

AXIOM ED23PMKII Passive Near Field Point Source Loudspeaker



# AXIOM ED23PMKII Passive Near Field Point Source Loudspeaker User Manual

[Home](#) » [AXiom](#) » AXIOM ED23PMKII Passive Near Field Point Source Loudspeaker User Manual 

## Contents

- 1 AXIOM ED23PMKII Passive Near Field Point Source Loudspeaker
- 2 FAQ
- 3 IMPORTANT SAFETY INSTRUCTIONS
- 4 DECLARATION OF CONFORMITY
- 5 LIMITED WARRANTY
- 6 INTRODUCTION
- 7 TECHNICAL SPECIFICATION
- 8 MECHANICAL DRAWING
- 9 OPTIONAL ACCESSORIES
- 10 SPARE PARTS
- 11 INPUT
- 12 MOUNTING INSTRUCTIONS
- 13 Contact
- 14 Documents / Resources
  - 14.1 References
- 15 Related Posts



**AXIOM ED23PMKII Passive Near Field Point Source Loudspeaker**





## FAQ

- **Q:** Can I use the speaker outdoors?
  - **A:** It is not recommended to use the speaker near water or in outdoor environments.
- **Q:** What is the warranty coverage?
  - **A:** The product comes with a limited warranty, refer to the warranty conditions for details.
- **Q:** How do I mount the speaker?
  - **A:** Optional mounting accessories like KPTED23 or KPTLTP can be used for wall or truss mounting. Refer to the mechanical drawing for more information.

## 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.

## DECLARATION OF CONFORMITY



The product is in compliance with:

- RoHS Directive 2011/65/EU and 2015/863/EU, WEEE Directive 2012/19/EU.



The product is in compliance with:

- S.I. 2012/3032 The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

## 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 by qualified personnel. Please contact the manufacturer for further information.

## INTRODUCTION

The ED23P is an ultra-compact and lightweight, two-way passive point source loudspeaker designed for near-field sound reinforcement applications such as television, stage front, conferencing, theatres, and audio-visual. Due to its very low profile, the ED23P is an ideal stage lip monitor and is especially useful for fashion show catwalks where it can provide unobtrusive inwards/ outwards coverage for both audience and presenters.

The two 3.5" low frequency drivers are matched to a dome tweeter on a spherical waveguide horn with an audiophile-grade passive crossover in a WTW linear enclosure configuration to give a wide dispersion pattern that allows widely spaced units to cover large spaces with high quality background sound.

The cabinet is trapezoidally shaped, and also asymmetrical, and this profile not only allows the assembly of small clusters using the integral flypoints, but also enables it to be suspended horizontally very close to a ceiling or placed on a stage front as a low profile monitor. The 15mm birch plywood cabinet is provided with M8 rigging points on the top and bottom, and M5 rigging points on the rear of the cabinet to allow suspension in fixed installations using optional mounting brackets. Two Neutrik® speakON™ NL4 connectors provide input and link connections.

To extend the system's low frequency response the ED25P can be complemented by subwoofers from the Axiom SW series such as the SW210P or SW18P.

## TECHNICAL SPECIFICATION

### SYSTEM

- **System's Acoustic Principle:** Two-way Vented Enclosure
  - Asymmetric Dispersion
- **Frequency response:** 200 Hz – 20 kHz (-6dB)
- **Nominal Impedance:** 32 Ω
- **Horizontal Coverage Angle:** 80° averaged, 1kHz to 20kHz (-6 dB)
- **80° averaged, 1kHz to 20kHz (-6 dB):** 65° averaged, 1kHz to 20kHz (-6 dB)
- **Sensitivity (4V @ 1m, 2 Pi):** 90 dB SPL
- **Maximum Peak SPL @ 1m:** 112 dB

### TRANSDUCERS

- **Low frequency transducer:** Two 3.5" (89mm) LF drivers
- **High frequency transducer:** One Dome tweeter with spherical waveguide horn (SWGH)

### INPUT CONNECTIONS

- **Connector Type:** Neutrik® Speakon® NL4 x 2
- **Input Wiring:** Pin 1+/1- (Pin 2+/2- pass thru)

\* AES Pink Noise Continuous Power

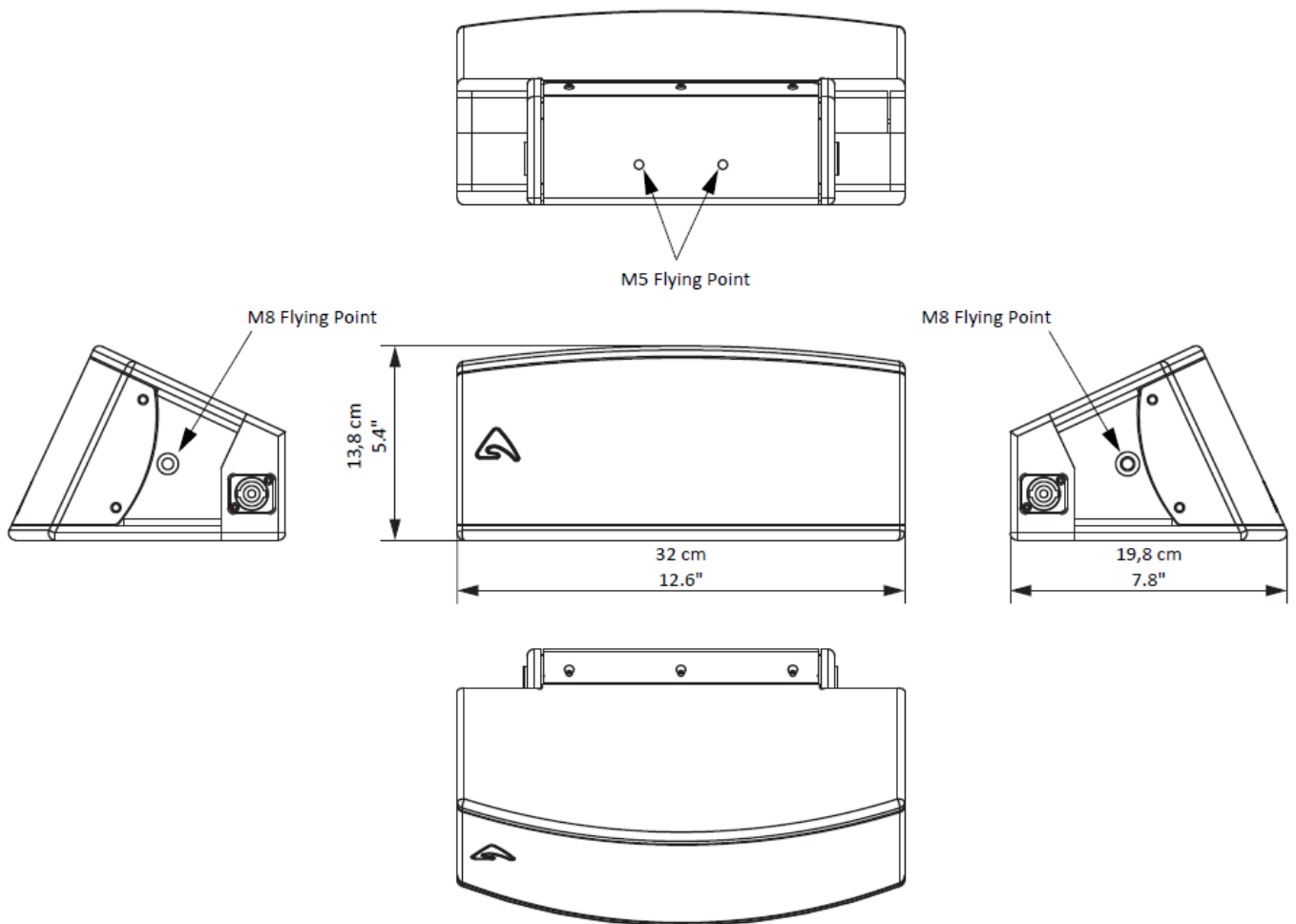
## POWER HANDLING

- **Power Handling (AES)\*:** 70 W
- **Power Handling (program):** 140 W

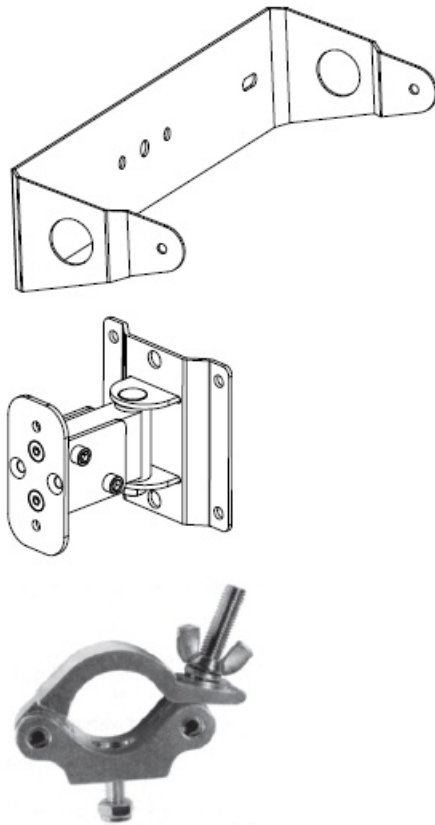
## ENCLOSURE & CONSTRUCTION

- **Width:** 320 mm (12.6")
- **Height:** 138 mm (5.4")
- **Depth:** 198 mm (7.8")
- **Taper angle:** Monitor: 20°
- **Enclosure Material:** 15 mm birch plywood
- **Paint:** High resistance, black or white water based paint
- **Flying System:** 2 x M8 flying points on sides
  - 2 x M5 flying points on rear
- **Net Weight:** 6.4kg (14.1 lbs)

## MECHANICAL DRAWING



## OPTIONAL ACCESSORIES



- **KPTED23:** Wall or Truss Mounting “C” bracket.
- **KPTLTP:** Wall Mounting bracket.
- **PLH295 / PLH295BK:** Ø 48-51mm truss tube aluminium half coupler with M10 x 50 built-in bolt and fastening nut.
  - Also available with black finish.

**NOTE:** KPTED23 and KPTLTP can be used alone or combined together.

**NL4FX:** Neutrik Speakon® PLUG

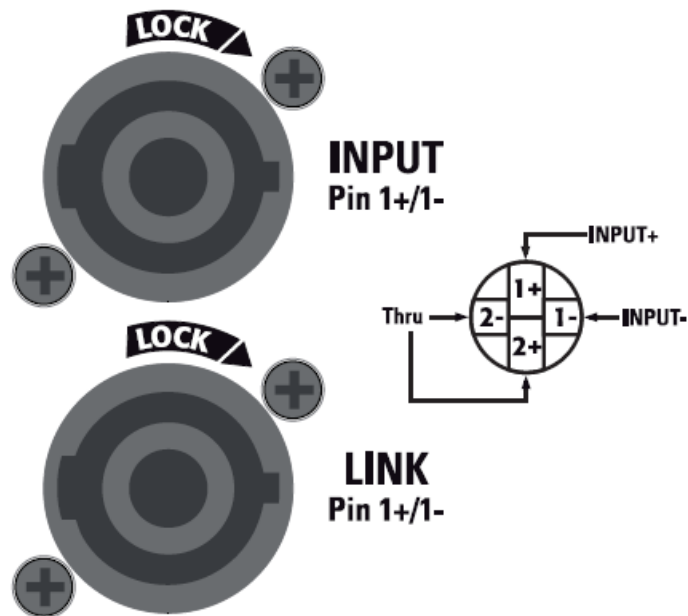
see <http://www.axiomprouaudio.com> for detailed description and other available accessories.

## SPARE PARTS

- **NL4MP:** Neutrik Speakon® panel socket
- **91CRO039AR1:** ED23P/ED25P Crossover PCBA
- **98TDS3WZ22:** 3.5” woofer – 1” VC – 22 ohm
- **98DRI025C:** 1” HF driver – 1” VC – 8 ohm with Wave Guide

## INPUT

Power input for the external amplifier. The ED23PMKII includes a passive crossover for filtering the signal. It includes also an internal protection that limits any excessive power to the HF section and, if the signal persists for a long time, it excludes the HF section. The connections are the following:



INPUT – LINK	
NL4 pin number	internal connection
1+	+
1-	–
2+	none (pass thru)
2-	none (pass thru)

## LINK

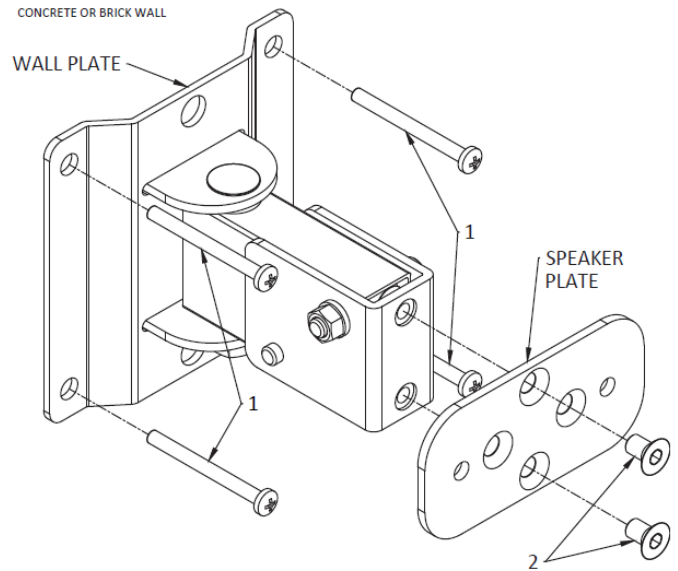
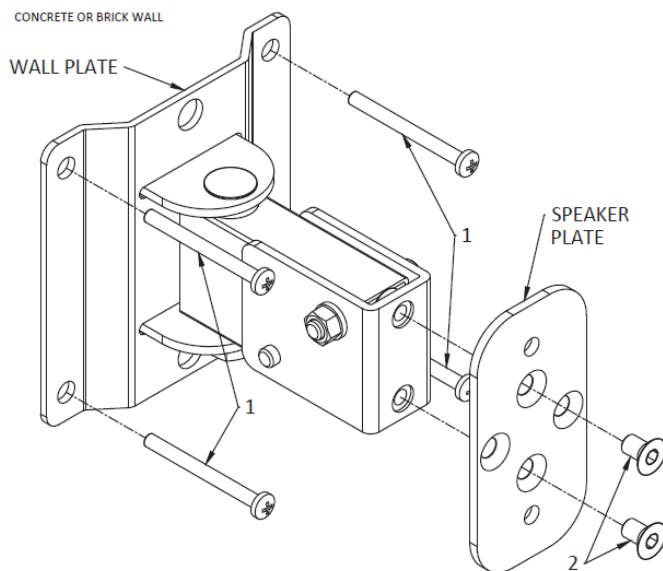
- Power output in parallel with the INPUT socket, for connecting the unit to another speaker.
- The number of ED23PMKII cabinets that can be connected in parallel depends on the amplifier load capacity.

**Note:** there is no silk-screen printing on the speaker, the illustration above is only representative of the internal connection, both speakon connectors on the sides of the speaker can be used as INPUT or LINK.

## MOUNTING INSTRUCTIONS

### KPTLTP WALL MOUNTING



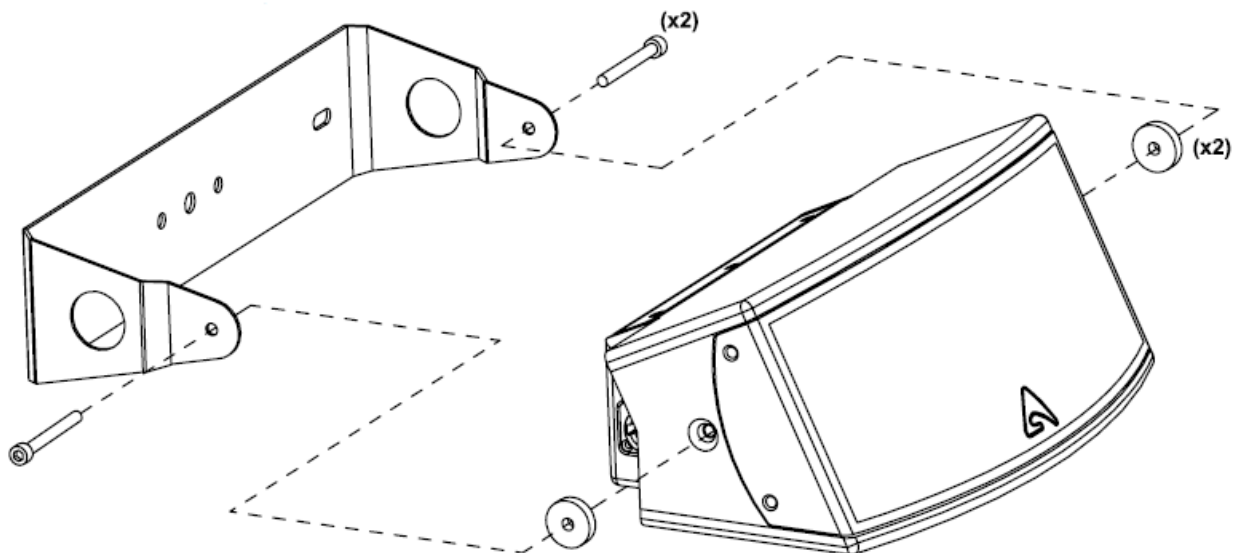


- This wall mounting bracket allows to aim the loudspeaker in both horizontally and vertically.
- The horizontal aiming is free with  $\pm 15^\circ$  and the vertical aiming is in 4 steps ( $0^\circ$ ,  $-15^\circ$ ,  $-30^\circ$ ,  $-45^\circ$ ).

#### Note

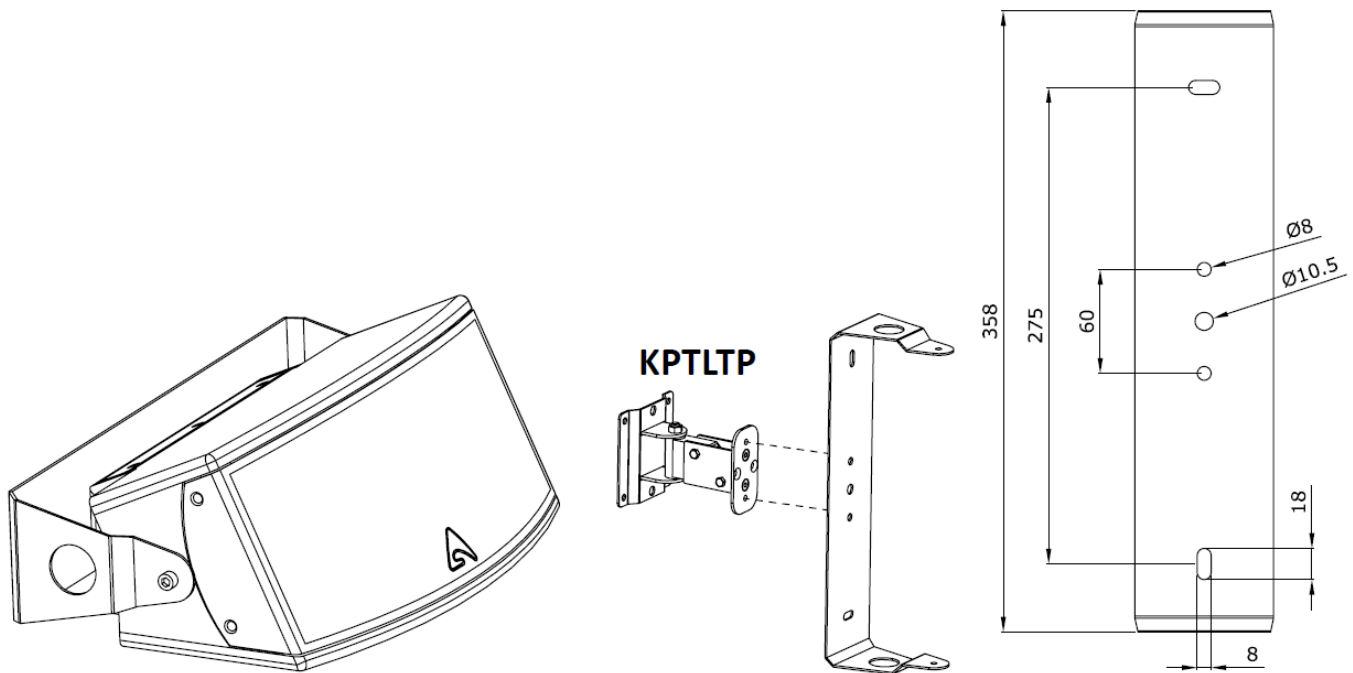
- The speaker plate can be rotated as shown above for the optimal speaker orientation, the speaker plate will be fixed to the rear M5 flying points.

#### KPTED23 WALL or TRUSS MOUNTING



- Using the “C” shape bracket the ED23PMKII loudspeaker can be installed to walls or mounted to trusses in combination combining with a PLH295.
- It allows to aim the speaker in one direction, vertical or horizontal.

#### KPTLTP and KPTED23 WALL MOUNTING



- Using both accessories combined is possible to obtain a more flexible orientation for the loudspeaker.

**WARNING:** CAREFULLY READ THE FOLLOWING INSTRUCTIONS AND CONDITION OF USE:

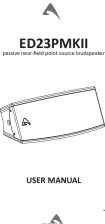
- For a supplementary safety assure always the loudspeaker to the wall with an alternative rope.
- This loudspeaker is designed exclusively for Professional audio applications. The product must be installed by qualified personal only.
- Proel strongly recommends that this loudspeaker cabinet be suspended taking into consideration all current National, Federal, State and Local regulations. Please contact the manufacturer 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.

## Contact

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- [www.axiomproaudio.com](http://www.axiomproaudio.com)

## Documents / Resources

 The image shows the front cover of the user manual for the Axiom ED23PMKII. At the top is the Axiom logo. Below it, the text 'ED23PMKII' is printed, followed by 'passive near field point source loudspeaker' in a smaller font. In the center is a line drawing of the speaker, which is a rectangular box with a slanted top and a small circular port on the side. Below the drawing, the words 'USER MANUAL' are printed. At the bottom is the Axiom logo again, with a small '1000000000' to its right.	<p><a href="#">AXIOM ED23PMKII Passive Near Field Point Source Loudspeaker</a> [pdf] User Manual</p> <p>ED23PMKII Passive Near Field Point Source Loudspeaker, ED23PMKII, Passive Near Field Point Source Loudspeaker, Near Field Point Source Loudspeaker, Field Point Source Loudspeaker, Point Source Loudspeaker, Source Loudspeaker, Loudspeaker</p>
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## References

- [Axiom Pro Audio](#)
- [User Manual](#)

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