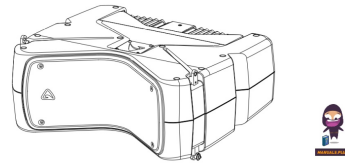**Manuals+** — User Manuals Simplified.

AXIOM AX800A Active Vertical Array Loudspeaker

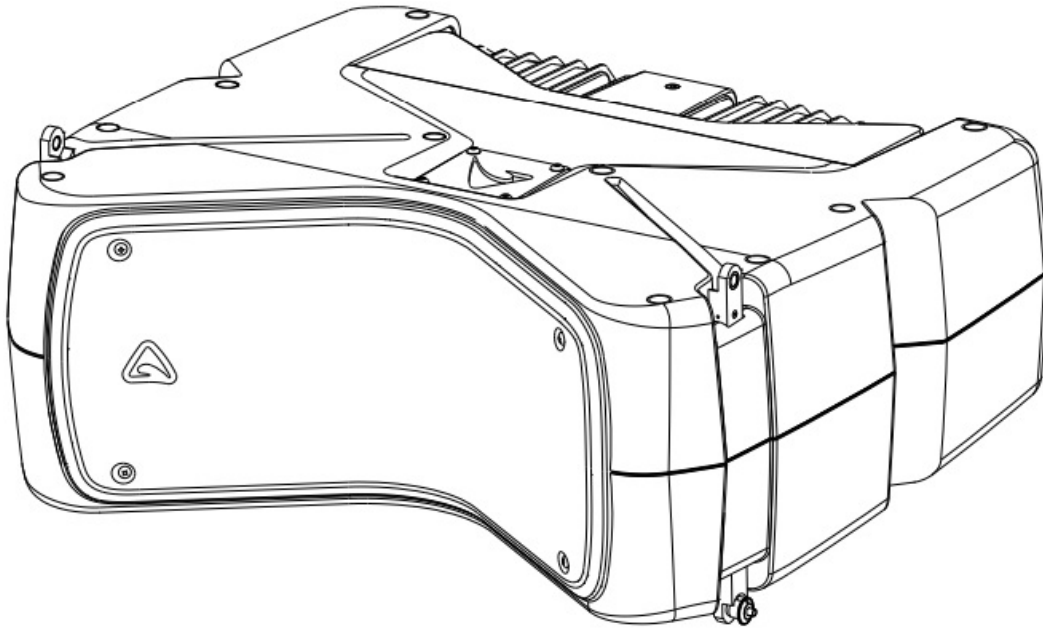# AXIOM AX800A Active Vertical Array Loudspeaker User Manual

Contents

AXIOM

AXIOM AX800A Active Vertical Array Loudspeaker

IMPORTANT SAFETY INSTRUCTIONS

Watch for these symbols:

The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure, that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

1. Read these instructions.

2. Keep these instructions.

3. Heed all warnings.

4. Follow all instructions.

5. Do not use this apparatus near water.

6. Clean only with dry cloth.

7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11. Only use attachments/accessories specified by the manufacturer.

12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

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

14. 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.

15. Warning: to reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

16. Do not expose this equipment to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the equipment.

17. To completely disconnect this apparatus from the ac mains, disconnect the power supply cord plug from the ac receptacle.

18. The mains plug of the power supply cord shall remain readily operable.

19. This apparatus contains potentially lethal voltages. To prevent electric shock or hazard, do not remove the chassis, input module or ac input covers. No user serviceable parts inside. Refer servicing to qualified service personnel.

20. The loudspeakers covered by this manual are not intended for high moisture outdoor environments. Moisture can damage the speaker cone and surround and cause corrosion of electrical contacts and metal parts. Avoid exposing the speakers to direct moisture.

21. Keep loudspeakers out of extended or intense direct sunlight. The driver suspension will prematurely dry out and finished surfaces may be degraded by long-term exposure to intense ultra-violet (UV) light.

22. The loudspeakers can generate considerable energy. When placed on a slippery surface such as polished wood or linoleum, the speaker may move due to its acoustical energy output.

23. Precautions should be taken to assure that the speaker does not fall off a stage or table on which it is placed.

24. The loudspeakers are easily capable of generating sound pressure levels (SPL) sufficient to cause permanent hearing damage to performers, production crew and audience members. Caution should be taken to avoid prolonged exposure to SPL in excess of 90 dB.

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources. Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling. Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

FEDERAL COMMUNICATIONS COMMISSION (FCC) STATEMENT

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense. This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

1. this device may not cause harmful interference, and
2. this device must accept any interference received, including interference that may cause undesired operation.

DECLARATION OF CONFORMITY

The product is in compliance with:

EMC Directive 2014/30/EU, LVD Directive 2014/35/EU, RoHS Directive 2011/65/EU and 2015/863/EU, WEEE Directive 2012/19/EU.

EN 55032 (CISPR 32) STATEMENT
Warning: This equipment is compliant with Class A of CISPR 32. In a residential environment this equipment may cause radio interference. Under the EM disturbance, the ratio of signal-noise will be changed above 10 dB.

The product is in compliance with:
S.I. 2016/1091 Electromagnetic Compatibility Regulations 2016, S.I. 2016/1101 Electrical Equipment (Safety) Regulations 2016, S.I. 2012/3032 The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012.

CISPR 32 STATEMENT
Warning: This equipment is compliant with Class A of CISPR 32. In a residential environment this equipment may cause radio interference. Under the EM disturbance, the ratio of signal-noise will be changed above 10 dB.

LIMITED WARRANTY

Proel warrants all materials, workmanship and proper operation of this product for a period of two years from the original date of purchase. If any defects are found in the materials or workmanship or if the product fails to function properly during the applicable warranty period, the owner should inform about these defects the dealer or the distributor, providing receipt or invoice of date of purchase and defect detailed description. This warranty does not extend to damage resulting from improper installation, misuse, neglect or abuse. Proel S.p.A. will verify damage on returned units, and when the unit has been properly used and warranty is still valid, then the unit will be replaced or repaired. Proel S.p.A. is not responsible for any "direct damage" or "indirect damage" caused by product defectiveness.

- This unit package has been submitted to ISTA 1A integrity tests. We suggest you control the unit conditions immediately after unpacking it.
- If any damage is found, immediately advise the dealer. Keep all unit packaging parts to allow inspection.
- Proel is not responsible for any damage that occurs during shipment.
- Products are sold "delivered ex warehouse" and shipment is at charge and risk of the buyer.
- Possible damages to unit should be immediately notified to forwarder. Each complaint for package tampered with should be done within eight days from product receipt.

CONDITIONS OF USE

Proel do not accept any liability for damage caused to third parties due to improper installation, use of non-original spare parts, lack of maintenance, tampering or improper use of this product, including disregard of acceptable and applicable safety standards. Proel strongly recommends that this loudspeaker cabinet be suspended taking into consideration all current National, Federal, State and Local regulations. The product must be installed be qualified personal. Please contact the manufacturer for further information.

INTRODUCTION

The AX800A has been developed with total optimization of the speaker components in mind – from the lightweight woofer cone materials through to the titanium diaphragm used in the high frequency compression driver. They've been developed in close cooperation with our supply partners, who act in many ways as an extension of our R&D acoustics team. Housing two eight-inch low frequency drivers, which are transmission line back-loaded for a significant reduction in low range frequencies at the rear of the speaker, the AX800A delivers natural cardioid behaviour and therefore clean mid-bass reproduction. This is especially important in preventing the "boxy" mid-bass sound commonly obtained from regular bass-reflex enclosures, or the build up of excessive low-mid

frequencies behind an array and on stage that can be annoying for performers. Completing the driver complement is a 1.4-inch titanium diaphragm compression driver loaded by an acoustic transmission line waveguide providing natural sounding high frequencies. The components are arranged in a very compact WTW driver configuration, which lends itself to correct line array behaviour, providing wide and even horizontal coverage of any venue or audience space. The AX800A is processed by 40bit floating point CORE2 DSP and powered by DA SERIES class D amplifier modules, with audio quality that is comparable to some of the best analogue Class A-B designs. The output power is optimized specifically to the drive units, sharing 900 watts between both woofers and delivering 300 watts to the high frequency band.

TECHNICAL SPECIFICATION

SYSTEM			
System's Acoustic Principle	Line Array Element Short Transmission Line LF Back Loading Acoustic Transmission Line HF Waveguide	Remote Controls	PRONET AX control software
		Network protocol	CANBUS
		Amplifier Type	Class D amplifier with SMPS
		Output Power	900W + 300W
Frequency Response (±3dB)	85 Hz – 16.8kHz (Processed)	Mains Voltage Range (Vac)	220-240 V~ or 100-120 V~ ±10% 50/60 Hz
Horizontal/Vertical Coverage Angle	100° x 10° (-6dB)	Consumption*	575 W (nominal) 1200 W (max)
Maximum Peak SPL @ 1m	132 dB	IN / OUT Connectors	Neutrik XLR-M / XLR-F
TRANSDUCERS		IN / OUT Network Connectors	ETHERCON® (NE8FAV)
LF	Two 8"(200mm), 2" (38mm) voice coil, 8Ω each, paralleled	Mains Connector	PowerCon® (NAC3MPXXA)
		Mains Link Connector	PowerCon® (NAC3MPXXB)
HF	One 1.4" driver, 2.5" (64mm) edgewound voice coil, titanium diaphragm, 8Ω	Cooling	Variable speed DC fan
		ENCLOSURE & CONSTRUCTION	
ELECTRICAL		Dimensions (W x H x D)	600mm (23.6") x 265.5mm (10.5") x 516mm (20.3")
Input Impedance	20 kΩ balanced, 10 kΩ unbalanced	Enclosure Material	Polypropylene
Input Sensitivity	+4 dBu / 1.25 V	Rigging system	
Signal Processing	CORE2 processing, 40bit floating point SHARC DSP, 24 bit AD/DA converters	Front Suspension	Aluminium Fast Link structure
		Back Suspension	High Strength Steel with ¼ Fast Pin
Direct access Controls	4 Presets (Standard/Long Throw/Down Fill-Single Box, User), Network Termination, GND Link.	Net Weight	25 Kg (55.1 lbs)

Nominal consumption is measured with pink noise with a crest factor of 12 dB, this can be considered a standard music program.

MECHANICAL DRAWING
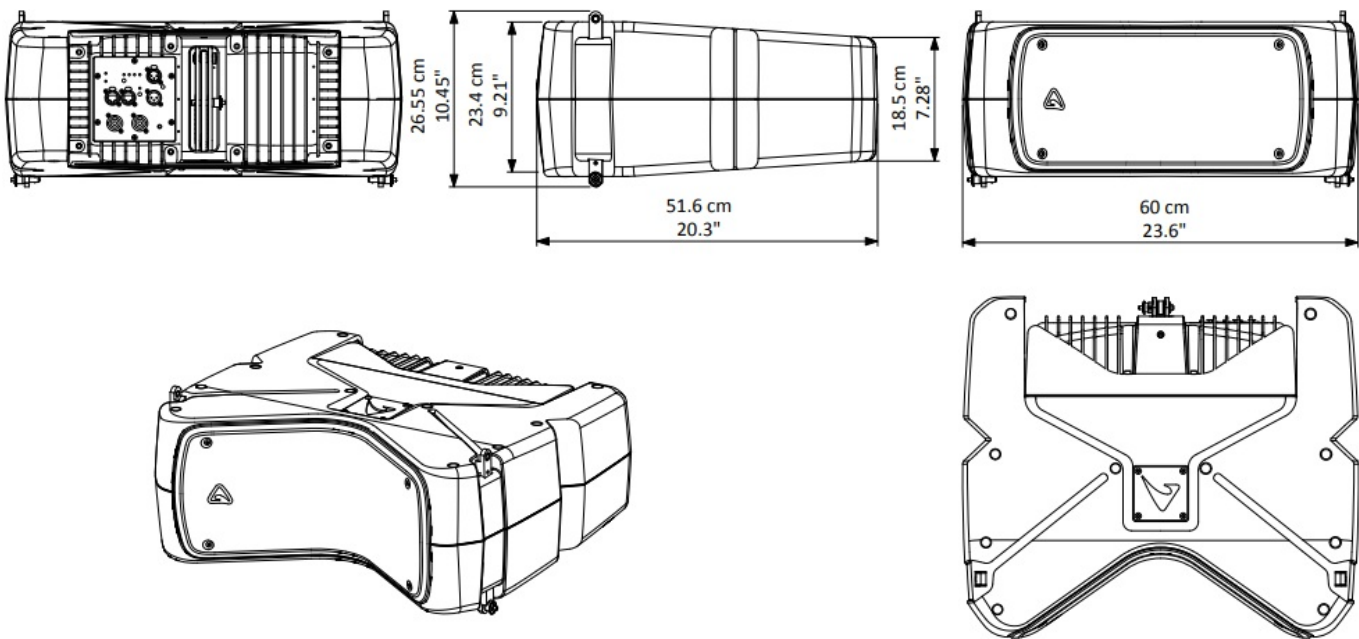
OPTIONAL ACCESSORIES

- AXCASE08 Carrying Case for 4 box unit
- NAC3FCA Neutrik Powercon® BLUE PLUG
- NAC3FCB Neutrik Powercon® WHITE PLUG
- NE8MCB Neutrik Ethercon PLUG
- NC3MXXBAG Neutrik XLR-M
- NC3FXXBAG Neutrik XLR-F
- SW1800A 2X18" Active Subwoofer
- USB2CAN PRONET network converter
- USB2CAND Dual output PRONET network converter
- CAT5SLU01/05/10 LAN5S – Cat5e – RJ45 plugs and NE8MC1 connectors. 1/5/10 m Length
- AR100LUxx Hybrid cable 1x Cat6e – 1x Audio with NEUTRIK connectors 0.7/1.5/2.5/5/10/15/20 m Length
- AVCAT5PROxx Cat5e on cable drum, RJ45 plugs and NEUTRIK connectors 30/50/75 m Length
- KPTAX800 Flying bar for 4 AX800A array loudspeakers
- KPTAX800L Flying bar for 12 AX800A array loudspeakers
- AXFEETKIT Kit of 6pcs BOARDACF01 M10 foot for stacked installation
- KPAX8 Pole Adaptor for 2 AX800
- DHSS10M20 Adjustable Sub-Speaker ø35mm spacer with M20 screw
- RAINCOV800 Rain cover for input sockets
  see **http://www.axiomproaudio.com**/ for detailed description and other available accessories.

SPARE PARTS

- PLG716 Straight Shackle 16 mm for Fly bar
- 94SPI816 16mm Locking Pin (AX800A front)
- 94SPI826 26mm Locking Pin (AX800A rear)
- 94SPI840 40mm Locking Pin (AX800A with KPTAX800L)
- 91AMDAX800 Power amplifier module with mechanical assembly
- 91DSPKT10 Input, Control and DSP PCBA
- 98AXM8WZ8 8'' woofer – 2" VC
- 98DRI2000 1.4'' compression driver – 2.4" VC
- 98MBN2000 titanium diaphragm for 98DRI2000 HF driver

contact the technical support on **http://www.axiomproaudio.com**/ for request or detailed spare part list.

I/O AND CONTROL OPERATIONS

MAINS IN
Powercon® NAC3FCA power input connector (blue). To switch the amplifier on, insert the Powercon® connector and turn it clockwise into the ON position. To switch the amplifier off, pull back the switch on the connector and turn it counter-clockwise into the POWER OFF position.

MAINS OUT
Powercon® NAC3FCB power output connector (grey). This is connected in parallel with the MAINS ~ / IN. The maximum load applicable depends on the mains voltage. With 230V~ we suggest to link a maximum of 5 AX800A loudspeakers, with 120V~ we suggest to link a maximum of 3 AX800A loudspeakers.

- WARNING! In the case of product failure or fuse replacement, disconnect the unit completely from the mains power. The power cable must only be connected to a socket corresponding to the specifications indicated on the amplifier unit.
- The power supply must be protected by a suitably rated thermo-magnetic breaker. Preferably use a suitable switch to power on the whole audio system leaving the Powercon® always connected to each speaker, this simple trick extend the life of the Powercon® connectors.
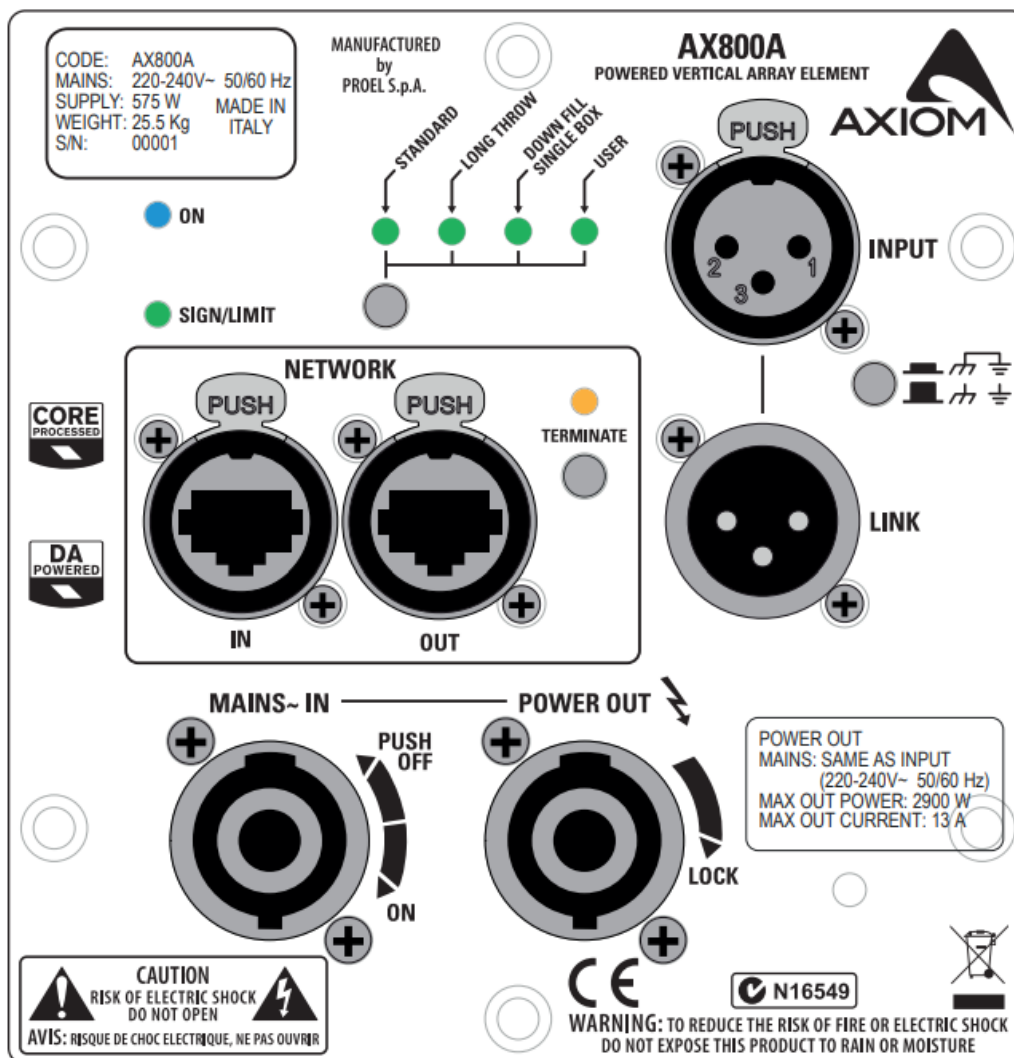
INPUT
Audio signal input with locking XLR connector. It has a fully electronically balanced circuitry including AD conversion for the best S/N ratio and input headroom.

LINK
A direct connection from the input connector to link other speakers with same audio signal.

ON
This LED indicates power on status.

SIGN/LIMIT
This LED lights in green to indicate the presence of the signal and lights in red when an internal limiter reduces the input level.

GND LIFT
This switch lift the ground of the balanced audio inputs from the earth-ground of the amplifier module.

PRESET BUTTON
This button has two function:

1. Pressing it while powering on the unit:

   - **ID ASSIGN**

     The internal DSP assigns a new ID to the unit for the PRONET AX remote control operation. Each loudspeaker must have a unique ID to be visible in the PRONET AX network. When you assign a new ID, all the other loudspeakers with the ID already assigned must be ON and connected to the network.

2. Pressing it with the unit ON you can select the DSP PRESET. The selected PRESET is indicated by the corresponding LED:

   - **STANDARD**

     This PRESET is suitable for vertical flown arrays that may range from 4 to 8 boxes or for the centre region of a bigger flown array. It can be used also for stacked arrays.

   - **LONG THROW**

     This PRESET can be used in arrays bigger than 6 or 8 boxes and loaded in the top 1 or 2 boxes in order to obtain a more even distribution of the sound pressure, especially if they point very far away or to the upper deck of a large theatre.

   - **DOWN FILL SINGLE BOX**

     This PRESET, which features a much smoother high frequency response, can be loaded in the bottom boxes (usually 1 or 2 boxes) of a large flown array, in order to reach conveniently the audience close to the stage. This preset could be very useful also when the box is used just on its own as a Front Fill element in the front of very large stages.

   - **USER**

     This PRESET corresponds to USER MEMORY no. 1 of the DSP and, as a factory setting, it's the same to STANDARD. If you want to modify it, you have to connect the unit to a PC, edit the parameters with PRONET AX software and save the PRESET into USER MEMORY no. 1.

AX800A – PRESET RESPONSE
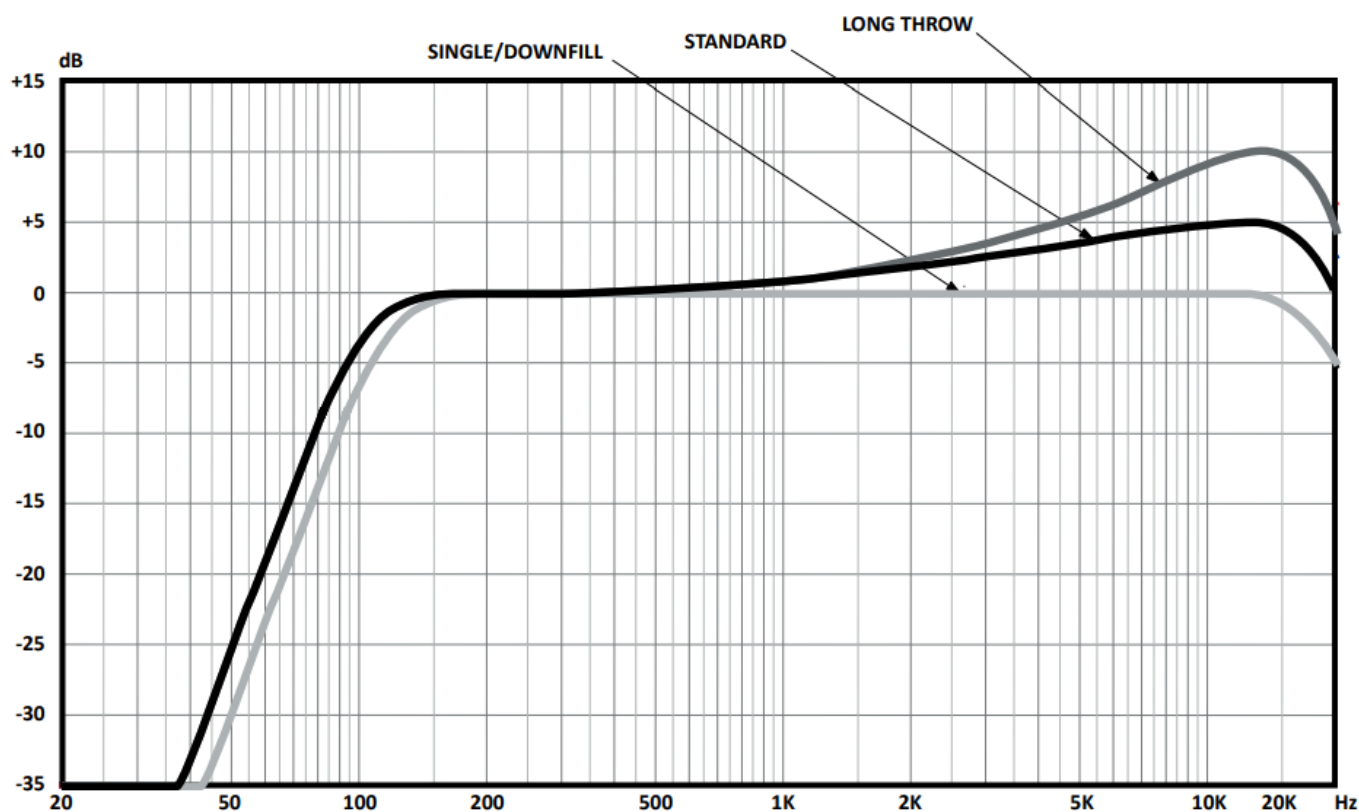
PRESET USING EXAMPLE: INSTALLATION IN A THEATRE WITH BALCONY

In the following figure you can see an example of the use of different PRESETS in an AX800A NEO flown array installed in a big theatre with balcony:

- The TOP BOXES of the array are aiming at the balcony while the DOWN FILL box is aiming at the audience close to the stage.
- TOP BOXES: the power level at the end of the balcony is lower, as well as the high frequency level.
- DOWN FILL BOXES: the power level in the proximity of the stage is higher, as well as the high frequency level.
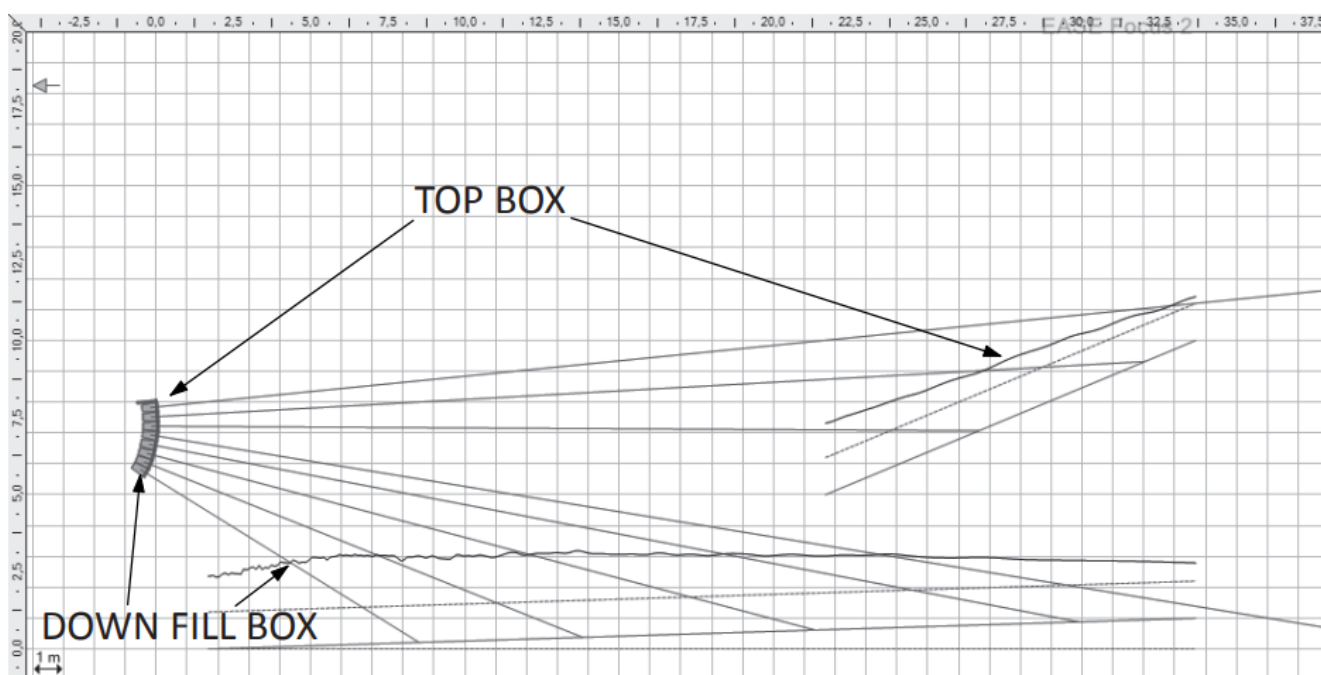
In order to optimize the array performances for the specific application, the PRESETS should be used in the following way.

- Load the STANDARD preset in the central boxes.
- Load the LONG THROW preset in the TOP 1 or 2 boxes, in order to compensate the loss of power level and high frequencies of the program sent the upper deck of the theatre.
- Load the DOWN FILL / SINGLE BOX preset in the BOTTOM box in order to smooth the high frequency content of the program sent to the audience close to the stage.

NETWORK IN/OUT
These are a standard RJ45 CAT5 connectors (with optional NEUTRIK NE8MC RJ45 cable connector carrier), used for PRONET network transmission of remote control data over long distance or multiple unit applications.

TERMINATE
In a PRONET AX network the last device must be always terminated (with an inner load resistance): press this switch if you want to terminate the network on this unit.

Only the last devices connected to the PRONET AX network must be always terminated, therefore all units connected between two devices within the network must not be terminated never.

PRONET AX – OPERATION

- The AXIOM active loudspeaker devices can be connected in a network and controlled by the PRONET AX software.
- PRONET AX software has been developed in collaboration with sound engineers and sound designers, in order to offer an "easy-to-use" tool to setup and manage your audio system. With PRONET AX you can visualize signal levels, monitor internal status and edit all the parameters of each connected device.
- Download the PRONET AX app registering on MY AXIOM at the website at **https://www.axiomproaudio.com**/.
- For the network connection the USB2CAND (with 2-port) converter optional accessory is needed.
- PRONET AX network is based on a "bus-topology" connection, where the first device is connected to the input connector of the second device, the second device network output is connected to the network input connector of the third device, and so on. To ensure a reliable communication the first and the last device of the "bus-topology" connection must be terminated. This can be done by pressing the "TERMINATE" switch near the network connectors in the rear panel of the first and the last device. For the network connections simple RJ45 cat.5 or cat.6 ethernet cables can be used (please don't confuse a ethernet network with a PRONET AX network these are completely different and must be fully separated also both use the same kind of cable).

Assign the ID number
To work properly in a PRONET AX network each connected device must have a unique identifier number, called ID. By default the USB2CAND PC controller has ID=0 and there can be only one PC controller. Every other device connected must have its own unique ID equal or greater than 1: in the network cannot exist two devices with the same ID.
In order to correctly assign a new available ID to each device for working properly in a PRONET AX network, follow these instructions:

1. Switch off all the devices.
2. Connect them correctly to the network cables.
3. "TERMINATE" the end device in the network connection.
4. Switch on the first device keep pressed "PRESET" button on the control panel.

5. Leaving the previous device switched on, repeat the previous operation on the next device, until the latest device is turned on.

The "Assign ID" procedure for a device makes the internal network controller to perform two operations: reset the current ID; search the first free ID in the network, starting from ID=1. If no other devices are connected (and powered on), the controller assume ID=1, that is the first free ID, otherwise it searches the next one left free. These operations ensure that every device has it's own unique ID, if you need to add a new device to the network you simply repeat the operation of step 4. Every device maintains its ID also when it is turned-off, because the identifier is stored in the internal memory and it is cleared only by another "Assign ID" step, as explained above.

With the network made always of the same devices the assigning ID procedure must be executed only the first time the system is turned on.
For more detailed instruction about PRONET AX see the PRONET AX USER'S MANUAL included with the software.

EXAMPLE OF PRONET AX NETWORK WITH AX800A AND SW1800A
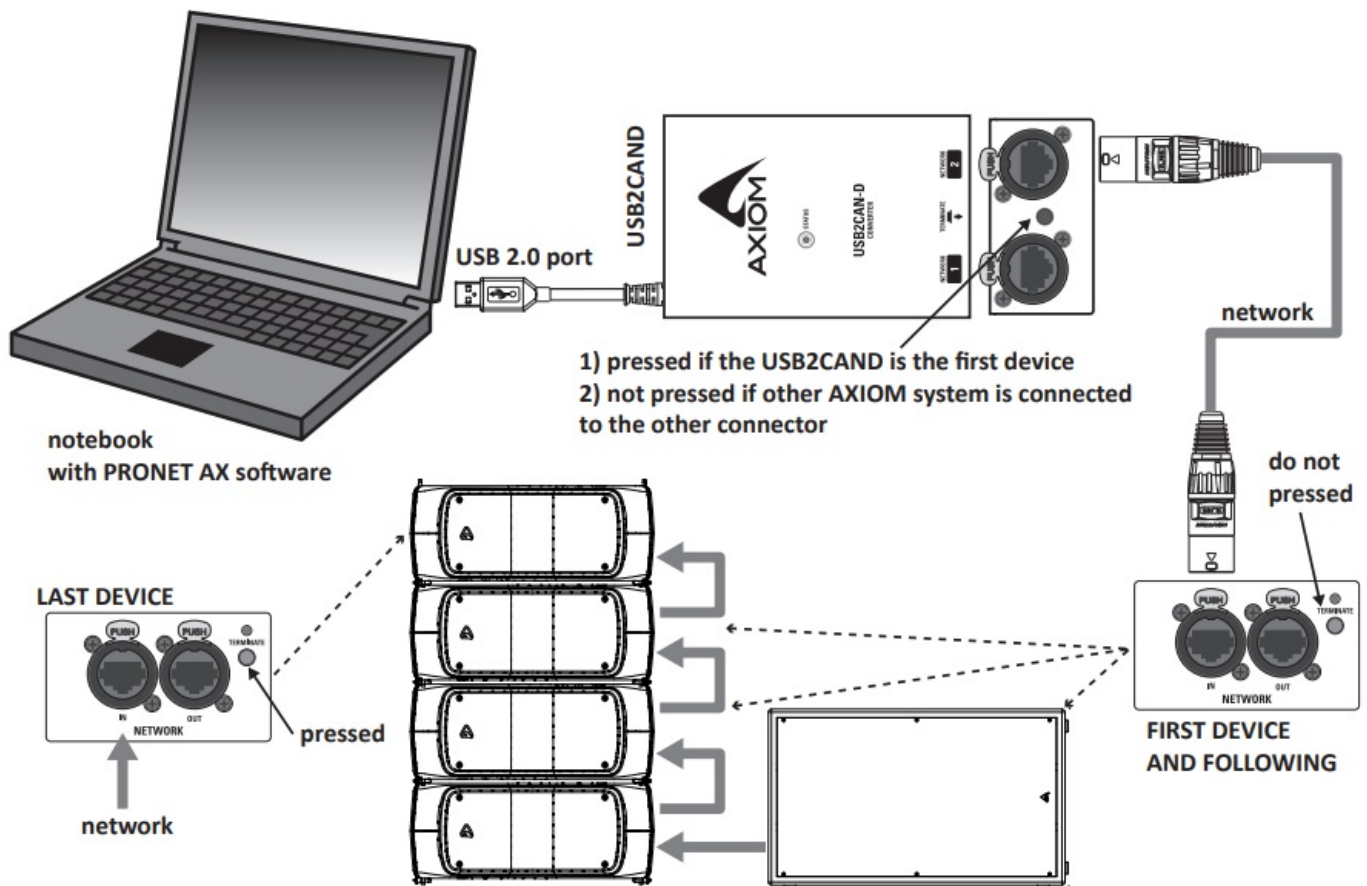
PREDICTION SOFTWARE: EASE FOCUS 3

To aim correctly a complete system we suggests to use always the Aiming Software – EASE Focus 3:
The EASE Focus 3 Aiming Software is a 3D Acoustic Modelling Software that serves for the configuration and modelling of Line Arrays and conventional speakers close to reality. It only considers the direct field, created by the complex addition of the sound contributions of the individual loudspeakers or array components. The design of EASE Focus is targeted at the end user. It allows the easy and quick prediction of the array performance in a given venue. The scientific base of EASE Focus stems from EASE, the professional electro- and room acoustic simulation software developed by AFMG Technologies GmbH. It is based on the EASE GLL loudspeaker data file required for its use. The GLL file contains the data that defines the Line Array with regard to its possible configurations as well as to its geometrical and acoustical properties.
Download the EASE Focus 3 app from the AXIOM website at **https://www.axiomproaudio.com**/ clicking on downloads section of the product.

Use the menu option Edit / Import System Definition File to import the GLL file, the detailed instructions to use the program are located in the menu option Help / User's Guide.
**Note:** Some windows system can require the .NET Framework 4 that can be download from website at https://focus.afmg.eu/.

BASIC INSTALLING OPERATION

The EASE FOCUS prediction software is the tool that allows you to evaluate your installation both to meet the acoustic requirements of the project and also to suspend or stack AX800A NEO systems, the program allows you to simulate the rigging pinpoint on the fly bar to obtain the calculated splay angle of the entire line array system and of the individual angles between each loudspeaker element.
The following examples shows how to operate correctly to link the loudspeaker box and to suspend or stack the whole system safely and surely, read these instructions with extreme attention:

KPTAX800 FLOWN PINPOINT
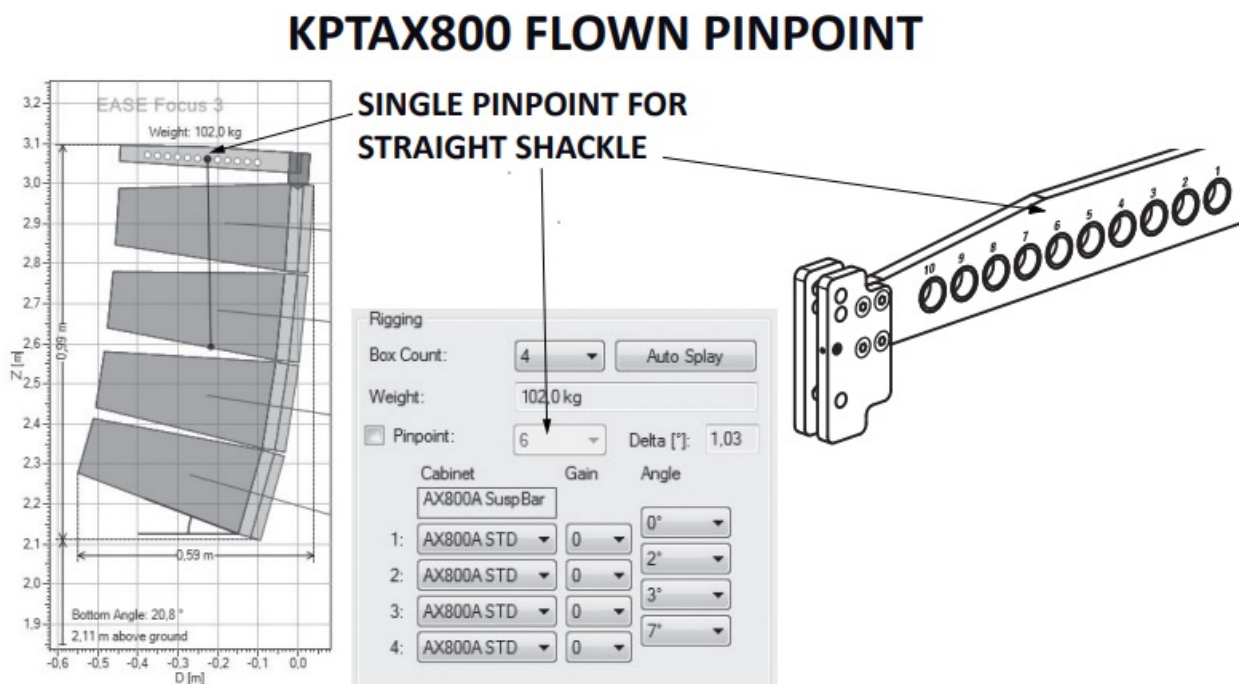
WARNING! CAREFULLY READ THE FOLLOWING INSTRUCTIONS AND CONDITION OF USE:

- This loudspeaker is designed exclusively for Professional audio applications. The product must be installed by qualified personal only, for suspending the system qualified rigger personal is mandatory.

- Proel strongly recommends that this loudspeaker cabinet be suspended taking into consideration all current National, Federal, State and Local regulations. Please contact the manufacturer and local distributor for further information.

- Proel do not accept any liability for damage caused to third parties due to improper installation, lack of maintenance, tampering or improper use of this product, including disregard of acceptable and applicable safety standards.

- During assembly pay attention to the possible risk of crushing. Wear suitable protective clothing. Observe all instructions given on the rigging components and the loudspeaker cabinets. When chain hoists are in operation ensure that there is nobody directly underneath or in the vicinity of the load. Do not under any circumstances climb on the array.

- Wind loads

When planning an open-air event it is essential to obtain current weather and wind information. When loudspeaker arrays are flown in an open-air environment, possible wind effects must be taken into account. Wind load produces additional dynamic forces acting on the rigging components and the suspension, which may lead to a dangerous situation. If according to the forecast wind forces higher than 5 bft (29-38 Km/h) are possible, the following actions have to be taken:

- The actual on-site wind speed has to be monitored permanently. Be aware that wind speed typically increases with height above ground.
- Suspension and securing points of the array should be designed to support double the static load in order to withstand any additional dynamic forces.
  WARNING!
  Flying loudspeakers overhead at wind forces higher than 6 bft (39-49 Km/h) is not recommended. If the wind force exceeds 7 bft (50-61 Km/h) there is a risk of mechanical damage to the components which may lead to a dangerous situation for persons in the vicinity of the flown array.
- Stop the event and make sure that no person remains in the vicinity of the array.
- Lower and secure the array.

Fly bar suspension and angle setup (centre of gravity)

The figure at the side shows where the normal centre of gravity is with one box or several boxes arranged in a line. Usually the boxes are arranged to make an arc for the best coverage of the audience, so the center of gravity moves backward. The aiming software suggests the ideal suspension pinpoint taking into account this behaviour: fix the straight shackle in this position.
Note that the ideal aiming angle often doesn't correspond to the pinpoint: there is often a little difference between ideal aiming and real aiming and its value is the Delta angle: positive delta angle can be adjusted a little using two ropes, negative delta angle are self adjusted a little because the cables weight on the back of the array. With some experience it's possible to consider preventively these required little adjustments.
During the flown set up you can connect the elements of the array to their cables. We suggest to discharge the weight of the cables from the flying pinpoint by tying them with a textile fibre rope, instead of letting them hang freely: in this way the position of the array will be much more similar to the simulation produced by the software.


KPTAX800 FLY BAR FOR FLOWN ARRAY

CENTRE OF GRAVITY
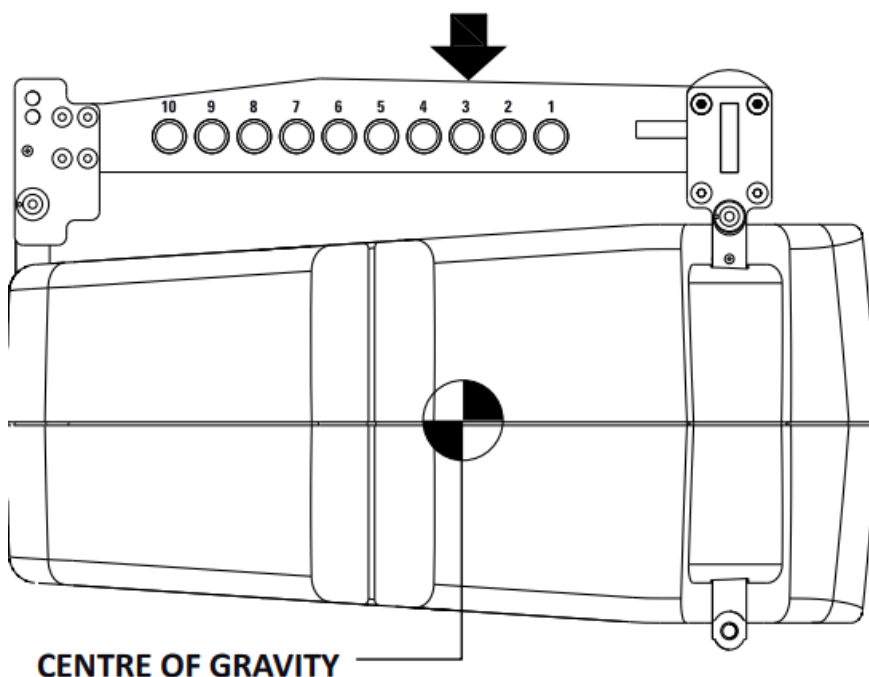
Pin locking and splay angles set up

The figures below shows how to insert correctly the locking pin, always carefully check that each pin is fully inserted and locked in the correct position. Set up the splay angle between loudspeakers inserting the pin in the correct hole, please note that the inner hole in the hinge top is for whole angles (1, 2, 3 etc.) while the outer hole is for the half angles (0.5, 1.5, 2.5 etc.).
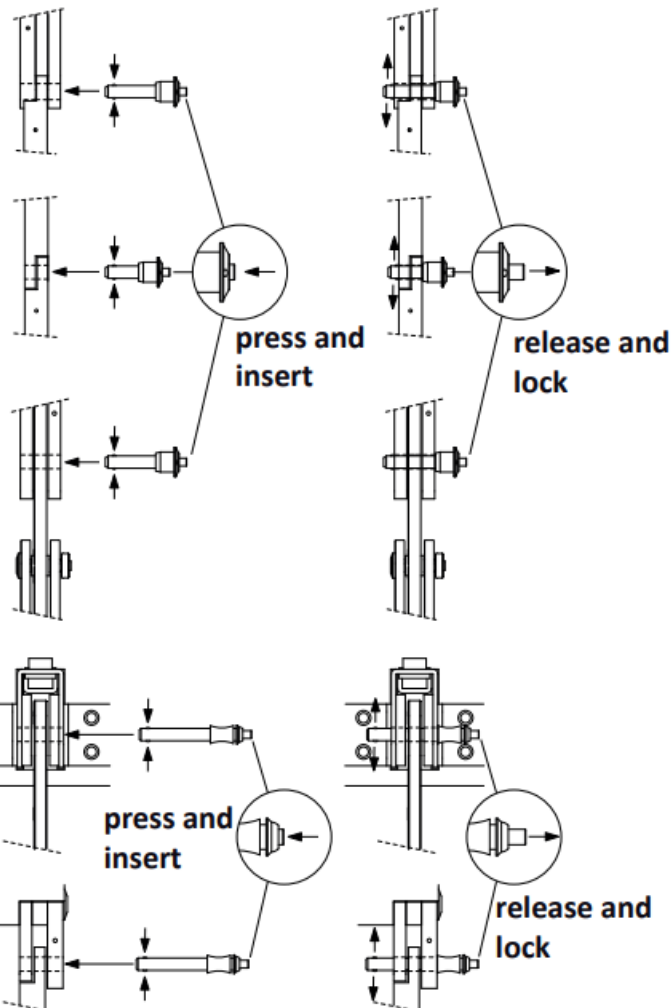
KPTAX800L FLY BAR FOR FLOWN ARRAY

CENTRE OF GRAVITY
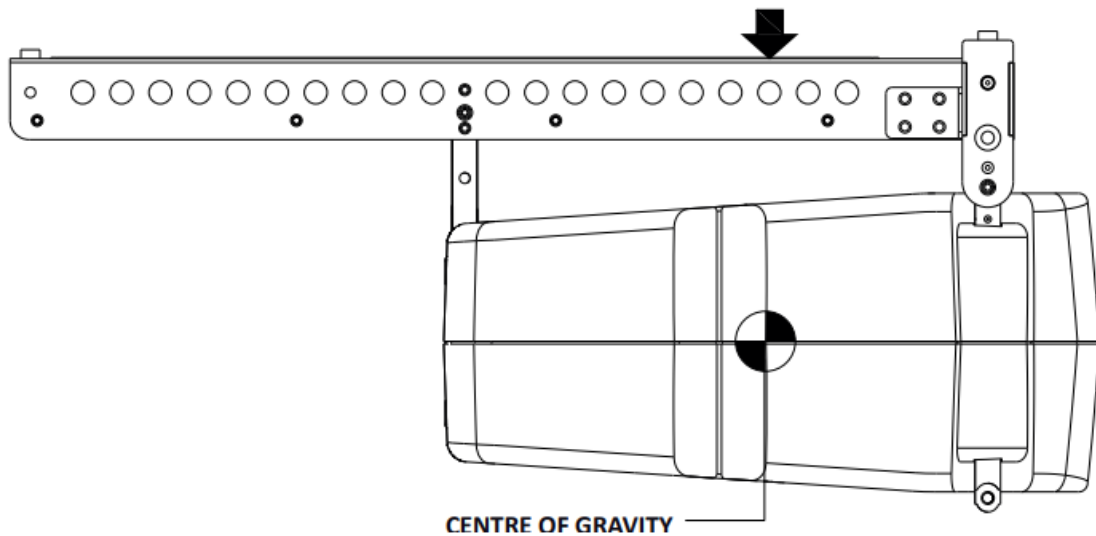
LOCKING PINS INSERTION

KPTAX800
fly bar-first box
front locking pin
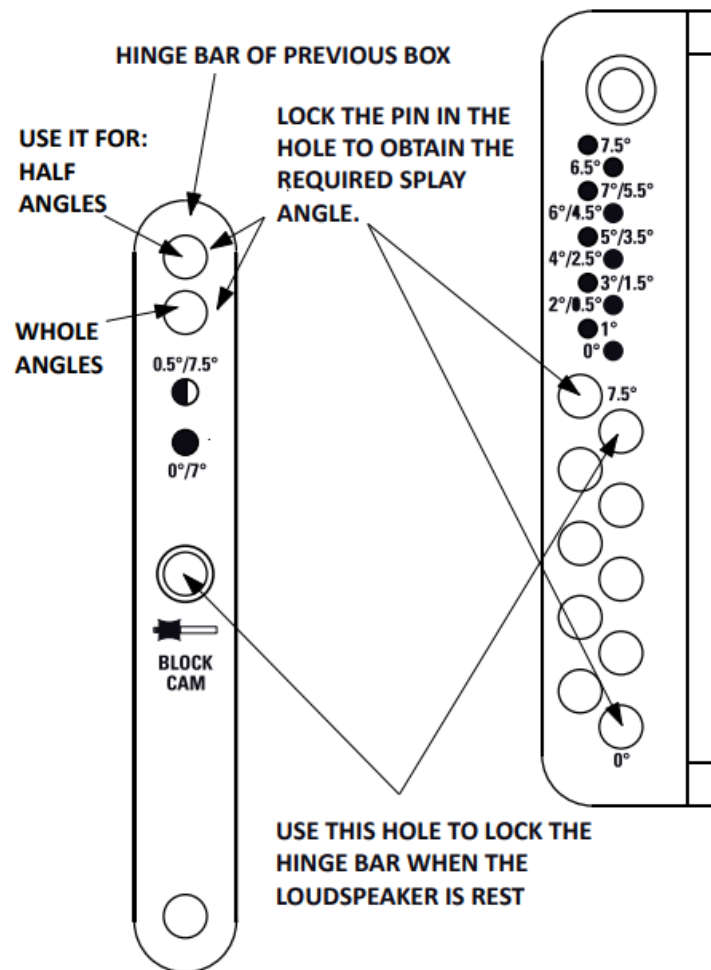(26mm)

box-box front
locking pin
(16mm)

press and insert

release and lock

rear locking
pin (26mm)

KPTAX800L
fly bar-first box
rear locking
pin (40mm)

press and insert

release and lock

KPTAX800L
fly bar-first box
front locking
pin (40mm)

LOUDSPEAKER SPLAY ANGLES SET UP

HINGE BAR OF PREVIOUS BOX

USE IT FOR:
HALF
ANGLES

LOCK THE PIN IN THE
HOLE TO OBTAIN THE
REQUIRED SPLAY
ANGLE.

WHOLE
ANGLES

0.5°/7.5°

0°/7°

BLOCK
CAM

7.5°
6.5°
7°/5.5°
6°/4.5°
5°/3.5°
4°/2.5°
3°/1.5°
2°/0.5°
1°
0°

7.5°

0°

USE THIS HOLE TO LOCK THE
HINGE BAR WHEN THE
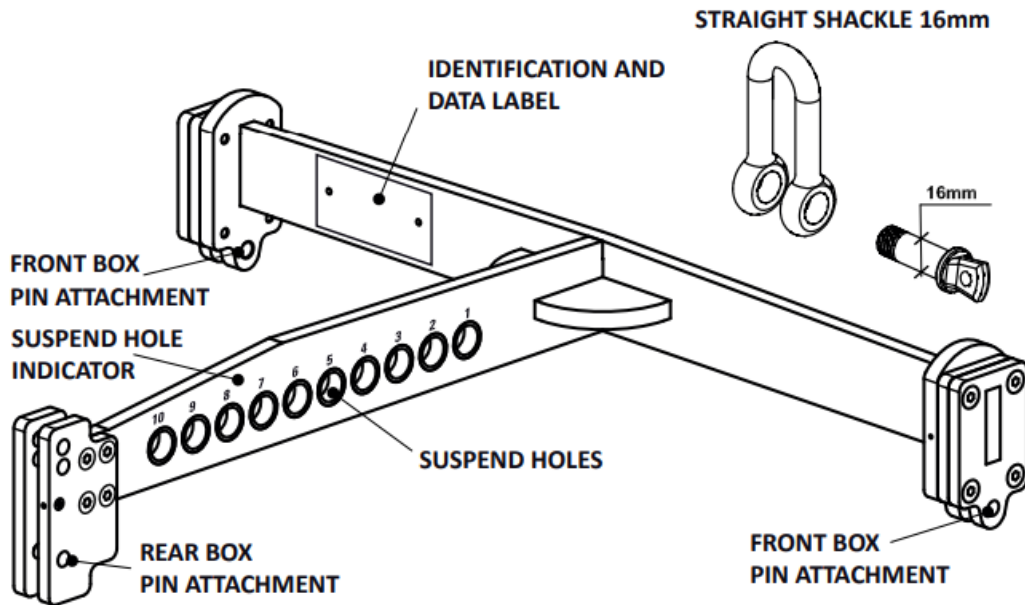LOUDSPEAKER IS REST

FLY BARS AND ACCESSORIES

The AX800A systems are built to allow the suspension of array with variable shape and dimensions. Thanks to a suspension mechanism designed to be functional, flexible and safe, each system must be suspended or stacked using the KPTAX800 or KPTAX800L fly bar. The loudspeakers are linked together in a column using a series of couplers integrated in the frame of each enclosure. Each system is set up properly both acoustically and mechanically only using the aiming software. Coupling system in the front does not require any adjustment: using two locking pins, each loudspeaker box is fixed to the previous. The slotted bar in the back is inserted in a U-shaped frame which features a series of numbered holes. Sliding the slotted bar in the U-shaped frame of the next loudspeaker and inserting a locking pin in one of the numbered holes, it is possible to adjust the relative splay angle between two adjacent loudspeakers in the array column.

KPTAX800 FLY BAR AND ACCESSORIES

STRAIGHT SHACKLE 16mm

IDENTIFICATION AND DATA LABEL

16mm

FRONT BOX PIN ATTACHMENT

SUSPEND HOLE INDICATOR

SUSPEND HOLES

REAR BOX PIN ATTACHMENT

FRONT BOX PIN ATTACHMENT

NOTE: The figures illustrate the KPTAX800 and KPTAX800L usages, these are similar with the respective load capacity limitations.

Follow the sequence in the figure for fixing the fly bar at the first box. Usually this is the first step before lifting up the system. Be careful to insert properly all the locking pins (1)(2) and (3)(4) then the shackle (5) in the right holes as specified by the aiming software.

When lifting the system always proceed gradually step by step, paying attention to secure the fly bar to the box (and the box to the other boxes) before pulling up the system: this makes easier to insert properly the locking pins. Also when the system is released down, unlock gradually the pins. During the lifting be very careful to not let the cables enter the space between one enclosure and the other, as their compression could cut them.
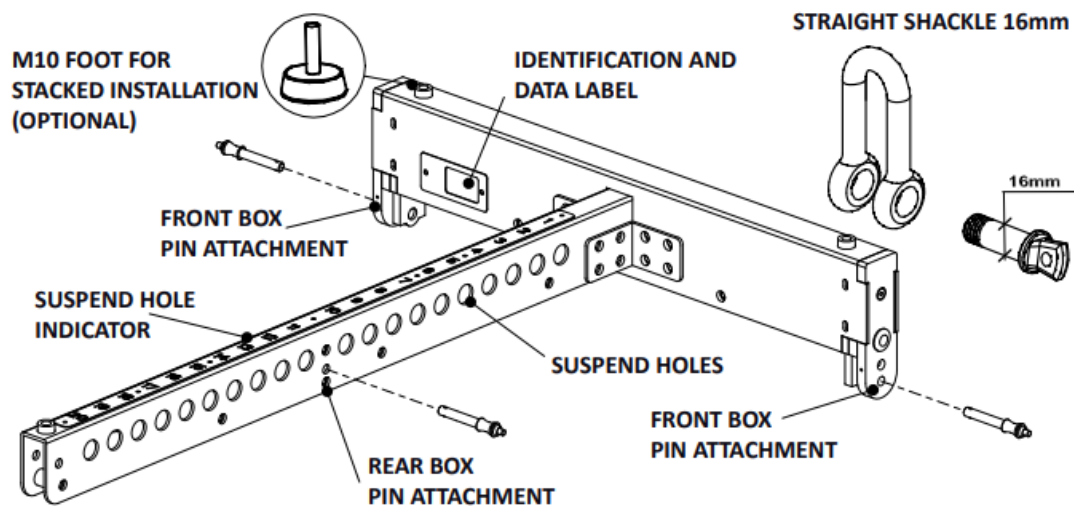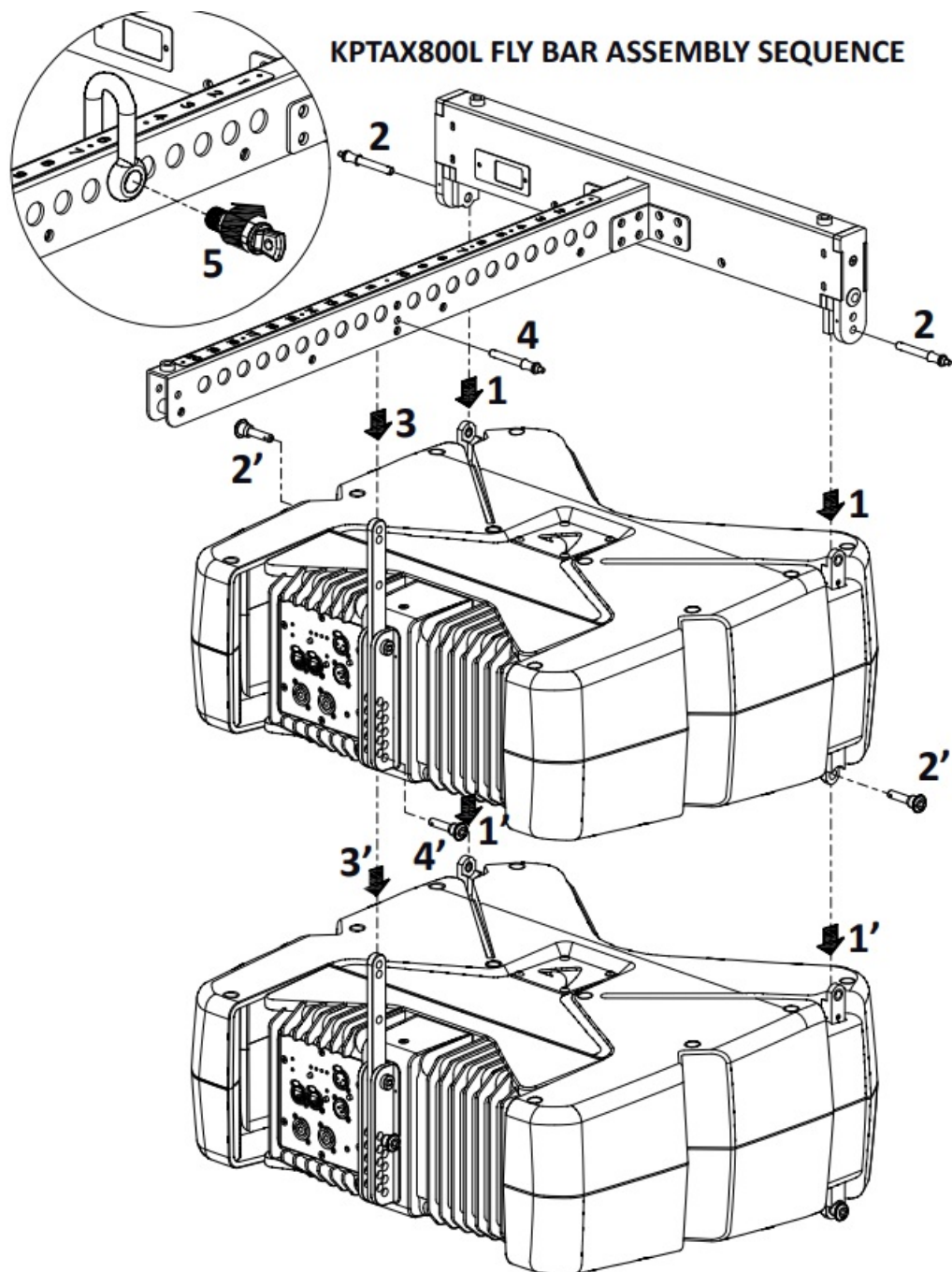
KPTAX800

Fly bar maximum capacity is 200 Kg (441 lbs) with the 0° angle. It can support, with a safety factor of 10:1, up to:

- 4 AX800A
- KPTAX800 can NOT be used for stacked array.

KPTAX800 FLY BAR ASSEMBLY SEQUENCE

KPTAX800L

Fly bar maximum capacity is 680 Kg (1500 lbs) with the 0° angle. It can support, with a safety factor of 10:1, up to:

- 12 AX800A
- KPTAX800L can be used for stacked array for a maximum of 4 AX800A units.

KPTAX800L FLY BAR AND ACCESSORIES

STRAIGHT SHACKLE 16mm

M10 FOOT FOR STACKED INSTALLATION (OPTIONAL)

IDENTIFICATION AND DATA LABEL

16mm

FRONT BOX PIN ATTACHMENT

SUSPEND HOLE INDICATOR

SUSPEND HOLES

FRONT BOX PIN ATTACHMENT

REAR BOX PIN ATTACHMENT

KPTAX800L FLY BAR ASSEMBLY SEQUENCE

STACKED SYSTEM WITH KPTAX800L

WARNING!

- The ground where the KPTAX800L Fly bar serving as ground support is placed needs to be absolutely stable and compact.
- Adjust the feet so to lie the bar perfectly horizontal.
- Always secure ground stacked setups against movement and possible tipping over.
- A maximum of 4 x AX800A cabinets with the KPTAX800L Fly bar serving as ground support are allowed to be set up as ground stack.

In the stack configuration you have to use the three optional BOARDACF01 feet and the fly bar must be mounted upside down on the ground.
Coupling system in the front do not require any adjustment: using two locking pins each loudspeaker box is fixed to the previous. The slotted bar in the back is inserted in a U-shaped frame which features a series of numbered

holes. Sliding the slotted bar in the U-shaped frame of the next loudspeaker and inserting a locking pin in one of the numbered holes, it is possible to adjust the relative splay angle between two adjacent loudspeakers in the array column.

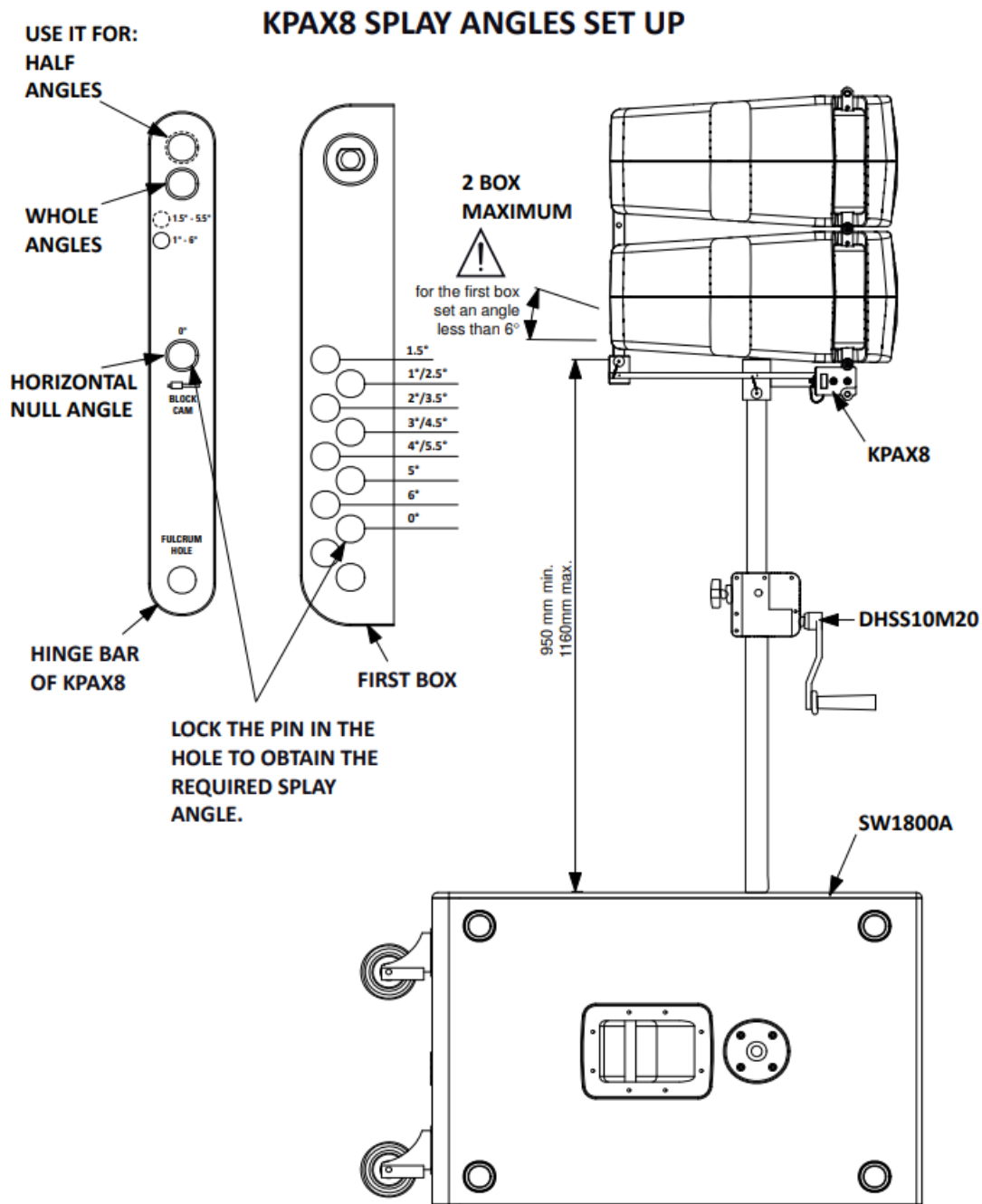The optimal splay angles can be simulated using the EASE Focus 3 software.

KPTAX800L STACKED ARRAY

max splay angle 7.5°

max splay angle 7.5°

max splay angle 7.5°
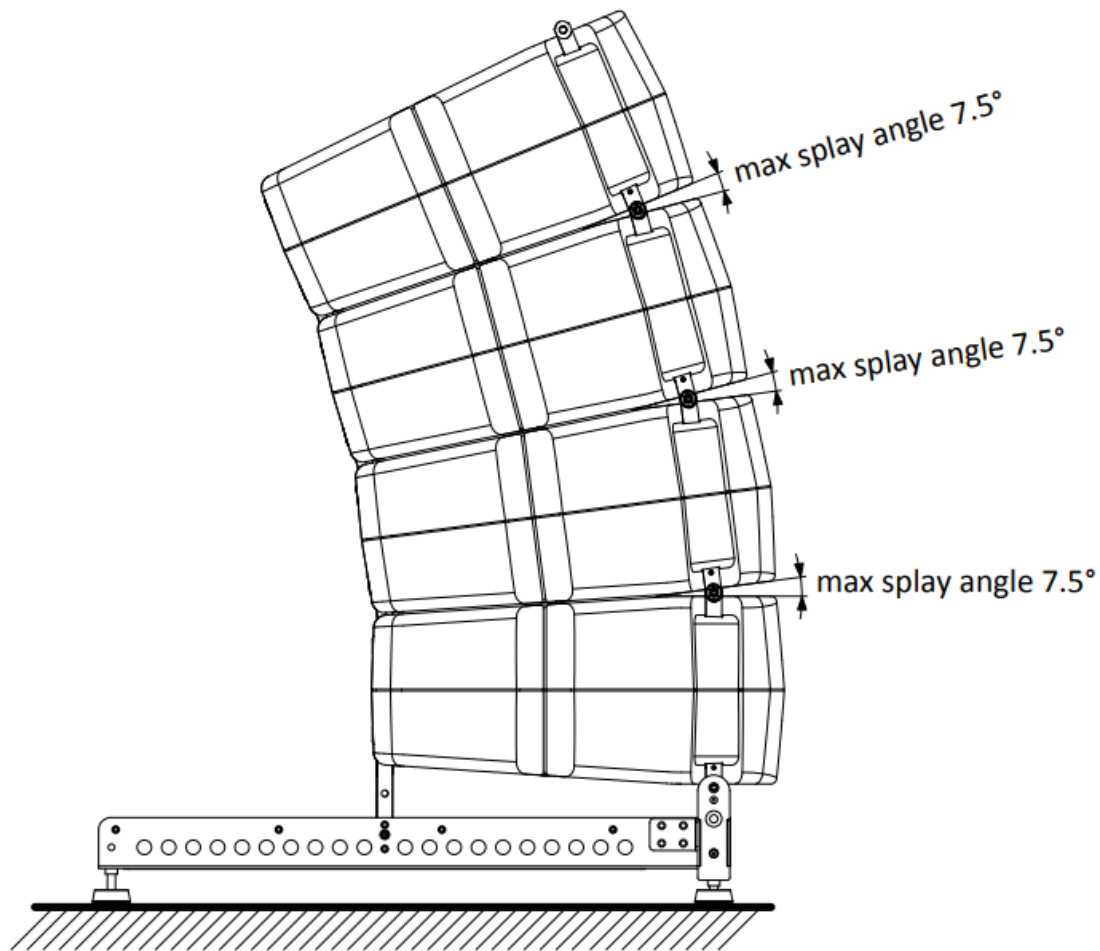
STACKED SYSTEM WITH KPAX8 POLE ADAPTER

WARNING!

- A maximum of 2 x AX800A can be installed on a pole using the KPAX8 pole adapter.
- The KPAX8 can be installed on a SW1800A sub-woofer (preferably in horizontal position) using the DHSS10M20 adjustable sub-Speaker ø 35mm spacer.
- The basement where the system is placed needs to be an horizontal plane.
- The splay angle of the first box attached to the KPAX8 must be less of 6°.
- The figure below shows the system configuration set up. Please note that the angles set up doesn't correspond to the silkscreen written on the back of the box, the figure below shows the real correspondence for a precise angles set up:

KPAX8 SPLAY ANGLES SET UP

USE IT FOR:
HALF ANGLES

WHOLE ANGLES

1.5° - 5.5°
1° - 6°

HORIZONTAL NULL ANGLE

0°

BLOCK CAM

FULCRUM HOLE

HINGE BAR OF KPAX8

LOCK THE PIN IN THE HOLE TO OBTAIN THE REQUIRED SPLAY ANGLE.

1.5°
1°/2.5°
2°/3.5°
3°/4.5°
4°/5.5°
5°
6°
0°

FIRST BOX

2 BOX MAXIMUM

⚠

for the first box set an angle less than 6°

KPAX8

950 mm min.
1160mm max.

DHSS10M20

SW1800A

PROEL S.p.A. (World Headquarters) – Via alla Ruenia 37/43 – 64027 Sant'Omero (Te) – ITALY Tel: +39 0861 81241 Fax: +39 0861 887862 **www.axiomproaudio.com**

Documents / Resources

AX800A Active Vertical Array Loudspeaker USER MANUAL AXIOM	**AXIOM AX800A Active Vertical Array Loudspeaker** [pdf] User Manual AX800A Active Vertical Array Loudspeaker, AX800A, Active Vertical Array Loudspeaker, Vertical Array Loudspeaker, Array Loudspeaker

References

- [**User Manual**](#)