

Kayman-KY52

Stainless steel line array element with 4x4" drivers

USER GUIDE



• 20260420 • V1



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IMPORTANT SAFETY INSTRUCTIONS



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



ATTENTION: RISQUE DE CHOC ELECTRIQUE NE PAS OUVRIR

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



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



The lighting flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated, dangerous voltage within the product enclosure that may be of magnitude to constitute a risk of electrical shock.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in this guide.



Operator's manual; operating instructions

This symbol identifies the operator's manual that relates to the operating instructions and indicates that the operating instructions should be considered when operating the device or control close to where the symbol is placed.



For indoor use only

This electrical equipment is designed primarily for indoor use.



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 device complies with Restriction of Hazardous Substances Directive.



WARNING
Failure to follow these safety instructions could result in fire, shock or other injury or damage to the device or other property.

General heed and warnings

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat
- Do not defeat the safety purpose of the polarized or grounding plug. A polarized plug has two blades with one wider than the other. A grounding plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Only use attachments/accessories specified by the manufacturer.
- 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.
- Clean the product only with a soft and dry fabric. Never use liquid cleaning products, as this may damage the products cosmetic surfaces.
- 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.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Avoid placing the product in a location under direct sunlight or near any appliance that generates UV (Ultra Violet) light, as this may change the product surface finishing and cause a change in color.
- Refer all servicing to qualified service 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.
- CAUTION: These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.
- WARNING: Only use attachments/accessories specified or provided by the manufacturer (such as the exclusive supply adapter, battery, etc.).
- Before turning the power on or off for all devices, set all volume levels to minimum.



This apparatus is intended for professional use.

Installation and commissioning may only be carried out by qualified and authorized personnel.

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- Use only speaker cables for connecting speakers to the speaker terminals. Be sure to observe the amplifier's rated load impedance particularly when connecting speakers in parallel. Connecting an impedance load outside the amplifier's rated range can damage the apparatus.
- K-array cannot be held responsible for damage caused by improper use of the loudspeakers.
- K-array will not shoulder any responsibilities for products modified without prior authorization.

CE Statement

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!



Trademark Notice

All trademarks are the property of their respective owners.

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Thank you for choosing this K-array product!

To ensure proper operation, please carefully read the owner's manuals and safety instruction before using the products.

After reading this manual, be sure to keep it for future reference.

Should you have any questions about your new device please contact K-array customer service at support@k-array.com or contact the official K-array distributor in your country.

The Kayman KY52 is a discreet passive line array element featuring 4x4" neodymium magnet woofers housed in a robust stainless steel enclosure, ensuring high resistance to corrosion and suitability for both indoor and outdoor applications (IP64). This half meter-long element delivers high intelligibility and consistent performance across the 120 Hz – 20 kHz frequency range, with a peak SPL of 132 dB.

The KY52 provides 90° horizontal coverage and selectable vertical dispersion (10°–45°), allowing precise adaptation to different acoustic environments. It can be combined with dedicated subwoofers to extend low-frequency response and achieve full-range system performance.

For system integration, the KY52 features selectable impedance (4Ω/16Ω) and SpeakON NL4 connectors (1+ / 1- signal, 2+ / 2- link). A range of mounting accessories enables flexible installation, allowing use as a main system, stacked on subwoofers, stage monitor, or in many sound reinforcement system configurations.

Key Features

- High performance in a compact form factor
- Made of highly resistant and durable stainless steel
- Premium finishes and customization
- 4" long-excursion full-range cone drivers
- Double voice coil and selectable impedance
- Selectable vertical dispersion pattern (Spot / Flood)
- Wide horizontal coverage
- Marine version available
- More complete water protection with dedicated K-IP65KITA and K-IP65KITB accessory for high IP-Rating demanding applications and outdoor installations.

Kayman-KY52

- Compact form factor and lightweight design
- 4x 4" neodymium magnet woofers
- Double voice coil and selectable impedance 4Ω / 16Ω
- 120 Hz - 20kHz (-6 dB) with dedicated preset for accurate frequency response.
- Full-range preset available - 70 Hz - 18 kHz (-6dB).
- 132 dB (peak)
- Selectable Vertical dispersion pattern V.10° / V-45° Spot/ Flood - H.90°
- SpeakON NL4 connector
- 2wires cable and gasket in the marine version KP52MI
- (WxHxD) 89 x 520 x 118 mm (3.5 x 20.5 x 4.7 in).

General applications

The Kayman-KY family includes line array speakers with pure array characteristics - designed for mid/high frequencies, ensuring optimal reproduction in those ranges. To reproduce low frequencies and extend the overall frequency response of the system, it is necessary to pair them with dedicated subwoofers from the Thunder-KS family. This approach allows for the creation of a scalable and adaptable audio system suitable for various applications in the audio industry, ranging from installations to live events. It's important to consider this when approaching the installation of the speaker and the overall system.

Loudspeakers Presets

Natural

Full-Range

The Kayman-KY52 can be used with natural preset, with a dedicated frequency response and crossover frequency when paired with a subwoofer, or in full-range mode. The Full-range preset is designed to extend the speaker's frequency response in the mid-to-low range and is particularly suitable for applications where the use of a subwoofer may be limited due to space constraints, different requirements, or to contribute to low-frequency extension with precision and efficiency.

Quick Start Guide

Application and mounting overview Configurations

The Kayman-KY52 is a versatile loudspeaker suitable for different installation and live sound applications.

It can be used as a mid-high frequency line array element in a full-range flown main system, using accessories such as **K-FLY3** and **K-JOINT3**. These systems are typically combined with dedicated subwoofers.

For smaller systems and more compact applications, the KY52 can be vertically stacked on Thunder series subwoofers using the **K-FOOT3** accessory.

The KY52 can also be used for stage applications as a front-fill or stage monitor using **K-STAGE** brackets.

All mentioned accessories are sold separately. For detailed assembly instructions, please refer to the assembly manuals available on the K-array website (k-array.com).

On-Wall installation

Follow this instructions to properly install the loudspeaker:

1. Unpack the loudspeaker
2. Unpack the corresponding accessories needed for wall mounting: **K-WALL2**, (to be purchased separately).
3. Find the proper position on the wall accordingly to the listening area to be covered.
4. Set the proper vertical dispersion using the spot or flood switch on the loudspeaker back panel.
5. Set the proper load impedance using the impedance switch on the loudspeaker back panel, with respect to the amplifier in use.
6. Set the proper speaker cable length for connecting the loudspeaker to the amplifier
7. In application demanding IP65 devices,
 - let the speaker cable passing trough the IP65 connector sealing rubber cover and fastener (IP65KITB accessory).
 - fix the gasket to the connector on the loudspeaker's panel to ensure protection.
8. Plug the NL4 speakON connector to the loudspeaker end and to the amplifier (connecting the terminals taking care to the respect the signal polarity.)
9. Set the dedicated loudspeaker preset on the KA-amplifier in use, particularly in cases of complex system installations that requires subwoofers.
10. Switch on the music and enjoy!

Kayman-KY52

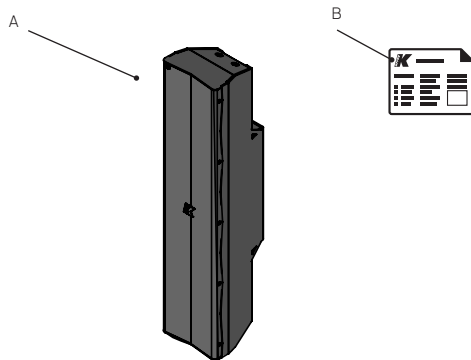
User Guide

Unpacking

Each K-array product 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 device. If you find any damage, immediately notify the shipping company.

- A. 1x Kayman-KY52 line array element
- B. 1x quick guide



Positioning

The Kayman-KY52 loudspeakers perform best when positioned on a planar surface such as a wall.

Different accessories are available for wall mounting, allowing precise adjustment of the loudspeaker tilt to optimize coverage of the listening area.

The system can also be installed in a standing configuration using dedicated joining elements and pole-mount accessories, including stack mounting on subwoofers or on a pole with base, ensuring correct acoustic coverage.

Find the proper installation height, aiming the loudspeaker at the listening position.

We suggest the following configurations:



Seated listening area

H: min height 1,5 m (5 ft) / max height 2 m (6.5 ft)



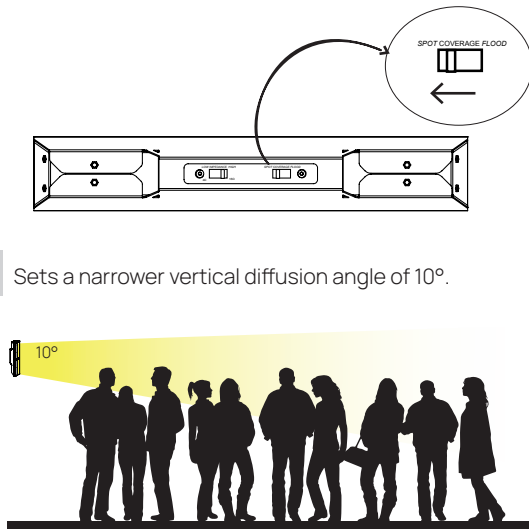
Standing listening area

H: min height 1,7 m (5.6 ft) / max height 2,7 m (9 ft)

Spot & Flood Coverage Switch

To achieve optimal coverage in a specific listening area for diverse applications, the Kayman-KY52 loudspeakers come equipped with a dedicated switch for selecting vertical dispersion:

- 1 Spot coverage - the speaker is set to spot by default.



- 1.1 Sets a narrower vertical diffusion angle of 10°.



- 1.2 Spot coverage is recommended for long throw applications.

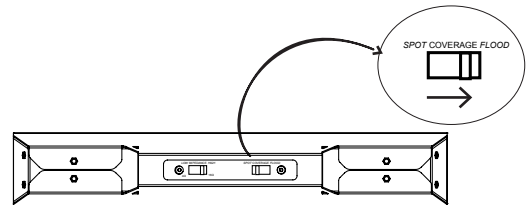
In array configuration set the coverage to spot.

In multi-speaker applications, set coverage to Spot.



- 2 Flood coverage

Sets a wide vertical diffusion angle of 45°.



- 2.1 Flood coverage is suggested for single speakers in diffused short throw applications, to obtain maximum diffusion.

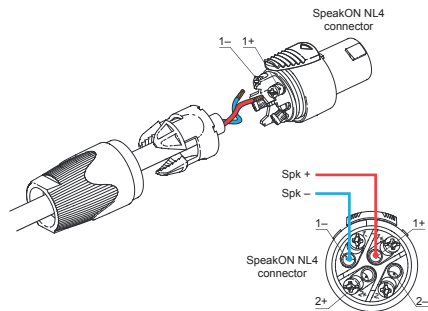


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Wiring

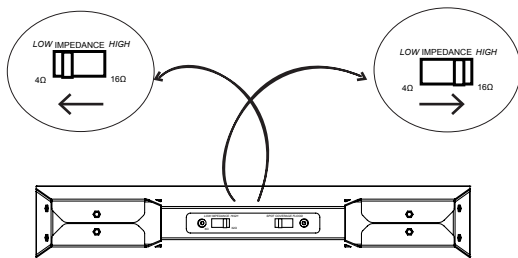
For easy connectivity and link, the Kayman-KY52 Loudspeakers feature a SpeakON NL4 connector. The internal wiring is shown in the picture below:



Terminals 1+ 1- are connected. 2+ 2- are passing trough.

Impedance selection

It is possible to set the speaker at high or low impedance using the dedicated switch located on the rear panel.



	LOW-Z	HIGH-Z
Kayman-KY52	4 Ω	16 Ω

Low impedance mode is ideal for small systems, such as single units stacked on a subwoofer in main system configurations, ensuring maximum performance and power delivery.

High impedance mode is recommended for installations with multiple loudspeakers, such as line arrays or distributed systems, enabling several units to be driven from a single amplifier channel, simplifying wiring and system design.

Amplifier Channel Matching

The number of Kayman-KY52 that can be connected in parallel to the same amplifier channel depends on the loudspeaker model, loudspeaker impedance and amplifier power.



Always check the loudspeaker impedance before connecting the amplifier.

The parallel connection lowers the total load impedance: caution must be taken to maintain the load impedance of the paralleled loudspeakers above the amplifier's minimum loading impedance.

Please refer to the [Amplifier-to-Speaker matching table](#) available on the K-array website for details about the maximum number of loudspeakers that can be driven by a single amplifier channel.



Before driving the loudspeakers ensure to load the proper loudspeaker factory preset on Kommander-KA amplifier.

Before connecting the loudspeaker cable to the amplifier:

- ensure the loudspeaker impedance matches the amplifier channel rated load impedance, especially when connecting multiple loudspeakers in parallel;
- load the dedicated loudspeaker factory preset on the amplifier DSP.

Mounting and rigging accessories

K-WALL2

Any Kayman-KY52 can be mounted on-wall and tilted with two dedicated mounting brackets that can be purchased separately, K-WALL2.

K-JOINT3 / K-FLY3

K-JOINT3 and K-FLY3 are two useful rigging hardware to hang more speakers in array configurations with the ease of very few steps.

Detailed information on mounting procedures for Python-KP on wall and in array can be found here: [Accessories Assembly For Column Speakers on K-array website](#).



Correct and safe rigging procedures for K-array systems are ensured only with dedicated K-array rigging hardware accessories.



K-array cannot be held responsible for any damage resulting from the use of third-party rigging materials.

Kayman-KY52

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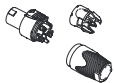
Outdoor applications*

Installation

Any Kayman-KY52 can be used in those applications that require an higher IP grade. It is possible to use the IP65 accessories composed of a dedicated plastic waterproof cap (part of IP65KITA) and waterproof rubber protection + gasket (part of IP65KITB) to be installed on the non-wired connector and on the wired one respectively, to effectively seal the inputs port from water. To install IP65 protection please follow the procedure shown below:

- A** Before proceeding, ensure that you have all the supplied components of the SpeakOn NL4 connector and of IP65 protection (rubber cable cover and gasket) and the waterproof cap.

1. SpeakON connector components



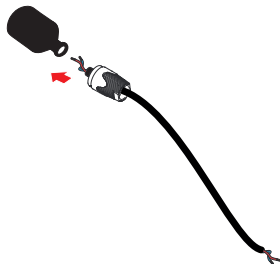
2. rubber cover and gasket (part of IP65KITB)



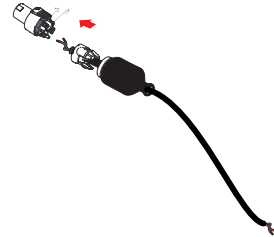
3. waterproof cap (part of IP65KITA)



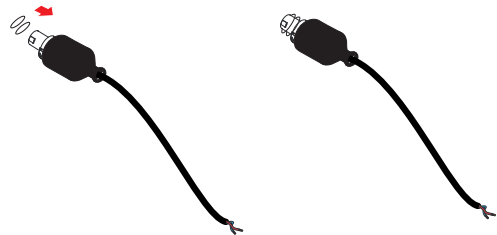
- B** Choose a cable with a sheath for greater insulation and pass it through the rubber cover accessory and trough the cable gland.



- C** Connect the wires to 1+1- terminals of the NL4 connector

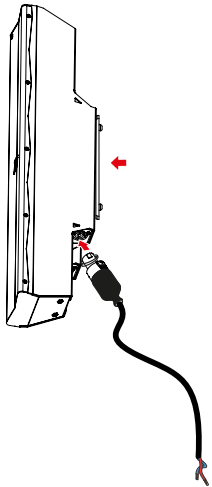


- D** Ensure that the gasket firmly adheres to the connector on the back panel. To do so, first, pass it around the head of the male connector to be plugged in.

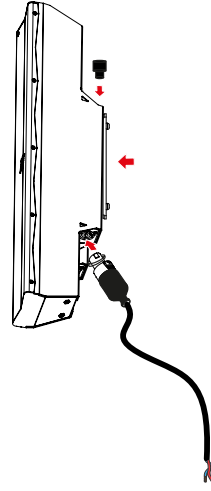


*The images shown refer to a similar loudspeaker model and are provided for illustrative purposes only, as the mounting procedures are identical. The images will be updated with the correct model in the next revision of the user guide.

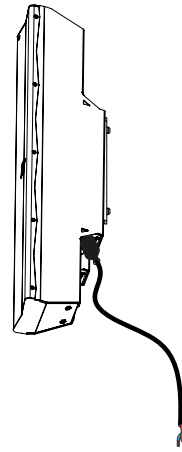
- E** Plug the connector to the loudspeaker and turn it clockwise together with the gasket to ensure a secure connection. It is also recommended to leave the switch panel closed after selecting the correct impedance to not damage the switches.



- F** Then use the dedicated waterproof cap to close the non-wired connector to seal it and prevent it from water infiltration.



- G** The Kayman-KY52 is finally installed with IP65 protection accessories and sealed against water.



Kayman-KY52

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Stage mounting accessory*

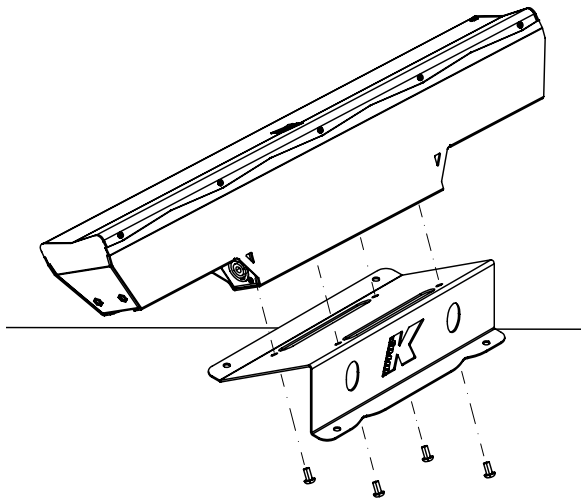
K-STAGE2

The Kayman-KY52 can be set on stage for monitoring system configuration, thanks to the new dedicated bracket K-STAGE2. This accessory bracket allows for setting up to 1x Kayman-KY on the stage to provide a monitoring system. This ensures stability and optimal positioning, allowing for reliable monitoring performance during stage setups.

Thanks to threaded holes, it is possible to fix the bracket to the stage surface with screws, ensuring even more stability.

1 K-STAGE2

Bracket accessory to mount the speaker on stage for monitoring system configuration - with dedicated screws. Find the proper listening position on the stage - then applique the bracket to the speakers.



- 2 Connect the audio cable to the speaker and then adjust the proper mix for the monitoring system.

*The mounting procedure is not explained in the picture but will be updated in the next revision of this document..

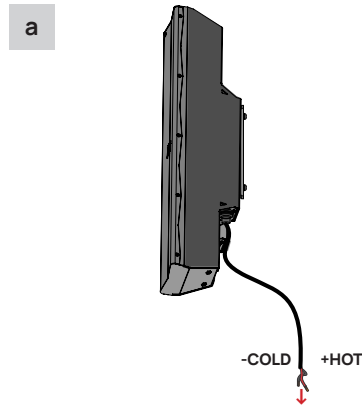
*The images shown refer to a similar loudspeaker model and are provided for illustrative purposes only, as the mounting procedures are identical. The images will be updated with the correct model in the next revision of the user guide.

Marine applications*

Kayman-KY52M

The Kayman-KY52 are available in the marine version, equipped with specialized treatments and finishes designed for marine applications, ensuring the speakers can withstand prolonged exposure to saltwater, thus enhancing their durability and longevity. In addition to these special features, the Kayman-KY52M (marine) come equipped with nickel-plated brass cable glands and a cable with sheath with COLD- and HOT+ terminals.

This not only allows for better isolation of the inputs but also allows easier wiring, especially in situations where space is limited, and water ingress could damage the speaker.



SIGNAL FROM AMPLIFIER CHANNEL - wiring (COLD)- (HOT) + to the dedicated amplifier channel and match the selected impedance value.



Is it recommended to close the switches compartment with the dedicated panel, any water infiltration can damage the speaker.

Service

To obtain service:

1. Please have the serial number(s) of the unit(s) available for reference.
2. Contact the official K-array distributor in your country: find the Distributors and Dealers list on K-array website. Please describe the problem clearly and completely to the Customer Service.
3. You will be contacted back for on line servicing.
4. 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.

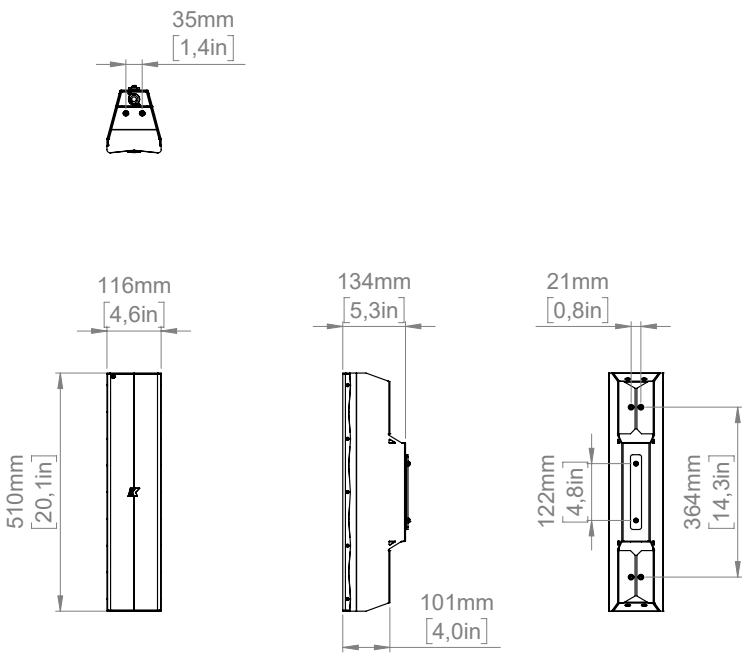
Any attempt to modify or replace components of the device will invalidate your warranty. Service must be performed by an authorized K-array service center.

Cleaning

Use only a soft, dry cloth to clean the housing. 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.

Mechanical Drawings

Kayman-KY52



Technical Specifications

Kayman-KY52

General	
Type	Passive line array element
Transducers	4x 4" neodymium magnet woofers
Frequency Response ¹	120 Hz - 20 kHz (-6 dB)
Frequency Response ¹³	70 Hz - 20 kHz (-6dB)
Max SPL ²	132 dB (peak)
Max SPL ²¹	120 dB (peak)
Rated Power	600 W
Coverage	V. 10° - 45° H. 90°
Nominal Impedance	4 Ω / 16 Ω selectable
Connectors	SpeakOn NL4 1+ 1- (signal); 2+ 2- (through) KP52M I - Marine grade multipole cable - terminals red+ black- (signal)

Handling & Finishes	
Material	Stainless Steel
Colors	Black, White, Custom RAL
Finishes	24K Gold, Polished, Brushed
IP Rating ³	IP64
Dimensions (WxHxD) ³	116 x 510 x 134 mm (4.6 x 20.1 x 5.3 in)
Weight	5.8 kg (12.78 lb)

¹ With dedicated natural preset.

¹³ With dedicated full-range preset

² Maximum SPL is calculated using a signal with crest factor 4 (12dB) measured at 8 m then scaled at 1 m.

²¹Maximum SPL is calculated using a signal with crest factor 4 (12dB) measured at 8 m then scaled at 1 m.

³ More complete water protection with K-IP65KITA and K-IP65KITB accessories (IP65 compliant)

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