



RCF Q 15 Two Way Point Source Modules User Manual

[Home](#) » [RCF](#) » RCF Q 15 Two Way Point Source Modules User Manual 








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Contents

- [1 SAFETY PRECAUTIONS AND GENERAL INFORMATION](#)
- [2 CARE AND MAINTENANCE](#)
- [3 DESCRIPTION](#)
- [4 CONNECTIONS](#)
- [5 HORIZONTAL HANGING](#)
- [6 VERTICAL HANGING](#)
- [7 VERTICAL HANGING WITH A 10° ANGLE](#)
- [8 EXAMPLES OF CONFIGURATIONS](#)
- [9 DIMENSIONS](#)
- [10 SPECIFICATIONS](#)
- [11 Documents / Resources](#)
- [12 Related Posts](#)

SAFETY PRECAUTIONS AND GENERAL INFORMATION

The symbols used in this document give notice of important operating instructions and warnings which must be strictly followed.

	CAUTION	Important operating instructions: explains hazards that could damage a product, including data loss
	WARNING	Important advice concerning the use of dangerous voltages and the potential risk of electric shock, personal injury or death.
	IMPORTANT NOTES	Helpful and relevant information about the topic
	SUPPORTS, TROLLEYS AND CARTS	Information about the use of supports, trolleys, and carts. Reminds to move with extreme caution and never tilt.
	WASTE DISPOSAL	This symbol indicates that this product should not be disposed of with your household waste, according to the WEEE directive (2012/19/EU) and your national law.

IMPORTANT NOTES

This manual contains important information about the correct and safe use of the device. Before connecting and using this product, please read this instruction manual carefully and keep it on hand for future reference. The manual is to be considered an integral part of this product and must accompany it when it changes ownership as a reference for correct installation and use as well as for safety precautions. RCF S.p.A. will not assume any responsibility for the incorrect installation and/or use of this product.

SAFETY PRECAUTIONS

1. All the precautions, in particular the safety ones, must be read with special attention, as they provide important information.
2. **Power supply from mains**
 - a. The mains voltage is sufficiently high to involve a risk of electrocution; install and connect this product before plugging it
 - b. Before powering up, make sure that all the connections have been made correctly and the voltage of your mains corresponds to the voltage shown on the rating plate on the unit, if not, please contact your RCF
 - c. The metallic parts of the unit are earthed through the power An apparatus with CLASS I construction shall be connected to a mains socket outlet with a protective earthing connection.
 - d. Protect the power cable from damage; make sure it is positioned in a way that it cannot be stepped on or crushed by
 - e. To prevent the risk of electric shock, never open this product: there are no parts inside that the user needs to
 - f. Be careful: in the case of a product supplied by a manufacturer only with POWER CON connectors and without a power cord, jointly to POWER CON connectors type NAC3FCA (power-in) and NAC3FCB (power-out), the following power cords compliant to the national standards shall be used:
 - EU: cord type HO5VV-F 3G 3x2.5 mm² – Standard IEC 60227-1
 - JP: cord type VCTF 3x2 mm²; 15Amp/120V— – Standard .fiS C3306

– US: cord type SJT/SJTO 3×14 AWG; 15Amp/125V— – Standard ANSI/UL 62

3. Make sure that no objects or liquids can get into this product, as this may cause a short circuit. This apparatus shall not be exposed to dripping or splashing. No objects filled with liquid, such as vases, shall be placed on this apparatus. No naked sources (such as lighted candles) should be placed on this apparatus.
4. Never attempt to carry out any operations, modifications, or repairs that are not expressly described in this manual.

Contact your authorized service center or qualified personnel should any of the following occur:

The product does not function (or function in an anomalous way). The power cable has been damaged. Objects or liquids have got in the unit.

The product has been subject to a heavy impact.

5. If this product is not used for a long period, disconnect the power cable.
6. If this product begins emitting any strange odors or smoke, switch it off immediately and disconnect the power cable.
7. **Do** not connect this product to any equipment or accessories not foreseen.

For suspended installation, only use the dedicated anchoring points and do not try to hang this product by using elements that are unsuitable or not specific for this purpose. Also check the suitability of the support surface to which the product is anchored (wall, ceiling, structure, etc.), and the components used for attachment (screw anchors, screws, brackets not supplied by RCF, etc), which must guarantee the security of the system/installation over time, also considering, for example, the mechanical vibrations normally generated by transducers.

To prevent the risk of falling equipment, do not stack multiple units of this product unless this possibility is specified in the user manual.

8. RCF S.p.A. strongly recommends this product is only installed by professional qualified installers (or specialized firms) who can ensure correct installation and certify it according to the regulations in force.

The entire audio system must comply with the current standards and regulations regarding electrical systems.

9. Supports, trolleys, and carts. The equipment should be only used on supports, trolleys, and carts, where necessary, that are recommended by the manufacturer. The equipment/support/trolley/cart assembly must be moved with extreme caution. Sudden stops, excessive pushing force, and uneven floors may cause the assembly to overturn. Never tilt the assembly.
10. There are numerous mechanical and electrical factors to be considered when installing a professional audio system (in addition to those which are strictly acoustic, such as sound pressure, angles of coverage, frequency response, etc.).
11. Hearing loss. Exposure to high sound levels can cause permanent hearing loss. The acoustic pressure level that leads to hearing loss is different from person to person and depends on the duration of exposure. To prevent potentially dangerous exposure to high levels of acoustic pressure, anyone who is exposed to these levels should use adequate protection devices. When a transducer capable of producing high sound levels is being used, it is, therefore, necessary to wear ear plugs or protective earphones. See the manual technical specifications to know the maximum sound pressure level.

OPERATING PRECAUTIONS

- Place this product far from any heat sources and always ensure adequate air circulation around it.
- Do not overload this product for a long time.
- Never force the control elements (keys, knobs, etc.)

- Do not use solvents, alcohol, benzene, or other volatile substances for cleaning the external parts of this product.



IMPORTANT NOTES

To prevent the occurrence of noise on line signal cables, use screened cables only and avoid putting them close to:

- Equipment that produces high-intensity electromagnetic fields
- Power cables
- Loudspeaker lines



WARNING! CAUTION! To prevent the risk of fire or electric shock, never expose this product to rain or humidity.



WARNING! To prevent electric shock hazards, do not connect to the mains power supply while the grille is removed.



WARNING! to reduce the risk of electric shock, do not disassemble this product unless you are qualified. Refer servicing to qualified service personnel.

CORRECT DISPOSAL OF THIS PRODUCT



■ This product should be handed over to an authorized collection site for recycling waste electrical and electronic equipment (EEE). Improper handling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the effective usage of natural resources. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, waste authority, or your household waste disposal service.

CARE AND MAINTENANCE

To ensure a long-life service, this product should be used following this advice:

- If the product is intended to be set up outdoors, be sure it is under cover and protected from rain and moisture.
- If the product needs to be used in a cold environment, slowly warm up the voice coils by sending a low-level signal for about 15 minutes before sending high-power signals.
- Always use a dry cloth to clean the exterior surfaces of the speaker and always do it when the power is turned off.



CAUTION: to avoid damaging the exterior finishes do not use cleaning solvents or abrasives.

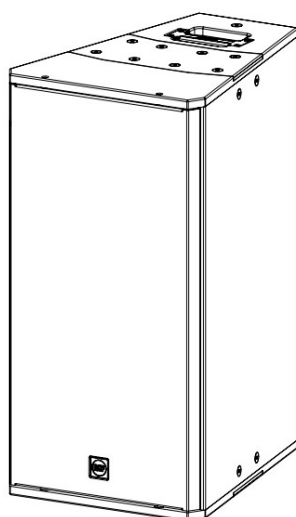


WARNING! CAUTION! For powered speakers, do cleaning only when the power is turned off.

DESCRIPTION

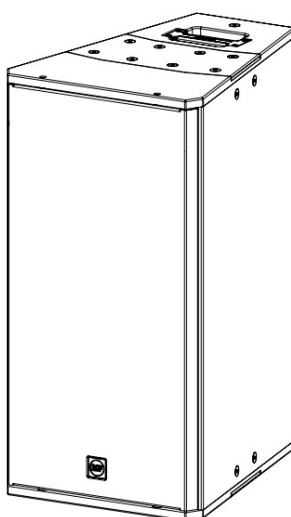
Q 15, Q 15-L, Q 15-P – TWO-WAY POINT SOURCE MODULES

Q 15 speakers are two-way, bi-amp point source modules for mid-distance and long throw applications, merging a compact size with very high output and accurate voice and sound reproduction. The systems are equipped with the latest generation of RCF precision transducers: a 15" neodymium woofer (4.0" v.c.) and a 1.4" exit compression driver (4.0" v.c.) providing a 1500 W power rating. Directivity, horizontal 22.5° and vertical 60° (Q 15), 90° (Q 15-L), and 40° (Q 15-P) make Q 15 speakers ideal to be used in point source configuration for mid-distance applications or clustered with narrower angles for long throw applications. The enclosure shape is trapezoidal and offers a 22.5° coupling angle on each side. Thanks to two different fly bars, it can be clustered both horizontally (up to 4 modules with the same fly bar) and vertically (up to 6 modules with one flybar and up to 8 modules with two fly bars). Connections to the amplifier are made through Speakon multi-pole connectors. The grille is in custom perforated steel epoxy coated, with woven fabric backing. The cabinet is made of multi-ply Baltic birch plywood and finished in a very resistant polyurea black paint.



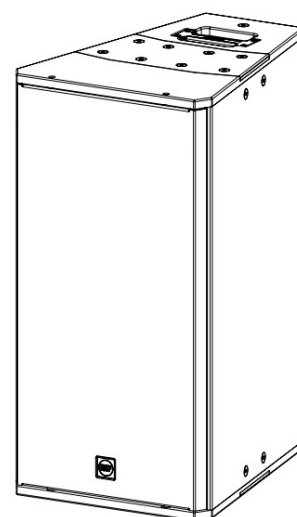
Q 15

Horizontal directivity: 22.5°
Vertical directivity: 60°



Q 15-L

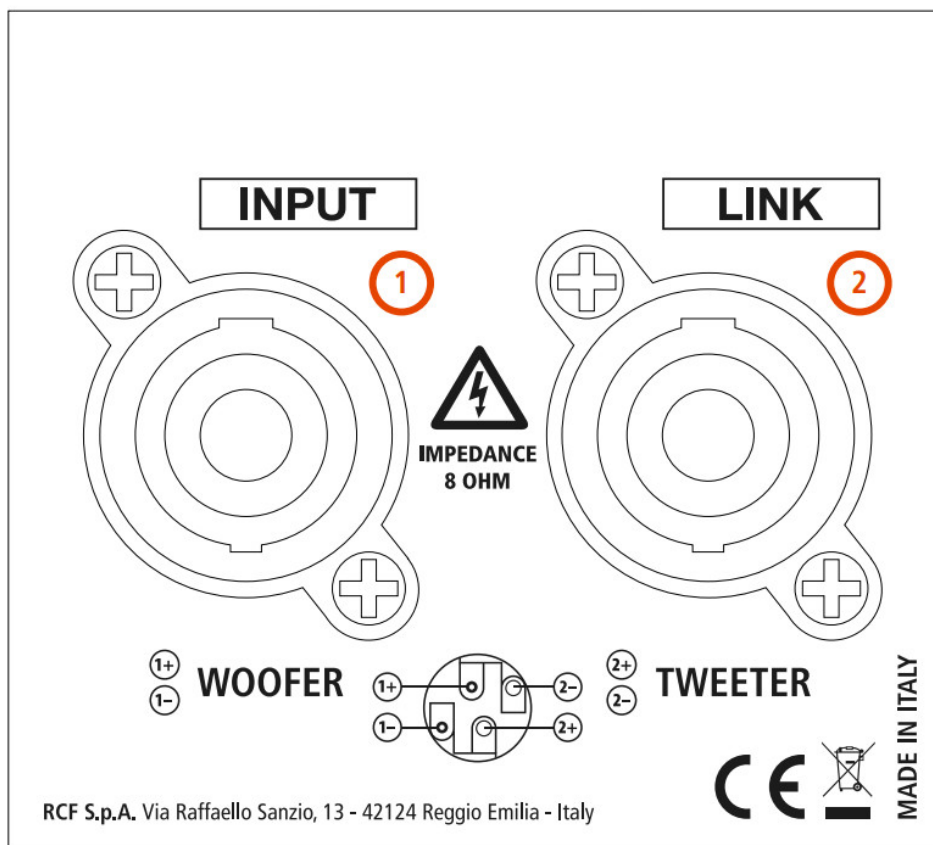
Horizontal directivity: 22.5°
Vertical directivity: 90°



Q 15-P

Horizontal directivity: 22.5°
Vertical directivity: 40°

CONNECTIONS



THE REAR PANEL

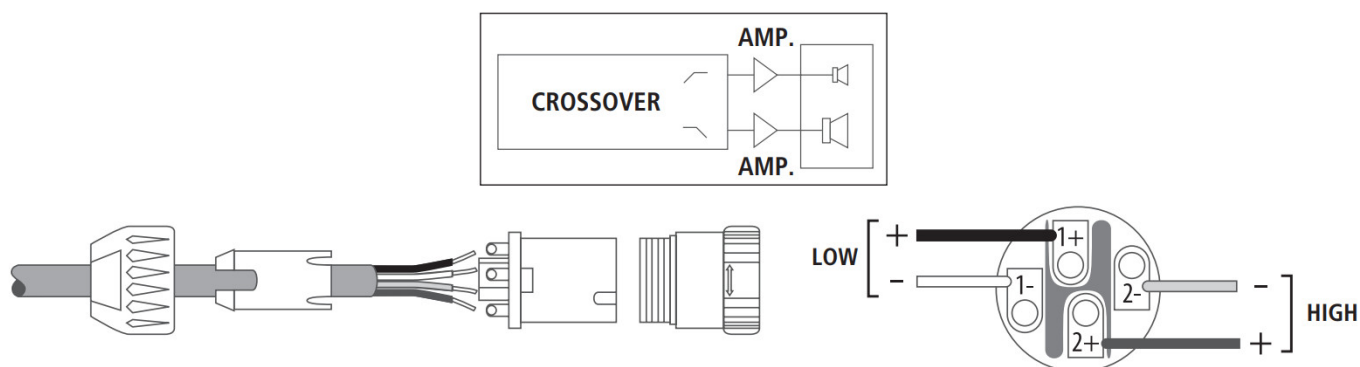
The rear panel displays 2 sockets, both for 'Neutrik Speakon NL4' (4-pole) plugs:

1. The INPUT socket receives the signal from the amplifier
2. The LINK socket can be used to link another speaker

'BI-AMP' MODE

The speaker must be powered by two amplifiers (one for the low frequency, one for the high frequency) and an external crossover is required.

Check in the specification table the impedance of both ways, their power, and the suggested crossover frequency.



CONNECTIONS

- Low-frequency amplifier + output to the pin 1+ of the SPEAKON connector
- Low-frequency amplifier – output to pin 1- of the SPEAKON connector
- High-frequency amplifier + output to the pin 2+ of the SPEAKON connector
- High-frequency amplifier – output to pin 2- of the SPEAKON connector



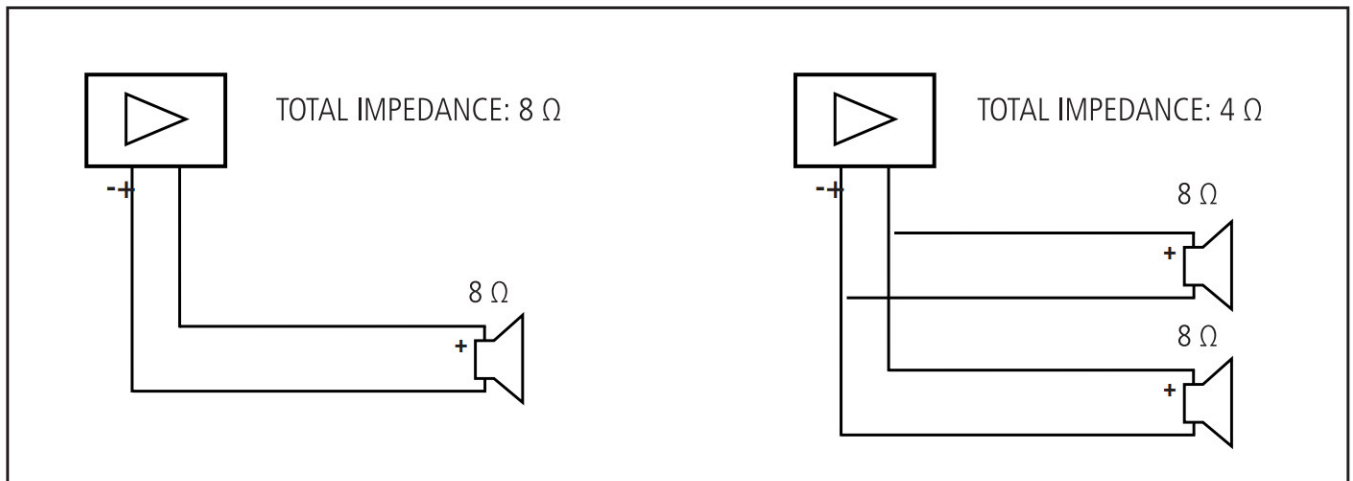
WARNING! CAUTION! Loudspeaker connections should be only made by qualified and experienced personnel having the technical know-how or enough specific instructions (to ensure that connections are made correctly) in order to prevent any electrical danger.

To prevent any risk of electric shock, do not connect loudspeakers when the amplifier is switched on.

Before turning the system on, check all connections and make sure there are no accidental short circuits.

The entire sound system shall be designed and installed in compliance with the current local laws and regulations regarding electrical systems.

NOTES ABOUT LOW IMPEDANCE CONNECTIONS

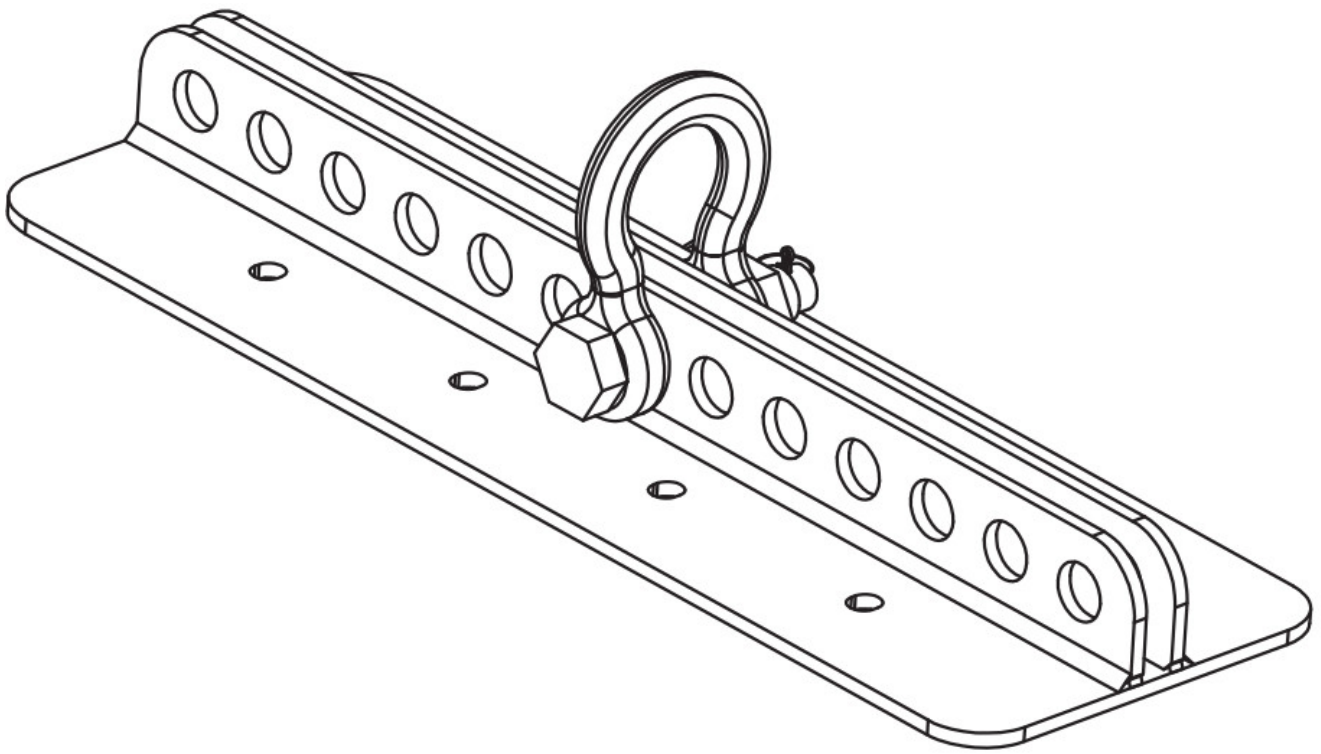


WARNING! CAUTION!

- The total loudspeaker impedance must not be lower than the amplifier output impedance. Note: a loudspeaker total impedance equal to the amplifier output one permits to get the maximum deliverable power (but a higher loudspeaker impedance entails less power).
- The total loudspeaker power shall be adequate for the maximum deliverable power of the amplifier.
- The loudspeaker line shall be short (for long distances, it may be necessary to use cables with large cross-section wires).
- Always use cables having wires with an adequate cross-section, considering the cable length and the total loudspeaker power.
- Loudspeaker lines must be kept separated from the main cables, microphone cables, or others, in order to avoid inductive phenomena that may cause hum or noises.
- Use loudspeaker cables with twisted wires to reduce hum caused by inductive effects due to coupling with electromagnetic fields.
- Do NOT connect the low impedance input directly to 70 / 100 V constant voltage lines.

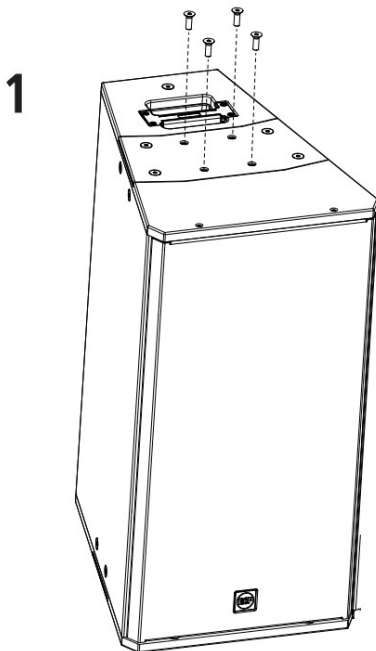
HORIZONTAL HANGING

Up to 4 x Q, 15 can be hanged horizontally by using the horizontal flybar FLY BAR FL-B H Q 15.

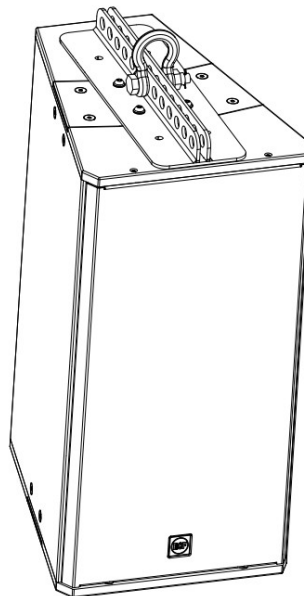


HORIZONTAL HANGING OF 1 SPEAKER

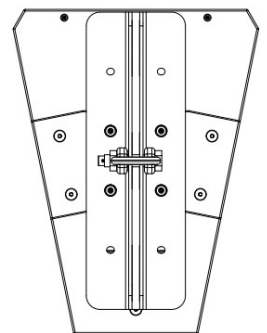
1. Unscrew the 4 central screws from the Top Plate
2. Secure the Flybar with the 4 x M10 screws provided



2



TOP VIEW

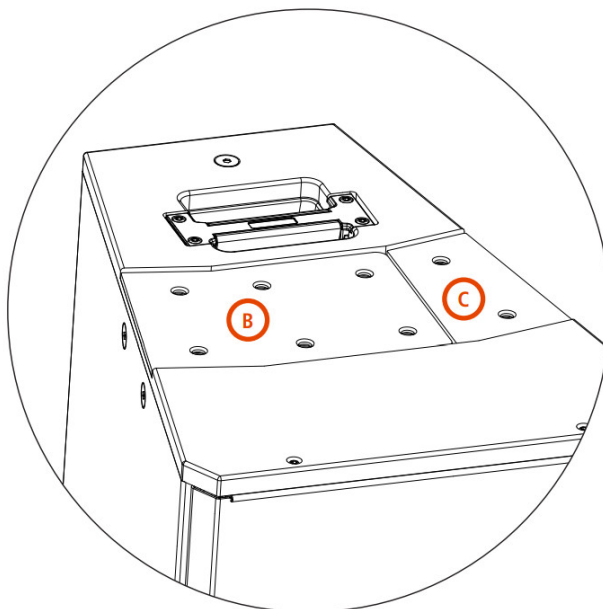
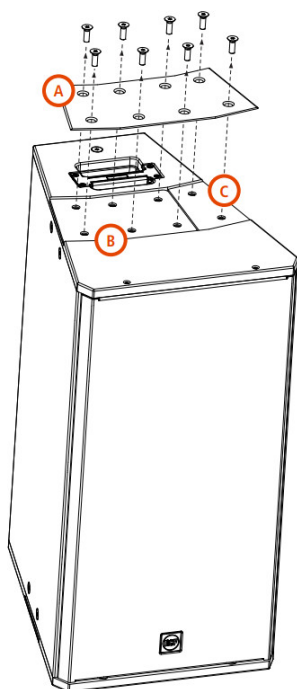


HORIZONTAL HANGING OF 2 OR MORE SPEAKERS

Unscrew the 8 screws from Top Plate A and remove them. There are 2 plates below the Top Plate:

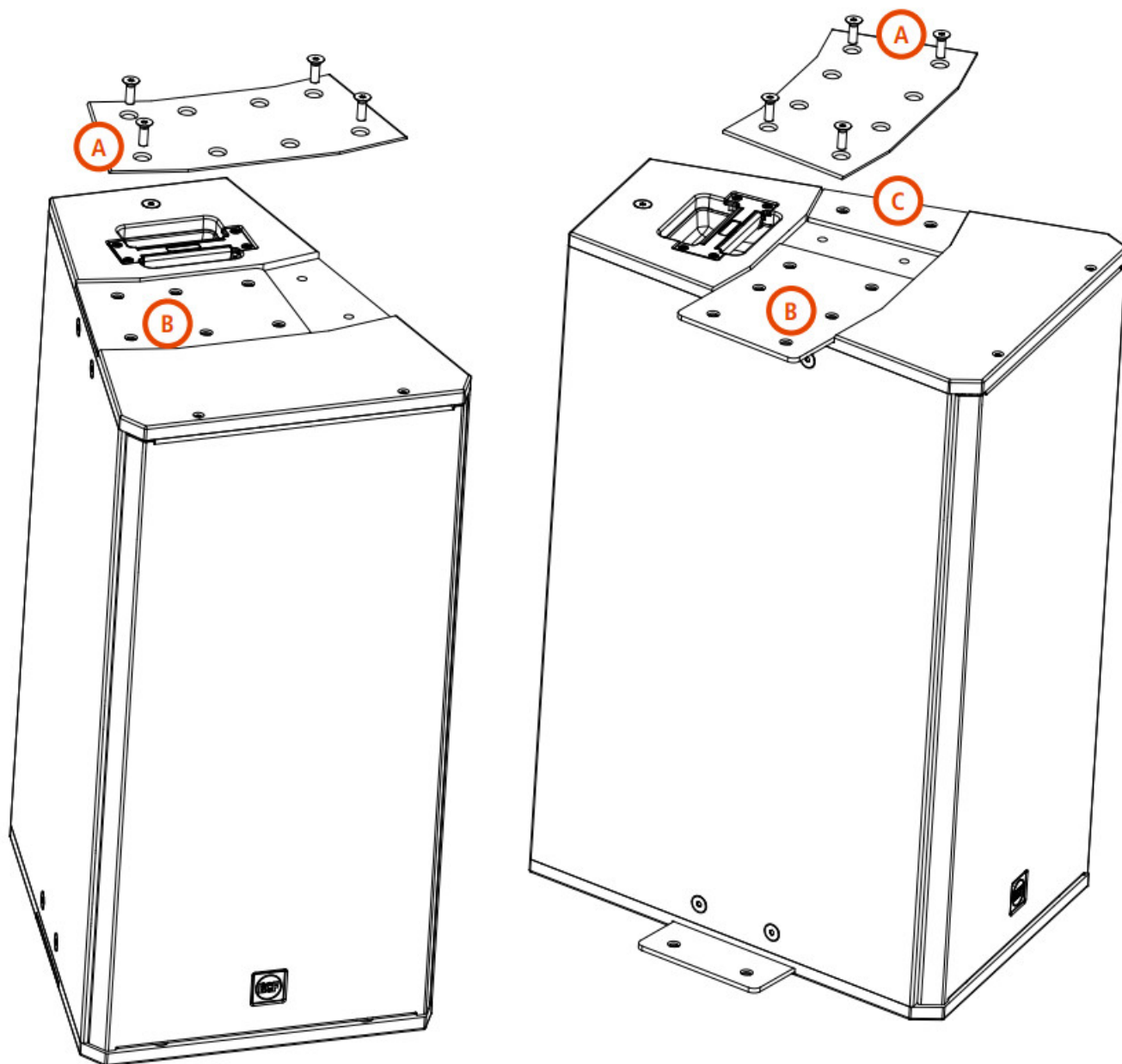
B a Link Plate (with 6 holes)

C an External Plate (with 2 holes)

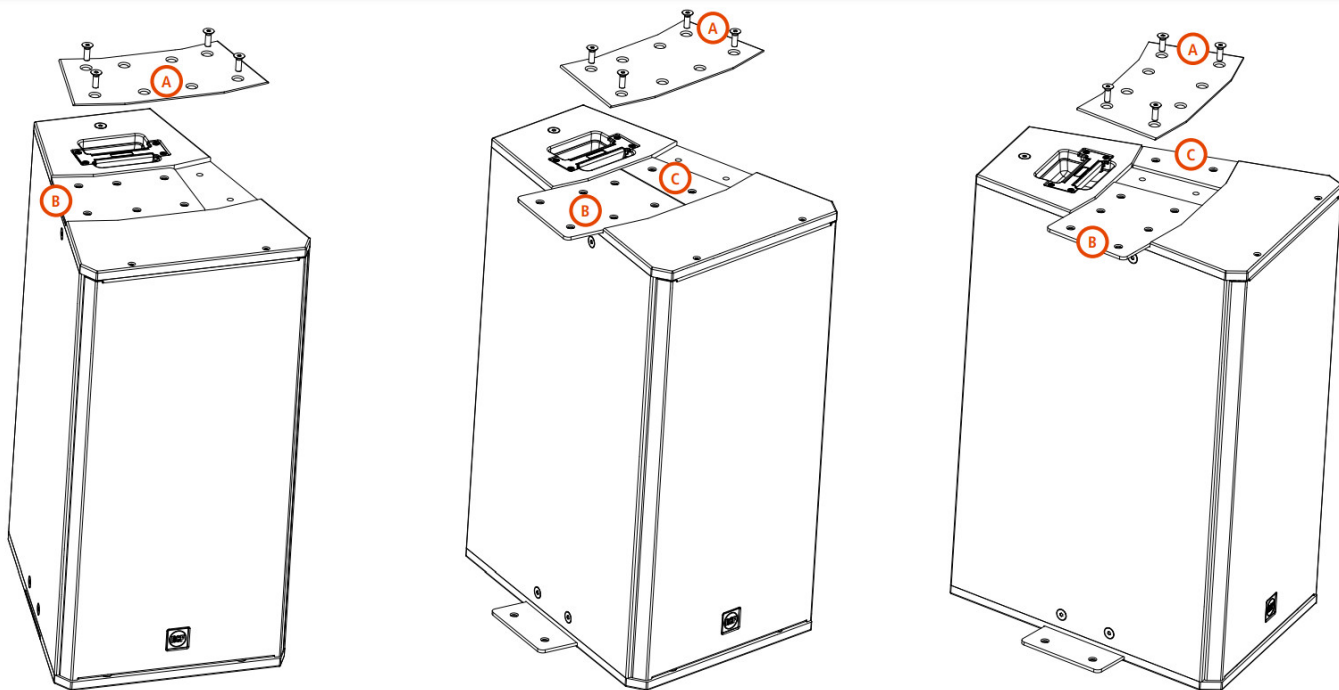


These two plates are designed to be moved from their position in order to link another speaker on its side depending on the configuration wanted🔗

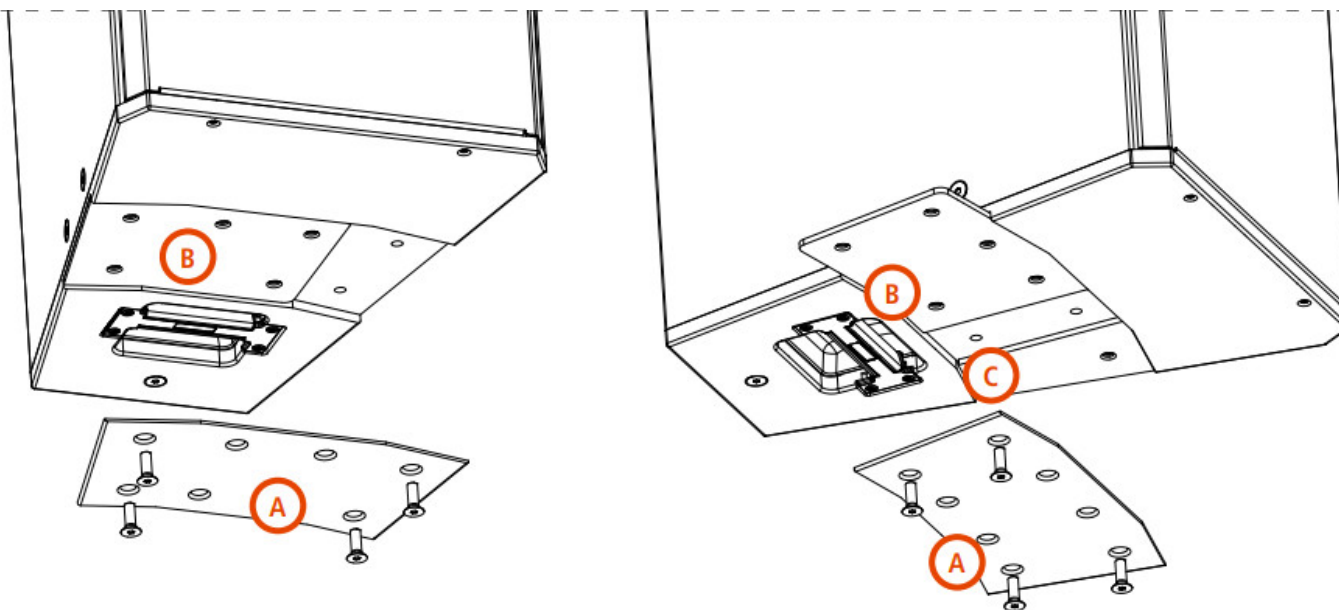
For example: for a 2 speakers horizontal configuration, this is how the two plates must be positioned:



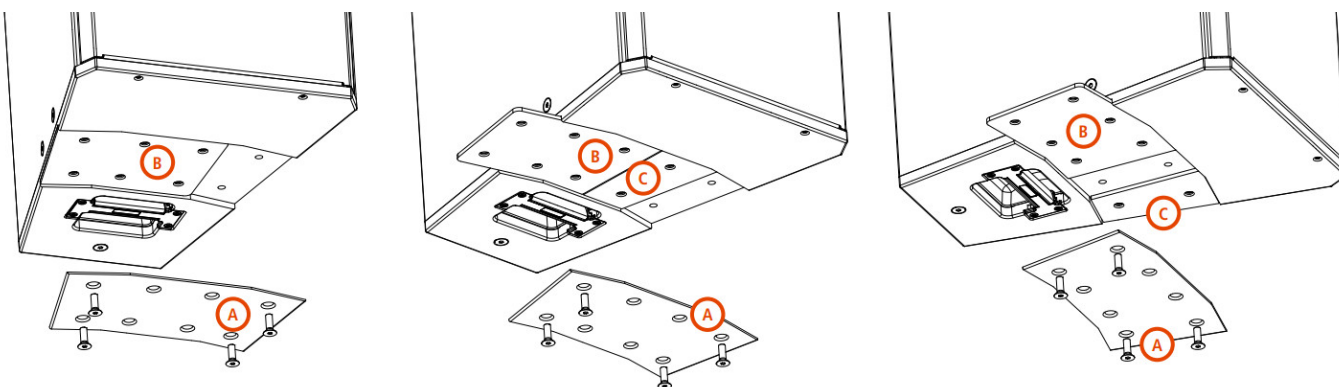
For example: for a 3 speakers configuration, this is how the two plates must be positioned:



NOTE: The exact same operations done on the upper side of the speaker must be done on the bottom side too.
BOTTOM VIEW of a 2 SPEAKERS CONFIGURATION



BOTTOM VIEW of a 3 SPEAKERS CONFIGURATION

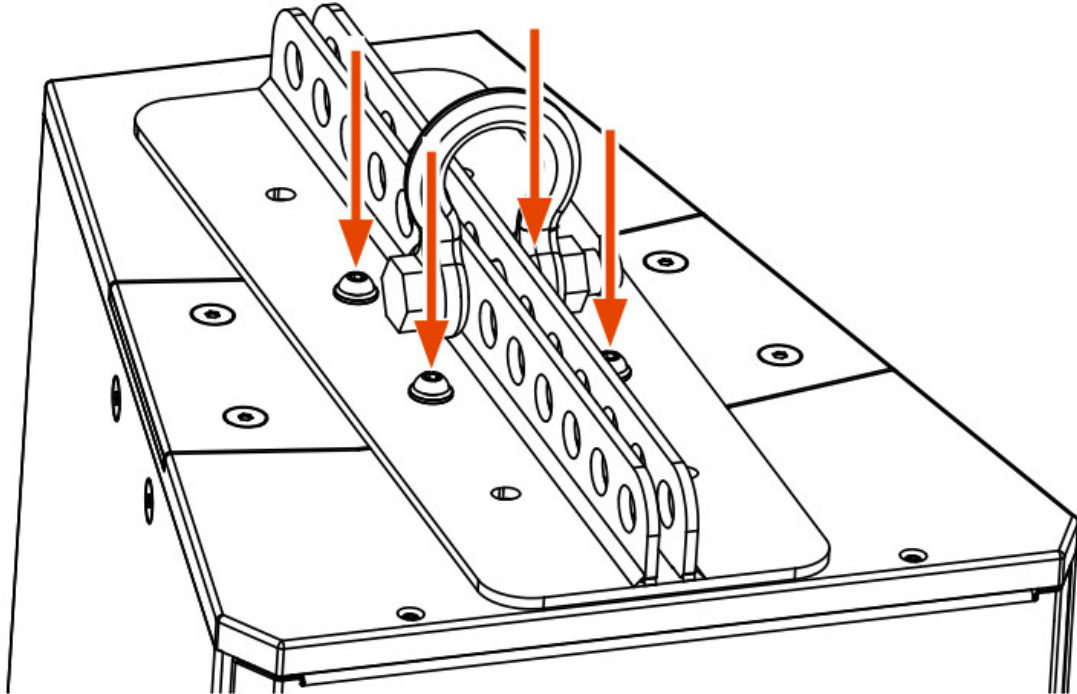




NOTE: Once chosen the right configuration the Top Plate must be always screwed back on its position, leaving the four middle holes free.

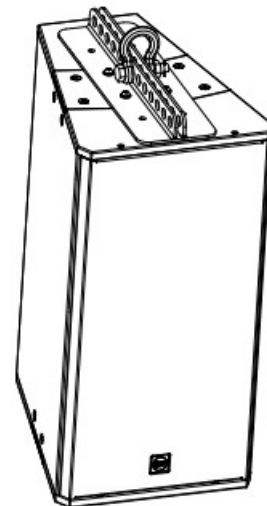
4.3 HORIZONTAL CONFIGURATIONS

Once screwed back the top plate, secure the horizontal flybar over the top plate by screwing (on the middle holes) the four M10 screws provided.

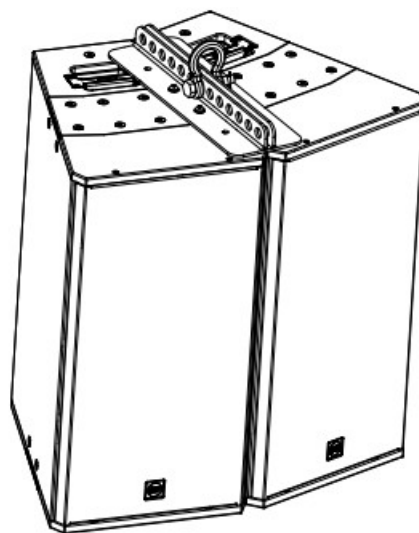
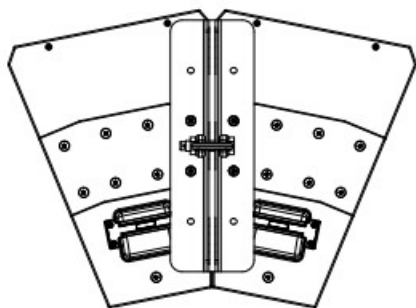


These are all 4 possible configurations by using one single Flybar:

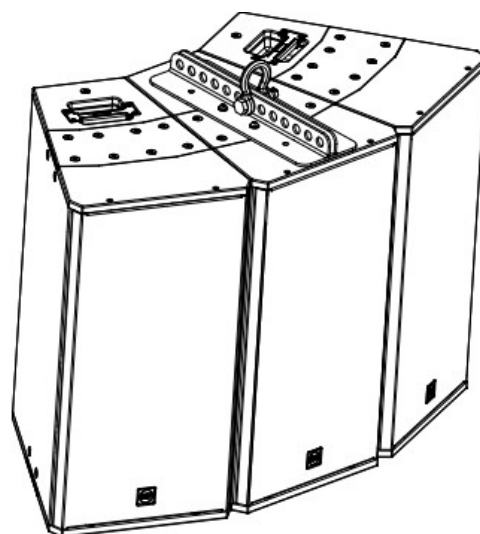
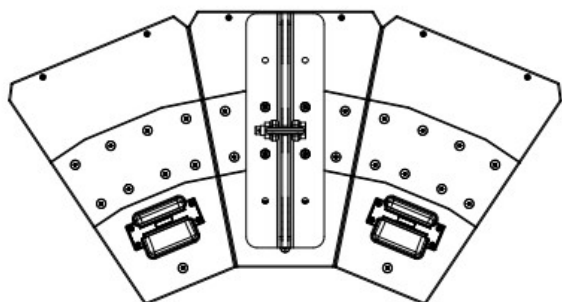
1 SPEAKER HORIZONTAL CONFIGURATION



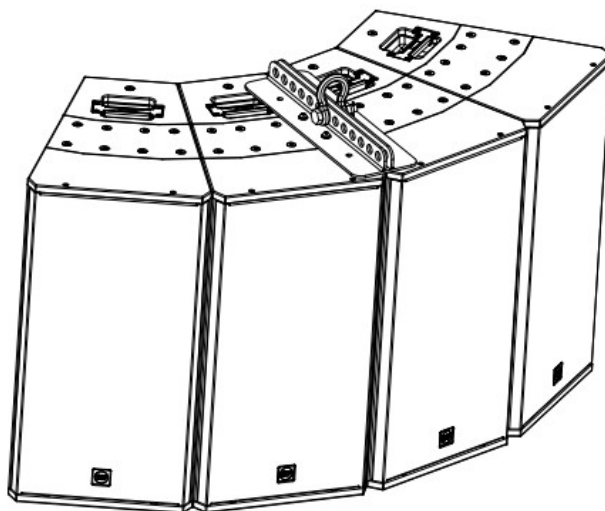
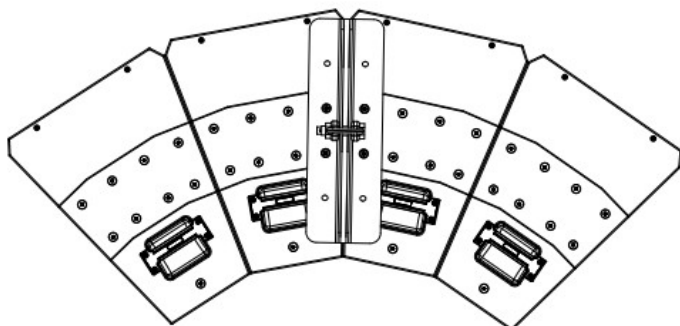
2 SPEAKERS HORIZONTAL CONFIGURATION



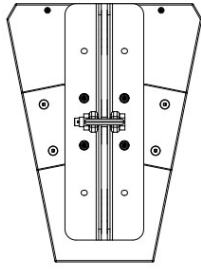
3 SPEAKERS HORIZONTAL CONFIGURATION



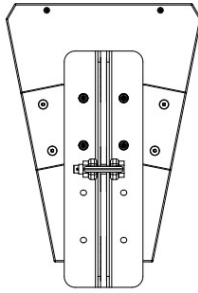
4 SPEAKERS HORIZONTAL CONFIGURATION



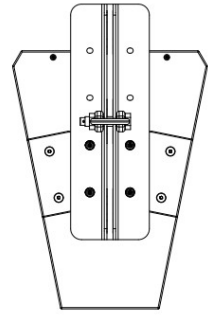
NOTE: The Flybar can be positioned backward or forward to even increase the desired inclination.



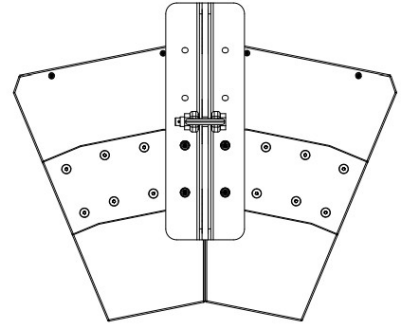
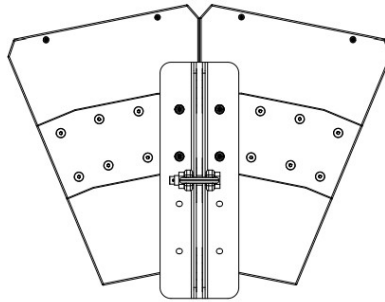
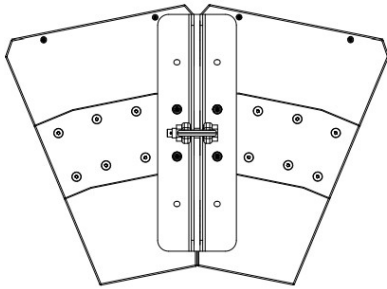
FLYBAR ON
CENTRAL
POSITION



FLYBAR ON
BACKWARD
POSITION



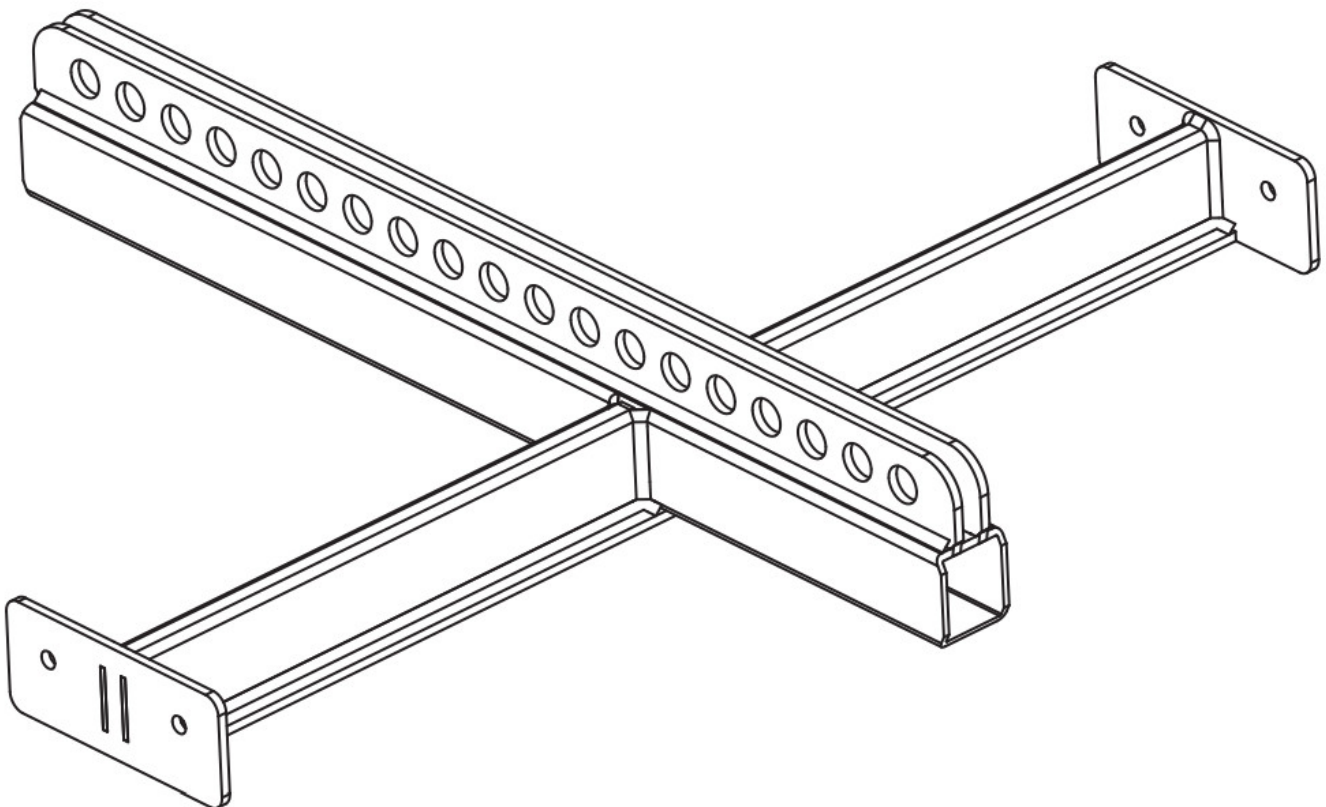
FLYBAR ON
FORWARD
POSITION



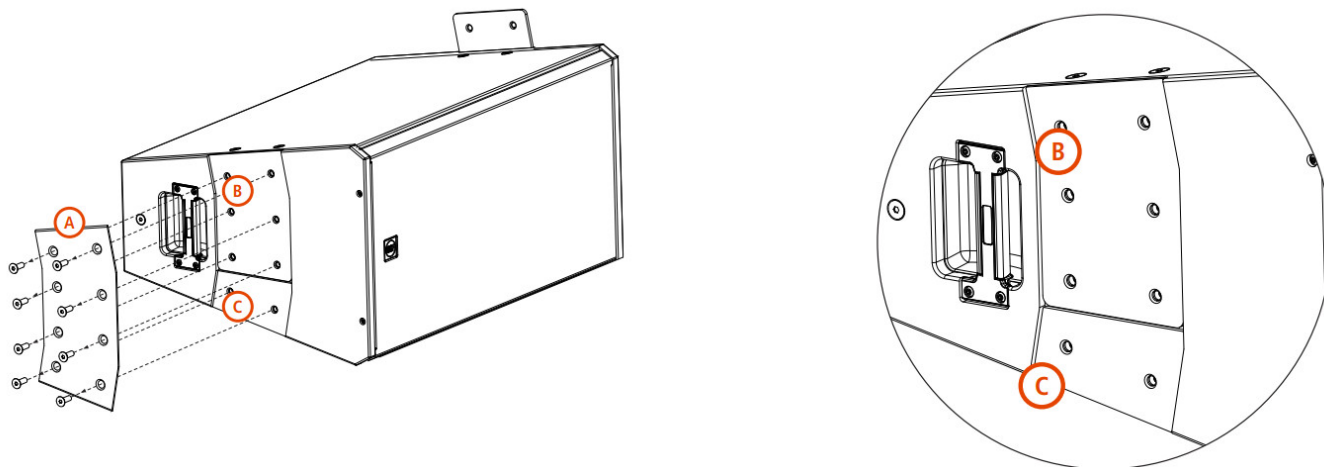
CAUTION: do not hang more than 4 speakers to one single horizontal flybar. To hang 5 more speakers, more horizontal fly bars are required.

VERTICAL HANGING

4 x Q 15 can be hung vertically by using the vertical flybar FLY BAR FL-B V Q 15.

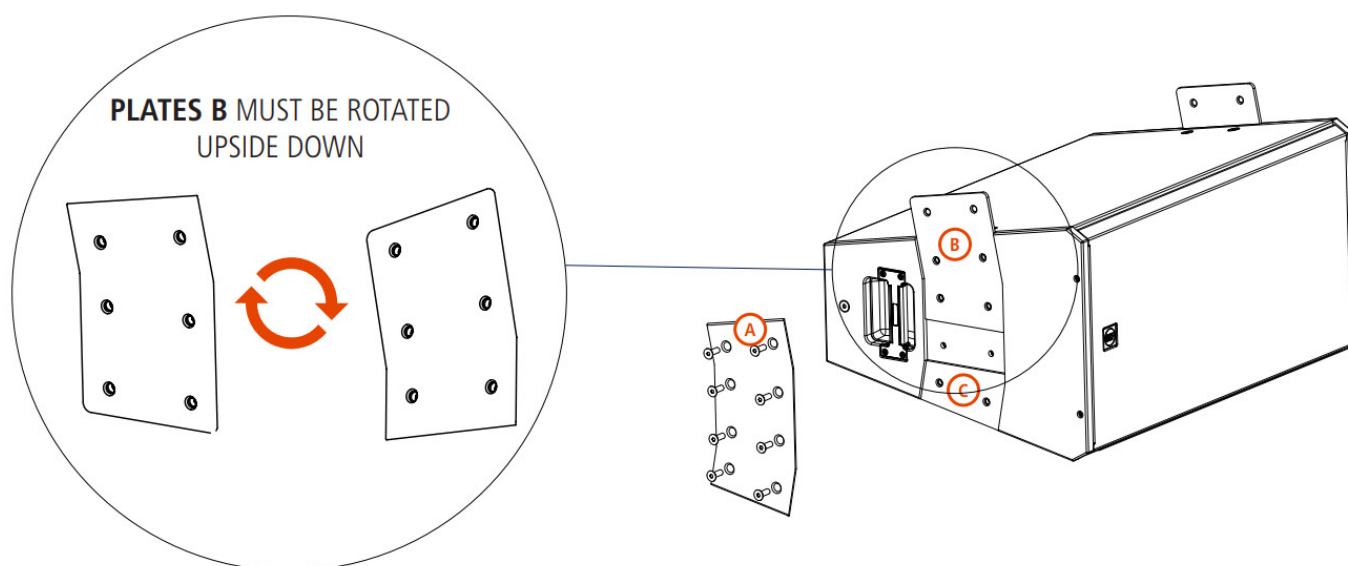


To vertically hang a series of Q 15 speakers, unscrew the 8 screws from the Top Plate A and remove it.
 As described in chapter 4.1 (Horizontal hanging of 2 or more speakers), two plates are located under the top one:
 B a Link Plate (with 6 holes)
 C an External Plate (with 2 holes)

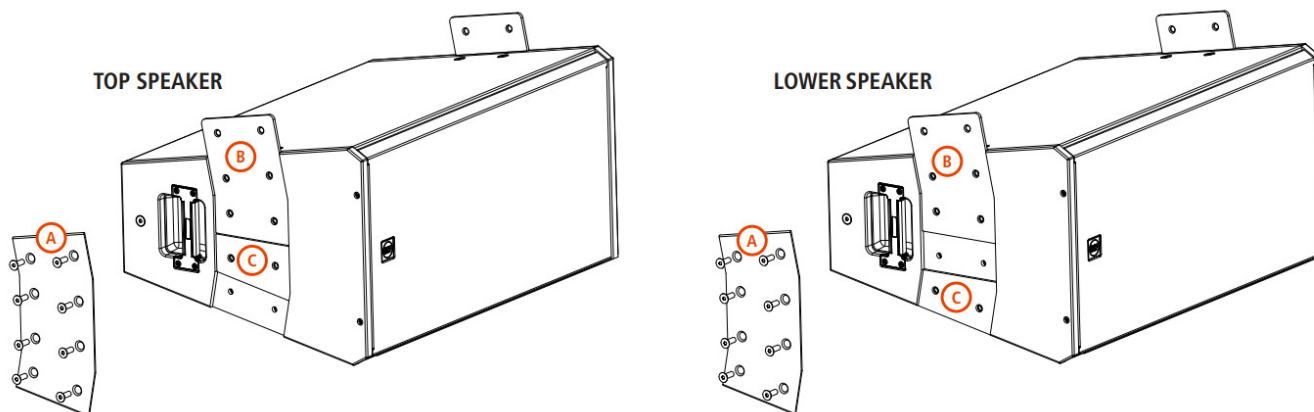


These two plates are designed to be moved from their position in order to link another speaker on its side depending on the configuration wanted.

Example: for a 1 speaker vertical configuration, this is how the two plates must be positioned:

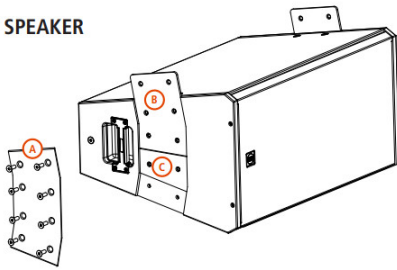


For example: for a 2 speakers vertical configuration, this is how the plates must be positioned:

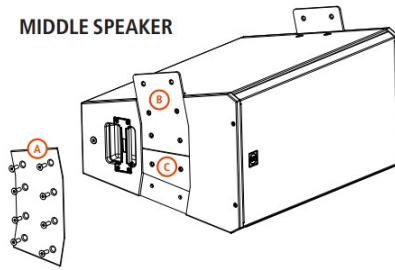


For example: for a 3 speakers vertical configuration, this is how the plates must be positioned:

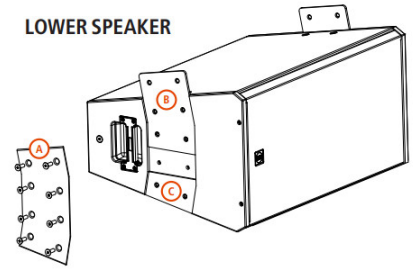
TOP SPEAKER



MIDDLE SPEAKER



LOWER SPEAKER



NOTE: The exact same operations must be done on both sides of the speaker

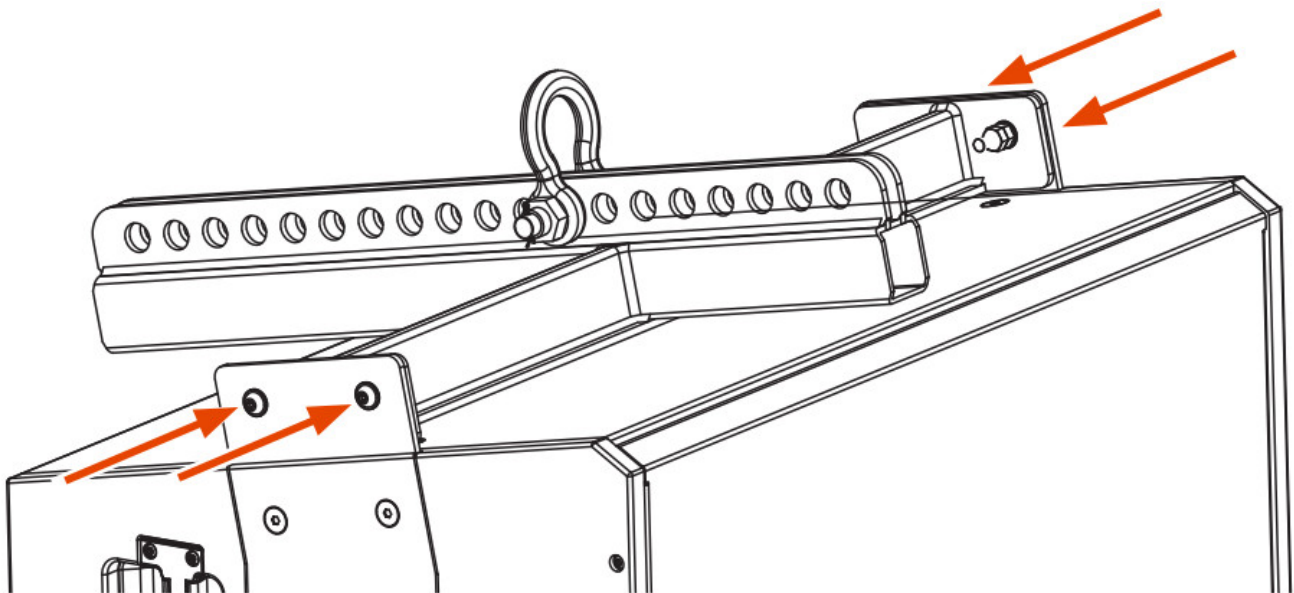


NOTE: Once chosen the right configuration the Top Plate must be always screwed back into its position.

5.1 VERTICAL CONFIGURATIONS

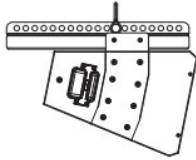
Once screwed back the top plate, secure the vertical flybar on the exposed portion of the Link Plate with the four M10 bolts provided.

Secure every bolt with the eight nuts provided (two nuts for each bolt).

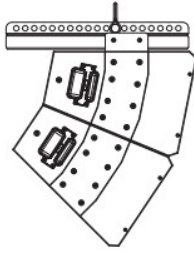


These are the possible horizontal configurations by using one single Flybar:

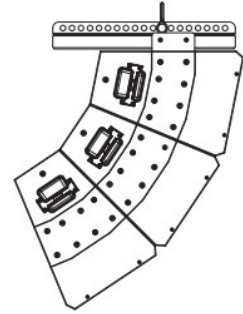
1 SPEAKER



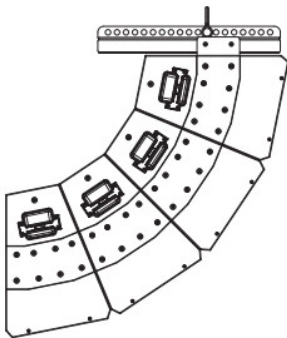
2 SPEAKERS



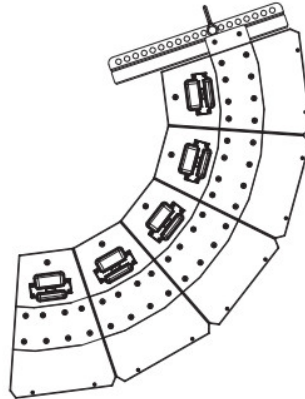
3 SPEAKERS



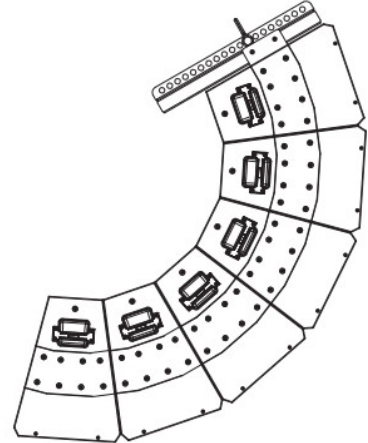
4 SPEAKERS



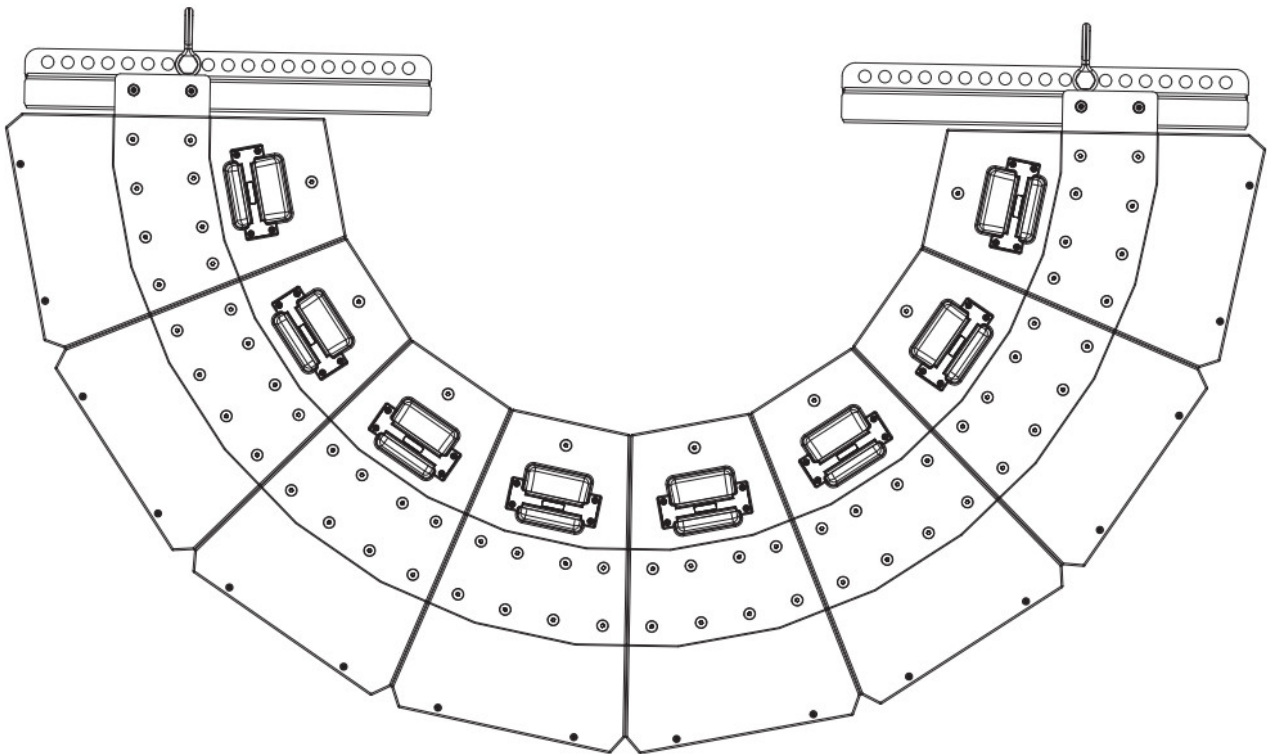
5 SPEAKERS



6 SPEAKERS



CAUTION: do not hang more than 6 speakers to one single vertical flybar.
An additional 8 speakers vertical configuration can be done by using two vertical fly bars.

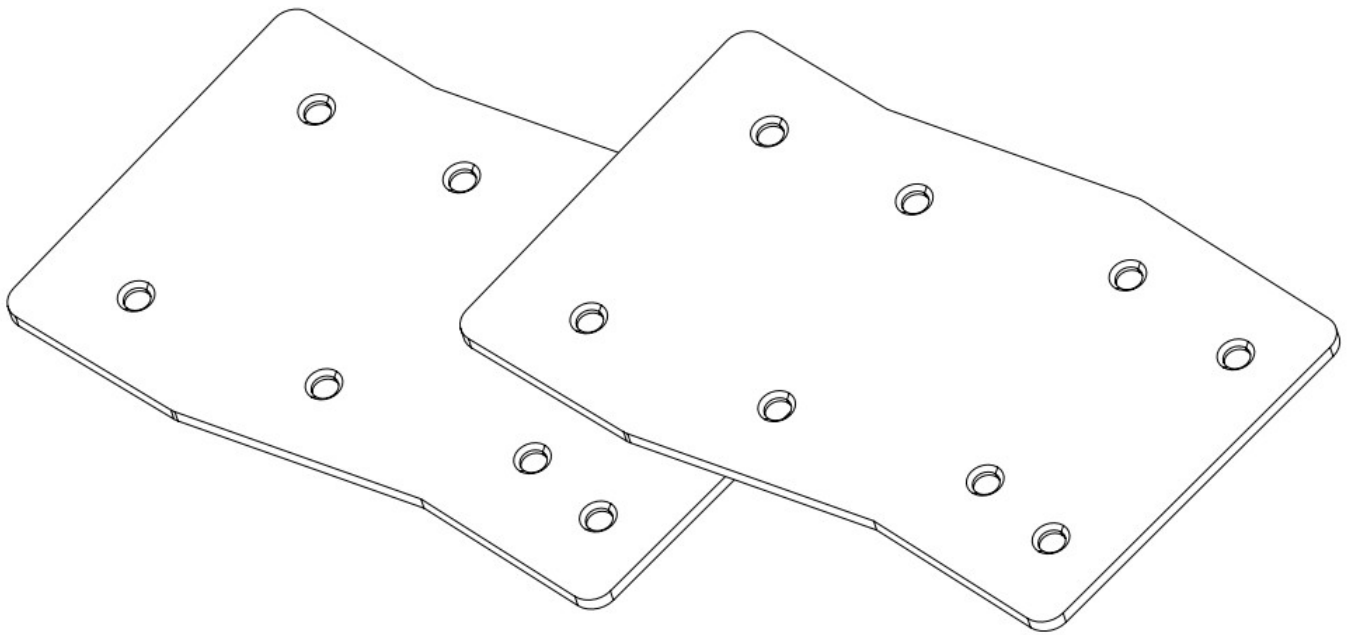


VERTICAL HANGING WITH A 10° ANGLE

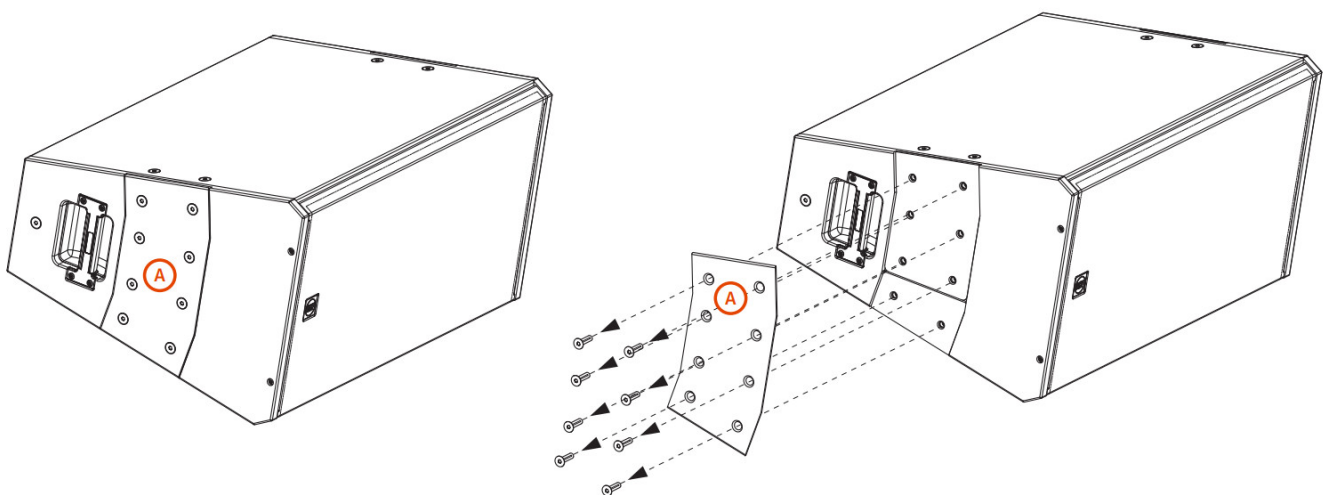
Using the C-BR 10° it is possible to reduce the opening angle from 22.5° to 10°.

PACKAGE CONTENT:

– 2 X C-BR 10° BRACKETS



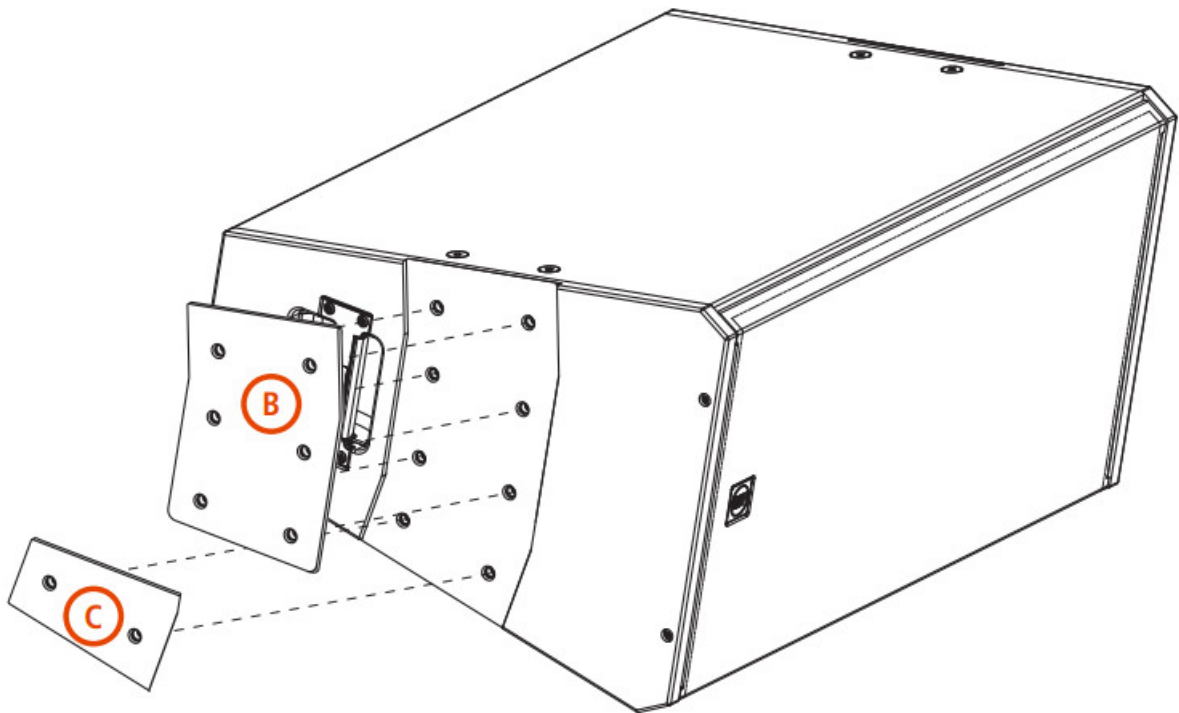
1. Unscrew the 8 screws from the Top Plate A and remove it.



2. Remove the two plates located under the top one:

B a Link Plate (with 6 holes)

C an External Plate (with 2 holes)



3. Place the C-BR at 10° D as shown in the pictures below.

- On the top and following speakers of the cluster, the External Plate C must be placed next to the C-BR at 10°, as shown in FIGURE 1.
- On the bottom speaker of the cluster the External Plate C must be placed as shown in FIGURE 2.

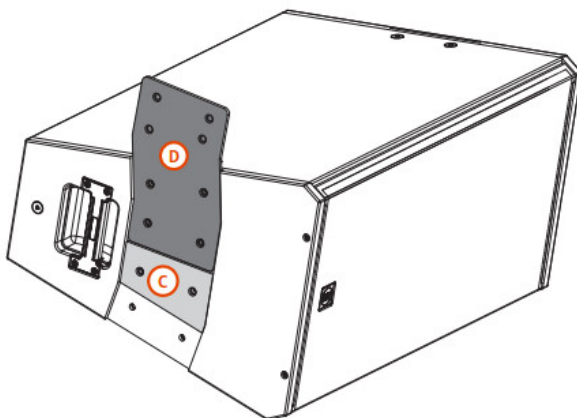


FIGURE 1
(Top and following speakers)

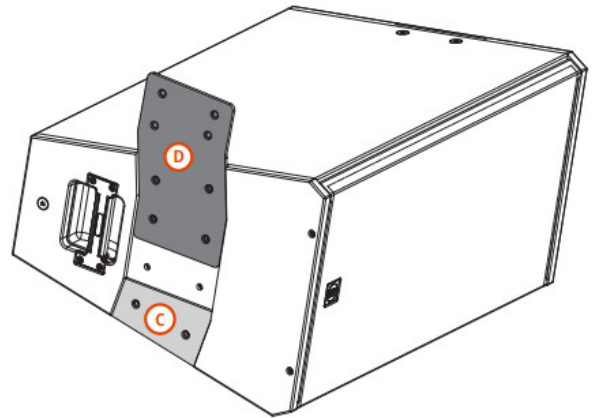
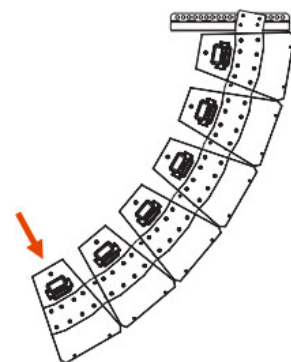
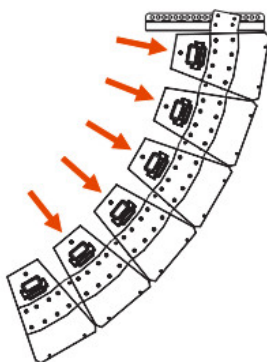
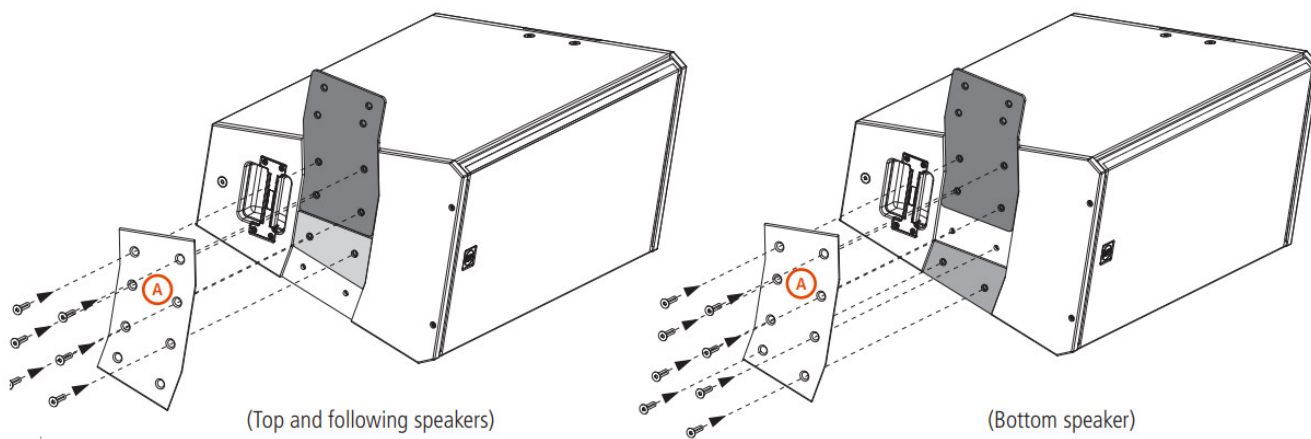


FIGURE 2
(Bottom speaker)



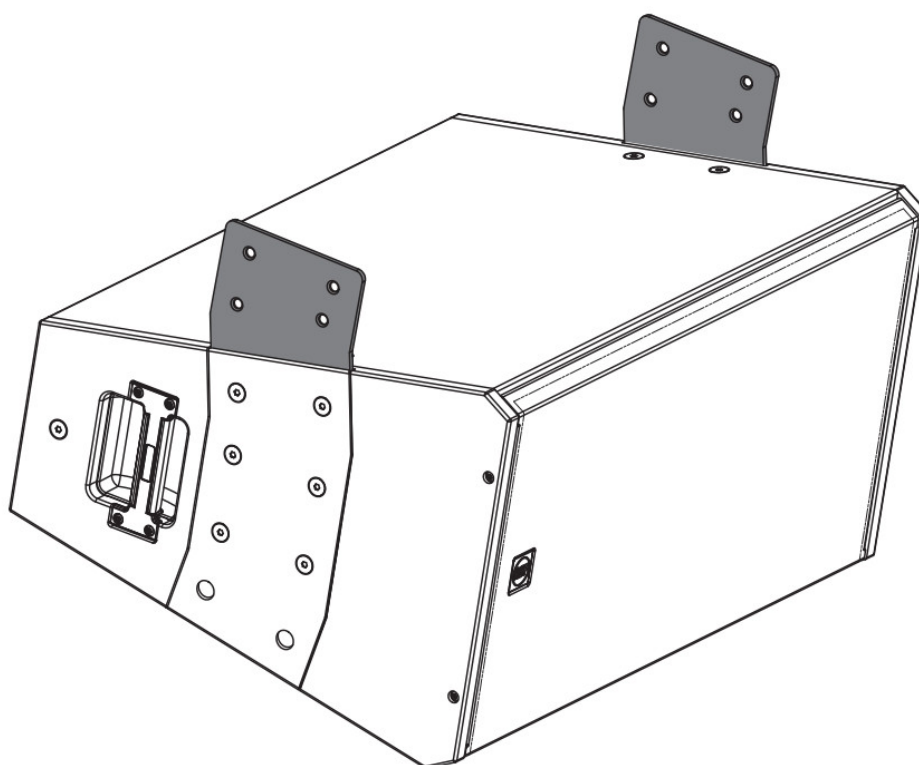
4. For the top and following speakers, place back the Top Plate in its position and screw it back with only six screws, leaving the two bottom holes empty. For the Bottom speakers screw back the Top Plate with all 8 screws.



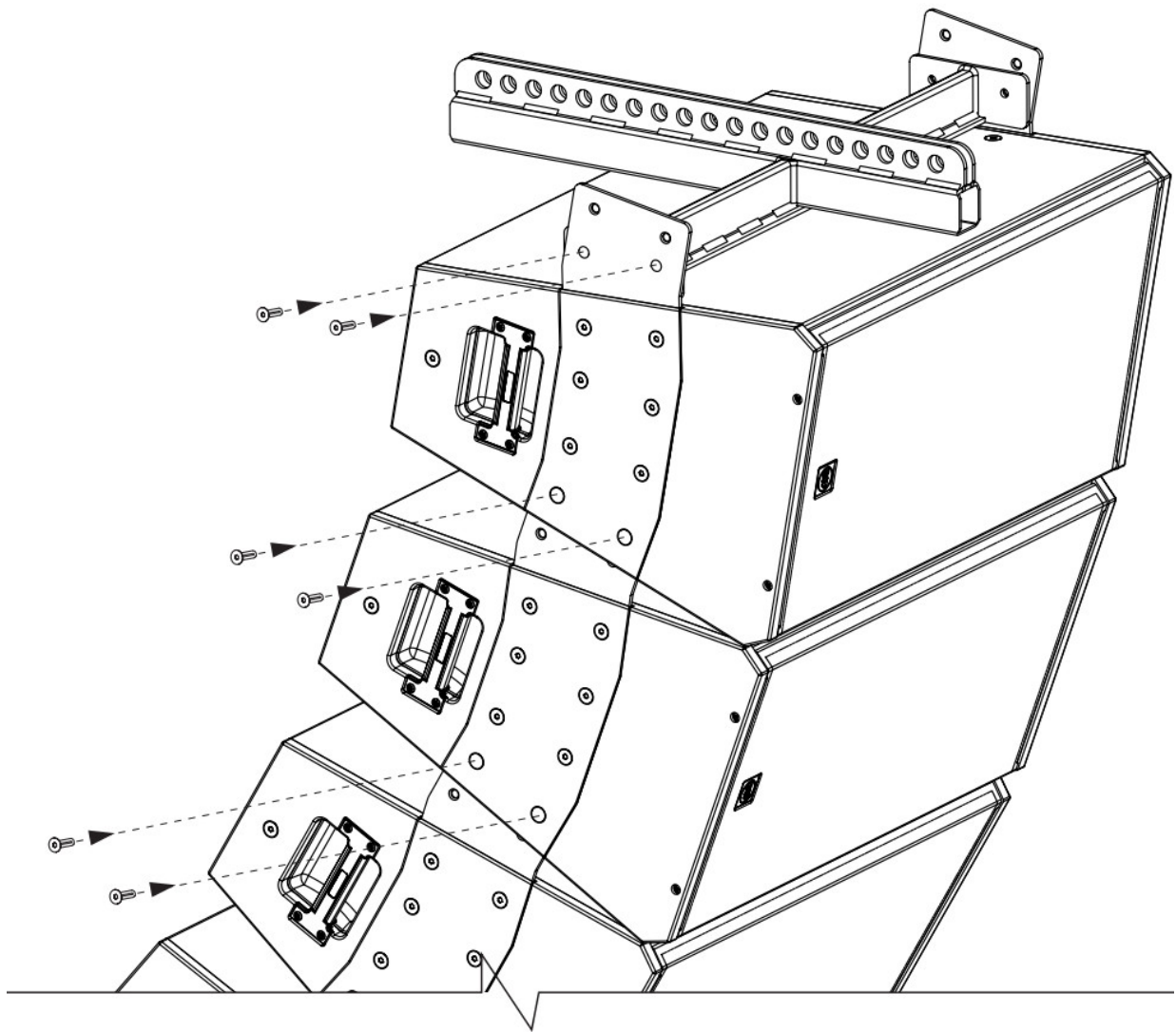
NOTE: The Top Plate A must be always screwed back on its position.



NOTE: The exact same operations must be done on both sides of the speaker



5. Now place the Vertical Fly Bar on top of a Q15 speaker and screw it with the 4 screws provided.
The protruding part of the 10° bracket of the lower speaker must be inserted on the respective seat on the upper speaker. Then depending on which angle is chosen, screw in the last two screws.



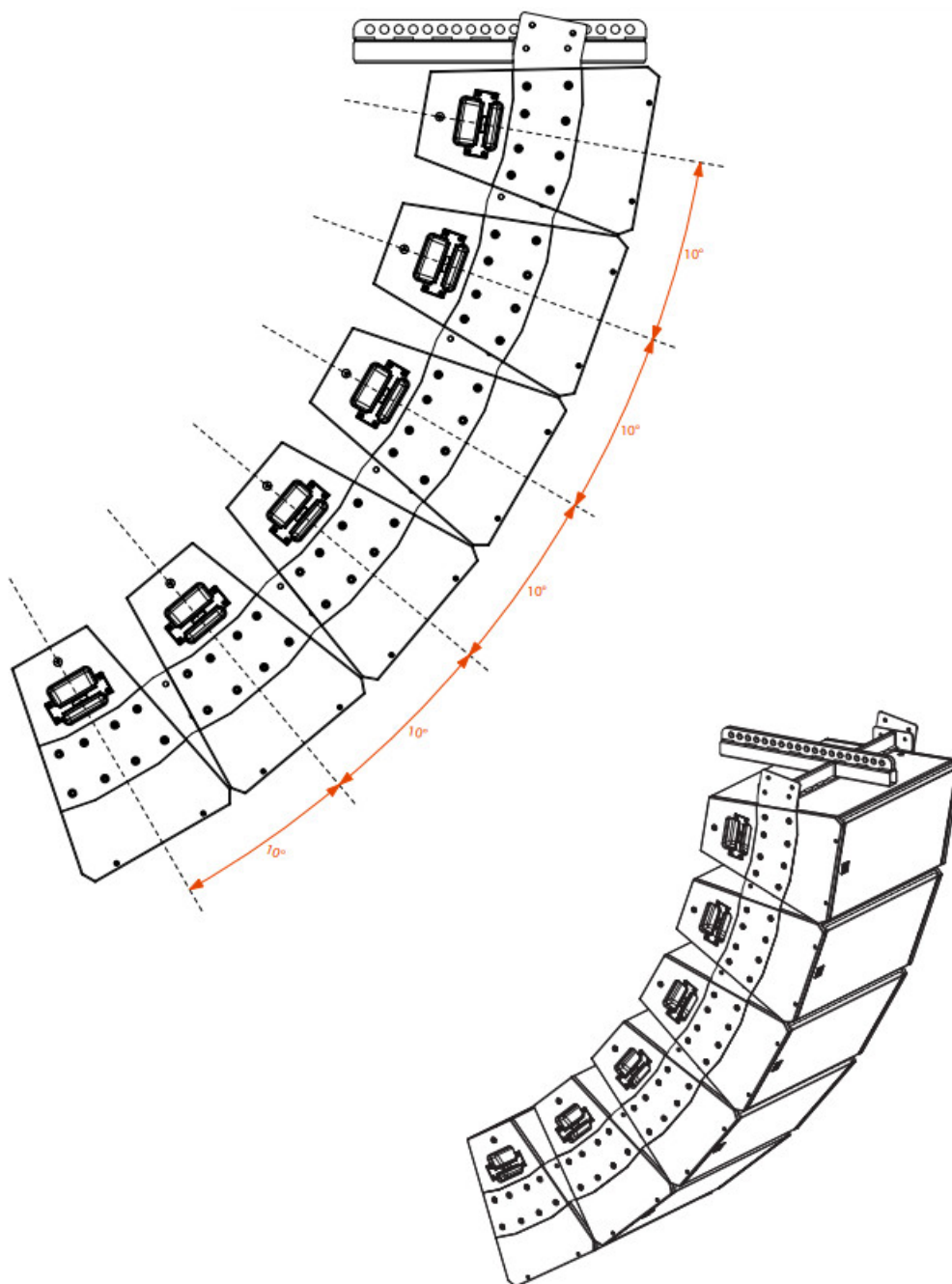
NOTE: The exact same operations must be done on both sides of the speaker

EXAMPLES OF CONFIGURATIONS

Now with the vertical flybar FLY BAR FL-B V Q 15, you can hang vertically multiple Q 15 speakers (maximum 6).

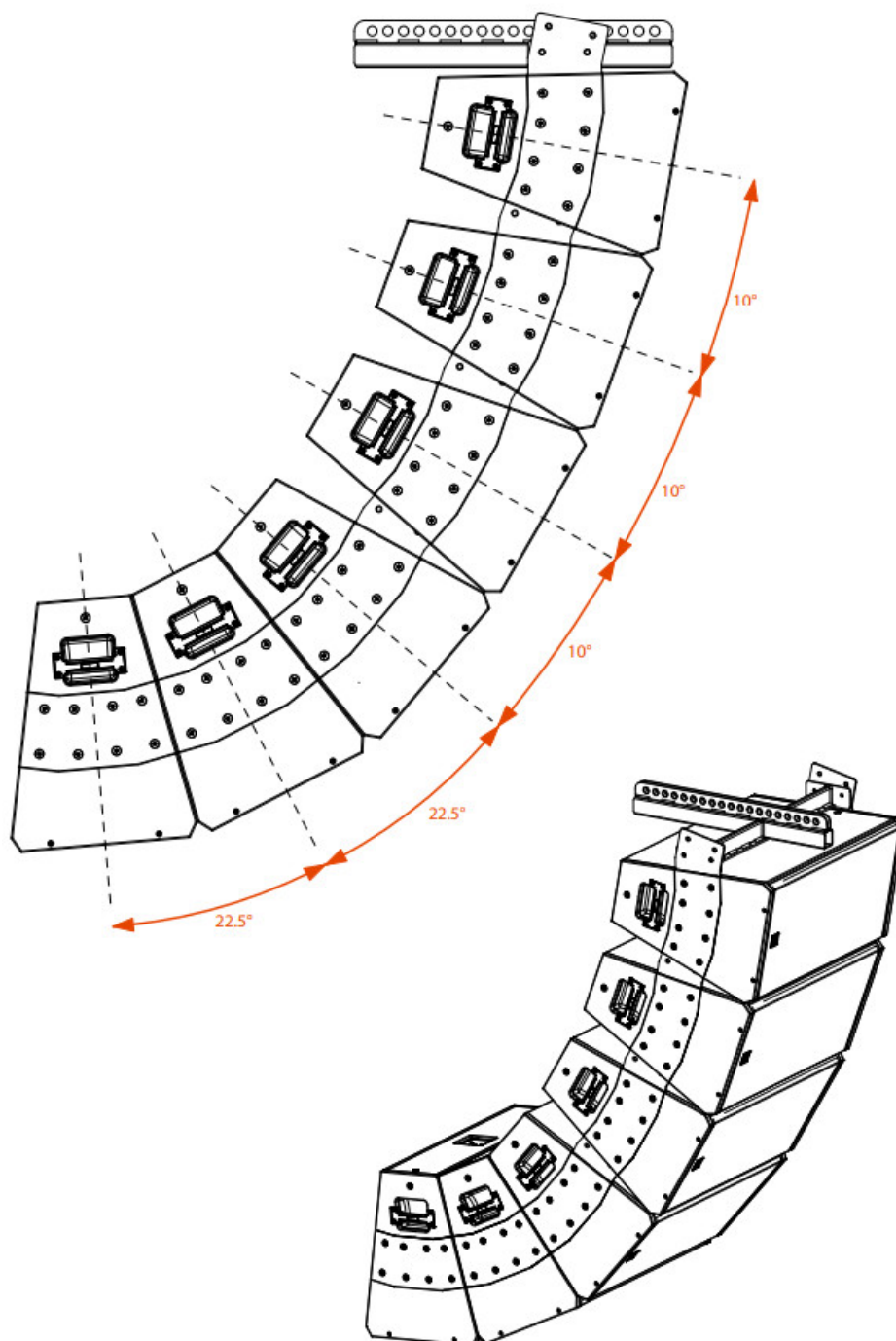
EXAMPLE

6 X 10° modules

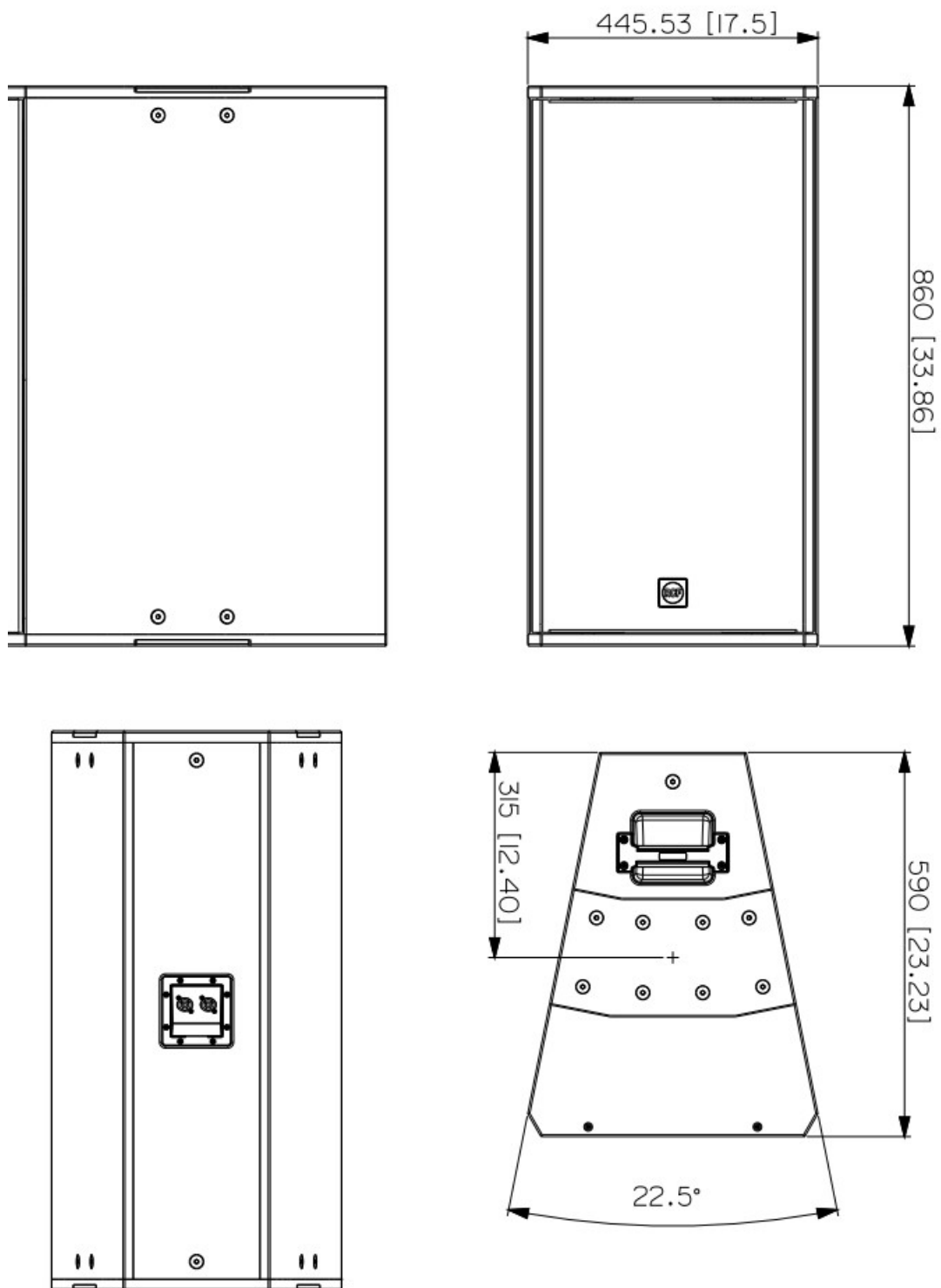


EXAMPLE

3 X 10° modules + 3 x 22.5° modules



DIMENSIONS





RCF products are continually improved. All specifications are therefore subject to change without notice. We recommend you to regularly check the RCF website for the latest version of this document

SPECIFICATIONS

Acoustical specifications	Frequency Response (-10dB): Max SPL @ 1m: Horizontal coverage angle: Vertical coverage angle: Directivity index Q:	45 Hz ÷ 20000 Hz 138 dB 22,5° 60° (Q 15), 90° (Q 15-L), 40° (Q 15-P) 20
Power section	Nominal Impedance (ohm): Power Handling: Peak Power Handling: Recommended Amplifier: Protections: Crossover Frequencies:	8 ohm 1500 W RMS 6000 W PEAK 3000 W Capacitor on Compression Driver 600 Hz
Transducers	Compression Driver: Nominal Impedance (ohm): Input Power Rating: Sensitivity: Woofer: Nominal Impedance (ohm): Input Power Rating: Sensitivity:	1 x 1.4" neo, 4.0" v.c 8 ohm 150 W AES, 300 W PROGRAM POWER 113 dB, 1W @ 1m 15" neo, 4.0" v.c 8 ohm 1350 W AES, 2700 W PROGRAM POWER 97 dB, 1W @ 1m
Input/Output section	Input connectors: Output connectors:	Speakon® NL4 Speakon® NL4
Standard compliance	CE marking:	Yes
Physical specifications	Cabinet/Case Material: Hardware: Handles: Grille:	Baltic birch plywood Side and rear array rigging point 2 Steel
Size	Height: Width: Depth:	446 mm / 17.56 inches 860 mm / 33.86 inches 590 mm / 23.23 inches

RCF S.p.A. Via Raffaello Sanzio, 13 – 42124 Reggio Emilia – Italy
Tel +39 0522 274 411 – Fax +39 0522 232 428 – e-mail: info@rcf.it – www.rcf.it

Documents / Resources

	<p>RCF Q 15 Two Way Point Source Modules [pdf] User Manual</p> <p>Q 15, Q 15-L, Q 15-P, Two Way Point Source Modules, Point Source Modules, Source Modules, Q 15, Modules</p>
	<p>RCF Q 15 Two Way Point Source Modules [pdf] Owner's Manual</p> <p>Q 15, Q 15-L, Q 15-P, Q 15 Two Way Point Source Modules, Two Way Point Source Modules, Point Source Modules, Source Modules, Modules</p>

Manuals+.