



Kayman

KY102

USER GUIDE

English

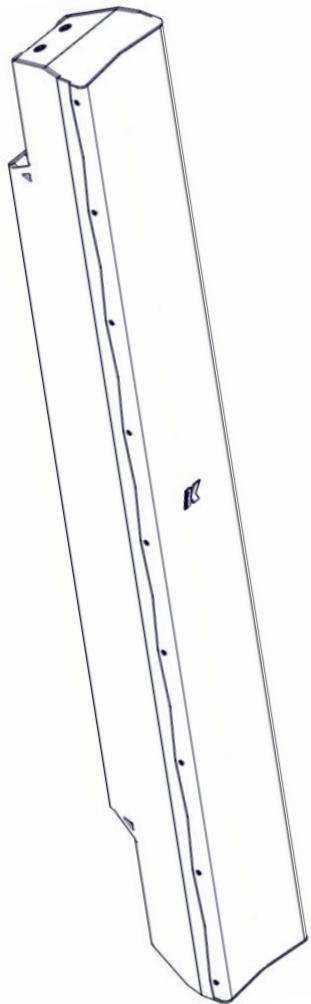


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SYMBOLS



K-array declares that this device is in compliance with applicable CE standards and regulations. Before putting the device into operation, please observe the respective country-specific regulations!



Waste Electrical and Electronic Equipment (WEEE)

Please dispose of this product at the end of its operational lifetime by bringing it to your local collection point or recycling center for such equipment.



This symbol alerts the user to the presence of recommendations about the product's use and maintenance.



Warning: DANGEROUS VOLTAGE.

Terminals marked with this symbol carry a risk of electric shock, therefore external wiring connected to these terminals requires installation by a qualified professional or the use of ready-made leads or cords.



This symbol alerts the user to the presence of recommendations about product's use and maintenance.



This device complies with the Restriction of Hazardous Substances Directive.

1. INTRODUCTION

The K-array KY102 is a passive speaker system comprised of eight 4" neodymium magnet transducers housed in an elegant and sturdy stainless steel frame. The vertical dispersion pattern can be switched for wide or narrow coverage, allowing for a great variety of applications. The eight closely-spaced cone drivers boast true line array characteristics, such as phase coherence, low distortion and focused listening in both the near field and at a distance from the speaker.

A variety of rigging accessories allows for many linking and hanging options for the KY102 in vertical and horizontal line array configurations to satisfy many different venue requirements during temporary events as well as permanent installations.

For easier use and integration with other speakers or amplifiers, the KY102 is equipped with two different values of impedance (8Ω – 32Ω). The KY102 is able to reproduce the whole vocal frequency range with high intelligibility. Integrating one of K-array's powered subwoofers (KMT18, KMT21, KMT218), configured with specific presets for the KY102, assures excellent coverage of the entire musical frequency range.

All KY102 components are designed by the K-array R&D Department and custom-made under the K-array Quality Control System.

2. KEY FEATURES

- Unique performance-to-size ratio
- Vertical and horizontal line array applications
- Multiple 4" long excursion, full-range cone drivers
- Wide horizontal coverage
- Electronically protected
- Selectable 8 ohm or 32 ohm impedance
- Weather proof, suitable for outdoor installations – IP54

3. APPLICATIONS

- Theatre, club, house of worship
- Front fill and under-balcony fill
- Portable and installed AV systems
- Stage and AV studio monitoring

4. SAFETY INFORMATION



Warning: failure to follow these safety instructions could result in injury or damage to the device or other property.

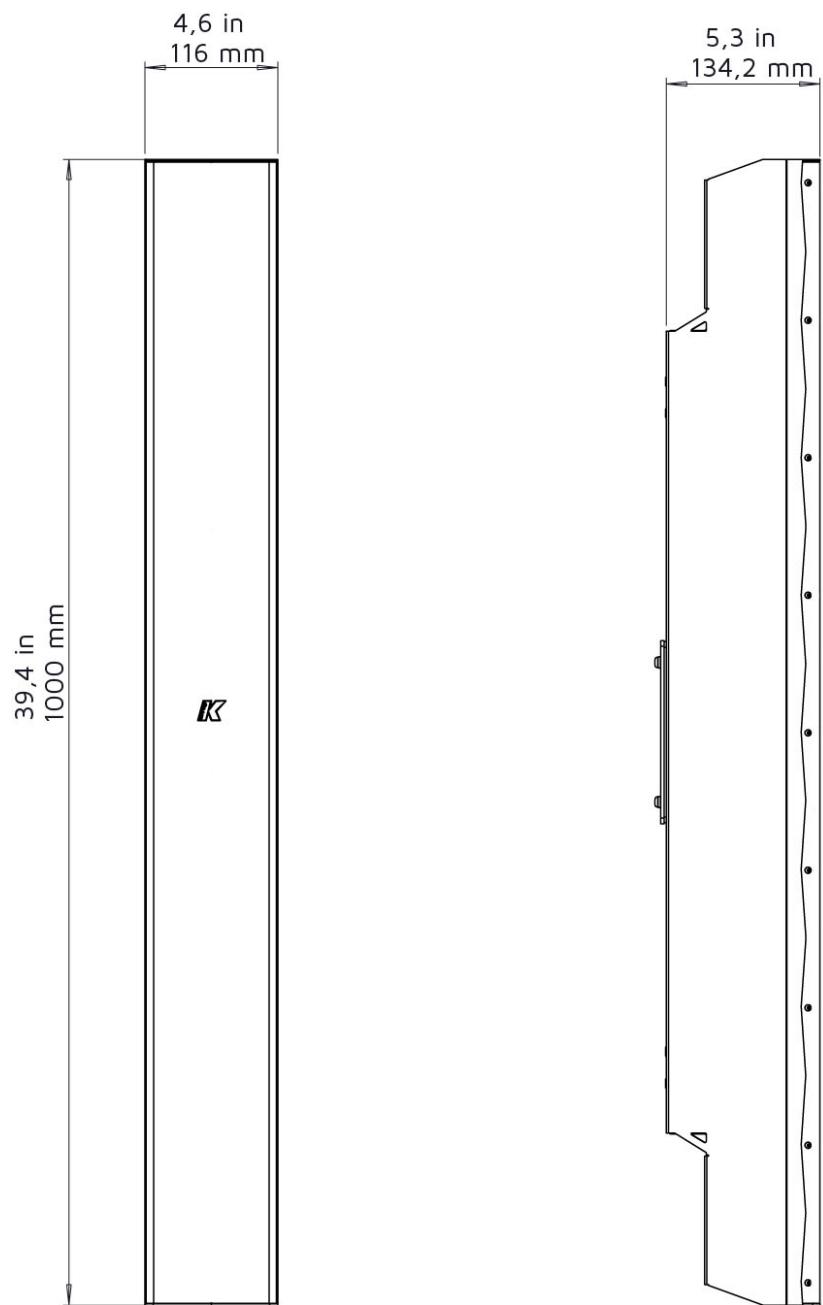
IMPORTANT SAFETY INSTRUCTIONS

- Read these instructions.
- Keep this instructions.
- Heed all warnings.
- Follow all instructions and keep all warnings.
- Only use attachments/accessories specified by the manufacturer.
 - 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.
- **Avoiding hearing damage.** Professional loudspeakers are capable of producing extremely high sound levels and should be used carefully. Never stand close to loudspeakers driven at high volume. Set the volume to a safe level. You can adapt over time to a higher volume of sound that over time may sound normal but can be damaging to your hearing. Hearing loss worsens after exposure to a sound level of 90 dB or over for an extended period of time. If you experience ringing in your ears or muffled speech, stop listening and have your hearing checked. The louder the volume, the less time is required before your hearing could be affected.
- **Choking Hazards.** This device contains small parts, which may present a choking hazard to small children. Keep the device and its accessories away from small children.
- **Do not make repairs yourself.** Never attempt to disassemble, repair or modify the system yourself. Disassembling the unit may cause damage that is not covered under the warranty. The device contains no user-serviceable parts. Repairs should only be performed by factory trained service personnel.
- **Sound distortion.** Do not operate speakers for an extended period of time with sound distortion. This is an indication of malfunction, which in turn can generate heat and result in a fire.
- **Carrying, handling and installing the device.** The device contains sensitive components. Do not drop, disassemble, open, crush, bend, deform, puncture, shred, incinerate, paint, or insert foreign objects into it. If your device has been dropped or damaged unplug the power cable immediately.
- **Set up.** Set up your device on a stable retaining horizontal surface. If combined or mechanically connected with other products, always verify the stability of the resulted system. Install the unit only in a location that can structurally support the weight of the unit and far away from people who can interfere with the stability of the system. Assure that the wind does not interfere with the system's stability, taking extra securities like chains, weights, ropes or any other certified anchoring systems. Doing otherwise may result in the unit falling down, causing personal injury or property damage or even death. The system should only be suspended by qualified personnel following safe rigging practices. Secure fixings to the building structure are vital. To clarify any doubt you may have, seek help from architects, structural engineers or other specialists.

5. UNPACKING

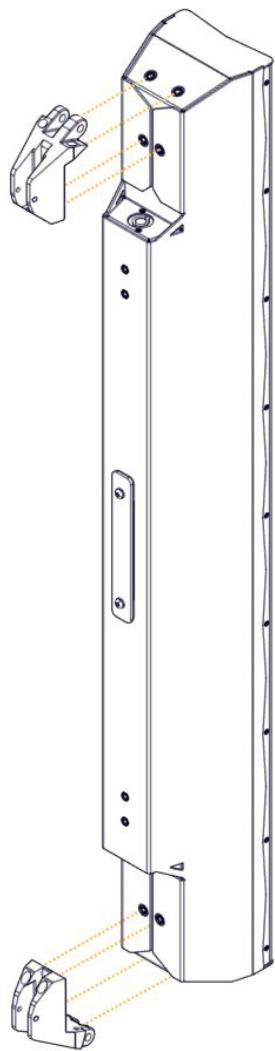
Each K-array speaker is built to the highest standard and thoroughly inspected before leaving the factory. Upon arrival, carefully inspect the shipping carton, then examine and test your new amplifier. If you find any damage, immediately notify the shipping company. Only the consignee may institute a claim procedure regarding the system's electronic equipment.

6. PHYSICAL

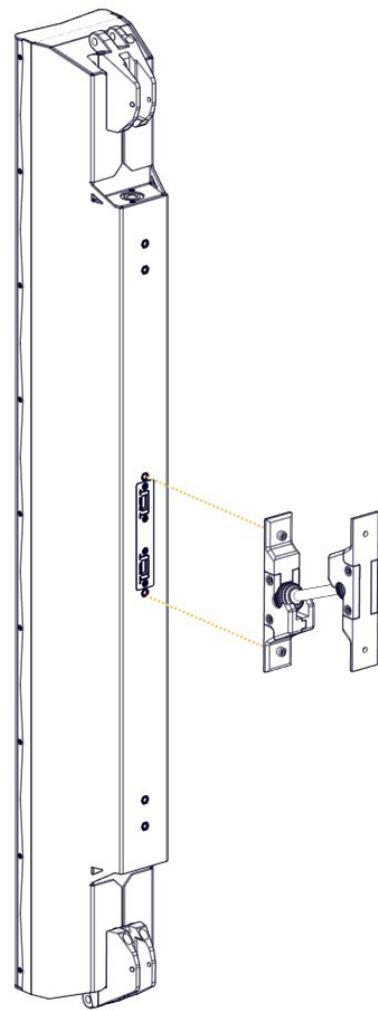


Weight
14.9 kg (32.8 lbs)

6.1 MOUNTING SCREW HOLES FOR ACCESSORIES



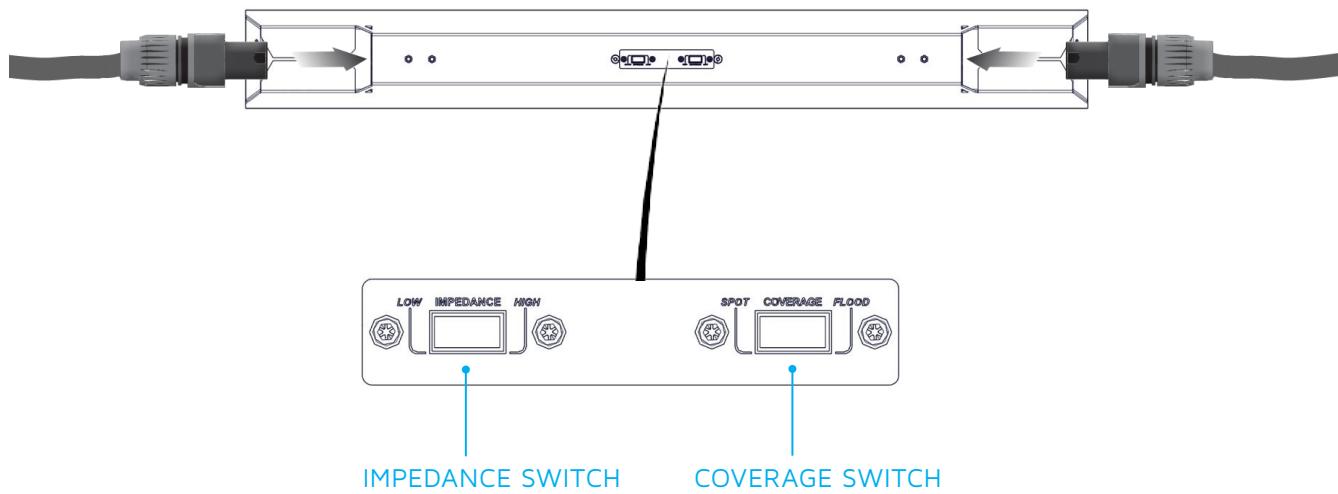
K-JOINT2



K-WALL2

7. WIRING

KY102 internal wiring is designed to pick up audio power signal from pins 1+ / 1- of a Speakon NL4 connector. Pins 1+ and 1-, such as pins 2+ and 2-, are directly wired from one socket to the other, so the two sockets are equivalent and can be used to connect the speaker to the amplifier or to connect the speaker to another KY102 driven in parallel by the same amplifier channel.



7.1 IMPEDANCE SWITCH

KY102 features a switch which allows users to select the impedance of the speaker ($8\Omega/32\Omega$). The value to be selected depends mainly on the amplifier you use to drive the unit. To find the correct impedance value to be set on the unit, we recommend that you check the Output Configuration Page on your K-array KA amplifier or KMT active subwoofer you use to drive the unit. Please refer to your amplifier or KMT's User Guide for further details.

NOTE:

- The K-array KA84 amplifier can drive up to two KY102 @ 8Ω per channel or up to four KY102 @ 32Ω in bridge mode.
- The K-array KMT218 and KMT21 powered subwoofers can drive up to two KY102 @ 8Ω .

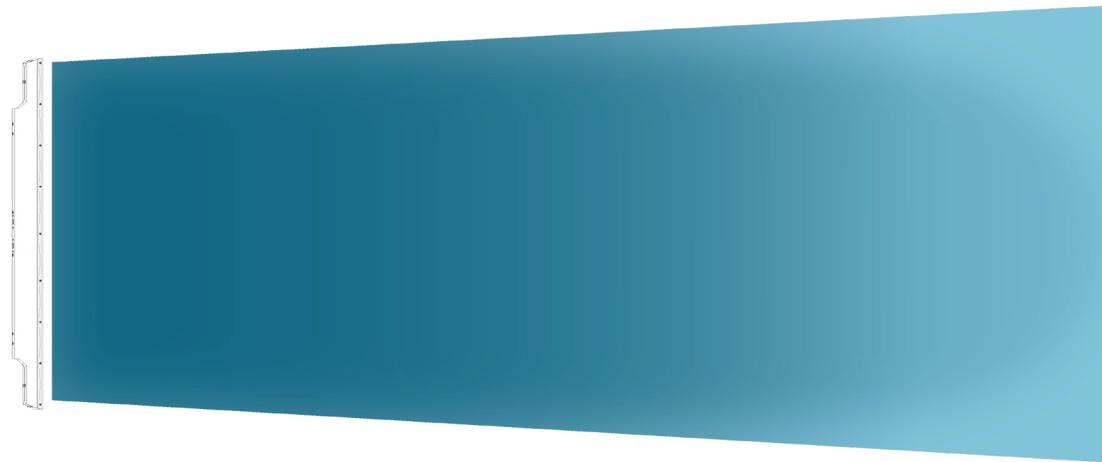
7.2 COVERAGE SWITCH

KY102 features a switch which allows users to select the vertical coverage of the speaker.

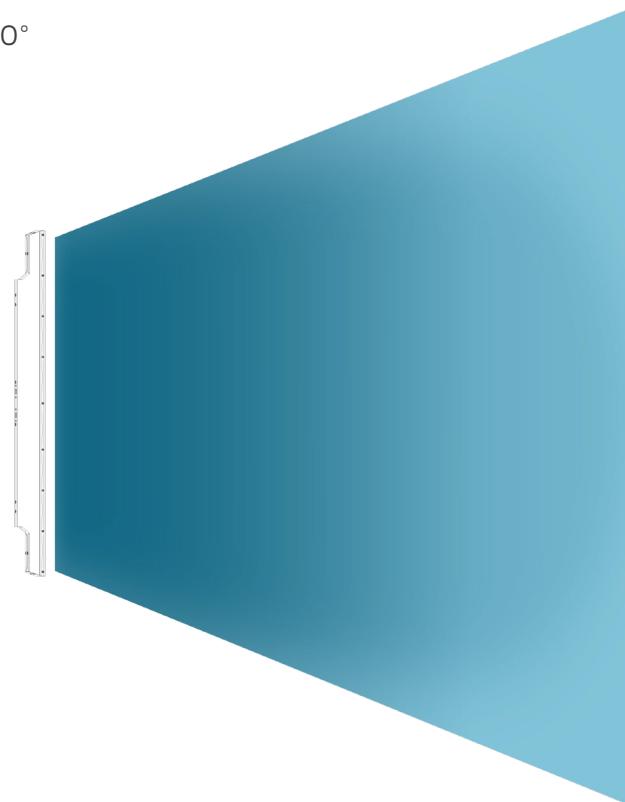
Flood coverage sets a wide vertical diffusion angle of 30°. Flood coverage is suggested for single speakers in diffused short throw applications to obtain maximum diffusion with a minimum footprint. Spot coverage sets a narrower vertical diffusion angle of 7° and is recommended for long throw or monitoring application.

When more units are combined in a line array configuration, make sure to set the coverage to Spot.

SPOT Coverage - 7°



FLOOD Coverage - 30°



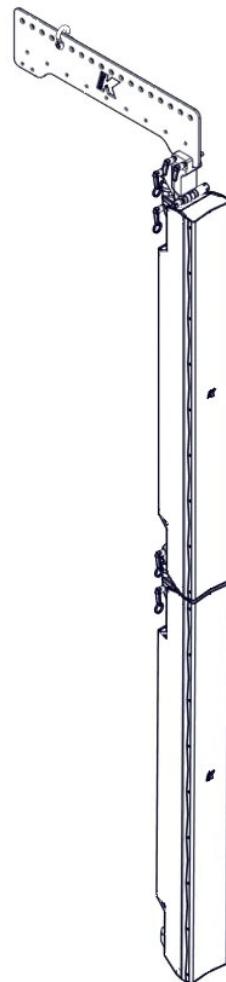
8. RIGGING

K-array offers a variety of dedicated accessories to mount and interconnect the KY102 speakers for a wide range of applications.

In this section we introduce you to the main accessories available for this product. More information can be found in the accessories' user guides.

8.1 SUSPENDING FROM THE FLY-BAR

KY102 units can be suspended using the K-FLY2 fly bar accessory and the K-JOINT2 hardware accessory used to connect together two units or to connect a unit to the fly bar. Please refer to the K-FLY2 User Guide to check all the available configurations and for safety information and operation details.



2 KY102 suspended from the K-FLY2

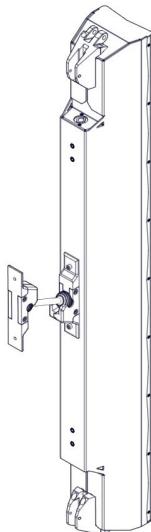


Consult the dedicated K-FLY2 User Guide for safety information and operation details.



8.2 HANGING ON THE WALL

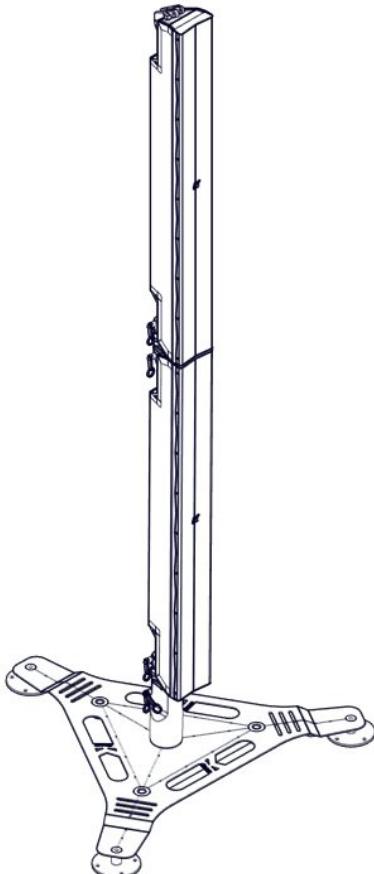
The K-WALL2 accessory is used to mount a speaker on a wall.



In case of outdoor installation, we recommend to not remove the protection plate that covers the switches. Use the screws included in the K-WALL2 to fix the bracket to the speaker keeping the switches protected by the plate.

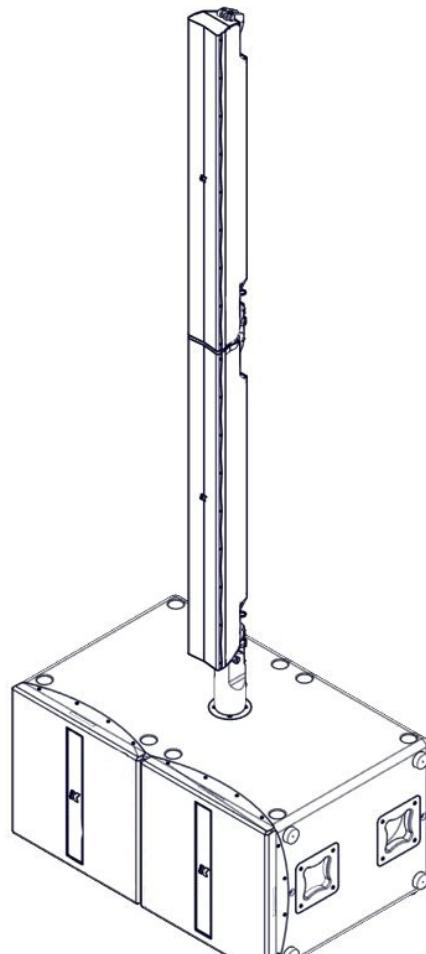
8.3 STANDING ON THE BASE

The K-BASE2 accessory assists in standing up to 2 units. For proper installation and operation, connect the units to the base with K-FOOT2 and K-JOINT2 accessories. Where possible, screw the feet of the K-BASE2 to the ground.



8.4 STANDING ON A KMT SUBWOOFER

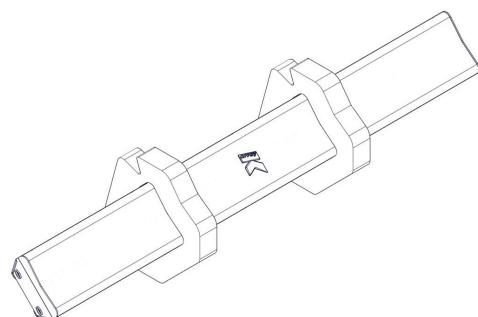
Up to two KY102 can be mounted on a KMT subwoofer by using the K-FOOT2 and K-JOINT2 accessories. Acoustically speaking, two KY102s perfectly match with a KMT218 subwoofer. An excellent example of the use of this combination is the K-array portable system KR802.



KMT218 + 2 x KY102

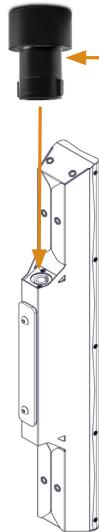
8.5 GROUND LAYING

KY-STAGE allows users to safely lay the speakers on the ground with three different angles: 0°, 30° and 45°. Ideal applications are monitoring and front-fill.

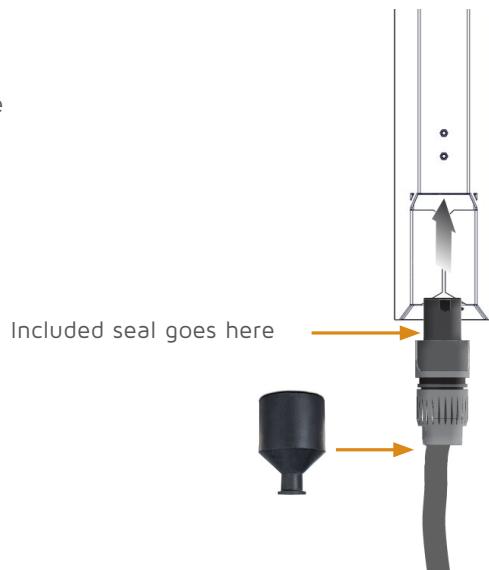


8.6 OUTDOOR INSTALLATION

In case of outdoor installation, use the K-IP65KITA weatherproof cap (not included) to close not connected NL4 sockets. Use the K-IP65KITB weatherproof rubber cable cover (not included) to further protect wired NL4 connectors. We also recommend to not remove the protection plate that covers the switches.



K-IP65KITA



K-IP65KITB

9. SERVICE

To obtain service:

- 1) Contact the official K-array distributor in your country. Your local distributor will direct you to the appropriate service center.
- 2) If you are calling for service, please have the serial number(s) of the unit(s) available for reference. Ask for Customer Service and be prepared to describe the problem clearly and completely.
- 3) If the problem cannot be resolved over the phone, you may be required to send the unit in for service. In this instance, you will be provided with an RA (Return Authorization) number which should be included on all shipping documents and correspondence regarding the repair. Shipping charges are the responsibility of the purchaser.

Any attempt to modify or replace components of the device will invalidate your warranty. Service must be performed by an authorized K-array service center.



Cleaning:

Use only a soft, dry cloth to clean the product. Do not use any solvents, chemicals, or cleaning solutions containing alcohol, ammonia, or abrasives. Do not use any sprays near the product or allow liquids to spill into any openings.

10. TECHNICAL SPECIFICATIONS

ACOUSTICS	
Power handling	1200 W
Frequency range	120 Hz – 20 kHz (- 10dB) ⁽¹⁾
Impedance	8 Ω / 32 Ω (selectable)
Maximum SPL	138 dB (peak) ⁽²⁾
COVERAGE	
Horizontal	90°
Vertical	7° / 30° (selectable)
CROSSOVER	
Type	External crossover required
Frequency	High pass @ 120 Hz, 24 dB/oct suggested minimum
TRANSDUCERS	
Full range	8 x 4" Neodymium magnet cone drivers with 1.5" voice coil
SELECTION SWITCHES	
Impedance	8 Ω / 32 Ω
Coverage	Spot / Flood
POWER AUDIO INPUT/OUTPUT	
Connector	2 x 4-pin Speakon
Wiring	1+ 1- (signal IN & LINK); 2+ 2- (through)
RECOMMENDED AMPLIFIERS	
Type	KA84, KMT
CERTIFICATION	
IP	64 ⁽³⁾
PHYSICAL	
Dimensions	116 x 1000 x 134 mm (4.6 x 39.4 x 5.3 in)
Weight	14.9 kg (32.8 lbs)

Notes for data

1. With dedicated preset;
2. Maximum SPL is calculated using crest factor 4 (12dB) from sensitivity scaled @1m and power handling specifications, exclusive of power compression.
3. More complete water protection with K-IP65KITA and K-IP65KITB accessories (IP65 compliant).

New materials and design are introduced into existing products without previous notice. Present systems may differ in some respects from those presented in this catalogue.