



***User's Manual***

# *WR series*

*WR-8826-FX / WR-8826-TFX / WR-6412-FX / WR-6415-FX  
WR-320-FX / WR-322S-FX / WR-121S-FX / WR-151S-FX*



Antes de utilizar el equipo, lea la sección "Precauciones de seguridad" de este manual. Conserve este manual para futuras consultas.

Before operating the device, please read the "Safety precautions" section of this manual. Retain this manual for future reference.

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### Cajas acústicas pasivas / Passive loudspeaker enclosures

El signo de exclamación dentro de un triángulo indica la existencia de importantes instrucciones de operación y mantenimiento en la documentación que acompaña al producto. Conserve y lea todas estas instrucciones. Siga las advertencias.



The exclamation point inside an equilateral triangle is intended to alert the users to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product. Heed all warnings. Follow all instructions. Keep these instructions.

El doble cuadrado indica equipo de Clase II.



The double square indicates Class II device.

Las especificaciones se encuentran en la etiqueta de la parte posterior del producto.

The specifications can be found on the rear label of the product.

No exponga este equipo a la lluvia o humedad sin el protector de lluvia recomendado. No use este aparato cerca del agua (piscinas y fuentes, por ejemplo). No exponga el equipo a salpicaduras sin el protector de lluvia recomendado, ni coloque sobre él objetos que contengan líquidos, tales como vasos y botellas.

Do not expose this device to rain or moisture without the rain protector supplied. Do not use this apparatus near water (for example, swimming pools and fountains). Do not place any objects containing liquids, such as bottles or glasses, on the top of the unit. Do not splash liquids on the unit without the rain protector supplied.

Equipo IP-56 (IP-54 en los modelos WR-6412) según la norma IEC 60529: 1989 + M1 @ 1999 con un ángulo horizontal mínimo de -2°.

IP-56 equipment (IP-54 for WR-6412 models) according IEC 60529: 1989 + M1 @ 1999. Minimum horizontal angle -2°.

Este símbolo indica que el presente producto no puede ser tratado como residuo doméstico normal, sino que debe entregarse en el correspondiente punto de recogida de equipos eléctricos y electrónicos.



This symbol on the product indicates that this product should not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment.

Equipo diseñado para funcionar entre -25°C y 45°C con una humedad relativa máxima del 95%.

Working temperature ranges from -25°C to 45°C with a relative humidity of 95%.

El cableado exterior conectado al equipo requiere de su instalación por una persona instruida o el uso de cables flexibles ya preparados.

The outer wiring connected to the device requires installation by an instructed person or the use of a flexible cable already prepared.

El equipo cuenta con dos conectores de entrada en paralelo para facilitar la conexión de varias cajas en paralelo.

Note that the two Speakon input connectors are wired in parallel to provide easy parallel connection of several enclosures.

No emplace altavoces en proximidad a equipos sensibles a campos magnéticos, tales como monitores de televisión o material magnético de almacenamiento de datos.



Do not place loudspeakers in proximity to devices sensitive to magnetic fields such as television monitors or data storage magnetic material.

El colgado del equipo sólo debe realizarse utilizando los herrajes de colgado recomendados y por personal cualificado.

The appliance should be flown only from the rigging points and by qualified personnel.

No existen partes ajustables por el usuario en el interior de este equipo. Cualquier operación de mantenimiento o reparación debe ser realizada por personal cualificado. Es necesario el servicio técnico cuando el equipo se haya dañado de alguna forma, como que haya caído líquido o algún objeto en el interior del aparato, haya sido expuesto a lluvia o humedad, no funcione correctamente, haya recibido un golpe o su cable de red esté dañado.

No user serviceable parts inside. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally or has been dropped.

Limpie con un paño seco. No use limpiadores con disolventes.

Clean only with a dry cloth. Do not use any solvent based cleaners.

## **GARANTÍA**

Todos nuestros productos están garantizados por un periodo de 24 meses desde la fecha de compra.

Las garantías sólo serán válidas si son por un defecto de fabricación y en ningún caso por un uso incorrecto del producto.

Las reparaciones en garantía pueden ser realizadas, exclusivamente, por el fabricante o el servicio de asistencia técnica autorizado.

Otros cargos como portes y seguros, son a cargo del comprador en todos los casos.

Para solicitar reparación en garantía es imprescindible que el producto no haya sido previamente manipulado e incluir una fotocopia de la factura de compra.

## **WARRANTY**

All our products are warrantied against any manufacturing defect for a period of 2 years from date of purchase.

The warranty excludes damage from incorrect use of the product.

All warranty repairs must be exclusively undertaken by the factory or any of its authorised service centers.

To claim a warranty repair, do not open or intend to repair the product.

Return the damaged unit, at shippers risk and freight prepaid, to the nearest service center with a copy of the purchase invoice.



## DECLARACIÓN DE CONFORMIDAD DECLARATION OF CONFORMITY

### **DAS Audio Group, S.L.**

C/ Islas Baleares, 24 - 46988 - Pol. Fuente del Jarro - Valencia. España  
(Spain).

Declara que

*WR-8826-FX / WR-8826-TFX / WR-6412-FX / WR-6415-FX / WR-320-FX / WR-322S-FX /  
WR-121S-FX / WR-151S-FX:*

Declares that

*WR-8826-FX / WR-8826-TFX / WR-6412-FX / WR-6415-FX / WR-320-FX / WR-322S-FX /  
WR-121S-FX / WR-151S-FX:*

Cumple con los objetivos esenciales de las Directivas:

Abide by essential objectives relating Directives:

- De Baja Tensión / Low Voltage 2014/35/UE
- RoHS 2011/65/UE
- RAEE (WEEE) 2012/19/UE

Y son conformes a las siguientes Normas Armonizadas Europeas:

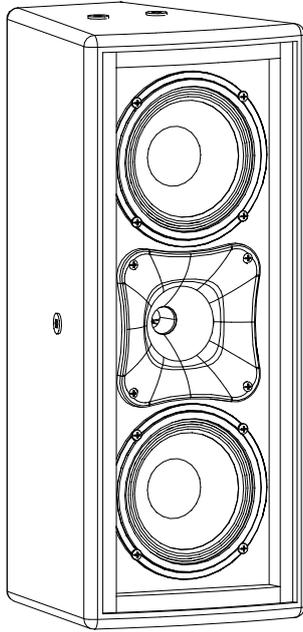
In accordance with Harmonized European Norms:

- 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.

## INTRODUCTION

The *WRFXseries* is a series of products aimed at the outdoor installation market (*Weather Resistant*).

### Features



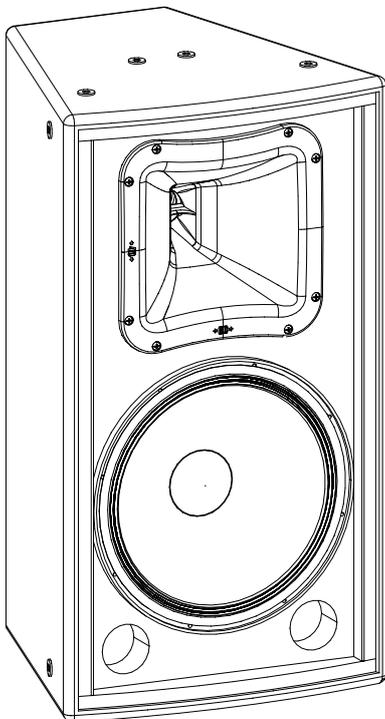
**WR-8826-FX / WR-8826-TFX**

### WR-8826FX / WR-8826TFX

- 2-way system for outdoor installation
- FX finish (Fiberglass) for direct exposure
- ISO-flex interior coating
- 2 x **6B**, 6" loudspeaker,
- 1" annular diaphragm compression driver
- Stainless threaded fixing points for wall mounts
- Version with line transformer is the **WR-8826FXT**

The **WR-8826FX** employs twin **6B** woofers for low frequency reproduction. A 1" annular diaphragm compression driver provides brilliant highs. The birch plywood cabinet construction offers an ultra-compact design which is available in black or white. This enclosure is IP-56 according IEC 60529.

The **WR-8826FX** has been designed for the outdoor installation market. The WR "FX" finish protects the cabinets outdoors thanks to a fiberglass exterior and ISO-flex interior protection augmenting their weather resistance when used in direct exposure situations. Stainless steel threaded rigging points and optional mounting hardware are available. Version with 75 W/100 V factory installed line transformer is available, **WR-8826FXT**.



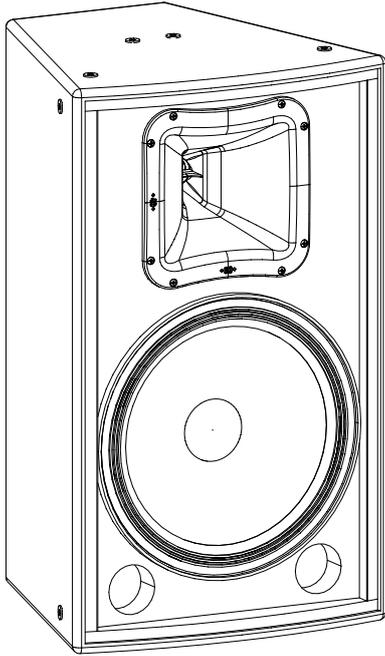
**WR-6412-FX**

### WR-6412FX

- 2-way system for outdoor installation
- FX finish (Fiberglass) for direct exposure
- ISO-flex interior coating
- 1 x **12AV**, 12" loudspeaker
- **M-75** compression driver with 3" annular diaphragm
- Rotatable 60° x 40° horn design
- Stainless threaded fixing points for wall mounts

The **WR-6412FX** employs a single **12AV** woofer for low frequency reproduction. An **M-75** compression driver with 3" titanium diaphragm attached to a 60° x 40° rotatable horn provides exceptional high frequency reproduction. The birch plywood cabinet construction offers an ultra-compact design which is available in black or white. This enclosure is IP-54 according IEC 60529.

The **WR-6412FX** has been designed for the outdoor installation market. The WR "FX" finish protects the cabinets outdoors thanks to a fiberglass exterior and ISO-flex interior protection augmenting their weather resistance when used in direct exposure situations. Stainless steel threaded rigging points and optional mounting hardware are available.



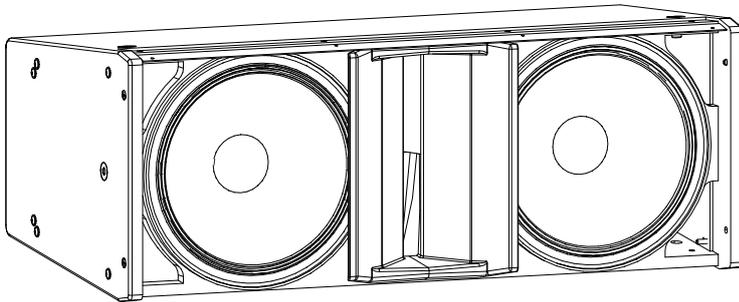
**WR-6415-FX**

### WR-6415FX

- 2-way system for outdoor installation
- FX finish (Fiberglass) for direct exposure
- ISO-flex interior coating
- 1 x **15AV**, 15" loudspeaker
- **M-75** compression driver with 3" annular diaphragm
- Rotatable 60° x 40° horn design
- Stainless threaded fixing points for wall mounts

The **WR-6415FX** employs a single **15AV** woofer for low frequency reproduction. An **M-75** compression driver with 3 titanium diaphragm attached to a 60° x 40° rotatable horn provides exceptional high frequency reproduction. The birch plywood cabinet construction offers an ultra-compact design which is available in black or white. This enclosure is IP-56 according IEC 60529.

The **WR-6415FX** has been designed for the outdoor installation market. The WR "FX" finish protects the cabinets outdoors thanks to a fiberglass exterior and ISO-flex interior protection augmenting their weather resistance when used in direct exposure situations. Stainless steel threaded rigging points and optional mounting hardware are available.



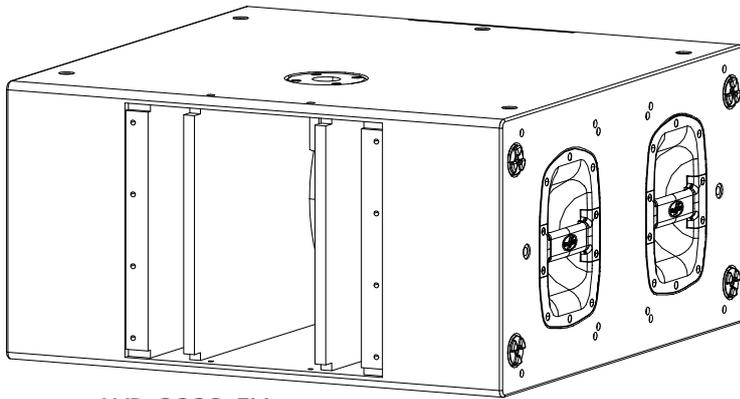
**WR-320-FX**

### WR-320FX

- Installation Line Array
- 2 x **10Mi** low frequency loudspeakers, 2.5" VCD
- 1 x **M-75** compression driver, 3" VCD
- Rigging systems for permanent installation
- Rigging compatible with the **WR-322SFX**

The **WR-320FX** has been designed for the outdoor installation market. The birch plywood cabinet construction offers a compact design which is available in black or white.

The WR "FX" finish protects the cabinets outdoors thanks to a fiberglass exterior and ISO-flex interior protection augmenting their weather resistance when used in direct exposure situations.



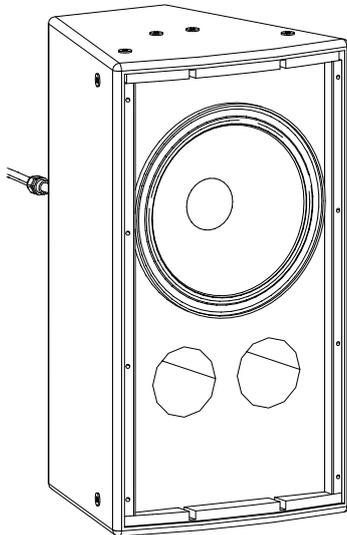
**WR-322S-FX**

**WR-322SFX**

- Weather resistant subwoofer system
- Fiberglass exterior finish
- ISO-flex interior coating
- 1600 W program power handling
- 2 x 12P, 12" low frequency loudspeakers, 3" VCD
- For use in bi-amplified systems
- Rigging compatible with the **WR-320FX**

The **WR-322SFX** has been designed for the outdoor installation market. The birch plywood cabinet construction offers a compact design which is available in black or white.

The WR "FX" finish protects the cabinets outdoors thanks to a fiberglass exterior and ISO-flex interior protection augmenting their weather resistance when used in direct exposure situations.

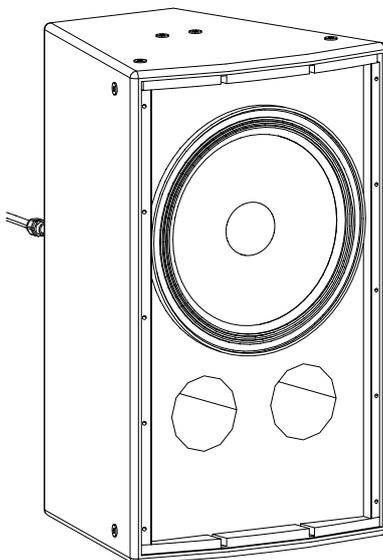


**WR-121S-FX**

**WR-121SFX**

- 12", 12GX, 4" VCD, weather resistant subwoofer system
- Fiberglass exterior finish
- ISO-flex interior coating
- Easy arraying with the **WR-6412FX**
- Threaded fixing points for mounting accessories
- IP54 rating according IEC 60529

The **WR** (weather resistant) *series* expands with a compact subwoofer designed to provide extended range for the **WR series** full-range cabinets. The **WR-121SFX** incorporates a single 600 Wrms 12" loudspeaker. The **WR-121SFX** offers identical cabinet dimensions as the **WR-6412FX** for easy combination in tight packed arrays. Threaded rigging points and optional mounting hardware are available.



**WR-151S-FX**

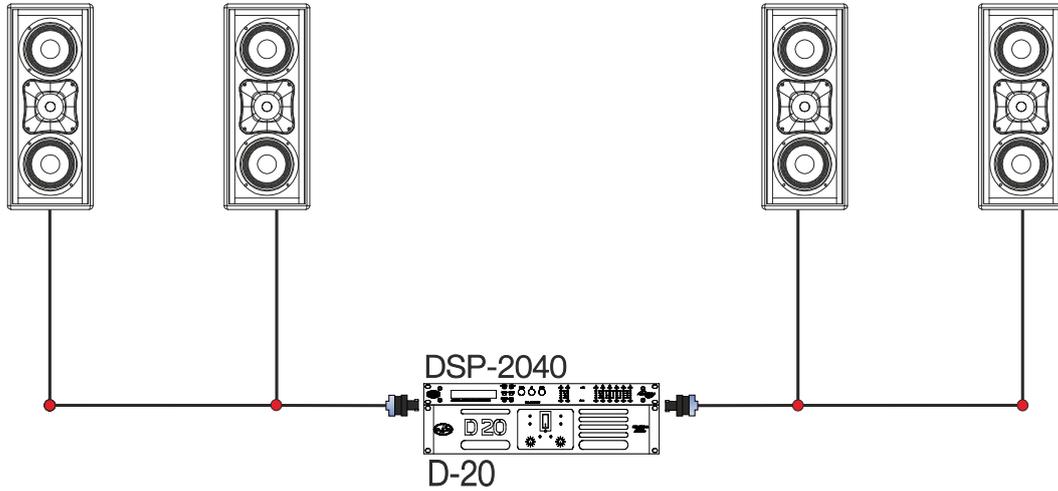
**WR-151SFX**

- 15", 15SX, 4" VCD, weather resistant subwoofer system
- Fiberglass exterior finish
- ISO-flex interior coating
- Easy arraying with the **WR-6415FX**
- Threaded fixing points for mounting accessories
- IP54 rating according IEC 60529

The **WR** (weather resistant) *series* expands with a compact subwoofer designed to provide extended range for the **WR series** full-range cabinets. The **WR-151SFX** incorporates a single 600 Wrms 15" loudspeaker. The **WR-151SFX** offers identical cabinet dimensions as the **WR-6415FX** for easy combination in tight packed arrays. Threaded rigging points and optional mounting hardware are available.

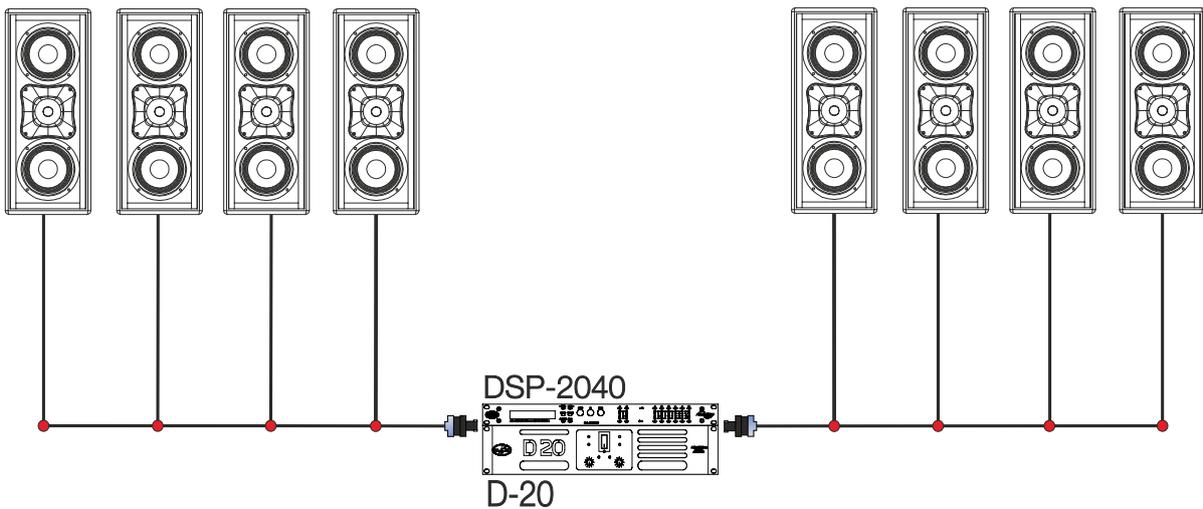
## CONFIGURATIONS

### **4 x WR-8826-FX 625W @ 8 Ohms**



Two WR-8826-FX (16ohms each) in parallel mode per channel.  
Refer to the user manual of the D-20 amplifier for SPEAKON connection.

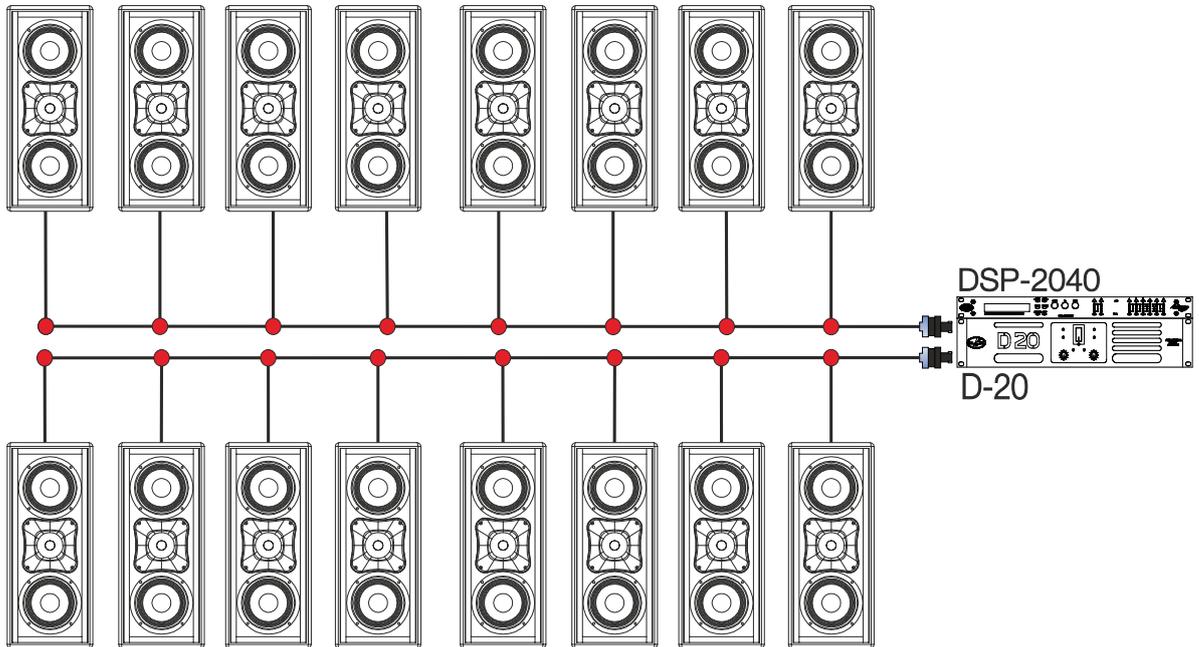
### **8 x WR-8826-FX 1150W @ 4 Ohms**



Four WR-8826-FX (16ohms each) in parallel mode per channel.  
Refer to the user manual of the D-20 amplifier for SPEAKON connection.

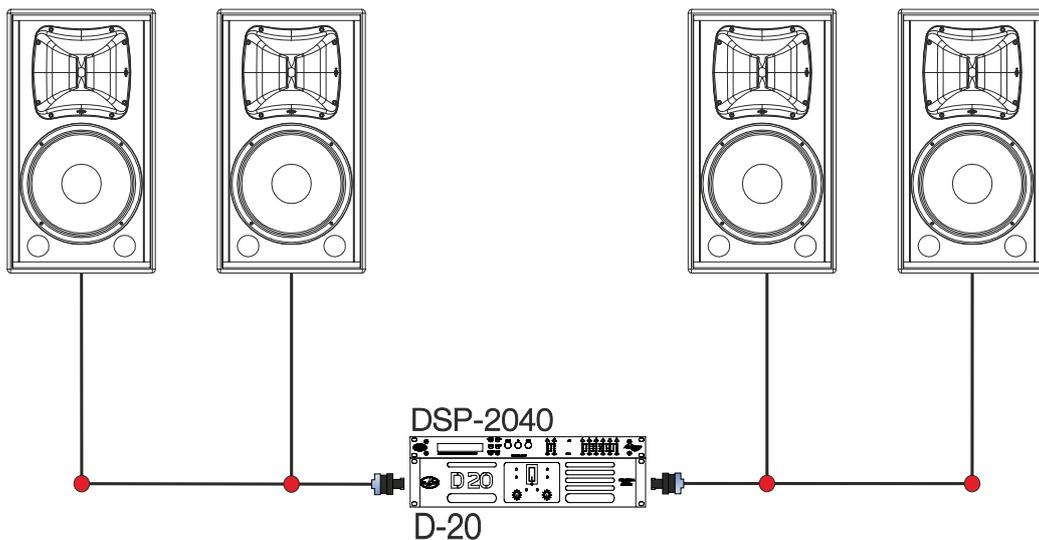
**CONFIGURATIONS (cont'd)**

**16 x WR-8826-FX  
2100W @ 2 Ohms**



Eight WR-8826-FX (16ohms each) in parallel per channel.  
Refer to the user manual of the D-20 amplifier for SPEAKON connection.

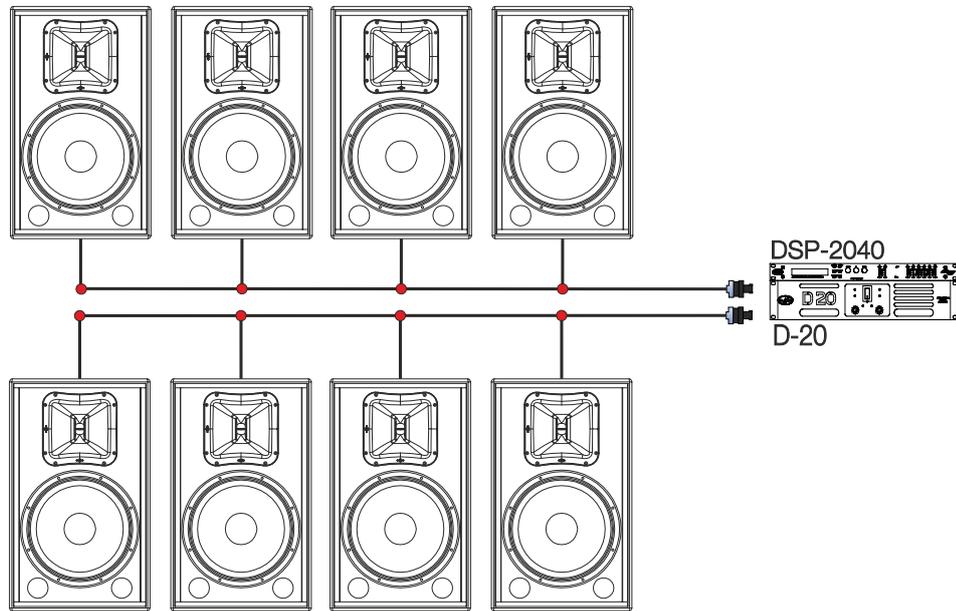
**4 x WR-6412-FX (or WR-6415-FX)  
1150W @ 4 Ohms**



Two WR-6412-FX or WR-6415-FX (8 ohms each) in parallel per channel.  
Refer to the user manual of the D-20 amplifier for SPEAKON connection.

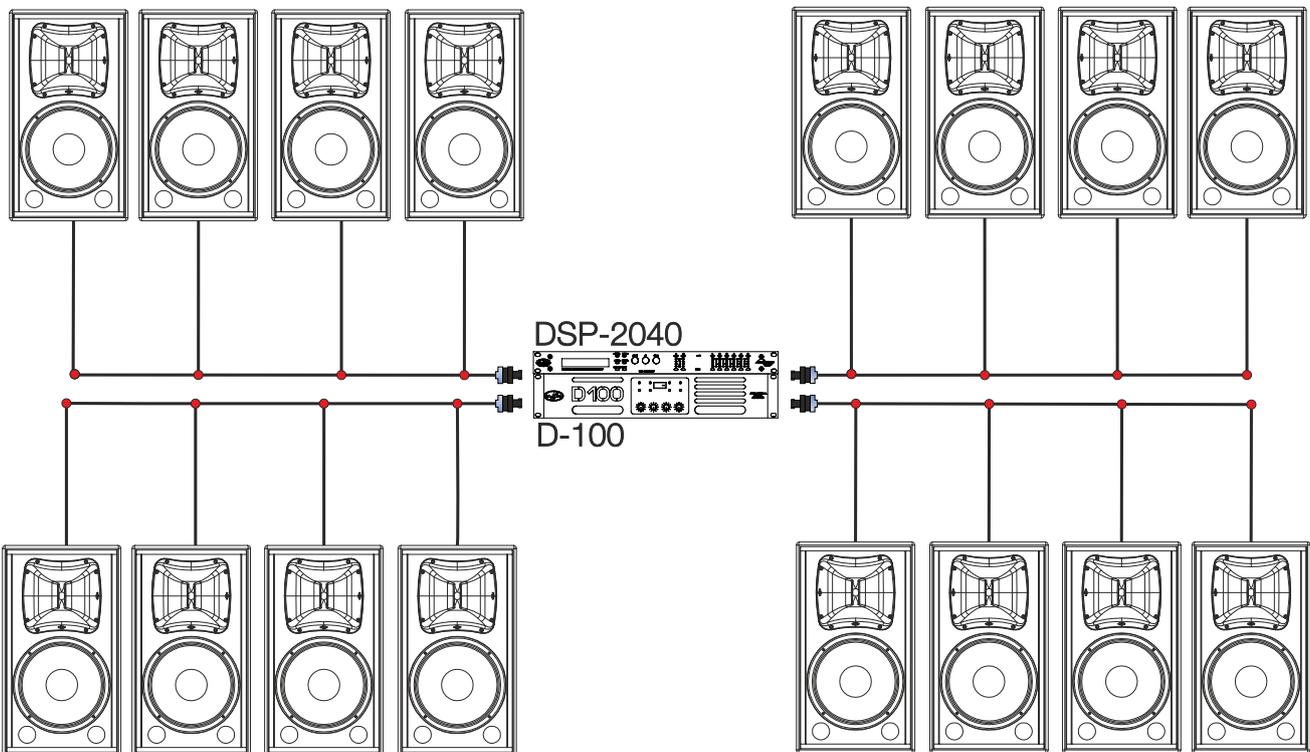
**CONFIGURATIONS (cont'd)**

**8 x WR-6412-FX (or WR-6415-FX)  
2100W @ 2 Ohms**



Four WR-6412-FX or WR-6415-FX (8 ohms each) in parallel per channel.  
Refer to the user manual of the D-20 amplifier for SPEAKON connection.

**16 x WR-6412-FX (or WR-6415-FX)  
3700W @ 2 Ohms**

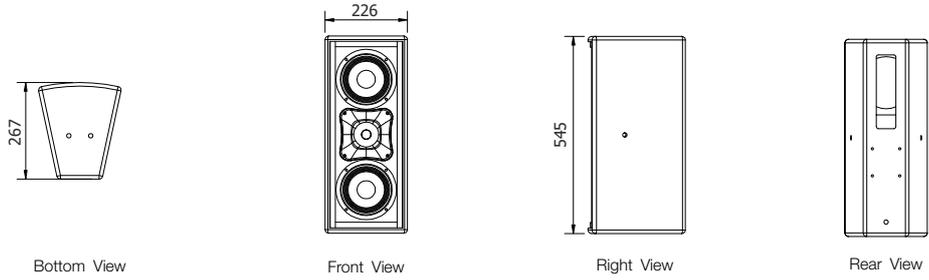


Four WR-6412-FX or WR-6415-FX (8 ohms each) in parallel per channel  
Refer to the user manual of the D-100 amplifier for SPEAKON connection.

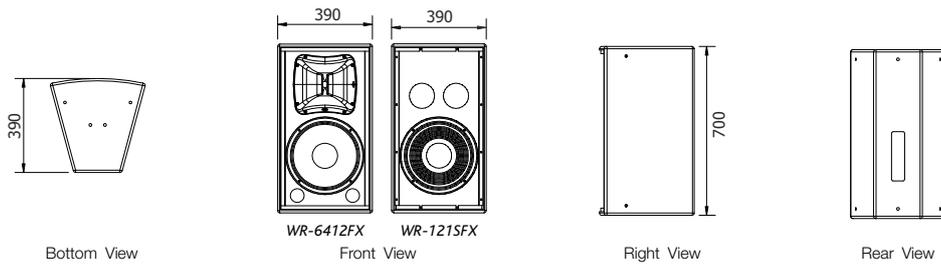
# LINE DRAWINGS

ALL DIMENSIONS IN MILLIMETERS

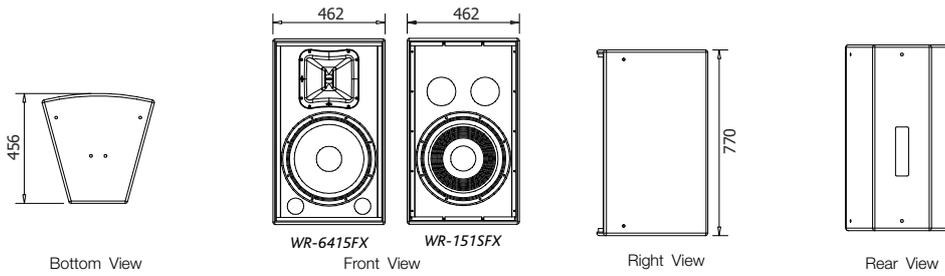
WR-8826-FX / WR-8826-TFX



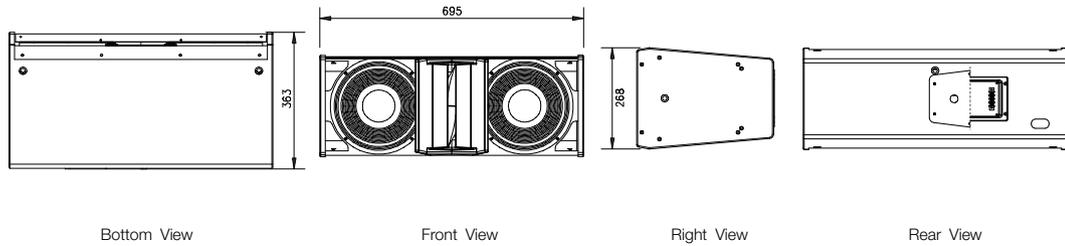
WR-6412-FX / WR-1215-FX



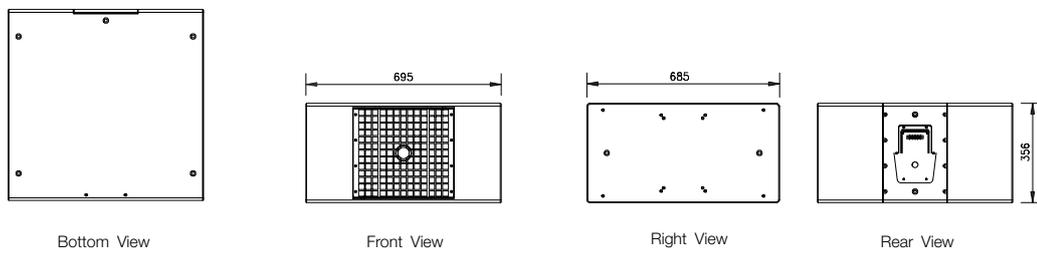
WR-6415-FX / WR-1515-FX



WR-320-FX



WR-322S-FX



## SPECIFICATIONS

<i>Model</i>	<b>WR-8826-FX</b>	<b>WR-8826-TFX</b>	<b>WR-6412-FX</b>	<b>WR-6415-FX</b>	<b>WR-320-FX</b>
<b>Peak Power Handling</b>	800W	300W	1600W		2000W
<b>RMS (Average) Power Handling<sup>1</sup></b>	200W	75W	400W		500W
<b>Frequency Range (-10 dB)</b>	70 Hz-20 kHz	100 Hz-20 kHz	60 Hz-20 kHz	55 Hz – 20kHz	60 Hz-20 kHz
<b>Nominal Impedance</b>	16 ohms	133 ohms	8 ohms		16 ohms
<b>Transformer Taps</b>	-----	75 W (100 V line)	-----	-----	-----
<b>On-axis Sensitivity 1 W/ 1 m</b>	93 dB SPL	93 dB SPL	98 dB SPL	99 dB SPL	99 dB SPL
<b>Rated Maximum Peak SPL at 1 m<sup>2</sup></b>	122 dB	118 dB	130 dB	131 dB	132 dB
<b>HF Horn Coverage Angles (-6dB)</b>	80° x 80°		60° x 40°		90° x Splay Dependent
<b>Enclosure Material</b>	Birch Plyw ood				
<b>Color</b>	Black or White / FX Fiberglass				
<b>Transducers/Replacement Parts</b>	LF: 2 x 6B/ 6B HF: M-1 / M-1		LF: 1 x 12AV/ GM-12P HF: M-75 / GM-M75	LF: 1 x 15AV/ GM-15P HF: M-75 / GM-M75	LF: 2 x 10M/ GM-10M HF: M-75 / GM-M75
<b>Connectors</b>	Barrier Strip				
<b>Dimensions (H x W x D)</b>	54.5 x 22.6 x 26.7 cm 21.5 x 8.9 x 10.5 in	54.5 x 22.6 x 26.7 cm 21.5 x 8.9 x 10.5 in	70 x 39 x 39 cm 27.6 x 10.4 x 10.4 in	77 x 46.2 x 45.5 cm 30.3 x 18.2 x 17.9 in	27 x 70 x 36 cm 10.6 x 27.6 x 14.2 in
<b>Weight</b>	12 kg 26.5 lb	12.5 kg 27.5 lb	24 kg 52.8 lb	28 kg 61.6 lb	26.5 kg 58.3 lb
<b>Accessories</b>	ANL-2 AX-SPG1 AXC-AT AXU-WR8826 AXW-1		ANL-2 AX-SPG1 AXC-AT AXU-WR6412	ANL-2 AX-SPG1 AXC-AT AXU-WR6415	ANL-2 AX-WR300 JP-WR320

<i>Model</i>	<b>WR-121S-FX</b>	<b>WR-151S-FX</b>	<b>WR-322S-FX</b>
<b>Peak Power Handling</b>	2400W	3200W	3200W
<b>RMS (Average) Power Handling<sup>1</sup></b>	600W	800W	800W
<b>Frequency Range (-10 dB)</b>	50 Hz-125 Hz	45 Hz-125 Hz	37 Hz – 300 Hz
<b>Nominal Impedance</b>	4 ohms passive 8 ohms biamp	4 ohms passive 8 ohms biamp	4ohms
<b>On-axis Sensitivity 1 W/ 1 m</b>	96 dB SPL	98 dB SPL	99 dB SPL
<b>Rated Maximum Peak SPL at 1 m<sup>2</sup></b>	130 dB	133 dB	134 dB
<b>Enclosure Material</b>	Birch Plyw ood		
<b>Color</b>	Black or White / FX Fiberglass		
<b>Transducers/Replacement Parts</b>	LF: 1 x 12GX/ GM-12GX	LF: 1 x 15SX/ GM-15SX	LF: 2 x 12P/ GM-12P
<b>Connectors</b>	Barrier Strip		
<b>Dimensions (H x W x D)</b>	70 x 39 x 39 cm 27.6 x 10.4 x 10.4 in	77 x 46.2 x 45.5 cm 30.3 x 18.2 x 17.9 in	35.5 x 70 x 68.5 cm 14 x 27.6 x 27 in
<b>Weight</b>	24 kg 52.8 lb	28 kg 61.6 lb	42.5 kg 93.5 lb
<b>Accessories</b>	ANL-2 AX-SPG1 AXC-AT AXU-WR6412	ANL-2 AX-SPG1 AXC-AT AXU-WR6415	ANL-2 AX-WR300 JP-WR320

Notes: 1. Based on a 2 hour test continuously applying 6 dB crest factor pink noise.

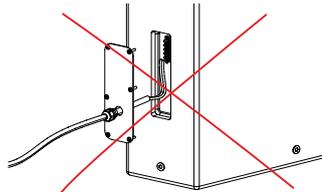
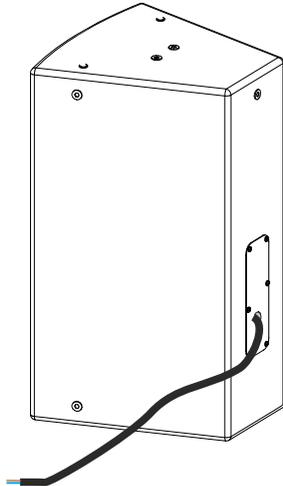
2. Maximum calculated Peak SPL based on sensitivity and RMS power handling.

**DAS Audio Group, S.L.** continuously strives to enhance its products through investigation and development. All specifications are subject to change without prior notice.

## INSTALLATION

The *WRFXseries* includes protection methods to ensure the best connectivity conditions even under harsh weather conditions.

It includes a waterproof cover which gives us a double connection chamber.



**Don't remove after installation**

After the installation is finished, don't remove any safety parts in normal working conditions. Security operations and/or technical services should be performed by authorised staff.

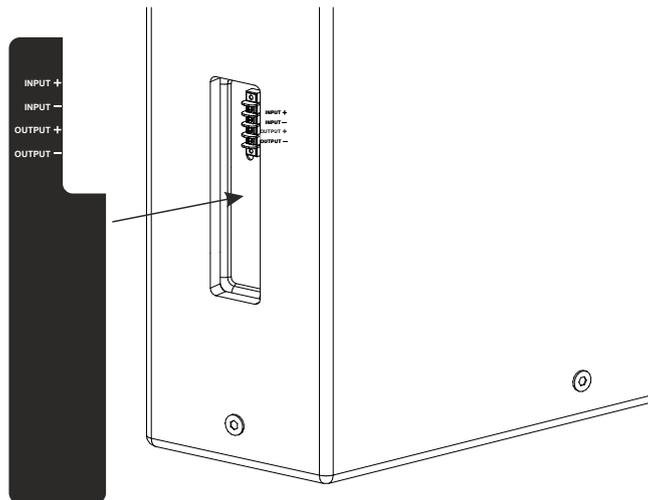
The system includes 5m of connection wire ready to use in the application.

The color code is:

.- Blue --> +   
.- Brown --> - 

The system includes 5m of connection wire ready to use in the application. If more than 5m of connection wire is required, a longer cable can be used. If so proceed as follows:

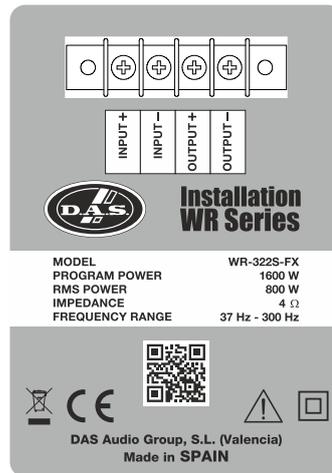
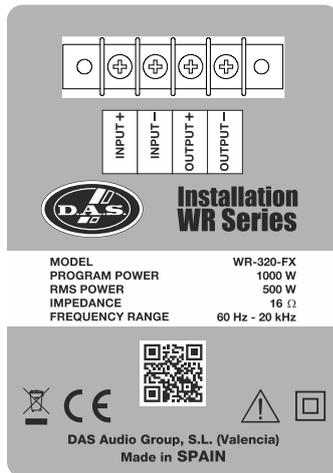
1.- Prepare the rear part of the enclosure for cable connection, removing the existing cable.



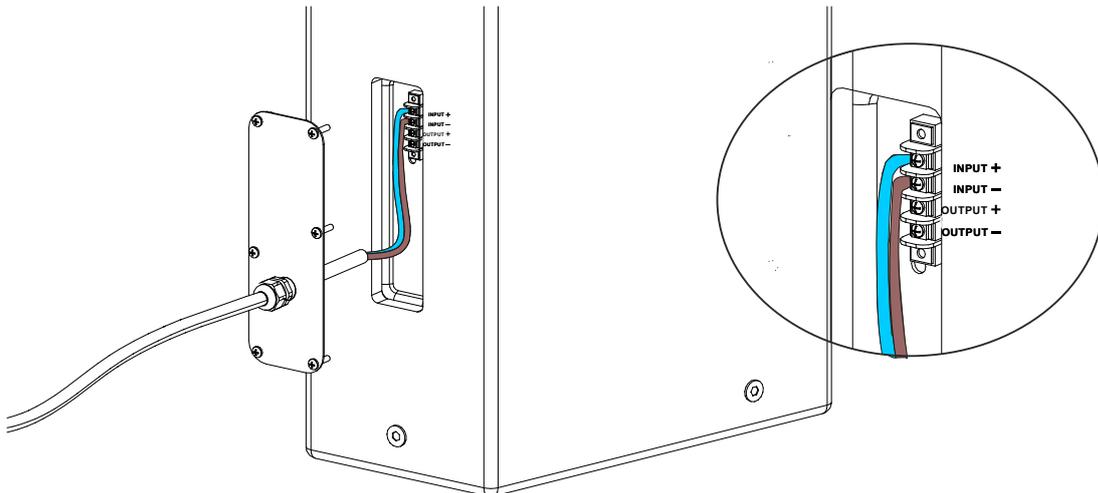
### Labels of models

MODEL	WR-8826-FX	WR-6412-FX	WR-6415-FX	WR-8826-TFX	WR-121S-FX	WR-151S-FX
POWER (RMS)	200 W	600 W	600 W	75 W	600 W	800 W
IMPEDANCE	16Ω	8Ω	8Ω	13Ω	8Ω	8Ω
FREQ. RANGE	70Hz-20kHz	67Hz-20kHz	61Hz-20kHz	100Hz-20kHz	50Hz-125Hz	45Hz-160Hz
CE						
MADE IN SPAIN						

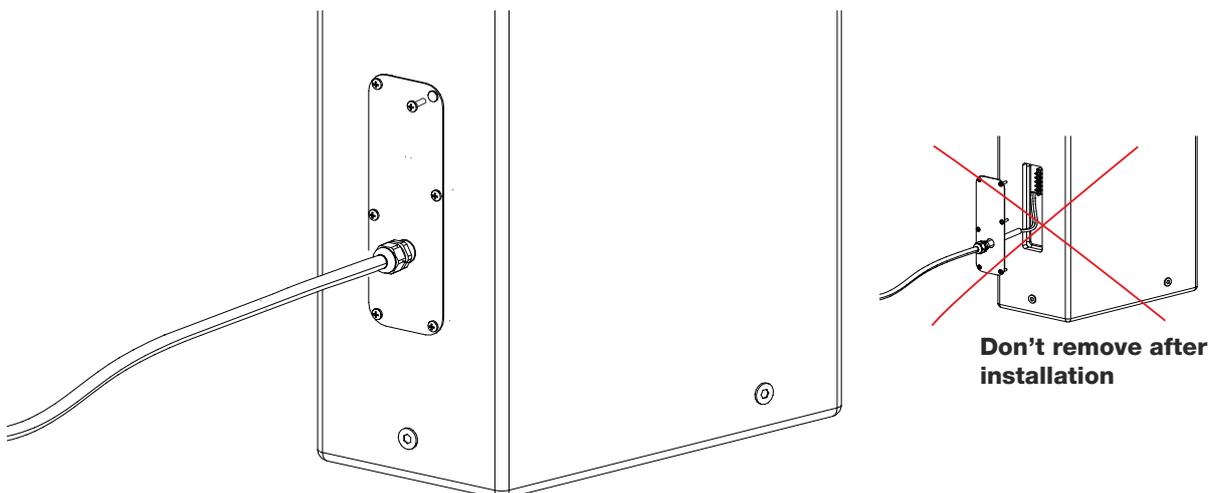
### Labels of models (cont'd)



2.- Screw the cables to the barrier strip following the label indications.



3.- Fix the cover of the rear part of the enclosure with six screws.



## ACCESSORIES

### Warnings

This manual contains needed information for flying DAS Audio systems, description of the elements and safety precautions. To perform any operations related to flying the system, read the present document first, and act on the warnings and advice given. The goal is to allow the user to become familiar with the mechanical elements required to fly the acoustic system, as well as the safety measures to be taken during set-up and teardown.

Only experienced installers with adequate knowledge of the equipment and local safety regulations should fly speaker boxes. It is the user's responsibility to ensure that the systems to be flown (including flying accessories) comply with state and local regulations.

The working load limits in this manual are the results of tests by independent laboratories. It is the user's responsibility to stay within safe limits. It is the user's responsibility to follow and comply with safety factors, resistance values, periodical supervisions and warnings given in this manual. Product improvement by means of research and development is on going at DAS. Specifications are subject to change without notice.

It is common practice to apply 5:1 safety factors for enclosures and static elements. For slings and elements exposed to material fatigue due to friction and load variation the following ratios must be met; 5:1 for steel cable slings, 4:1 for steel chain slings and 7:1 polyester slings. Thus, an element with a breaking load limit of 1000 kg may be statically loaded with 200 kg (5:1 safety factor) and dynamically loaded with 142 kg (7:1 safety factor).

When flying a system, the working load must be lower than the resistance of each individual flying point in the enclosure, as well as each box. Hanging hardware should be regularly inspected and suspect units replaced if in doubt. This is important to avoid injury and absolutely no risks should be taken in this respect. It is highly recommended that you implement an inspection and maintenance program on flying elements, including reports to be filled out by the personnel that will carry out the inspections. Local regulations may exist that, in case of accident, may require you to present evidence of inspection reports and corrective actions after defects were found.

Absolutely no risks should be taken with regards to public safety. When flying enclosures from ceiling support structures, extreme care should be taken to assure the load bearing capabilities of the structures so that the installation is absolutely safe. Do not fly enclosures from unsafe structures. Consult a certified professional if needed. All flying accessories that are not supplied by DAS Audio are the user's responsibility. Use at your own risk.

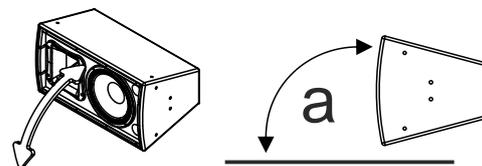
Periodically check the system replacing the structural elements which could be deteriorated.

### Introduction

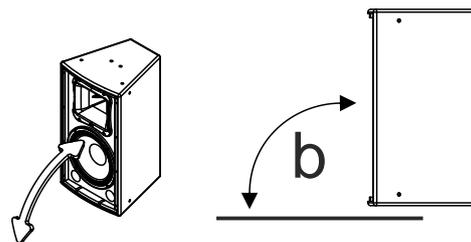
The WR system includes a double connection chamber to achieve better connectivity conditions even under harsh weather conditions.

The minimum angle in the horizontal plane to ensure the max IP ratio IP56 is  $-2^\circ$ .

That is, if we look at the figures below, the angle **a** (in horizontal assemblies) must have a value between  $0$  and  $90^\circ$  while the angle **b** (in vertical assemblies), must have a value between  $0$  and  $88^\circ$ .



Assembly with horizontal box



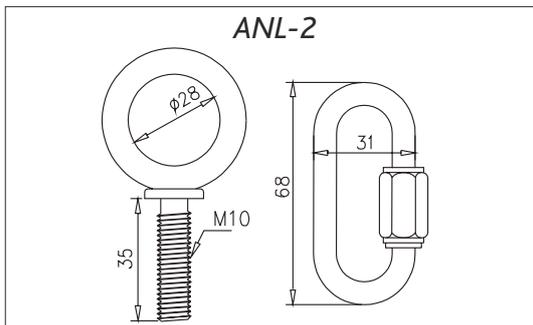
Assembly with vertical box

## Flying with eyebolts

The WR series models feature internal steel flying points with mounting threads. These eyebolt flying points are factory sealed with M10 screws, which are replaced with eyebolts on the flying points as required. Flying with eyebolts is very economical and safe, and is specially recommended for fixed installations where the boxes are permanently fixed.

The Allen-head screws must be removed and replaced by M10 eyebolts on one side of the enclosure. Each rigging point has a 200 kg (440 lb) working load limit. Then choose the slings or chains of required load resistance and length, bearing in mind that the length difference between the front and back slings or chains will determine the vertical orientation. Alternatively, the back bottom eyebolt point can be used to provide vertical orientation.

The *ANL-2* set is an optional set of four eyebolts and four carabiners. (Dimensions below are in millimeters).

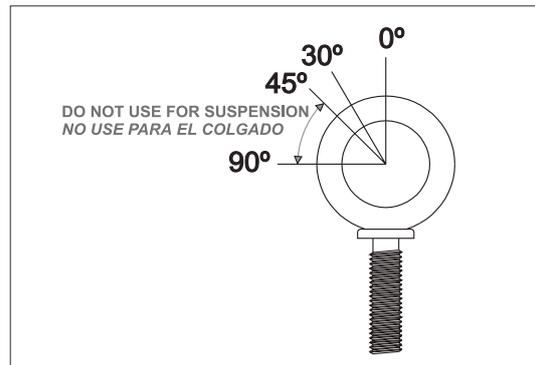


Each *ANL-2* eyebolt has a rated working load of 200 kg. (440 lb). Each *ANL-2* carabiner has a working load of 330 kg (726 lb). If using other hardware, make sure it is rated to handle the required load.

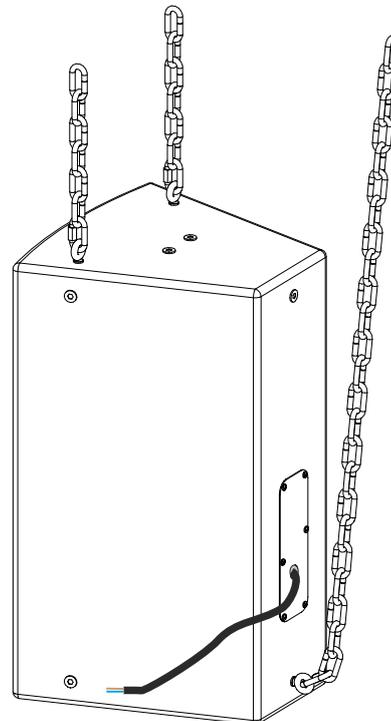
When using eyebolts it is important to bear in mind that the rated working load is only true for a load applied in the plane of the eye, and is significantly reduced for other angles. The drawing illustrates the concept. The table shows the variation of the working load as a function of the load angle.

In the case of the *ANL-2* eyebolt, this means that the 200 kg working load becomes 60 kg at 45 degrees. Do not use eyebolt flying if the load angle is higher than 45 degrees.

	0 Degrees	30 Degrees	45 Degrees	More than 45 Degrees
% of working load	100%	65%	30%	25%

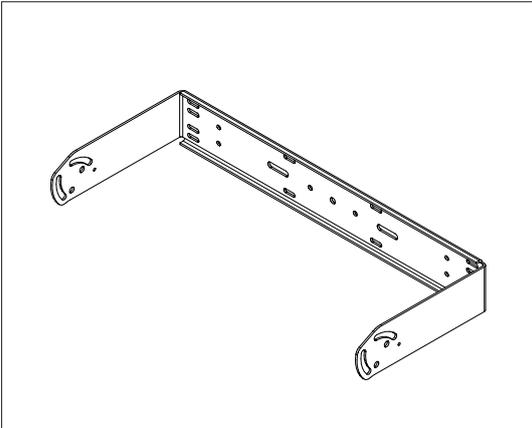


The following illustrations show different views on eyebolt flying for a single box. The length of the back cables or chains determines the vertical angle of the box.



## Rigging accessories

### AXU-WR8826 / AXU-WR6412 / AXU-WR6415



The *AXU-WR8826* / *AXU-WR6412* / *AXU-WR6415* are not included with the *WR-8826-FX* (or *WR-8826-TFX*) / *WR-6412-FX* and *WR-6415-FX* respectively in the packaging.

The AXU accessories have been designed to enable mounting the speakers in a horizontal and vertical position.

They can also be installed on walls or ceilings.

#### Mounting instructions:

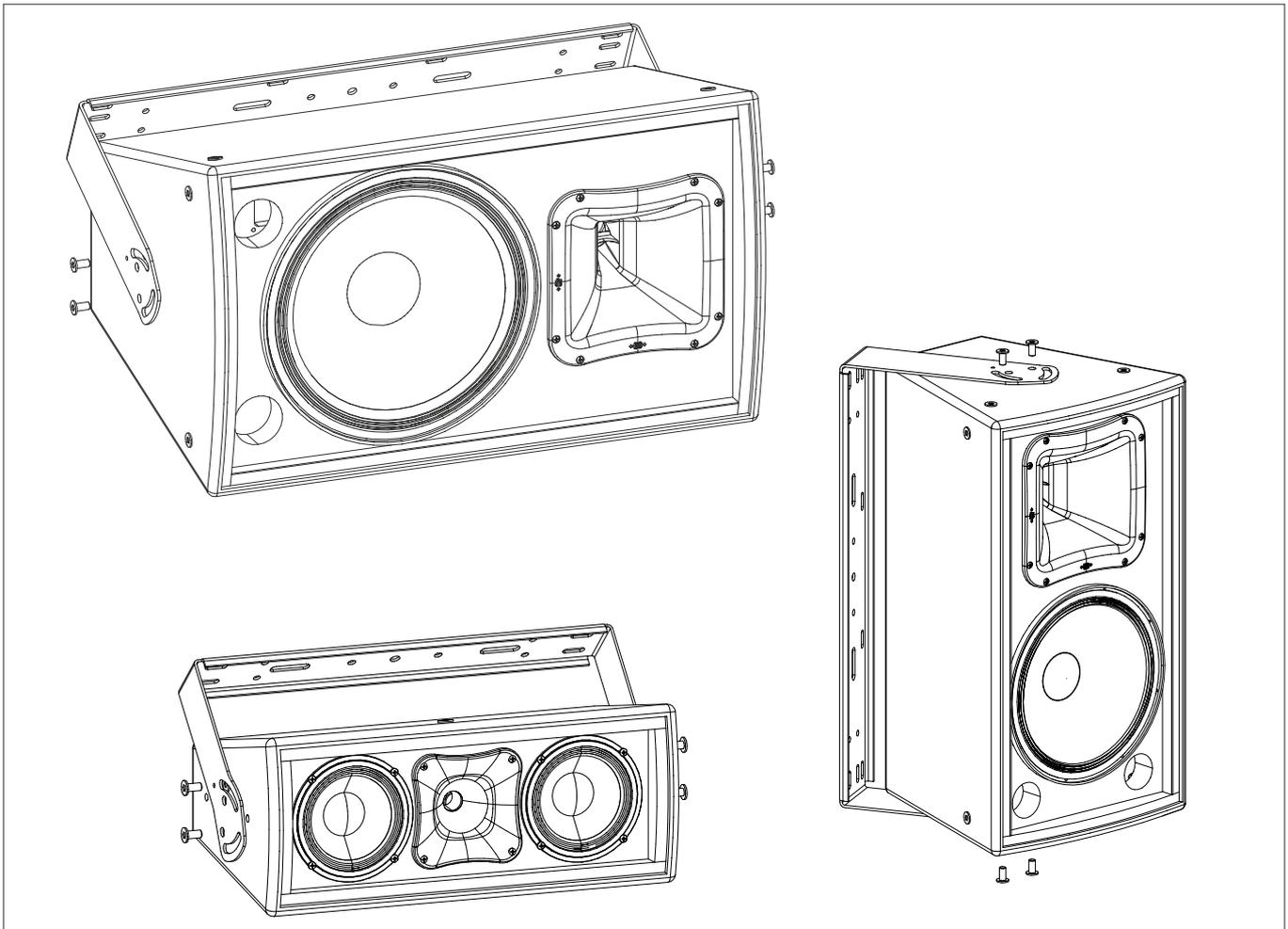
1.- Remove the top and bottom screws from the speaker cabinet.

2.- Position the AXU-WRXXXX on the wall or ceiling.

3.- Position the WR cabinet between the arms of the support. Beware that the AXU support allows for an asymmetric arc. Install in the appropriate position.

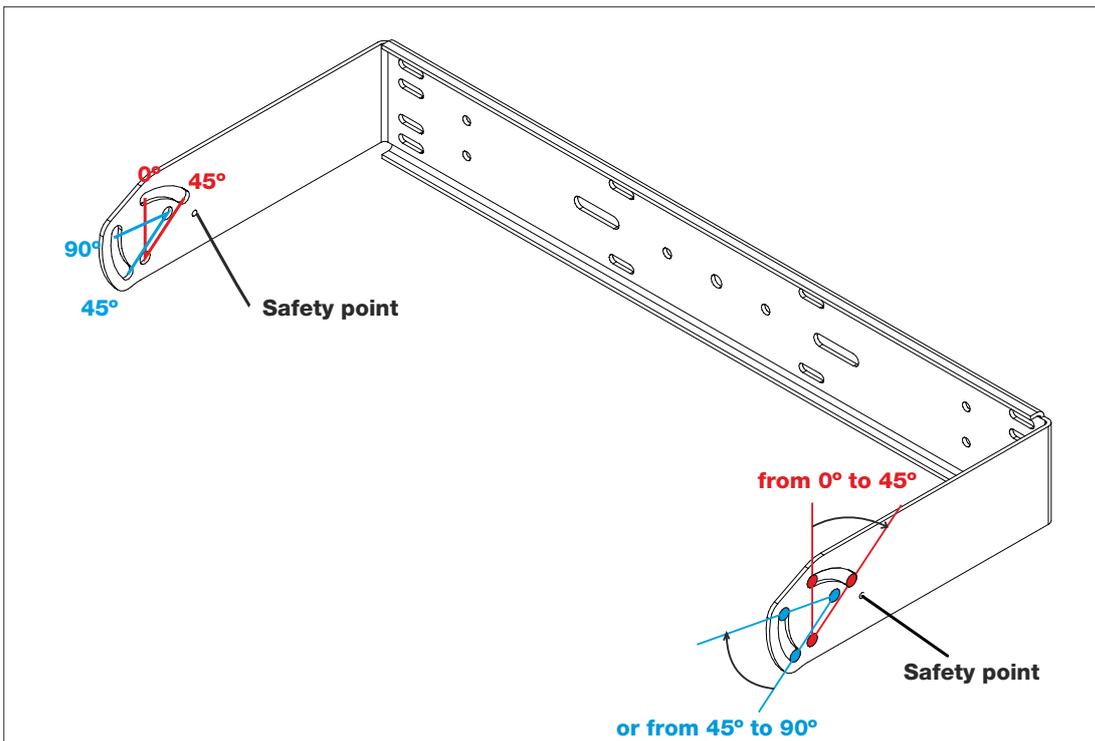
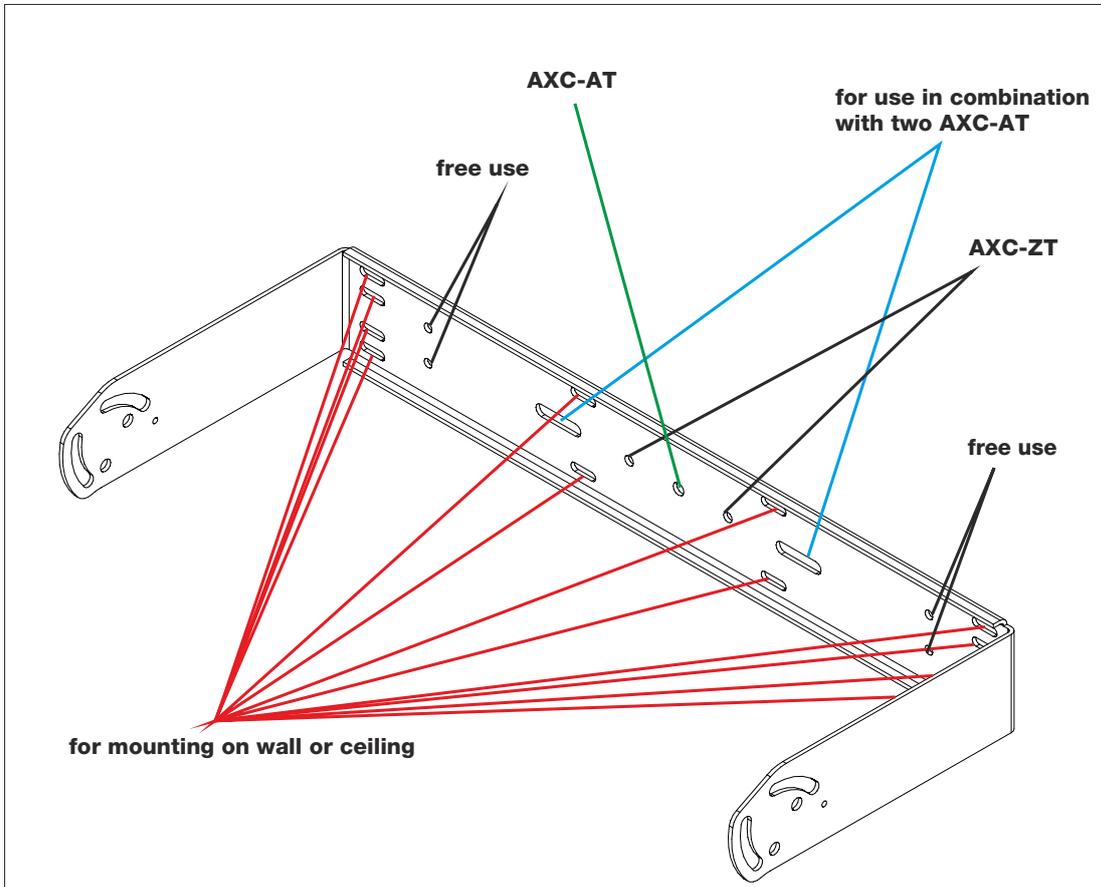
4.- Attach the unit to the support using the screws (step 1) but do not tighten.

5.- Aim the unit to the desired angle and tighten screws.



## Description of the AXU-WR8826 / AXU-WR6412 / AXU-WR6415

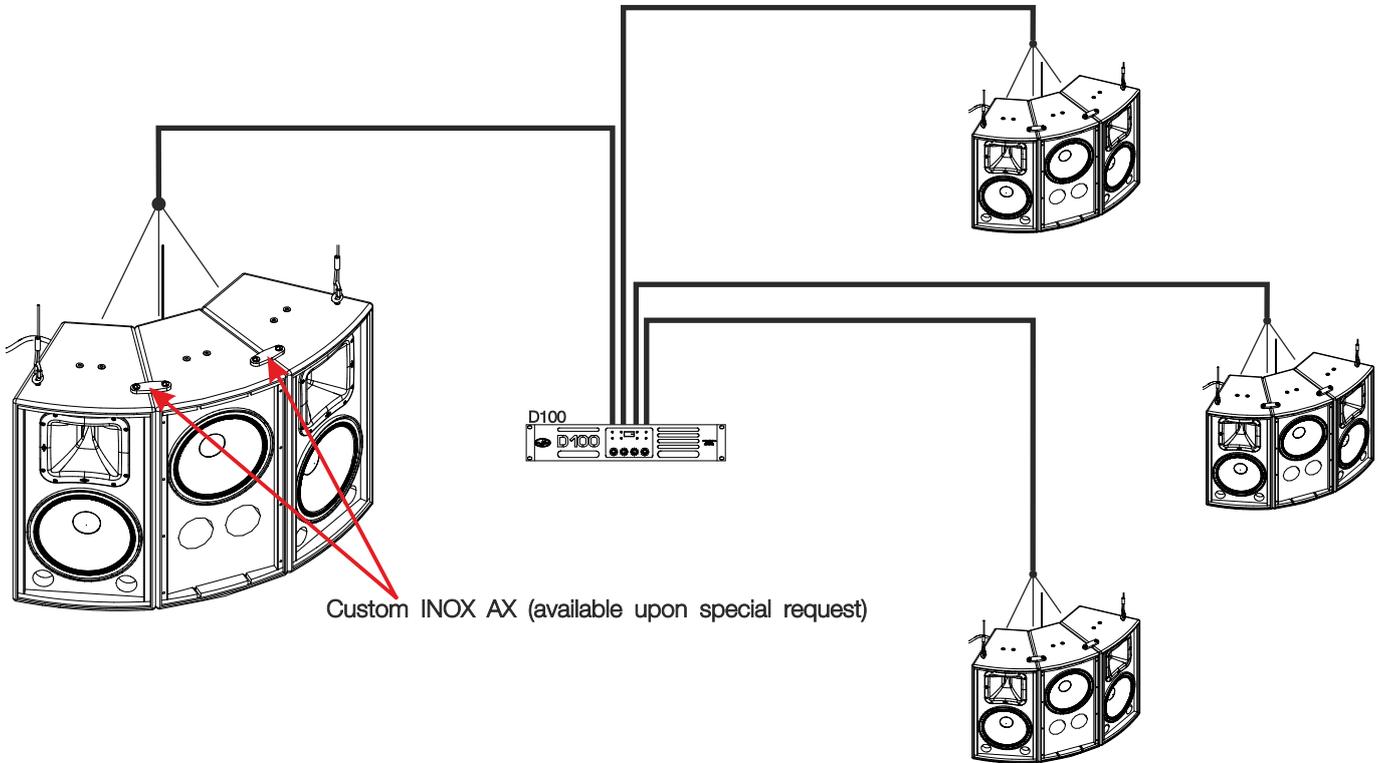
Refer to the user's manual of accessories, on our website, for more information.



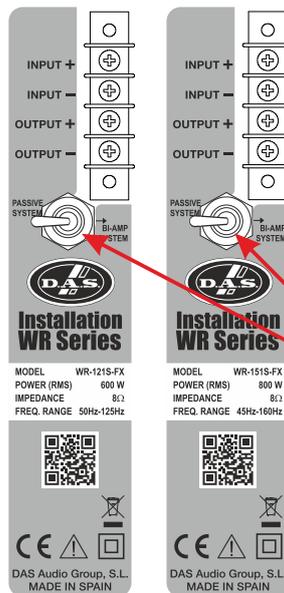
**Horizontal array with tops and subwoofers**

The *WR FX series* allows us to create horizontal array configurations with tops and subwoofers with the *WR-6412-FX* and *WR-1215-FX* models, and with the *WR-6415-FX* and *WR-1515-FX* models.

In the figure you can see an example of this type of array.



2 tops and 1 sub are ideal to be used with one amplifier channel (using the subwoofer's selector in the "PASSIVE SYSTEM" position).



We must use the subwoofer's selector in the "PASSIVE SYSTEM" position to drive the group easily.

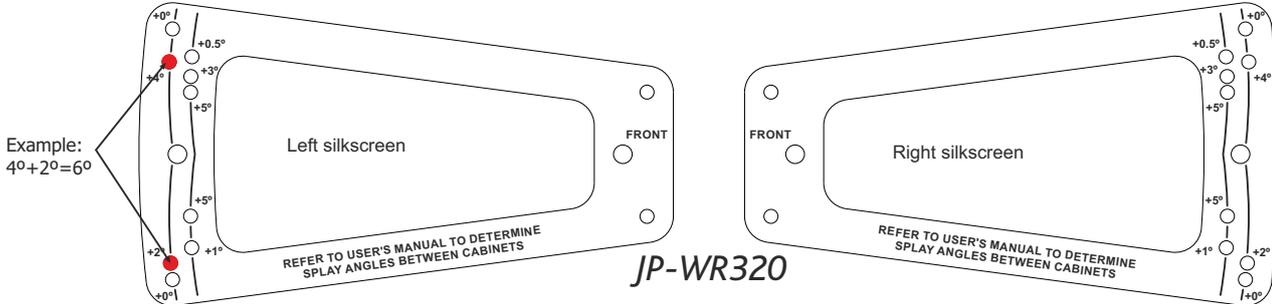
## Installation Line Array

Also, the *WR FX series* permits to make line arrays with the models *WR-320-FX* & *WR-322S-FX*.

The *WR-320-FX* includes the *JP-WR320*, to help in the angling of the array. **The sum of the angles used on a side, indicate the angle between the boxes on this side.**

**Note: Use the same combination for the other side.**

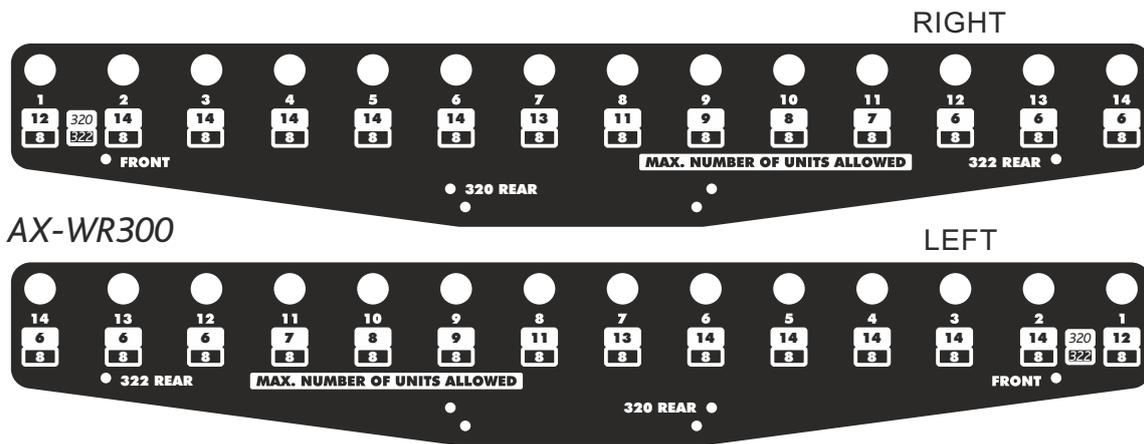
Below we will see the silkscreen of these pieces and an example for 6°.



*WR FX series* also offers an optional *AX* accessory, *AX-WR300*, which allows us to fly an array of *WR-320-FX*, or *WR-322S-FX* + *WR-320-FX*.

The *WR-322S-FX* does not include the *JP-WR320*.

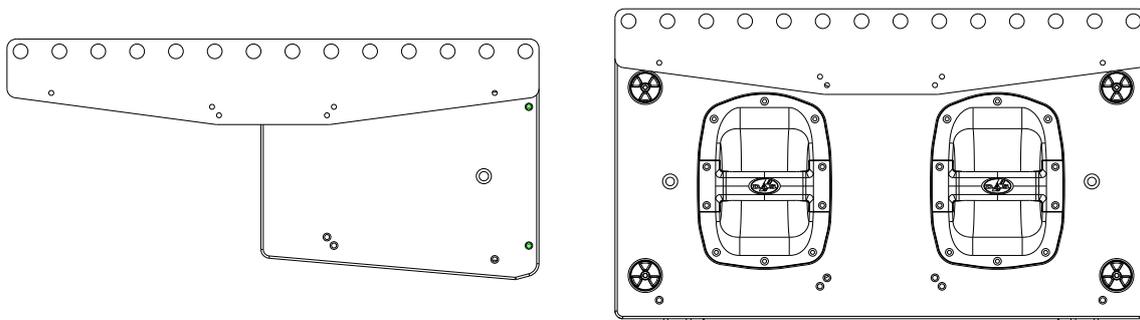
See the silkscreen of *AX*, where the holes to use for the different combinations are indicated.



**Note:** It's possible to use a *UFB* (Universal Fly Bar) if a central bar is needed, because this *AX* does not include a pick-up.

**Note:** The same screws removed on the sides of the boxes, will be used again to fit the accessories to the enclosure.

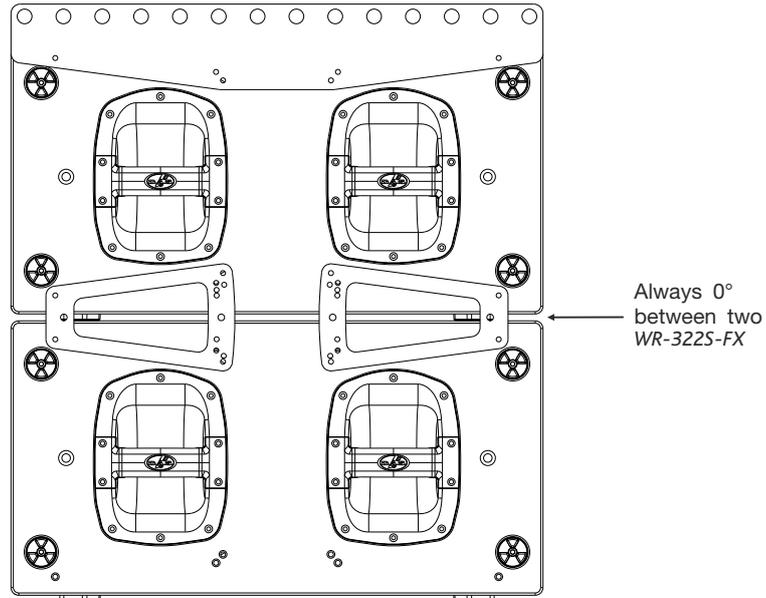
Regardless of the use of a *UFB*, we must start by screwing the *AX-WR300* to the top enclosure.



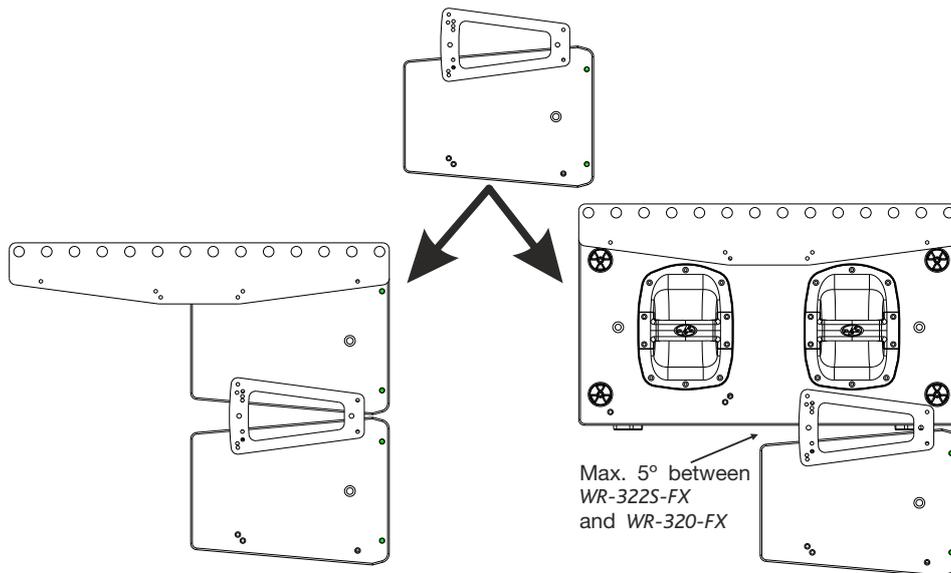
*AX-WR300* + *WR-320-FX*

*AX-WR300* + *WR-322S-FX*

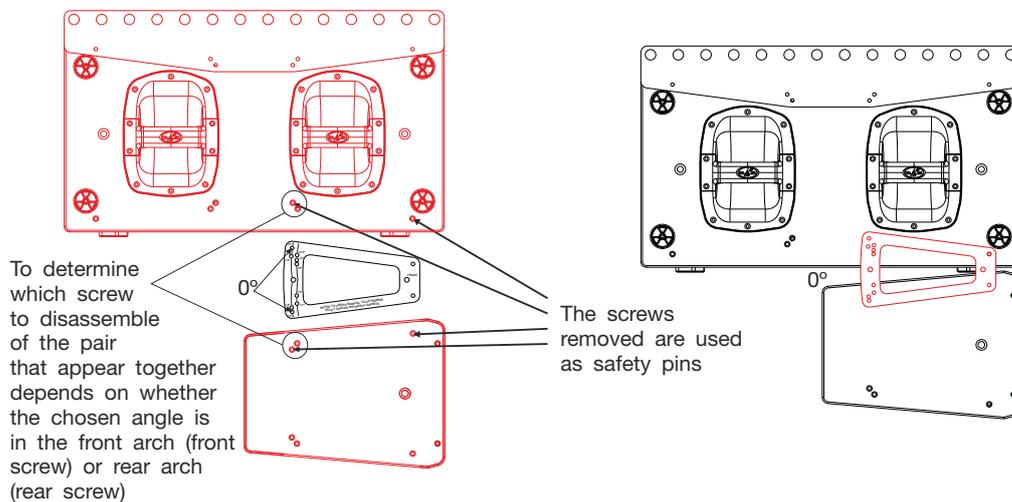
If we need to mount another sub below the first, we will need another *JP-WR320*, one piece on each side.

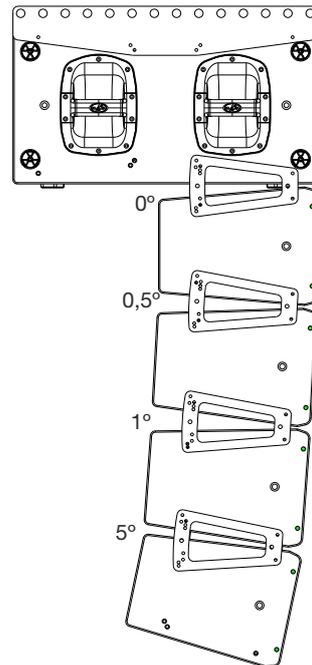
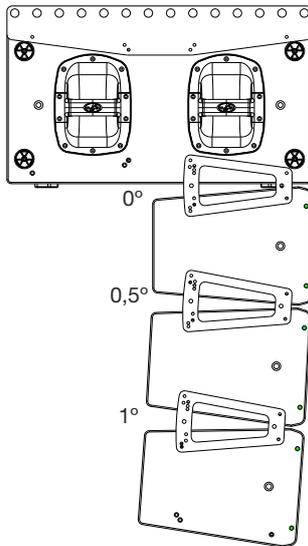
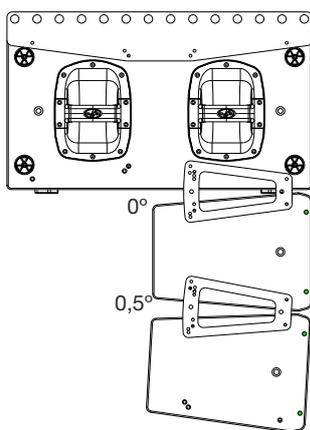
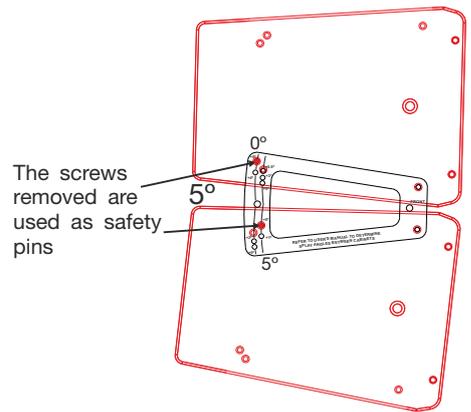
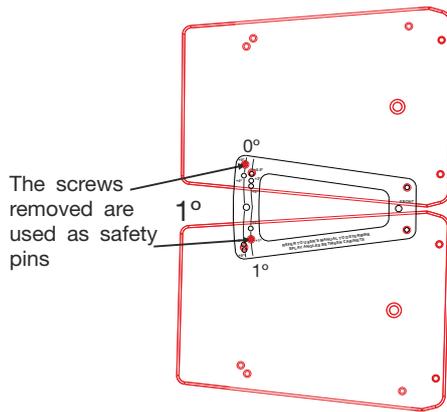
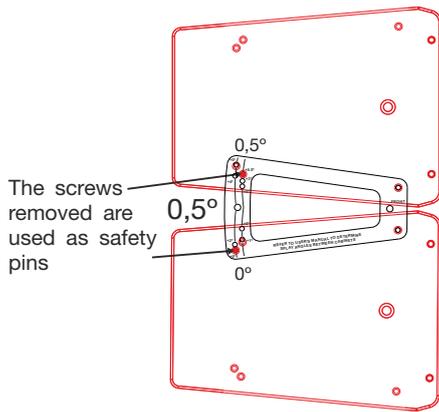


Both in the case of having subwoofers as in the case of not having any, we will mount the following *WR-320-FX* below the first enclosure, for which we need a *JP-WR320*, one piece for each side, with the desired angles.

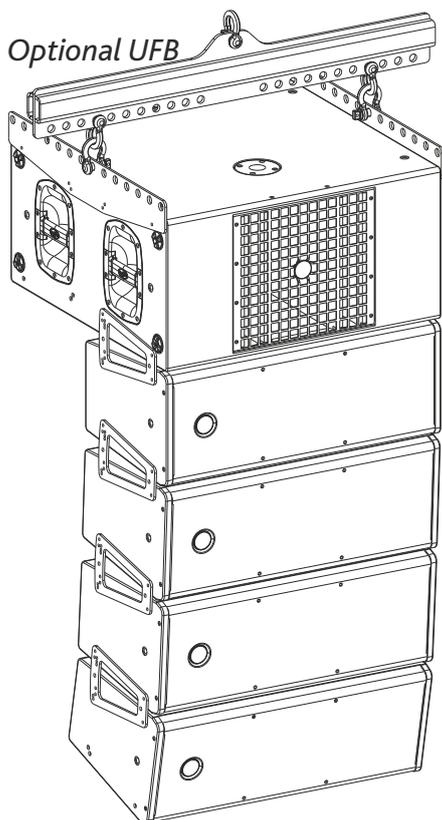


As an example we will mount the following array: **1x** *WR-322S-FX* + **4x** *WR-320-FX*, with angles: 0°, 0,5°, 1° and 5°.

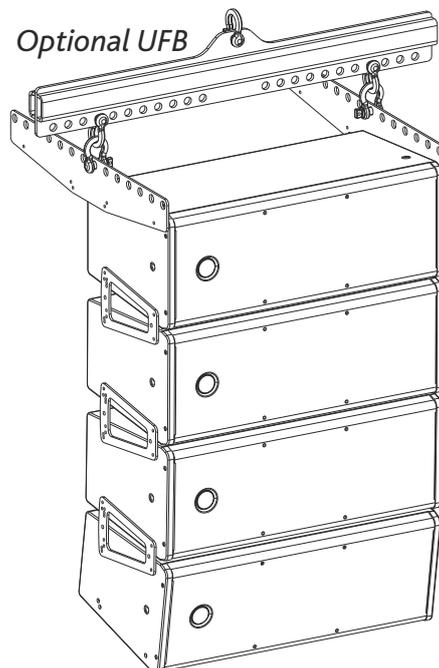




Then, we will have an array: **1x WR-322S-FX** + **4x WR-320-FX**, with angles: 0°, 0,5°, 1° and 5°.



Nevertheless, for an array without WR-322S-FX, with **4x WR-320-FX** only, and the same angles: 0°, 0,5°, 1° and 5°, we will have:



## TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
1 - No sound from any units.	1.1 - No signal present in the amplifier	1.1.1 - Check that the amplifier is on. 1.1.2 - Check that the gain is set above its minimum setting. 1.1.3 - Check that there is a signal to your amplifier from your mixer.
	1.2 - Defective cable.	1.2.1 - Check that the cable from the sound source to the UNIT is connected correctly. Replace the cable if defective. 1.2.2 - Check that none of the connected cables are cut or frayed.
	1,3 - High number of speakers connected in the same amplifier's channel.	1,3,1 - Check the minimum impedance requirements of your amplifier.
2 - NO sound from one unit.	2.1 - No signal present in the UNIT..	2.1.1 - Check that the cable between the UNITS is connected correctly. Replace the cable if defective. 2.1.2 - Check the balance control on the mixer.
3 - Poor stereo image or weak bass output	3.1 - Wrong connection	3.1.1 - Check the polarities (+/-) and be sure that all the speakers are well connected.

## ANNEX : Table for cable selection

This table shows the power loss in % and dB, for different cable lengths and sections shown. It is recommended that the losses do not exceed 30% in any case (around 3dB). Although it is recommended minimizing losses, the maximum acceptable losses are usually around 15% (approximately 1.4dB).

Longitud / Length		Calibre	Area	R	Perdida de potencia / Power Loss			
m	ft	AWG	mm2	Ohms	% @ 8 ohms	% @ 4 ohms	dB @ 8 ohms	dB @ 4 ohms
5	16,4	18	0,8	0,2250	2,74	5,33	-0,241	-0,475
		16	1,31	0,1374	1,69	3,32	-0,148	-0,293
		14	2,1	0,0857	1,06	2,10	-0,093	-0,184
		12	3,3	0,0545	0,68	1,35	-0,059	-0,118
		10	5,3	0,0340	0,42	0,84	-0,037	-0,073
		8	8,35	0,0216	0,27	0,54	-0,023	-0,047
10	33	18	0,8	0,4500	5,33	10,11	-0,475	-0,926
		16	1,31	0,2748	3,32	6,43	-0,293	-0,577
		14	2,1	0,1714	2,10	4,11	-0,184	-0,364
		12	3,3	0,1091	1,35	2,65	-0,118	-0,234
		10	5,3	0,0679	0,84	1,67	-0,073	-0,146
		8	8,35	0,0431	0,54	1,07	-0,047	-0,093
15	49	18	0,8	0,6750	7,78	14,44	-0,704	-1,354
		16	1,31	0,4122	4,90	9,34	-0,436	-0,852
		14	2,1	0,2571	3,11	6,04	-0,275	-0,541
		12	3,3	0,1636	2,00	3,93	-0,176	-0,348
		10	5,3	0,1019	1,26	2,48	-0,110	-0,218
		8	8,35	0,0647	0,80	1,59	-0,070	-0,139
25	82	18	0,8	1,1250	12,33	21,95	-1,143	-2,153
		16	1,31	0,6870	7,91	14,66	-0,716	-1,377
		14	2,1	0,4286	5,08	9,68	-0,453	-0,884
		12	3,3	0,2727	3,30	6,38	-0,291	-0,573
		10	5,3	0,1698	2,08	4,07	-0,182	-0,361
		8	8,35	0,1078	1,33	2,62	-0,116	-0,231
50	164	18	0,8	2,2500	21,95	36,00	-2,153	-3,876
		16	1,31	1,3740	14,66	25,57	-1,377	-2,565
		14	2,1	0,8571	9,68	17,65	-0,884	-1,686
		12	3,3	0,5455	6,38	12,00	-0,573	-1,110
		10	5,3	0,3396	4,07	7,83	-0,361	-0,708
		8	8,35	0,2156	2,62	5,11	-0,231	-0,456
75	246	18	0,8	3,3750	29,67	45,76	-3,057	-5,314
		16	1,31	2,0611	20,49	34,01	-1,991	-3,610
		14	2,1	1,2857	13,85	24,32	-1,295	-2,421
		12	3,3	0,8182	9,28	16,98	-0,846	-1,616
		10	5,3	0,5094	5,99	11,30	-0,536	-1,041
		8	8,35	0,3234	3,88	7,48	-0,344	-0,675
100	328	18	0,8	4,5000	36,00	52,94	-3,876	-6,547
		16	1,31	2,7481	25,57	40,72	-2,565	-4,542
		14	2,1	1,7143	17,65	30,00	-1,686	-3,098
		12	3,3	1,0909	12,00	21,43	-1,110	-2,095
		10	5,3	0,6792	7,83	14,52	-0,708	-1,362
		8	8,35	0,4311	5,11	9,73	-0,456	-0,889



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