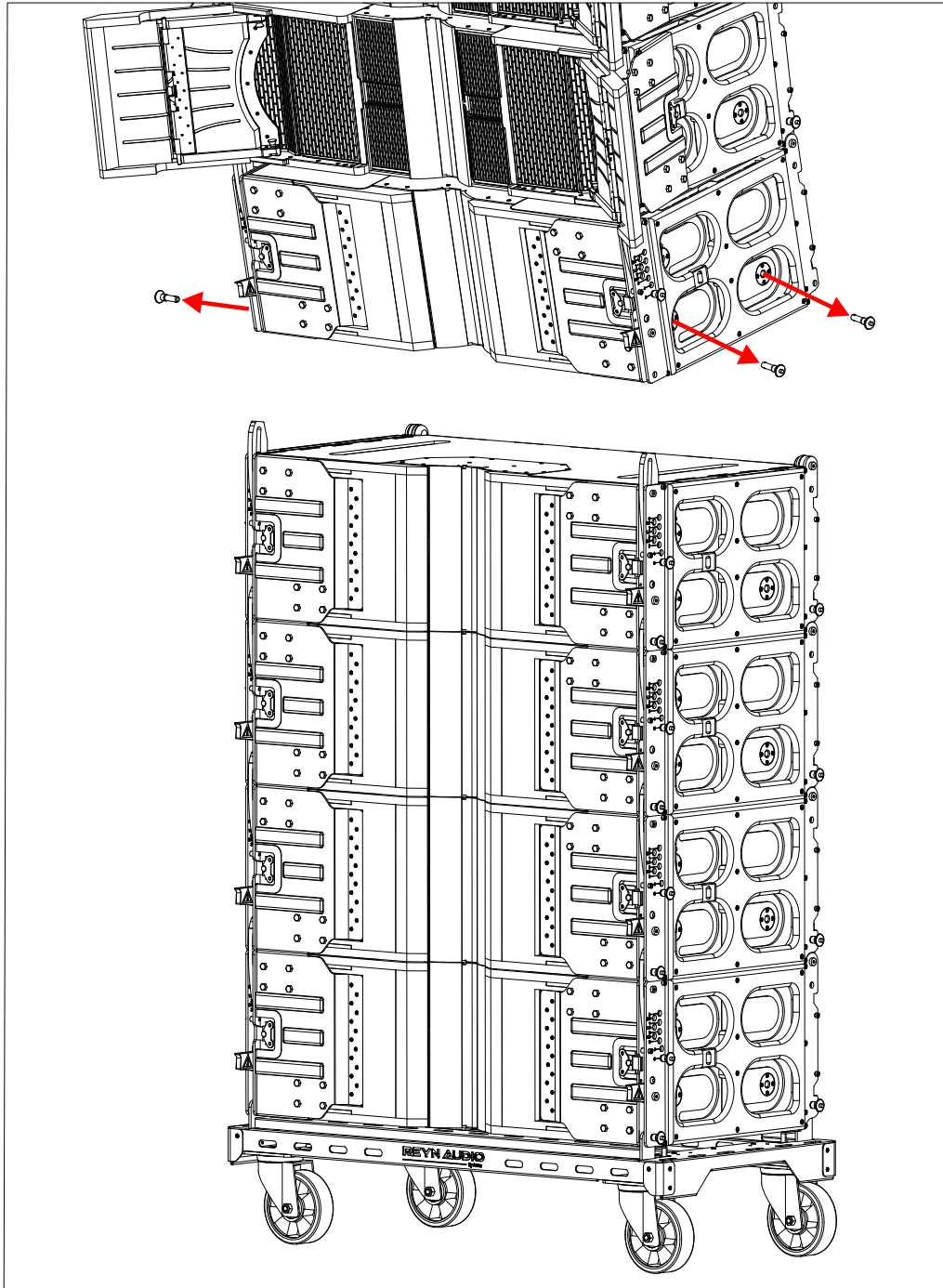
12. Select the 5° angle for both angle arms on top of ARRAY#2: remove the locking pin from the shipping location, hold it facing to the 5° angle hole, and slide out the angle arm until the locking pin enters and locks.

Note: This step is only for the convenience of attaching the ARRAY#1 to the ARRAY#2. After attachment, please reselect the desired angle as needed.

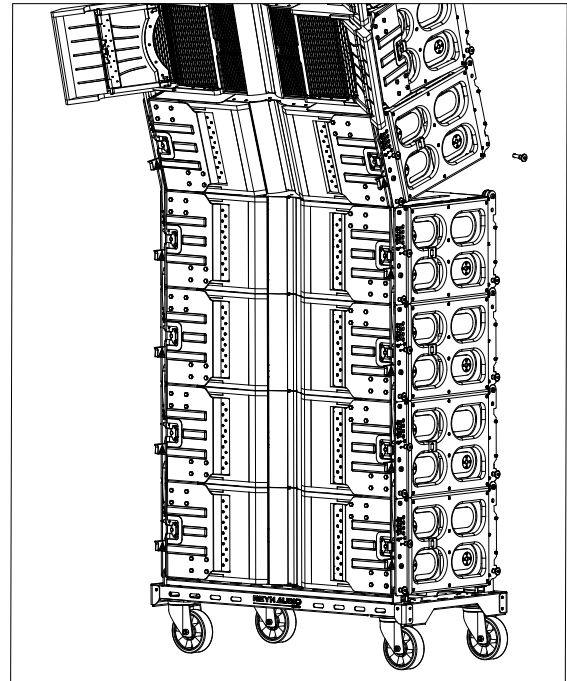
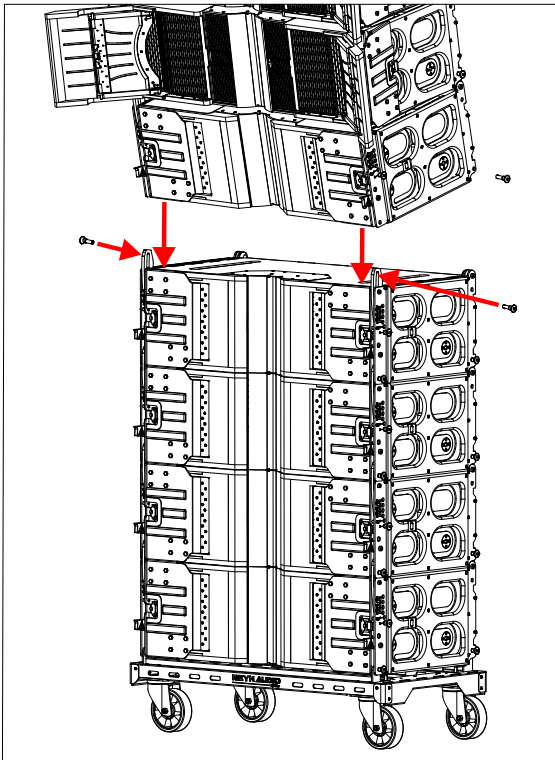


13. Attach the ARRAY#1 to the ARRAY#2 as described below:

- ▶ Remove the four locking pins from the bottom enclosure of the ARRAY#1 and let them hang.



- ▶ Lower the ARRAY#1 so as to align the front rigging points with both angle arm oblong holes on the ARRAY#2 and attach them (use two locking pins).



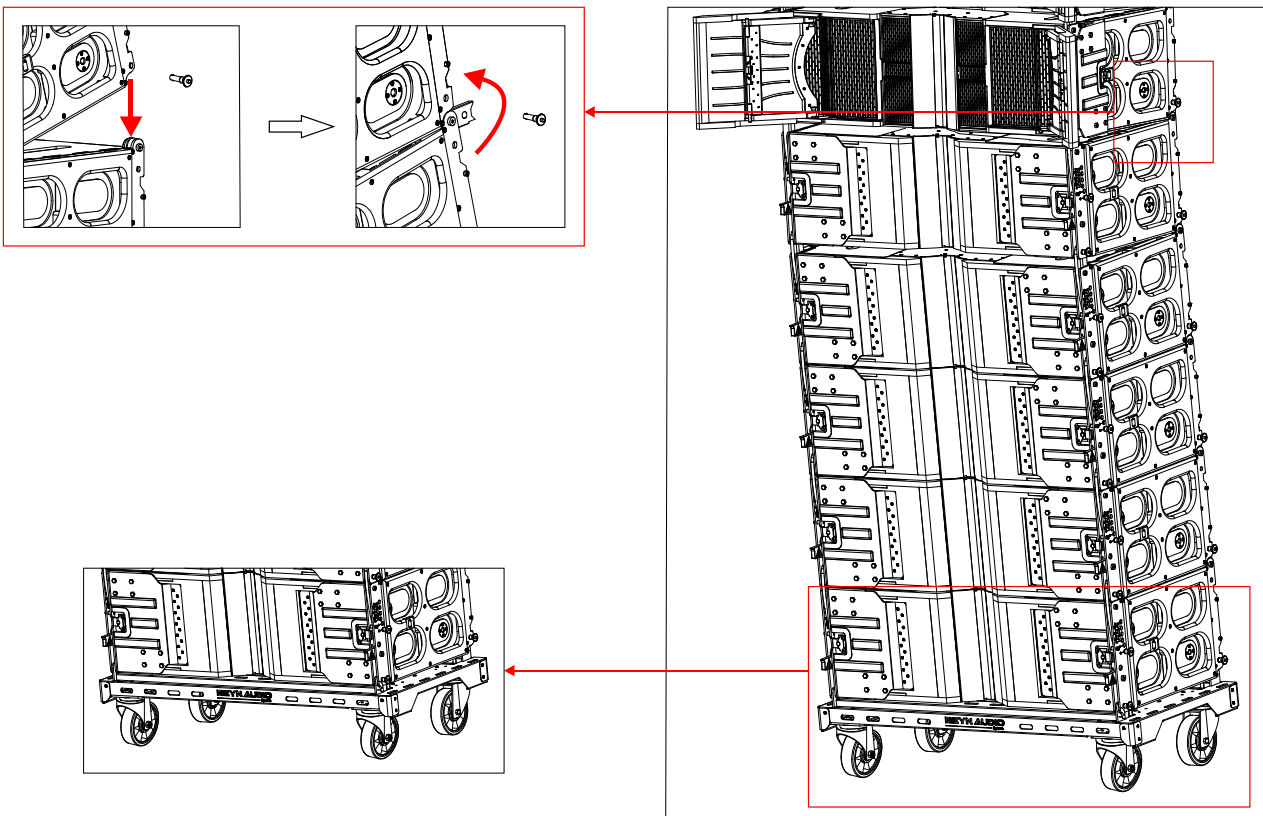
- ▶ Arrange the RAFALE1 DOLLY front wheels towards interior as it is shown in the figure.

Note: This operation will avoid instability when the wheels are in contact with the ground.

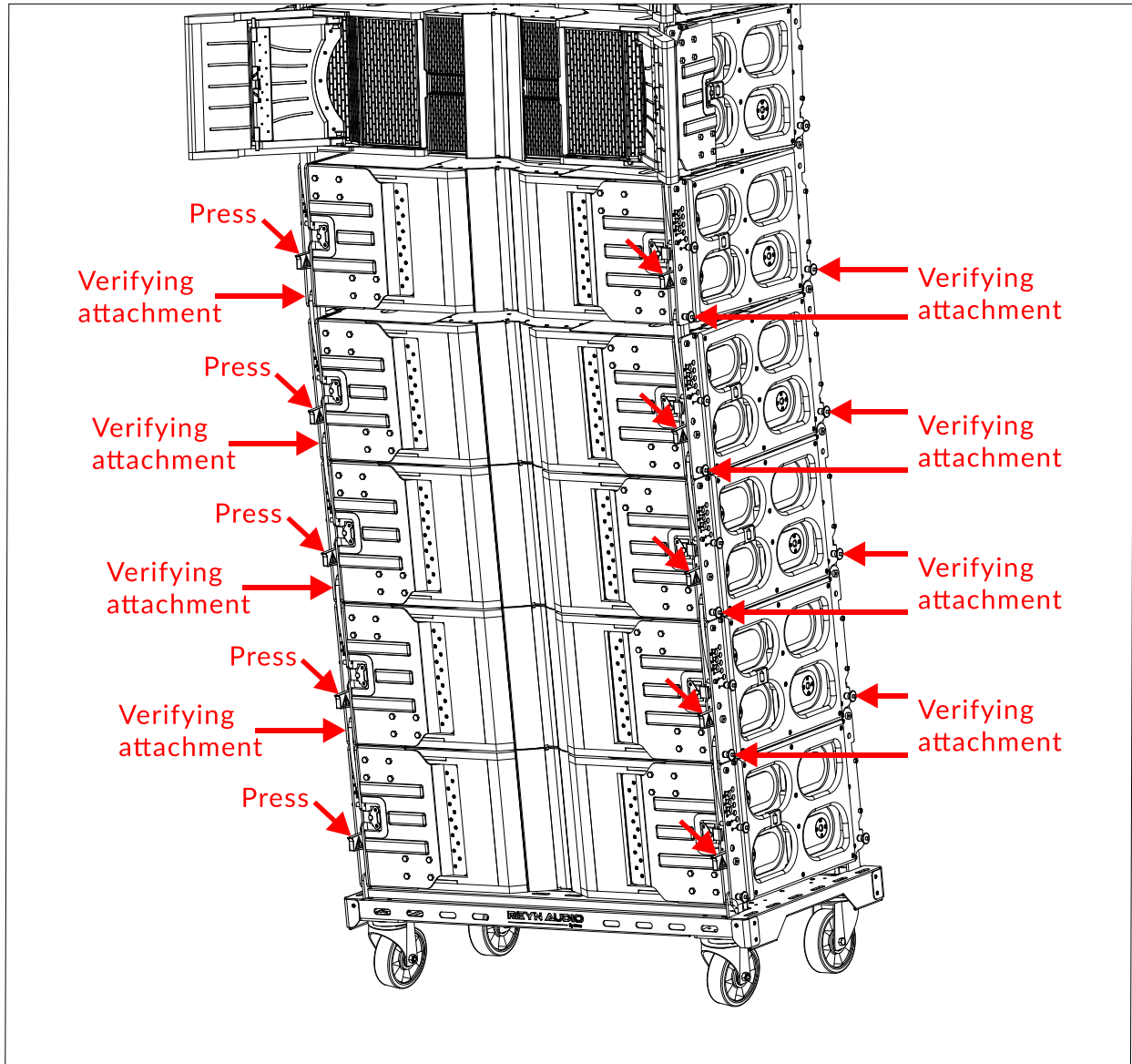
- ▶ With 3 people (one manipulating the hoist controller and two on both sides of the array grabbing the bottom handles of ARRAY#2), pull towards the back while lowering the array until both RAFALE1 DOLLY front wheels touch the ground.
- ▶ Continue lowering the array until the ARRAY#2 and ARRAY#1 rear corners are in contact.

Caution: Stop lowering the array at the exact moment when both ARRAY rear corners are in contact so as to avoid putting too much stress on the RAFALE1 DOLLY wheels.

- ▶ Lift both rear arms out of ARRAY#2 and attach them to the ARRAY#1 (use two locking pins).

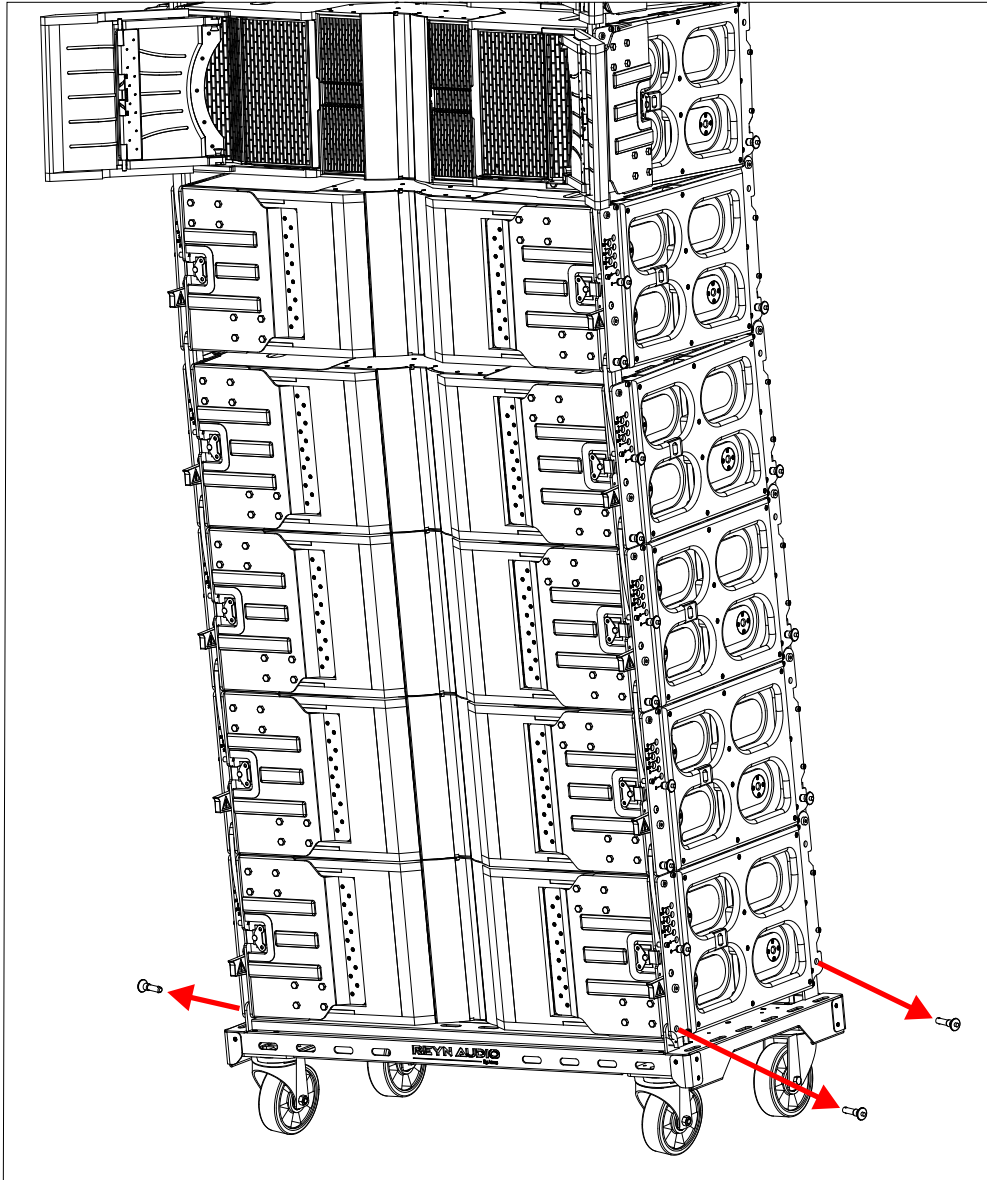


14. Verify that each enclosure is attached to the enclosure above: ensure that both rear and angle arms are attached to the enclosure above. Then press the angle unlocking latch on both sides of each enclosure.

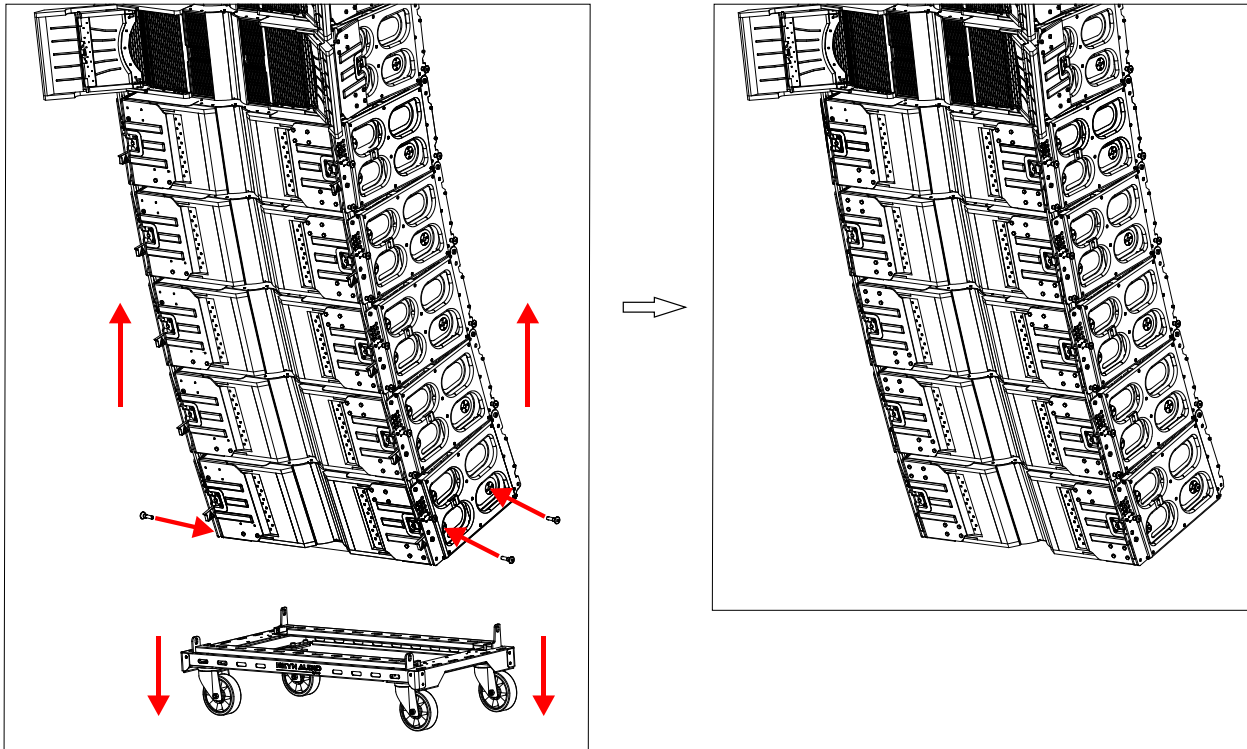


15. Remove the RAFALE1 DOLLY from the ARRAY#2 as described below:

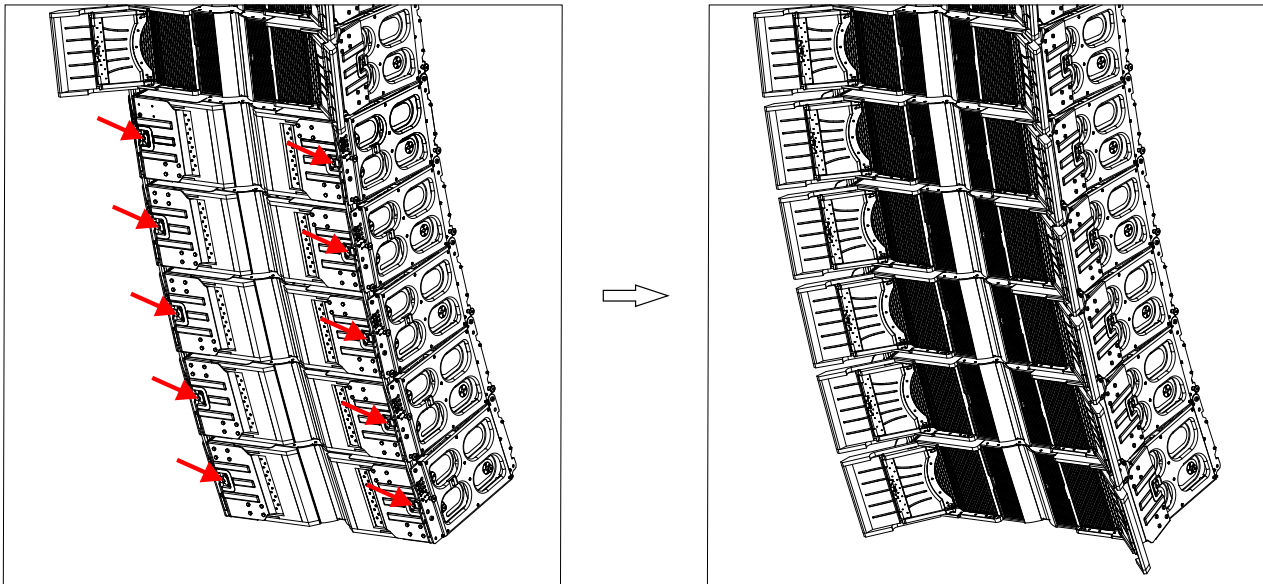
- ▶ Remove both rear locking pins from the bottom enclosure while holding the RAFALE1 DOLLY.
- ▶ Remove both front locking pins.



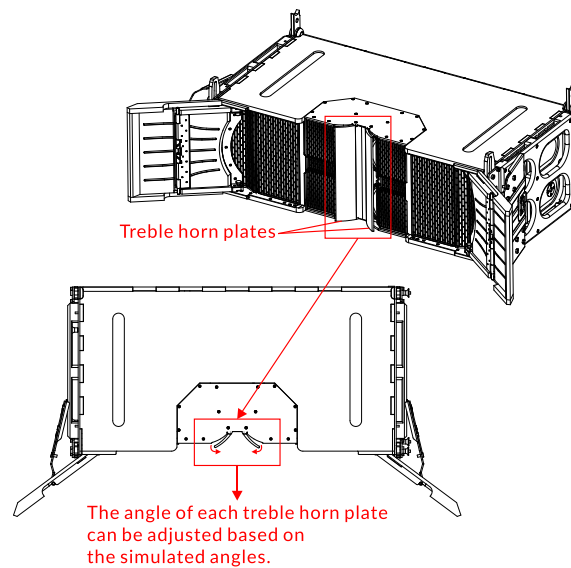
- ▶ Place the locking pins back into their storage locations on the bottom enclosure and raise the array to remove the RAFALE1 DOLLY.



16. Twist the lock catch on both sides of each enclosure to open the metal grilles of all speakers.



Note: The treble horn plates in the middle of each enclosure of the ARRAY#2 can be adjusted between 90° and 110° to be suitable for different places.

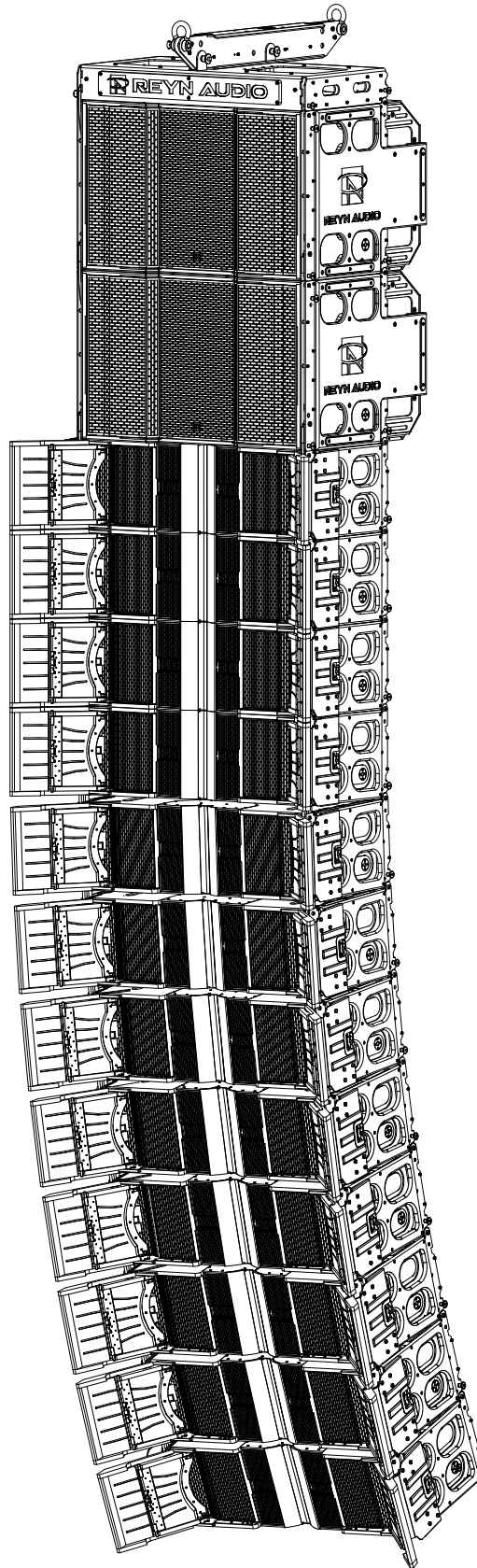


17. Raise the array to a certain height.

Note: As the array is raised all angle unlocking latches should subsequently take their locking position and a “shlack” noise should be heard.

18. For arrays of more than 8 enclosures repeat steps 10 to 17 until all ARRAYS composing the array are flown.

19. The figure below shows the array built by successively adding a RAPTOR enclosure block and 3-RAFALE1 enclosure blocks.



6. Care and Maintenance

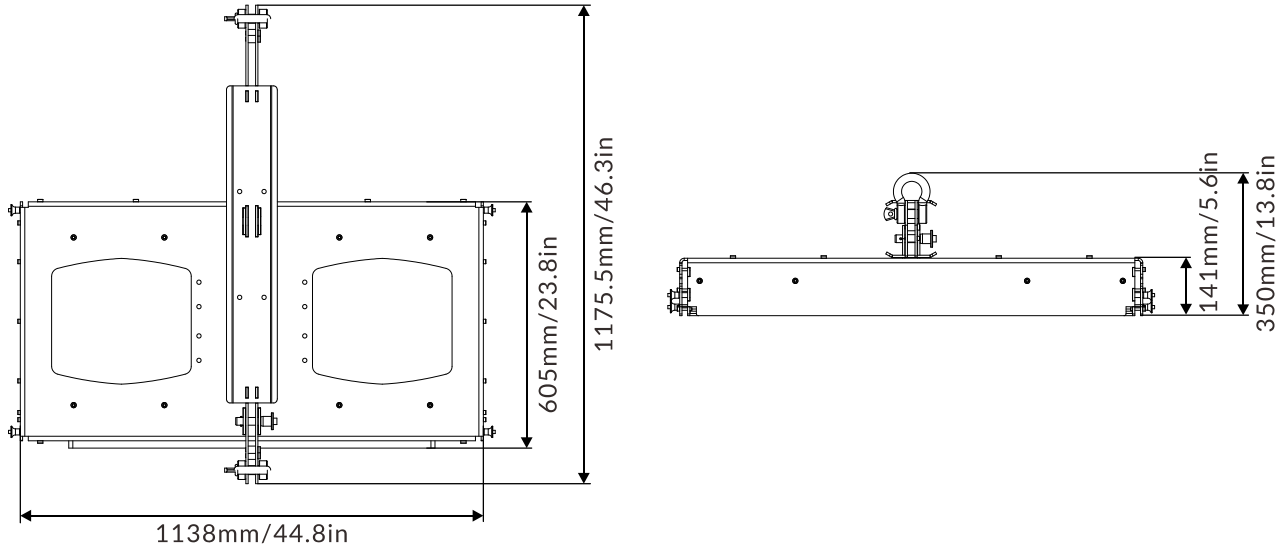
If all components are used as it is described in this manual they will remain fully operational over the enclosures' life.

However, it is necessary to regularly check the following points in order to guaranty the system durability.

- ▶ Any component should not show any sign of deformation, fissure, or corrosion.
- ▶ Any component incorporating a part showing signs of defect must immediately be replaced.
- ▶ Verify the screwing mechanism on each shackle. Ensure that the safety pin is present and that it locks correctly.
- ▶ For new speakers and amplifiers, the volume should be gradually increased from low to high during the initial use.
- ▶ Speakers and amplifiers should be installed in a fixed location whenever possible to minimize disassembly.
- ▶ It is best to install speakers symmetrically, facing the user directly, with the direction of high-frequency radiation slightly higher than the level of the ears.
- ▶ The amplifier output should be matched to the speaker load, with the amplifier output power being 0.2-2 times higher than the speaker load power. The total load impedance of the speakers should not be lower than the minimum impedance that the amplifier can handle.
- ▶ To enhance the sound projection and expand the listening space, the center portion of the high-frequency should be directed towards a position higher than the ear level.
- ▶ To reduce interference, do not place the microphone in front of the speakers.
- ▶ Do not place the speakers on an unstable surface to prevent them from falling and causing damage.
- ▶ Regularly inspect the position where you install the speaker, and inspect the power supply cable, signal cable, audio cable, etc.
- ▶ The speakers and amplifiers should be regularly dusted and cleaned, especially the amplifiers, audio sources, and surrounding areas.

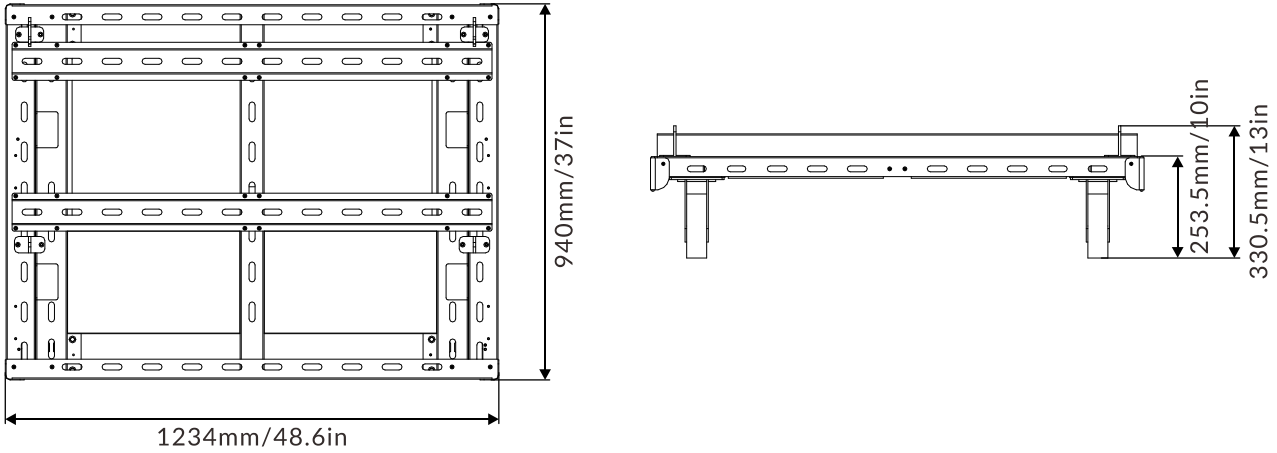
7. Specifications

Reference	RAFALE1 BUMP
Dimensions (L x H x D)	1138x350x1175.5mm / 44.8x13.8x46.3inch



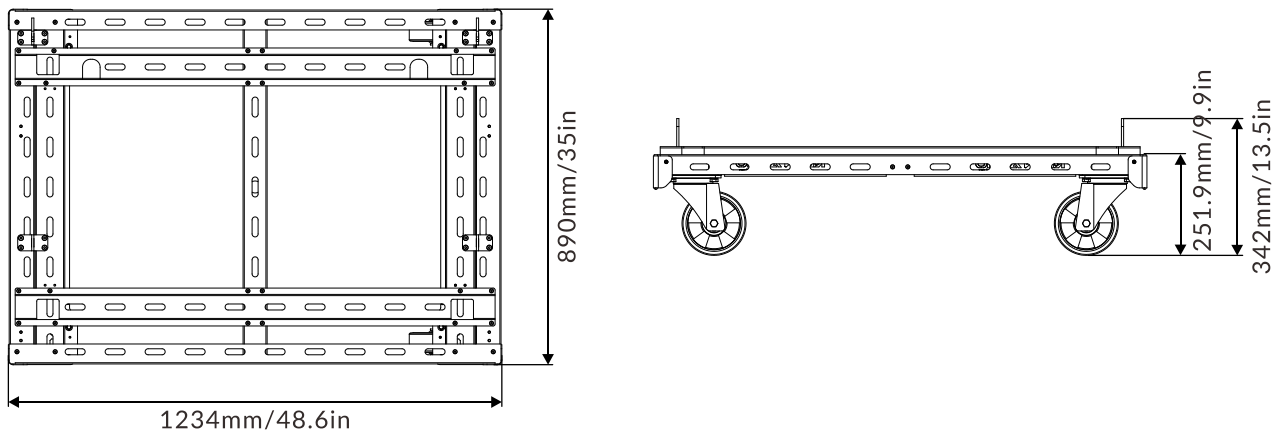
Weight	94 kg / 207.2 lbs
Setup safety limits	Maximum of 24 RAFALE1 enclosures per RAFALE1 BUMP Maximum of 16 RAPTOR enclosures per RAFALE1 BUMP
Material	304 industrial stainless steel
Included accessories	RAFALE1 DELTA plate with three shackles, two shackles, ten locking pins
Not included accessories	Adjustable sling, safety sling

Reference	RAFALE1 DOLLY
Dimensions (L x H x D)	1234x330.5x940mm / 48.6x13x37inch



Weight	37.2 kg / 82 lbs
Setup safety limits	Maximum of 4 RAFALE1 enclosures per RAFALE1 DOLLY
Material	304 industrial stainless steel

Reference	RAPTOR DOLLY
Dimensions (L x H x D)	1234x342x890mm / 48.6x13.5x35inch



Weight	52.8 kg / 116.4 lbs
Setup safety limits	Maximum of 2 RAPTOR enclosures per RAPTOR DOLLY
Material	304 industrial stainless steel

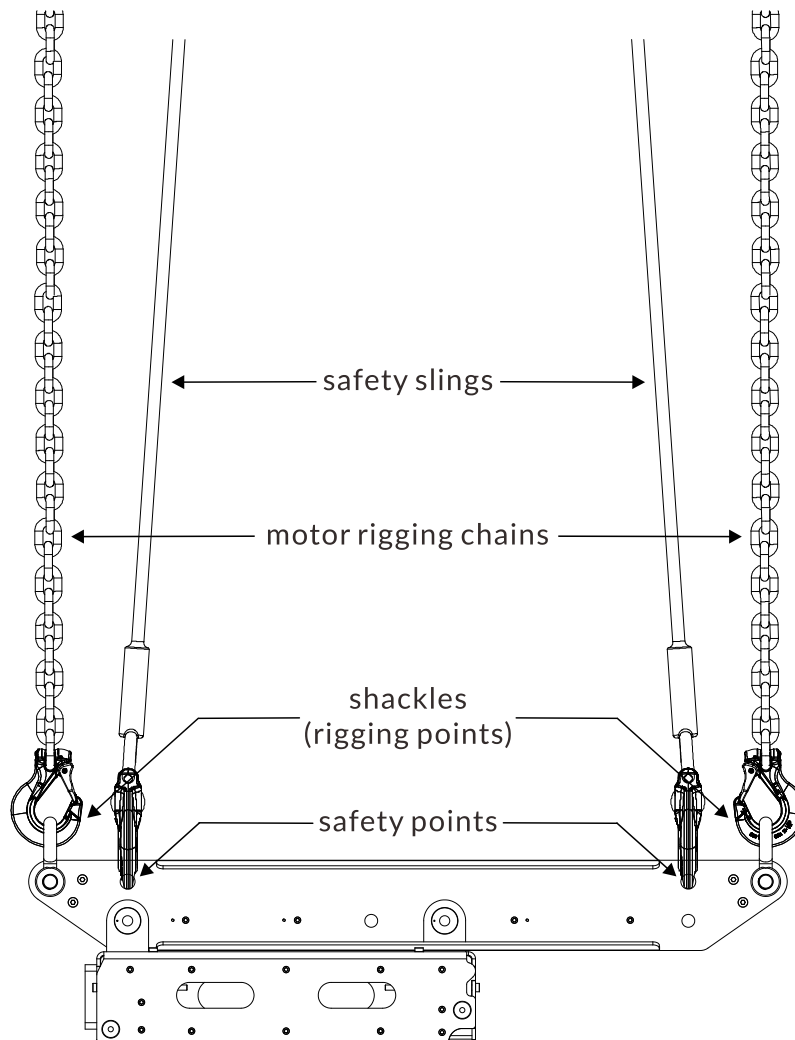
8. Appendix

8.1 Rigging and Safety Requirements

Up to 24 RAFALE1 or 16 RAPTOR enclosures and corresponding cable set can be flown as a vertical line source array using the RAFALE1 BUMP flying structure.

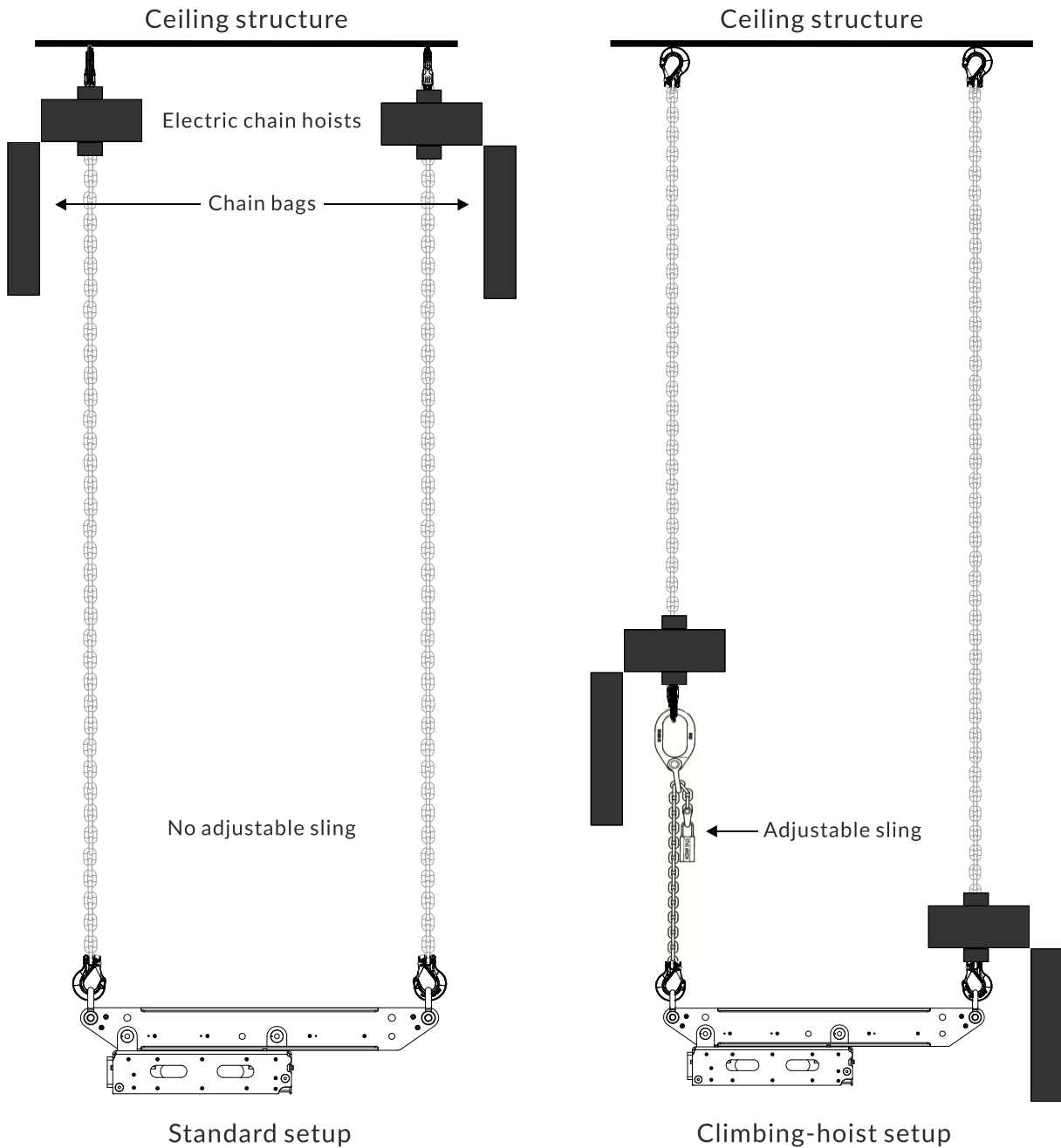
ALWAYS secure a flow array using two safety slings.

ALWAYS refer to the mechanical data and warning indications provided in TURANDOT software (mechanical data section) to verify the mechanical conformity of the system before installation.



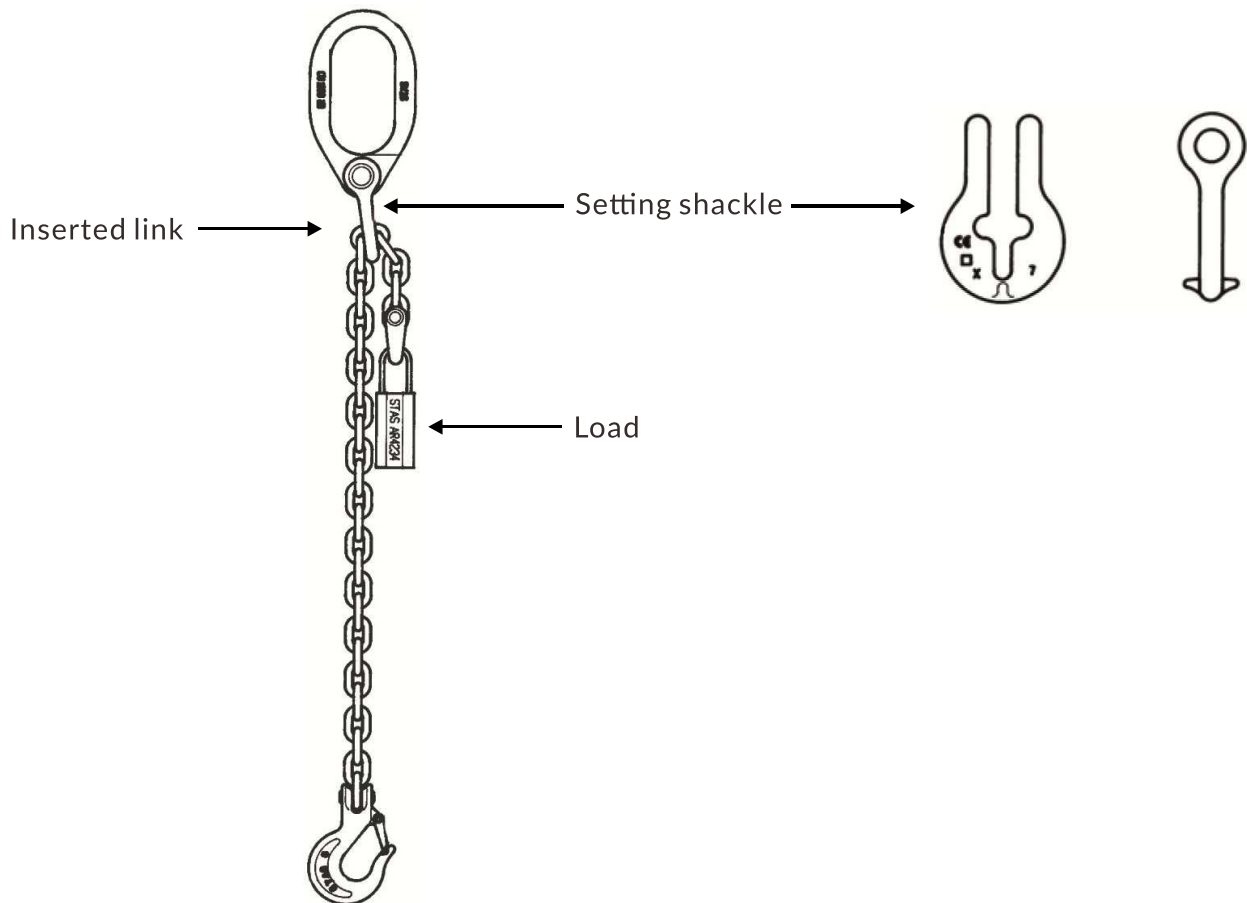
8.2 Standard or Climbing Hoist Setup

Adjustable slings must be used in case of climbing-hoist setup in order to prevent the chain bag to lie in front of the enclosures located on top of the array.



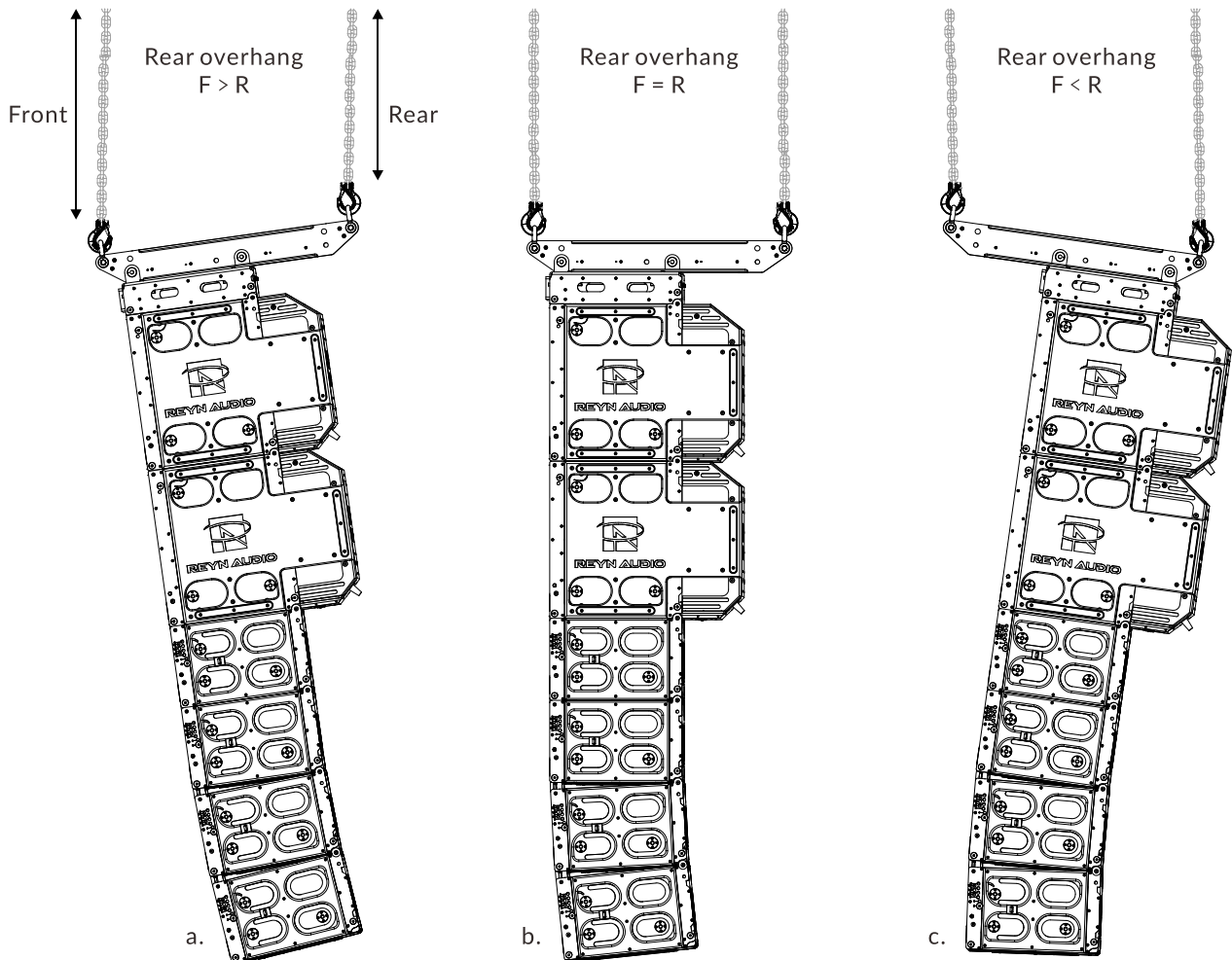
Sling length setting procedure:

1. Free the inserted link from the setting shackle by pulling it up.
2. Slide the chain through the setting shackle so as to select the desired length.
3. Insert the appropriate link into the setting shackle and let the load hang.



8.3 Site Angle Setting

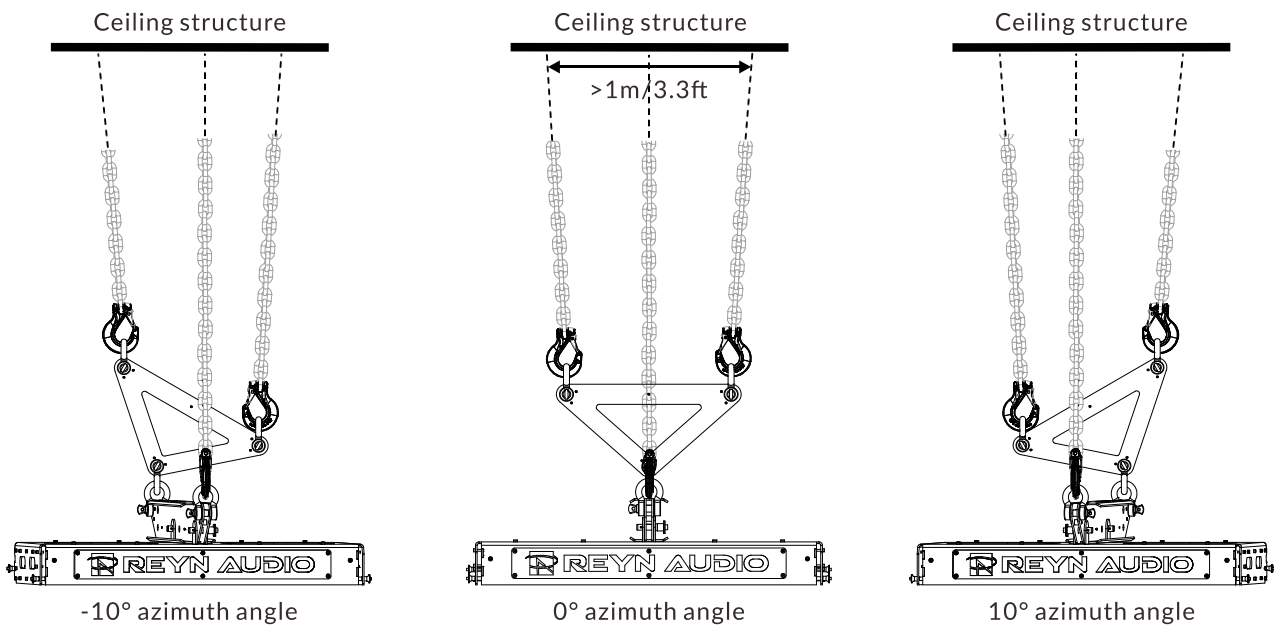
The array site angle depends on the relative heights between the RAFALE1 BUMP's front and rear hang points (motor chain lengths) and central bar configuration (front or rear overhang).



Examples of site angle settings: (a) negative, (b) null, and (c) positive

8.4 Azimuth Angle Setting

Array azimuth angle setting needs the addition of the RAFALE1-DELTA and two rear motors. The recommended spacing between the suspension points on the ceiling structure is a minimum of 1m/3.3ft. Variations from -10° to $+10^{\circ}$ are performed by setting the relative heights between both rear rigging points.



Setting the azimuth angle using RAFALE1-DELTA and two rear motors (front views)

