



# BOSE MA12 Panray Modular Line Array Loudspeaker Installation Guide

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**BOSE MA12 Panray Modular Line Array Loudspeaker**



## Product Information

- The Panaray Modular Line Array Loudspeaker is a high-performance loudspeaker designed for permanent installation in indoor or outdoor venues.
- The product conforms to all applicable EU directive requirements and Electromagnetic Compatibility Regulations 2016.
- The complete declaration of conformity can be found at [www.Bose.com/compliance](http://www.Bose.com/compliance).
- The loudspeaker has threaded attachment points that require metric Grade 8.8 minimum fasteners. The fasteners should be tightened using torque not to exceed 50 inch-pounds (5.6 Newton-meters).
- Using graded hardware is recommended, and a 10:1 safety-weight ratio should be maintained when attaching the loudspeaker to a mounting surface.

## Product Usage Instructions

- Choose a position and mounting method consistent with local building codes and regulations. Ensure the mounting surface and the method of attaching the loudspeaker to the surface is structurally capable of supporting the weight of the loudspeaker
- For permanent installation, attach the loudspeaker to brackets or other mounting surfaces for long-term or seasonal use.
- Use only metric Grade 8.8 minimum fasteners and tighten them using torque not to exceed 50 inch-pounds (5.6 Newton meters).
- Do not attempt to alter the threaded attachment points or re-thread them to accommodate any other thread size or type, as this will render the installation unsafe and permanently damage the loudspeaker.
- If necessary, you may substitute 1/4-inch washers and lock washers for the 6 mm ones.
- To improve resistance to vibrations, it is recommended to use locking washers or adhesive, such as Loctite 242, that allows for disassembly.

## For Permanent Installation

This product conforms to all applicable EU directive requirements. The complete declaration of conformity can be found at: [www.Bose.com/compliance](http://www.Bose.com/compliance). This product conforms to all applicable Electromagnetic Compatibility Regulations 2016 and all other applicable UK regulations. The complete declaration of conformity can be found at: [www.Bose.com/compliance](http://www.Bose.com/compliance).

**WARNING:** Permanent installations involve the attachment of the loudspeakers to brackets or other mounting surfaces for long-term or seasonal use. Such mountings, frequently in overhead locations, involve the risk of personal injury if either the mounting system or the loudspeaker attachment fails. Bose® offers permanent mounting brackets for the safe use of these loudspeakers in such installations. However, we realize some installations may call for the use of other, custom-designed mounting solutions or non-Bose mounting products. While Bose Corporation cannot be held responsible for the proper design and use of non-Bose mounting systems, we offer the following guidelines for the permanent installation of any Bose® PANARAY® MA12/MA12EX Modular Line

**Array Loudspeaker:** Choose a position and mounting method consistent with local building codes and regulations. Ensure the mounting surface and the method of attaching the loudspeaker to the surface is structurally capable of supporting the weight of the loudspeaker. A 10:1 safety weight ratio is recommended.

- Obtain your mounting system from a reputable manufacturer, and make sure the system is specifically designed for the loudspeaker of choice and your intended use.
- Before using a custom-designed and fabricated mounting system, have a licensed professional engineer review the design and fabrication for structural integrity and safety in the intended application.
- Notice that all threaded attachment points on the rear of each loudspeaker cabinet have a metric M6 x 1 x 15 mm thread with 10 usable threads.
- Use a safety cable, separately attached to the cabinet at a point not in common with the load-bearing attachment points of the bracket to the loudspeaker.
- If you are unfamiliar with the proper design, use, and purpose of a safety cable, consult a licensed professional engineer, a rigging professional, or a theatrical lighting trades professional.

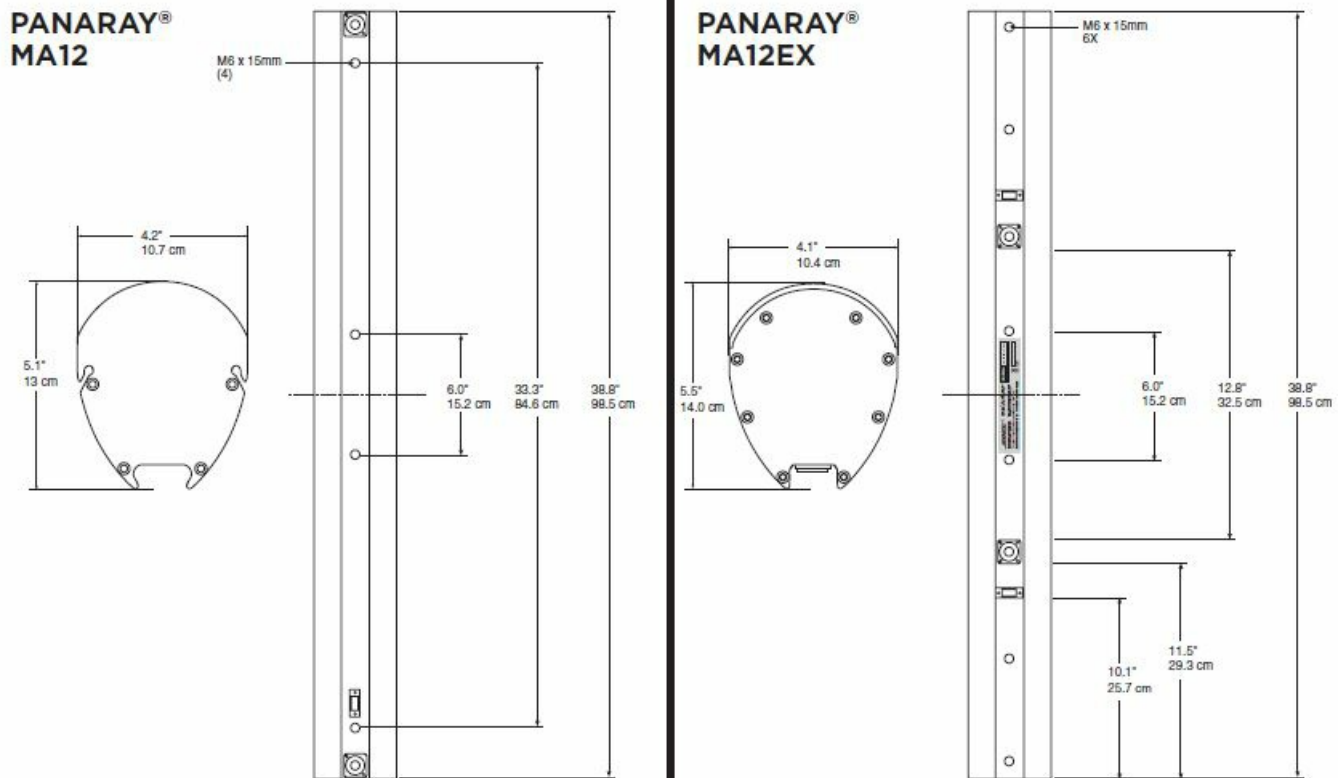
**CAUTION:** Use only graded hardware. Fasteners should be metric Grade 8.8 minimum and should be tightened using torque not to exceed 50 inch-pounds (5.6 Newton-meters). Overtightening the fastener could result in irreparable damage to the cabinet and an unsafe assembly. Lockwashers or a thread locking compound intended for hand disassembly (such as Loctite® 242) should be used for a vibration-resistant assembly.

**CAUTION:** The fastener should be long enough to engage no fewer than 8 and no more than 10 threads of the attachment point. A fastener should protrude by 8 to 10 mm, with 10 mm preferred (5/16 to 3/8 inch, with 3/8 inch preferred) beyond the assembled mounting parts to provide sufficient threaded attachment to the loudspeaker.

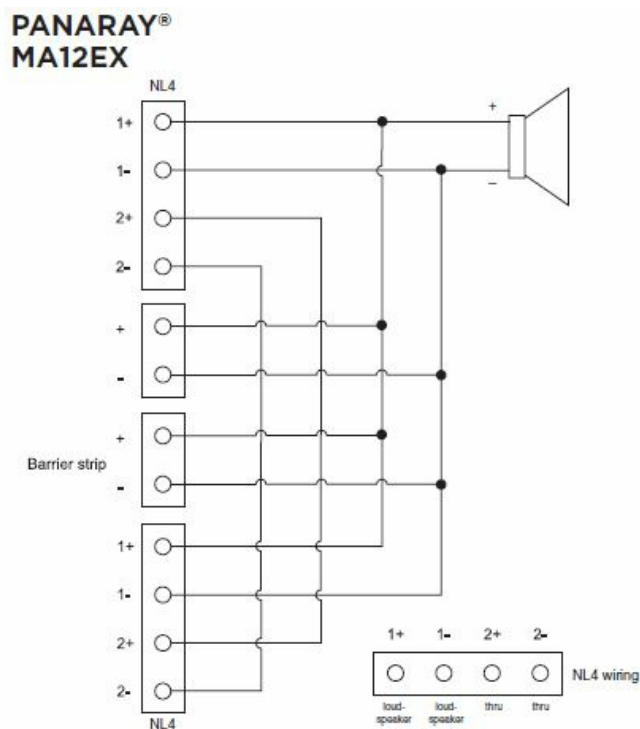
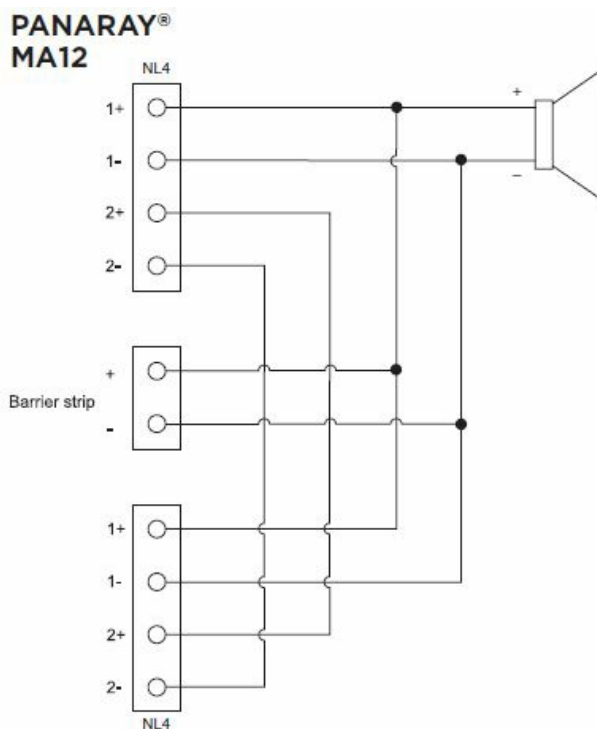
Using a fastener that is too long may result in irreparable damage to the cabinet and, when overtightened, can create a potentially unsafe assembly. Using a fastener that is too short provides inadequate holding power and may strip the mounting threads, resulting in an unsafe assembly. Confirm that at least 8 full threads are engaged in your assembly.

**CAUTION:** Do not attempt to alter the threaded attachment points. While SAE 1/4 – 20 UNC fasteners are very similar in appearance to the metric M6, they are not interchangeable. Do not attempt to re-thread the attachment points to accommodate any other thread size or type. Doing this will render the installation unsafe and will permanently damage the loudspeaker. You may substitute 1/4-inch washers and lock washers for the 6 mm ones. This product conforms to all applicable EU directive requirements. The complete declaration of conformity can be found at: [www.Bose.com/compliance](http://www.Bose.com/compliance).

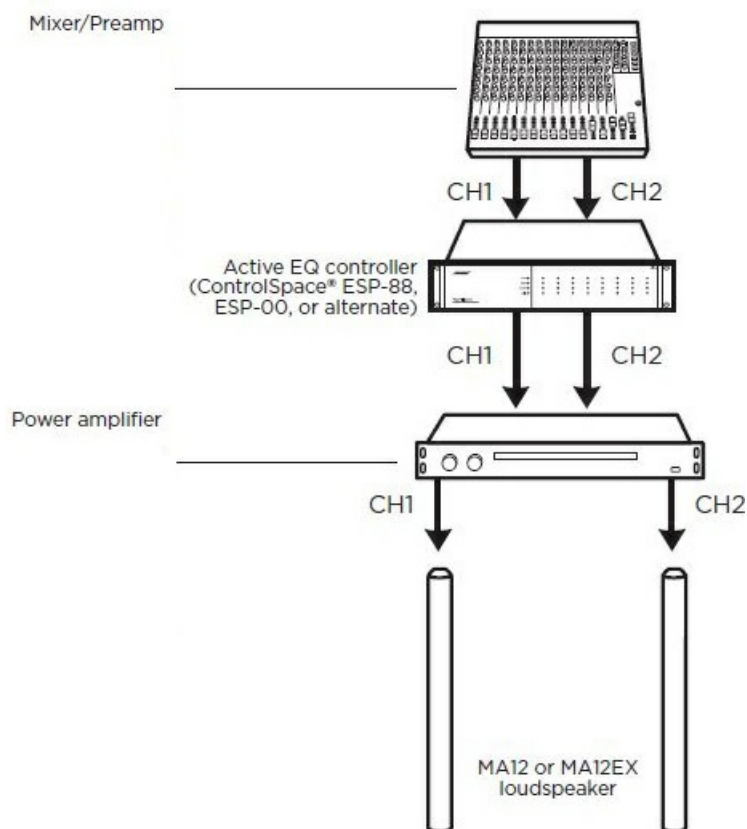
## Dimensions



## Wiring schematic



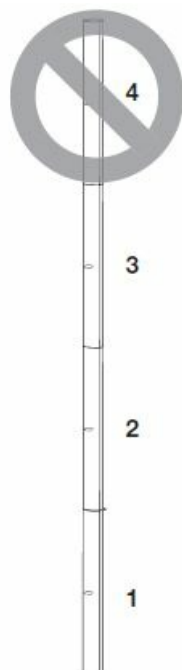
## System Setup



[pro.Bose.com](http://pro.Bose.com) For specs, EQ data, and detailed information.

## Setup

Stacks greater than three units will require custom rigging.




## Choices

	<b>MA12</b>	<b>MA12EX</b>
<b>Transformer</b>	CVT-MA12 White/Black	CVT-MA12EX White/Black
<b>Coupling bracket</b>	CB-MA12 White/Black	CB-MA12EX White/Black
<b>Pitch-only Bracket</b>	WB-MA12/MA12EX White/Black	
<b>Bi-pivot Bracket</b>	WMB-MA12/MA12EX White/Black	
<b>Pitch Lock Upper Bracket</b>	WMB2-MA12/MA12EX White/Black	
<b>ControlSpace® Engineered Sound Processor</b>	ESP-88 or ESP-00	

- **China Importer:** Bose Electronics (Shanghai) Company Limited, Level 6, Tower D, No. 2337 Gudai Rd. Minhang District, Shanghai 201100
- **UK Importer:** Bose Limited Bose House, Quayside Chatham Maritime, Chatham, Kent, ME4 4QZ, United Kingdom
- **EU Importer:** Bose Products B.V., Gorslaan 60, 1441 RG Purmerend, The Netherlands

- **Mexico Importer:** Bose de México, S. de R.L. de C.V. , Paseo de las Palmas 405-204, Lomas de Chapultepec, 11000 México, D.F. For importer &
- **service information:** +5255 (5202) 3545
- **Taiwan Importer:** Bose Taiwan Branch, 9F-A1, No. 10, Section 3, Minsheng East Road, Taipei City 104, Taiwan. Phone Number: +886-2-2514 7676
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- Framingham, MA 01701-9168 USA
- [PRO.BOSE.COM](https://pro.bose.com).
- AM317618 Rev. 01
- June 2022
- [pro.Bose.com](https://pro.bose.com).
- For use by trained installers only

## Documents / Resources

 <p><b>Panray</b> Modular Line Array Loudspeaker</p> <p>MA12, MA12EX, MA12 Panray Modular Line Array Loudspeaker, Panray Modular Line Array Loudspeaker, Modular Line Array Loudspeaker, Line Array Loudspeaker, Array Loudspeaker, Loudspeaker</p>	<p><a href="#">BOSE MA12 Panray Modular Line Array Loudspeaker</a> [pdf] Installation Guide</p> <p>MA12, MA12EX, MA12 Panray Modular Line Array Loudspeaker, Panray Modular Line Array Loudspeaker, Modular Line Array Loudspeaker, Line Array Loudspeaker, Array Loudspeaker, Loudspeaker</p>
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## References

-  [Bose Professional](#)
-  [Bose European Union Regulatory and Compliance Information](#)