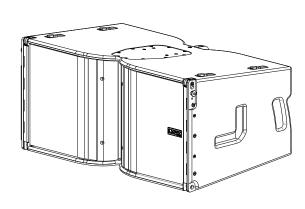
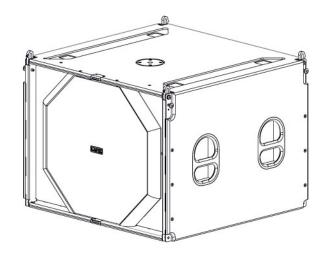




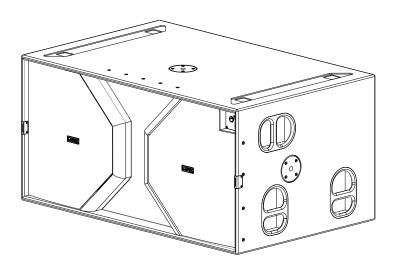
CLS-212P

CLS-121SP





CLS-218SP



Manufacturer



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



CE CERTIFICACTION, EUROPEAN PRODUCT



INTRODUCTION

This manual describes the recommended installation procedure for the Coaxial Line Source cabinets CLS-212P 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.

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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 excesivelly 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 interferente 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 apparatus to extreme humidity and or temperature values.



SYSTEM OVERVIEW

CLS-212P

Extremely compact & extremely powerful 3-way, biamplified coaxial line array element. Dual high power 12" neodymium transducers and two unique 6.5" dual diaphragm coaxial planar wave driver.

Technical Data:

Frequency range: 60 Hz - 22 KHz (- 6 dB)

Horizontal coverage: 100°

Vertical coverage: Single element 10° Max SPL / Peak: 142 dB / 148 dB

Components:

• LF: 2 x 12". 4" DUO double layer in/out copper voice coil,

waterproof cone treated on both sides, neodymium magnet. 1400 W (AES)

• MF/HF: 2 x 6.5" dual diaphragm coaxial planar wave driver.

Mid: 3.5" (90 mm) voice coil, 150 W (AES)High: 1.5" (44.4 mm) voice coil, 80 W (AES)

Max. SPL / peak: LF: 135 dB / 140 dB

MF/HF: 141 dB / 147 dB

Sensitive: LF: 103 dB

MF/HF: 114 dB

Impedance: Low section: $4 \Omega (8 + 8 \Omega)$

Mig/high section: 8 Ω

Crossover: Mid/high: 6300 Hz

Low/mid: 500 Hz

Speakon connection: +1/-1 12" right, +2/-2 12" left, +3/-3 mid/high section, +4/-4 NC

Finish: Polyurea coating, high grade resistant paint

Material: 15 mm Premium birch plywood

Dimensions: $384 \times 800 \times 480 \text{ mm} (H \times W \times D) / \text{ with pins } 815.5 \text{ mm} (W)$

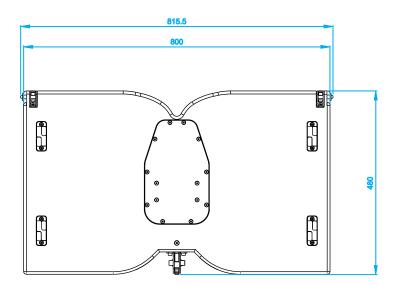
Weight: 45 Kg (99 lbs)

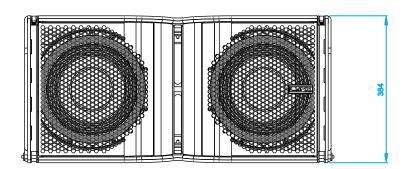
Key features

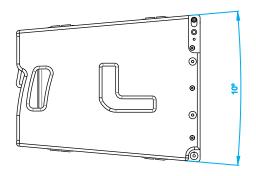
- Extraordinary power-to-size ratio
- Unique 6.5" dual diaphragm planar wave driver
- Perfect acoustical coupling of individual units providing continuous line source & excellent phase coherence
- Extended bandwith (60 Hz 22 KHz)
- Perfect Time Alignment avoiding Multi-Source Interference problems
- Ergonomic design in premium birch plywood & finished in polyurea



• CLS-212P measurements









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" Neodymiun magnet transducer. 4" quattro in/out copper voice coil,

waterproof cone treated 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: 8Ω

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)

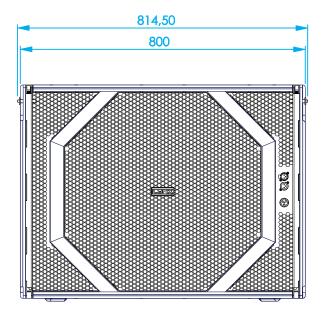
Weight: 62 Kg (137 lbs)

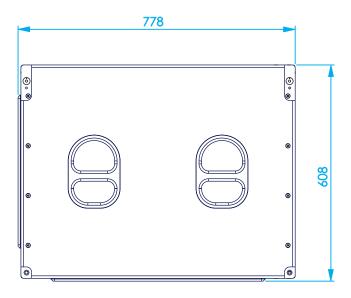
Key features

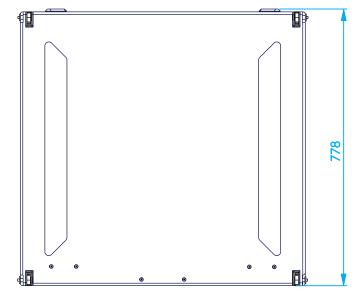
- Extraordinary high power output
- Front & rear audio and power connectors for cardioid applications
- Ergonomic design in premium birch plywood & finished in polyurea
- Stackable and flyable standard and/on cardioid configuration



• CLS-121SP measurements











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 cone treated 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: 4Ω

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)

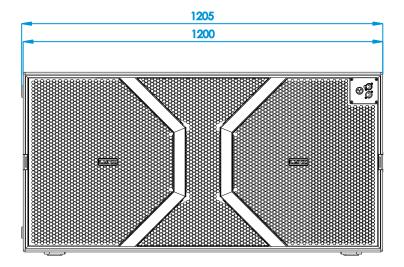
Weight: 79 Kg (174 lbs)

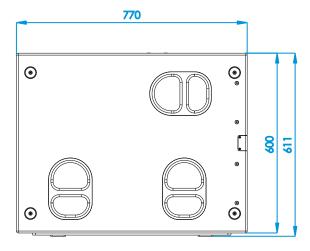
Key features

- 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

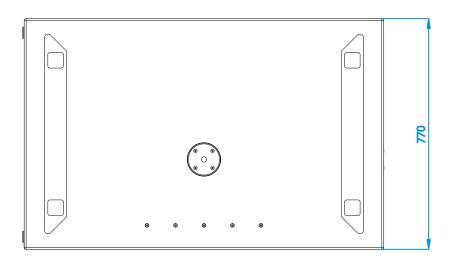


• CLS-218SP measurements





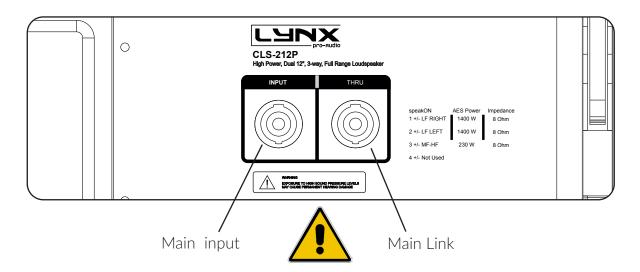


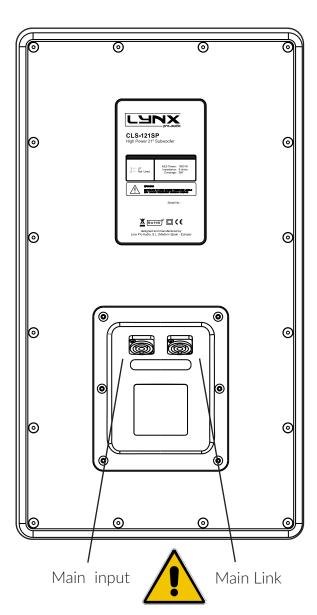




CLS BACK PANEL

This is the back pannel of the CLS-212P tops, including the connectors.





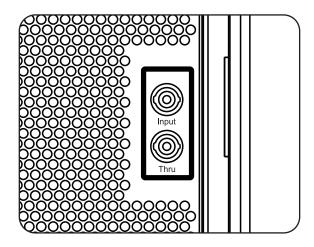
 $Both \, subwoofer \, cabinets \, CLS-121 SP \, and \, CLS-218 SP \, have \, the \, same \, rear \, pannel, \, including \, the \, connectors.$

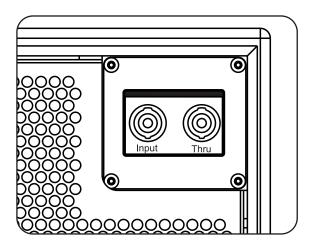


CONNECTORS AND CONNECTIONS

All the connectors and connections are placed on the back pannel 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.





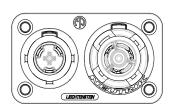
You will find a compact connector pannel integrated into the front grill of the subwoofers CLS-121SP (left) and CLS-218SP (right) in order to connect the system in cardioid configuration.



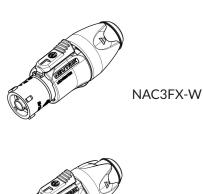


CAUTION: Do not connect or disconnect the AC Power connectors under load.

SOCKET POWERCON TRUE1





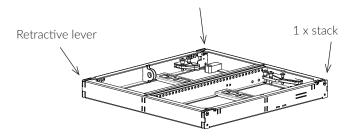






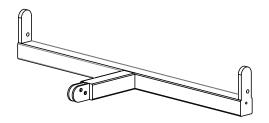
HARDWARE AND ACCESSORIES

The CLS cabinets offer a variety of practical accessories to help use the system in a number of events, from touring applications to fixed installations, indoor and outdoor.



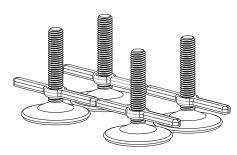
SV-CLS20

Flying frame for 16 CLS-212 or 10 CLS-121S. Max. 1000 Kg. For fly or stack.



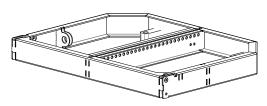
• SC-CLS212/121S

Connection system for CLS-212 together with CLS-121S. 6 enclosures maximum.



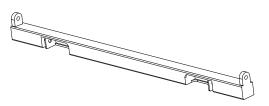
• ST-CLSKIT

4 x ground stack stabilisers for SV-CLS10.



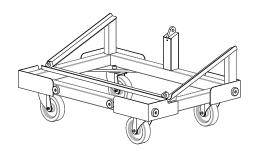
• SV-CLS20 Lite

Flying frame for 16 CLS-212. Max. 1000 Kg



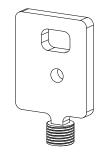
• SC-CLS212/28

Connection system for CLS-212 together with CLS-28. 6 enclosures maximum.



• CA-4CLS212

Transport dolly. Up to 4 CLS-212.



• ST-SVCLS/M20

Kit to connect SV-CLS10 or SV-CLS20 flying frame and M20 plate. Join 118S/121S/218S with bumper.

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.



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

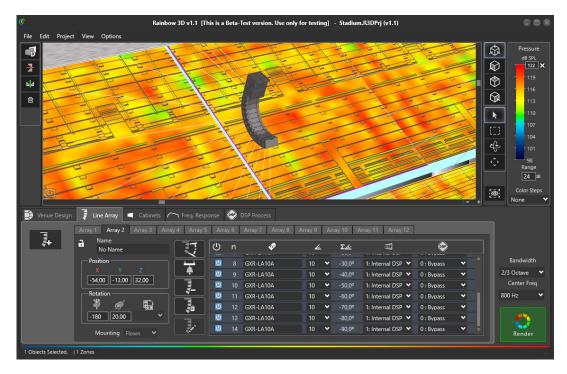
Rainbow 3D has the ability to add DSP processing to the simulation and uses algorithms to control the directivity (beam steering) in columns, without the need to tilt them physically, being able to divide the column into several beams that point to different zones.

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

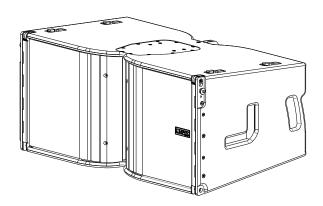
Likewise, the R&D department is developing multiple measurement and analysis tools for the calculated data. For example, the sound pressure curves (SPL) in the listening areas and the capture of virtual measurements that show the frequency response in the points of location indicated and added. Among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





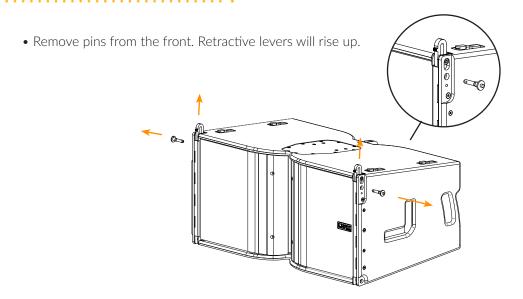
CLS-212P RIGGING HARDWARE

• Each CLS-212P cabinet has four ergonomic handles with firm internal grip to facilitate transport, positioning and loading of the cabinets.

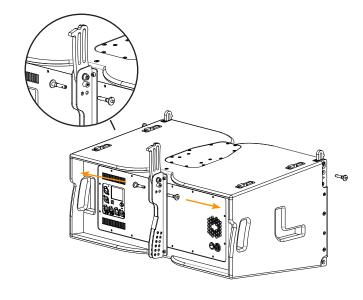


Two handles are placed at the rear of the cabinet and two L-shaped are located on the sides.

CLS-212P: How to fix cabinets



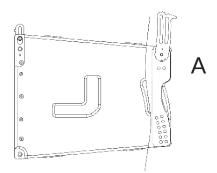
• Remove pins from the centre/rear. The rear lever is activated manually.

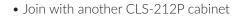


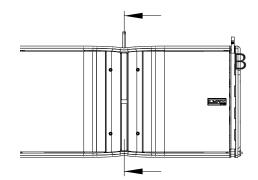


CLS-212P: How to fix cabinets

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







• Join with flying frame SV-CLS20

The 3 point rigging system (2 front retractive levers + 1 rear point) enables up to 16 CLS-212P 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-212P: How to fix cabinets

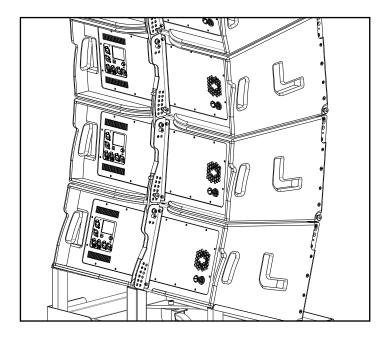
- The first thing to do is to choose the angle. Then, you must lock it.
- SPLAY ANGLES (flown cabinets)

Use the yellow part of the rigging system.

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

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

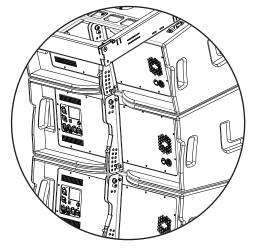




• When the cabinets are completely stacked you can prepare the set up without lifting any cabinet. Just choose the splays angles and insert the pins.

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





- STACK ANGLES

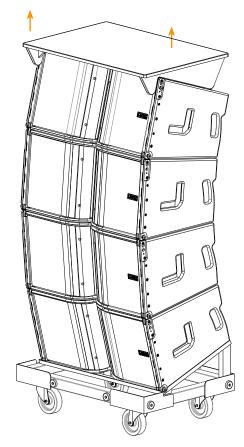
Use the blue part of the rigging system.

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.



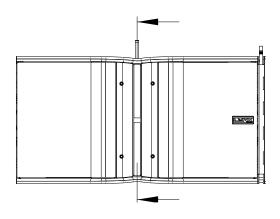


• Remove lid / top cover



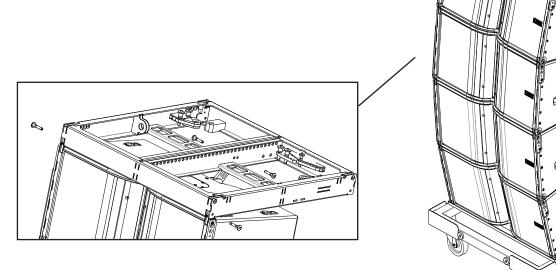


• Remove pins from the front of the top cabinet. Retractive levers will rise up. Then remove pins from the rear lever and place it in the middle position.



3

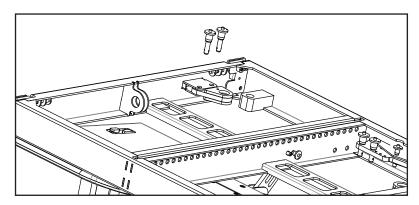
• Place SV-CLS20 and introduce security pins. Bring it closer to the cabinet.



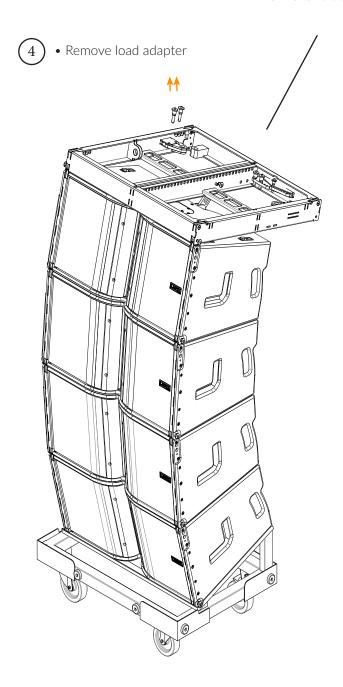
NOTE: Ensure all pins on all cabinets are inserted correctly

and fully in their corresponding holes.





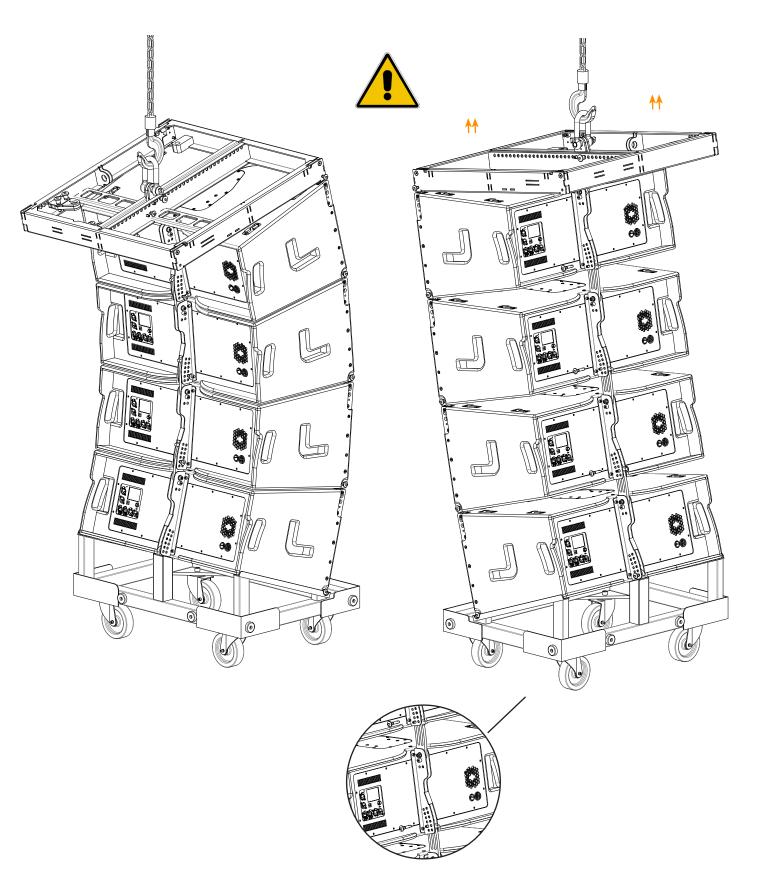
NOTE: Remove load adapter correctly from their positions to fit in the SV-CLS20 accessory.



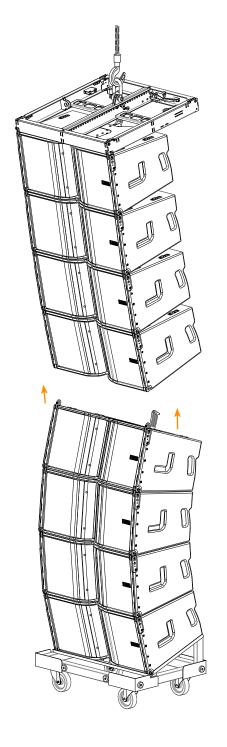


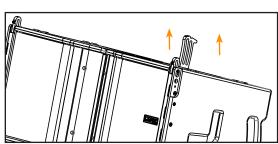
• Set angles (0, 3, 4) in rest position as simulated in Rainbow 3D

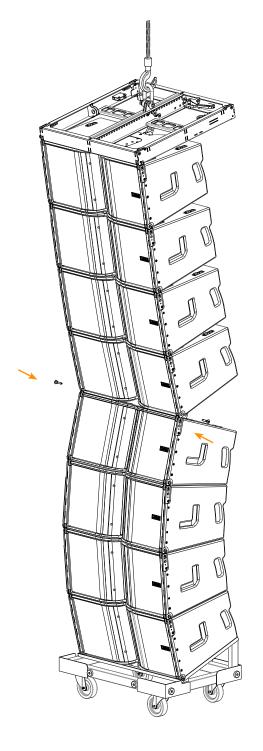
• After rising the cluster always introduce security pins.

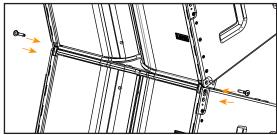




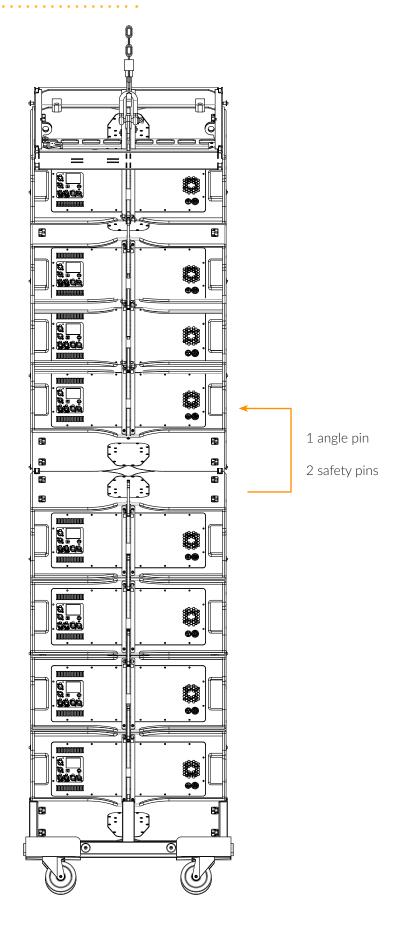








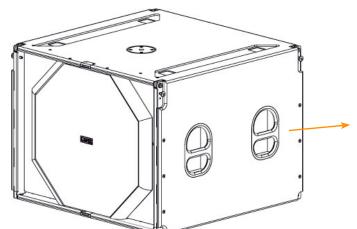






CLS-121SP RIGGING HARDWARE

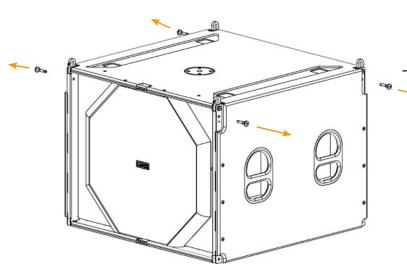
• CLS-121SP enclosure:

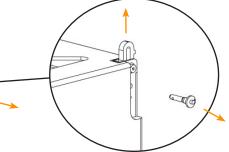


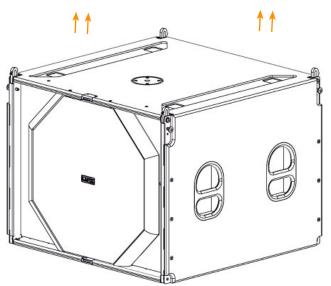
Four ergonomic handles with firm internal grip to facilitate transport, positioning and loading of the cabinets.

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.

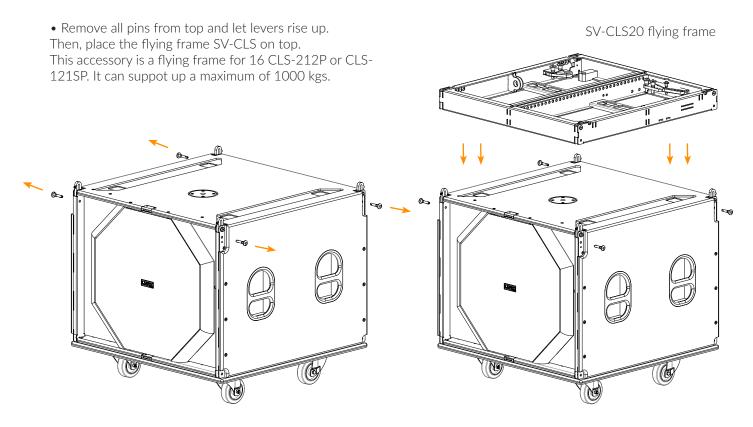




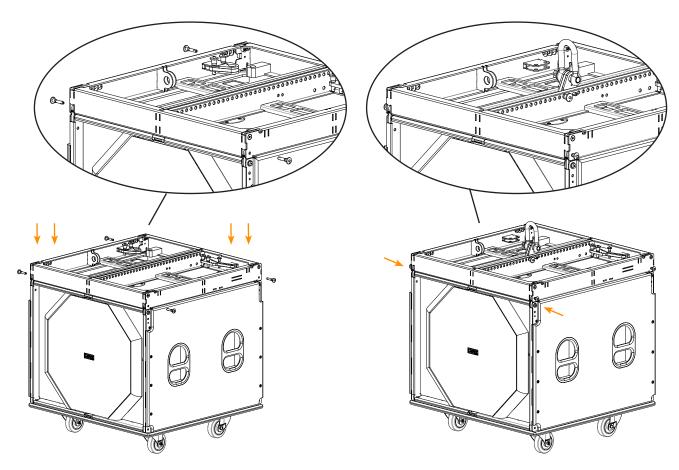


• The 4 point rigging system which includes 2 front automatically rising plates and 2 rear points which enable 10 CLS-121SP cabinets to be flown in a single array or together with the CLS-212P.





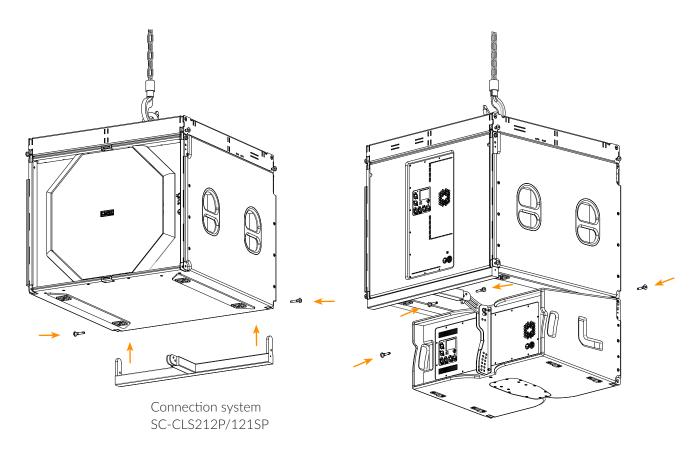
• Place the flying frame SV-CLS20 carefully on top of the CLS-121SP to fit in the levers with the screws. Please, make sure to fit all the screws on the levers until the flying frame is attached.

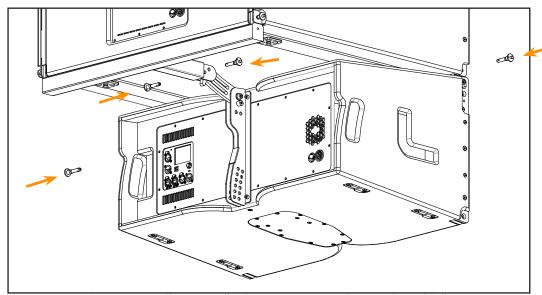




CLS-121SP FLOWN CONFIGURATION

• Place the SC-CLS212/121S connection system below the subwoofer. Make sure to fit in the screws correctly to attach the CLS-121SP cabinet. Then, fit the CLS-212P cabinet just below the SC-CLS212P/121SP accessory and make sure to insert the pins on the holes correctly.



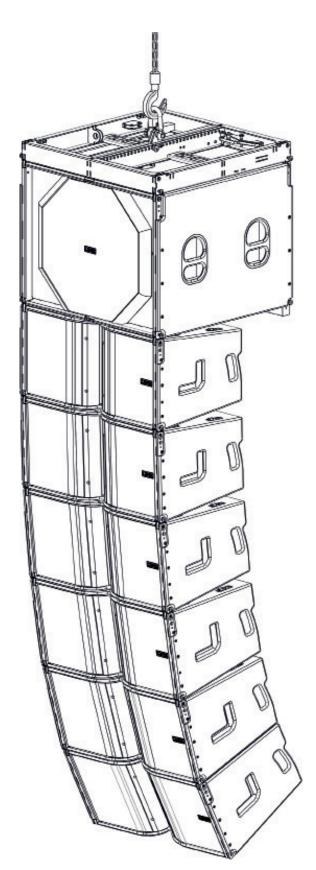


NOTE: Ensure all pins on all cabinets are inserted correctly and fully in their corresponding holes.



CLS-121SP & 6 CLS-212P 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-212P cabinets.



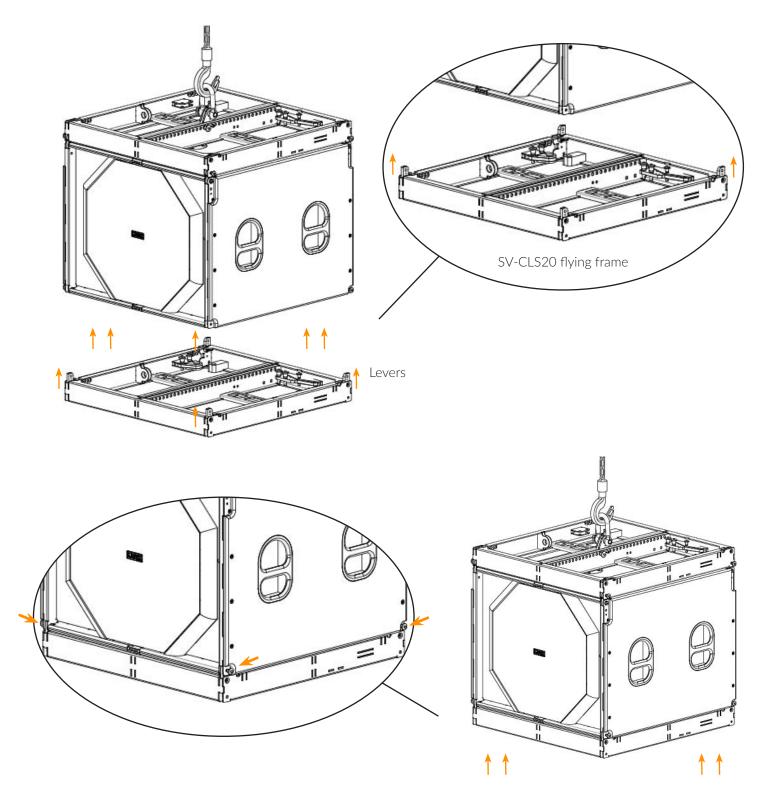






CLS-121SP FLOWN CONFIGURATION

• 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 screws correctly on the levers until the flying frame is attached to the CLS-121SP cabinet.

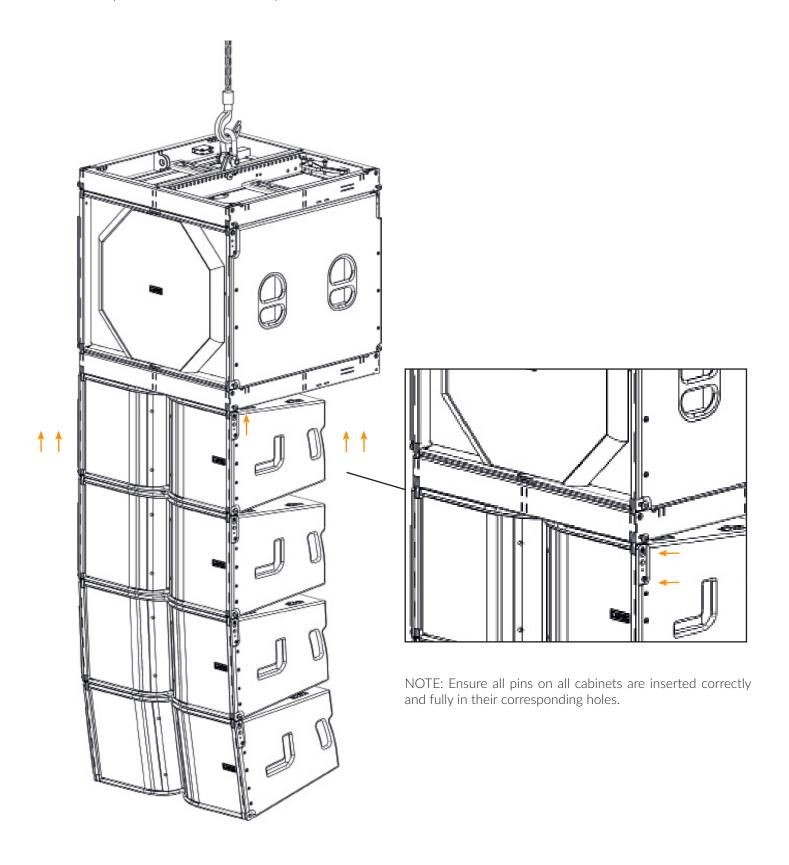


NOTE: Ensure all screws are inserted correctly and fully in their corresponding holes.



CLS-121SP FLOWN CONFIGURATION

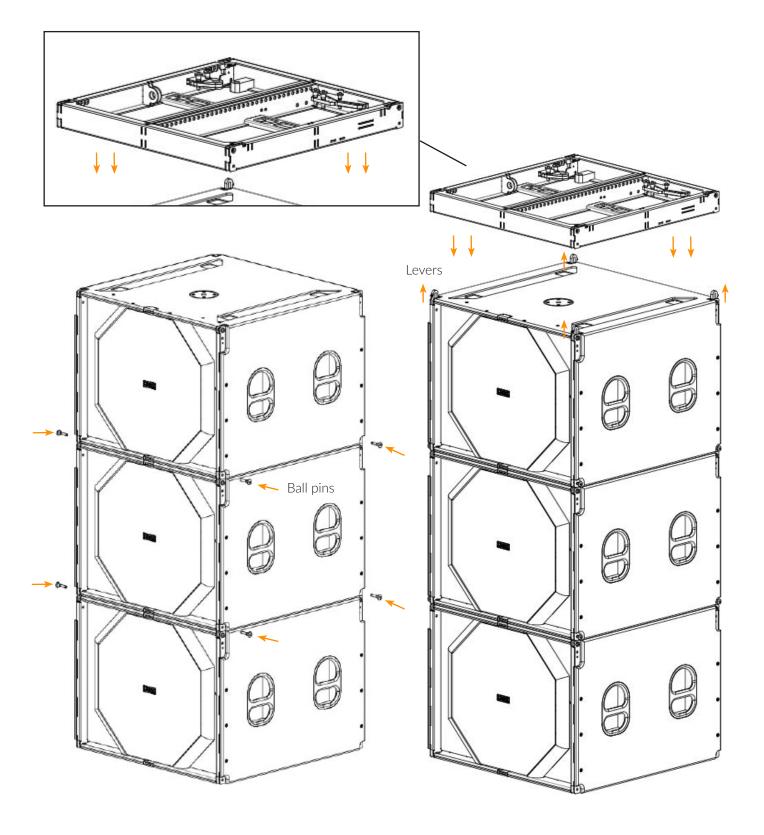
• Place 4 CLS-212P cabinets with the levers rise up below the CLS-121SP subwoofer. Make sure to fit in all the screws correctly on the levers until the array is attached to the CLS-121SP cabinet.





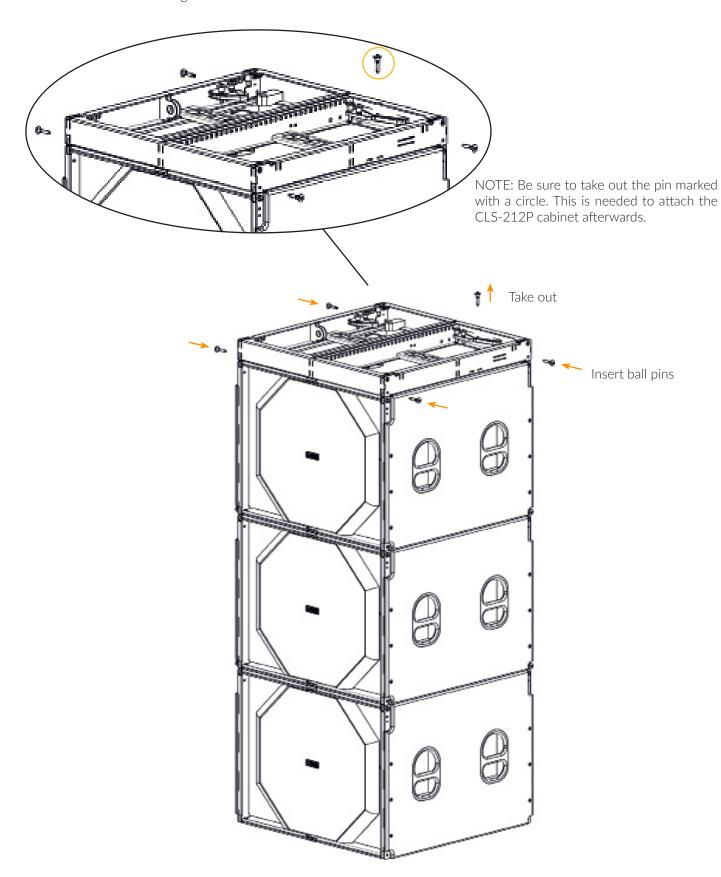
• Place 3 CLS-121SP subwoofers on top of each other. Be sure to place all screws properly into the levers until the cabinets are tight and the stack configuration is fully secured.

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 screws between the lever and the flying frame holes.



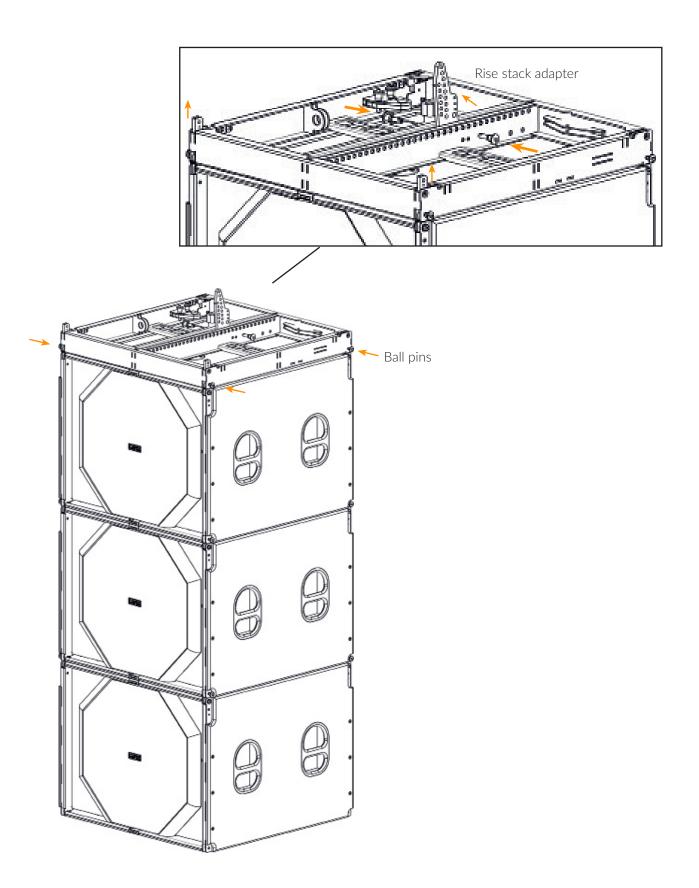


• Once the SV-CLS20 flying frame is placed on top of the CLS-121SP make sure that the 4 pins between levers and holes are tight and secured. Also, be sure to remove the pin above the flying frame so that you can attach the CLS-212P cabinet after securing it.





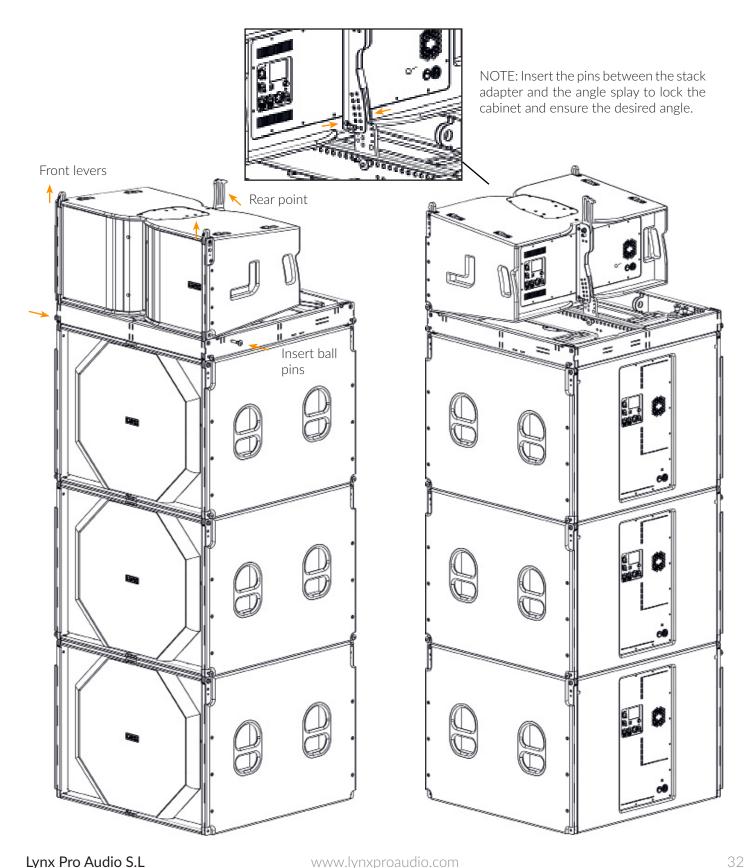
• Once the SV-CLS20 is secured on top of the subwoofer, rise the front levers and the stack adapter. Then secure the stack adapter with pins on both sides.





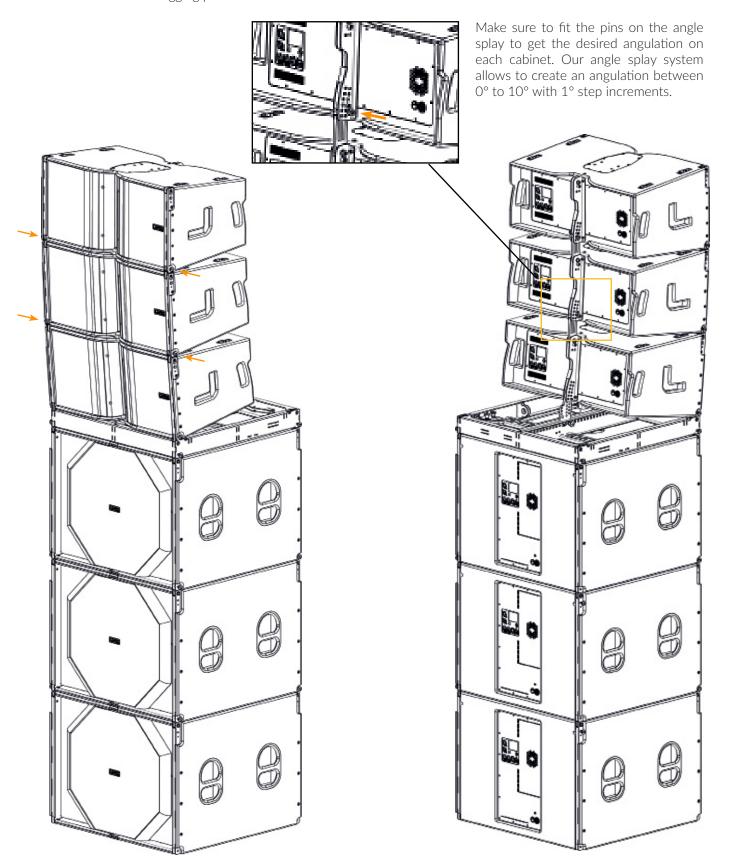
• Place the CLS-212P cabinet carefully on top of the flying frame. Insert the ball pins in the front holes. Then, place the stack adapter between the CLS-212P's angle splay. Raise the 3 rigging points (front levers and rear point) to enable an easy set-up.

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.



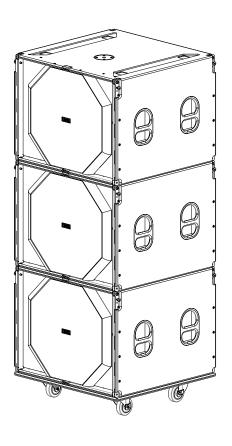


• For stack configuration you can place 3 CLS-212P cabinets on top of CLS-121SP subwoofers. Repeat the previous process: introduce the pins on their corresponding holes, assuring that the cabinets are secured through the front levers and the rear rigging point.

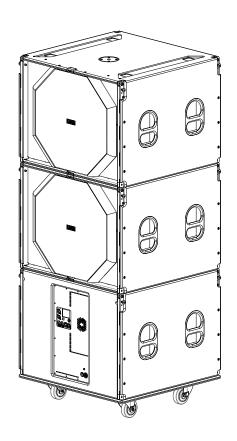




• 3 CLS-121SP on a dolly

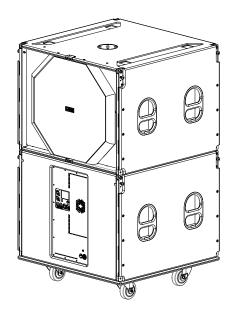


• 3 CLS-121SP in cardioid configuration

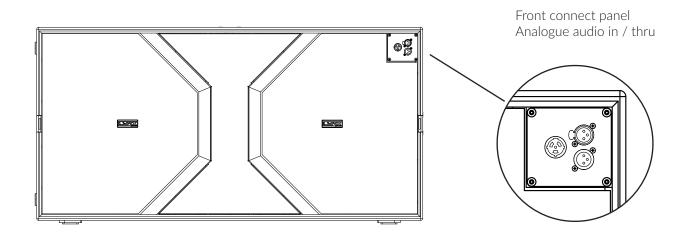


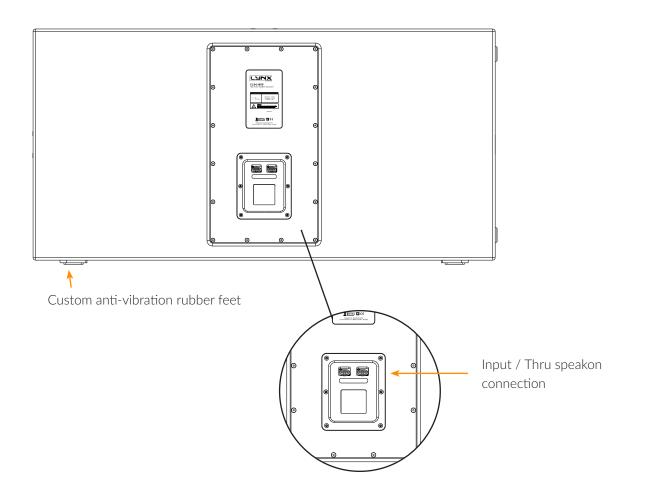


• 2 CLS-121SP in cardioid configuration on a dolly

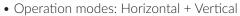


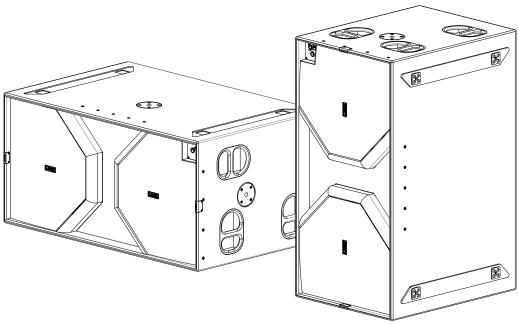


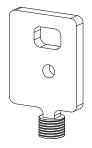




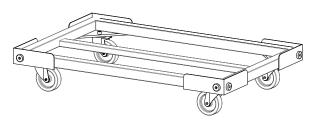




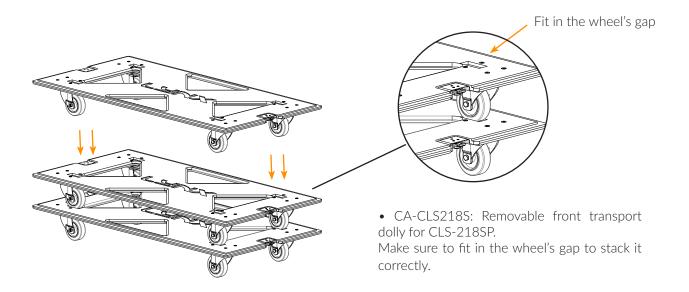




• ST-SVCLS/M20: Kit to connect SV-CLS10 or SV-CLS20 flying frame and M20 plate

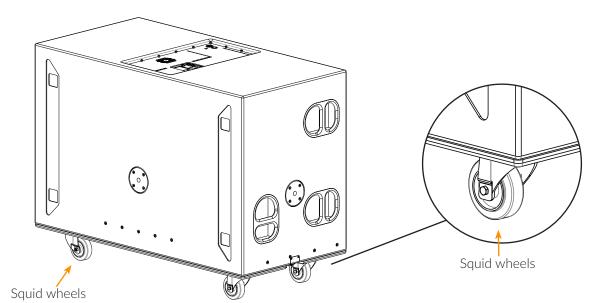


• CA-CLS218S/2: Dolly for CLS-218SP with 120mm heavy duty wheels and rubber protection

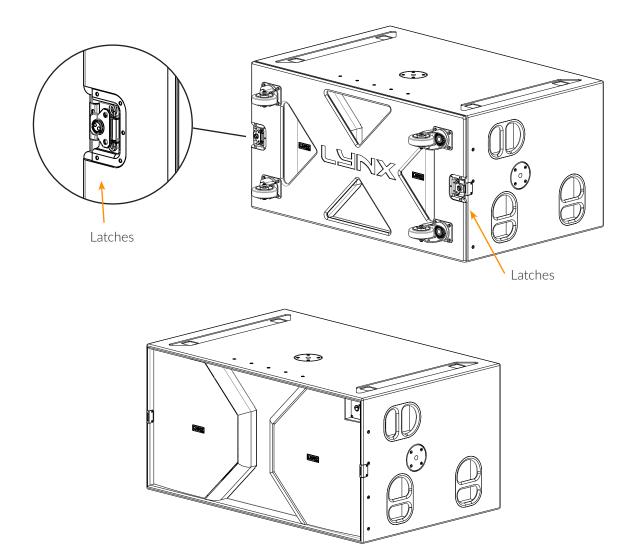




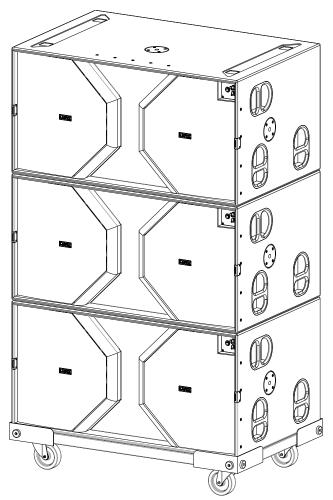
• CLS-218SP on a dolly with squid wheels for easy transport.

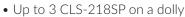


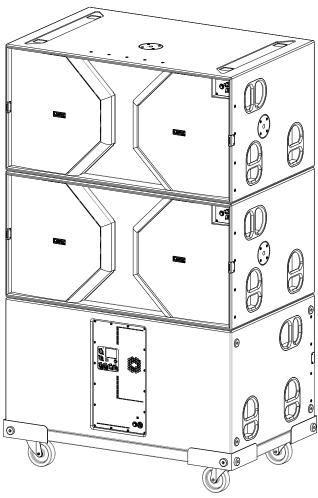
• Lay the cabinet carefully, remove latches and take off the dolly.



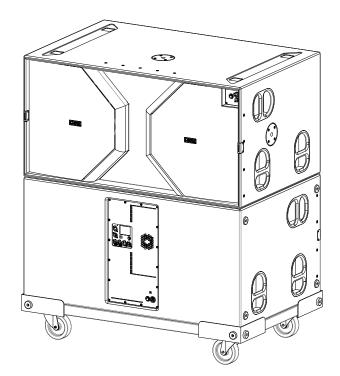








• Up to 3 CLS-218SP in cardioid configuration





• Up to 2 CLS-218SP in cardioid configuration





DECLARATION OF CONFORMITY

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

Low Voltage Directive2014/35/UEElectromagnetic Compatibility EMC2014/30/UEROHS Directive2011/65/UERAEE (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-28P / CLS-212P / CLS-118SP / CLS-121SP / CLS-218SP





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 y 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.