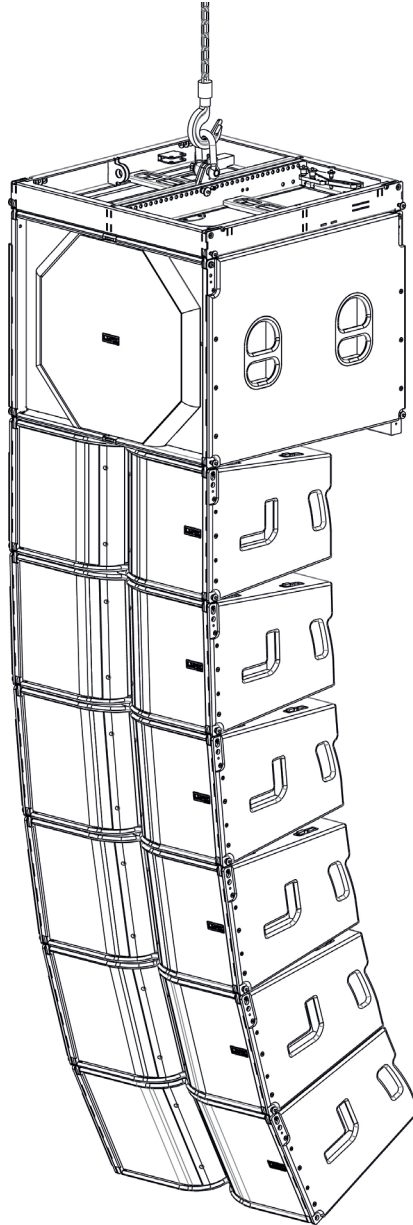


# CLS-210P

## USER MANUAL

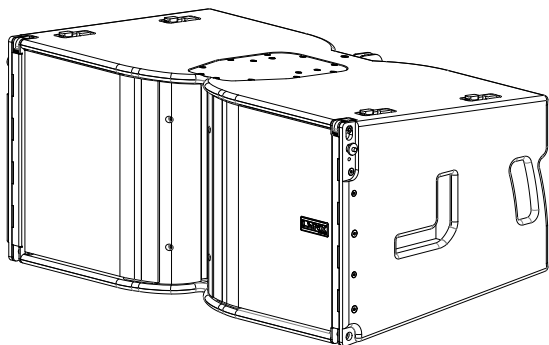
CLS-121SP  
CLS-218SP



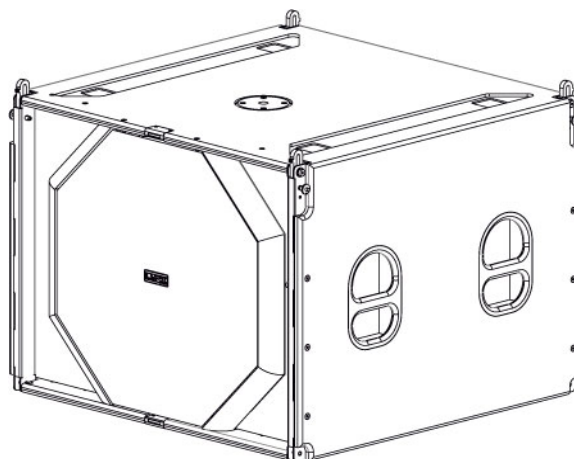
**Lynx Pro Audio S.L.**

Valencia, Spain - [www.lynxproaudio.com](http://www.lynxproaudio.com) - [info@lynxproaudio.com](mailto:info@lynxproaudio.com)

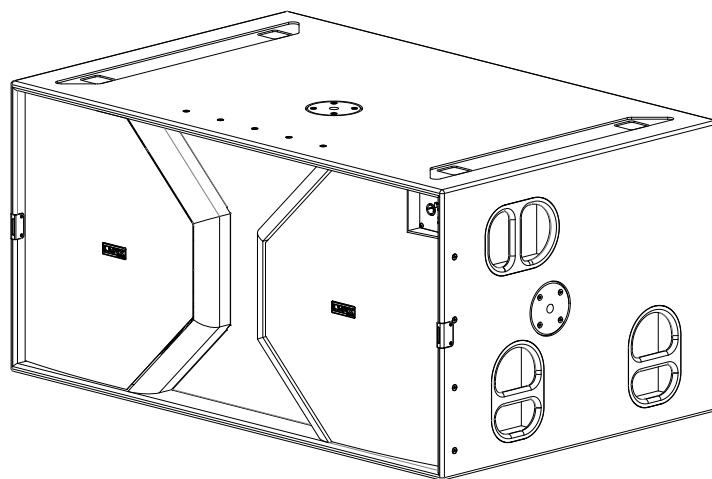
CLS-210P



CLS-121SP



CLS-218SP



Manufacturer



LYNX Pro Audio S.L.  
Calle 1 - Pol. Ind. Picassent  
E-46220 Picassent (Valencia)



CE CERTIFICATION, EUROPEAN PRODUCT

## INTRODUCTION

This manual describes the recommended installation procedure for the Coaxial Line Source cabinets CLS-210P in combination with the subwoofers CLS-121SP and CLS-218SP.

The CLS series is Lynx Pro Audio's answer to scalable line array systems.

Extreme care has been taken to select and customize the most advanced components on the market, including coaxial Mid/high drivers.

## CONTENTS

SAFETY PRECAUTIONS	4
• SYSTEM OVERVIEW	
CLS-210P	5
CLS-121SP	7
CLS-218SP	9
BACK PANEL	11
CONNECTORS AND CONNECTIONS	12
• RAINBOW 3D ACOUSTIC SIMULATION SOFTWARE	13
• HARDWARE AND ACCESSORIES	15
• CLS-210P RIGGING HARDWARE	16
• CLS-210P RIGGING MANUAL	17
• HOW TO USE THE FLYING FRAME ON CLS-210P	19
• CLS-121SP RIGGING HARDWARE	24
• HOW TO USE THE FLYING FRAME ON CLS-121SP	25
• FLOWN CONFIGURATION ON CLS-121SP	26
• STACK CONFIGURATION ON CLS-121SP	30
• APPLICATION EXAMPLES FOR CLS-121SP	35
• APPLICATION EXAMPLES FOR CLS-218SP	36
• RAINBOW 3D ACOUSTIC SIMULATION SOFTWARE	40
• CERTIFICATIONS AND GUARANTEE	42

Before starting to use this device, please read this instruction manual carefully.  
Keep these instructions in the place where the equipment will be used and with easy access to them.



## • Electrical appliance

The exclamation mark within a triangle identifies the presence of electricity. Use the system carefully without wet hands or feet. Avoid installing the speaker in wet or excessively humid places. Do not place material that contains liquid on or near the unit. Avoid dripping or splashing water or any liquid over the unit. Regularly check the condition of the cables and make sure these are not being walked on or pinched. Connect the speaker to bipolar, earthed mains. The mains plug must be connected to the appropriate protection (fuse or breaker). Connection to any other type of mains could result in an electrical shock and violate local electrical codes.

CAUTION: DO NOT CONNECT OR DISCONNECT THE AC POWER CONNECTORS UNDER LOAD.



## • Heavy equipment

Apply back protection when using the system. Avoid loading and unloading at heights.



## • Hearing damage risk

These systems can reproduce large quantities of sound pressure which can damage hearing. Take precautions if you are going to be near them for extended amounts of time and do not get too close.



## • Hanging / Flying

Do not hang the cabinets from the handles or from any other part other than the designated hanging point. When flying this system please observe the technical and "Rainbow" software data carefully. Never exceed the maximum safe working loads or ignore the instructions included within this manual. Use Only flying accessories provided by Lynx Pro Audio S.L. Rigging must be always carried out by professionals.



## • Delicate Material

Please ensure no foreign object or water enters the speaker. Only clean the unit with dry cloths. Do not use solvents.



## • Overheating / Fire risk

To reduce the risk of the speaker over heating, avoid direct contact with sunlight. Avoid placing the unit close to heat inducing objects such as radiators. Do not cover the equipment in use and do not block any ventilation openings. Do not put naked flame, such as lighted candles, close or on top of the unit.



## • Electromagnetic and interference emissions

Avoid placing objects which through electromagnetic waves can damage the unit, such as mobile phones, lap tops, magnetic strip cards etc.

This system complies with normatives

EN 55103-1 (1)

EN 55103-2 (2)

(1) This device may not cause harmful interferences.

(2) This device may receive interference including interferences that may cause undesired working.



## • IMPORTANT NOTE

This Equipment must be used in accordance with these instructions and by trained professional personnel only. This equipment should not be used in places with extreme tropical climates. Don't expose this device to extreme humidity and or temperature values.



## SYSTEM OVERVIEW

### • CLS-210P

Extremely compact & powerful 3-way, biamplified coaxial line array element. Dual high power 10" neodymium transducers and a unique 10" dual diaphragm coaxial planar wave driver.

### Technical Data

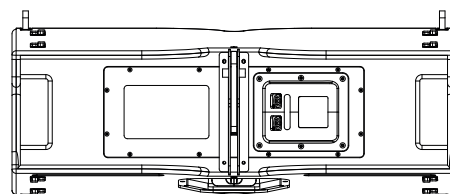
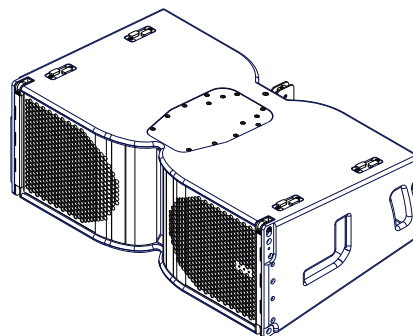
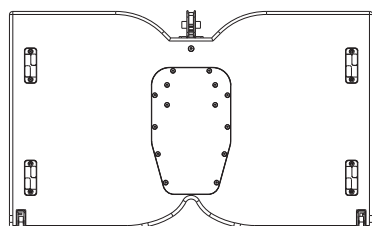
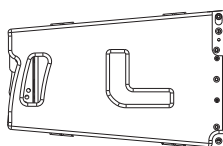
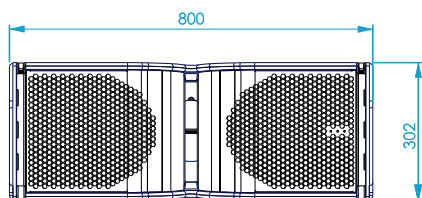
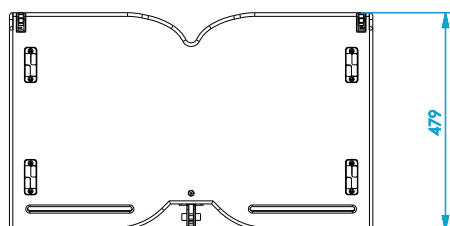
Components	
• LF:	2 x 10" (DUAL 88mm (3,5") voice coil), waterproof treated cone on both sides, neodymium magnet, 1600W (AES)
• MF/HF:	10" dual diaphragm coaxial planar wave driver. - Mid: 3.5" (90 mm) voice coil, 150 W (AES) - High: 1.75" (44.4 mm) voice coil, 80 W (AES)
Frequency range	55 Hz - 22 KHz (-10 dB)
Frequency response	65 Hz - 20 KHz ( ± 6 dB)
Impedance	Low Left Section: 16 Ω Low Right Section: 16 Ω Mid Section: 16 Ω High Section: 16 Ω
Sensitivity	LF: 102 dB MF/HF: 122 dB
Max SPL / Peak	LF: 134 dB / 140 dB MF/HF: 135 dB / 143 dB
Power	LF Left: 800W (1600W program, 3200W peak) LF Right: 800W (1600W program, 3200W peak) MF: 150W ( 300W program, 1000W peak) HF: 80W (160W program, 320W peak)
Horizontal coverage	110° (-10 dB) / 100° (-6 dB)
Vertical coverage	Single element 10°
Crossover	Low/Mid 550 Hz Mid/High 6300 Hz
Connectors	2 x Neutrik Speakon NL8MP
Finish	Black Polyurea coating, high grade resistant paint. other colours (RAL) available
Material	15 mm Premium birch plywood
Dimensions	302 x 800 x 479 mm (H x W x D)
Weight	33 Kg

Calculated maximum SPL based on rated peak power and measured sensitivity.

### • Key features

- Extraordinary power-to-size ratio
- Unique 10" dual diaphragm planar wave driver
- Perfect acoustical coupling of individual units to create virtually continuous line source & excellent phase coherence
- Extended bandwidth (55 Hz – 22 KHz)
- Perfect Time Alignment avoiding Multi-Source Interference problems
- Ergonomic design in premium birch plywood & finished in polyurea

- CLS-210P dimensions



- **CLS-121SP**

Compact & extremely powerful subwoofer unit in direct radiation configuration. 21" (4" voice coil) neodymium transducer

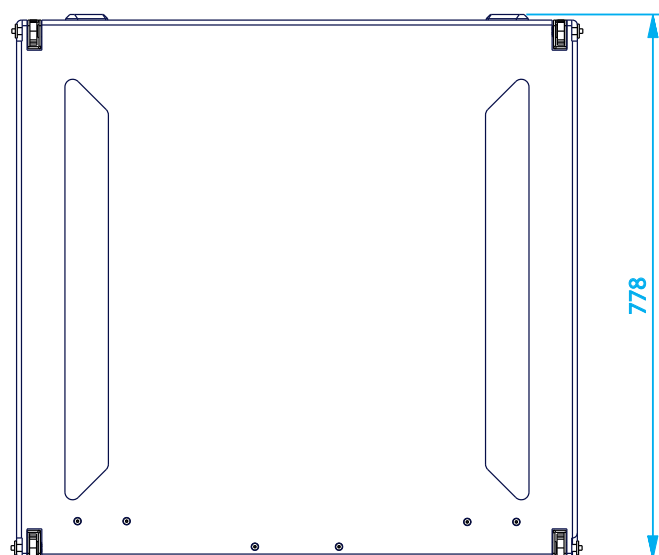
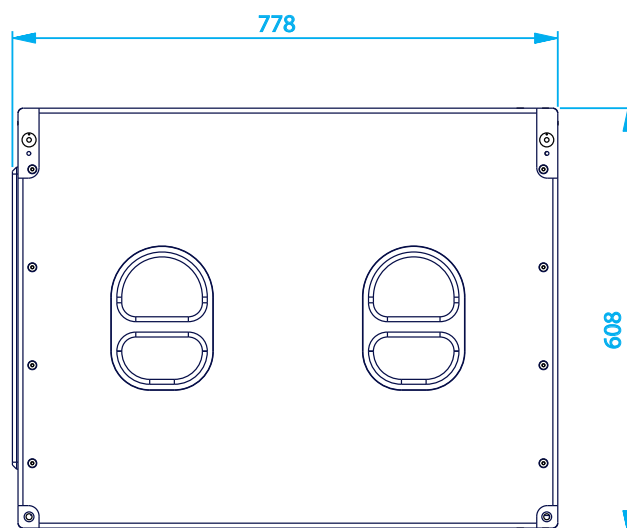
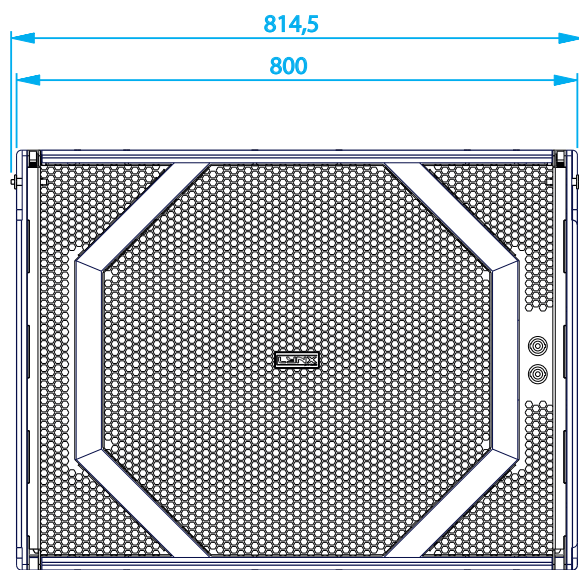
- **Technical Data:**

Frequency range:	30 Hz - 90 Hz ( preset 90 Hz)
Coverage:	Quasi omnidirectional
Max SPL / Peak:	131 dB / 137 dB
Components:	
• LF:	21" Neodymium magnet transducer. 4" quattro in/out copper voice coil, waterproof treated cone on both sides. Malt Cross Technology cooling system. Aluminium demodulating ring for very low distortion. 1600 W (AES)
Sensitive 1w/1m	
half space:	99dB
Configuration:	Bass-reflex direct radiation enclosure
Impedance:	8 $\Omega$
Finish:	Polyurea coating, high grade resistant paint
Material:	15 mm / 18 mm premium birch plywood
Dimensions:	608 x 800 x 778 mm (H x W x D) / with pins 815 mm (W)
Weight:	62 Kg (137 lbs)

- **Key features**

- Extraordinary high power output
- Front & rear audio and power connectors for cardioid applications
- Ergonomic design in premium birch plywood & finished in polyurea
- Stackable and flyable standard and/on cardioid configuration

- CLS-121SP dimensions



- **CLS-218SP**

Compact & extremely powerful, 3400 W subwoofer unit in direct radiation configuration. Dual 18" (4.5" voice coil) neodymium transducer.

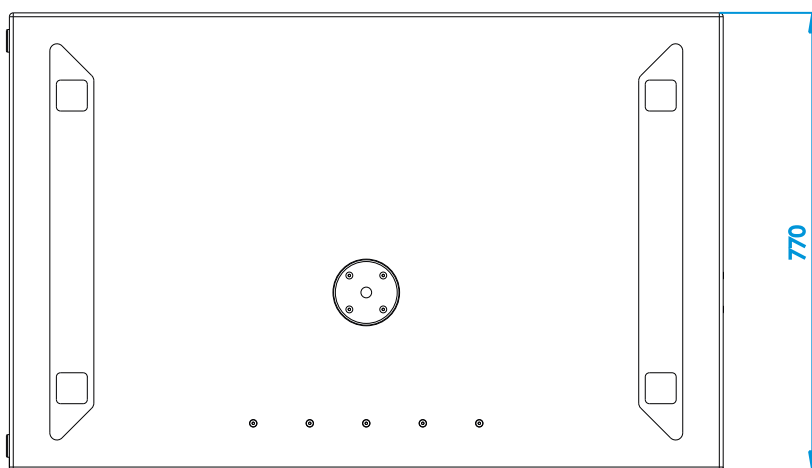
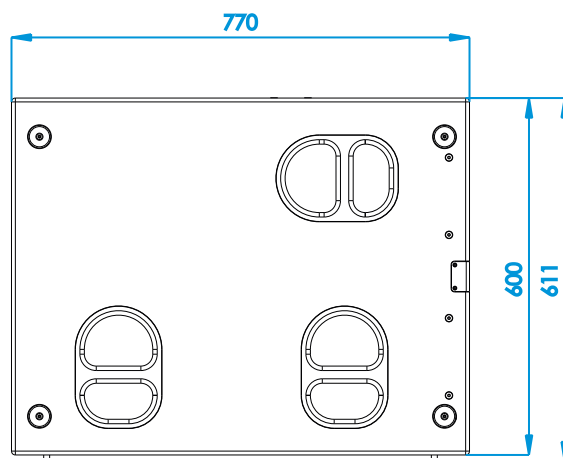
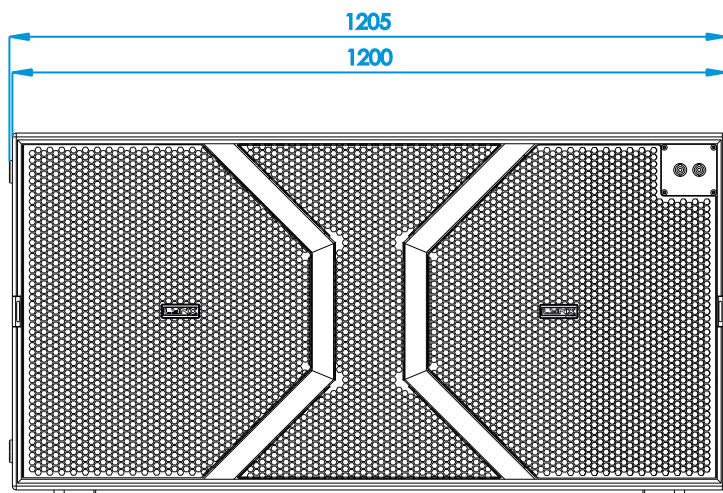
- **Technical Data:**

Frequency range:	25 Hz - 250 Hz
Frequency response:	30 Hz - 100 Hz (preset 100 Hz) / 28 Hz - 80 Hz (preset infra)
Coverage:	Quasi omnidirectional
Max SPL / Peak:	136 dB / 142 dB
Components:	
• LF:	Dual 18" Neodymium magnet transducer. 4.5" split winding copper voice coil. waterproof treated cone on both sides. Aluminium demodulating ring for very low distortion. 1700 W (AES)
Sensitive 1w/1m	
half space:	101 dB
Configuration:	Bass-reflex direct radiation enclosure
Power:	3400 W / 6800 W / 13600 W peak
Impedance:	4 $\Omega$
Finish:	Polyurea coating, high grade resistant paint
Material:	15 mm / 18 mm premium birch plywood
Dimensions:	600 x 1200 x 770 mm (H x W x D)
Weight:	79 Kg (174 lbs)

- **Key features**

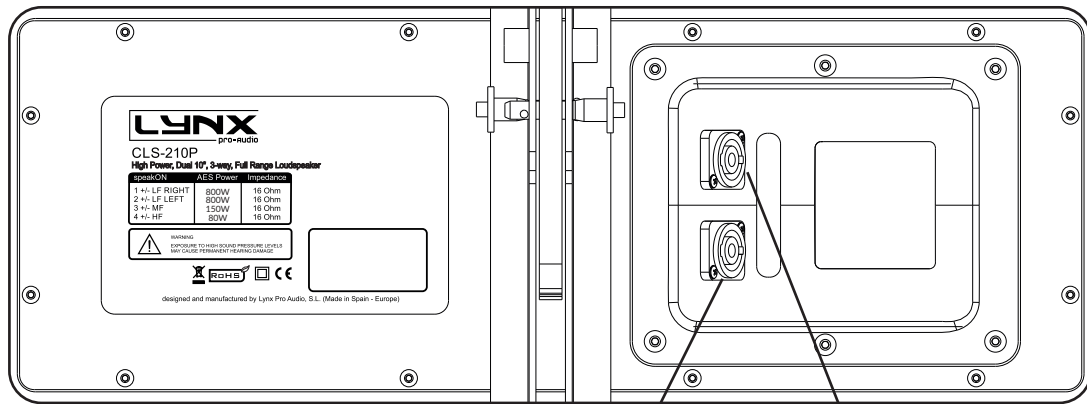
- Extraordinary high power output and sonic linearity
- Front & rear audio and power connectors for cardioid applications
- Ergonomic design in premium birch plywood & finished in polyurea
- Stackable standard and/on cardioid configuration

- CLS-218SP dimensions



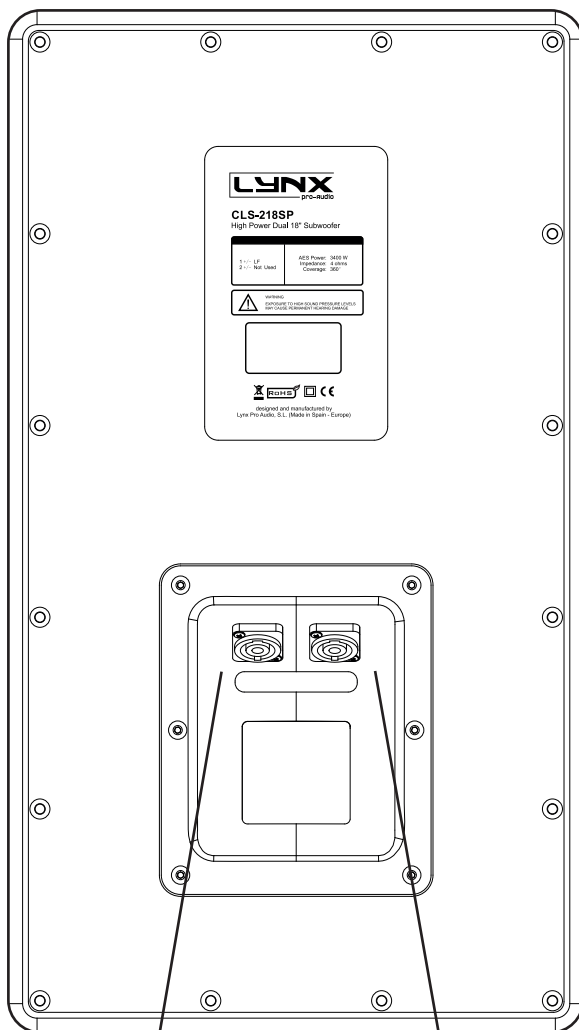
## CLS BACK PANEL

This is the back pannel of the CLS-210P tops, including the connectors.



Main input

Main Link



Main input

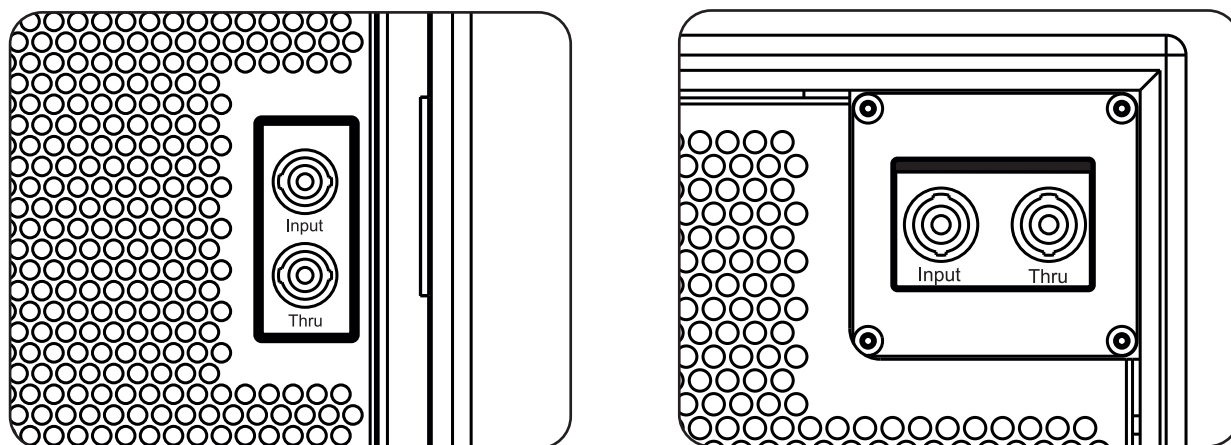
Main Link

Both subwoofer cabinets CLS-121SP and CLS-218SP have the same rear pannel, including the connectors.

## CONNECTORS AND CONNECTIONS

All the connectors and connections are placed on the back panel of the cabinets.

Furthermore, subwoofers CLS-121SP and CLS-218SP have extra connectors integrated into the front grill so you can setup the cabinets in cardioid configuration (back pannel at the front view). By this way the subwoofers are connected always at the rear part of the system avoiding to have all the wires on the front view.



You will find a compact connector pannel integrated into the front grill of the subwoofers CLS-121SP (left) and CLS-218SP (right) in order to connect the system in cardioid configuration.



## CONNECTORS AND CONNECTIONS

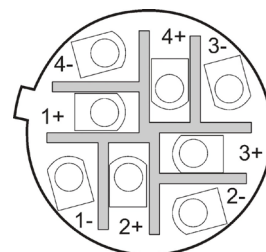
### Normative

CLS-P cabinets meet the following standards:

EN 55032:2012	Electromagnetic compatibility of multimedia equipment. Emmision requeriments.
EN 55103-2:2009	Electromagnetic compatibility. Product family standard for audio, video, audiovisual and entertainment lighting control apparatus for professional use. Part 2: Immunity.
EN 60065:2014	Audio, video and similar electronic apparatus. Safety requirements.
EN 50581:2012	Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

CLS-P cabinets are in conformity with the following EC directives:

Low Voltage Directive	2014/35/UE
Electromagnetic Compatibility EMC	2014/30/UE
RoHS Directive	2011/65/UE
RAEE (WEEE)	2012/19/UE



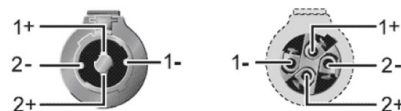
### 2.2 Connectors

CLS-P cabinets have a connection panel at the rear of the cabinet. This consists of 2 internally bridged Neutrik NL8-MP/NL4-MP connectors which apply no process to the signal.

Note: If pins +-2 are not used they will still be internally bridged.



The following table indicates which pins are used for all the models, with passive and bi-amplified modes.

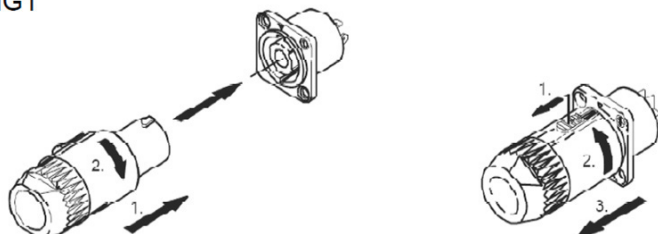


Cabinet	Connector	Speakon connections	per box	Impedance	Rated power	Program power
CLS-210P	NL8	± 1 LF input/link	2	16 ohms	800 W AES	1600 W
CLS-210P	NL8	± 2 LF input/link	2	16 ohms	800 W AES	1600 W
CLS-210P	NL8	± 3 MF input/link	2	16 ohms	90 W AES	180 W
CLS-218SP	NL8	± 4 HF input/link	2	16 ohms	50 W AES	100 W
CLS-118SP	NL4	± 1 input / link	2	8 ohms	400 W AES	800 W
CLS-218SP	NL4	± 1 input / link	2	8 ohms	500 W AES	1000 W

## CONNECTORS AND CONNECTIONS

To connect the speakon follow the instructions in fig. 1

FIG1



Insert the male speakon in its corresponding hole and turn right until it clicks. This fixes it safely and strongly and helps stop it being pulled out by mistake. At the other end of the cable connect in the same way to the amplifier channel.

### Recommendations

Always ensure cables are in good condition. Know the recommended cable length and thickness according to the cabinet and quantity you are installing. An incorrect connection can affect the functioning of the system or even damage it. Cable thickness will vary according to cabinet impedance, quantity and distance. This is especially important when connecting Subwoofers.

As a guide, please see the following table which outlines the thickness depending on the power and length of cable.

Maximum recommended cable length for low impedance systems						
Wire section	AWG number	Cable resistance in 100 meters	Maximum recommended lenght (in pieces)			
			2 Ω	4 Ω	8 Ω	16 Ω
13.3 mm	6	0.25 ohm	24	57	122	253
6.63 mm	8	0.49 ohm	12	28	61	126
5.26 mm	10	0.62 ohm	10	23	48	100
3.31 mm	12	0.99 ohm	6	14	30	63
2.08 mm	14	1.57 ohm	4	9	19	40
1.31 mm	16	2.49 ohm	2	6	12	25
0.82 mm	18	3.98 ohm	2	4	8	16
0.52 mm	20	6.28 ohm	1	2	5	10
0.33 mm	22	9.89 ohm	1	1	3	6

Bear in mind Ohm ratings on the amplifiers used to power the cabinets. For example, 2 ohm amplifier configurations are not recommended due to the excessive power from the amp output.

Never connect more cabinets than recommended in parallel. With parallel connections, the total impedance can be calculated by dividing the impedance of 1 cabinet by the number connected.

## HARDWARE AND ACCESSORIES

The CLS series include some accessories for installation and transport.

 <p><b>SV-CLS20</b> Flying frame for 16 CLS-212P, CLS-210P or 10 CLS-121S. Máx. 1000 Kg</p>	 <p><b>SV-CLS10 Lite</b> Flying frame for 16 CLS-28P. Max.600Kg</p>	 <p><b>FD_CLSSUBNL</b> Rain cover for CLS-118SP / CLS-121SP / CLS-218SP / CLS-210P</p>
 <p><b>SC-CLS212/121</b> Connection system for CLS-210P together with CLS-121SP</p>	 <p><b>ST-CLS20KIT</b> 4 ground stack stabilisers for SV-CLS20</p>	 <p><b>FD-CLS218S</b> Nylon cover for CLS-218S</p>
 <p><b>ST-SVCLS/M20</b> Kit to connect SV-CLS10 or SV-CLS20 flying frame and M20plate.</p>	 <p><b>FD-CLS210NL</b> Rain cover for CLS-210P</p>	 <p><b>FC-SVCLS20</b> Flight case to transport 2 SV-CLS20, cables and accessories</p>
 <p><b>BALL-PSR0820</b> Ball pin with thread for CLS-212/ CLS-210/CLS-28 / CLS-118S/ CLS-121S</p>	 <p><b>FD-4CLS210</b> Rain cover for CLS-118SP / CLS-121SP / CLS-218SP / CLS-210P</p>	 <p><b>FC-4CLS210</b> Flight case to transport 4 CLS-28P</p>
 <p><b>SC-CLS212/28</b> Connection Sustum for CLS-212P together with CLS-210P</p>	 <p><b>POWERRACK10</b> Transport rack 10 units</p>	 <p><b>CA-4CLS210</b> Removable front transport dolly for CLS-218SP</p>
 <p><b>CA-CLS218/2</b> Dolly for 2 or 3 CLS-218SP</p>	 <p><b>CA-4CLS210</b> Transport trolley for 4 CLS210</p>	

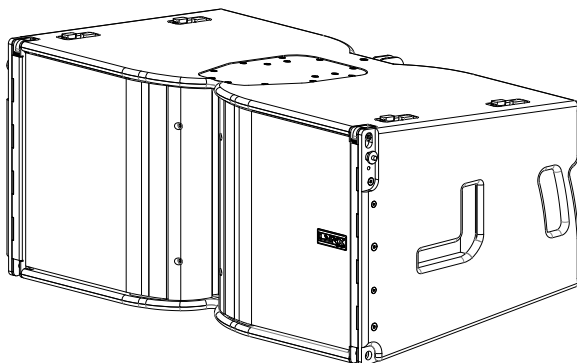
## About the rain hood

This rain hood is crafted to provide effective protection against regular rainfall. However, it is important to note that it is not engineered to serve as a waterproof barrier in extreme weather conditions. For severe storms or heavy downpours, we recommend additional protective gear to ensure complete waterproofing.

The rain hood is an accessory just to be used when there is a forecast of rain. Do not use during normal weather conditions.

## CLS-210P RIGGING HARDWARE

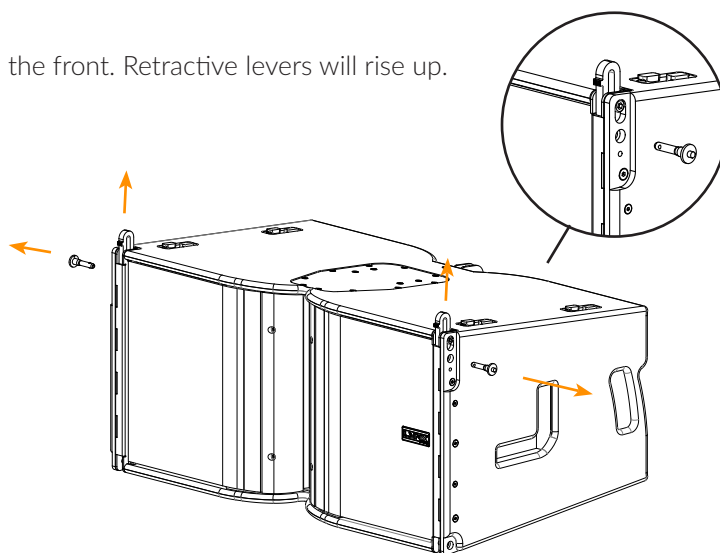
- Each CLS-210P cabinet has four ergonomic handles with firm internal grip to facilitate transport, positioning and loading of the cabinets.



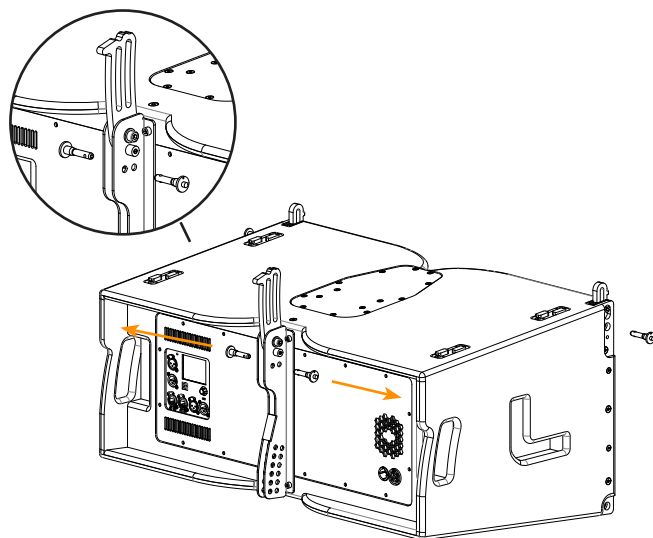
Two handles are placed at the rear of the cabinet and two L-shaped are located on the sides.

## CLS-210P: RIGGING MANUAL

- Remove pins from the front. Retractive levers will rise up.

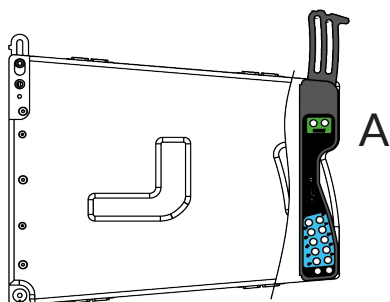


- Remove pins from the centre/rear. The rear lever is activated manually.

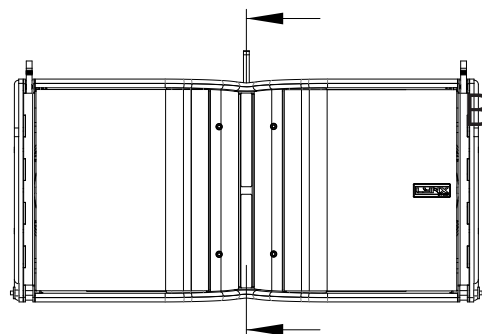


## CLS-210P: RIGGING MANUAL

- This rear lever has two working positions depending if we want to join the cabinet to another cabinet (A) or to join the cabinet to the flying frame (B).



- Join with another CLS-210P cabinet



- Join with flying frame SV-CLS20

The 3 point rigging system (2 front retractive levers + 1 rear point) enables up to 16 CLS-210P cabinets to be flown in a single array.

Array angulation is configured on the back of the cabinet using the splay/stack hardware located at the centre of the rear panel. Different splay angles are easily set up available with optional splay angles, from between 0° to 10° with 1° step increments to create the desired curve.

This angulation system has two sides, showing the yellow and blue colours.



The Yellow side allows splay angles for a line array in flown configuration.



The Blue side allows to set up the stack mode.

## CLS-210P: RIGGING MANUAL

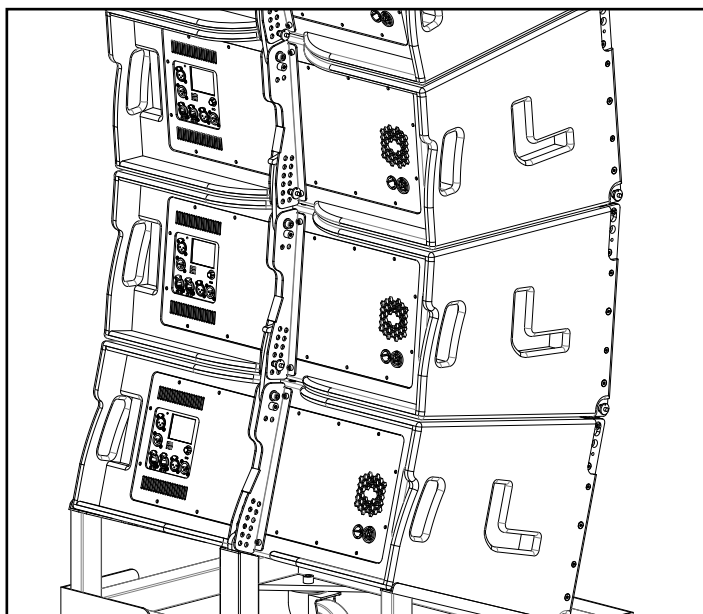
- The first thing to do is to choose the angle. Then, you must lock it.

### SPLAY ANGLES (flown cabinets)

Use the yellow part of the rigging system.

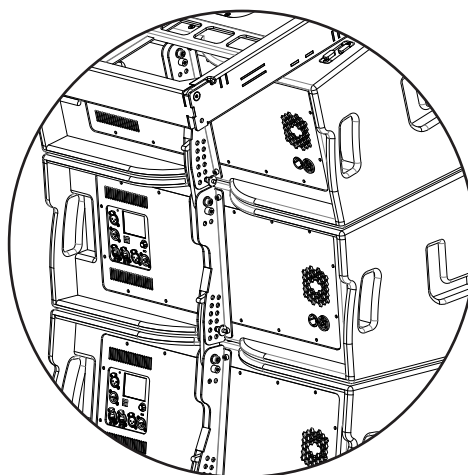
Choose your splay angle and then insert the pin. This can be done before flying the speakers. Ensure that the pin is correctly inserted. When lifting, the angles will place themselves. Then, on the blue side of the rigging system, insert another pin through the yellow circle (splay lock) with the same chosen angle, to lock the angle. For further information about the rigging, see the following pages of the manual.

This rigging system allows to set up the cabinets in retracted position.



- When the cabinets are completely stacked you can prepare the set up without lifting any cabinet. Just choose the splays angles and insert the pins.

Then lift the array slowly and when the array takes its shape just lock each one of the cabinets.



- While you are lifting the array the rigging system will apply the angulation to each cabinet and then you only need to lock it for security.

### - STACK ANGLES

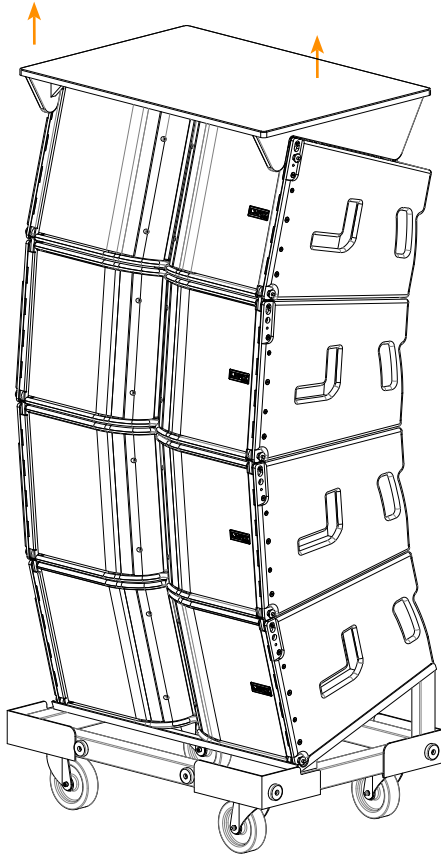
Use the blue part of the rigging system.

Choose your stack angle and then insert the pin. Ensure that the pin is correctly inserted. Then, on the other side of the rigging system, insert another pin through the blue circle with the same chosen angle.

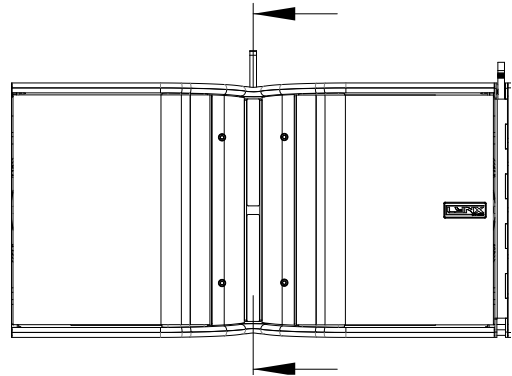


## How to use the flying frame on CLS-210P

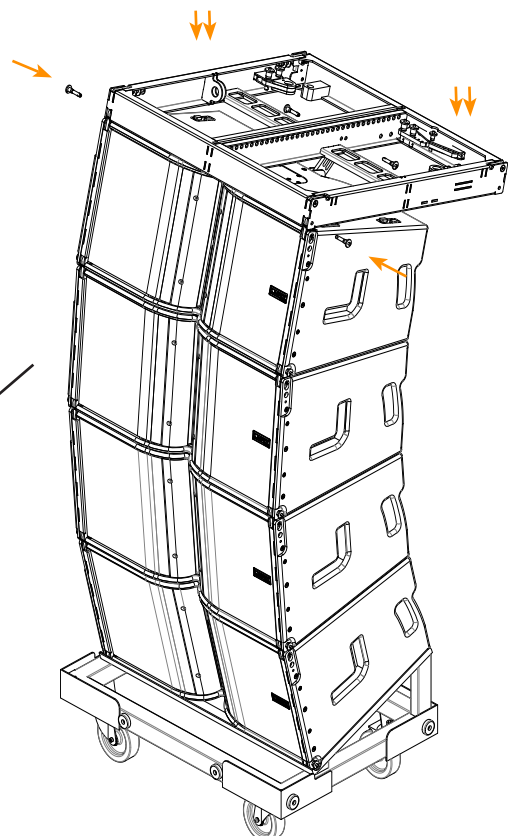
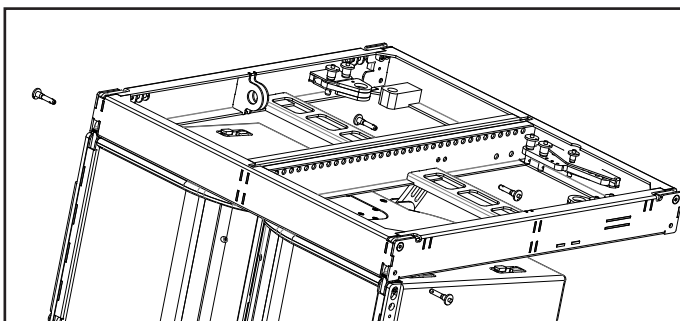
- ① • Remove lid / top cover



- ② • Remove pins from the front of the top cabinet. Retractive levers will rise up. Then remove pins from the rear lever and place it in the middle position.

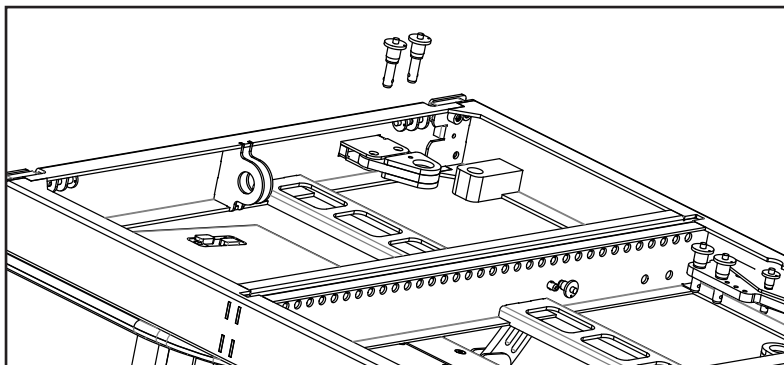


- ③ • Place SV-CLS20 and introduce security pins. Bring it closer to the cabinet.



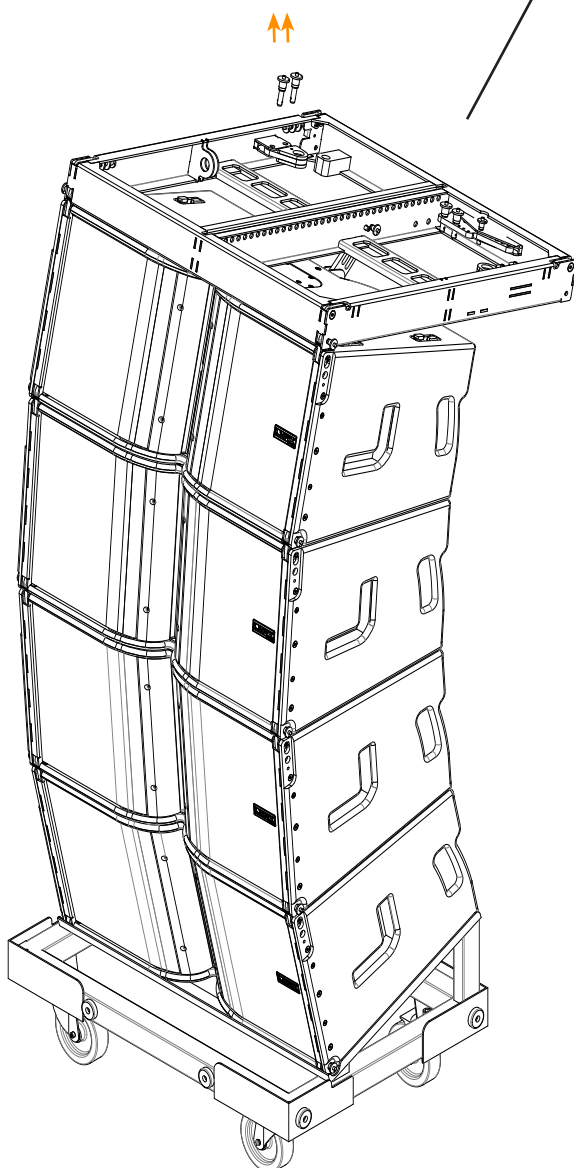
NOTE: Ensure all pins on all cabinets are inserted correctly and fully in their corresponding holes.

## How to use the flying frame on CLS-210P

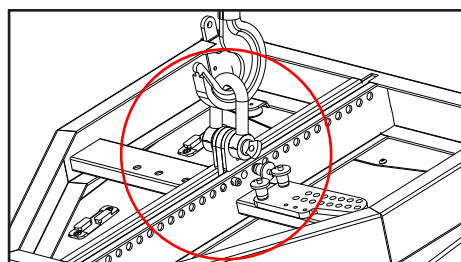


NOTE: Remove load adapter correctly from their positions to fit in the SV-CLS20 accessory.

- 4 • Remove load adapter



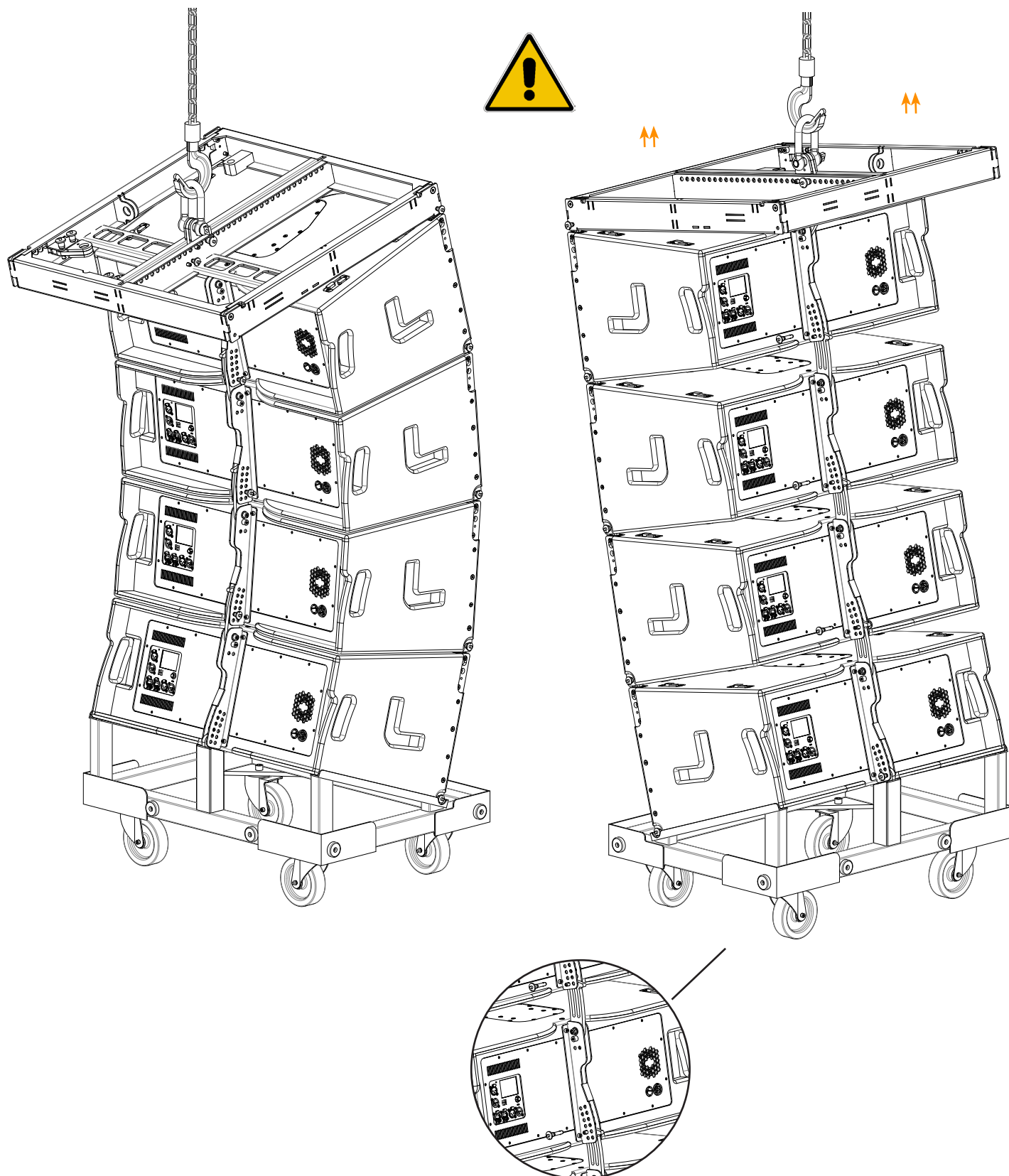
- 5 • Insert the load adapter into the flying holes calculated by Rainbow 3D.



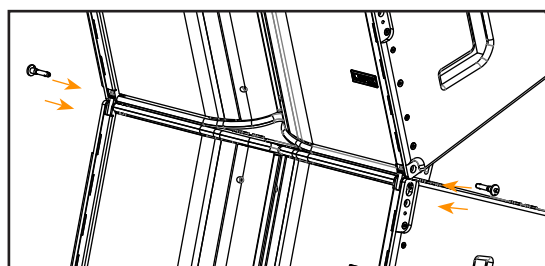
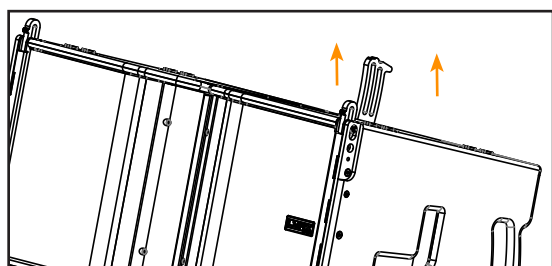
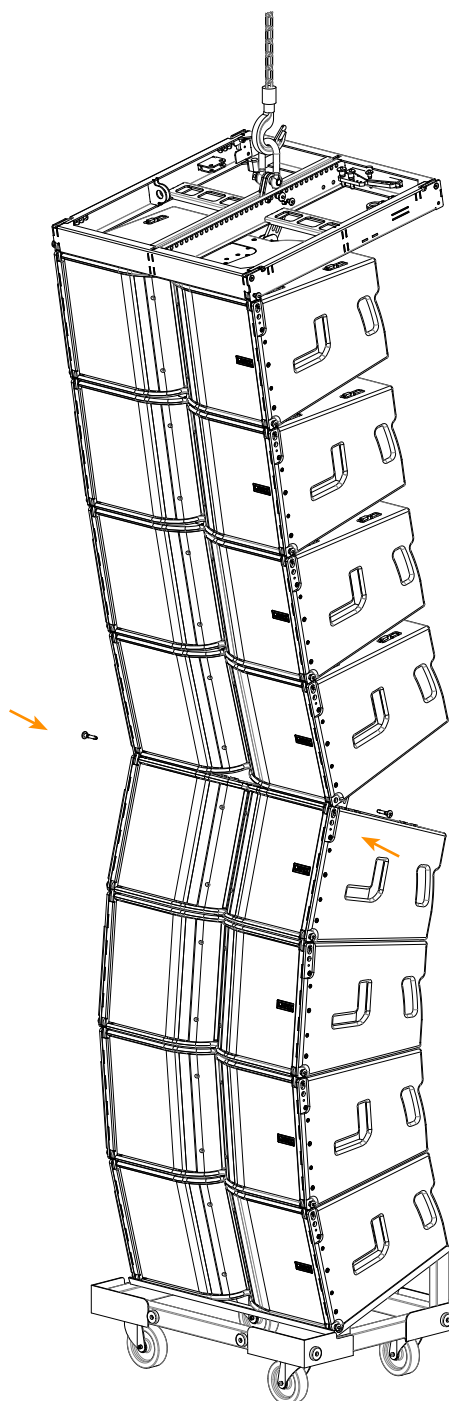
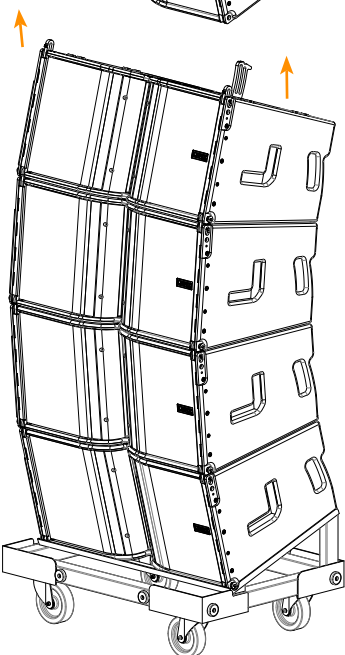
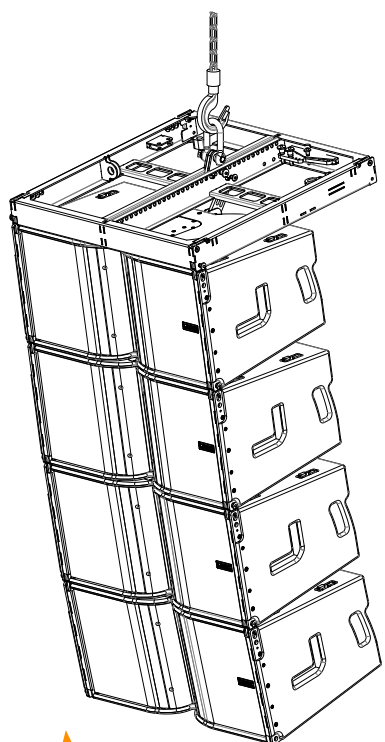


## How to use the flying frame on CLS-210P

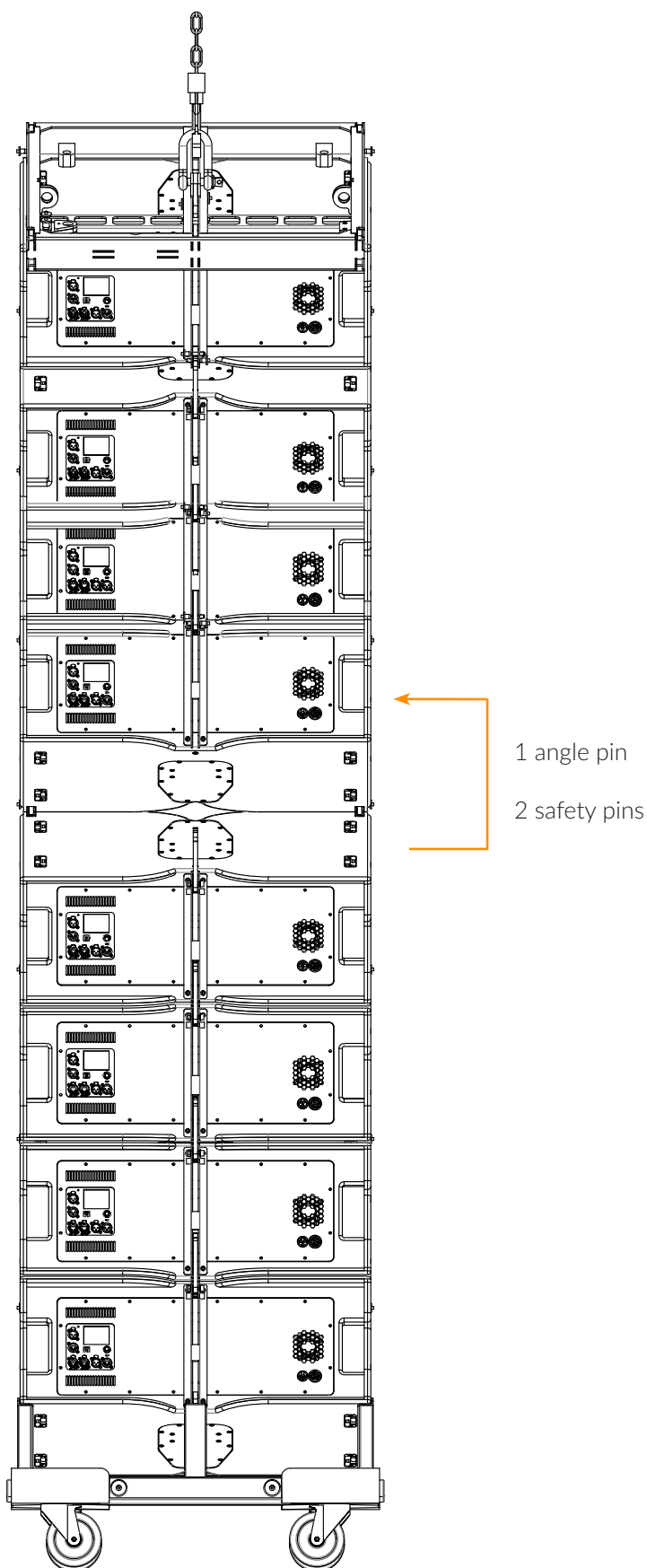
- Set angles (0, 3, 4) in rest position as simulated in Rainbow 3D
- After rising the cluster always introduce security pins.



## How to use the flying frame on CLS-210P

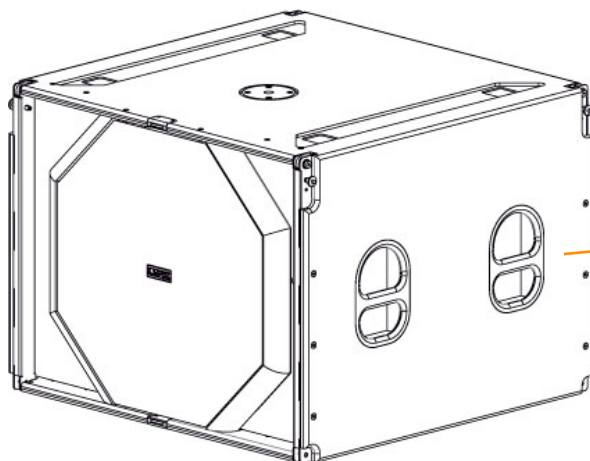


## How to use the flying frame on CLS-210P



## CLS-121SP RIGGING HARDWARE

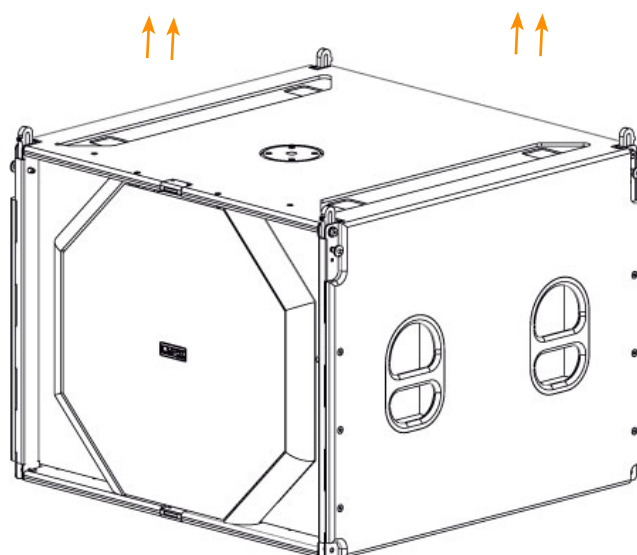
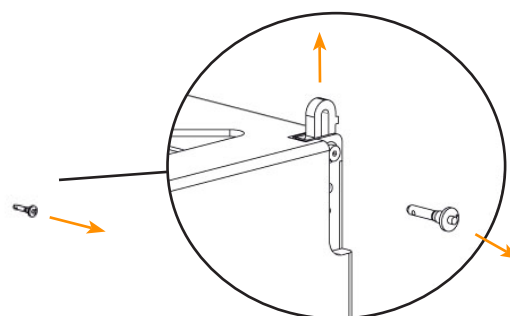
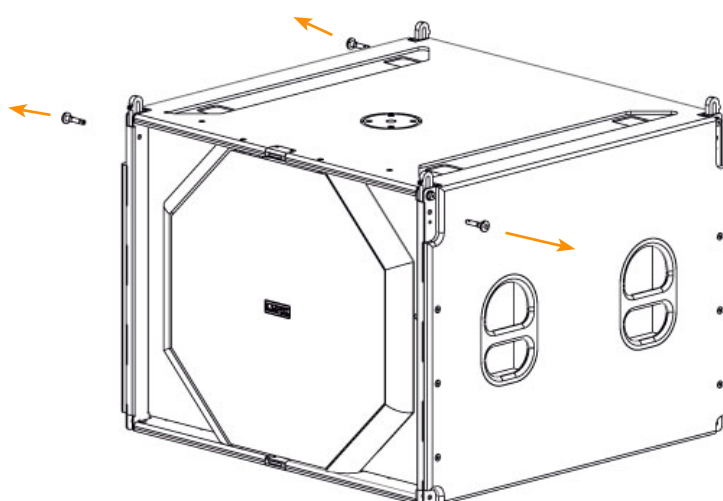
- CLS-121SP enclosure:



Four ergonomic handles with firm internal grip to facilitate transport, positioning and loading of the cabinets.

Two handles are placed on each side of the cabinet.

- Remove pins from CLS-121SP (front and back).  
Retractive levers will rise up in the front.

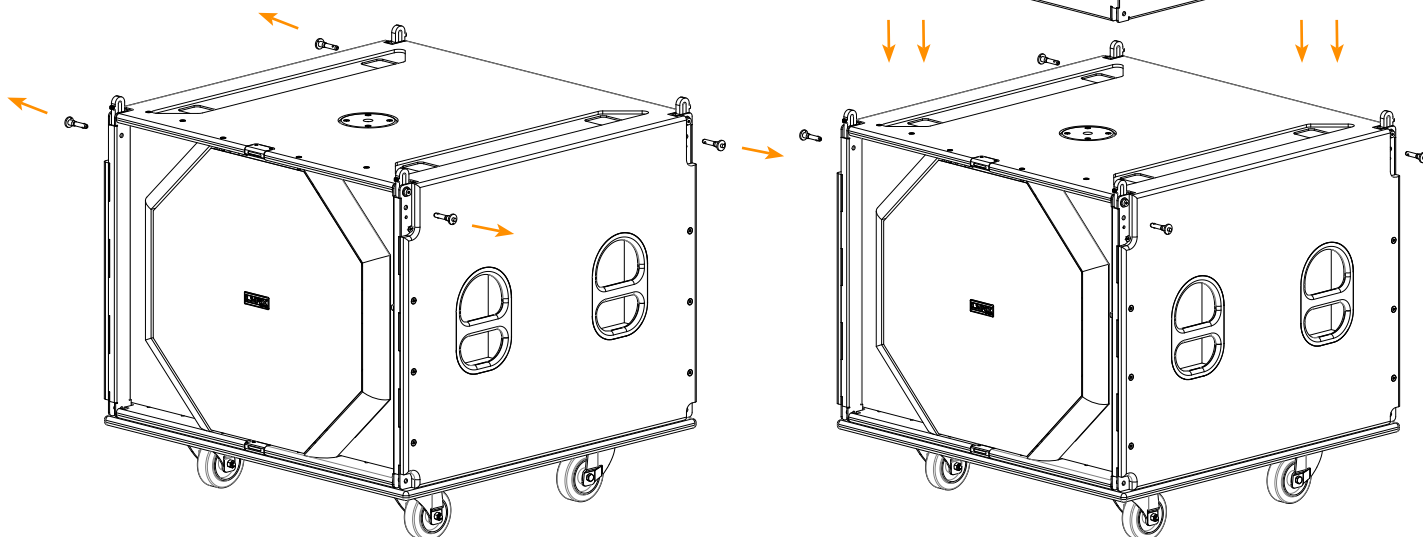


- The 4 point rigging system which includes 2 front automatically rising plates and 2 rear points which enable 10 CLS-121SP cabinets to be flown in a single array or together with the CLS-210P.

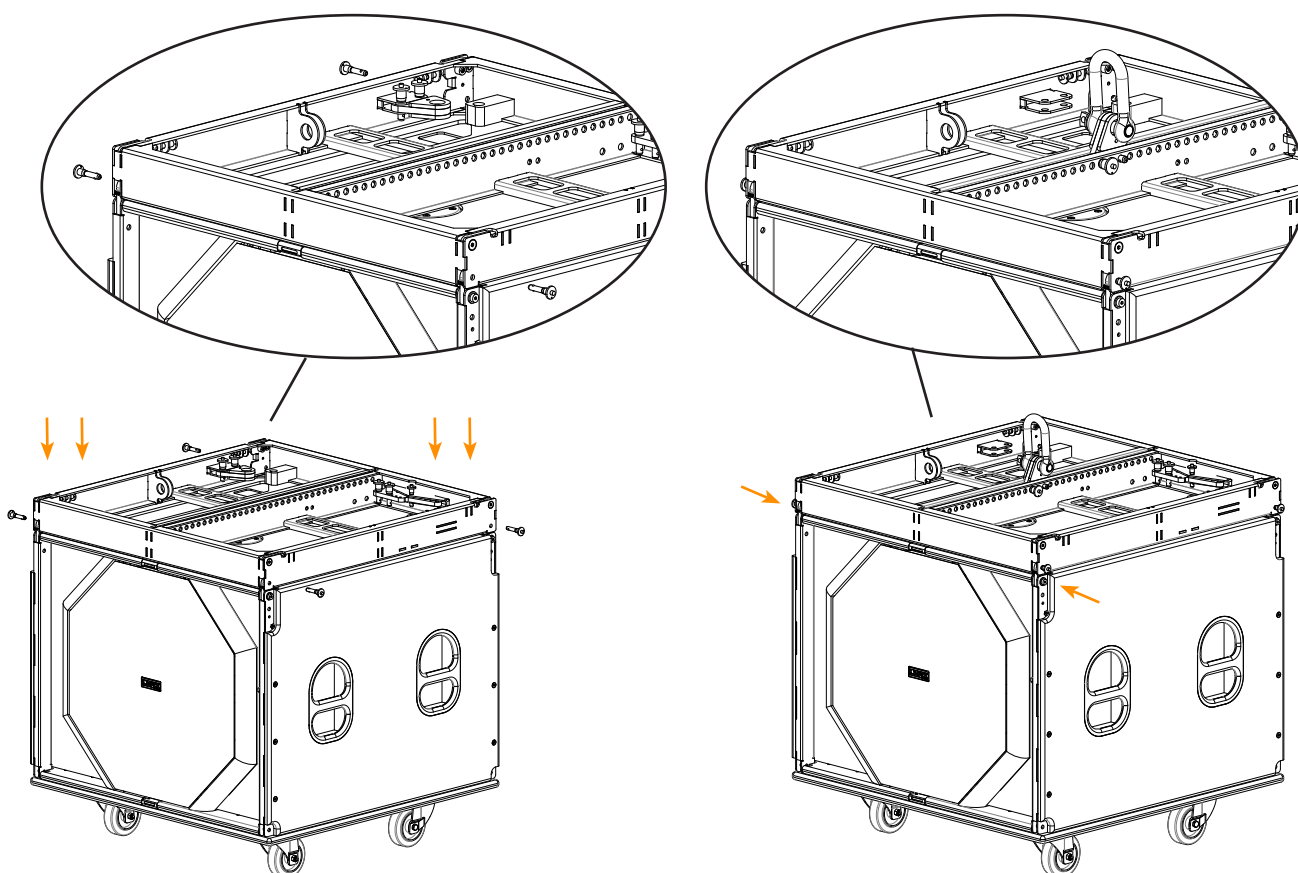
## How to use the flying frame on CLS-121SP

- Remove all pins from top and let levers rise up. Then, place the flying frame SV-CLS on top. This accessory is a flying frame for 16 CLS-210P or CLS-121SP. It can support up a maximum of 1000 kgs.

SV-CLS20 flying frame



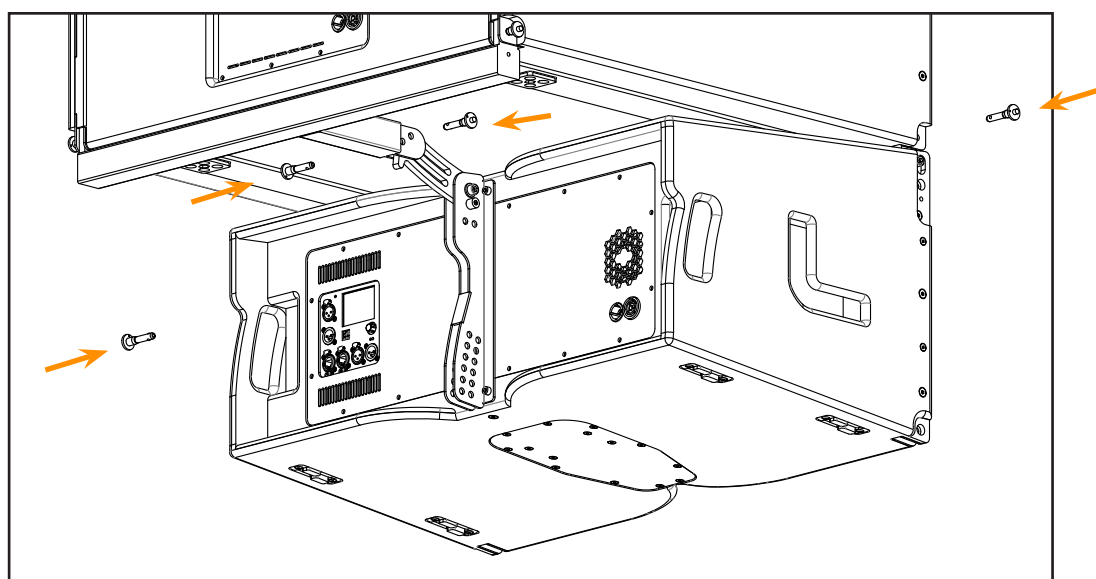
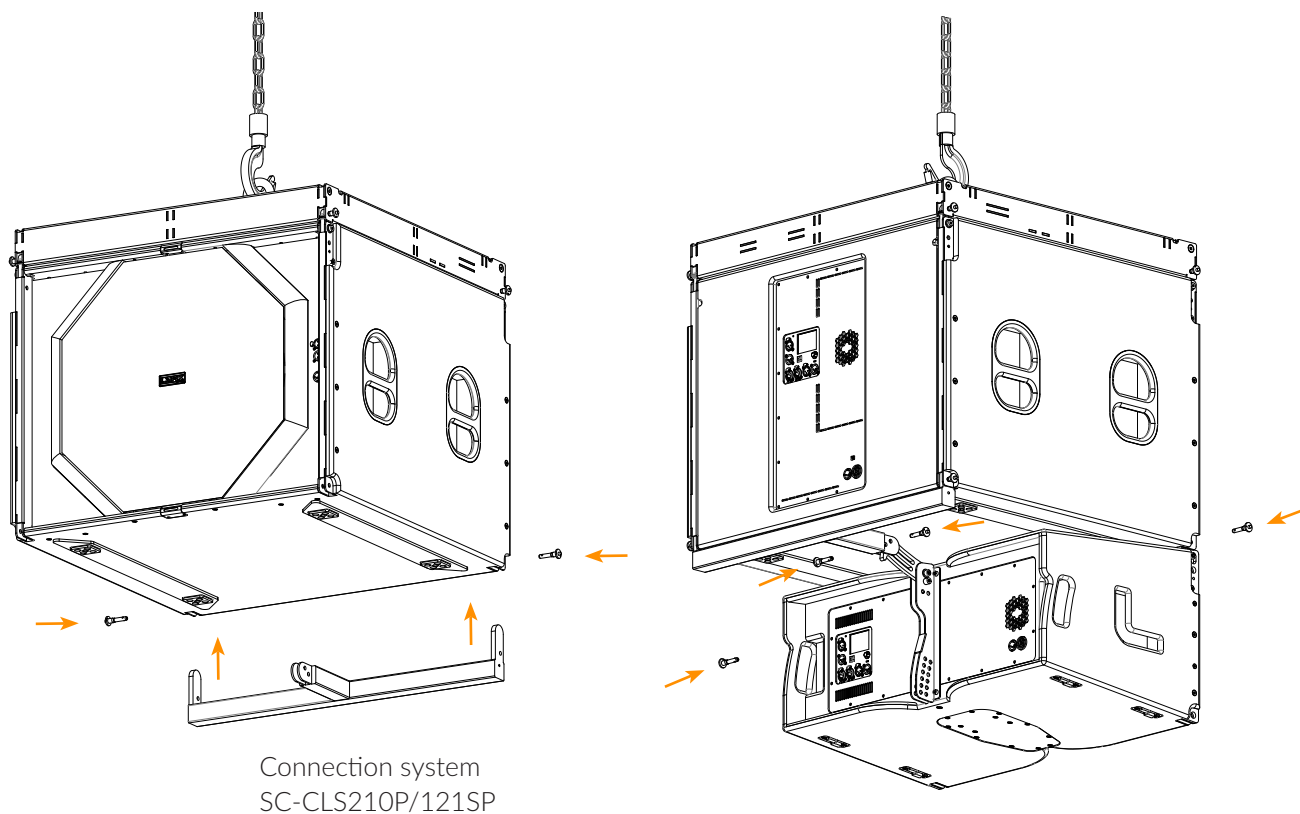
- Place the flying frame SV-CLS20 carefully on top of the CLS-121SP to fit in the levers with the pins. Please, make sure to fit all the pins on the levers until the flying frame is attached.





## CLS-121SP FLOWN CONFIGURATION

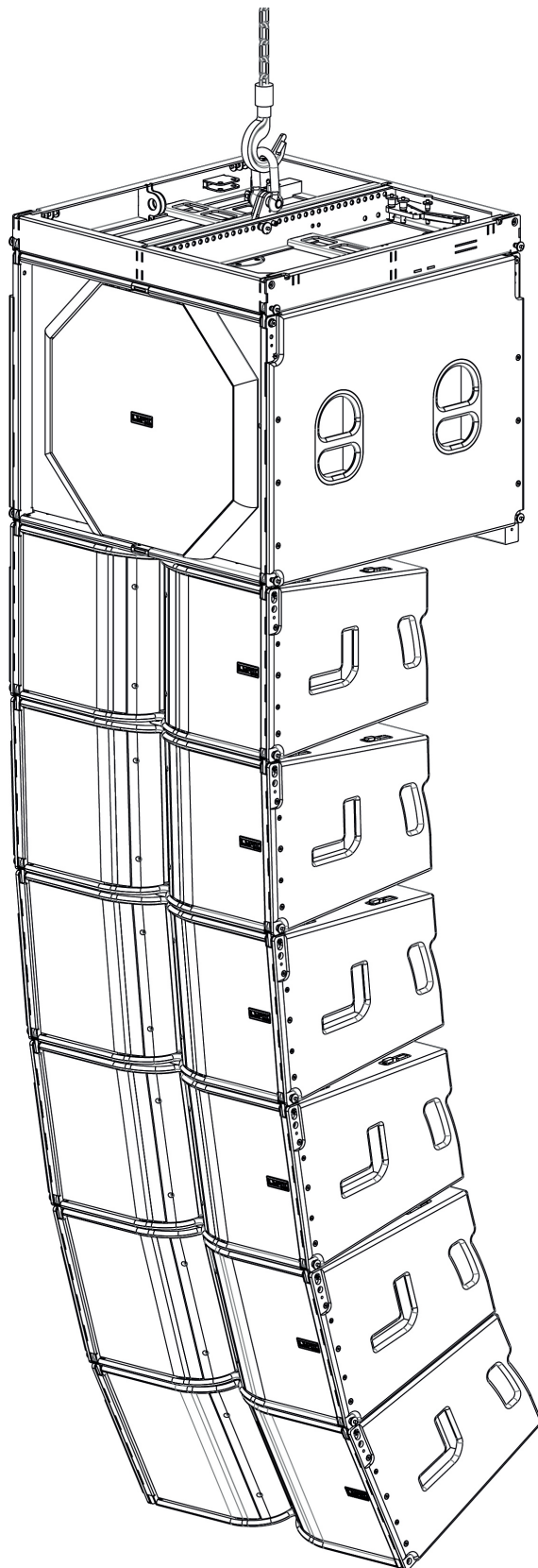
- Place the SC-CLS210/121S connection system below the subwoofer. Make sure to fit in the pins correctly to attach the CLS-121SP cabinet. Then, fit the CLS-210P cabinet just below the SC-CLS210P/121SP accessory and make sure to insert the pins on the holes correctly.



NOTE: Ensure all pins on all cabinets are inserted correctly and fully in their corresponding holes.

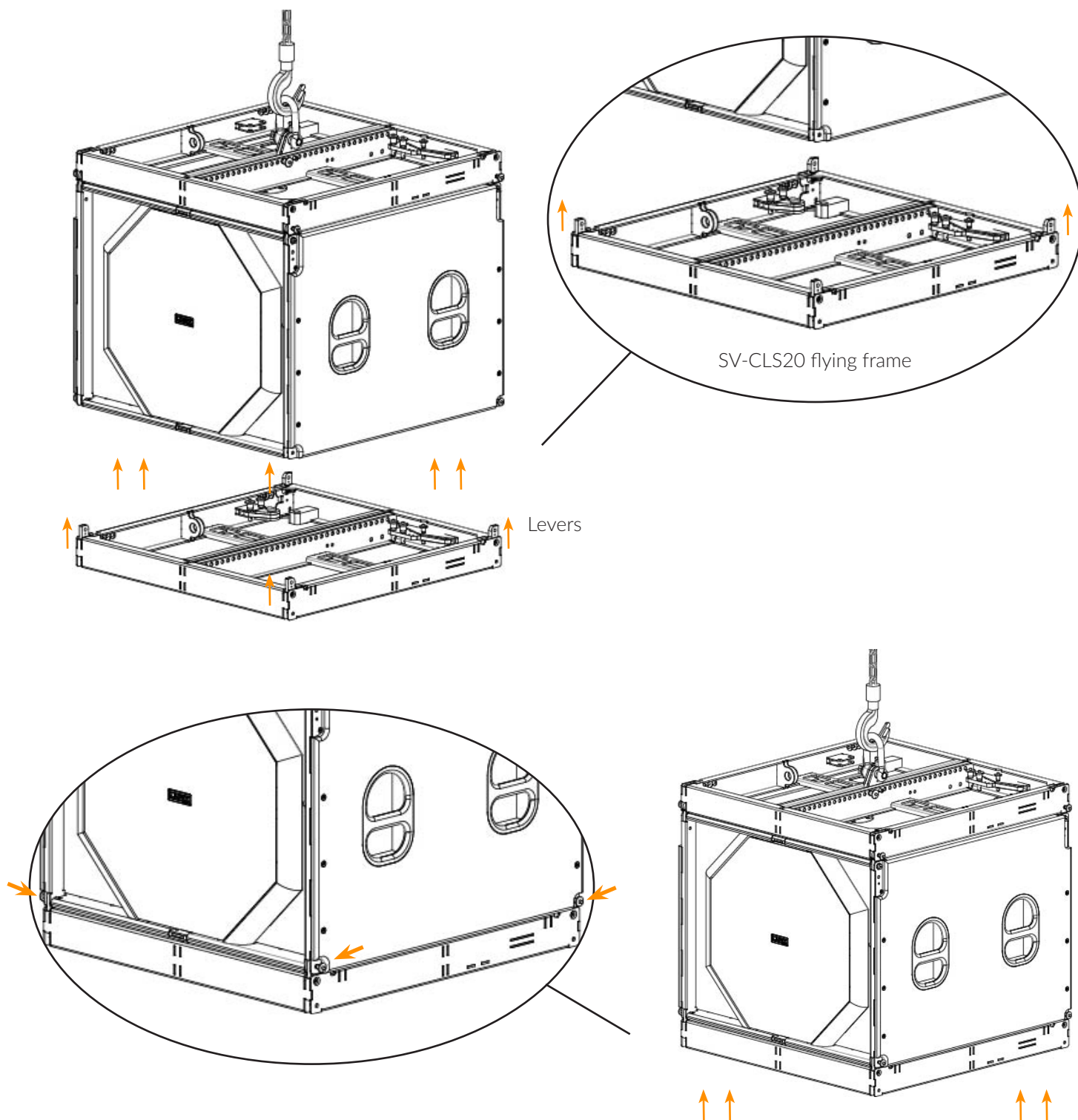
## CLS-121SP & 6 CLS-210P FLOWN CONFIGURATION

- Make sure you have inserted the security pins on the holes correctly before adding any cabinet. You can place a maximum of 6 CLS-210P cabinets.



## CLS-121SP FLOWN CONFIGURATION

- Take the SV-CLS20 flying frame accessory with the levers rise up and place it carefully below the subwoofer CLS-121SP. Then make sure to fit in all the pins correctly on the levers until the flying frame is attached to the CLS-121SP cabinet.

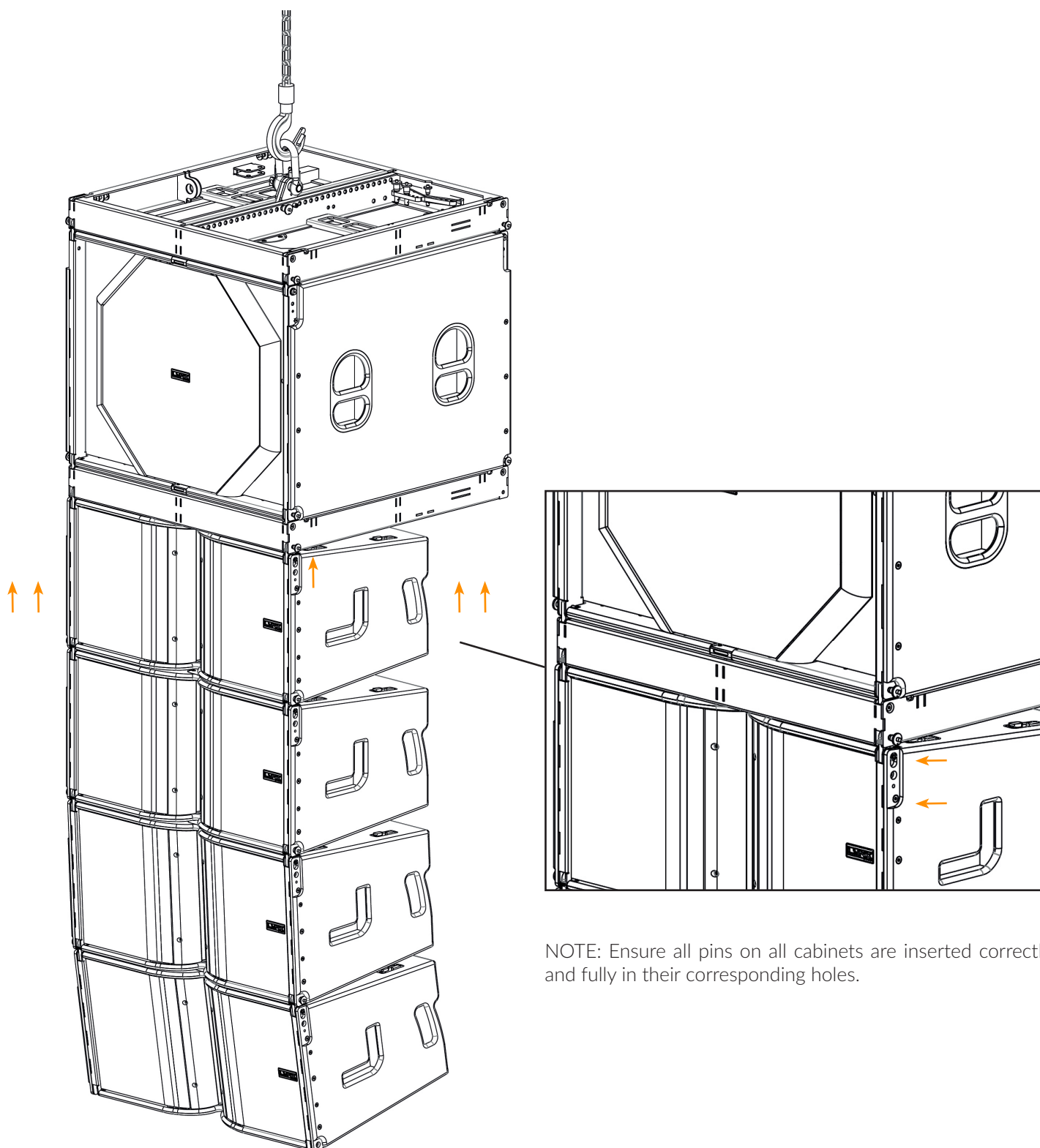


NOTE: Ensure all pins are inserted correctly and fully in their corresponding holes.



## CLS-121SP FLOWN CONFIGURATION

- Place 4 CLS-210P cabinets with the levers rise up below the CLS-121SP subwoofer. Make sure to fit in all the pins correctly on the levers until the array is attached to the CLS-121SP cabinet.

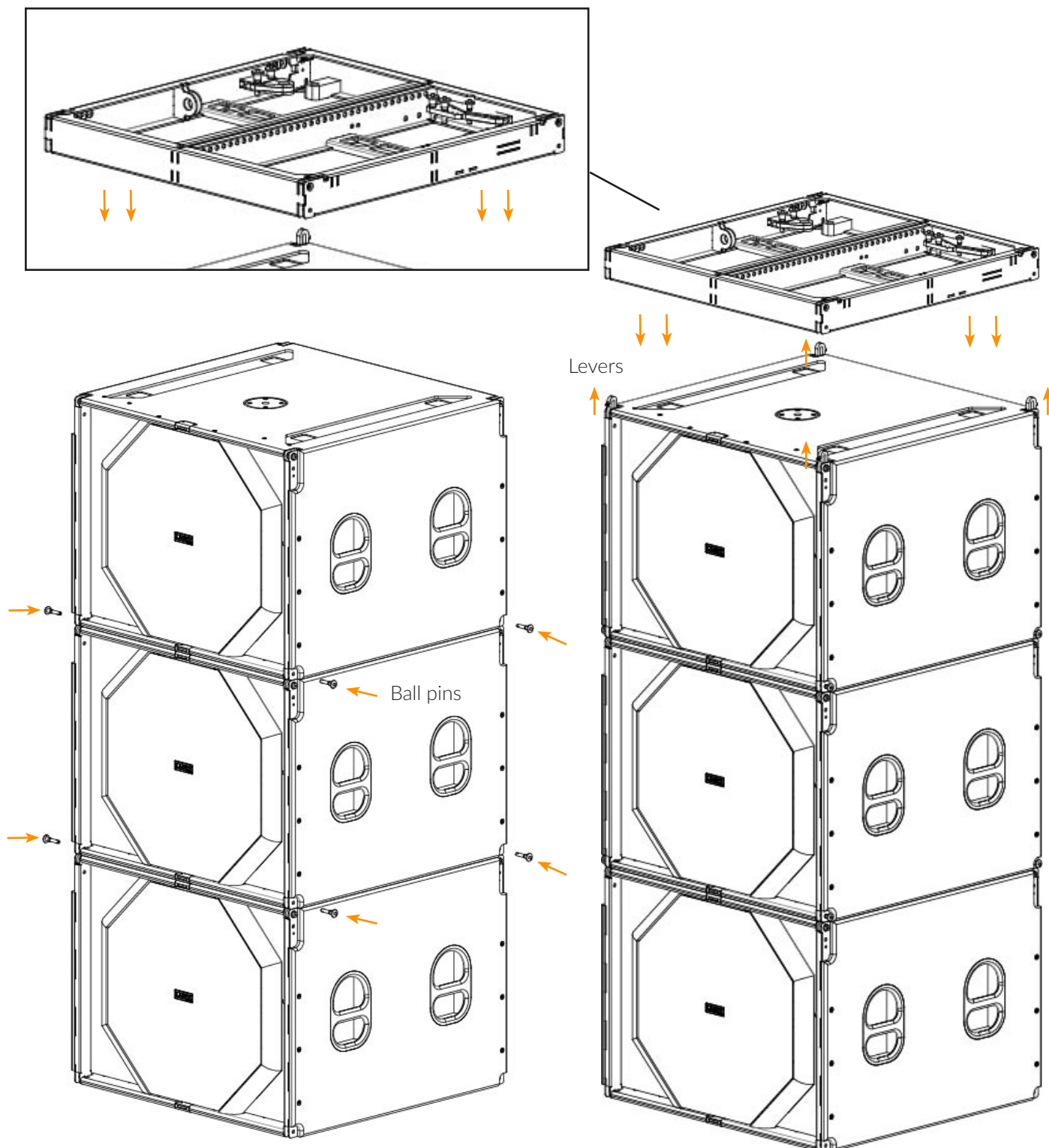


NOTE: Ensure all pins on all cabinets are inserted correctly and fully in their corresponding holes.

## CLS-121SP STACK CONFIGURATION

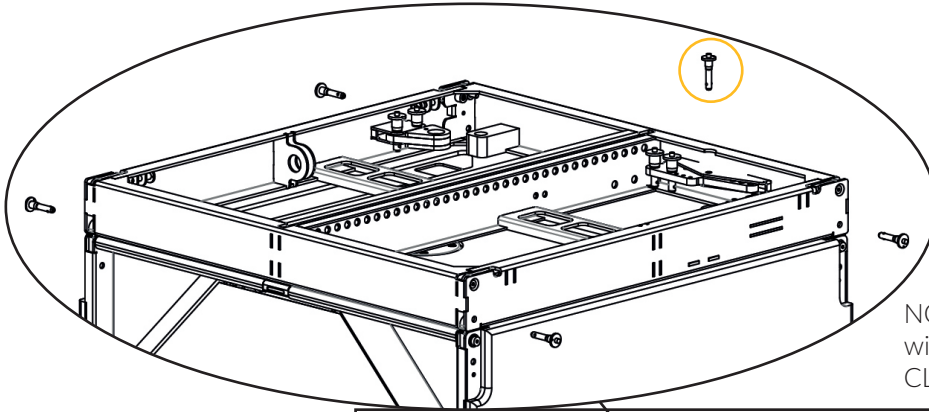
- Place 3 CLS-121SP subwoofers on top of each other. Be sure to place all pins properly into the levers until the cabinets are tight and the stack configuration is fully secured.

Then place the SV-CLS20 on top of the CLS-121SP cabinet for stack configuration. Make sure the CLS-121SP subwoofer levers are raised in order to fit the pins between the lever and the flying frame holes.

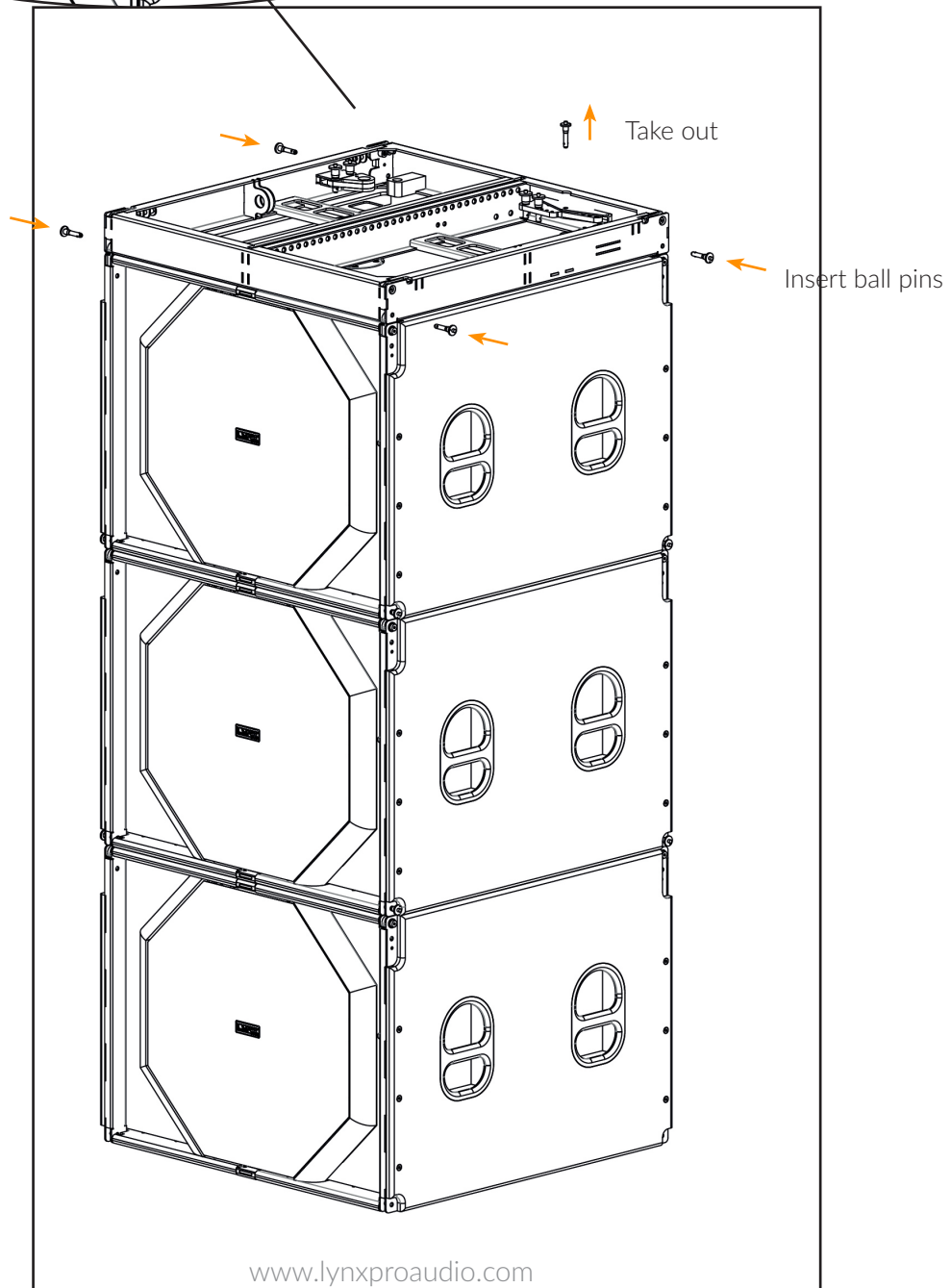


## CLS-121SP STACK CONFIGURATION

- Once the SV-CLS20 flying frame is placed on top of the CLS-121SP make sure that the 4 pins between levers and holes are tight and secured. Also, be sure to remove the pin above the flying frame so that you can attach the CLS-210P cabinet after securing it.

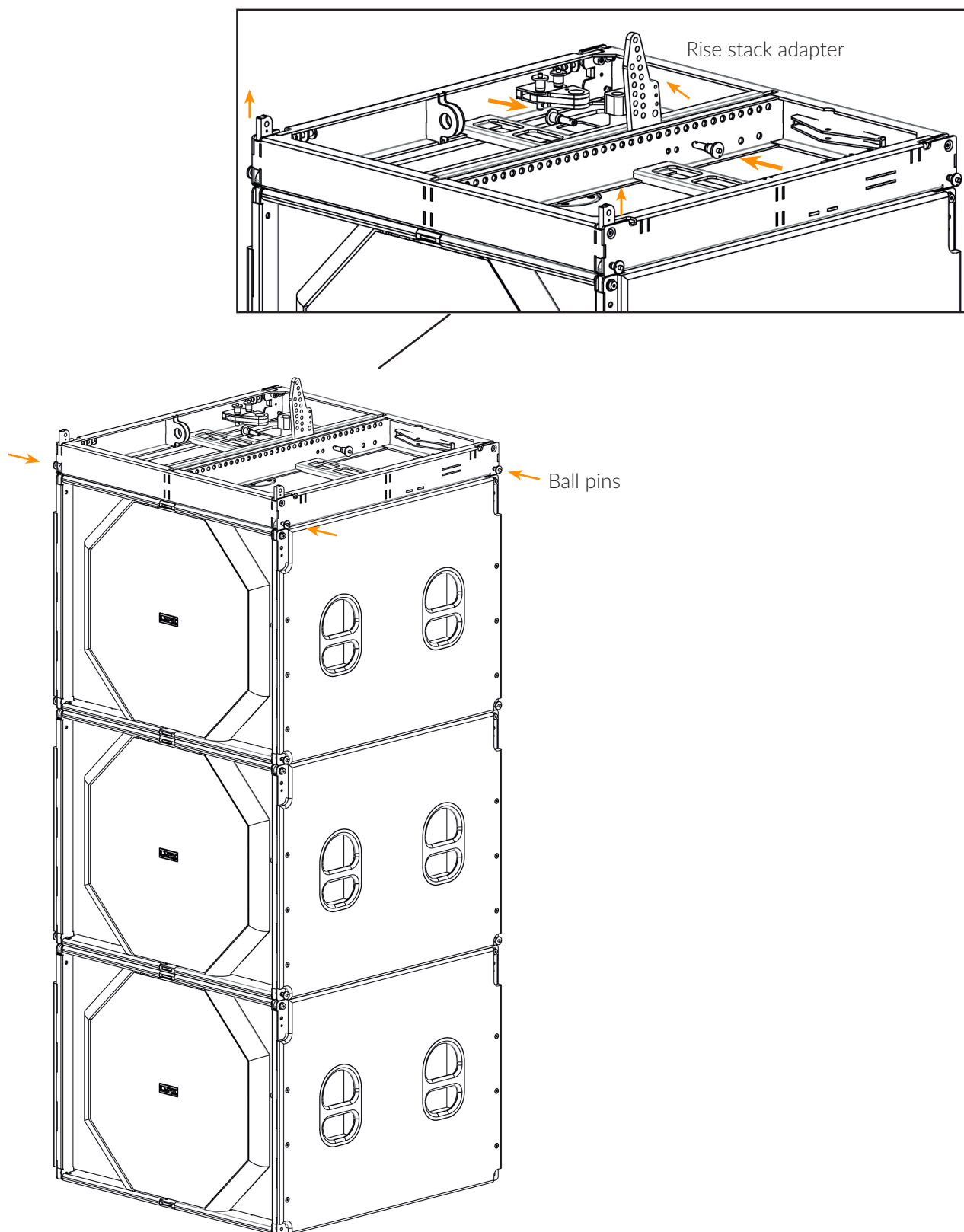


NOTE: Be sure to take out the pin marked with a circle. This is needed to attach the CLS-210P cabinet afterwards.



## CLS-121SP STACK CONFIGURATION

- Once the SV-CLS20 is secured on top of the subwoofer, rise the front levers and the stack adapter. Then secure the stack adapter with pins on both sides.

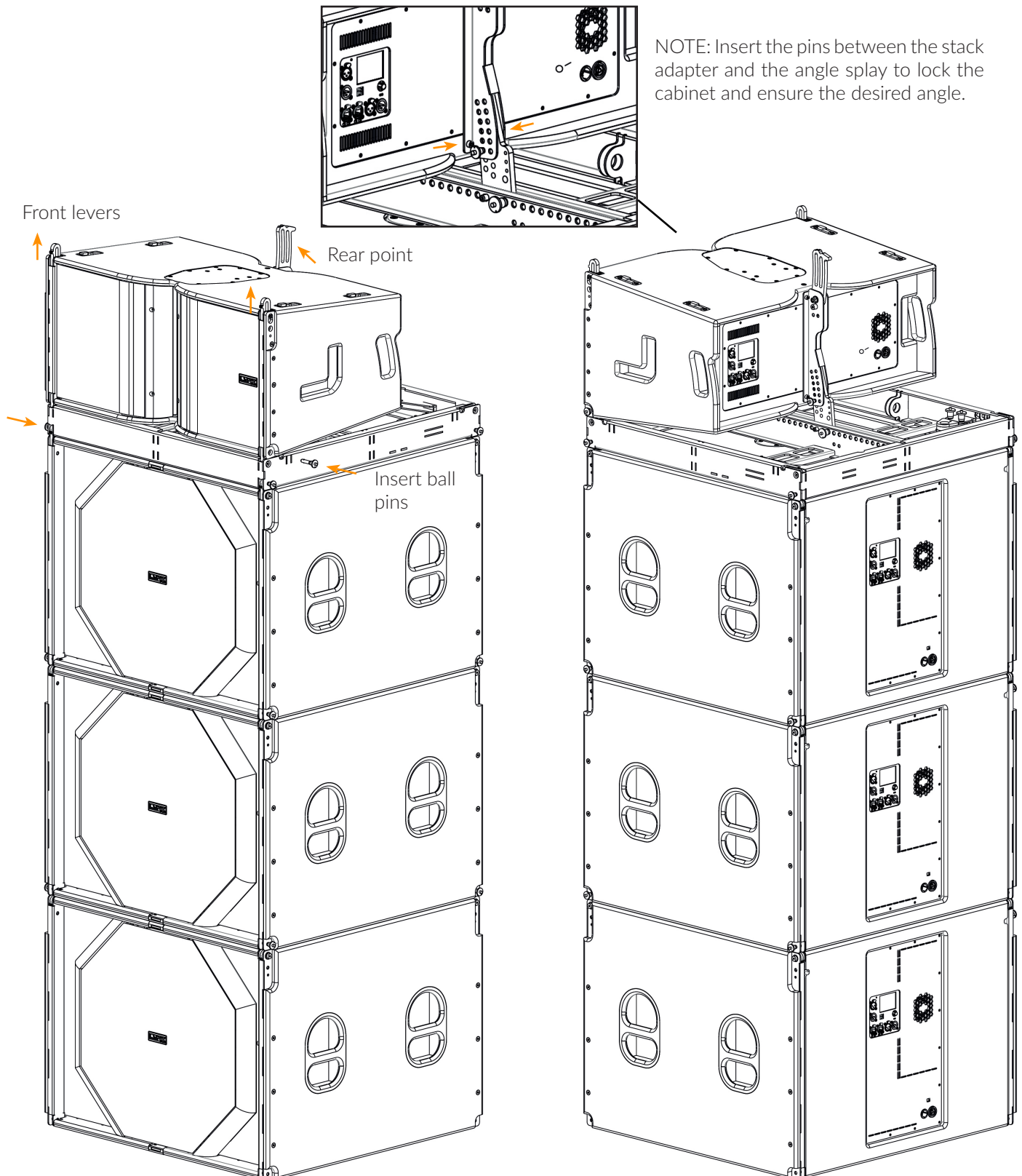




## CLS-121SP STACK CONFIGURATION

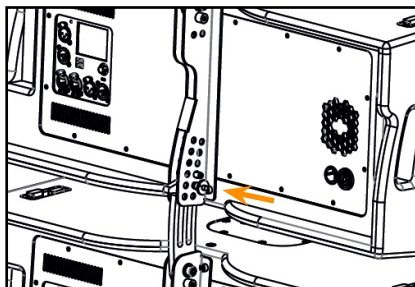
• Place the CLS-210P cabinet carefully on top of the flying frame. Insert the ball pins in the front holes. Then, place the stack adapter between the CLS-210P's angle splay. Raise the 3 rigging points (front levers and rear point) to enable an easy set-up.

Reminder: The system can be rigged and angled in retracted position enabling a much easier set-up without the need to lift each cabinet individually.

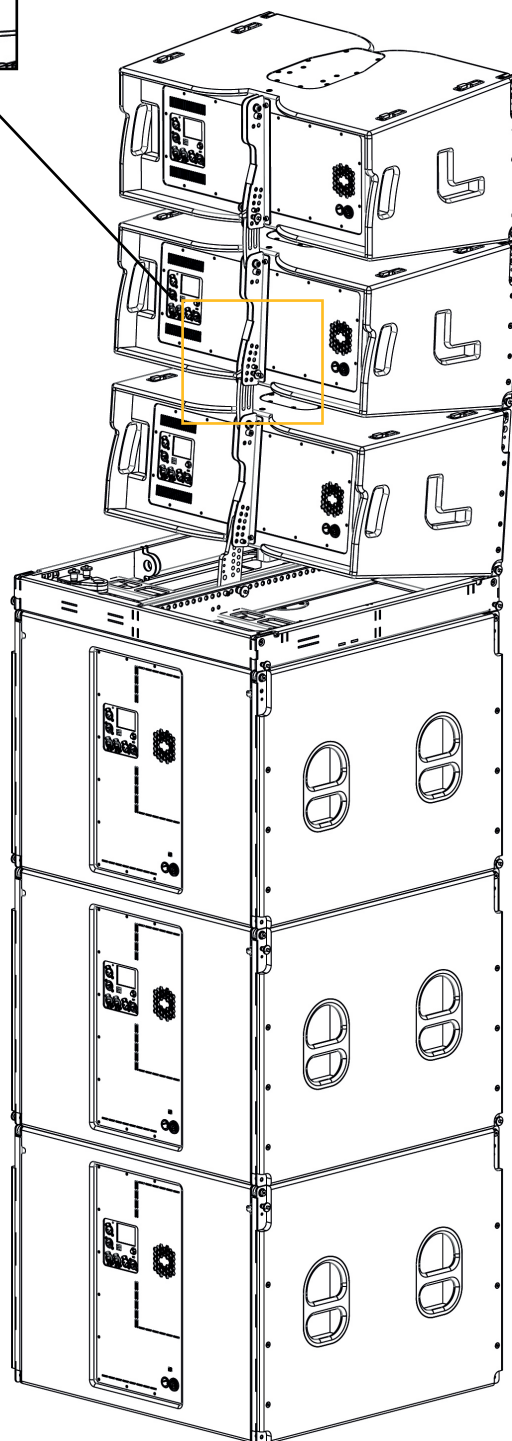
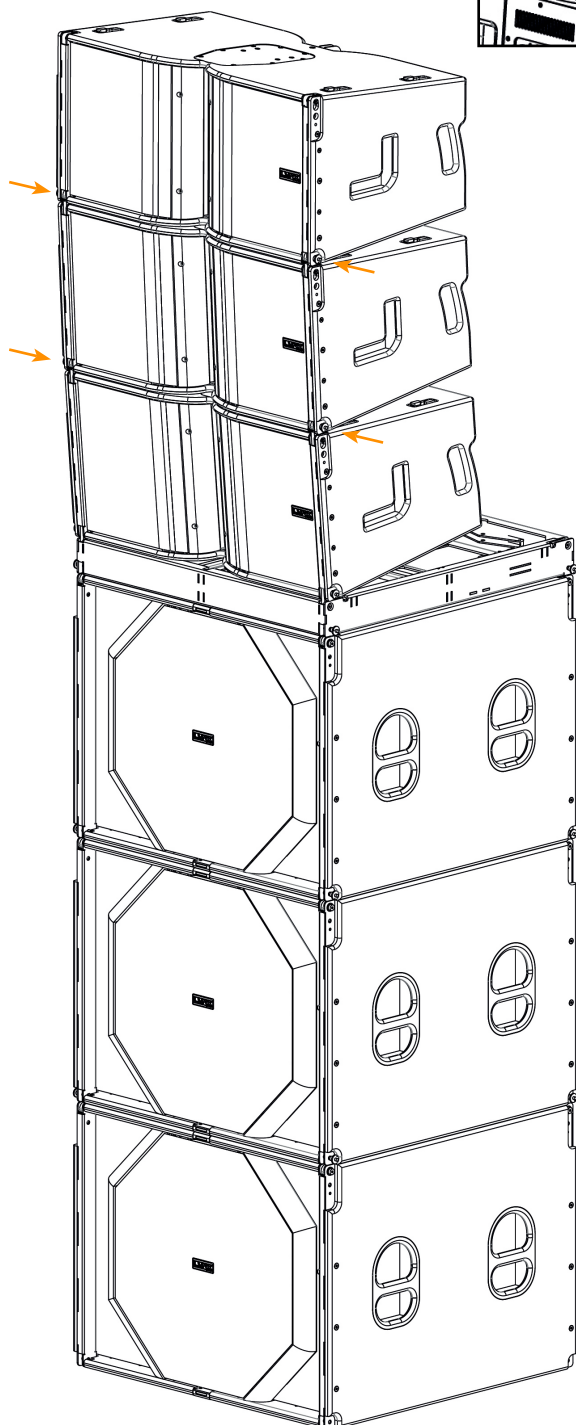


## CLS-121SP STACK CONFIGURATION

- For stack configuration you can place 3 CLS-210P cabinets on top of CLS-121SP subwoofers. Repeat the previous process: introduce the pins on their corresponding holes, assuring that the cabinets are secured through the front levers and the rear rigging point.

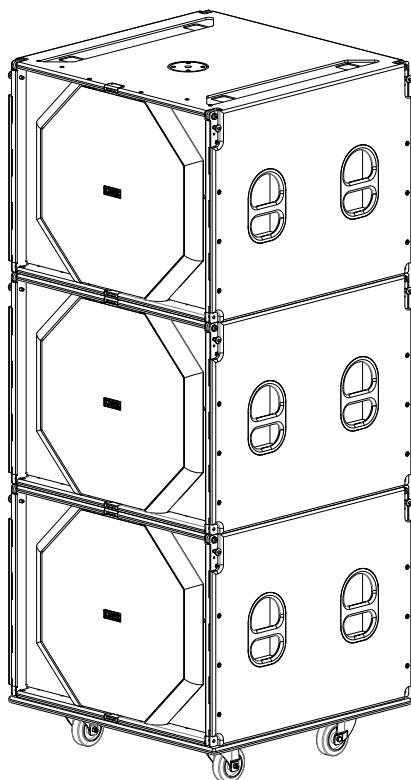


Make sure to fit the pins on the angle splay to get the desired angulation on each cabinet. Our angle splay system allows to create an angulation between 0° to 10° with 1° step increments.

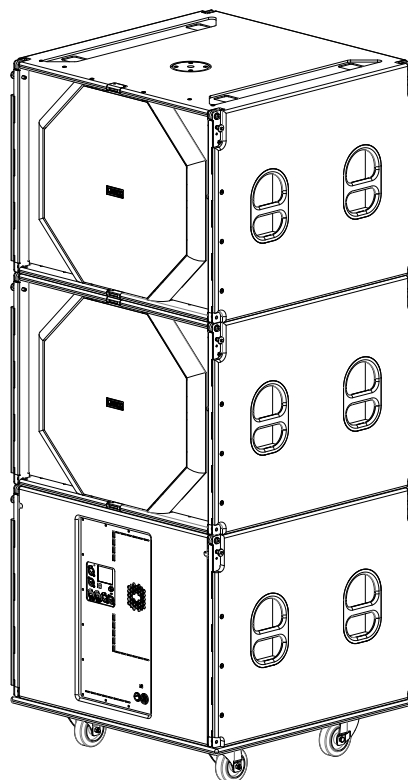


## CLS-121SP APPLICATIONS

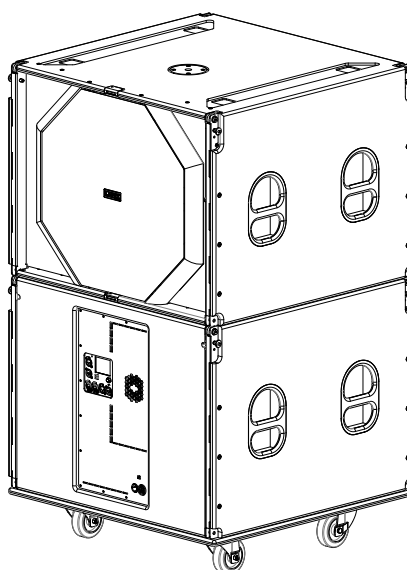
- 3 CLS-121SP on a dolly



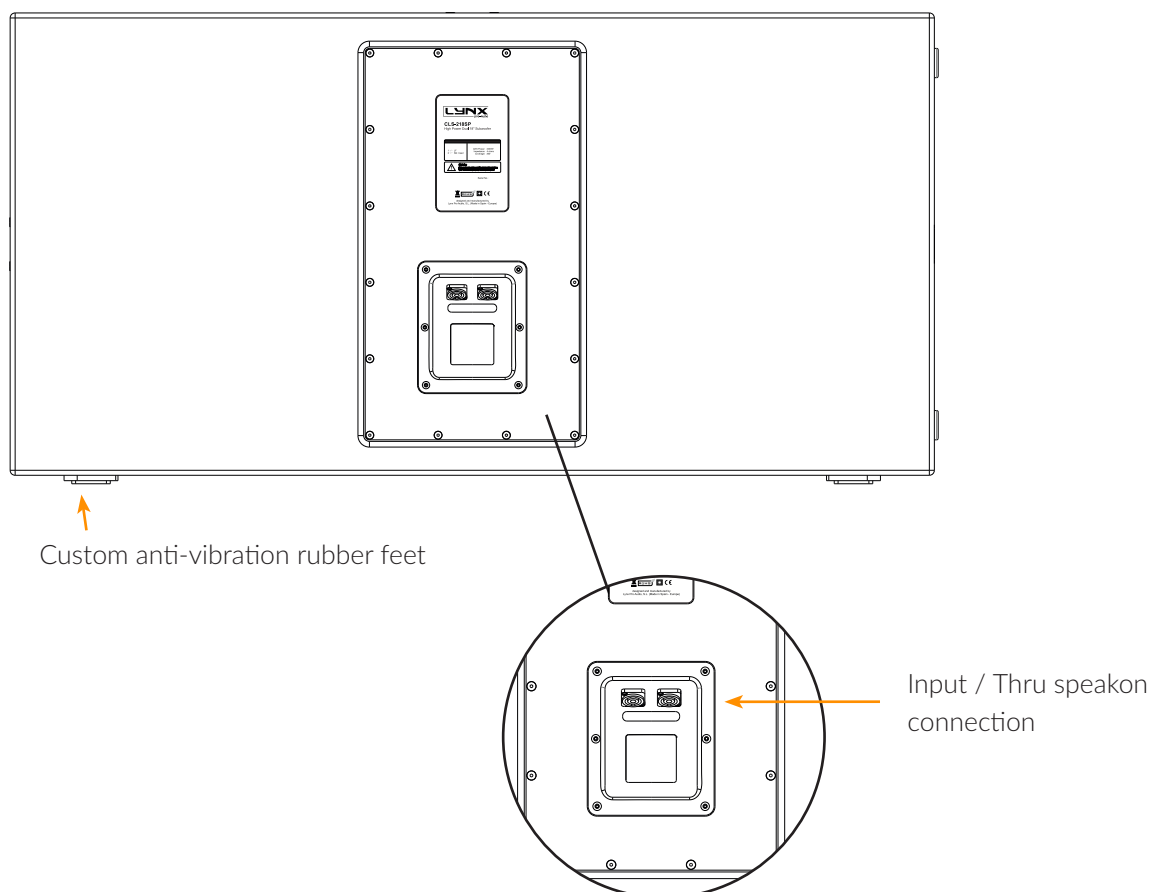
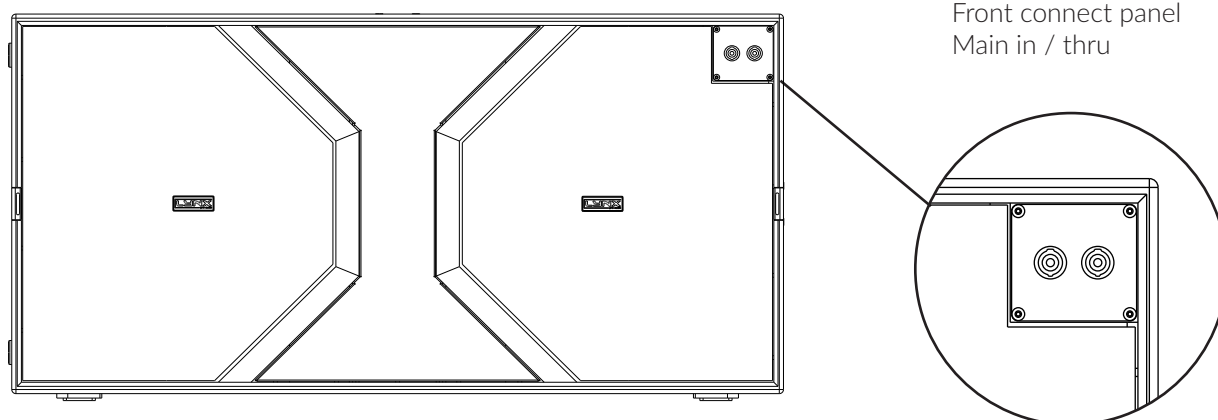
- 3 CLS-121SP in cardioid configuration



- 2 CLS-121SP in cardioid configuration on a dolly



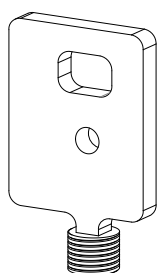
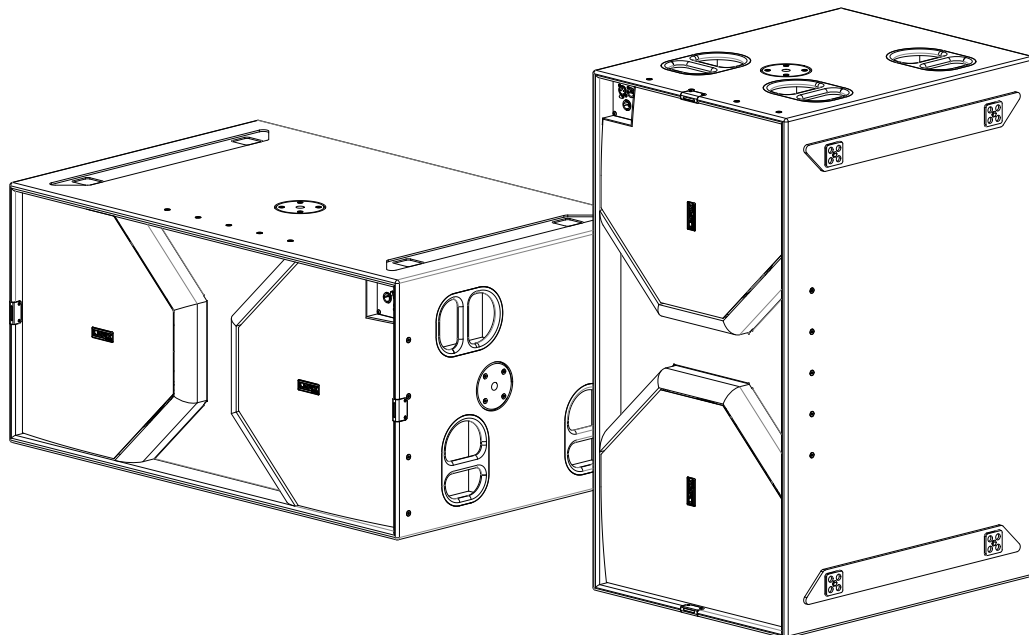
## CLS-218SP APPLICATIONS



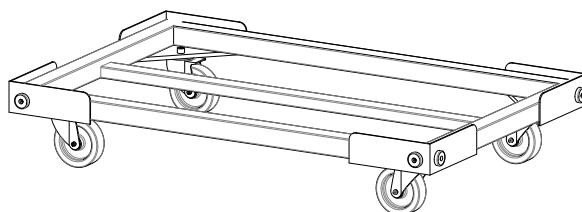


## CLS-218SP APPLICATIONS

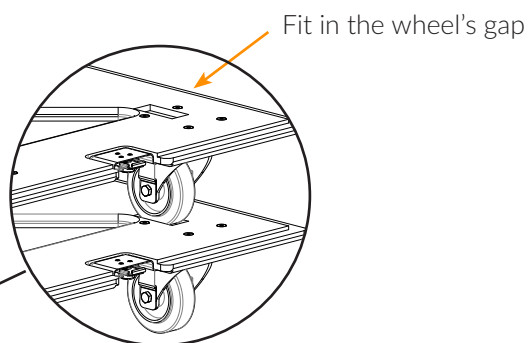
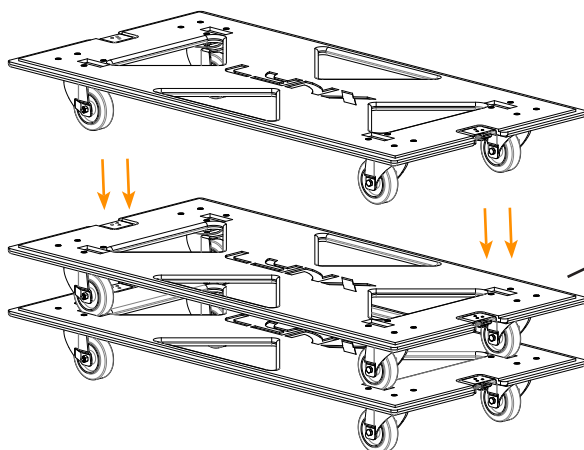
- Operation modes: Horizontal + Vertical



- ST-SVCLS/M20: Kit to connect SV-CLS10 or SV-CLS20 flying frame and M20 plate



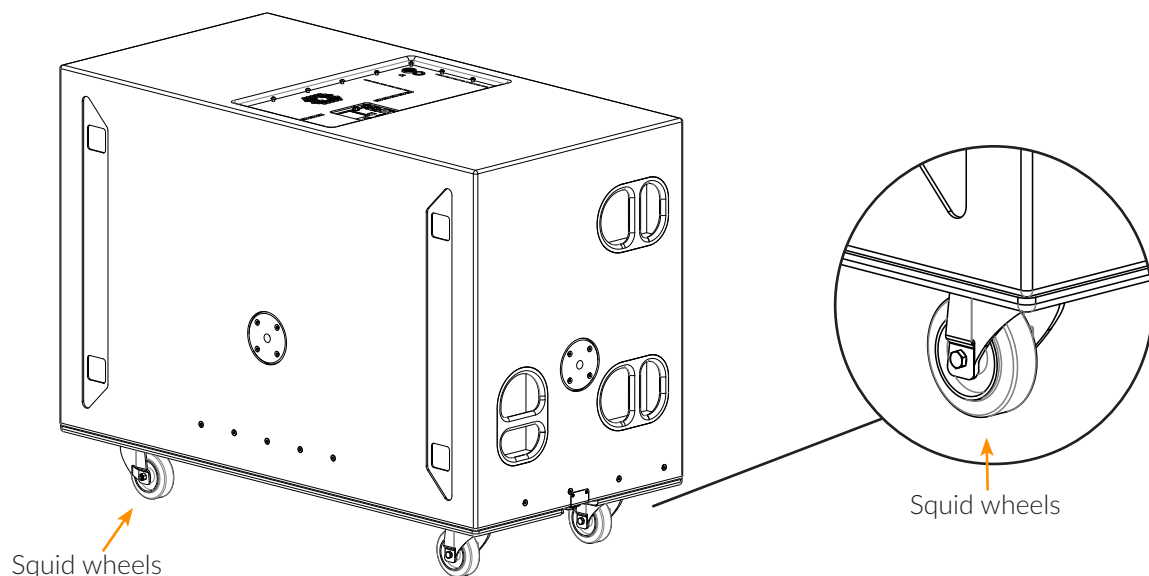
- CA-CLS218S/2: Dolly for CLS-218SP with 120mm heavy duty wheels and rubber protection



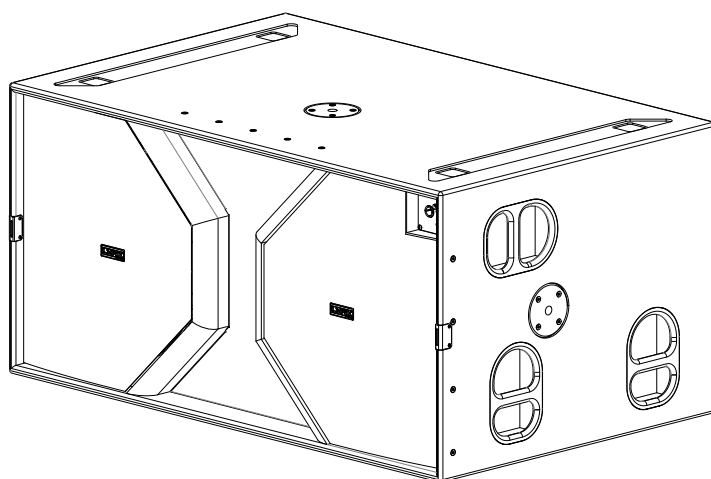
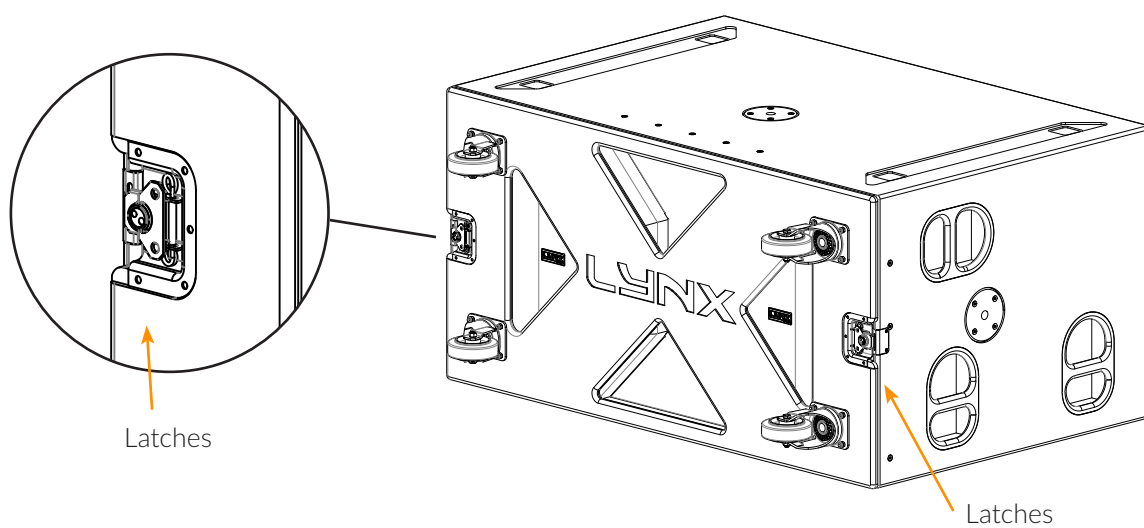
- CA-CLS218S: Removable front transport dolly for CLS-218SP. Make sure to fit in the wheel's gap to stack it correctly.

## CLS-218SP APPLICATIONS

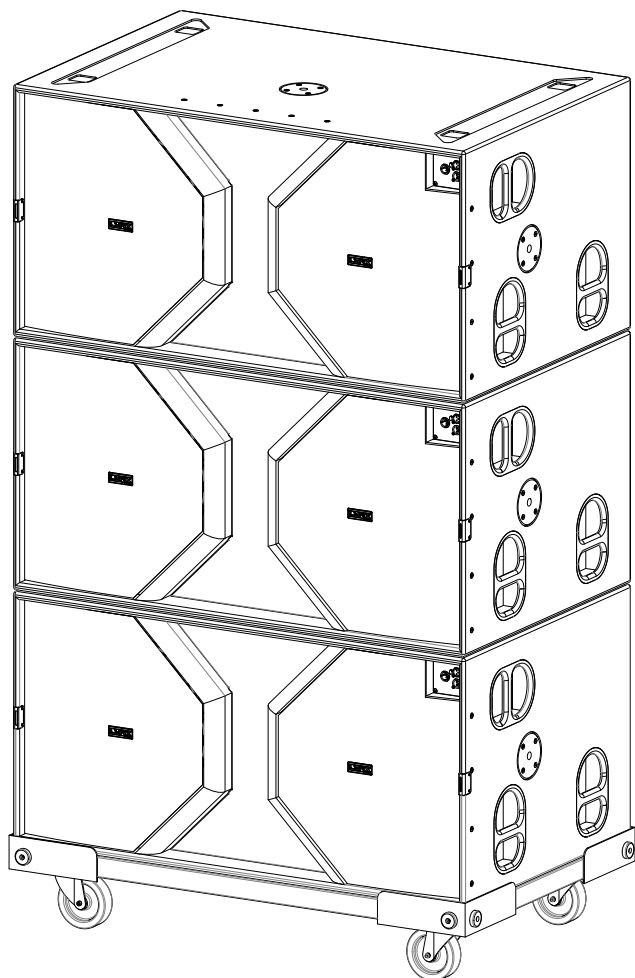
- CLS-218SP on a dolly with squid wheels for easy transport.



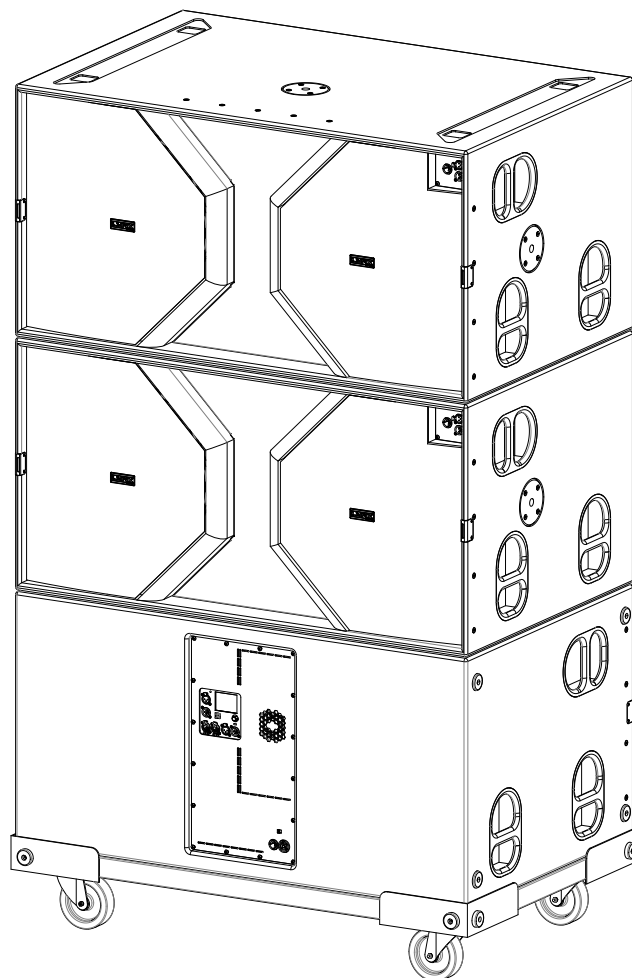
- Lay the cabinet carefully, remove latches and take off the dolly.



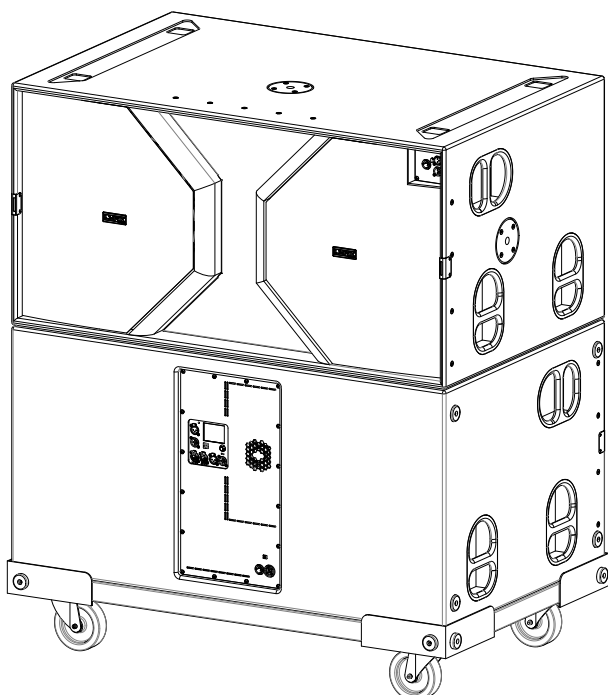
## CLS-218SP APPLICATIONS



- Up to 3 CLS-218SP on a dolly



- Up to 3 CLS-218SP in cardioid configuration



- Up to 2 CLS-218SP in cardioid configuration

## RAINBOW 3D Acoustic Prediction Software

Lynx Pro Audio's R&D department is working on Rainbow 3D, a new acoustic simulation software with dynamic 3D features. With a sophisticated design, Rainbow 3D stands out for its speed, being able to provide a simulation in just a few seconds. It also provides algorithms for beam steering and optimizing the listening area.

- **Designed from scratch by professionals**

Rainbow 3D has been programmed from scratch by Lynx Pro Audio engineers, using new programming procedures that achieve an effective simulation with really low calculation time.

- **Multiple listening zones**

The program can simulate all Lynx Pro Audio's acoustic enclosures located in a 3D space, including the classic side, top and front views. It can also define multiple listening zones and allows offset positioning and symmetry. Blueprint images, textures and PNG format pictures can be imported.

- **Unlimited sound sources**

Allows the acoustic simulation for an unlimited number of sound sources and audio systems. You can place as many systems (subwoofers, line arrays, columns and individual boxes) as you desire. Also, the line arrays can be placed in stack or flown configuration.

- **Beam steering**

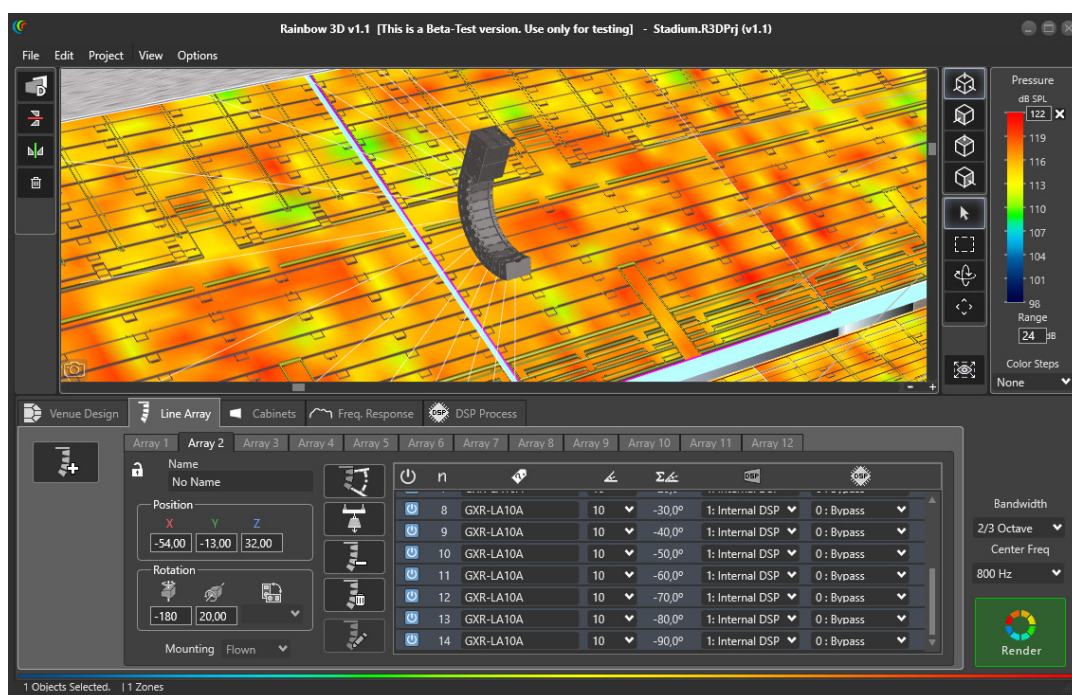
Rainbow 3D has the ability to add DSP processing to the simulation and uses algorithms to control the directivity (beam steering) in columns, without the need to tilt them physically, being able to divide the column into several beams that point to different zones.

- **Accurate optimization thanks to FIR filters**

Optimized algorithms are used in the listening area to improve the sound coverage and the frequency response. This feature can be executed in a matter of seconds. Additionally, the export of FIR coefficients can be performed with the optimization for later loading in the DSP via Ethernet or a USB device. In the near future direct communication with Lynx Pro Audio and OCS will be available.

- **Multiple measures and tools**

Likewise, the R&D department is developing multiple measurement and analysis tools for the calculated data. For example, the sound pressure curves (SPL) in the listening areas and the capture of virtual measurements that show the frequency response in the points of location indicated and added. Among other tools you will find autoplay and a wizard to set up different subwoofer arrangements.





## DECLARATION OF CONFORMITY

**Lynx Pro Audio S.L.**  
Calle 1 - Pol. Ind. Picassent  
46220 Picassent (Valencia)  
SPAIN - EU  
Tel.: (+34) 961 10 96 01  
[www.lynxproaudio.com](http://www.lynxproaudio.com)

Lynx Pro Audio S.L. declares that CLS series are in conformity with the following EC directives:

Low Voltage Directive	2014/35/UE
Electromagnetic Compatibility EMC	2014/30/UE
RoHS Directive	2011/65/UE
RAEE (WEEE)	2012/19/UE

In accordance with Harmonized European Norms:

EN 60065:2014	Audio, video and similar electronic apparatus. Safety requirements
EN 55032:2012	Electromagnetic compatibility of multimedia equipment. Emission requeriments.
EN 55103-2:2009	Electromagnetic compatibility. Product family standard for audio, video, audiovisual and entertainment lighting control apparatus for professional use. Part 2: Immunity.
EN 50581:2012	Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

CLS models: CLS-210P | CLS-210P | CLS-28P | CLS-218SP | CLS-121SP | CLS-118SP



## LYNX PRO AUDIO GUARANTEE

Lynx products are guaranteed against every kind of manufacturing fault 2 year after the date of sale. When products are under guarantee, the repairing and the free supplying of the device parts in order to correct any kind of defect are guaranteed by Lynx Pro Audio S.L. In the case that the product could not be returned to the factory for checking and repairing, Lynx Pro Audio S.L. would supply all the necessary parts.

Lynx Pro Audio S.L. is not responsible for any damage or defect caused during the transport or caused by an undue or improper handling by a non-authorized person during the life of this guarantee.

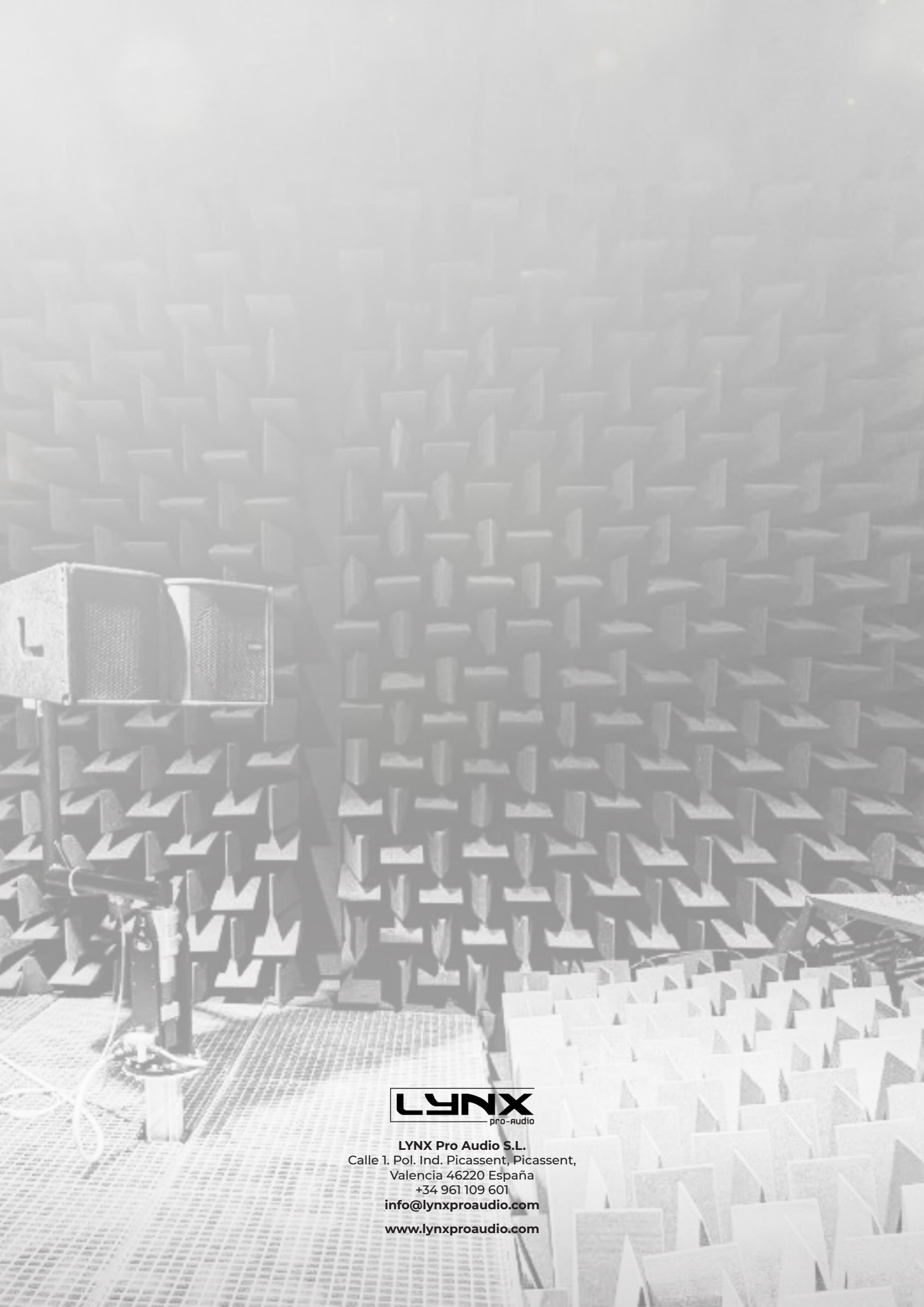
All our products undergo rigorous tests and quality controls. We guarantee the characteristics described here within and their quality against any fabrication defect.

The user loses all warranty rights if he incorporates or carries out any modification to the product, if he uses it outside of the stated safe working loads or does not secure the system properly using all the pins in their corresponding holes.

For any question regarding the product, the user must quote the model and serial number.

**WEEE Declaration:** Electrical and electronic equipment must be disposed of separately from normal waste at the end of its operational lifetime. Please dispose of this product according to the respective national regulations or contractual agreements. If there are any further questions concerning the disposal of this product please contact Lynx Pro Audio S.L.





**LYNX Pro Audio S.L.**  
Calle 1. Pol. Ind. Picassent, Picassent,  
Valencia 46220 España  
+34 961 109 601  
[info@lynxproaudio.com](mailto:info@lynxproaudio.com)  
[www.lynxproaudio.com](http://www.lynxproaudio.com)