

# CLUSTER SERIES

User Manual



Systems:

Cluster Q  
Cluster Q4  
Cluster Q8

# Contents



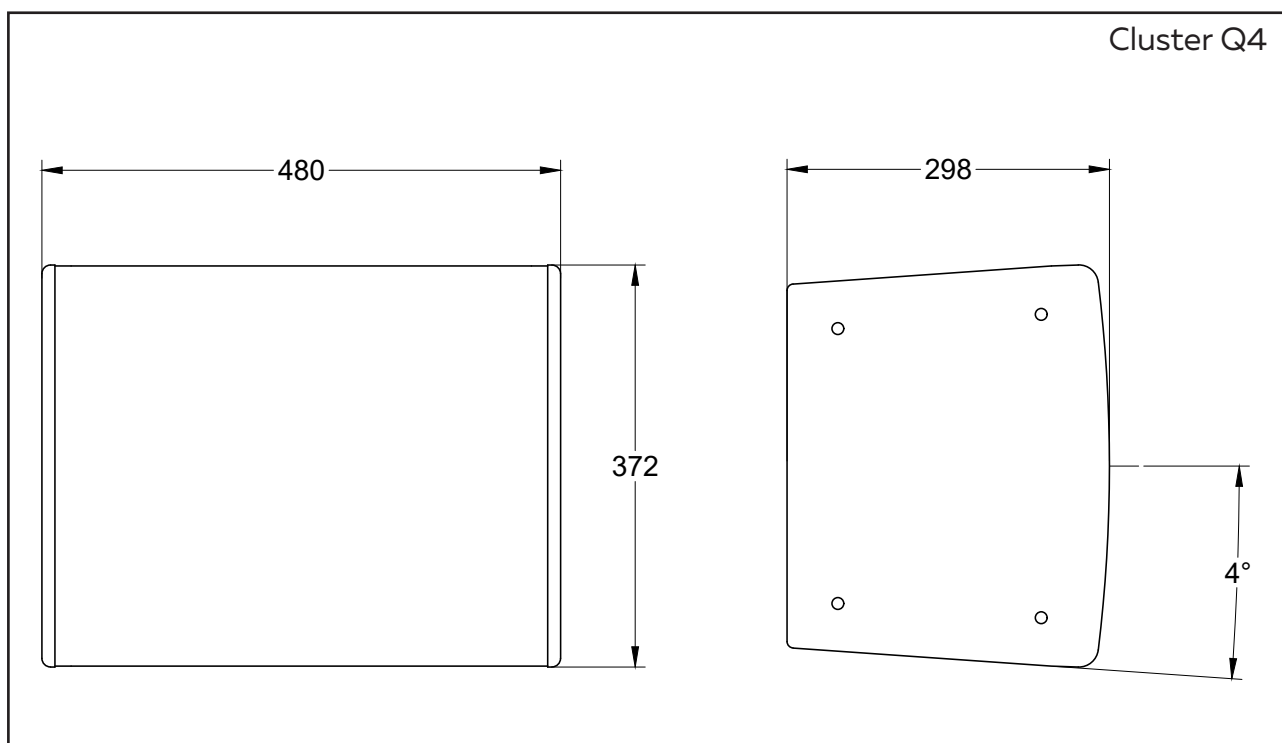
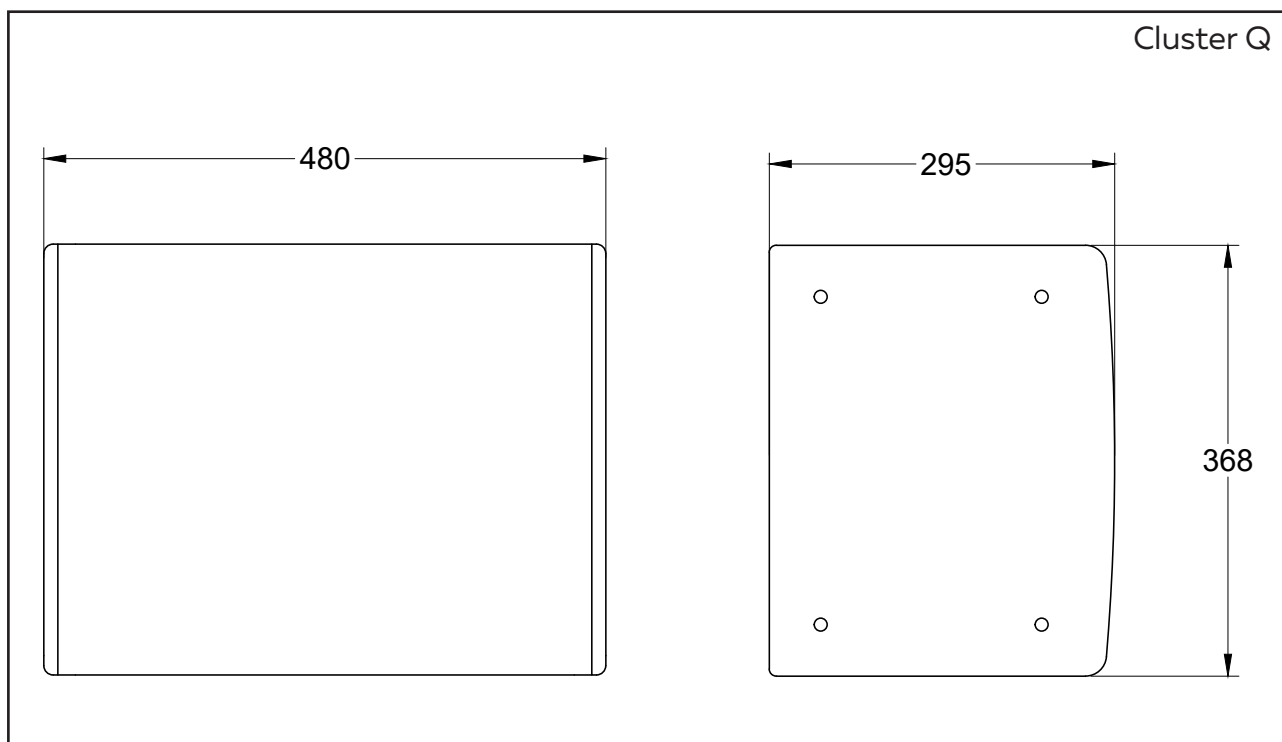
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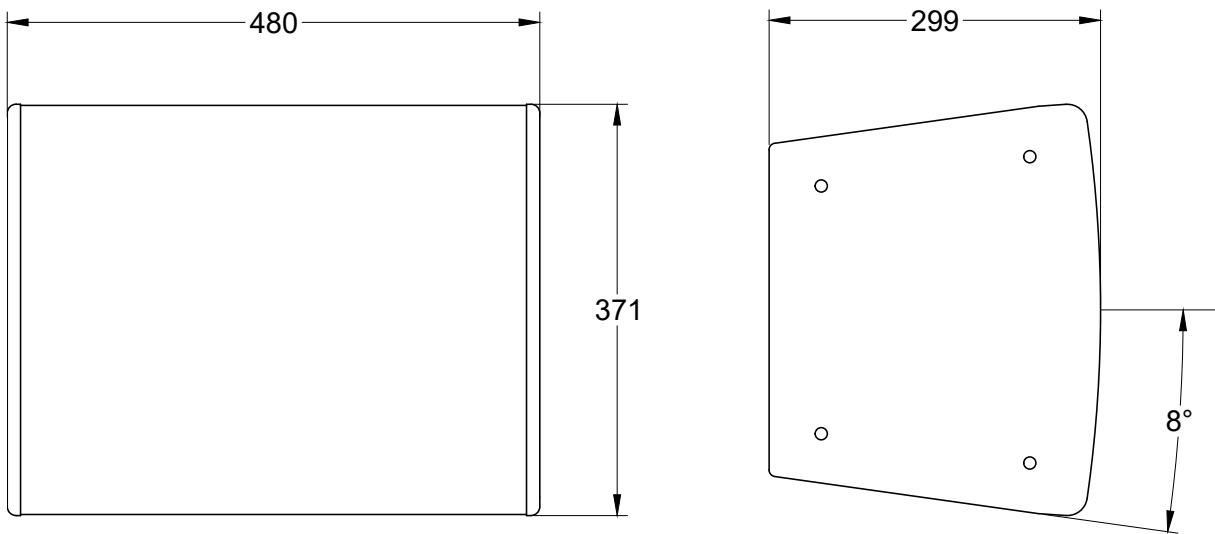
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# Panel A. Dimensions





## Cluster Q8



# 1. Safety instructions



## EXPLANATIONS OF GRAPHICAL SYMBOLS



The triangle with the lightning bolt is used to alert the user to the risk of electric shock.



The triangle with the exclamation point is used to alert the user to important operating or maintenance instructions.



The CE-mark indicates the compliance with the low voltage and electromagnetic compatibility.



Symbol for earth/ground connection.



Symbol indicating that the equipment is for indoor use only.



Symbol for conformity with Directive 2002/96/EC and Directive 2003/108/EC of the European Parliament on waste electrical and electronic equipment (WEEE).



**WARNING: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT ATTEMPT TO OPEN ANY PART OF THE UNIT. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.**



**TO COMPLETELY DISCONNECT THIS APPARATUS FROM THE AC MAINS, DISCONNECT THE POWER SUPPLY CORD PLUG FROM THE AC RECEPTACLE.**



**THE MAINS PLUG OF THE POWER SUPPLY CORD MUST REMAIN READILY ACCESSIBLE.**



**DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE, DRIPPING OR SPLASHING LIQUIDS. OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHOULD NOT BE PLACED ON THIS APPARATUS.**



**CONNECTIONS TO THE MAINS SHALL BE DONE ONLY BY AN ELECTROTECHNICALLY SKILLED PERSON ACCORDING TO THE NATIONAL REQUIREMENTS OF THE COUNTRIES WHERE THE UNIT IS SOLD.**

## IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions carefully.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this equipment 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 use near heat sources such as stoves, heat registers, radiators or other equipment (including amplifiers) that produces heat.
9. Do not use the unit near open fire sources.
10. Connect the unit only to the electric network with grounding. Use only electric plugs that provide grounding.
11. Protect the power cord from being walked on, pinched, or otherwise damaged.
12. Use only accessories specified by the manufacturer.
13. Unplug this unit during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the system 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 unit, the unit 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 SYSTEM UNIT TO RAIN OR MOISTURE.**

**THIS UNIT CONTAINS POTENTIALLY LETHAL VOLTAGES. TO PREVENT ELECTRIC SHOCK OR HAZARD, DO NOT REMOVE THE AMPLIFIER MODULE. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.**

**INSTALLING OF THIS UNIT MUST BE PERFORMED ONLY BY QUALIFIED TRAINED PERSONNEL FOLLOWING APPLICABLE SAFETY RULES. DO NOT ALLOW INSTALLATION OF THIS UNIT IF INSTALLATION HARDWARE IS BROKEN, BENT, PARTS ARE MISSING OR IS OTHERWISE DAMAGED.**

## 2. Regulatory information

### FCC COMPLIANCE NOTICE

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.

**CAUTION:** Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. 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. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the distance between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### EC DECLARATION OF CONFORMITY

Manufacturer:

MAG Audio LLC  
Merezhna 2  
Bila Tserkva, Kyiv region  
09112 Ukraine

We declare that under our sole responsibility the products:

Model Names: Cluster Q, Cluster Q4,  
Cluster Q8

Intended use: Professional Speaker System

Are in conformity with the provisions of the following EC Directives, including all amendments, and with the national legislation implementing these directives:

- 2006/95/EC Low Voltage Directive
- 2004/108/EC Electromagnetic Compatibility Directive
- 2002/95/CE RoHS Directive

The following harmonized standards are applied:

EN 55103-1:2009 /A1:2012  
EN 55014-1:2006 /A1:2009 /A2:2011  
EN 55022:2010 /AC:2011  
EN 61000-3-2:2006 /A1:2009 /A2: 2009  
EN 61000-3-3:2013  
EN 61000-3-11:2000  
EN 61000-3-12:2011  
EN 55103-2:2009 /IS:2012  
EN 61000-4-2:2009  
EN 61000-4-3:2006 /A1:2008 /IS1:2009 /A2:2010  
EN 61000-4-4:2012  
EN 61000-4-5:2006  
EN 61000-4-6:2014  
EN 61000-4-11:2004  
EN 60065:2002 /A1:2006 /A11:2008 /A2:2010 /A12:2011

Bila Tserkva,  
22 January 2019

Alexey Asanov  
CEO

For compliance questions: [info@mag-audio.com](mailto:info@mag-audio.com)



# 3. CLUSTER series



## 3.1 Introduction

Covering the demand for high-pressure systems for nightclubs, concert halls, and sport arenas, Cluster series introduces the power of arrayable speakers into the realm of fixed installation. Inheriting the best features of reliability, sound performance, and ease of control from touring and mobile sound, Cluster series is augmented with convenient mounting hardware solution for quick setups and perfect fit into the architectural designs.

Cluster Q, Q4 and Q8 systems is a unique installation line array system with integrated mounting capabilities, providing flexible tool for system engineer to introduce uniform coverage into each and any of sound projects. With convenient options for wiring and amplifier connection, Q, Q4 and Q8 can be used to accurately steer the sound field for even the most difficult acoustical conditions.

Cluster series are optionally available as waterproof, and can be used with installation subwoofers to deliver a complete package of in-house sound system for a sound-pressure demanding high-profile projects.

## 3.2 CLUSTER series speaker models

AIR series includes following speaker models:

Cluster Q part number 00-0004804

Cluster Q4 part number 00-0003576

Cluster Q8 part number 00-0003575



## 4. Specifications



System	Cluster Q Installation line array module	Cluster Q4 Installation line array module	Cluster Q8 Installation line array module
Frequency Response (-10dB)	100 - 19000 Hz	100 - 19000 Hz	100 - 19000 Hz
Max SPL <sup>1</sup>	142 dB	142 dB	142 dB
Sensitivity (1W/1m)	98 dB Low / 113 dB High	98 dB Low / 113 dB High	98 dB Low / 113 dB High
LF Driver	4x 6", 1,75" VC	4x 6", 1,75" VC	4x 6", 1,75" VC
HF Driver	2x 1", 1,75" VC	2x 1", 1,75" VC	2x 1", 1,75" VC
Impedance	8 Ohm Low / 16 Ohm High	8 Ohm Low / 16 Ohm High	8 Ohm Low / 16 Ohm High
Horizontal coverage	90°	90°	90°
Vertical splay angle	0°	4°	8°
Nominal power <sup>2</sup>	520 W Low / 100 W High	520 W Low / 100 W High	520 W Low / 100 W High
Connectors	Barrier strip	Barrier strip	Barrier strip
Dimensions (W×H×D), mm	480x368x286 mm	480x372x298 mm	480x371x299 mm
Net weight, kg	24 kg	24 kg	24 kg
Shipping weight, kg	26,5 kg	26,5 kg	26,5 kg
Mounting	Integrated flying hardware	Integrated flying hardware	Integrated flying hardware
Enclosure material	Plywood; wear-resistant paint	Plywood; wear-resistant paint	Plywood; wear-resistant paint
Grill	Steel grill, polymer protective net	Steel grill, polymer protective net	Steel grill, polymer protective net

<sup>1</sup> - peak value, calculated according to AES 2 - 2012

<sup>2</sup> - based on transducer power measured according to AES 2 - 2012

# 5. System operation

## 5.1. Rigging

Cluster installation array systems are equipped with integrated rigging system for versatile applications.

Rigging must be performed only by trained personnel following the established safety rules.

MAXIMUM WEIGHT RESTRICTIONS MUST BE FOLLOWED AT ALL TIMES!

MAKE SURE THE SUPPORT STRUCTURE IS CAPABLE OF HOLDING THE APPLIED WEIGHT WHILE SUSPENDING THE SYSTEM!

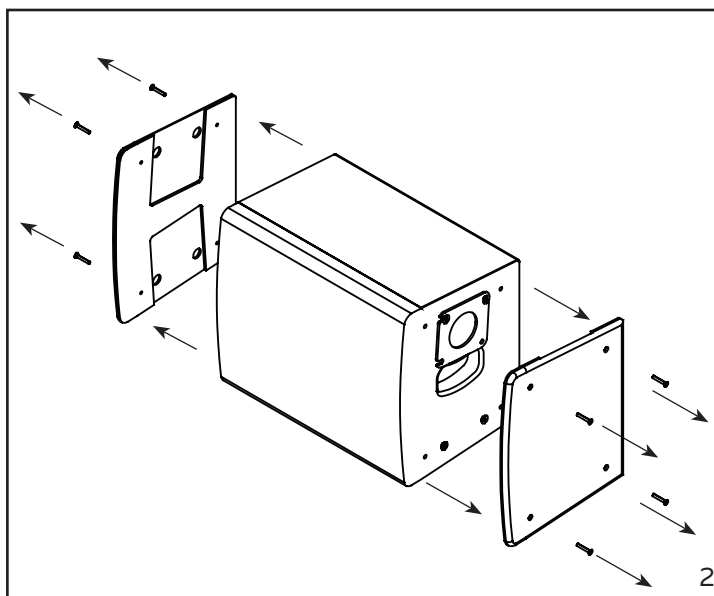
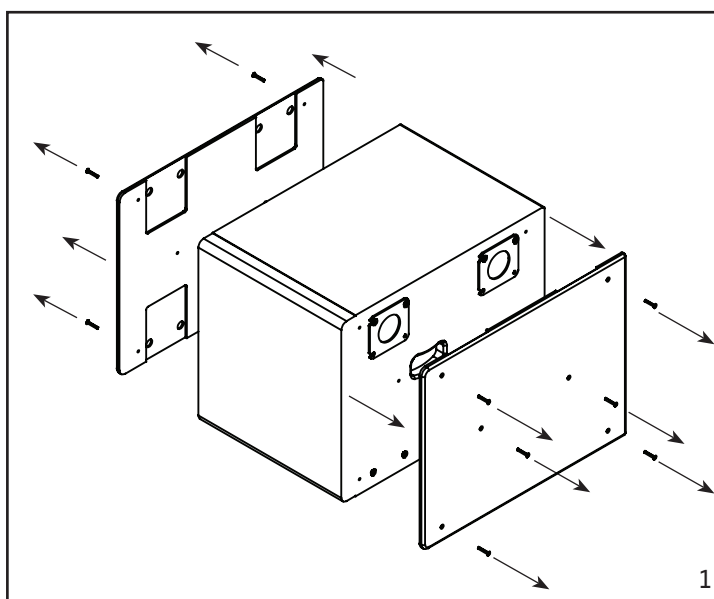
## 5.2. Assembling the Cluster array

Accessories:

Cluster Frame (part No. 00-0004317)

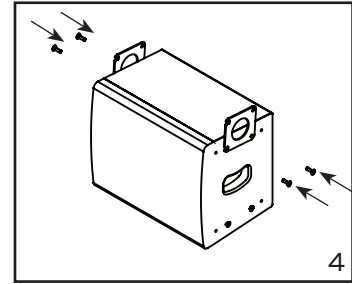
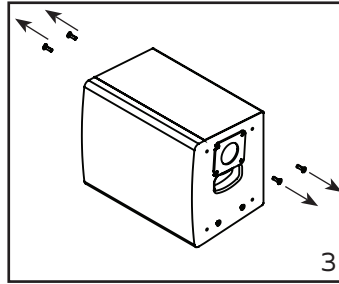
### 5.2.1. Removing the decorative side panels

Remove M6 hex bolts from sides of Cluster Q, Q4, Q8, and Sub C15, and remove decorative side panels to gain access to mounting hardware. (Pic 1, 2)



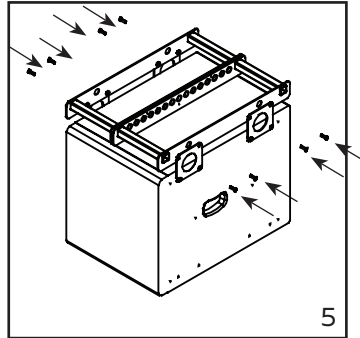
### 5.2.2 Placing Cluster Connectors into the working position

Cluster Connectors on Cluster Q, Q4, Q8 and Sub C15 are hidden by default for ease of transportation. Remove M8 Hex head bolt, and move Cluster Connectors into the working position. (Pic 3, 4)



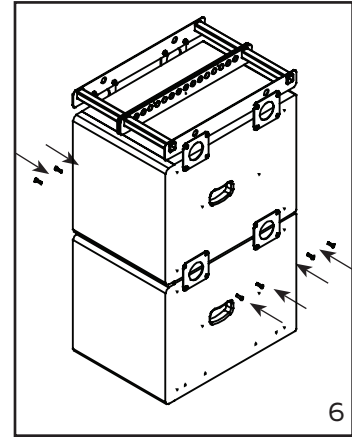
### 5.2.3. Attaching Sub C15 to Cluster Frame.

Use M8 Hex bolt to attach Sub C15 to Cluster Frame via Cluster Connectors. (Pic 5)



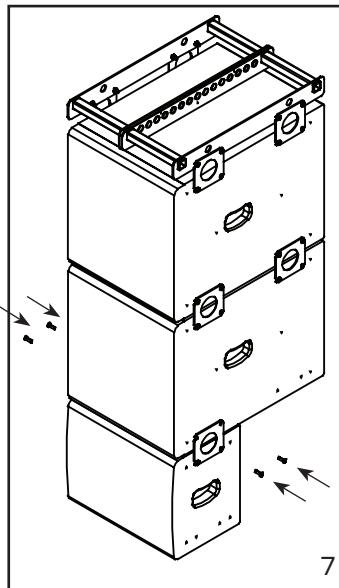
### 5.2.4. Attaching two Sub C15

If necessary, additional Sub C15s may be attached via Cluster Connectors. (Pic 6)



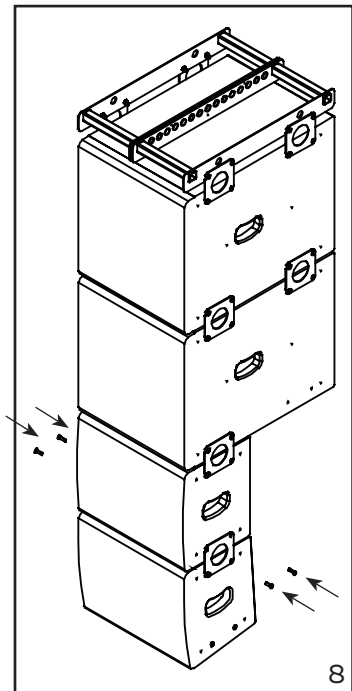
### 5.2.5. Attaching Cluster Q, Q4, Q8 to Sub C15.

Use M8 hex head bolts to attach Cluster Q, Q4 or Q8 module to Sub C15 via Cluster Connectors and M8 hex head bolts. (Pic 7)



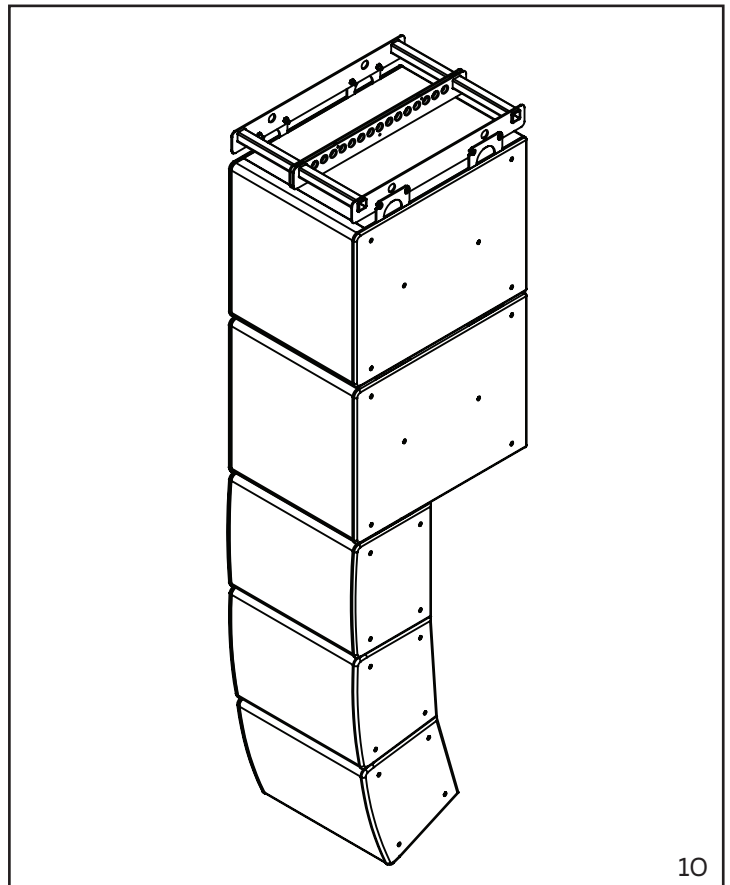
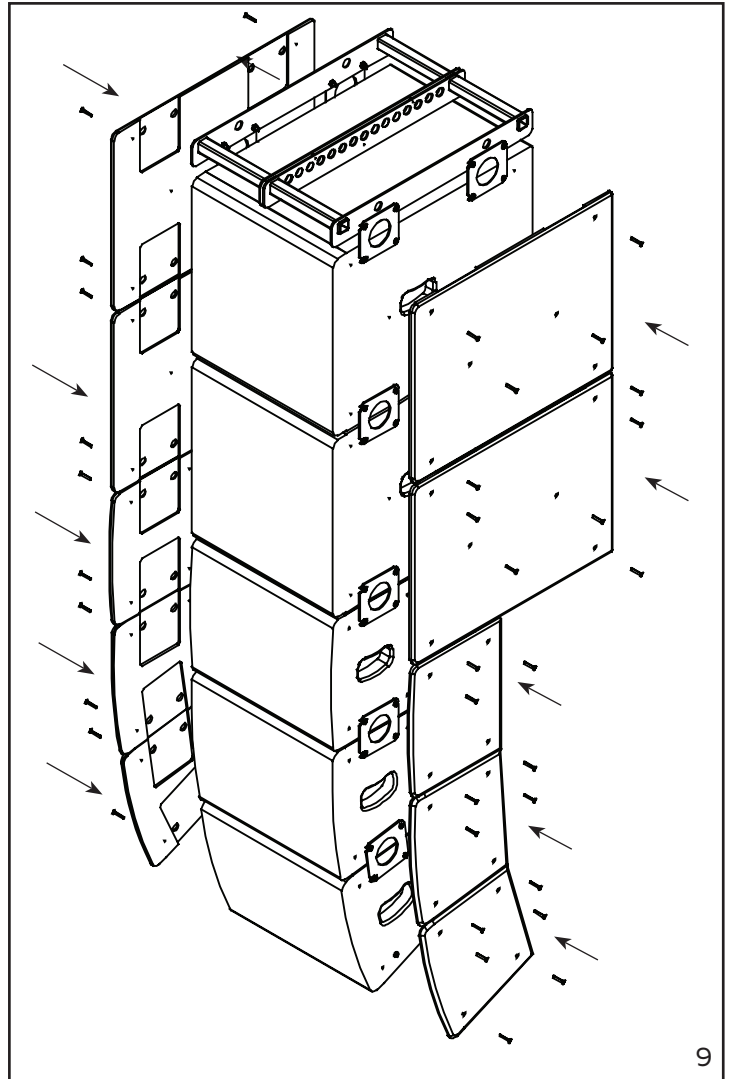
### 5.2.6. Attaching additional Cluster Q, Q4, Q8 modules.

If necessary, additional Cluster Q, Q4 or Q8 modules may be attached via Cluster Connectors and M8 hex head bolts. (Pic 8)



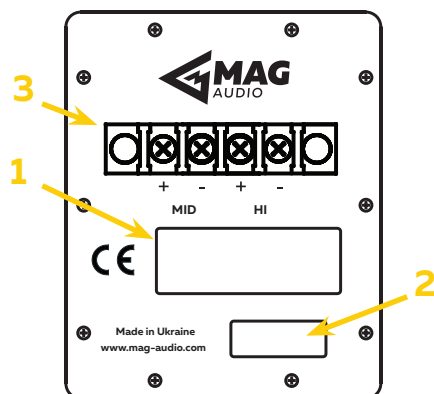
### 5.2.7 Attaching decorative side panels

After assembling the array, attach decorative side panels for all speakers using M6 hex head bolts. (Pic 9, 10)

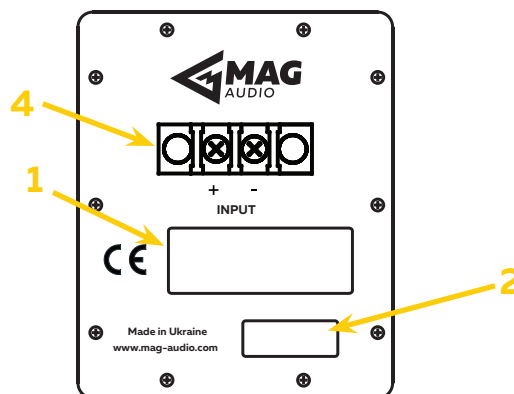


## 5.3. Passive speakers

Cluster Q, Q4, Q8 connection plate



Sub C15 connection plate



1. LABEL FIELD. Name of the system, along with its basic parameters is noted here.

2. SERIAL NUMBER FIELD. Sticker with the systems serial number is located here. NEVER REMOVE THE SERIAL FROM THE SYSTEM, AS IT IS AN IMMEDIATE WARRANTY VOID.

3. BI-AMP INPUTS. Two pair of screw terminals. Use this connectors to connect power amplifier.

4. INPUT. Pair of screw terminals. Use these to connect power amplifier.

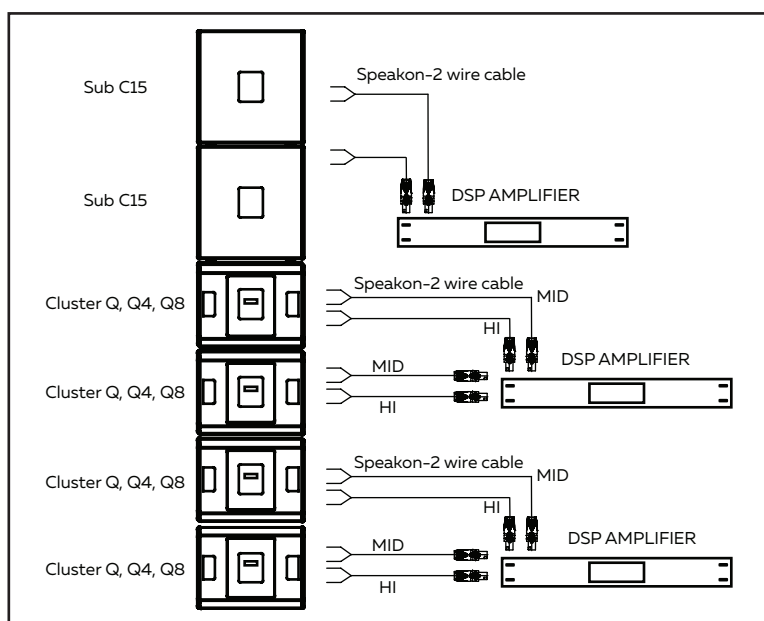
### 5.3.1. Passive connections

Use power amplifier with DSP or power amplifiers with external speaker processor with Cluster series systems.

MAKE SURE TO USE HIGH PASS FILTER FOR ALL NX SERIES SYSTEMS TO PREVENT EXCESSIVE CONE MOVEMENT, RESULTING IN TRANSDUCER DAMAGE OR FAST DETERIORATION.

Recommended HPF settings, suggested power amplifier ratings, and connection pins are found in table below:

Cluster series connection diagram



System	Amplifier power	Amplifier impedance	Connection pins	Recommended HPF
Cluster Q	520 - 1040 W	8 Ohm	MID + -	100 Hz or higher, 18 dB/oct min
Cluster Q	100 - 200 W	16 Ohm	HI + -	1300 Hz or higher, 18 dB/oct min
Cluster Q4	520 - 1040 W	8 Ohm	MID + -	100 Hz or higher, 18 dB/oct min
Cluster Q4	100 - 200 W	16 Ohm	HI + -	1300 Hz or higher, 18 dB/oct min
Cluster Q8	520 - 1040 W	8 Ohm	MID + -	100 Hz or higher, 18 dB/oct min
Cluster Q8	100 - 200 W	16 Ohm	HI + -	1300 Hz or higher, 18 dB/oct min

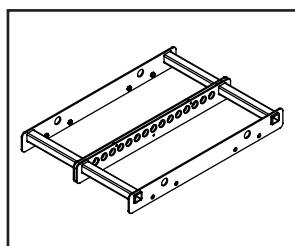
## 6. Standard contents

Please check complete complement of your Cluster series system upon receiving the package.  
Standard contents of Cluster series systems:

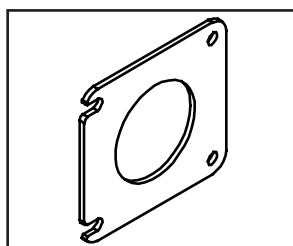
System	Supplied Cluster series system	Cluster Connector	M6 hex head bolt	M8 hex head bolt	Polyethylene bag	Carton Box
Cluster Q	Cluster Q passive speaker system	2 pcs	8 pcs	8 pcs	+	+
Cluster Q4	Cluster Q4 passive speaker system	2 pcs	8 pcs	8 pcs	+	+
Cluster Q8	Cluster Q8 passive speaker system	2 pcs	8 pcs	8 pcs	+	+
Sub C15-8	Sub C15 8 Ohm passive subwoofer	4 pcs	12 pcs	16 pcs	+	+

## 7. Accessories

Various accessories are available for Cluster series systems:



Cluster Frame  
mounting frame  
Part No. 00-0004819



Cluster Connector  
Part No. 00-0004821

# 8. Warranty and assistance

## 8.1. Product warranty

1. By this warranty MAG Audio grants that all equipment manufactured under the MAG Audio trademark is free from defects in material, components and factory workmanship under the normal use and maintenance for the time as specified below.

2. All warranty repairs and maintenance of MAG Audio products shall be carried out at MAG Audio production sites or by MAG Audio authorized personnel at no cost for the product purchaser.

3. Warranty period for cone transducers, high frequency drivers and crossovers, whether sold separately or as a component of a speaker system, is 60 months from the production date.

4. Warranty period for enclosures, grills, connection plates and accessories, whether sold separately or as a component of a speaker system, is 60 months from the production date.

5. Warranty period for built-in power amplifiers, whether sold separately or as a component of a speaker system, is 36 months from the production date.

6. Warranty repairs or maintenance will be performed only if a) MAG Audio product was purchased from an official MAG Audio distributor / dealer and b) warranty card with specified serial number, production date, realization date, vendor's signature and stamp is presented.

7. Warranty shall not cover the following: damage caused by accident, misuse or failure to follow exploitation rules stated in technical manual; repairs performed by non-authorized personnel; mechanical damage caused by shipping accidents and normal tear and wear.

8. Warranty shall not be applicable to any product with defaced, removed, or modified serial number.

9. If your MAG Audio product needs repairing or maintaining, contact your official MAG Audio distributor / dealer. Please do not ship your MAG Audio product without prior authorization.

## 8.2. Assistance

There are no user-serviceable parts in your device. Refer servicing to qualified technical personnel. In addition to in-house service department, MAG Audio supports the chain of distributors, authorized in repairs and service. If your device needs repairing, contact your MAG Audio dealer or distributor.

Occasionally, due to the nature of the failure, it might be necessary to return defective products to MAG Audio for repair. In this case, before shipping, please kindly contact your MAG Audio distributor or dealer, or MAG Audio directly. You will be provided with the RMA number code and detailed instructions regarding your particular case. Please do not send products without a prior authorization.

Thank you for your understanding, cooperation and choice of MAG Audio products.



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