



User's Manual

artec 300 series

*ARTEC-306 / ARTEC-308 / ARTEC-326
ARTEC-310.96 / ARTEC-310.64
ARTEC-312.96 / ARTEC-312.64
ARTEC-315.96 / ARTEC-315.64
ARTEC-320 / ARTEC-322S*



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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<u>4x ARTEC-312.XX / ARTEC-315.XX + 2x ARTEC-322S</u>	
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artec 300 series

Precauciones de Seguridad Safety Precautions



Cajas acústicas pasivas / Passive loudspeaker enclosures

Conserve y lea todas estas instrucciones.

Siga todas las advertencias.

El signo de exclamación dentro de un triángulo indica la existencia de componentes internos cuyo reemplazo puede afectar a la seguridad.



Keep these instructions.

Heed all warnings. Follow all instructions.

The exclamation point inside an equilateral triangle indicates the existence of internal components whose substitution may affect safety.

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.

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 exponga este equipo a la lluvia o humedad. No exponga el equipo a salpicaduras ni coloque sobre él objetos que contengan líquidos, tales como vasos y botellas. Equipo IP-20.

Do not expose this device to rain or moisture. 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. IP-20 equipment.

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 15°C y 42°C con una humedad relativa máxima del 95%.

Working temperature ranges from 15°C to 42°C with a relative humidity of 95%.

El cableado exterior conectado al equipo requiere de su instalación por una persona instruida.

The outer wiring connected to the device requires installation by an instructed person.

El equipo cuenta con un terminal de entrada tipo regleta de tornillo para facilitar la conexión.

Device with terminal strip input to provide an easy connection.

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.

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 aparato se haya dañado de alguna forma, tal como que haya caído líquido o algún objeto en el interior del aparato, haya sido expuesto a lluvia o humedad, no funcione correctamente o haya recibido un golpe.

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 warranted 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 la *serie artec 300*:

Declares that *artec 300 series*:

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 es conforme a las siguientes Normas Armonizadas Europeas:

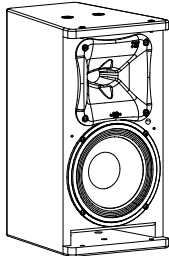
In accordance with Harmonized European Norms:

- 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.

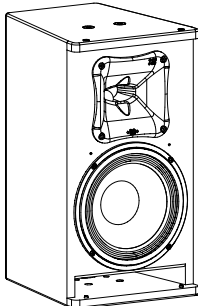
INTRODUCTION

The *artec 300* series full range systems have been designed to provide wide bandwidth and high SPL in a visually discrete package. The *artec 300* products can be installed on walls, ceilings or columns thanks to an extensive selection of optional mounting accessories. The ideal choice for under balcony, area fill and near field applications, their reduced dimensions and sleek styling fits perfectly into multiple surroundings including hotels and restaurants, from elegant nightclub installations to educational facilities.

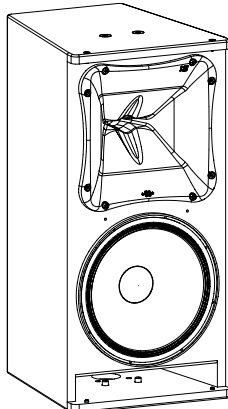
Features



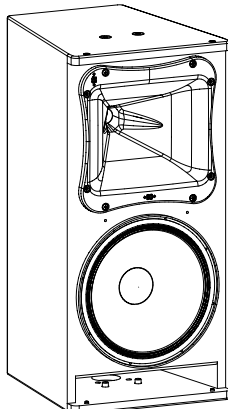
ARTEC-306



ARTEC-308



ARTEC-310.96



ARTEC-310.64

ARTEC-306

- 1x 6" low frequency loudspeaker
- 1x 1" exit compression driver
- Rotatable 90°x60° horn
- Vertical or horizontal positioning
- VESA-75/VESA-100 standard threaded mounting points
- Versions with factory-installed line transformer and black or white finishes available.

The *ARTEC-306* employs a single 6" woofer for low frequency reproduction. The *M-26* compression driver provides the highs. The birch plywood cabinet construction offers an ultra-compact design which is available in black or white. Precise coverage and control in either the horizontal or vertical position is possible thanks to the 90°x60° horn geometry. The cabinets can be permanently installed by way of the included "U" brackets and the other optional accessories which allow for multiple configurations. Four threaded fixing points for the wall mount and stand mounting accessories augment adaptability. A robust steel grille internally lined with acoustically transparent filter cloth protects components.

ARTEC-308

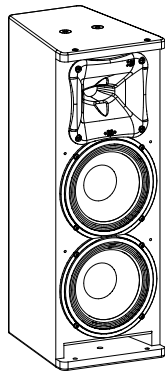
- 1x 8" low frequency loudspeaker
- 1x 1" exit compression driver
- Rotatable 90°x60° horn
- Vertical or horizontal positioning
- VESA-75/VESA-100 standard threaded mounting points
- Versions with factory-installed line transformer and black or white finishes available.

The *ARTEC-308* employs a single 8" woofer for low frequency reproduction. The *M-26* compression driver provides the highs. The birch plywood cabinet construction offers an ultra-compact design which is available in black or white. Precise coverage and control in either the horizontal or vertical position is possible thanks to the 90°x60° horn geometry. The cabinets can be permanently installed by way of the included "U" brackets and the other optional accessories which allow for multiple configurations. Four threaded fixing points for the wall mount and stand mounting accessories augment adaptability. A robust steel grille internally lined with acoustically transparent filter cloth protects components.

ARTEC-310.96 / ARTEC-310.64

- 1x 10" low frequency loudspeaker
- 1x 1" exit compression driver
- Rotatable 90°x60° / 60°x40° horn (different models)
- Vertical or horizontal positioning
- VESA-75/VESA-100 standard threaded mounting points
- Versions with factory-installed line transformer and black or white finishes available.

The *ARTEC-310.XX* employs a single 10" woofer for low frequency reproduction. The *M-34* compression driver provides the highs. The birch plywood cabinet construction offers an ultra-compact design which is available in black or white. Precise coverage and control in either the horizontal or vertical position is possible thanks to the 90°x60° horn geometry in *ARTEC-310.96*, or the 60°x40° horn geometry in *ARTEC-310.64*. The cabinets can be permanently installed by way of the included "U" brackets and the other optional accessories which allow for multiple configurations. Four threaded fixing points for the wall mount and stand mounting accessories augment adaptability. A robust steel grille internally lined with acoustically transparent filter cloth protects components.

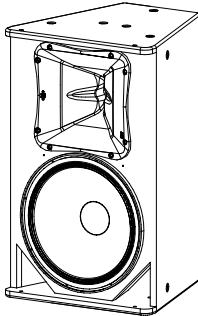


ARTEC-326

ARTEC-326

- 2x 6" low frequency loudspeaker
- 1x 1" exit compression driver
- Rotatable 90°x60° horn
- Vertical or horizontal positioning
- VESA-75/VESA-100 standard threaded mounting points
- Versions with factory-installed line transformer and black or white finishes available.

The **ARTEC-326** employs dual 6" woofers for low frequency reproduction. The **M-26** compression driver provides the highs. The birch plywood cabinet construction offers an ultra-compact design which is available in black or white. Precise coverage and control in either the horizontal or vertical position is possible thanks to the 90°x60° horn geometry. The cabinets can be permanently installed by way of the included "U" brackets and the other optional accessories which allow for multiple configurations. Four threaded fixing points for the wall mount and stand mounting accessories augment adaptability. A robust steel grille internally lined with acoustically transparent filter cloth protects components.

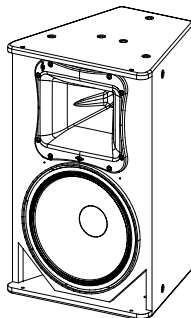


ARTEC-312.96

ARTEC-312.96 / ARTEC-312.64

- 1x 12" low frequency loudspeaker
- 1x 1" exit compression driver
- Rotatable 90°x60° / 60°x40° horn (different models)
- Vertical or horizontal positioning
- Versions black or white finishes available.

The **ARTEC-312.XX** employs a single 12" woofer for low frequency reproduction. The **M-34** compression driver provides the highs. The birch plywood cabinet construction offers an ultra-compact design which is available in black or white. Precise coverage and control in either the horizontal or vertical position is possible thanks to the 90°x60° horn geometry in **ARTEC-312.96**, or the 60°x40° horn geometry in **ARTEC-312.64**. The cabinets can be permanently installed by way of the optional "U" brackets and accessories which allow for multiple configurations. Four threaded fixing points for the wall mount and stand mounting accessories augment adaptability. A robust steel grille internally lined with acoustically transparent filter cloth protects components.

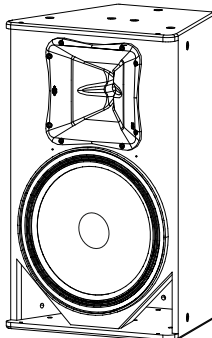


ARTEC-312.64

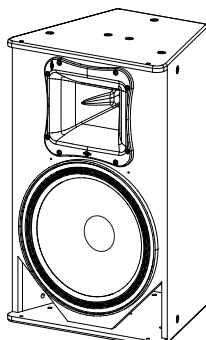
ARTEC-315.96 / ARTEC-315.64

- 1x 15" low frequency loudspeaker
- 1x 1" exit compression driver
- Rotatable 90°x60° / 60°x40° horn (different models)
- Vertical or horizontal positioning
- Versions black or white finishes available.

The **ARTEC-315.XX** employs a single 15" woofer for low frequency reproduction. The **M-34** compression driver provides the highs. The birch plywood cabinet construction offers an ultra-compact design which is available in black or white. Precise coverage and control in either the horizontal or vertical position is possible thanks to the 90°x60° horn geometry in **ARTEC-315.96**, or the 60°x40° horn geometry in **ARTEC-315.64**. The cabinets can be permanently installed by way of the optional "U" brackets and accessories which allow for multiple configurations. Four threaded fixing points for the wall mount and stand mounting accessories augment adaptability. A robust steel grille internally lined with acoustically transparent filter cloth protects components.



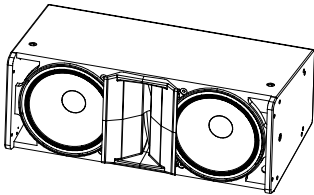
ARTEC-315.96



ARTEC-315.64

ARTEC-320

- Two-way installation line array
- 2x 10" low frequency loudspeaker
- Compression driver with 3" titanium diaphragm and 1.5" exit
- Rigging system for installation compatible with **ARTEC-322S**
- Versions black or white finishes available.



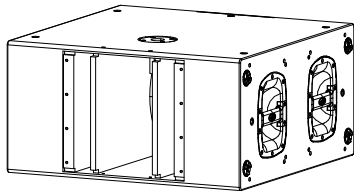
ARTEC-320

The **ARTEC-320** system is a two-way line array for installation with dual 10" low frequency speakers, and a compression driver with 3" titanium diaphragm and 1.5" exit for the highs. The birch plywood cabinet construction offers an ultra-compact design which is available in black or white. The high frequency waveguide is the same as the waveguide incorporated in the prestigious *event series*. A rugged protective steel grille safeguards the DAS components.

The **JP-320** (included in **ARTEC-320**) are accessories that permit the system array assembly, whereas the **AX-AR3** (optional) is needed for the rigging system.

ARTEC-322S

- Compact band-pass subwoofer system
- Dual 12" low frequency loudspeakers
- Enclosure designed for an easy stacking
- Rigging system compatible with **ARTEC-320**
- Versions black or white finishes available.

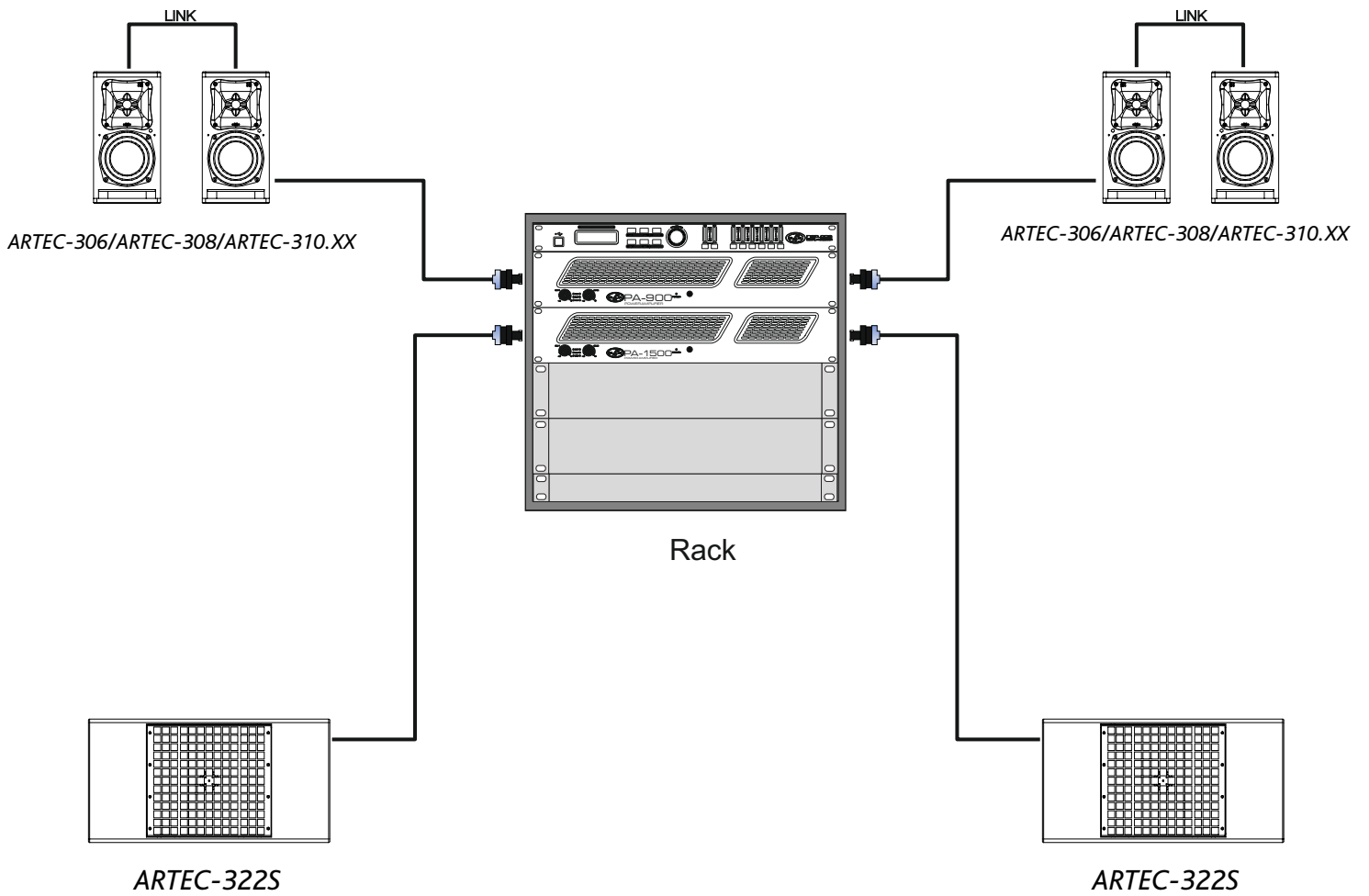


ARTEC-322S

The **ARTEC-322S** is a band-pass subwoofer system with dual **12P** low frequency loudspeakers. The loudspeaker is protected by a perforated steel grille, sealed against corrosion using a powder coat finish. The birch plywood cabinet construction offers an ultra-compact design which is available in black or white. The **ARTEC-322S** is designed for use in active systems. The handles make moving easy.

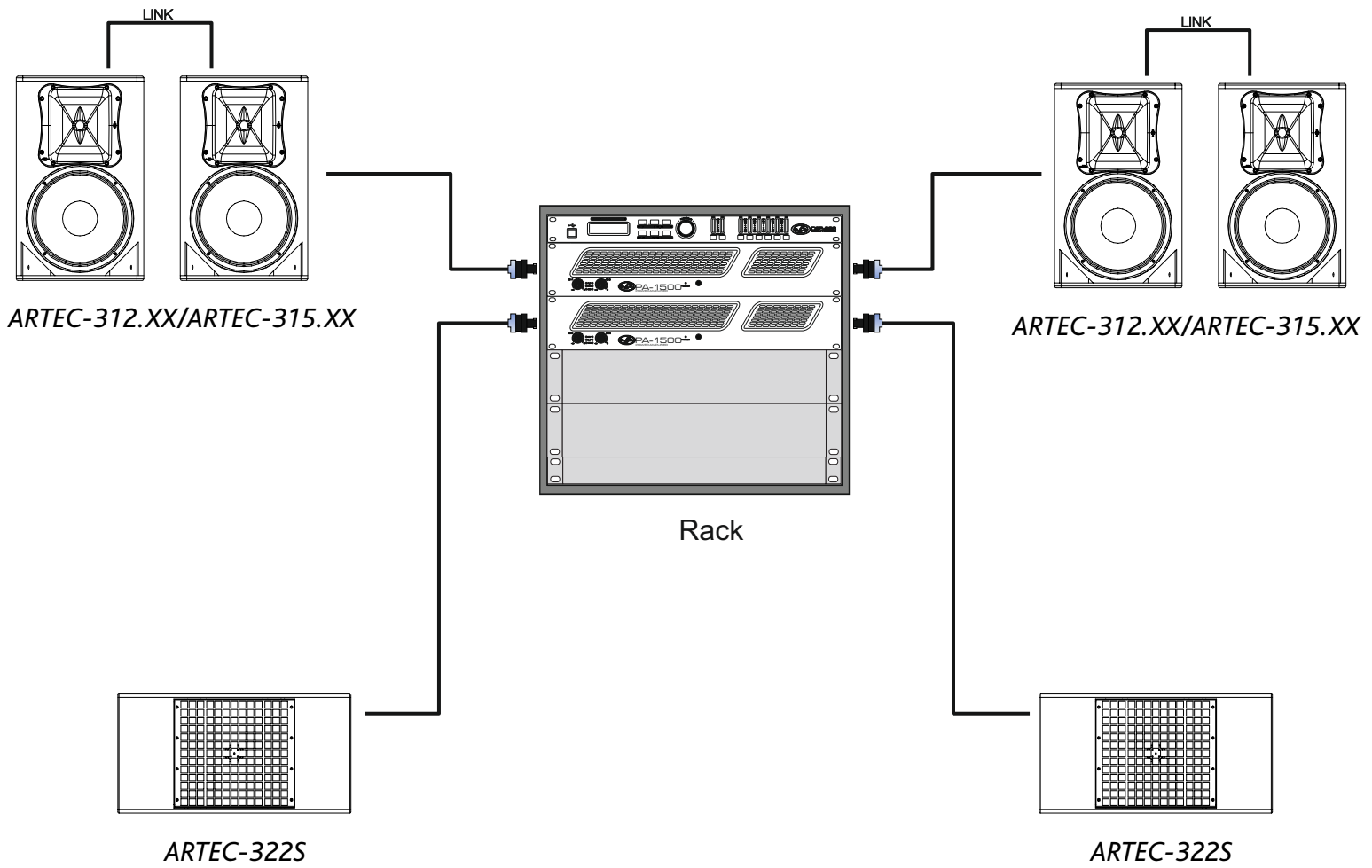
CONFIGURATIONS

4x ARTEC-306 / ARTEC-308 / ARTEC-310.XX + 2x ARTEC-322S



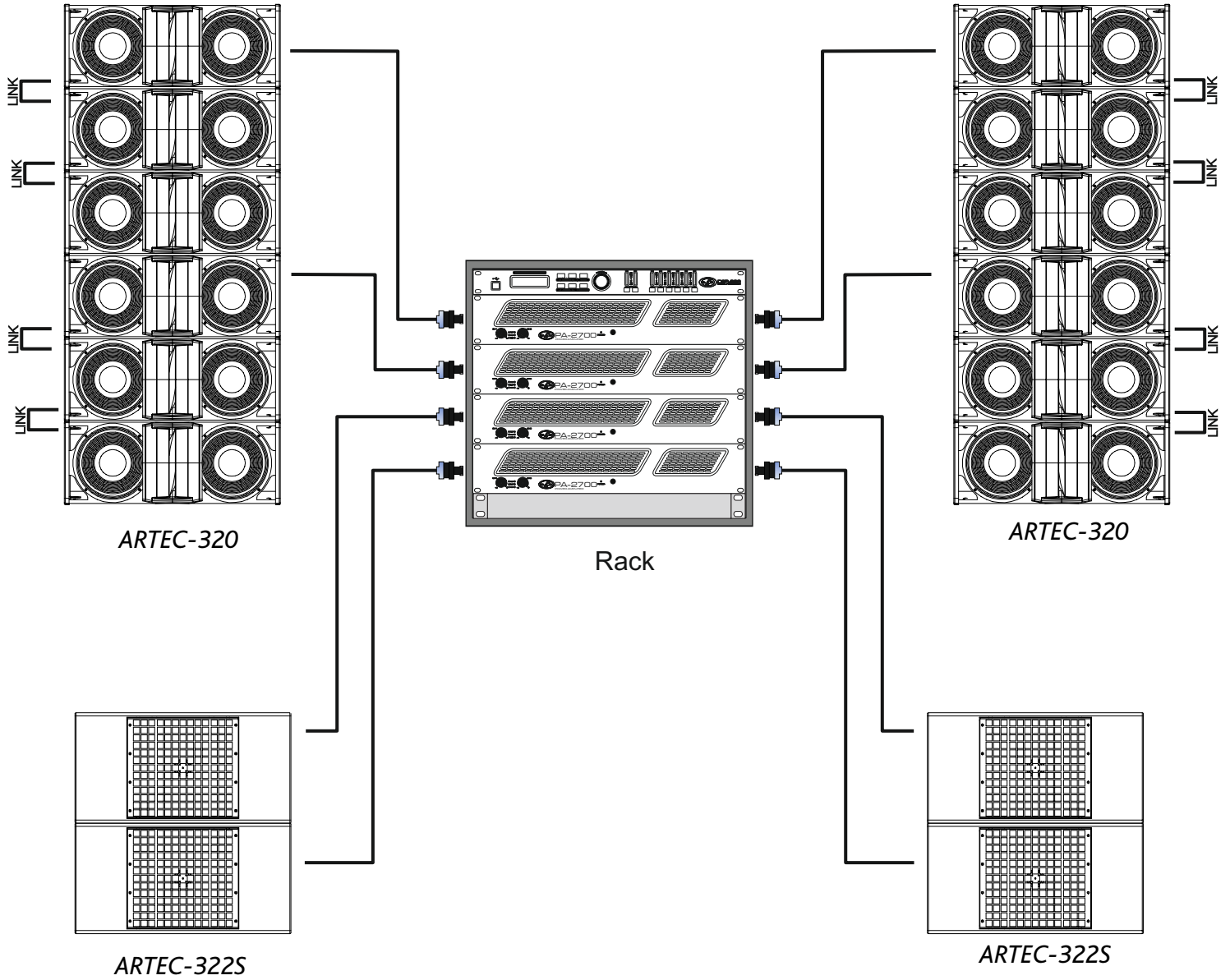
CONFIGURATIONS (cont'd)

4x ARTEC-312.XX / ARTEC-315.XX + 2x ARTEC-322S



CONFIGURATIONS (cont'd)

12x ARTEC-320 + 4x ARTEC-322S



SPECIFICATIONS

MODELS (black)	ARTEC-306	ARTEC-326	ARTEC-308	ARTEC-310.96 ARTEC-310.64
MODELS (with autoformer)	ARTEC-306-T	ARTEC-326-T	ARTEC-308-T	ARTEC-310.96-T ARTEC-310.64-T
MODELS (white)	ARTEC-306-W	ARTEC-326-W	ARTEC-308-W	ARTEC-310.96-W ARTEC-310.64-W
MODELS (white & with autoformer)	ARTEC-306-TW	ARTEC-326-TW	ARTEC-308-TW	ARTEC-310.96-TW ARTEC-310.64-TW
TRANSDUCERS	LF: 6B HF: M-26	LF: 2 x 6B HF: M-26	LF: 8B HF: M-26	LF: 10MI HF: M-34
REPLACEMENT PARTS	GM-6B GM-M26	GM-6B GM-M26	GM-8B GM-M26	GM-10MI GM-M34
HF HORN COVERAGE ANGLES (-6dB)	90° x 60° HORN ROTATABLE	90° x 60° HORN ROTATABLE	90° x 60° HORN ROTATABLE	90°x60° ARTEC-310.96 60°x40° ARTEC-310.64 HORN ROTATABLE
FREQUENCY RANGE (-10dB)	70 Hz - 20 kHz	60 Hz - 20 kHz	60 Hz - 20 kHz	50 Hz - 20 kHz
NOMINAL IMPEDANCE	8 Ohms	16 Ohms	8 Ohms	8 Ohms
POWER HANDLING	100W RMS 200W PGM	200W RMS 400W PGM	150W RMS 300W PGM	250W RMS 500W PGM
ON-AXIS SENSITIVITY (1W / 1m)	90dB SPL	93dB SPL	92dB SPL	96dB SPL
MAXIMUM PEAK SPL	116dB	122dB	120dB	126dB
INPUT CONNECTIONS (black or white models)	TERMINAL STRIP	TERMINAL STRIP	TERMINAL STRIP	TERMINAL STRIP
INPUT CONNECTIONS (T models)	TERMINAL STRIP	TERMINAL STRIP	TERMINAL STRIP	TERMINAL STRIP
ENCLOSURE MATERIAL	BIRCH PLYWOOD	BIRCH PLYWOOD	BIRCH PLYWOOD	BIRCH PLYWOOD
COLOR	BLACK or WHITE	BLACK or WHITE	BLACK or WHITE	BLACK or WHITE
FINISH	ISO-FLEX PAINT	ISO-FLEX PAINT	ISO-FLEX PAINT	ISO-FLEX PAINT
DIMENSIONS (H x W x D)	38 x 19.5 x 25.5 (cm) 15 x 7.7 x 10 (in)	54 x 19.5 x 25.5 (cm) 21.3 x 7.7 x 10 (in)	44.5 x 24.5 x 28.5 (cm) 17.5 x 9.6 x 11.2 (in)	60.5 x 29 x 34.5 (cm) 23.8 x 11.4 x 13.6 (in)
NET WEIGHT (black or white models)	7.2 kg 15.8 lb	10 kg 22 lb	9.5 kg 20.9 lb	15.5 kg 34.1 lb
NET WEIGHT (T models)	8.2 kg 18 lb	11 kg 24.2 lb	10.5 kg 23.1 lb	16.5 kg 36.3 lb
ACCESSORIES	AXU-AR306 (included)	AXU-AR326 (included)	AXU-AR308 (included)	AXU-AR310 (included)
	ANL-2 EYE BOLT	ANL-2 EYE BOLT	ANL-2 EYE BOLT	ANL-2 EYE BOLT
	AXW-3 WALL MOUNT	AXW-3 WALL MOUNT	AXW-3 WALL MOUNT	AXW-3 WALL MOUNT
			AXC-AT	AXC-AT
			AXF-AR508	AXF-AR510
		CEILING BRACKET	CEILING BRACKET	

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

SPECIFICATIONS (cont'd)

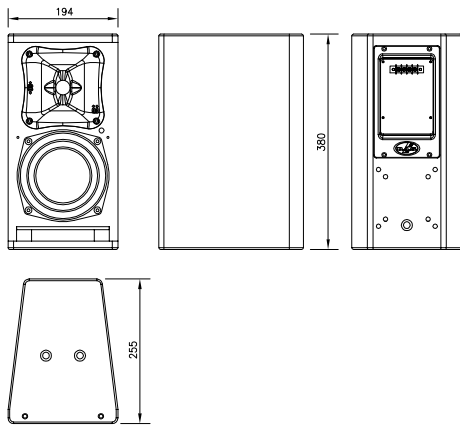
MODELS (black)	ARTEC-312.96 ARTEC-312.64	ARTEC-315.96 ARTEC-315.64	ARTEC-320	ARTEC-322S
MODELS (with autoformer)	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE
MODELS (white)	ARTEC-312.96-W ARTEC-312.64-W	ARTEC-315.96-W ARTEC-315.64-W	ARTEC-320-W	ARTEC-322S-W
MODELS (white & with autoformer)	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE
TRANSDUCERS	LF: 12MI HF: M-34	LF: 15MI HF: M-34	LF: 2 x 10MI HF: M-75	LF: 2 x 12P
REPLACEMENT PARTS	GM-12MI GM-M34	GM-15MI GM-M34	GM-10MI GM-M75	GM-12P
HF HORN COVERAGE ANGLES (-6dB)	90°x60° ARTEC-312.96 60°x40° ARTEC-312.64 HORN ROTATABLE	90°x60° ARTEC-315.96 60°x40° ARTEC-315.64 HORN ROTATABLE	90° x splay dependent	-
FREQUENCY RANGE (-10dB)	50 Hz - 20 kHz	47 Hz - 20 kHz	60 Hz - 20 kHz	37 Hz - 300 Hz
NOMINAL IMPEDANCE	8 Ohms	8 Ohms	16 Ohms	4 Ohms
POWER HANDLING	300W RMS 600W PGM	350W RMS 700W PGM	500W RMS 1000W PGM	800W RMS 1600W PGM
ON-AXIS SENSITIVITY (1W / 1m)	96dB SPL	96dB SPL	99dB SPL	98dB SPL
MAXIMUM PEAK SPL	127dB	127dB	132dB	132dB
INPUT CONNECTIONS (black or white models)	TERMINAL STRIP	TERMINAL STRIP	TERMINAL STRIP	TERMINAL STRIP
INPUT CONNECTIONS (T models)	-	-	-	-
ENCLOSURE MATERIAL	BIRCH PLYWOOD	BIRCH PLYWOOD	BIRCH PLYWOOD	BIRCH PLYWOOD
COLOR	BLACK or WHITE	BLACK or WHITE	BLACK or WHITE	BLACK or WHITE
FINISH	ISO-FLEX PAINT	ISO-FLEX PAINT	ISO-FLEX PAINT	ISO-FLEX PAINT
DIMENSIONS (H x W x D)	61 x 38 x 37.5 (cm) 24 x 15 x 14.8 (in)	71 x 44 x 37.5 (cm) 28 x 17.3 x 14.8 (in)	27 x 70 x 36 (cm) 10.6 x 27.6 x 14.2 (in)	35.5 x 70 x 68.5 (cm) 14 x 27.6 x 27 (in)
NET WEIGHT (black or white models)	18.5 kg 40.7 lb	21.5 kg 47.3 lb	26.5 kg 58.3 lb	42.5 kg 93.5 lb
NET WEIGHT (T models)	-	-	-	-
ACCESSORIES	ANL-2 EYE BOLT	ANL-2 EYE BOLT	AX-AR3	ANL-2 EYE BOLT
	AXU-AR312	AXU-AR315	JP-320 (included)	AX-AR3
				JP-320

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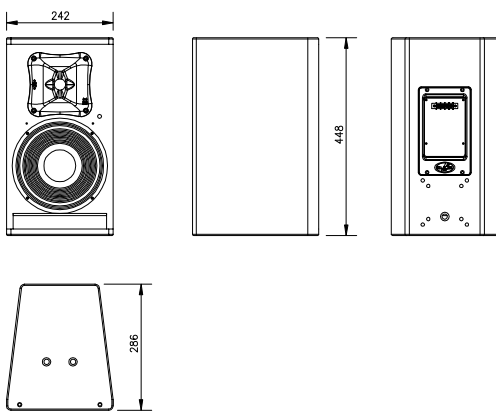
LINE DRAWINGS

ALL DIMENSIONS IN MILLIMETERS

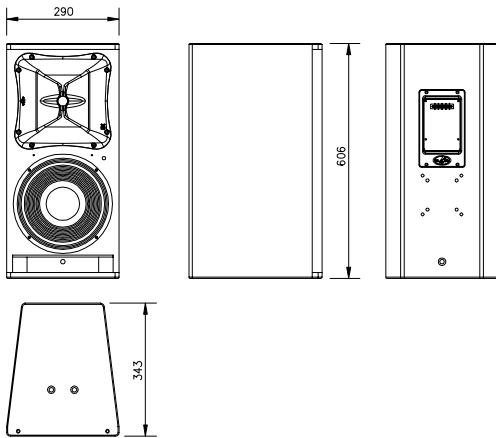
ARTEC-306 / ARTEC-306-T



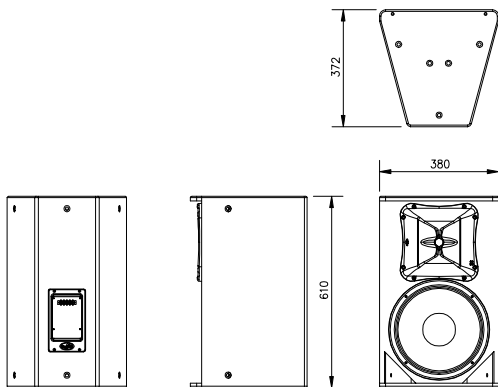
ARTEC-308 / ARTEC-308-T



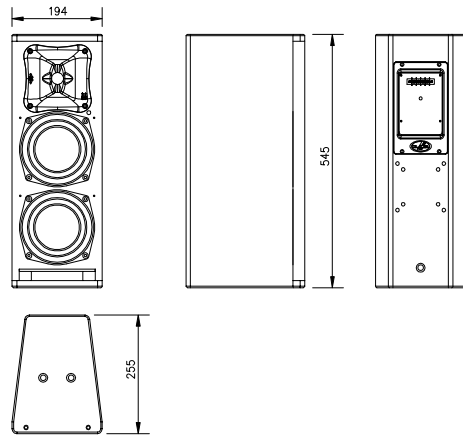
ARTEC-310.96 / ARTEC-310.96-T



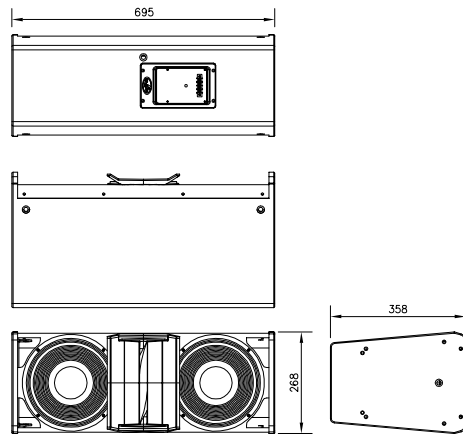
ARTEC-312.96



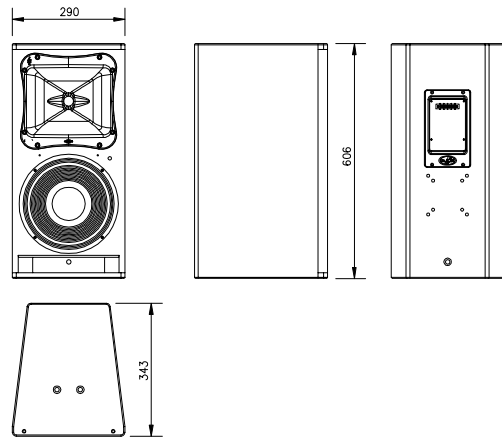
ARTEC-326 / ARTEC-326-T



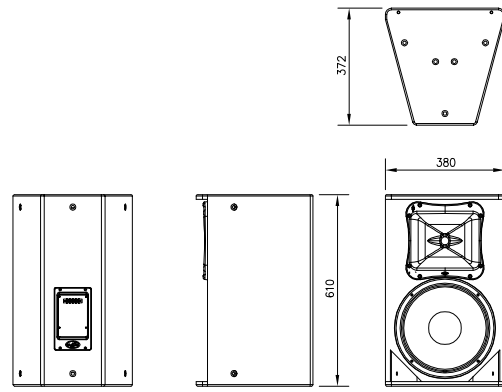
ARTEC-320



ARTEC-310.64 / ARTEC-310.64-T



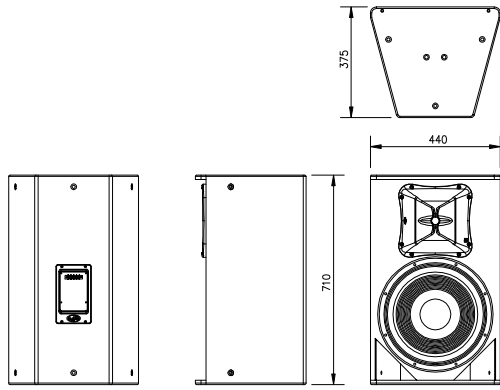
ARTEC-312.64



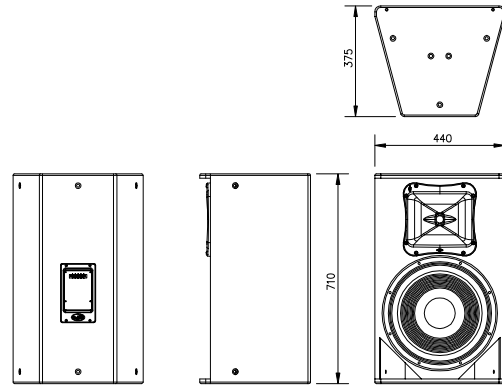
LINE DRAWINGS (cont'd)

ALL DIMENSIONS IN MILLIMETERS

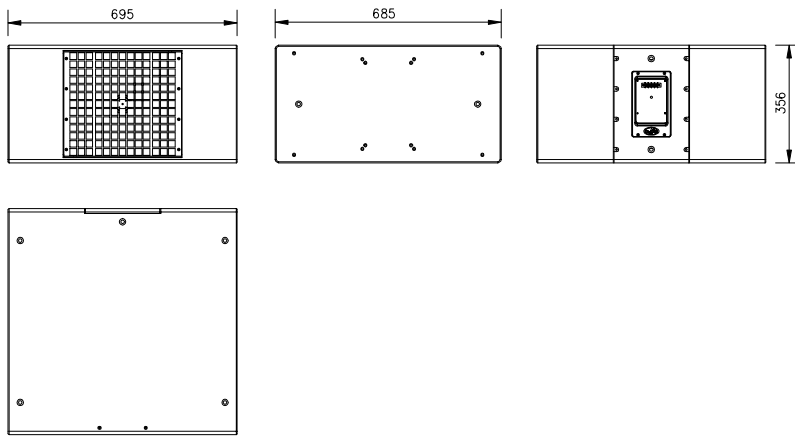
ARTEC-315.96



ARTEC-315.64



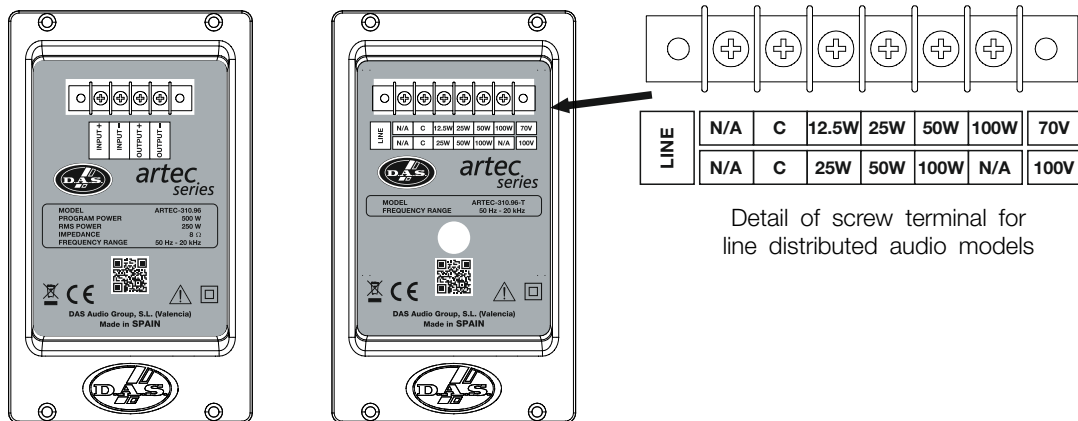
ARTEC-322S



INSTALLATION & ACCESSORIES

Connectors

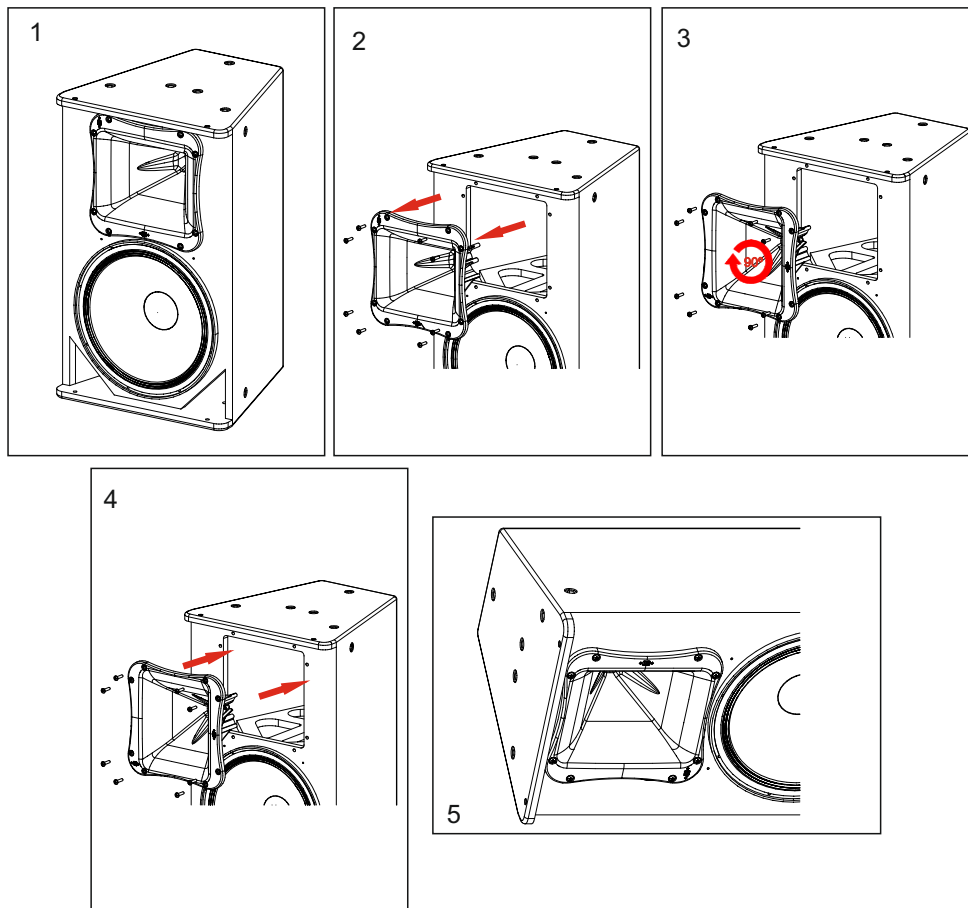
The **DAS artec 300 series** is designed to facilitate the connection for installations, so it has been provided with screw terminals for easier use in most types of installations. The polarity of the connectors and other important information for proper connection is indicated on the labels.



The “T” models have a bigger screw terminal with the connections for different powers (see the label).

Rotatable horns

The **artec 300 series** models have been provided with rotatable horns to optimize the acoustic response of the unit group of installed systems. This will be necessary when we install the equipment horizontally, as shown in the following figures:



Safety Precautions

Wall plugs provided are to be used in brick walls only. For other wall materials, source the suitable wall plug before use.

DAS Audio is not responsible for use other than the recommended or whether it be the result of insufficient strength of the support structure. Use only the screws and wall plugs supplied on surfaces that will provide sufficient support.

Do not use on surfaces such as plaster boards and gypsum.

To ensure optimum safety, the installation should be checked thoroughly at regular intervals replacing all deteriorated elements. Loosen the screws before reorienting the speaker. Never force the rigging elements.

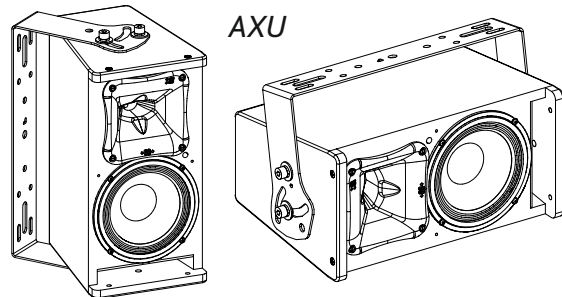
It is highly recommended and in most parts of the world mandatory, that a safety cable be used to secure the enclosure to the structure.

Contact a licensed rigger if there is any doubt.

AXU accessories

The **AXU** are accessories for mounting on the wall, or ceiling. The **AXU-AR312** is the optional accessory for the different models of **ARTEC-312.XX**. The **AXU-AR315** is the optional accessory for the different models of **ARTEC-315.XX**.

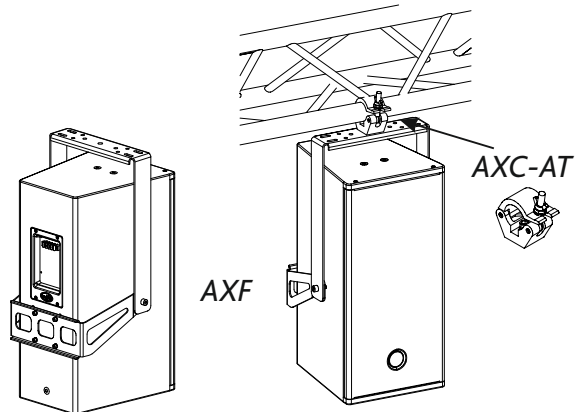
The models **AXU-AR306**, **AXU-AR326**, **AXU-AR308** & **AXU-AR310** are included in the products **ARTEC-306**, **ARTEC-326**, **ARTEC-308** & **ARTEC-310.XX**, respectively. Other **AXU** models are available separately



AXF accessories

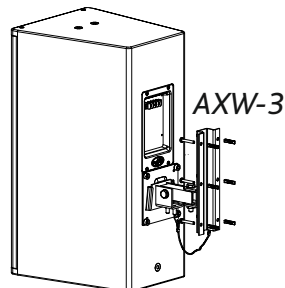
(for ARTEC-308 & ARTEC-310.XX versions only)

The **AXF** are designed for wall or truss mounting of enclosures **ARTEC-508**, **ARTEC-308**, **ARTEC-310.XX**, **ARTEC-510** and their different versions.



AXW-3 accessories

The **DAS Audio** accessories **AXW-3**, permit the wall mounting of **ARTEC-306**, **ARTEC-326**, **ARTEC-308** **ARTEC-310.XX** and their different versions.



Mounting instructions

You can consult the different mounting instructions for each accessory for **artec 300** series on the web: www.dasaudio.com

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).

The load capacity, of each lift motor, should correspond to a safety factor of 10:1.

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.

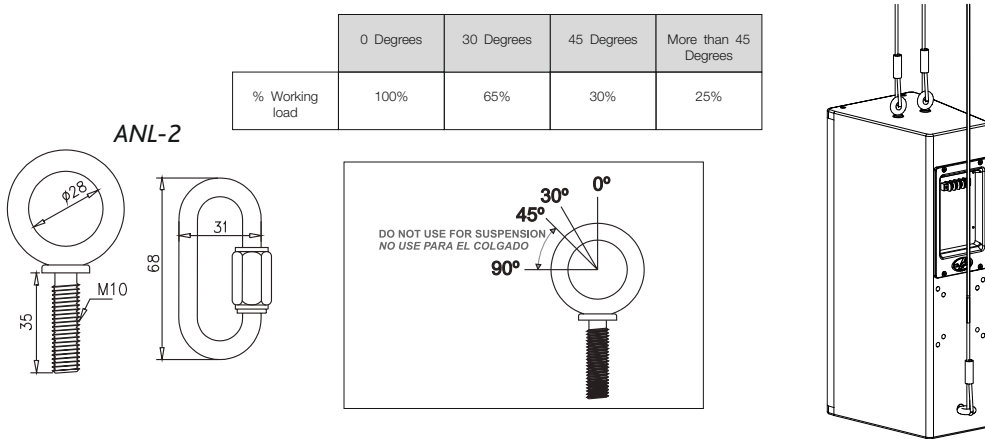
Absolutely no risks should be taken with regards to public safety.

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.



To hang the units, 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 a 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 points can be used to provide vertical orientation.

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

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 above 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.

Note: As always, when we handle heavy loads, we should wear appropriate clothing and protective elements such as gloves, safety shoes, etc.

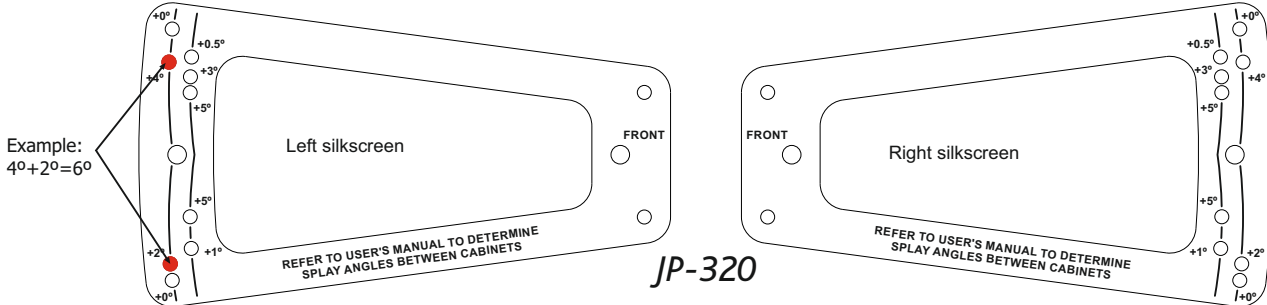
Installation Line Array

Also, the *artec 300* series permits to make line arrays with the models *ARTEC-320* & *ARTEC-322S*.

The *ARTEC-320* includes the *JP-320*, 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.

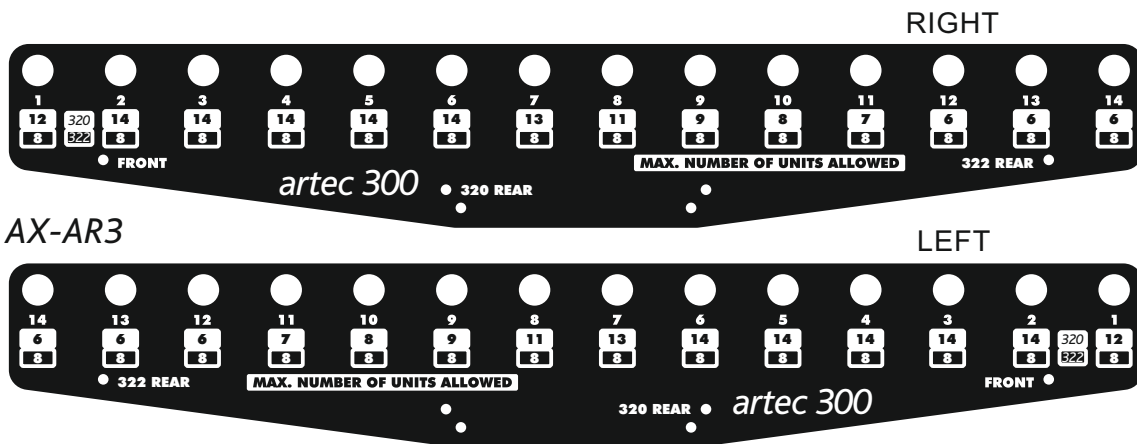
Then we will see the silkscreen of these pieces and an example for 6°.



artec 300 series also offers an optional AX accessory, *AX-AR3*, which allows us to fly an array of *ARTEC-320*, or *ARTEC-322S* + *ARTEC-320*.

The *ARTEC-322S* does not include the *JP-320*.

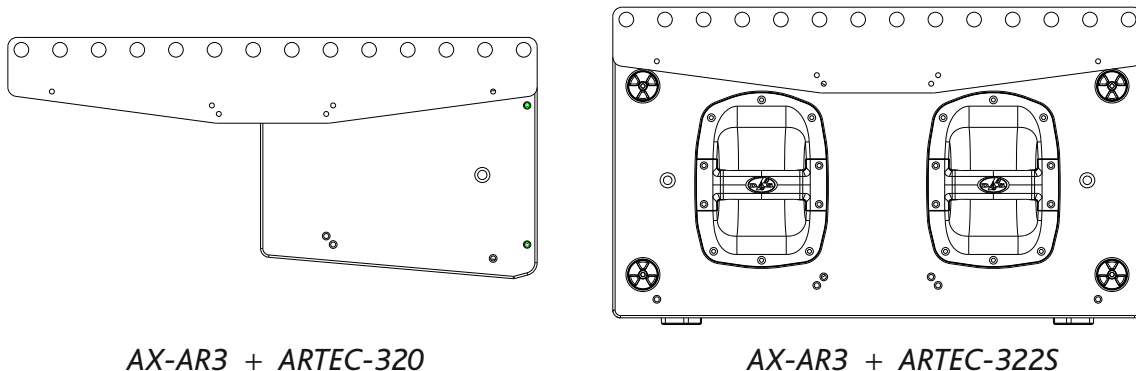
See the silkscreen of *AX*, where the holes to use for the different combinations are indicated.



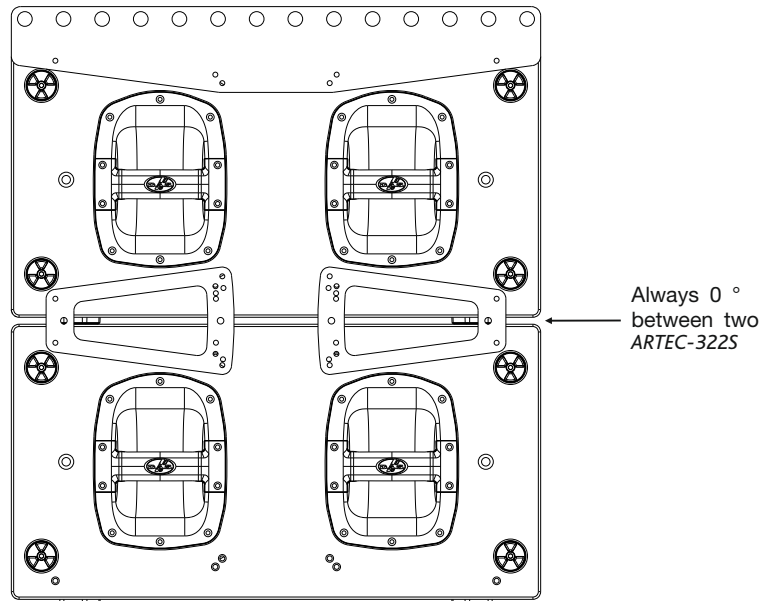
Note: It's possible to use a *UFB* (Universal Fly Bar) if a central bar is needed, because this *AX* does not include a pick-up.

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

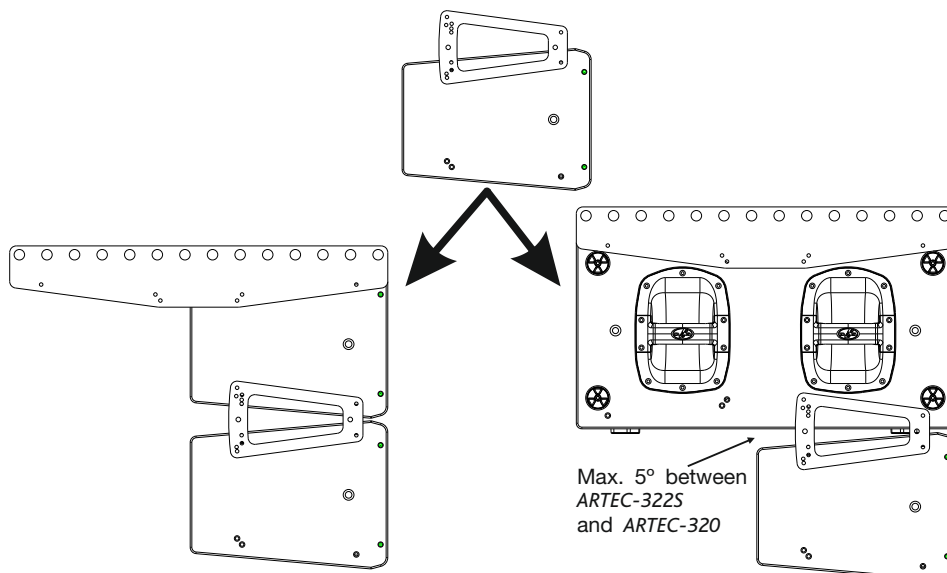
Regardless of the use of a *UFB*, we must start by screwing the *AX-AR3* to the top enclosure.



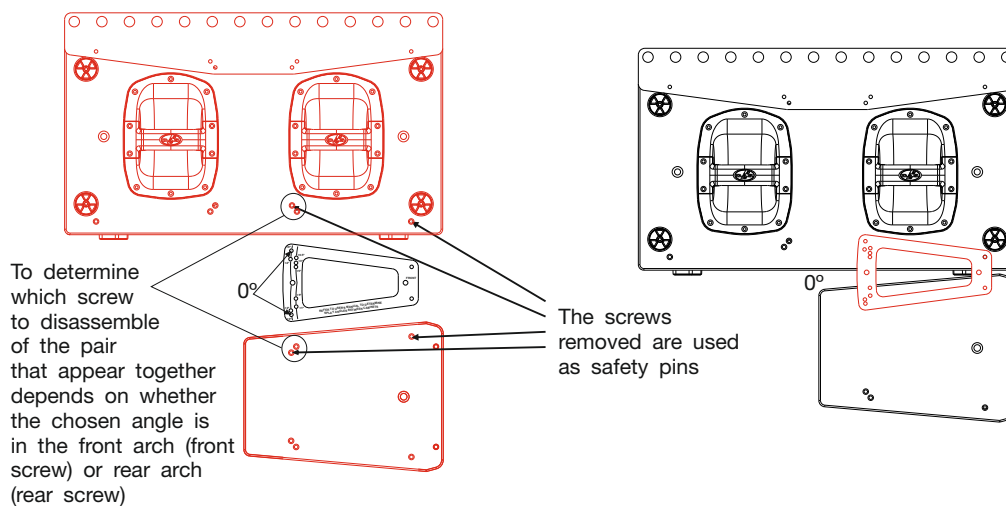
If we need to mount another sub below the first, we will need another *JP-320*, one piece on each side.

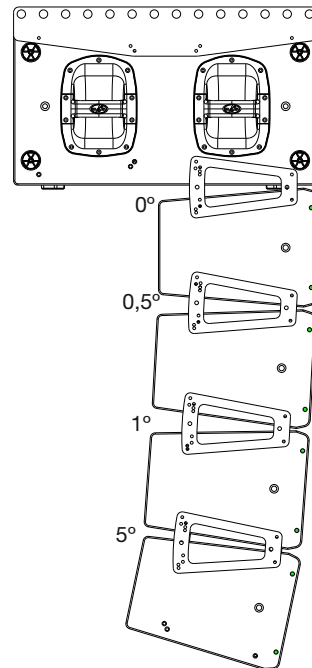
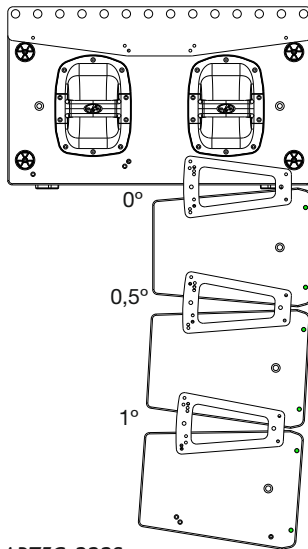
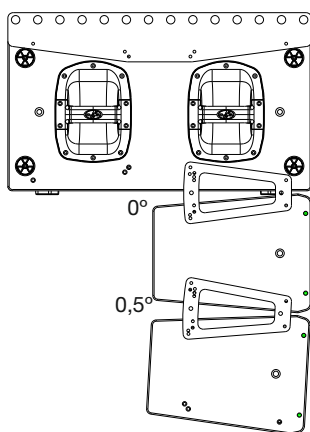
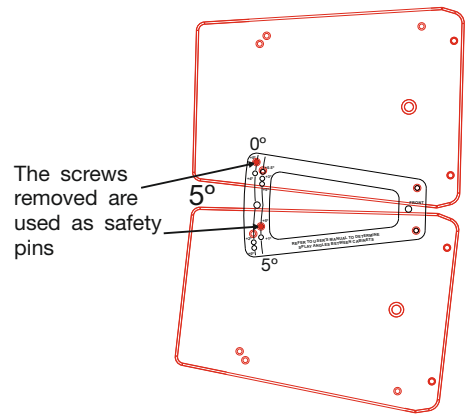
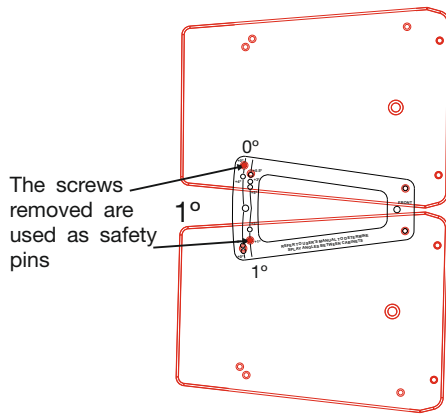
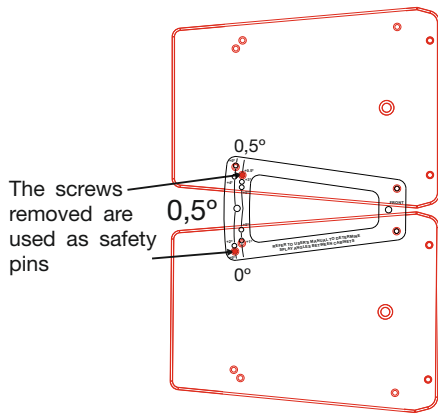


Both in the case of having subwoofers as in the case of not having any, we will mount the following *ARTEC-320* below the first enclosure, for which we need a *JP-320*, one piece for each side, with the desired angles.

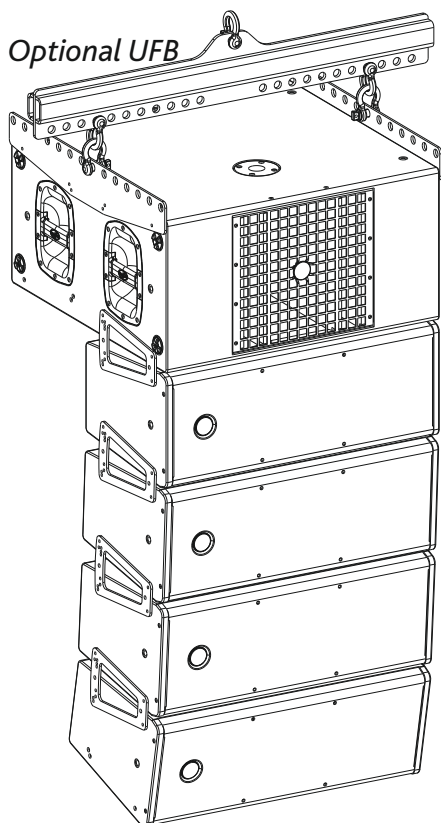


As an example we will mount the following array: **1x ARTEC-322S + 4x ARTEC-320**, with angles: 0°, 0,5°, 1° and 5°.

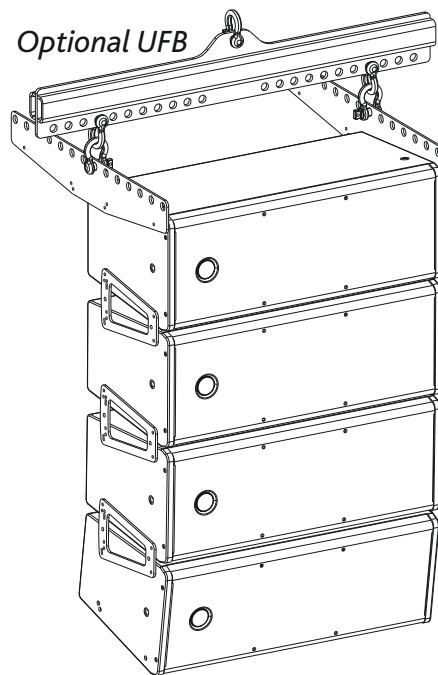




Then, we will have an array: **1x ARTEC-322S**
 + **4x ARTEC-320**, with angles: 0°, 0,5°, 1° and 5°.



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



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



www.dasaudio.com

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