



*User's Guide*

# *convert 12A and convert 18A*



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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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. **ATENCIÓN:** Es un producto clase A, por lo que en entornos domésticos puede causar radio-interferencias, en cuyo caso el usuario tendrá que tomar las medidas oportunas. De acuerdo con EN55103-2, usar el equipo sólo en entornos E1, E2, E3 ó E4.



No desconecte la tierra en el conector de alimentación pues es peligroso e ilegal. Equipo de Clase I.

El signo del rayo con la punta de flecha, alerta contra la presencia de voltajes peligrosos no aislados. Para reducir el riesgo de choque eléctrico, no retire la cubierta. Sólo use este equipo con el cable de red de alimentación adecuado para su país.



No instale el aparato cerca de ninguna fuente de calor como radiadores, estufas u otros aparatos que produzcan calor. Debe instalarse siempre sin bloquear la libre circulación de aire por las aletas del radiador.

No exponga este equipo a la lluvia o humedad. No use este aparato cerca del agua (piscinas y fuentes, por ejemplo). No exponga el equipo a salpicaduras ni coloque sobre él objetos que contengan líquidos, tales como vasos y botellas. Equipo IP-20.

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.



Equipo diseñado para funcionar entre 15°C y 42°C con una humedad relativa máxima del 95%, con un rango de  $\pm 10\%$  de la tensión nominal de alimentación indicada en la etiqueta trasera (según IEC 60065:2001). Si debe sustituir el fusible preste atención al tipo y rango.

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

Si el aparato es conectado permanentemente, la instalación eléctrica del edificio debe incorporar un interruptor multipolar con separación de contacto de al menos 3mm en cada polo.

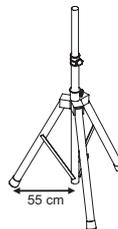
Desconecte este aparato durante tormentas eléctricas, terremotos o cuando no se vaya a emplear durante largos periodos.

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



Para las cajas con vaso para trípode, la altura máxima de seguridad desde el suelo a la base de la caja montada sobre trípode modelo TRD-2, con pies a 55 cm del eje del trípode, es:

convert 12A ----->150 cm



El colgado del equipo sólo debe realizarse utilizando los herrajes de colgado recomendados y por personal cualificado. No cuelgue la caja de las asas.

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.

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

The exclamation point inside an equilateral triangle is intend 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.

**WARNING:** This is a class A product. In a domestic environment this product may cause radio interferences in which case the user may be required to take adequate measures.

Use this product only in E1, E2, E3 or E4 environments according to EN55103-2.

Do not remove mains connector ground, it is dangerous and illegal. Class I device.

The lightning and arrowhead symbol warns about the presence of uninsulated dangerous voltage. To reduce the risk of electric shock, do not remove the cover.

Only use this equipment with an appropriate mains cord for your country.

Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus that produce heat.

The circulation of air through the heatsink must not be blocked.

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

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.

Working temperature ranges from 15°C to 42°C with a relative humidity of 95%, with  $\pm 10\%$  of the rated main voltage value indicated on the rear label (according to IEC 60065:2001). If the fuse needs to be replaced, please pay attention to correct type and ratings.

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

If the apparatus is connected permanently, the electrical system of the building must incorporate a multipolar switch with a separation of contact of at least 3mm in each pole.

Unplug this apparatus during lightning storms, earthquakes or when unused for long periods of time.

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

For enclosures with tripod socket, the maximum safety height from floor to bottom of enclosure when mounting on a TRD-2 tripod, with legs spread 55cm from the central pole, is:

convert 12A ----->150 cm

The appliance should be flown only from the rigging points and by qualified personnel. Do not suspend the box from the handles.

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.

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 D.A.S. 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

### **D.A.S. Audio, S.A.**

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

Declara que la *serie convert*:

Declares that *convert series*:

Cumple con los objetivos esenciales de las Directivas:

Abide by essential objectives relating Directives:

- Directiva de Baja Tensión (Low Voltage Directive) 2006/95/CE
- Directiva de Compatibilidad Electromagnética (EMC) 2004/108/CE
- Directiva RoHS 2011/65/CE
- Directiva RAEE (WEEE) 2002/96/CE

Y es conforme a las siguientes Normas Armonizadas Europeas:

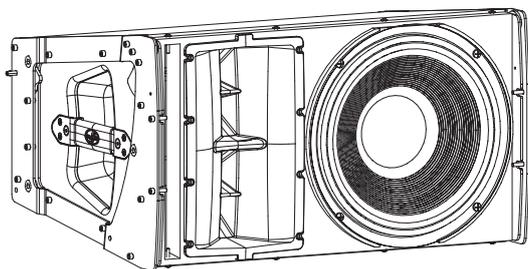
In accordance with Harmonized European Standards:

- EN 60065:2002 / A11:2008  
Audio, video and similar electronic apparatus. Safety requirements.
- EN 55103-1:2009  
Electromagnetic compatibility. Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use. Part 1:Emission.
- EN 55103-2:2009  
Electromagnetic compatibility. Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use. Part 2:Immunity.

## INTRODUCTION

The *convert* powered, multifunction systems combine D.A.S.'s reputation for performance and reliability with the latest technological innovations offering users an unmatched level of versatility. The exceptional characteristics of the onboard amplification, complex waveguide design and digital signal processing provide the output and control required, allowing the *convert series* to be deployed as a main system or in any number of support applications. The easy-to-use rigging hardware and range of mounting accessories expand the possible applications of the D.A.S. *convert series*.

### Convert 12A

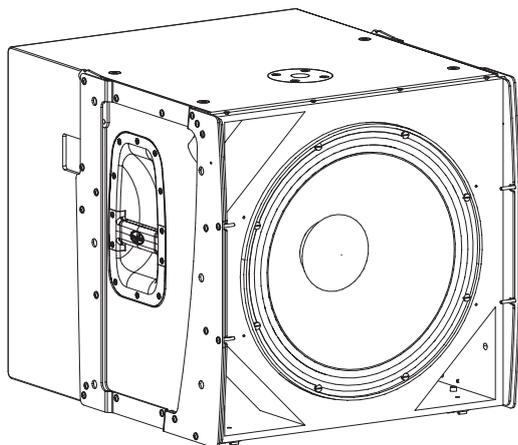


- Powered two-way full range system
- Two channel amplifier 550 W LF + 220 W HF
- 12V4 loudspeaker for bass reproduction
- Two M-60N Neodymium compression drivers
- Wide vertical dispersion
- Captive rigging system integrated in the cabinet design

The *Convert 12A* is a powered, two-way curved source array unit ideal for use in small to medium live events, as well as permanent installation. The latest in Class D power amplification, digital signal processing and optimized D.A.S. components have been combined with enclosures designed for rapid deployment, precise coverage and high acoustic output.

The *Convert 12A* enclosure is constructed of birch plywood finished with the durable Iso-Flex black paint. The rigging system can be used to form vertical curved source arrays of up to 6 units. The *Convert 12A* includes a pole mount socket with variable inclination for use as a satellite unit in combination with subwoofers.

### Convert 18A



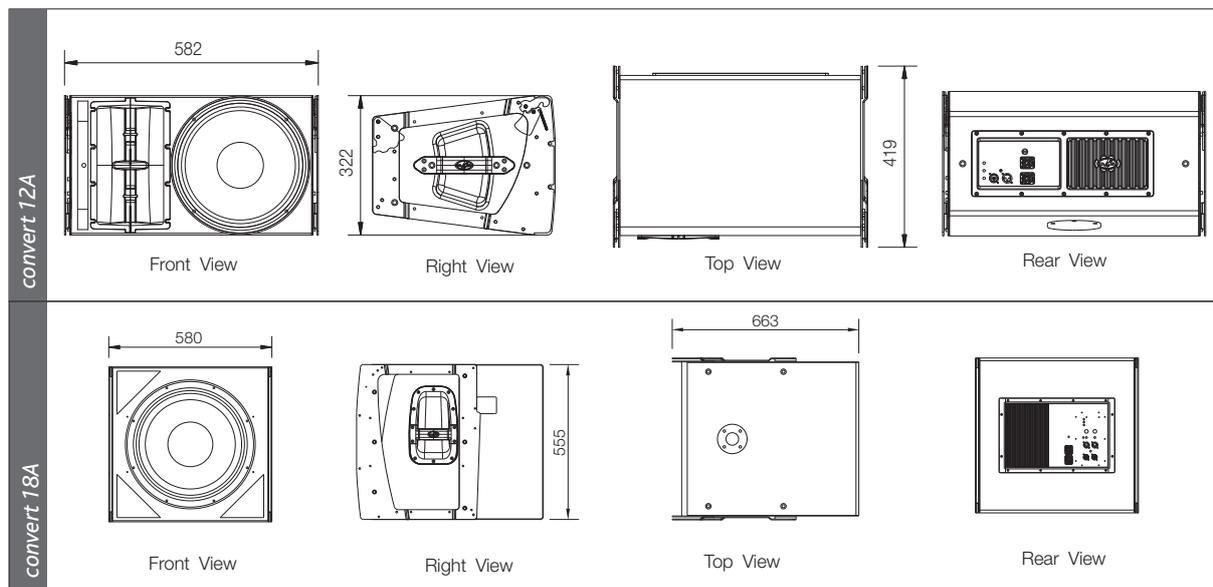
- Powered subwoofer system
- High output 18" loudspeaker
- Polarity switch (0°-180°)
- Filtered output defeat switch
- Variable 100-160 Hz low-pass filter
- Gain control

The *Convert 18A* is a powered subwoofer system designed to provide extended bass response for the *Convert* range cabinets. A 1000 W Class D amplifier drives a D.A.S. 18H bass loudspeaker. The 18H loudspeaker incorporates a 4" voice coil high power handling and output.

The subwoofer system includes two balanced inputs with stereo filtered output connections for satellite systems. The variable low-pass filter ranges from 100 Hz - 160 Hz and can be defeated to offer stereo "loop-thru" connections. A gain control and polarity reverse feature increase user control over the system.

## LINE DRAWINGS

ALL DIMENSIONS IN MILIMETERS



## SPECIFICATIONS

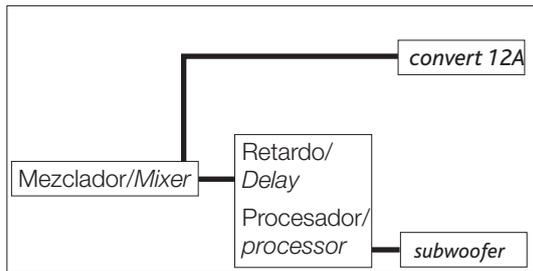
MODEL	<i>convert 12A</i>	<i>convert 18A</i>
LF Amplifier Power	1000 W <sub>peak</sub> - 500 W <sub>continuous</sub>	-
HF Amplifier Power	200 W <sub>peak</sub> - 100 W <sub>continuous</sub>	-
Nominal Amplifier Power		2000 W <sub>peak</sub> - 1000 W <sub>continuous</sub>
Input Type	Balanced Differential Line	Balanced Differential Line
Input Impedance	Line: 20kOhms	Line: 20kOhms
Sensitivity	Line: 1.95 V (+8dBu)	Line: 1.95 V (+8dBu)
Frequency Range (-10dB)	63 Hz - 20 kHz	35 Hz - 160 Hz (variable LFP)
Horizontal Coverage (-6dB)	90° Nominal	-
Vertical Coverage	15° Nominal	-
Rated Maximum Peak SPL at 1m	131 dB	134 dB
Transducer/Replacement Parts	LF: 1 x 12V4/GM 12P4 HF: 2 x M-60N/GM M-60N	LF: 1 x 18H/GM 18G -
Enclosure Geometry	Trapezoidal 15°	-
Enclosure Material	Birch Plywood	Birch Plywood
Color/Finish	Black or White/ISO-flex Paint	Black or White/ISO-flex Paint
Rigging System Splay Angles	15°	-
Safety Factor	Maximum 6 cabinets @ 7:1	-
Connectors	INPUT: Female XLR LOOP THRU: Male XLR AC INPUT: PowerCon AC OUTPUT: PowerCon	INPUT: 2 x Female XLR LOOP THRU: 2 x Male XLR AC INPUT: PowerCon AC OUTPUT: PowerCon
AC Power Requirements	3.4A, 115V, 50 Hz/60 Hz 1.7A, 230V, 50 Hz/60 Hz	3.2A, 115V, 50 Hz/60 Hz 1.6A, 230V, 50 Hz/60 Hz
Dimensions (H x W x D)	32.2 x 57.6 x 41.7 cm 12.7 x 22.7 x 16.4 in	56.6 x 57.6 x 67 cm 22 x 22.7 x 26.4 in
Weight	27.5 kg	47 kg
Accessories	AX-convert12 AXS-convert12 Pick-up-AX-convert12	TRD-6

**D.A.S. Audio S.A.** continuously strives to enhance its products through investigation and development. All specifications are subject to change without prior warning.

## CONFIGURATIONS

The *convert 12A* can be employed alone for voice applications where not a high pressure level is required. For this use, plug the mixer output to the enclosure input. The most frequently use will combine *convert12A* and *convert18A*. In this case, plug the mixer output with input signal of *convert18A* (subwoofer) and then, through the SATELLITE OUTPUT connector, send the signal to *convert12A*.

In case of not place the subwoofers in the same *convert12A* cluster, it would be better to send independent signals to each one of the systems controlling the delay in the frequency cut.

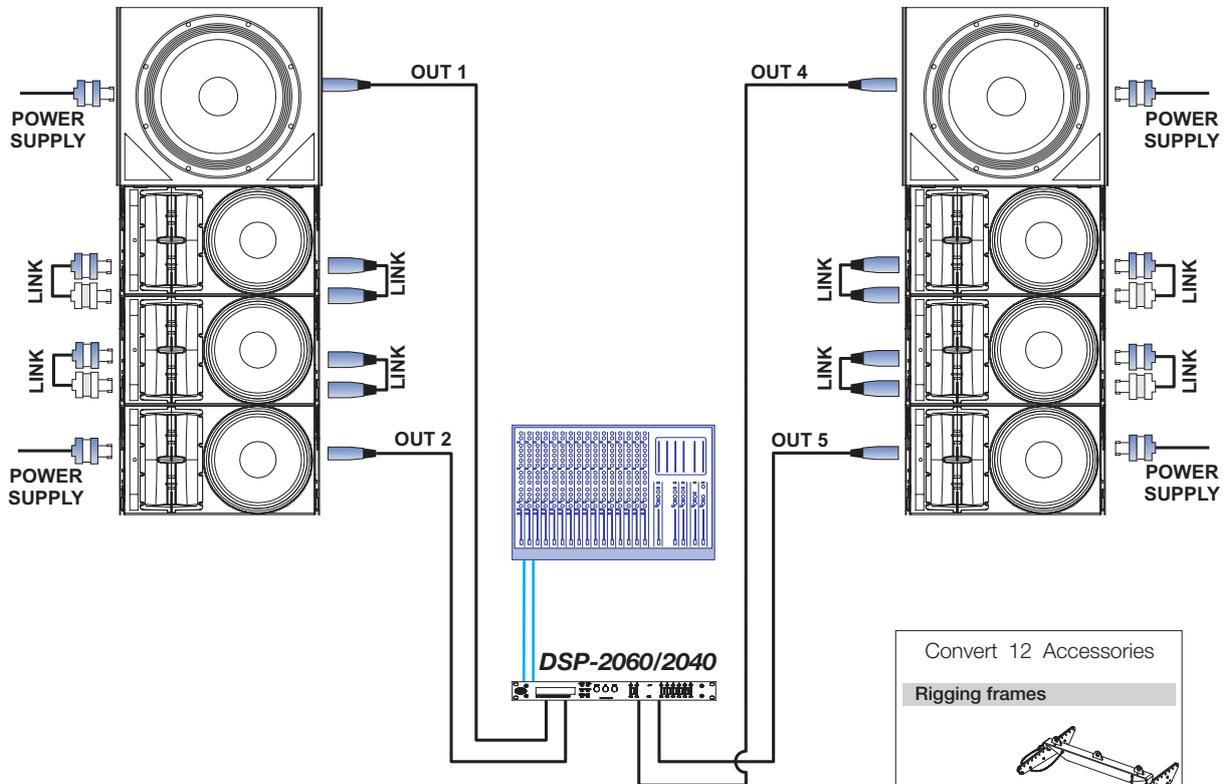


**CONFIGURATIONS (cont'd)**

A continuación mostraremos ejemplos, para teatros, de las muchas configuraciones posibles.

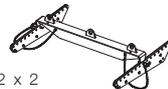
La *convert 12A* se puede colgar debajo de las *convert 18A* para aquellas configuraciones donde se requiera colgar también el subwoofer.

**6 x Convert12A  
2 x Convert 18A  
1 x DSP-2060 / 2040**



Convert 12 Accessories

**Rigging frames**



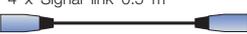
AX-Convert12 x 2

**Speaker cabling:**

4 x PowerCon link 0.5 m



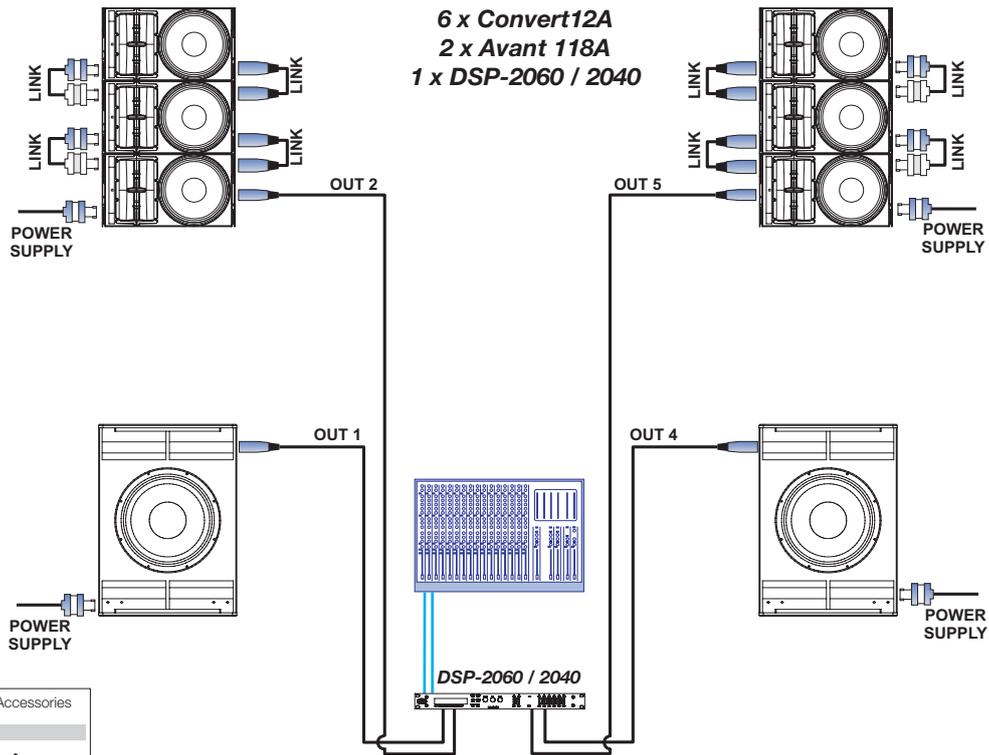
4 x Signal link 0.5 m



1 x DSP-2060A / DSP-2040A

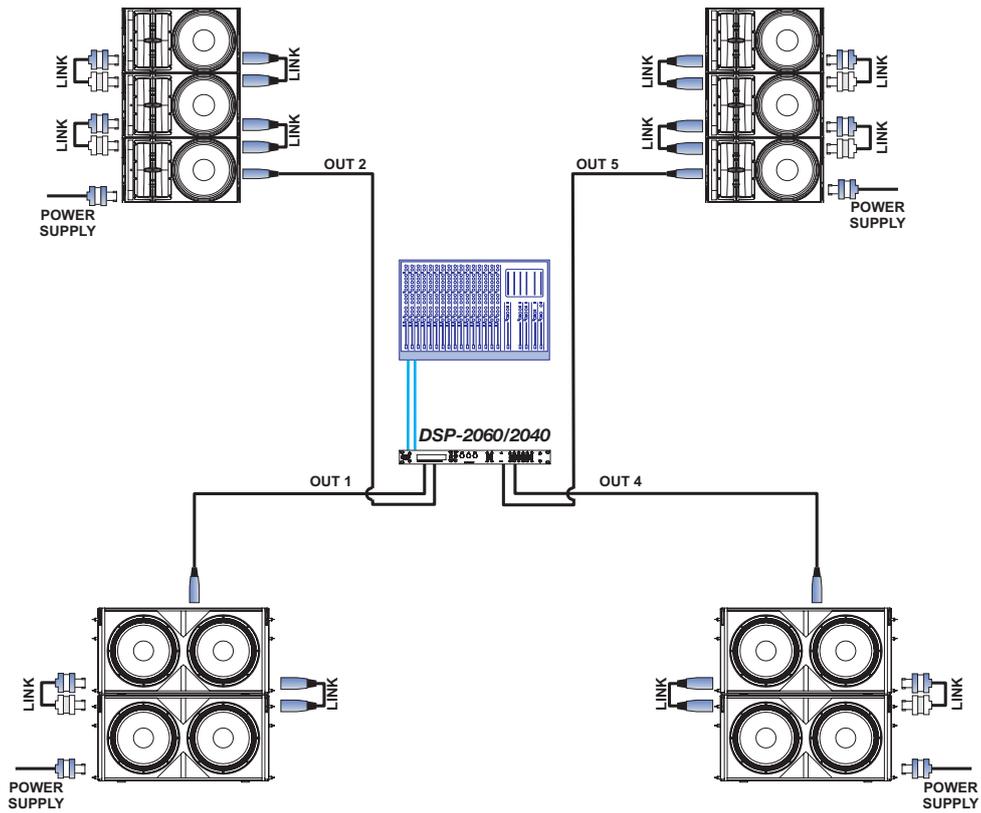


**CONFIGURATIONS (cont'd)**

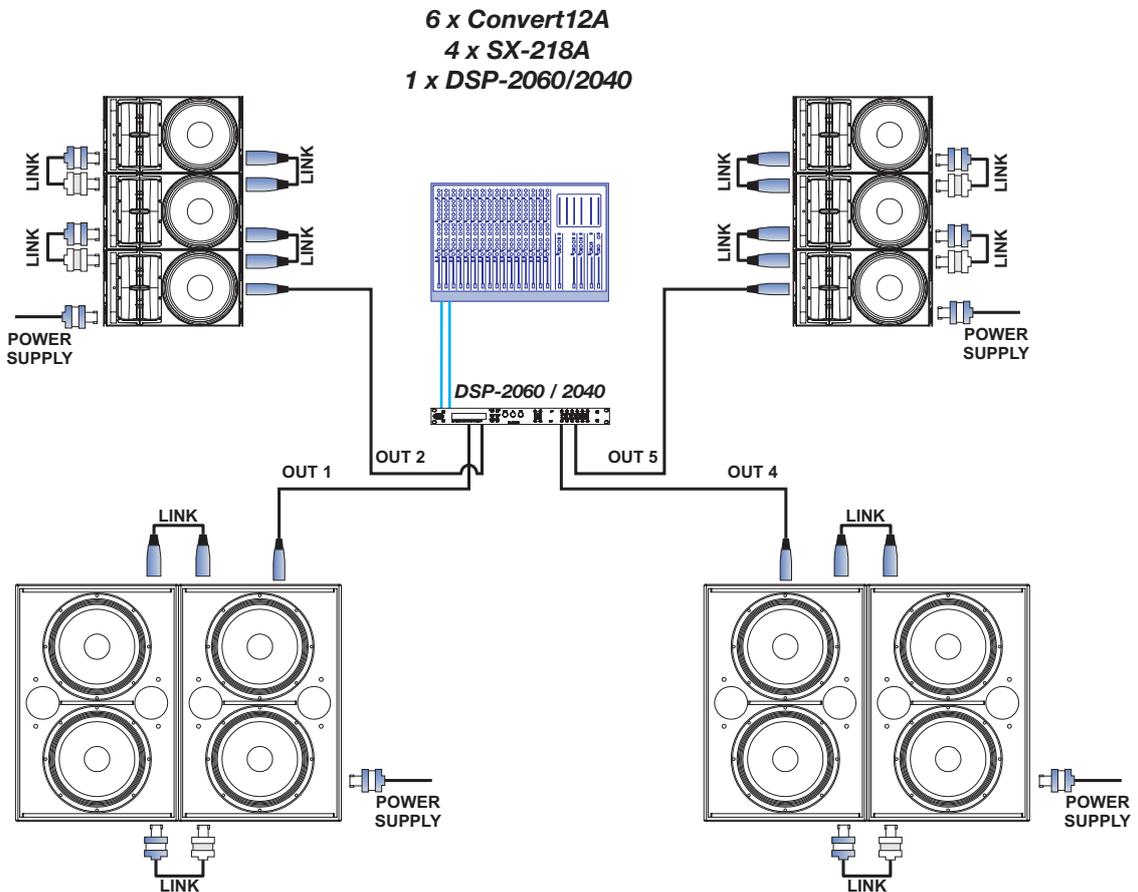
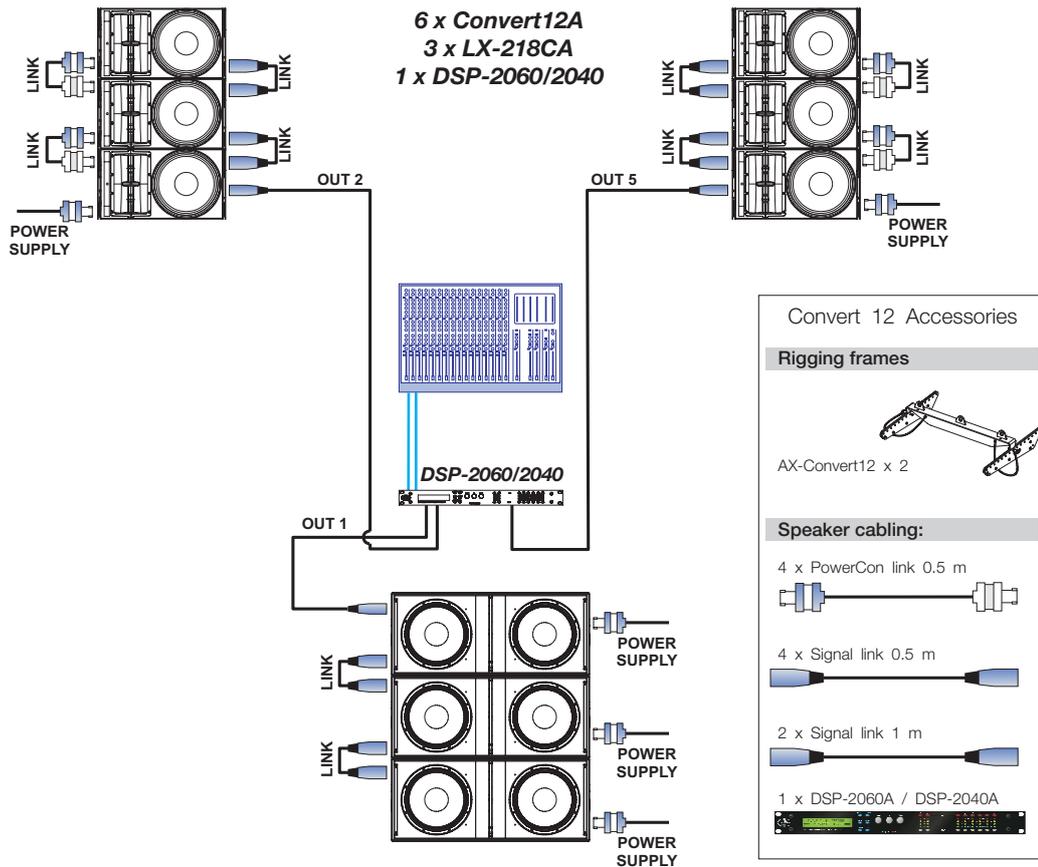


- Convert 12 Accessories
- Rigging frames**
    - AX-Convert12 x 2
  - Speaker cabling:**
    - 4 x PowerCon link 0.5 m
    - 4 x Signal link 0.5 m
  - 1 x DSP-2060A / DSP-2040A

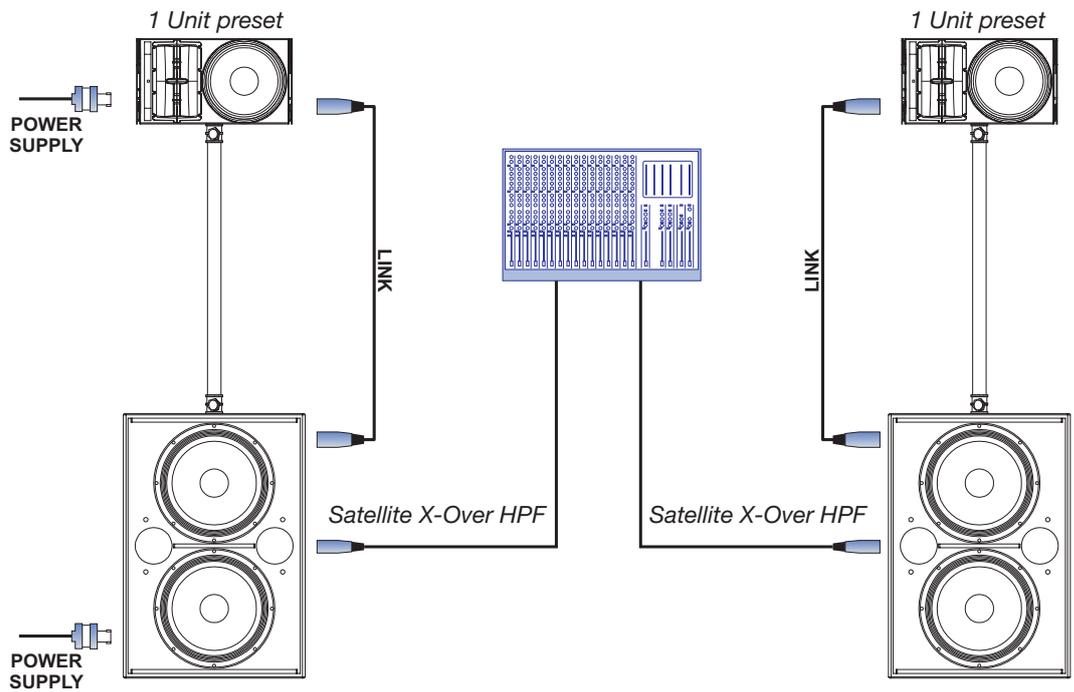
**6 x Convert12A**  
**4 x LX-215A**  
**1 x DSP-2060/2040**



**CONFIGURATIONS (cont'd)**



**2 x Convert12A  
2 x SX-218A**



Convert 12 Accessories

**Rigging frames**

TRD-6 x 2



**Speaker cabling:**

2 x Signal link 2 m



1 x DSP-2060A / DSP-2040A



## AMPLIFIER

### Description

#### 1) INPUT :

1/4" Jack+XLR combined socket-type input signal connector. This is a balanced connector just like the LOOP THRU connector with the following pin assignments:

- 1 or S =GND (ground).
- 2 or T =(+ ) Non inverted input.
- 3 or R =(- ) Inverted input.

#### 2) LOOP THRU (except SUBs):

XLR-type output signal connector for connecting several units together and sending them all the same signal.

#### 2) SATELLITE OUTPUT (only SUBs):

A and B, XLR-type output signal connectors for connecting several units together and sending them all the same input signal or filtered signal (by using THRU/HPF).

#### 3) LIMIT :

Red LED indicates amplifier saturation. Amplifier limiter indicator lights.

#### 4) SIGNAL :

Green LED indicates signal presence.

#### 5) ON :

Green LED indicates that the unit is ON.

#### 6) ARRAY EQ :

Button for switching between two types of frequency response.

#### 6) SUB LEVEL (only SUB's) :

Potentiometer for adjusting the unit level.

#### 7) FUSE :

Do not use a not recommended fuse.

#### 7) LOW-PASS CROSSOVER (only SUB's) :

Button for LPF adjustment for subwoofer. We recommend 100 Hz.

#### 8) AC INPUT :

PowerCon NAC3FCA mains connector (inserted, rotated and locked for ON). **Only use this equipment with an appropriate mains cord.**

#### 9) AC OUTPUT :

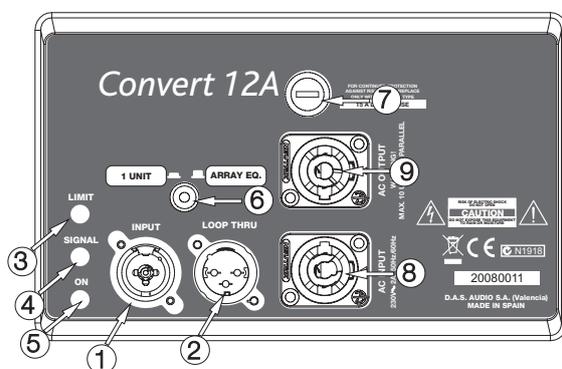
PowerCon NAC3FCB connector for AC loop thru allows up to 6 units when using a 230V version (see unit's label)). **Only use this equipment with an appropriate mains cord.**

#### 10) PHASE :

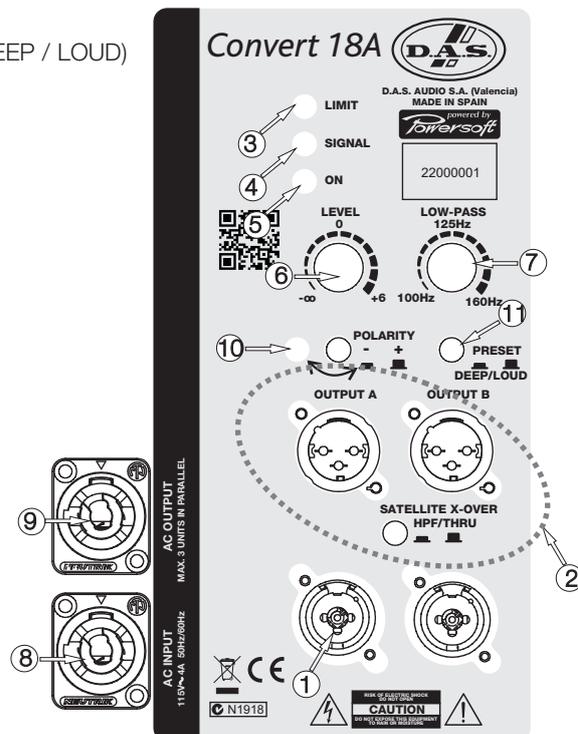
Switch for inverting the phase of the unit.

#### 11) PRESET :

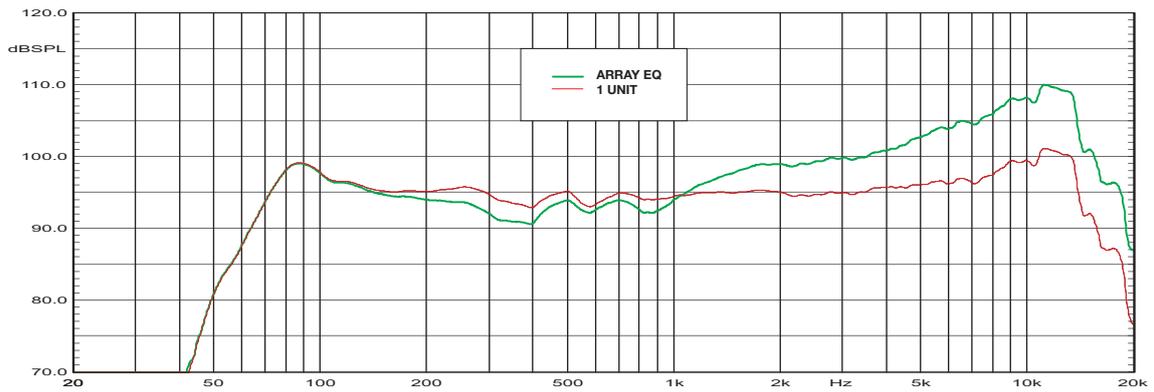
Button for switching between two types of preset (DEEP / LOUD)



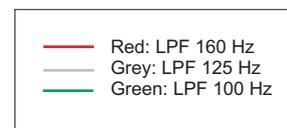
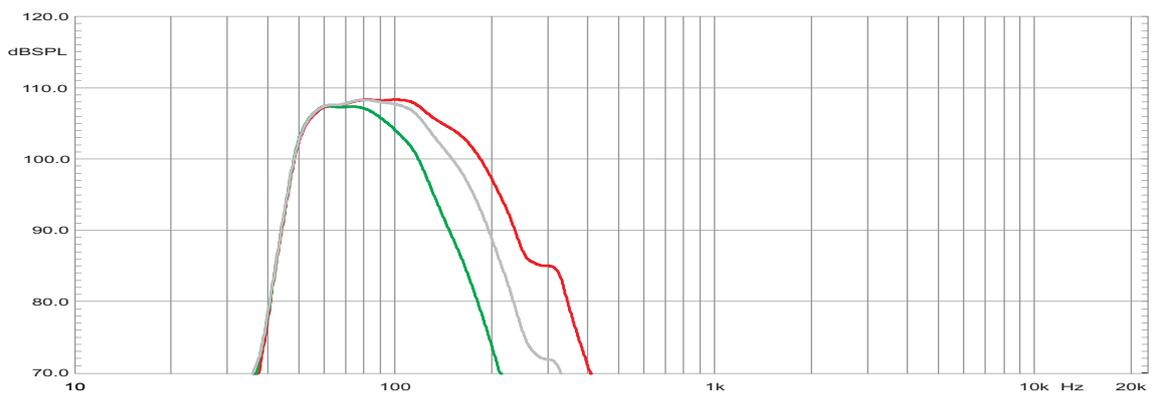
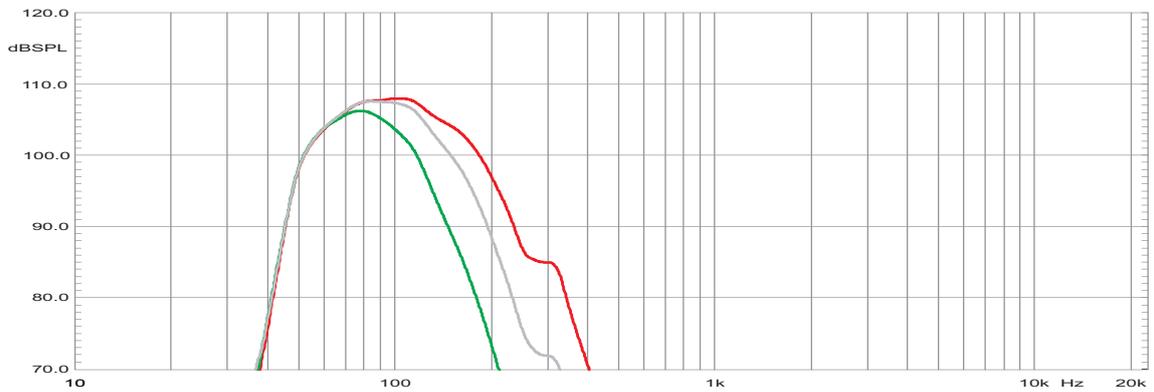
convert12A amplifier.



convert18A amplifier



**convert 12A frequency response curves**



**convert 18A amplifier frequency response curves**

### **Preliminary Note**

Use this product only in environments E1, E2, E3 or E4(\*) following EN55103-2 (Electromagnetic Compatibility. Norms. Products for professional sound, video and audiovisual systems and light control for shows use. Part 2: Immunity).

Do not cover the amplifier's radiator and don't obstruct the ventilation.

Do not plug the system in the same line that light systems, avoiding intermittency or light intensity cuts.

### **ON/OFF**

A sound system should be switched on sequentially. Switch on the self-powered units last in your sound system (switch on the subwoofer before the mid-high system). Switch on the sound sources such as CD players or turntables, then the mixer, then the processors, and finally the self-powered unit. If you have several units, it is recommended that you switch them on sequentially one at a time.

Follow the inverse order when switching off, turning self-powered units off before any other element in the sound system.

Disconnect the device by removing the mains connector from the mains socket. The mains connector and mains socket must always be freely accessible and never covered or blocked in any way.

The models use a power cable equipped with a Neutrik PowerCon NC3FCA connector. Power can be daisy chained via the NC3FCB output connector (see details on product label).

**IMPORTANT:** Do not disconnect the unit while in use.

Ensure that the device is disconnected from the mains by observing that the ON LED is turned off. Please note that the ON LED can stay on for several seconds after the mains power has been disconnected.

### **Overload indicator**

This device has an indicator (LIMIT LED) that lights when the signal is excessive.

The indicator should not be lit continuously. This distorts the signal (quickly fatiguing your ears) and may damage the speakers. Therefore, it is recommended that you never work with this LED on; at most it should blink only occasionally.

### **Overheating**

This equipment does not normally overheat during normal conditions of use. When overheating occurs, the unit protects itself. You should then find out why and if necessary contact an authorised dealer for technical assistance.

### **Equalisation**

The unit does not need extreme settings of equalisation to produce quality sound. Avoid high levels of gain on the equalisers. Gain values above +3 dB on a console's EQ are not recommended.

### **Low mains voltage**

If mains voltage falls below the shutdown voltage for the unit, it will stop playing. When acceptable levels are regained, the unit will switch back on automatically.

The power supply allows the system to function using two voltage ranges: from 90V to 128V, for 115V AC version, and from 180V to 256V, for 230V AC version.

Therefore the current consumed by the first range (90 to 128V) is double in the second to achieve the same acoustic power level.

### **Current consumption:**

<b><i>Pink Noise Mains 230 Vrms</i></b>	1/3 Power
<i>convert12A</i>	1.7A
<i>convert18A</i>	2A

### **(\*)Note**

E1.- Residential  
E2.- Commercial and light industry.  
E3.- Outside urban.  
E4.- CEM controlled environment and rural outdoor environments.

## Troubleshooting

PROBLEM	CAUSE	SOLUTION
No sound from the unit. The SIGNAL LED does not light up.	<ol style="list-style-type: none"> <li>1 – The signal source is sending no signal.</li> <li>2 – Defective cable.</li> </ol>	<ol style="list-style-type: none"> <li>1 – Check that the mixer or sound source is sending signal to the UNIT.</li> <li>2 – Check that the cable from the sound source to the UNIT is connected correctly. Replace the cable if defective.</li> </ol>
Full power cannot be obtained. The LIMIT LED never lights up.	The signal source does not have a hot enough output.	If using a mixer, use the balanced output if available. Use a professional mixer with a hotter output.
Sound is distorted. The LIMIT LED is not on, or only lights up occasionally.	The mixer or signal source is distorting.	Turn mixer channel gains down. Check that none of your signal sources are distorting.
Sound is distorted and very loud and LIMIT LED lights up.	The system is overloaded and has reached maximum power.	Turn down the mixer's output.
Hum or buzz when a mixer is connected to the unit.	<ol style="list-style-type: none"> <li>1.– The console probably has un-balanced outputs. You may be using an incorrect un-balanced to balanced cable.</li> <li>2.– The mixer and the powered speaker are not plugged into the same mains outlet.</li> <li>3.– The audio signal cable is too long or too close to an AC cable</li> </ol>	<ol style="list-style-type: none"> <li>1.– Read the appendix of this manual to make a correct un-balanced to balanced cable.</li> <li>2.– Connect the mixer and the unit to the same mains outlet.</li> <li>3.– Use a cable that is as short as possible and/or move the audio signal cable away from mains cables.</li> </ol>
Hum or buzz when using lighting controls in the same building.	<ol style="list-style-type: none"> <li>1.– The audio signal cable is too long or too close to the lighting cable.</li> <li>2.– On a sound system with three-phase AC, the lighting equipment and the UNIT are connected to the same phase.</li> </ol>	<ol style="list-style-type: none"> <li>1.– Move the audio signal cable away from lighting cables. Try to find out at what point the noise is leaking into the system.</li> <li>2.– Connect the sound system to a different phase than the lights. You may need the help of an electrician.</li> </ol>
The ON LED does not light up when the mains connector is connected and the unit is switched to ON.	<ol style="list-style-type: none"> <li>1.– Bad or loose AC connection to the UNIT or the mains outlet.</li> <li>2 – Faulty AC cable.</li> <li>3 – Blown Fuse.</li> <li>4 - The mains voltage is out of range.</li> </ol>	<ol style="list-style-type: none"> <li>1.– Check your connections.</li> <li>2.– Check the cables, connectors and AC power with a suitable mains tester.</li> <li>3.- Replace the blown fuse for another of the same type and size.</li> <li>4.- If the multimeter determines that the mains voltage is out the range, you may need the assistance of an electrician to find an appropriate solution.</li> </ol>

### Warnings

This manual contains needed information for flying D.A.S. Audio line array 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 D.A.S. Specifications are subject to change without notice.

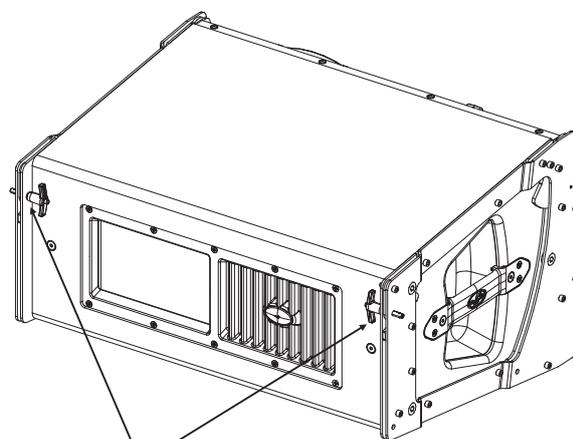
To this date, there is no international standard regarding the flying of acoustic systems. However, it is common practice to apply 5:1 safety factors for enclosures and static elements. For slings and elements exposed to material fatigue due to friction and load variation the following ratios must be 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.

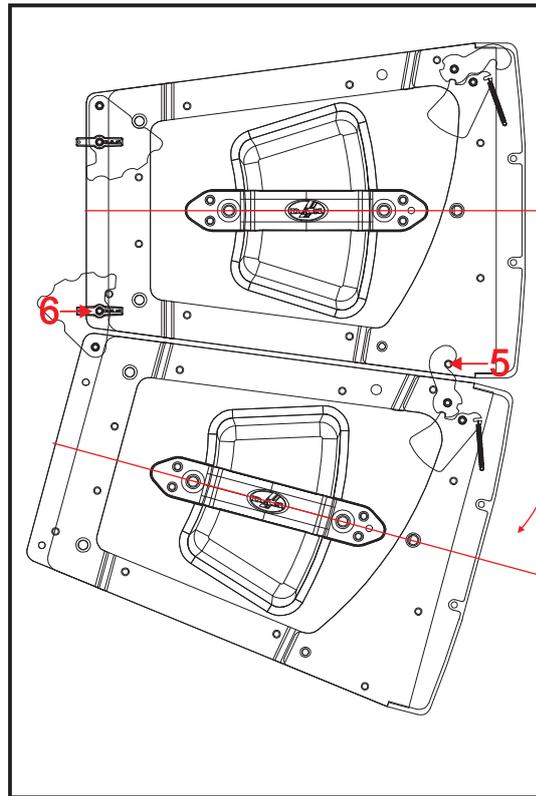
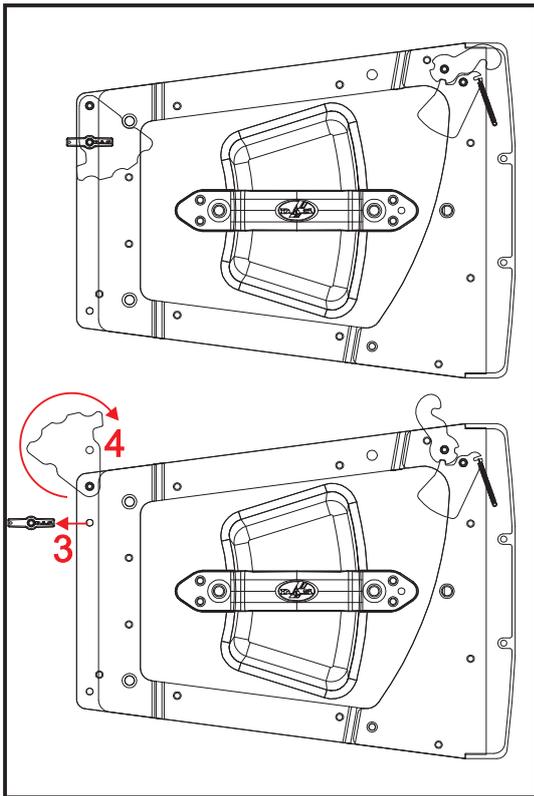
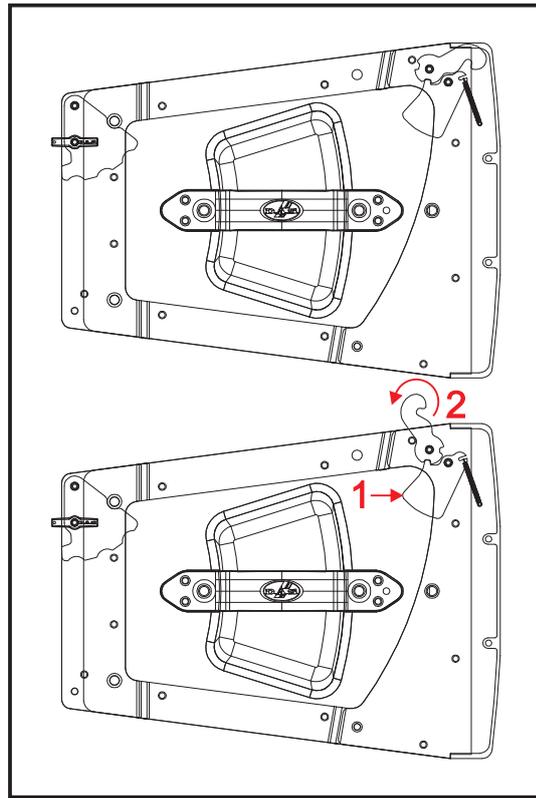
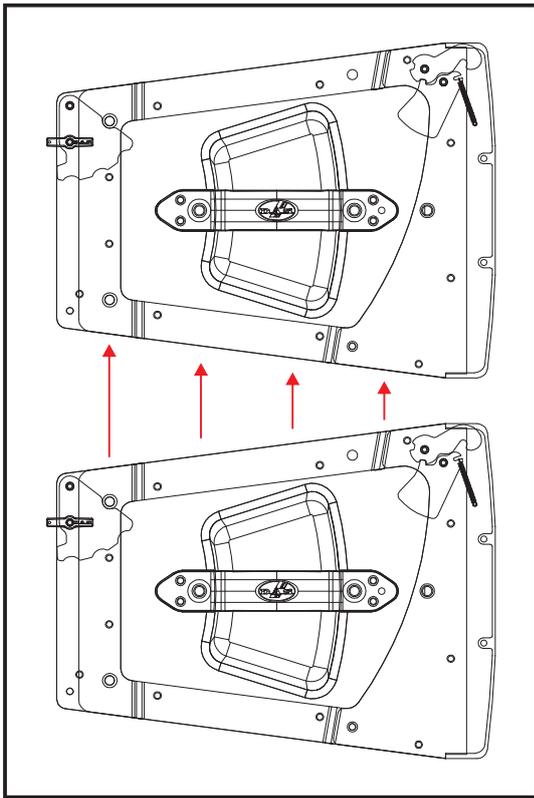
Absolutely no risks should be taken with regards to public safety. When flying enclosures from ceiling support structures, extreme care should be taken to assure the load bearing capabilities of the structures so that the installation is absolutely safe. Do not fly enclosures from unsafe structures.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

### Introduction

The *convert 12A* series of D.A.S. Audio incorporate 2 structures in each side of the enclosure. This ironworks are made with steel and aluminium and are fixed with special M8 screws in the wood side of the two systems. On each one of this structures there is ensambled (with a special axis screw) a steel rod which allows stack or rig the enclosures. The angles vary from 15° to 15° with each *convert12A*. Each enclosure includes, on the rear part, 2 high resistency pins made of steel for insert on the side ironworks to rig or stack easily and faster.



Pasadores  
Quick release pins

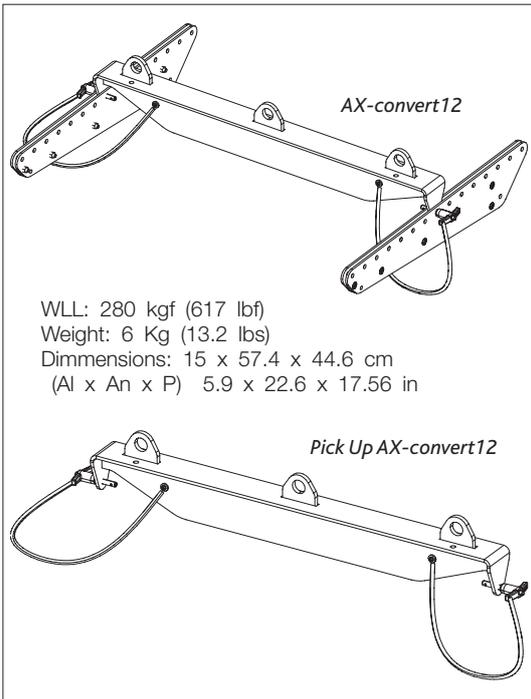
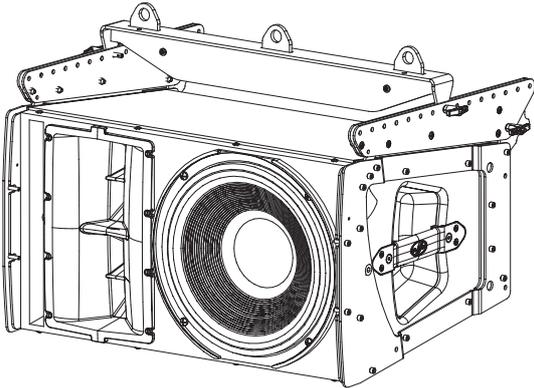


This figures illustrate the best way to rig one enclosure to another. Firstable, push the iron piece to free the front rod (1). Turn the front rod until fix it (2). Remove the rear safety pin to free the rear rod (3). Turn the rear rod (4).

Hook the rear rod in the lower screw indicated on the upper enclosure (5). Up the rear until mach with the anchor slots from the rear part of the upper enclosure and insert again the safety pin (6). As you can see, the enclosures form a 15° angle.

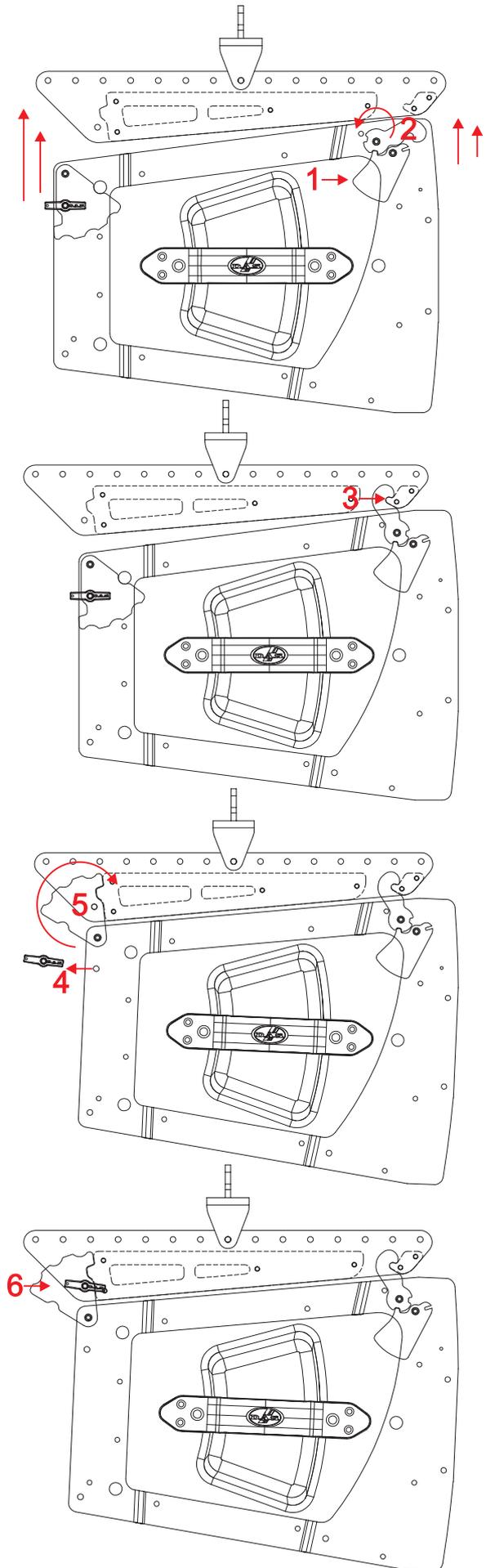
### AX-convert12

*AX-convert12* structure allows to rig maximum 6 *convert 12A*. It has three points where you can hook the rigging slings. To control the vertical inclination use the slots from the side pieces, like other accessories and with help of the software *EasyFocus*. Join the first enclosure of the column to this structure with the rod described before and the safety pins.



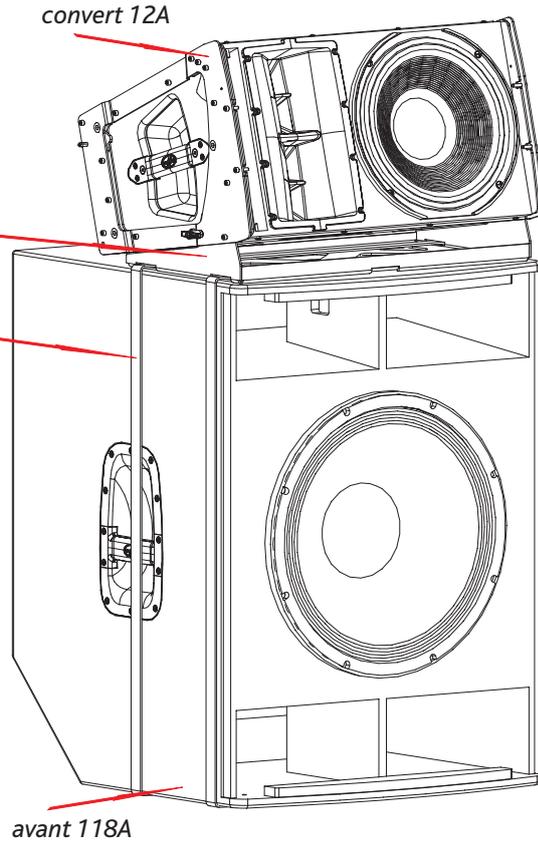
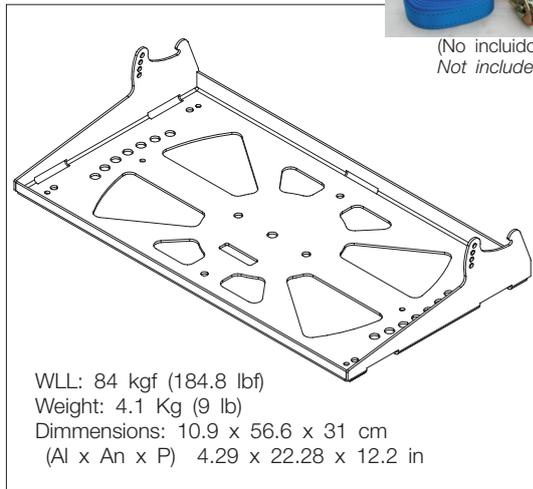
On the attached figures can be seen the order to follow for the right assembly between *AX-convert12* and the first *convert 12A*.

Adding a *Pick Up AX-convert12* we will get extra rigging points, for example, for another rigging power unit.



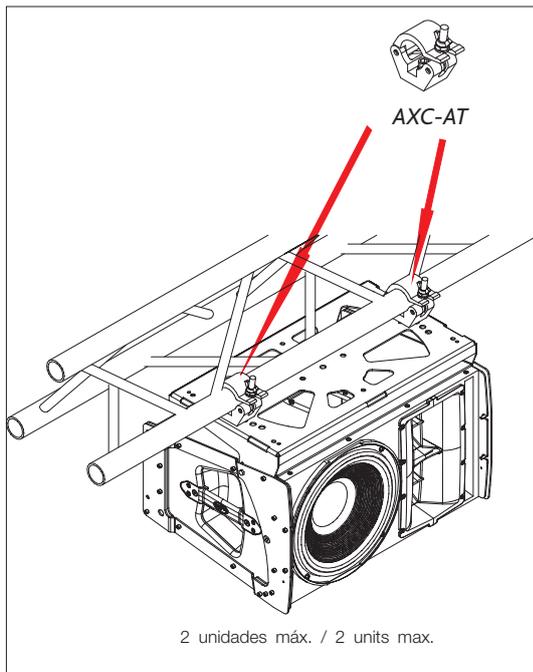
**AXS-convert12**

The structure *AXS-convert12* is adequate for stack, maximum, 3 *convert 12A* enclosures. To control the vertical inclination of the column use the slots from the side pieces, like other accessories, and with help of the software *Ease Focus*. To this structure will join the first enclosure of the column with the rods described before and the safety pins.



**Note:**

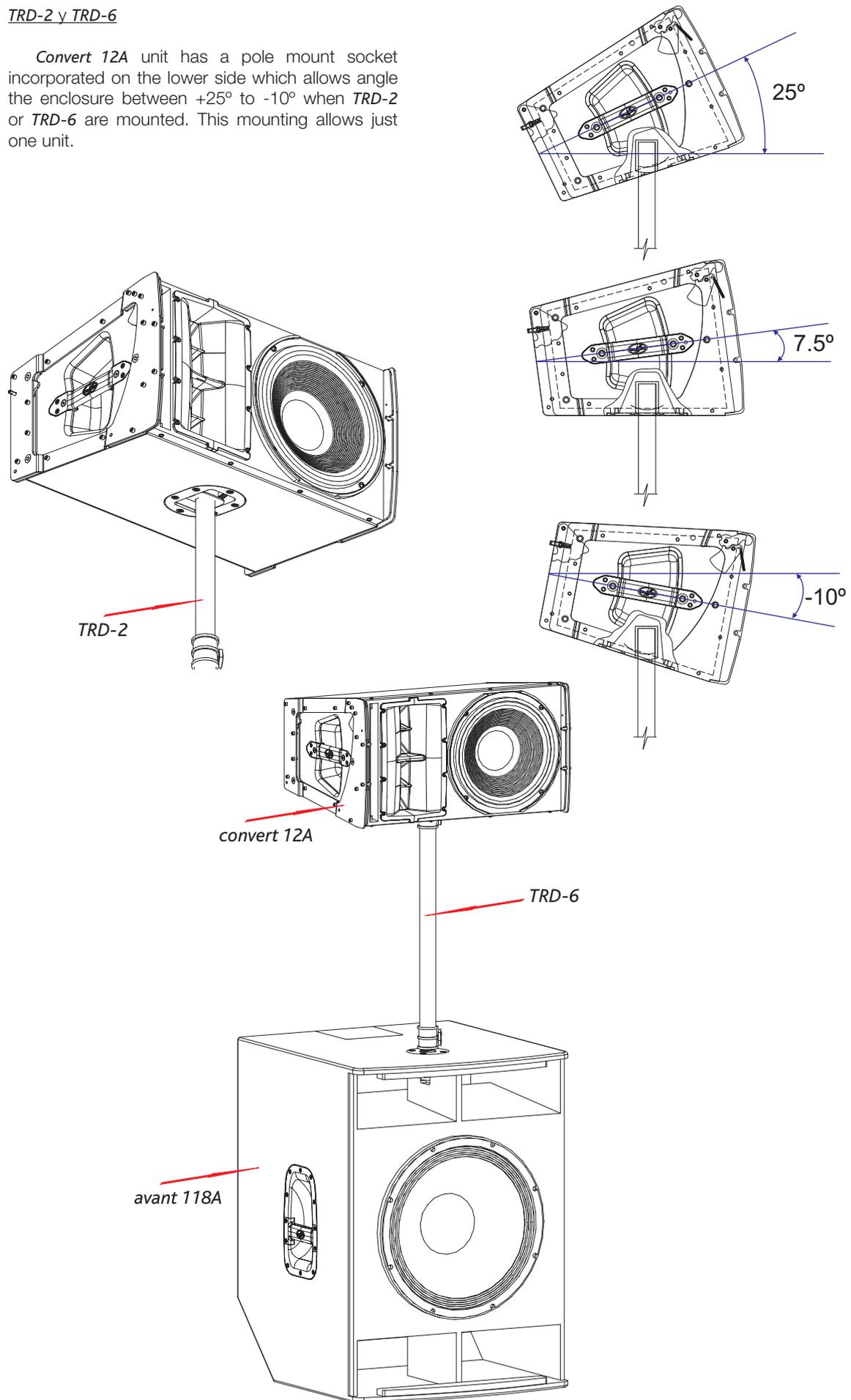
You must use for the fixing of the charge lashings with tensioners with a maximum width of 50mm (2") for AXS applications.  
 Recommended width: 35mm. Length: Depends on the place where *convert 12A* enclosures are mounted.



*AXS-convert12* structure is also adequate to rig from a truss *convert 12A* enclosures (2 units maximum). To this structure will join the first enclosure of the column with the rods described before and the safety pins. Make note that the enclosure will be inverted so that, it will be recommendable remove previously the weather protection and turn the front logo. You will need two *AXC-AT* (not included with *AXS-convert12*). The system rigging must be done with the recommended rigging ironworks and made by qualified workers. Don't rig any system from the handles.

TRD-2 y TRD-6

*Convert 12A* unit has a pole mount socket incorporated on the lower side which allows angle the enclosure between  $+25^{\circ}$  to  $-10^{\circ}$  when *TRD-2* or *TRD-6* are mounted. This mounting allows just one unit.



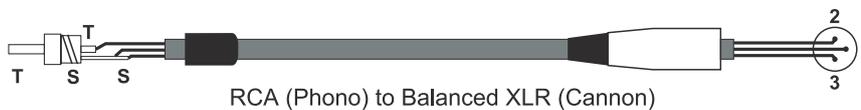
## APPENDIX: Line connections: unbalanced and balanced

There are two basic ways to transport an audio signal with microphone or line level:

**Unbalanced line:** Utilising a two conductor cable, it transports the signal as the voltage between them. Electromagnetic interference can get added to the signal as undesired noise. Connectors that carry unbalanced signals have two pins, such as RCA (Phono) and 1/4" (6.35mm, often referred to as jack) mono. 3 pin connector such as XLR (Cannon) may also carry unbalanced signals if one of the pins is unused.

**Balanced line:** Utilising a three conductor cable, one of them acts as a shield against electromagnetic noise and is the ground conductor. The other two have the same voltage with respect to the ground conductor but with opposite signs. The noise that cannot be rejected by the shield affects both signal conductors in the same way. At the device's input the two signals get summed with opposite sign, so that noise is cancelled out while the programme signal doubles in level. Most professional audio devices use balanced inputs and outputs. Connectors that can carry balanced signal have three pins, such as XLR (Cannon) and 1/4" (6.35mm) stereo.

The graphs that follow show the recommended connection with different types of connectors to balanced processor or amplifier inputs. The connectors on the left-hand side come from a signal source, and the ones on the right hand side go to the inputs of the processor or amplifier. Note that on the unbalanced connectors two terminals are joined inside the connector. If hum occurs with balanced connections, try disconnecting the sleeve (ground) on the input connector. Note that the illustrations show what should be connected to what, but that pin locations on an actual XLR connector are different. Also, pin 2 hot is assumed on XLR connectors.



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