



Kayman

KY102

USER GUIDE
English

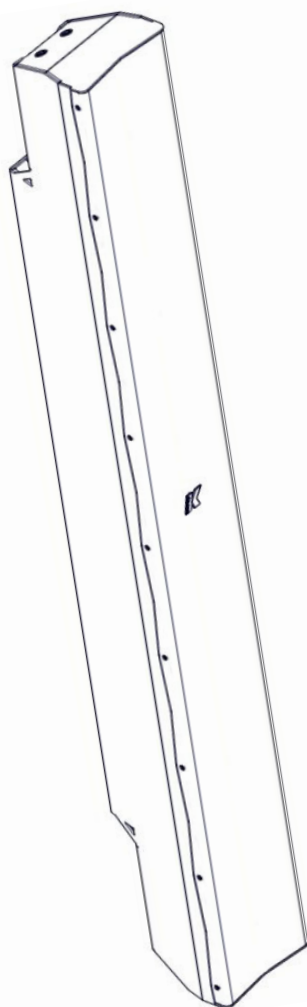


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SYMBOLS



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, horizontal and 3D line array applications
- Multiple 4" long excursion, full-range cone drivers
- Wide horizontal coverage
- Electronically protected
- Selectable 8 ohm or 32 ohm impedance
- Selectable vertical pattern (spot - flood)
- 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.

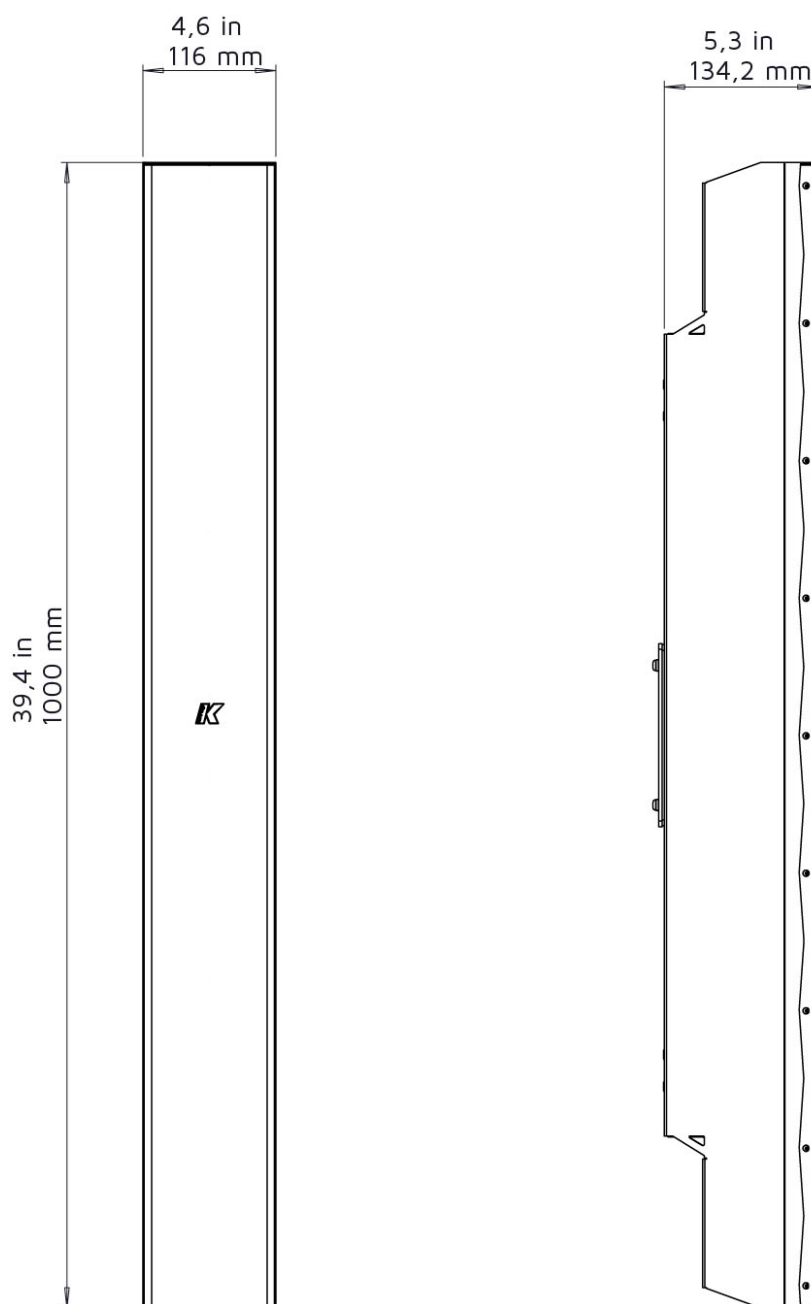
IMPORTANT SAFETY INSTRUCTIONS

- 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

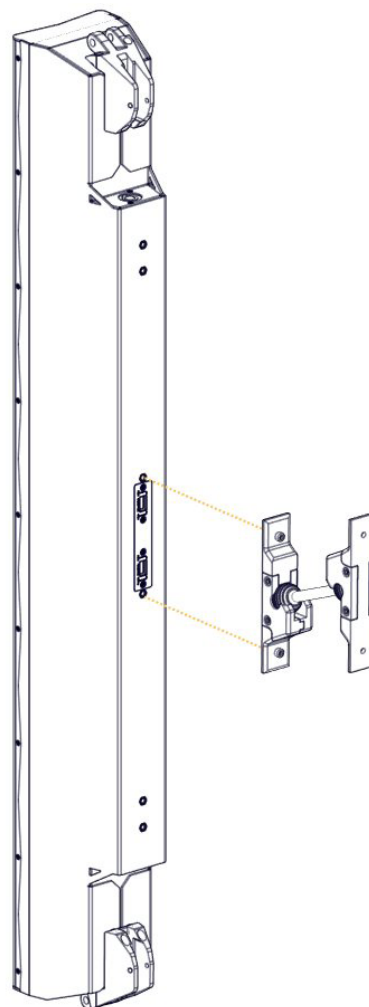


Weight
14.9 kg (32.8 lbs)

6.1 MOUNTING SCREW HOLES FOR ACCESSORIES



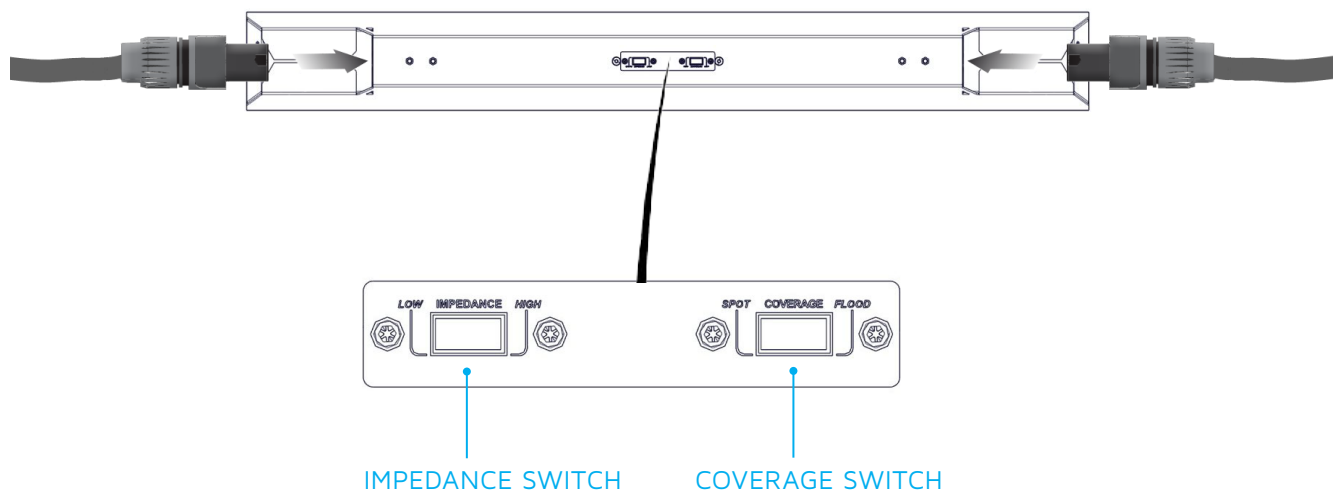
K-JOINT2



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.

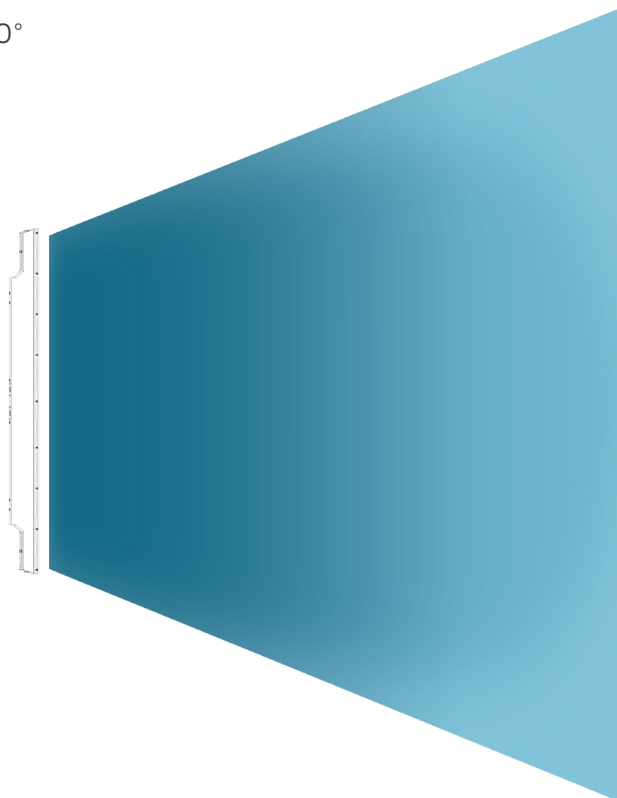
Spot coverage sets a narrower vertical diffusion angle of 7° and is recommended for long throw or monitoring application.

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

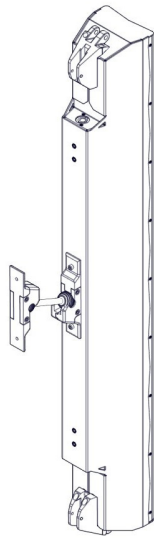


Consult the dedicated product manuals for safety information and operation details.



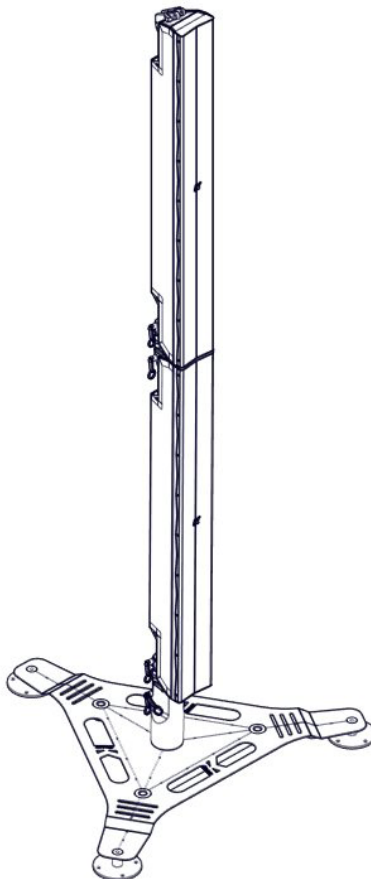
8.2 HANGING ON THE WALL

The K-WALL2 accessory is used to mount a KY102 speaker on a wall or a stand.



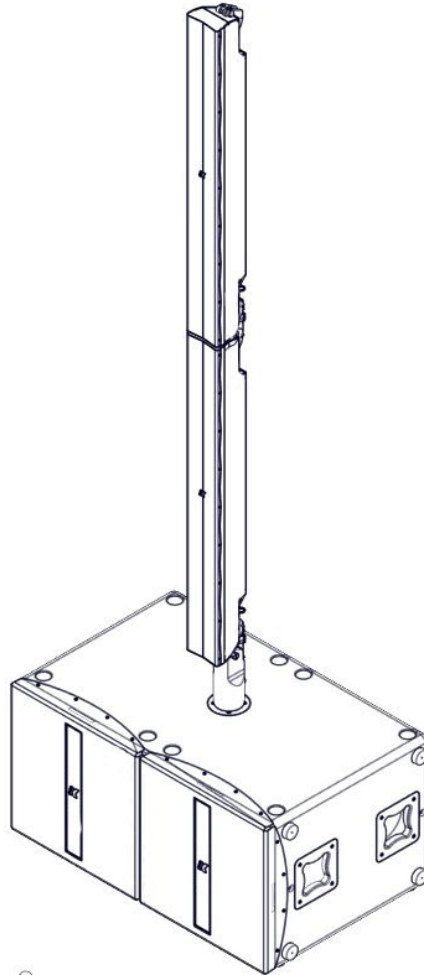
8.3 STANDING ON THE BASE

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

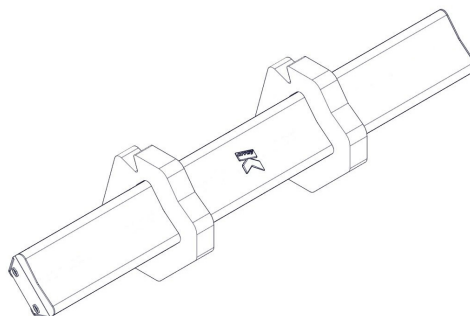
Up to two KY102 can be mounted on a KMT subwoofer by using the K-FOOT2 and K-JOINT2 accessories. Acoustically speaking, two KY102s perfectly match with a KMT218 subwoofer. An excellent example of the use of this combination is the K-array portable system KR802.



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.



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
Max power	1800 W
Frequency range	110 Hz – 20 kHz (- 3dB) ⁽¹⁾
Impedance	8 Ω / 32 Ω (selectable)
SPL 1W/1mt	102 dB ⁽²⁾
Maximum SPL	132 dB (cont.) – 138 dB (peak) ⁽³⁾
	COVERAGE
Horizontal	90°
Vertical	7° / 30° (selectable)
	CROSSOVER
Type	External crossover required
Frequency	High pass @ 90 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	54
	PHYSICAL
Dimensions	11.6 x 100.0 x 13.4 cm (4.6" x 39.4" x 5.3")
Weight	14.9 kg (32.8 lbs)

Notes for data

1. With dedicated preset;
2. Measured @8 mt then scaled @1 mt;
3. Measured with musical signal

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.

Kayman-KY102-EBS

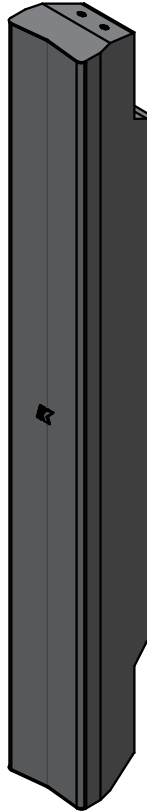
Stainless steel steerable line array element with 4" drivers

USER GUIDE



• 20260511 •

V1



K-ARRAY
Unique Audio Solutions

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.

Kayman-KY102-EBS

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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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Unpacking

Electronic Beam Steering

Wiring

Wire Gauge

Updating EBS DSP

Mechanical drawings

Technical Specifications

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-KY102-EBS steerable line array loudspeaker has been designed to provide an advanced solution to control emission and directivity of the sound source.

The Electronic Beam Steering integration with PAT – Pure Array Technology –, combines accuracy and even coverage with maximum control over directivity of the Kayman-KY102-EBS line array where each of the eight woofers can be independently processed through FIR filters.

The dynamic control and manipulation of the sound beam by means of K-array Kommander-KA power amplifier with EBS DSP allows to precisely aim the emission of the line array loudspeaker over the desired listening area. This is particularly essential in environments where the risk of sound leaks or dispersion is high, such as reflective halls where traditional speaker tilting is restricted.

Kayman-KY102-EBS

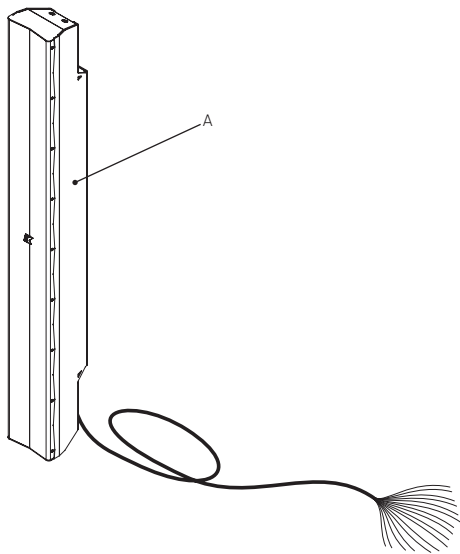
USER GUIDE

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Unpacking

Each K-array loudspeaker 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. Check that the following parts are supplied with the product.

- A. 1x Kayman-KY102-EBS with built-in 5 m (16.4 ft) signal cable.



Electronic Beam Steering

Traditional line array loudspeakers are appreciated for their narrow on-axis directivity: the Kayman-KY102-EBS can break this paradigm with non need of any specific mechanical arrangement.

The Kayman-KY102-EBS features eight 4" drivers that can be directly and independently driven by eight separated amplifier channels. The Kommander-KA18 is the dedicated K-array 8-channel audio power amplifier with DSP designed to perfectly match with the Kayman-KY102-EBS' eight 4" drivers.

By freely updating the Kommander-KA18 DSP firmware to the EBS version, it is possible to modify the natural emission of the line array loudspeaker by steering the sound beam off-axis.

This feature can be used to overcome some limitations of the physical installation of the loudspeaker allowing to modify the directivity of the loudspeaker according to the actual listening configuration.

The K-framework3 is the all-in-one software providing both the acoustical simulations of the loudspeakers coverage and fine tuning of a sound reinforcement system.

Thanks to the K-framework3, designing, configuring and tuning a sound reinforcement system composed of Kommander-KA18 amplifiers with EBS DSP and Kayman-KY102-EBS steerable loudspeakers can be easily accomplished in few simple steps.

WINDOWS and OSX software
K-Monitor

click to go

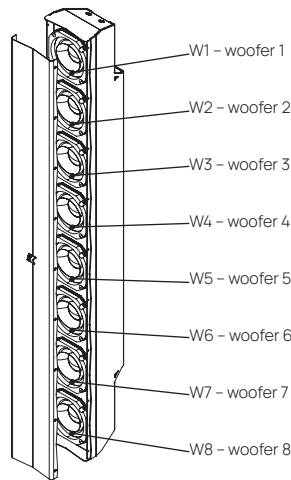
WINDOWS and OSX software
K-framework3

click to go

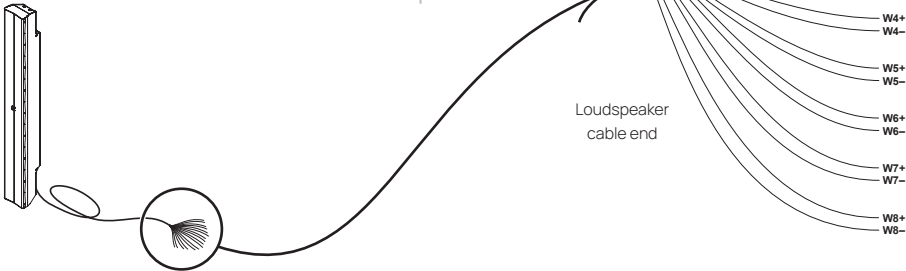
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Wiring

A single Kayman-KY102-EBS steerable line array element shall be driven by a single Kommander-KA18 amplifier with EBS DSP. The amplifier output channels 1 to 8 shall be matched with the loudspeaker woofers 1 to 8, where woofer 1 is the top transducer and woofer 8 is the bottom transducer.



The Kayman-KY102-EBS is provided with a built-in 5m (16.4ft) long multicore cable. The cable ends with eight pairs of strands. Each pair of strands is connected to the wiring terminals of a single woofer. Each strand is labeled according to its termination.



Strand Label	Polarity	Woofer
W1-	COLD (-)	1
W1+	HOT (+)	
W2-	COLD (-)	2
W2+	HOT (+)	
W3-	COLD (-)	3
W3+	HOT (+)	
W4-	COLD (-)	4
W4+	HOT (+)	
W5-	COLD (-)	5
W5+	HOT (+)	
W6-	COLD (-)	6
W6+	HOT (+)	
W7-	COLD (-)	7
W7+	HOT (+)	
W8-	COLD (-)	8
W8-	HOT (+)	

Kayman-KY102-EBS

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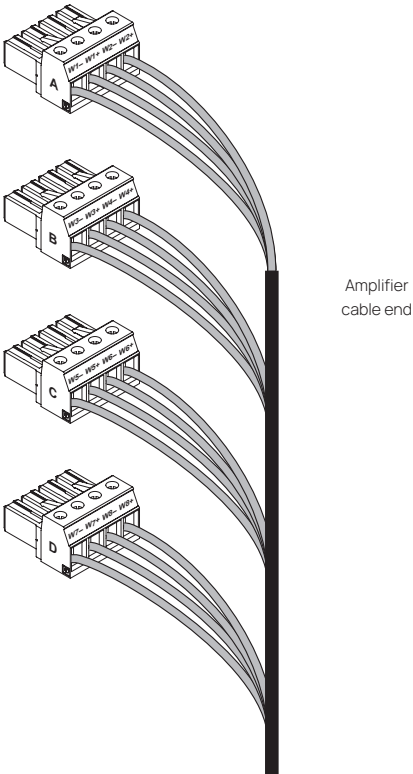
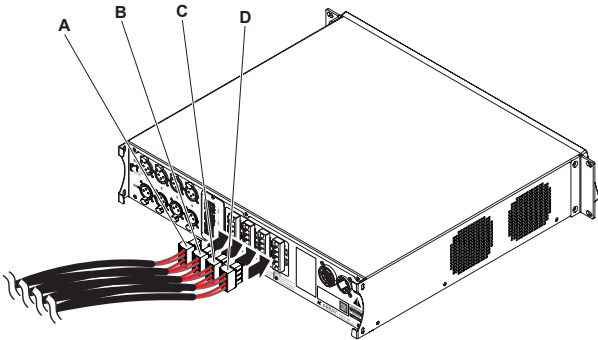
In order to drive the Kayman-KY102-EBS transducers independently, every pair of strands shall be connected to a single Kommander-KA18 amplifier channel.

A 16 wires multicore cable shall be used to connect the Kayman-KY102-EBS loudspeaker to the Kommander-KA18 amplifier.

At the amplifier end, the strands of the multicore cables shall be terminated with the PC 4/ 4-ST-7,62 flying connectors provided with the Kommander-KA18 amplifier.

The wiring schematics shall guarantee the proper loudspeaker woofer to amplifier channel matching.

Woofer	Strand Label	Polarity	Amplifier connector	Amplifier channel
1	W1-	COLD (-)	A	-
	W1+	HOT (+)		+
2	W2-	COLD (-)	A	-
	W2+	HOT (+)		+
3	W3-	COLD (-)	B	-
	W3+	HOT (+)		+
4	W4-	COLD (-)	B	-
	W4+	HOT (+)		+
5	W5-	COLD (-)	C	-
	W5+	HOT (+)		+
6	W6-	COLD (-)	C	-
	W6+	HOT (+)		+
7	W7-	COLD (-)	D	-
	W7+	HOT (+)		+
8	W8-	COLD (-)	D	-
	W8+	HOT (+)		+



Wire Gauge

For up to 30 m (almost 100 ft) of cable run a multicore cable with 16 conductors 0,75 mm² cross section (18 AWG) can be used.

For longer cable runs the power loss shall be taken into account; consider to use cables with a large cross section to limit power loss. For longer runs up 150 m (490 ft) the suggested minimum gauge is 4 mm² (12 AWG) yielding about 3 dB loss.

Kayman-KY102-EBS

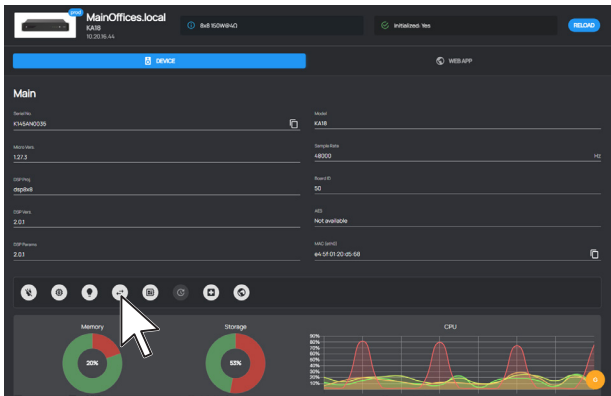
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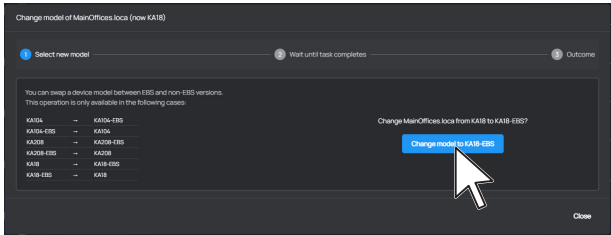
Updating EBS DSP

The Kommander-KA18 amplifier firmware can be updated to EBS using the K-Monitor software version 1.4.4 or higher.

- A. Connect the computer running the K-Monitor software to the same network comprising the Kommander-KA18 amplifier.
- B. Launch the software and let it discover the amplifier.
- C. Click on the amplifier icon in the left sidebar: the main window will show the amplifier parameters.



- D. Click on the "double arrow" icon button to start the firmware update.



WINDOWS and OSX software
K-Monitor

click to go



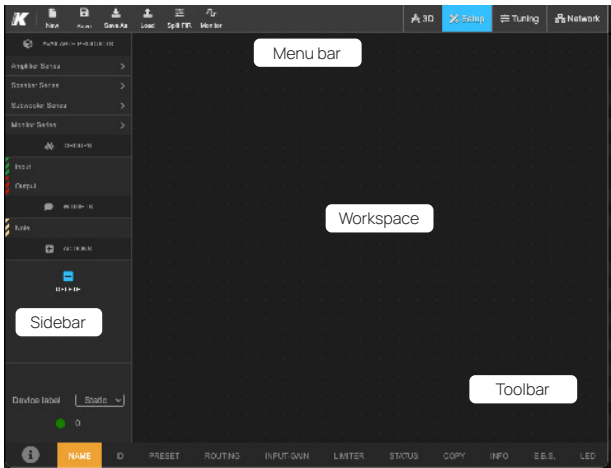
K-framework3

The Kayman-KY102-EBS can be remotely controlled with the dedicated K-framework3 software available for PC and MAC on K-array website. EBS technology control is applied by processing via Kf3.

The K-framework3 is the managing and control software dedicated to professionals and operators looking for a powerful tool for designing and managing a large number of units



WINDOWS and OSX software
K-framework3



in demanding applications.

The K-framework3 operates in three modes:

- 3D – Design a loudspeaker system for your venue in a fully 3D environment and make free field acoustic simulations; in these mode, In this mode, it is also possible to load FIR filters for the EBS function and view the actual simulation of the sound beam orientation based on frequency
- SETUP – import from the 3D design the active components into the workspace or build from scratch a PA system composed of active loudspeakers and amplifiers; use the input and output groups to allow full

Grouping - quick start

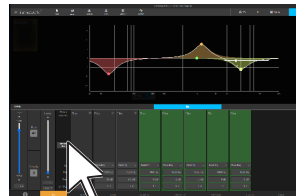
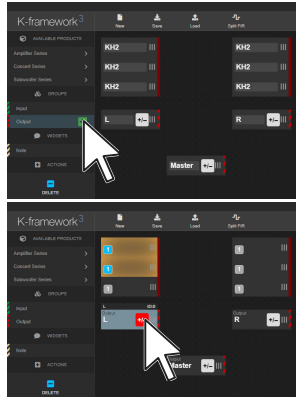
The K-framework3 paradigm involves grouping input and output channels of units in the workspace to adjust system performance. Groups can be created offline or online and persist even when units are unplugged. If a device belongs to a group, it is recreated in the workspace during synchronization. Active loudspeakers or amplifiers can belong to multiple groups, sharing features like EQ filters, time delay, and volume



The K-framework3 synchronization process reset to default the EQ, delay and volume parameters edited with the K-array Control mobile app and the embedded Web app.

settings.

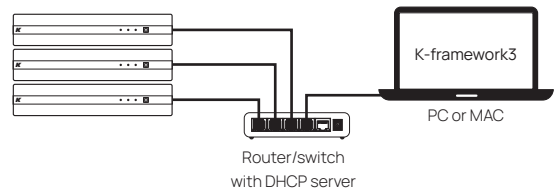
- In Setup mode: set the unit local parameters (presets, routing, input gains, limiters, etc).
- Add INPUT and OUTPUT groups as needed.
- Assign the units' channels to the groups. (EBS mode requires previous assignment).
- Switch to Tuning mode.
- Align the system using the tools available on the groups (eq, delay, polarity, etc).
- In Copy mode: edited parameters can be copied to other groups.



- TUNING – Manage and control the loudspeaker system in real time: optimize the performance of the loudspeaker system during the tuning session and control its behavior in live events.

The K-framework3 can work either off-line with virtual devices or on-line with real active loudspeakers and amplifiers connected over the same Ethernet network.

The K-framework3 allows you to start designing the PA system off-line and sync the virtual devices to the real ones on site, when the devices are available. Alternatively you can import from scratch in the workspace the real passive loudspeakers connected to the amplifiers available on the network. In both cases, in order to discover and sync the active devices, both the PC or Mac running the K-framework3 and the real units shall be properly connected to the same Local Area Network – LAN – with star topology in the same subnet.



Kayman-KY102-EBS

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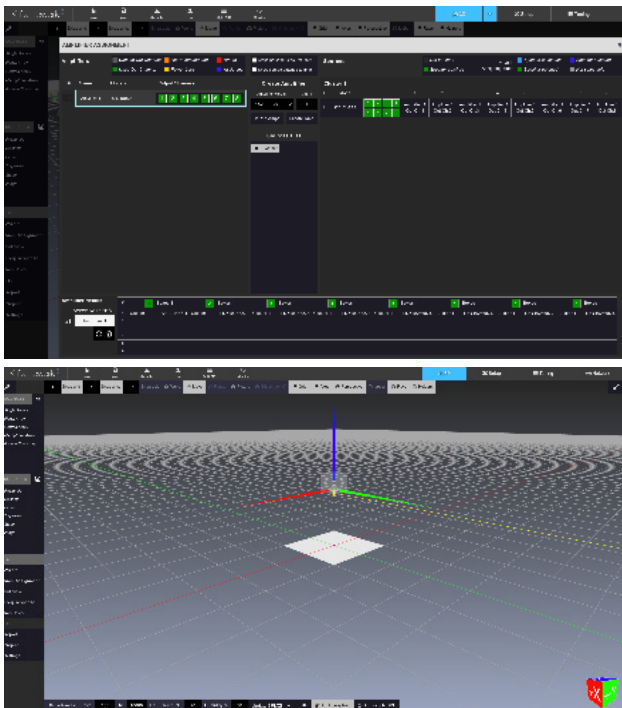
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3D simulation

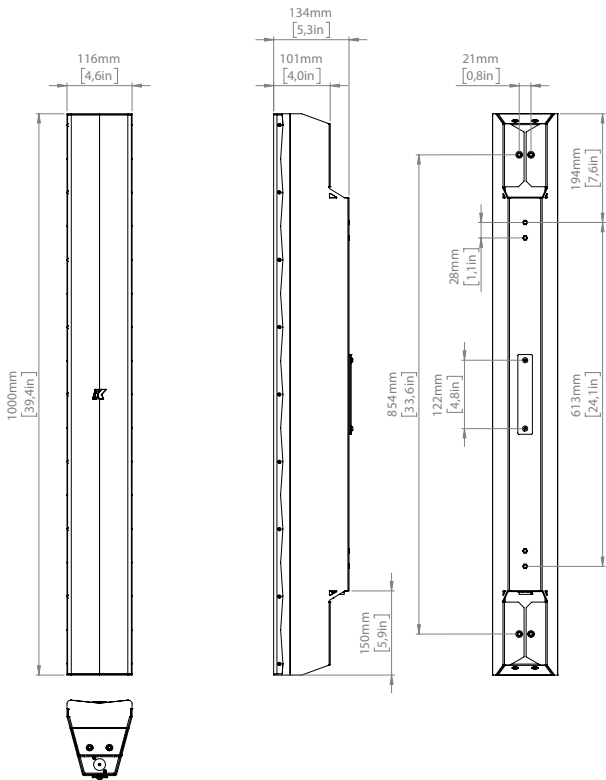
In the 3D simulation mode of K-Framework 3, the software allows systems and speakers to be positioned at specific height and distance coordinates. It calculates sound emission and simulates sound pressure levels based on these coordinates and the listening area's dimensions, enabling accurate configuration and adjustment.

Amp Assignment and EBS function

Once the system is selected, use the Amp Assignment function to designate the appropriate amplifier and channels for EBS mode. Verify the correct speaker-to-channel assignment by checking the amplifier's output power. Channels will blink in different colors to indicate their status: optimal, full power, or not recommended. Apply channel speaker presets at this stage as well.



Mechanical drawings



Technical Specifications

Key Features	
Type	Passive line array loudspeaker
Transducers	8x 4" Neodymium magnet woofers
Frequency Response ¹	120 Hz - 18 kHz (-6 dB)
Max SPL ²	138 dB peak
Coverage	V. digitally adjustable 1 H. 90°
Power Handling	8x 150 W
Nominal Impedance	8x 4 Ω
Connectors	16-wire multicore cable

Handling and Finish	
Material	Stainless steel
Color	Black, White, Custom RAL
IP Rating ³	IP65
Dimensions (WxHxD)	116 x 1000 x 134 mm (4.6 x 39.4 x 5.3 in)
Weight	14.9 kg (32.8 lb)

¹ With dedicated preset.
² Maximum 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)

Passive loudspeaker requiring dedicated K-array Commander-KA18 amplifier with firmware-EBS (KA18-EBS model on K-Monitor)

New materials and design are introduced into existing products without previous notice.

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