

# TRAIL103

LOUDSPEAKERS

*Rail-mount loudspeaker*



## USER MANUAL

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## 1. IMPORTANT REMARK




WARNING: SHOCK HAZARD - DO NOT OPEN  
AVIS: RISQUE DE CHOC ÉLECTRIQUE - NE PAS OUVRIR



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.

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

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

**WARNING:** An apparatus with Class I construction shall be connected to a mains socket-outlet with a protective earthing connection.

## 2. IMPORTANT SAFETY INSTRUCTIONS

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 the plugs, convenience receptacles, and at the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Unplug the apparatus during lightning sorts or when unused for long periods of time.
13. Refer all servicing to qualified 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.
14. Disconnecting from mains: Switching off the POWER switch all the functions and light indicators of the amplifier will be stopped, but fully disconnecting the device from mains is done unplugging the power cord from the mains input socket. For this reason, it always shall remain readily operable.
15. Equipment is connected to a socket-outlet with earthing connection by means of a power cord.
16. The marking information is located at the bottom of apparatus.
17. The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on apparatus.

**NOTE:** *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 his own expense.*



**WARNING:** This product must not be discarded, under any circumstance, as unsorted urban waste. Take to the nearest electrical and electronic waste treatment centre.

**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.

### 3. IMPORTANT NOTE

Thank you for choosing our **Light-rail speaker TRAIL103!**

It is **VERY IMPORTANT** to carefully read this manual and to fully understand its contents before any connection in order to maximize your use and get the best performance from this equipment.

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

**All ECLER products are covered by warranty**, please refer to [www.ecler.com](http://www.ecler.com) or the warranty card included with this product for the period of validity and conditions.

### 4. INTRODUCTION

TRAIL103 is a 3" loudspeaker with lamp appearance. It has an installation system with three options: on a lighting rail, on a surface and by means of a truss or threaded bar adapter. It includes connections for low impedance (4 ohm) and for high impedance (15W and 30W). Available in white and black.

### 5. TECHNICAL FEATURES

- 3" Speaker
- Options for installation on lighting rail (GLOBAL Trac Pro), on surface, on threaded bar or truss
- Connection for low impedance: 4ohm
- Connection for high impedance: 15/30W connector
- Available in white (RAL 9003) and black (RAL 9005)

## 6. CABLE CONNECTIONS

The TRAIL103 supports high or low impedance operation. In this sense, its rear panel has 2 Euroblock connectors to select its working mode. The HI-Z INPUT connector allows the system to work in high impedance (100V line) and the LO-Z INPUT connector in low impedance. (\*)

The type of connection depends on the type of installation: on lighting rail, on surface or on truss. By default, the TRAIL103 is mounted for rail installation. In this case, its connection is by means of stripped cable clamp terminals. If you wish to install on a surface or truss, the audio cables must be cut for connection to a screw terminal block (for more information see chapter 7).



To make the connection in the speaker, it has a male Euroblock type connector, which is connected to the high or low impedance input (**HI-Z IN** or **LO-Z IN**), depending on the type of installation:

- **HI-Z IN:** the connector for the 100 V line will allow you to configure the maximum power that each unit will work with. Thus, in areas where a low sound level is desired, terminals 0 (black wire) and 15W (blue wire) will be used to connect the speaker; while in areas where a higher level is desired, terminals 0 (black wire) and 30W (red wire) will be used. If the speaker is used in 70V installations, the corresponding powers for the 100V position will be reduced to half those indicated on the connector terminals. In the case of installations at 50V, to a quarter.

- **LO-Z IN:** the connector for low impedance will allow you to configure the speakers to work in these conditions, with a maximum power of 30 W (black and red cables). If you choose this configuration, you must consider the limitations of the amplifier when connecting multiple speakers to its output, especially if the impedance of the set drops below  $4\Omega$ . It is also important that the connection cable between the amplifier outputs and the speakers be of good quality and as short as possible; this is especially important when the distances to be covered are large and the impedance of the speakers is low.

**(\*) Note:** The 100V/70V line speaker distribution system historically arose from the technical need to mix loudspeakers of different impedances and/or powers on the same line or amplifier channel, all without having to worry about the total impedance of the resulting set. Additionally, this solution allows to use, with minimum power losses, long cable runs and of a significantly lower section than the one usually used in the low impedance installation.

**WARNING!** If you accidentally connect the system to an amplifier with a low impedance output, through the high impedance terminals (HI-Z INPUT connector), it will not cause any damage to the speaker but it will perform far below its performance. Accidentally connecting the loudspeaker to a 100V low impedance network (LO-Z INPUT connector) will seriously damage it.

## 7. LOCATION AND MOUNTING

TRAIL103 offers different mounting systems. In the packaging you will find all the necessary accessories for the different options: installation on lighting rail, on surface (wall or ceiling) and on threaded bar or truss.

The following general rules shall be observed:

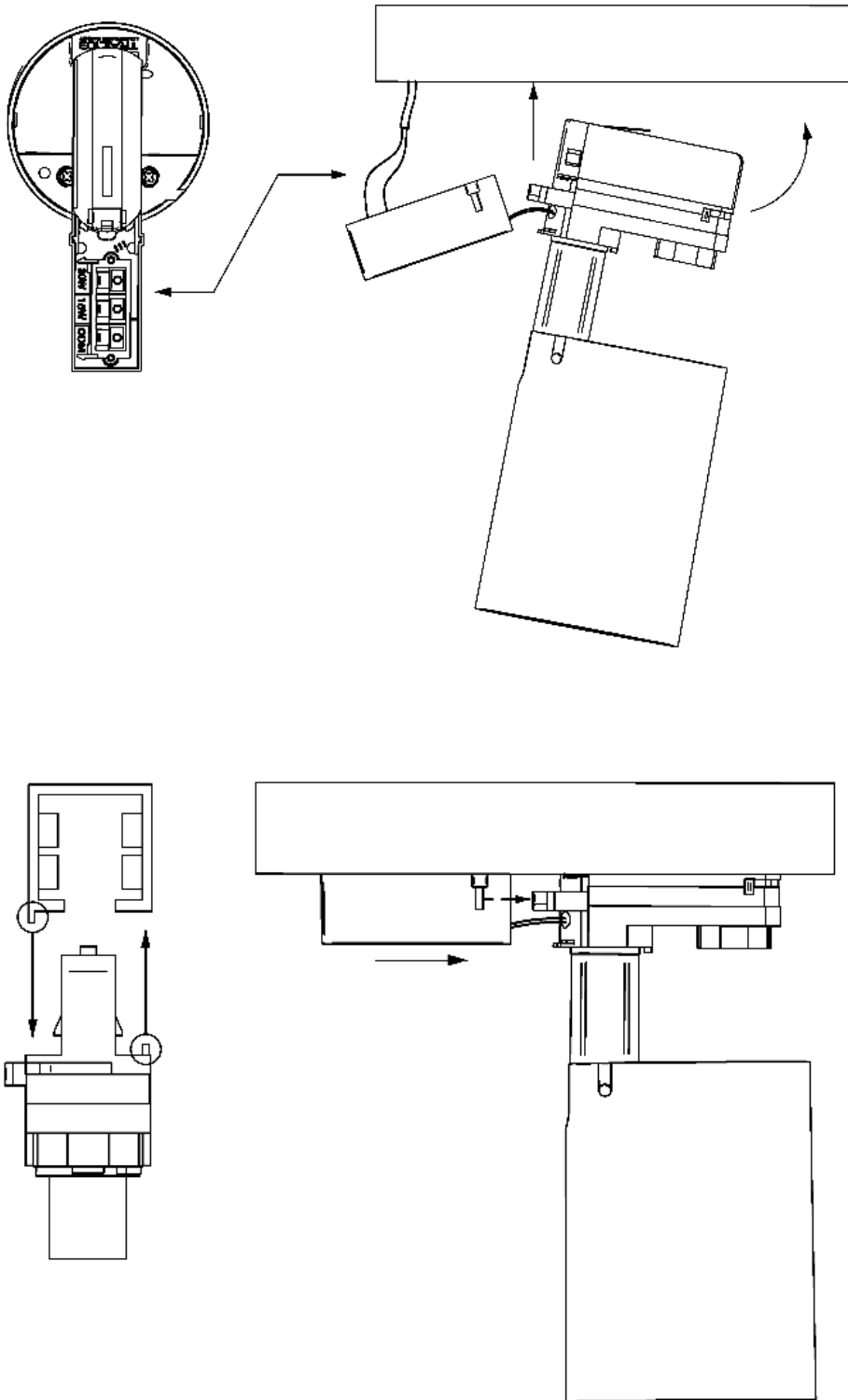
- Always install the unit on solid and firm surfaces, in the case of surface installation (ceiling / wall).
- Lighting rail installation: TRAIL103 is compatible with 4 wire / 3 circuit lighting rail systems.
- For good sound reproduction there should be no obstacle between the speakers and the audience.
- Adapt the sound pressure levels to the needs of reproduction. Despite its small size, TRAIL103 has a much higher performance than domestic speakers.

### 7.1. Lighting rail installation procedure (GLOBAL Trac Pro)

1. Connect the male Euroblock connector to the desired input, depending on whether the installation is high (HI-Z INPUT) or low impedance (LO-Z INPUT)
2. Place the back cover
3. Make the speaker connection as follows:
  - High impedance: via the red (30W) or blue (15W) terminals and the black (COM) terminal
  - Low impedance: via red (+) and black (-) terminals

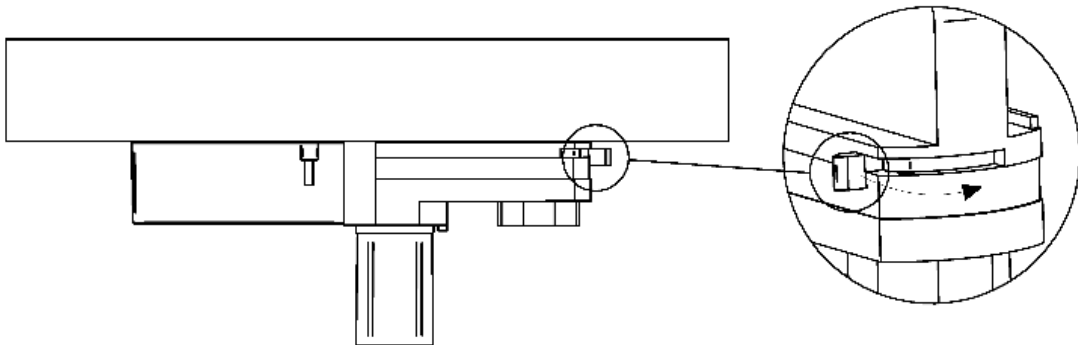


4. Place the speaker on the lighting rail as shown in the pictures



Connection to a rail GLOBAL Trac Pro (three-wire lighting anchorage system)

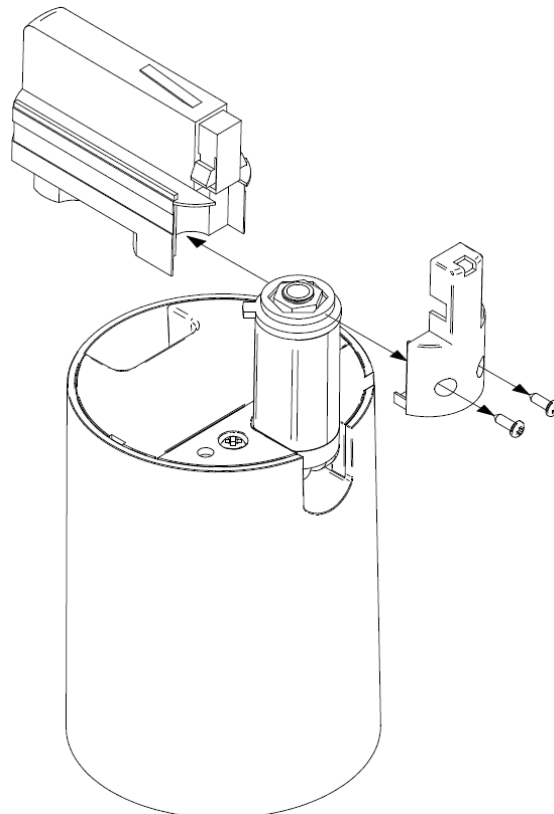
5. Make sure that the wheel of the adapter is in the OFF position. Turn the safety lock to secure the speaker to the light rail. Turn the wheel to a position other than OFF and the safety catch will be locked



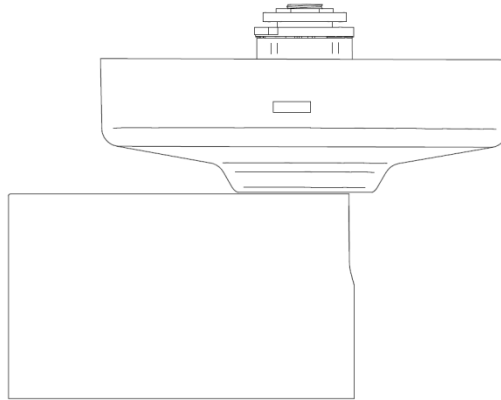
6. Align the speaker to the desired position on the vertical and horizontal axes
7. If the TRAIL103 is to be removed from the rail, the box with the clamp terminals must be removed first.

#### 7.2. Surface installation procedure:

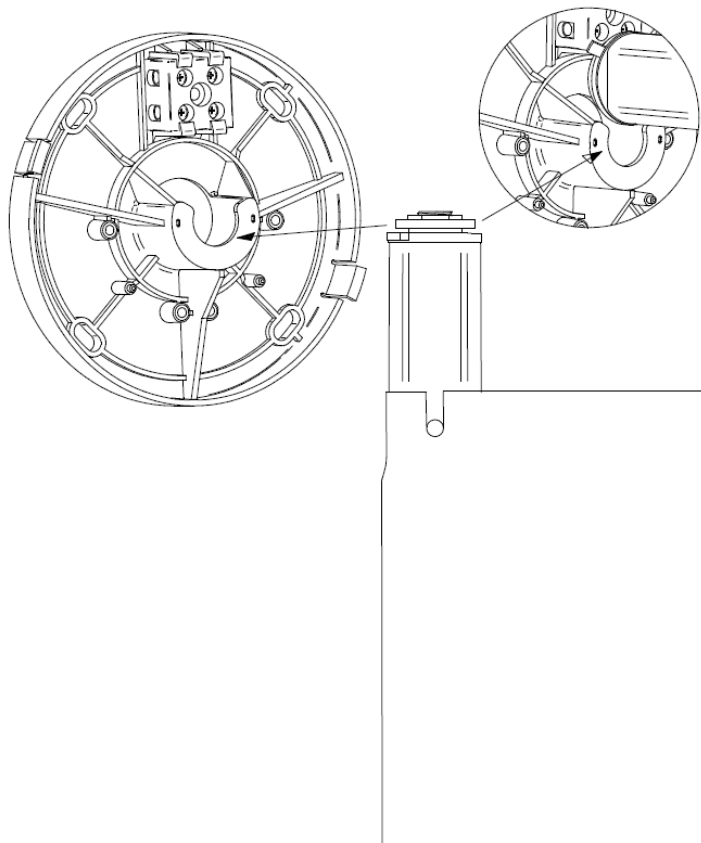
1. Remove the box with the terminals, and cut the three audio cables (red, blue and black) from the part closest to the clip terminals
2. Remove the light rail mounting accessory. To do this, remove the fixing screws as shown in the picture



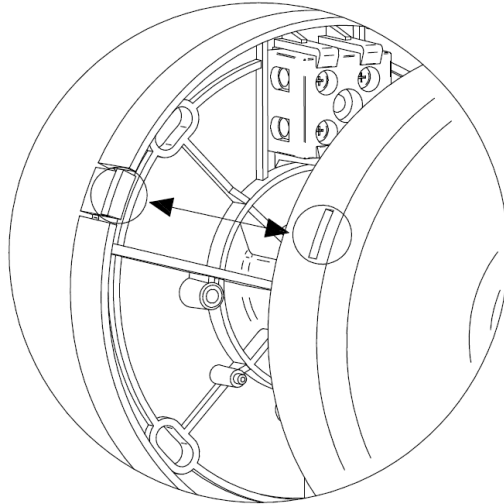
3. Pass the surface accessory cover over the speaker arm before making connections



4. Fix the base of the accessory to the desired surface. Make sure the surface is solid and firm. There are 4 holes for this purpose. It is recommended to use  $\varnothing 4$ mm screws (not included)
5. Connect the audio cables from the amplifier stage to the screwable rail of the base
6. Connect the wires from the speaker to the screwable rail, observing the colour code for high and low impedance explained in point 3 of the instructions for installation on the lighting rail
7. Insert the speaker arm anchor into the previously installed base according to the following picture



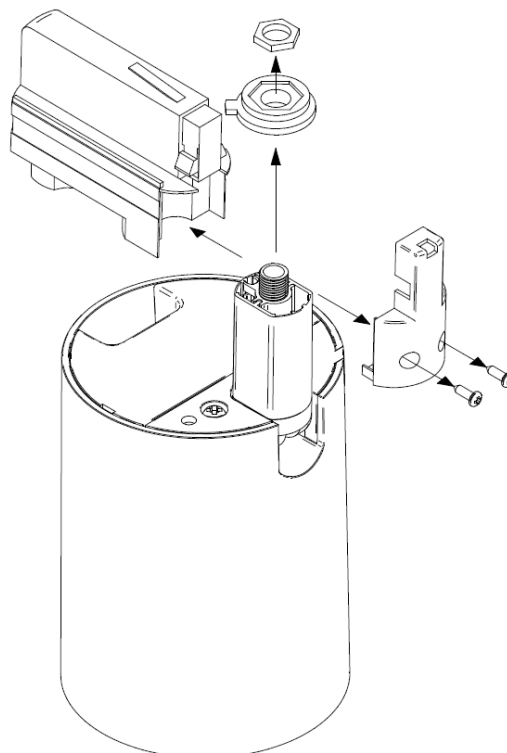
8. Attach the base cover. To do this, press the cover against the base so that the slot and tabs are aligned. You will hear a click when it is fixed



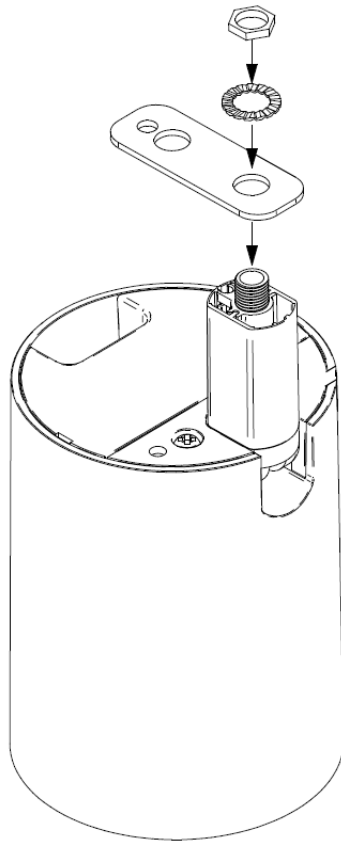
9. Align the speaker to the desired position on the vertical and horizontal axes

### 7.3. Truss or threaded bar installation procedure

1. Remove the box with the terminals, and cut the three audio cables (red, blue and black) from the part closest to the clip terminals
2. Remove the light rail mounting accessory. To do this, remove the fixing screws as shown in the picture. Also remove the washer and the plastic piece on the speaker arm



3. Fix the accessory for mounting on threaded bar or truss as shown in the following picture



4. Make the connections, taking into account the colour coding for high and low impedance explained in point 3 of the instructions for installation on the lighting rail. If desired, use the screwable rail on the base of the surface mount. Attach the speaker to the threaded bar or truss and orient the speaker to the desired position along the vertical and horizontal axes

## 8. TECHNICAL SPECIFICATIONS

### TRAIL103

System	
Effective frequency range <sup>1</sup>	115 Hz-20 kHz
Coverage angle <sup>2</sup>	180°x180° (HxV)
Power handling	15 W RMS / 60 W Peak
Sensitivity <sup>3</sup>	83 dB (1W/1m)
Maximum SPL <sup>4</sup>	95 dB continuous / 101 dB peak
Power options	Lo-Z: 4Ω; Hi-Z: 15/30 W @ 100V
Recommended amplifier power	30 W RMS
Transducers	
Ways	1
Driver	3" woofer
Nominal impedance	4Ω
Physical	
Connection type	Clamp terminals + Euroblock terminals
Installation options	Ceiling light rails, surface mount, truss mount
Mounting system	Cabinet
Rail fixing system	4 wire 3 circuit track system
Compatible rail systems	Global Track Pro or compatibles
Support arm	Swivel (pan and tilt)
Included accessories	Mounting accessories
Finished colour	White (RAL 9003) or black (RAL 9005)
Dimensions (ØxD) without arm	96x110mm / 3.78"x4.33"
Weight	1.0 kg / 2.2 lb

<sup>1</sup>10dB below the sound pressure level at specified sensitivity

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

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

<sup>4</sup>Calculated from sensitivity and power handling specifications, exclusive of power compression

## 9. PACKAGE CONTENTS

- TRAIL103
- Lighting rail mount accessory + speaker box with clamp-on connectors (installed on speaker by default)
- Surface mount accessory (2 pieces: base + plastic cover)
- Accessory for mounting on threaded rod or truss (2 pieces: aluminum plate + toothed washer M10)
- Rear speaker cover
- 3C Euroblock connector P=5.08
- 5.1x20 screw for safety cable anchorage (not included)
- Quick User Guide
- Warranty Card

All product characteristics are subject to variation due to production tolerances. **NEEC AUDIO BARCELONA S.L.** reserves the right to make changes or improvements in design or manufacture that may affect these product specifications.

For technical queries please contact your supplier, distributor or complete the contact form on our website under Support / [Technical Query](#).

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