

MIA Series

COMMERCIAL LOUDSPEAKERS

Mini Array Column Loudspeakers



USER MANUAL



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WARRANTY &
ENVIRONMENT

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1. PRECAUTIONS

1.1 Important Notice



WARNING: SHOCK HAZARD - DO NOT OPEN

AVIS: RISQUE DE CHOC ÉLECTRIQUE - NE PAS OUVRIR



The flashing light with an arrowhead symbol inside an equilateral triangle on it is intended to alert the user of the presence of non-insulated “dangerous voltage” within the enclosure, which might be of sufficient magnitude to pose a risk of electric shock to users.



The exclamation mark within an equilateral triangle is intended to alert the user of the requirement for important operating and maintenance (servicing), for which instructions may be found in the literature accompanying the appliance.

WARNING (If applicable): Terminals marked with symbol “” may be of sufficient magnitude to pose a risk of electric shock. The external wiring connected to terminals requires installation by a technician, or the use of ready-made leads or cords.

WARNING: To prevent fire or shock hazard, do not expose this equipment to rain or humidity.

WARNING: A device with Class I manufacturing ought to be connected to a mains socket outlet with a protective earthing connection.



WARNING: Ecler products have a long lifetime of more than 10 years. This product must never be discarded as unsorted urban waste, but must be taken to the nearest electrical and electronic waste treatment centre.



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1.2 Key Safety Directions

1. Read the following directions.
2. Keep the following directions.
3. Heed all warnings.
4. Follow all directions.
5. Do not use this device in proximity to water.
6. Clean only with a 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 devices (including amplifiers) that may release heat.
9. Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades, being 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, contact a qualified electrician for a replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at the plugs, convenience receptacles, and at the point of exit from the device.
11. Only use attachments/accessories specified by the manufacturer.
12. Unplug the device during lightening sorts or when unused for long periods of time.
13. Refer all servicing to qualified personnel. Servicing is required when the device has been damaged in any way, such as power supply cord or plug damage, liquid spillage or objects onto the device, the device has been exposed to rain or humidity, does not operate normally, or has been dropped.
14. Disconnecting from mains: When switching off the POWER switch, all the functions and light indicators of the unit will be stopped, but fully disconnecting the device from mains is done by unplugging the power cable from the mains input socket, therefore, it should always remain easily accessible
15. Equipment is connected to a socket-outlet with an earthing connection by means of a power cord.
16. The marking information is located at the bottom of the unit.
17. The device shall not be exposed to dripping or splashing liquids, and no liquid-filled objects, such as a filled up glass, shall be placed on top of the device.

1.3 Cleaning Directions



Clean the unit with a soft, dry clean cloth or slightly wet with water and neutral liquid soap only, then dry it with a clean cloth. Be careful that water never gets into the unit through any hole. Never use alcohol, benzine, solvents or abrasive substances to clean this unit.

NEEC AUDIO BARCELONA, S.L. accepts no liability for any damage that may be caused to people, animal, or objects due to failure to comply with the warnings above.



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2. WARRANTY & ENVIRONMENT

Thank you for choosing our Ecler MIA Series!

We greatly value your trust.

It is **VERY IMPORTANT** to **carefully read this manual** and to fully understand its contents before any connecting takes place in order to make the best use of this equipment, as well as to get the best performance from it.

To ensure optimal operation of this device, **we strongly recommend that its maintenance be carried out by our authorised Technical Services.**



Ecler is truly committed with the environment and planet sustainability, energy saving and CO₂ emission reduction. Recycling materials and using non-contaminant components are also top priorities in our green crusade.

Ecler has deeply evaluated and analyzed the environmental impacts of all the processes involved in the production of this product, including packaging, and has alleviated, reduced and/or compensated for them.

3. PACKAGE CONTENTS

- 1 MIA Series unit.
- 1 FLATY wall-mount bracket for MIA-81, or
- 1 HANDY wall-mount bracket for MIA-82
- 2x Euroblock connector
- First Steps Guide.
- Warranty card.



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4. DESCRIPTION & FEATURES

MIA Series is a family of elegant, unique and compact design column loudspeakers, built in a single aluminium piece to avoid vibrations and mechanical stress.

MIA-81 includes 8x1.5" drivers with an RMS rating of 40W and **MIA-82** includes 8x2.5" drivers with an RMS rating of 150W. Both models behave as a mini line array with the disposition of 8 drivers per column and the possibility of working in 16 Ω or 64 Ω by selecting them behind the logo without the need to remove the grille.

MIA Series are available in black and white colour, are IP44 graded ready for outdoor applications.

As a highlight, a stainless-steel wall-mount bracket is included for height adjustment at any point along the length of the column. MIA-81 includes the FLATY bracket that allows the column to be mounted against the wall and MIA-82 includes the incredibly versatile HANDY wall-mount smart pan and tilt bracket.

4.1 Main Features

- Column passive loudspeaker for surface mounting.
- Possibility of working in 16 Ω or 64 Ω by selecting them behind the logo without the need to remove the grille.
- Aluminium one-piece non resonant compact enclosure.
- Stack Output.
- FLATY bracket allows the column to be mounted against the wall (MIA-81).
- HANDY wall-mount versatile pan and tilt bracket included (MIA-82).
- Weather-protected with IP44 rating.
- Available in white (RAL9003) and black (RAL9005).



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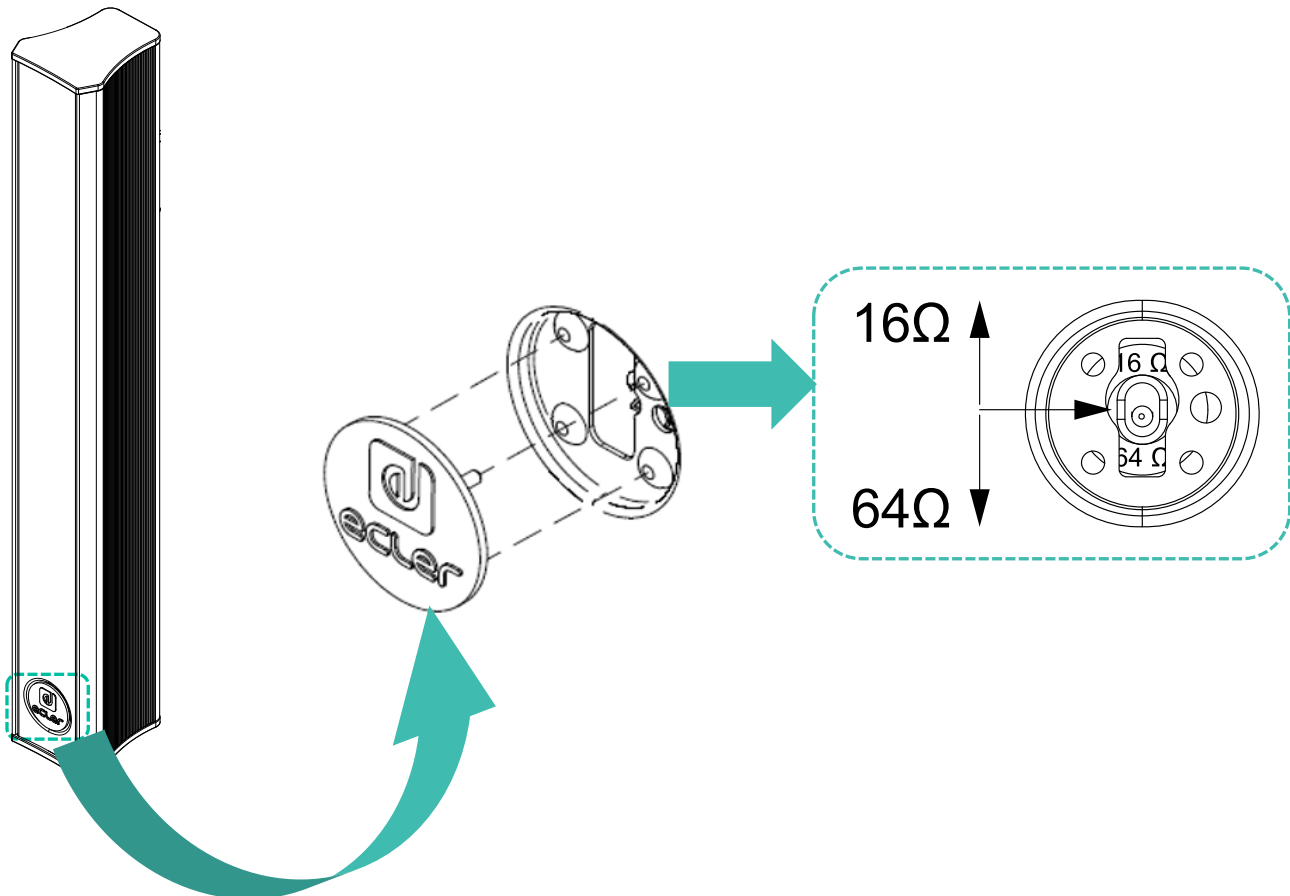
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5. IMPEDANCE SELECTOR

MIA Series has 2 impedance options (16Ω and 64Ω) to install more or less speakers in parallel. In this matter, it has a 2-position switch on its front panel (behind the logo) that allows to select its working mode without removing the grill.



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6. CONNECTIONS

The connection cables which connect the amplifiers output and the speaker should be of good quality, have sufficient conductor area and be as short as possible. The latter fact is especially important when the distance is long and the load impedance is 16 Ω . A cross-section of at least 2.5mm² is recommended for distances up to 10m; 4 or 6mm² for longer distances. Following formula gives the required section, assuming 4% losses:

$$\text{Cross section in mm}^2 = \frac{\text{Length in m}}{\text{Loudspeaker impedance in } \Omega}$$

6.1 High Impedance Amplifiers

- ✗ **MIA-81** is not compatible with High Impedance amplifiers.
- ✓ **MIA-82** switched to 64 Ohm can be connected to a High Impedance amplifier. Consider MIA-82 as a 160W loudspeaker in a 100V line and a 80W loudspeaker in a 70V line.

 **Always respect the polarity.** The loudspeaker has an INPUT Euroblock connector, and a second STACK Euroblock connector thereby facilitating the parallel connection of speaker.



See detailed connections diagram on next page.



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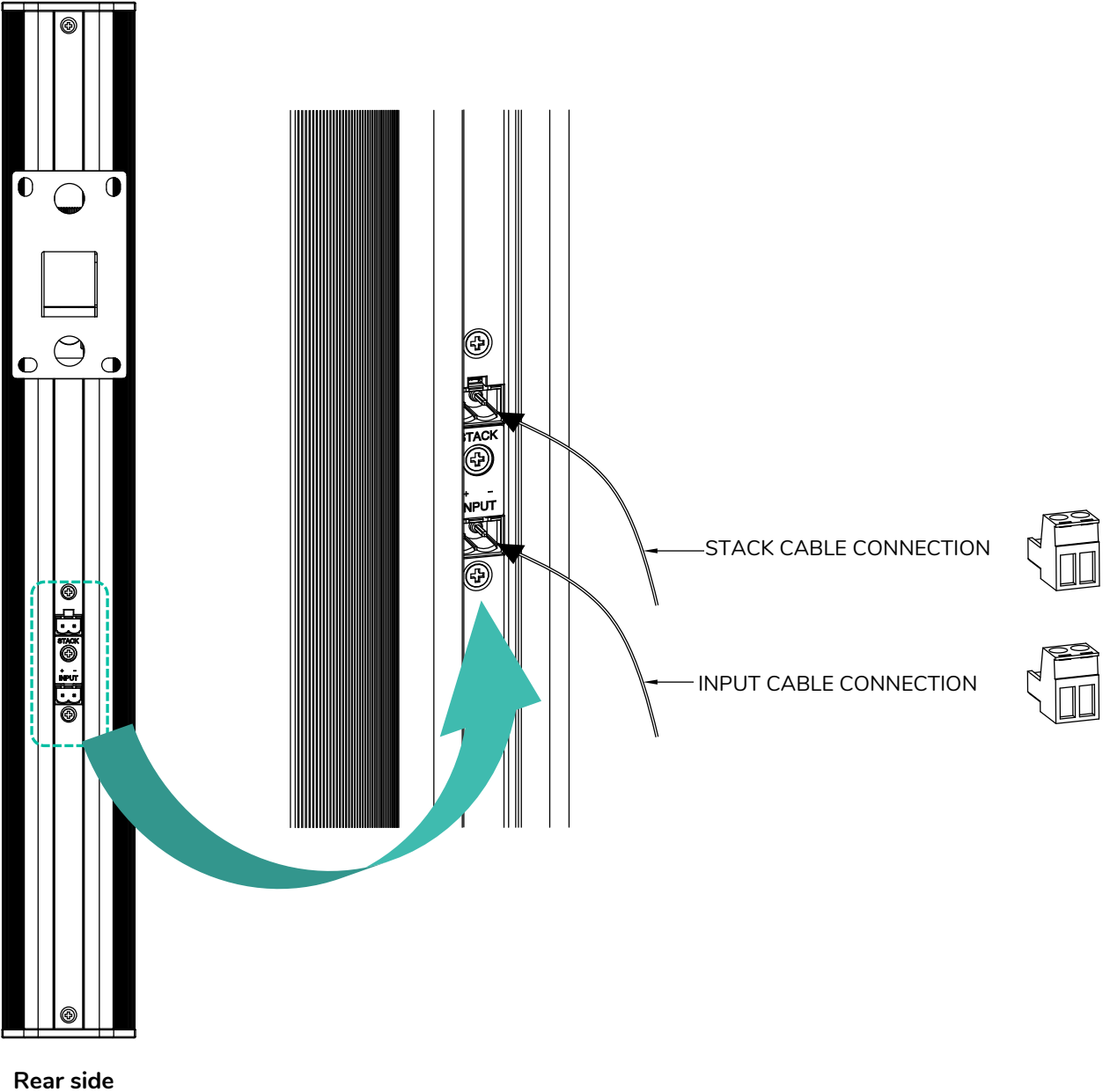
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6.2 Connections Diagram



7. EQ SETTINGS

8. RECOMMENDED AMPLIFIER

The output power of the **recommended amplifier** for MIA-81 is 80W RMS and for MIA-82 is 300W RMS.

9. POSITIONING & INSTALLATION

9.1 Positioning

Consider following general rules.

Place the speaker on a solid and firm surface. No obstacles should stand between the enclosures and the audience. The high frequencies are very directive compared to the low frequencies, so that any obstacle will impair their response. In case large audiences must be addressed, a better long distance sound propagation will be achieved if the enclosures are flown high enough.



Download all EASE files by clicking on the image:



9.2 Installation

MIA Series loudspeakers include a wall-mount bracket.

- **MIA-81** includes a **FLATY wall-mount bracket** that allows the column to be mounted against the wall.
- **MIA-82** includes the incredibly **versatile HANDY wall-mount** smart pan and tilt bracket.

Both brackets are **made out of stainless-steel** and **permits adjusting the height** at any point of the length of the column.



See detailed installation diagram on next page.



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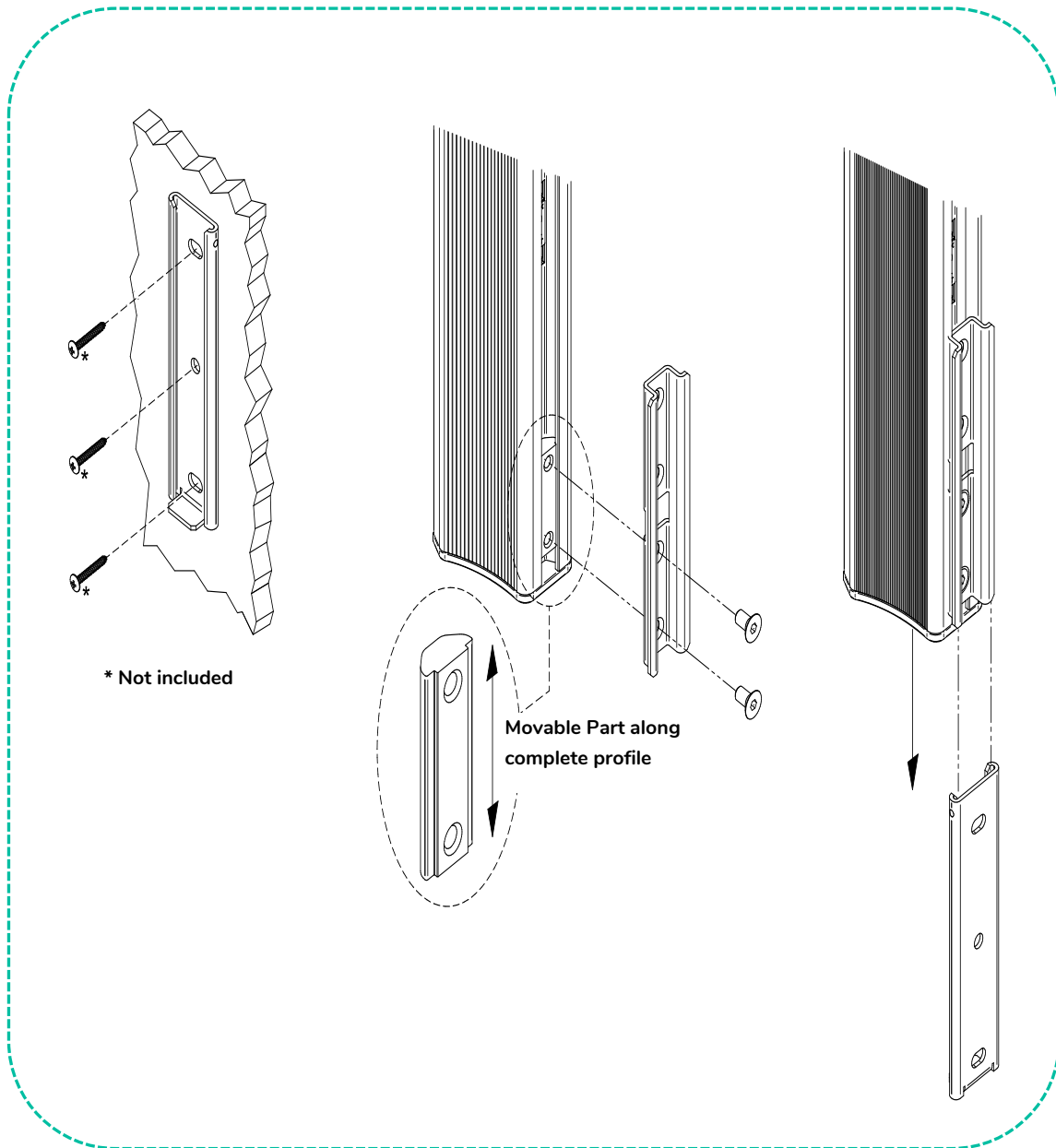
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9.2.1 MIA-81: FLATY Wall-Mount Bracket Installation Diagram



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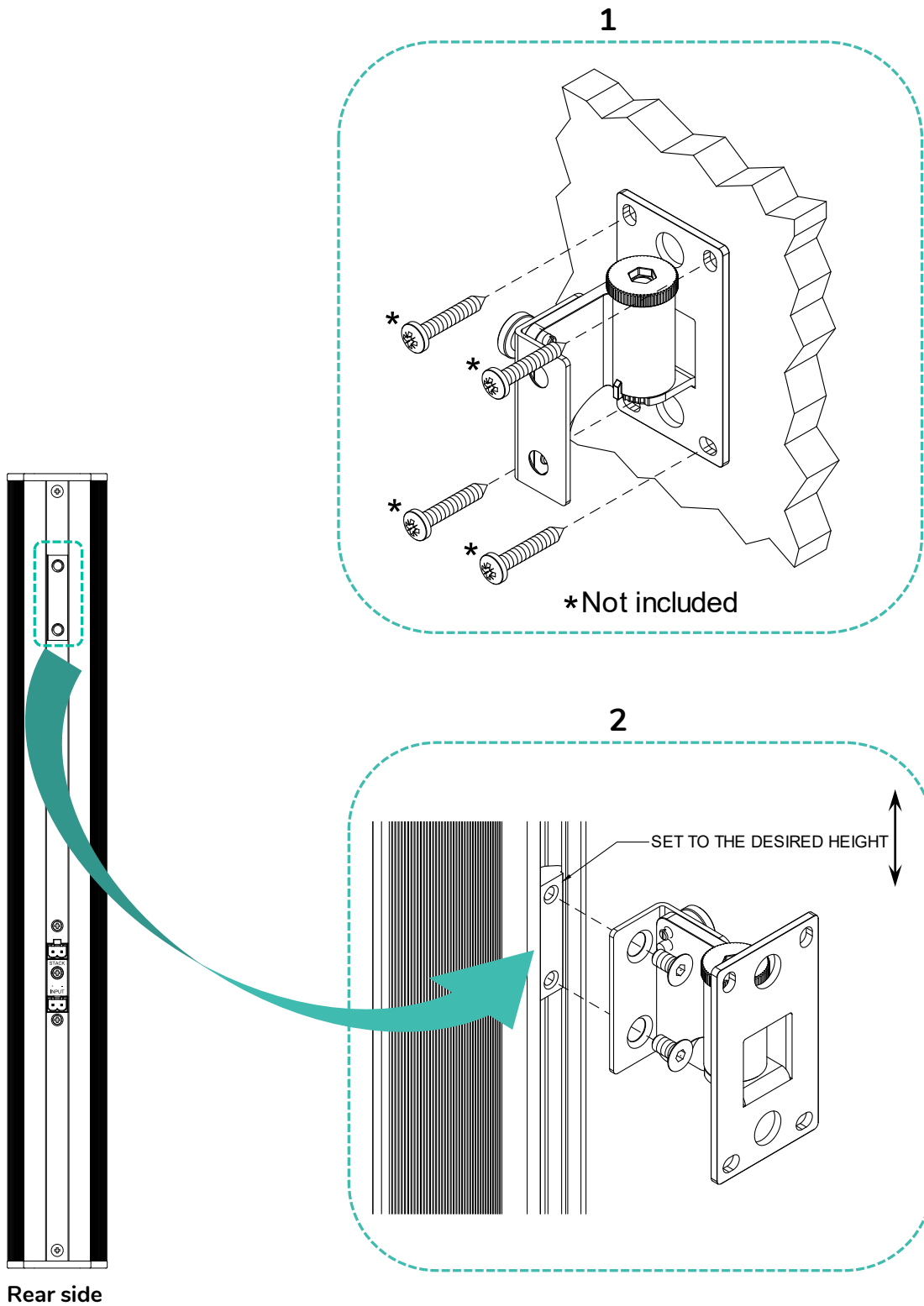
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9.2.2 MIA-82: HANDY Wall-Mount Bracket Installation Diagram



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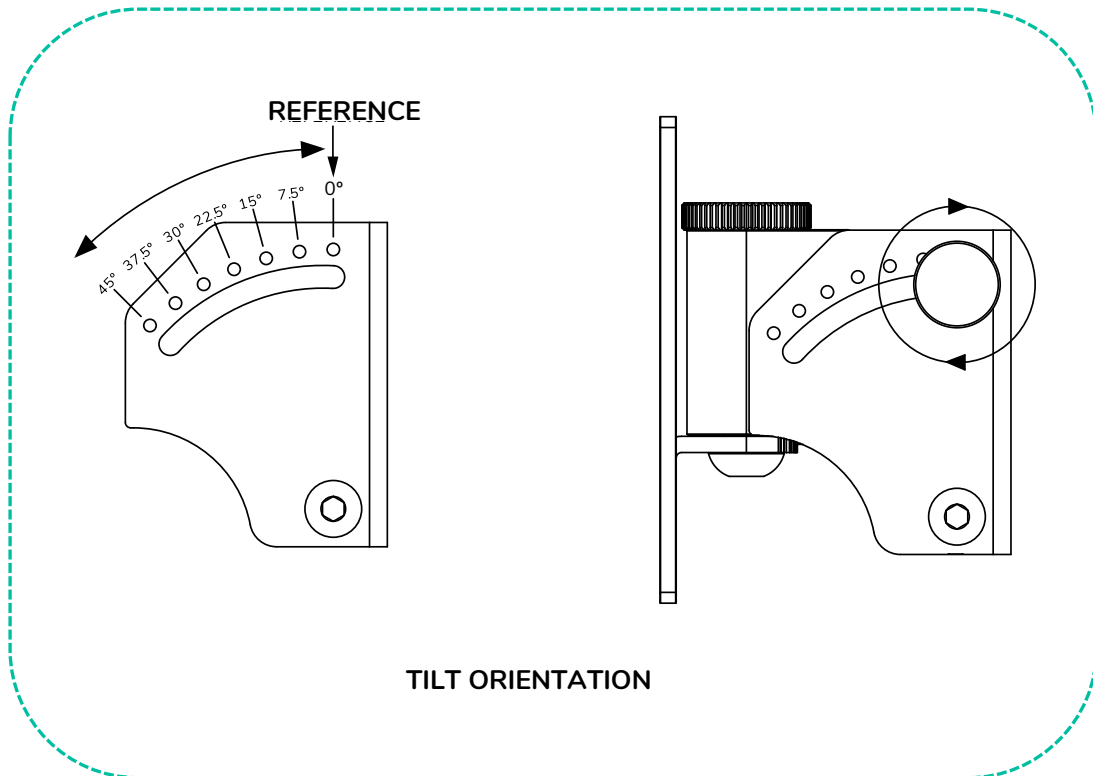
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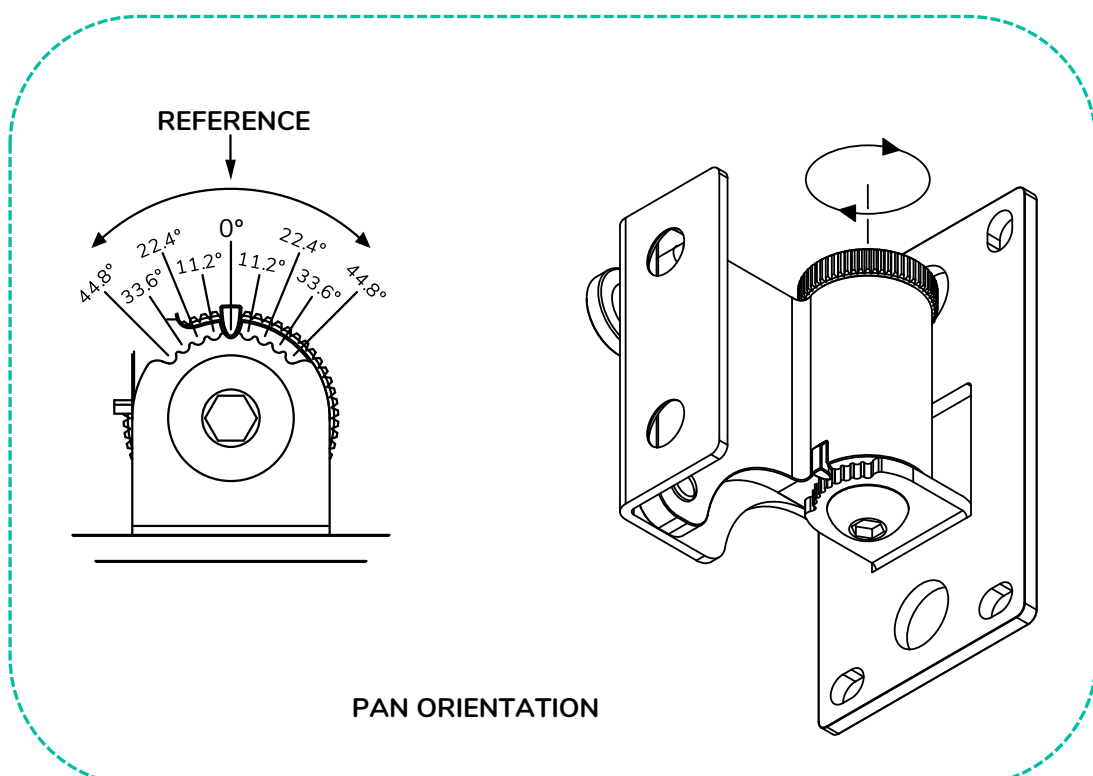
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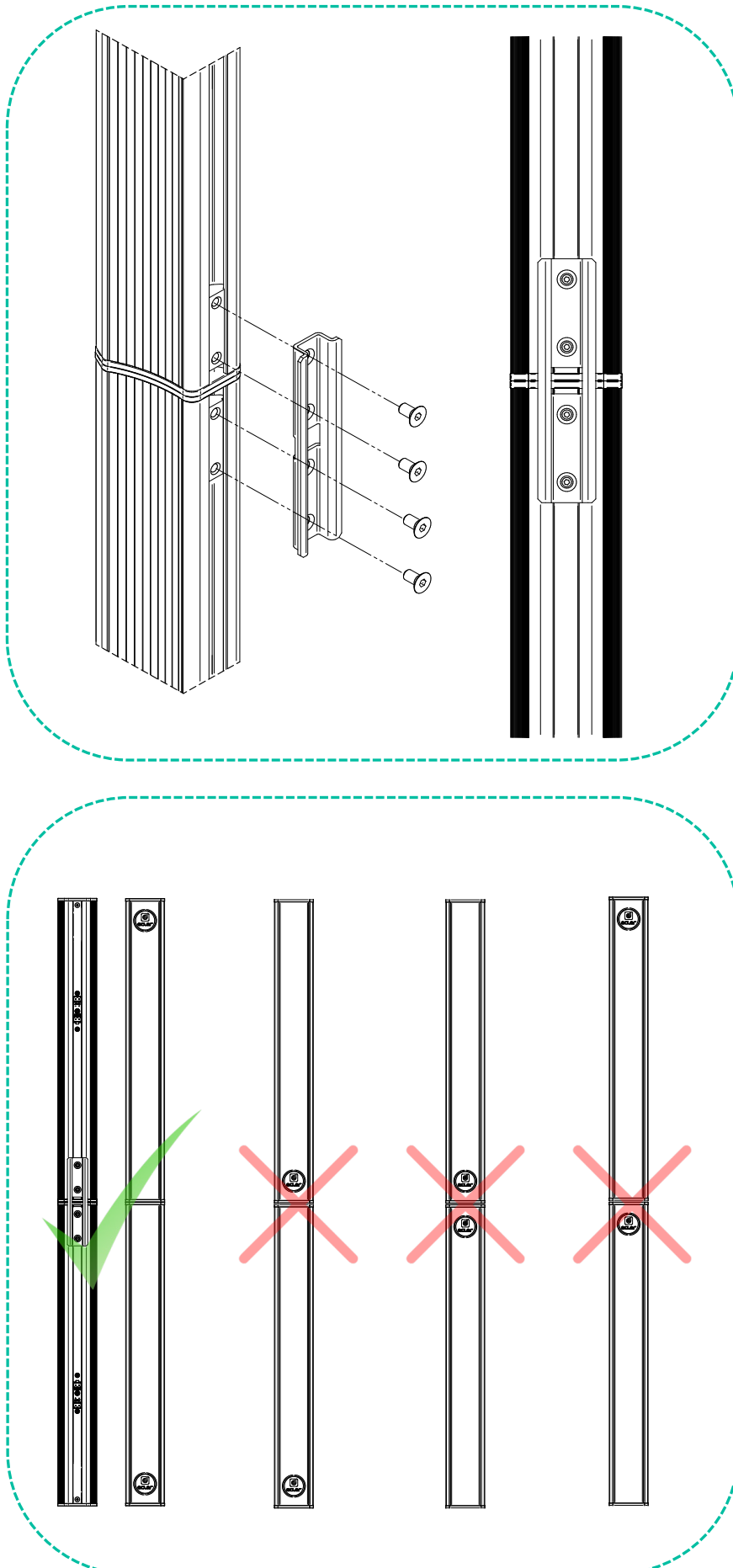
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9.2.3 Assembling 2 MIA units by using FLATY Wall-Mount bracket



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10.1 Technical Specifications

10.1.1 MIA-81

MIA-81

SYSTEM		
Effective Freq. Range ¹	175Hz-20kHz (-10dB)	
Coverage angle ²	235° x 58° (HxV)	
Power handling	40 W RMS / 160 W Peak	
Sensitivity ³	98 dB (1W/1m)	
Maximum SPL ⁴	114 dB continuous / 120 dB peak	
Recommended amplifier power	80W RMS	
TRANSDUCERS		
Ways	1-way full range	
Driver	8 x 1.5" Loudspeaker	
Nominal impedance	16Ω / 64Ω	
PHYSICAL		
Connection type	Double INPUT/LINK connector, Euroblock type	
Power type selector	Front selection by toggle switch	
Installation options	Surface / Wall mounting	
Environmental	IP44	
Enclosure material	Aluminium	
Grille material	Aluminium	
Grille fixing system	Side Insertion mount system	
Mounting system	Stainless Steel Wall Bracket	
Operating temperature	Min: 0°C ; 32°F Max: 35°C ; 95°F	
Operating humidity	<85% HR	
Storage temperature	Min: -10°C ; 14°F Max: 50°C ; 122°F	
Storage humidity	<90% HR	
Included accessories	FLATY bracket, 2x Euroblock connector	
Finished colour	White (RAL9003) or Black (RAL9005)	
Dimensions (WxHxD)	58 x 448 x 67 mm / 2.28 x 17.64 x 2.64 in.	
Weight	1.2 kg / 2.64 lb	
Pieces per box	1	
Shipping dimensions (WxHxD)	135 x 655 x 160 mm / 5.31 x 25.79 x 6.30 in.	
Shipping weight	1.9 kg / 4.19 lb	



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10.1.2 MIA-82

MIA-82

SYSTEM		
	Effective Freq. Range ¹	165Hz-20kHz (-10dB)
	Coverage angle ²	165° x 41° (HxV)
	Power handling	150 W RMS / 600 W Peak
	Sensitivity ³	105 dB (1W/1m)
	Maximum SPL ⁴	127 dB continuous / 133 dB peak
	Power options	100V: 160W (switched to 64 Ohm) 70V: 80W (switched to 64 Ohm)
	Recommended amplifier power	300W RMS
TRANSDUCERS		
	Ways	1-way full range
	Driver	8 x 2.5" Loudspeaker
	Nominal impedance	16Ω / 64Ω
PHYSICAL		
	Connection type	Double INPUT/LINK connector, Euroblock type
	Power type selector	Front selection by toggle switch
	Installation options	Surface / Wall mounting
	Environmental	IP44
	Enclosure material	Aluminium
	Grille material	Aluminium
	Grille fixing system	Side Insertion mount system
	Mounting system	Stainless Steel Wall Bracket
	Operating temperature	Min: 0°C ; 32°F Max: 35°C ; 95°F
	Operating humidity	<85% HR
	Storage temperature	Min: -10°C ; 14°F Max: 50°C ; 122°F
	Storage humidity	<90% HR
	Included accessories	HANDY wall-mount bracket, 2x Euroblock connector
	Finished colour	White (RAL9003) or Black (RAL9005)
	Dimensions (WxHxD)	83 x 648 x 87 mm / 3.27 x 25.51 x 3.43 in.
	Weight	2.65 kg / 5.84 lb
	Pieces per box	1
	Shipping dimensions (WxHxD)	135 x 920 x 160 mm / 5.31 x 36.22 x 6.30 in.
	Shipping weight	3.45 kg / 7.61 lb

¹ below the sound pressure level at specified sensitivity.

² 6dB below the sound pressure level than that at the direction of maximum level, Max. angle between 1 kHz and 4 kHz.

³ Measured on-axis, far field and referenced to 1 meter by inverse square law. Average from 100 Hz to 10 kHz.

⁴ Calculated from sensitivity and power handling specifications, exclusive of power compression.



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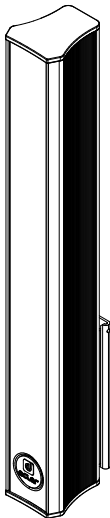
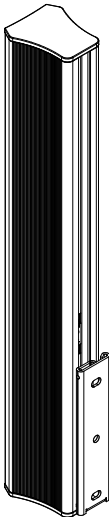
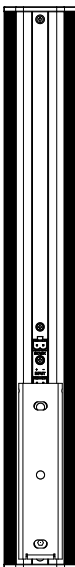
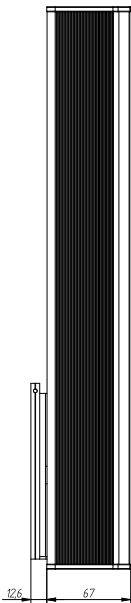
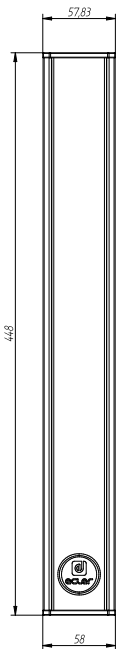
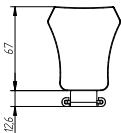
10.2 Mechanical Diagram

10.2.1 MIA-81

All measurements are in mm.



Ecler MIA-81 Mechanical Diagram



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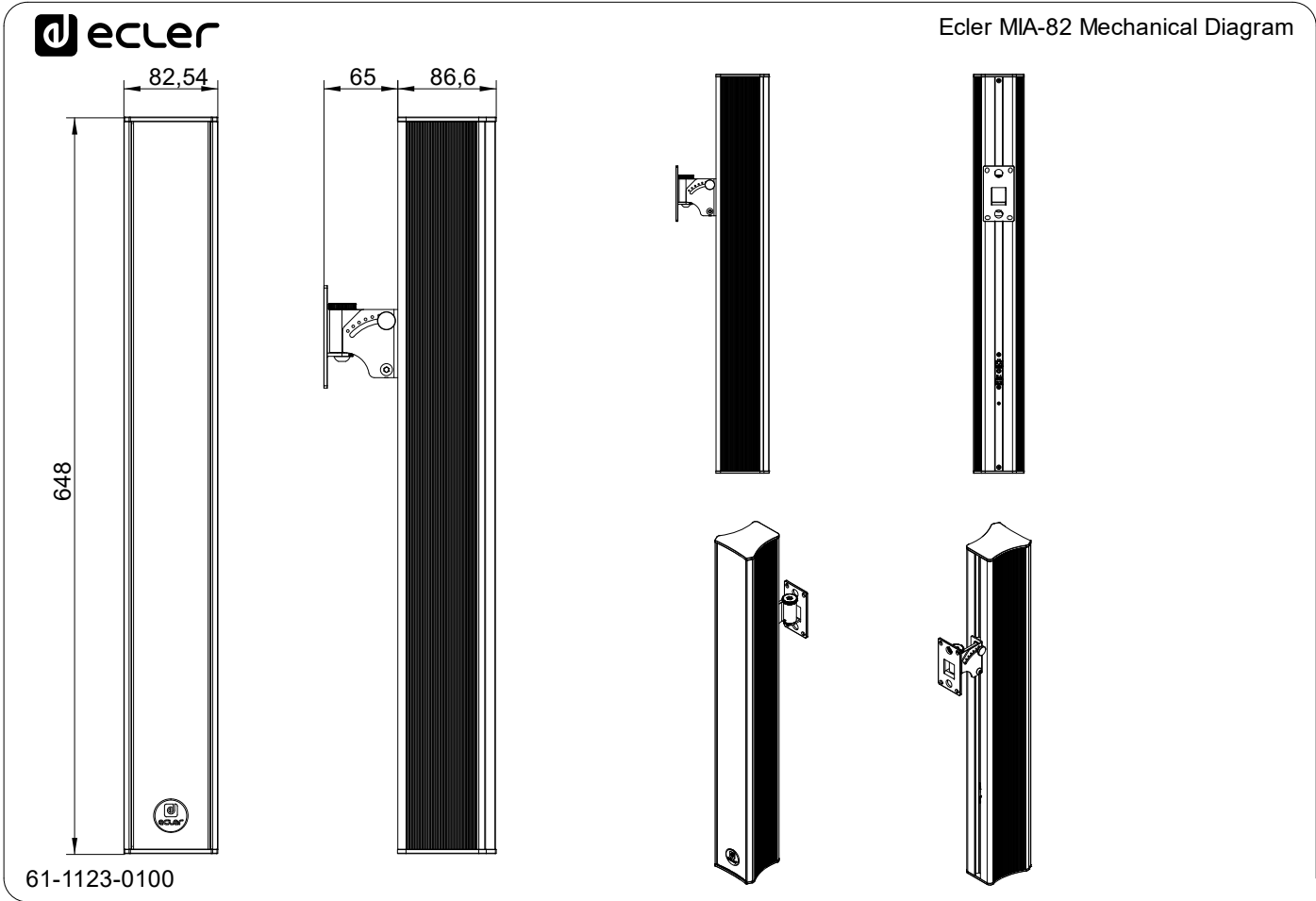
All the measurements are in mm

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10.2.2 MIA-82

All measurements are in mm.



All the measurements are in mm

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All product characteristics are subject to variation due to production tolerances.