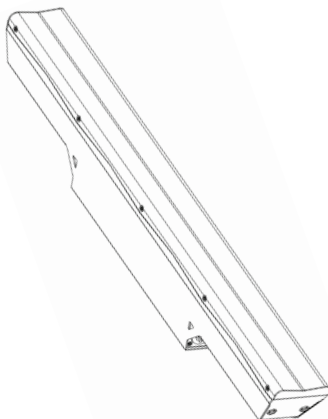


Kobra
KK52/KK102
USER'S MANUAL
English



Contents

<i>SYMBOLS</i>	5
<i>1. INTRODUCTION</i>	7
<i>2. APPLICATIONS</i>	7
<i>3. KEY FEATURES</i>	7
<i>4. UNPACKING</i>	8
<i>5. WARRANTY</i>	8
<i>6. SAFETY</i>	8
<i>7. PHYSICAL</i>	9
<i>8. REAR PANEL</i>	11
<i>9. COVERAGE</i>	12
<i>10. WIRING</i>	14
<i>11. PROTECTION CIRCUITRY</i>	14
<i>12. ACCESSORIES AND CONFIGURATIONS</i>	15
<i>K-Base2</i>	15
<i>K-Fly2</i>	16
<i>K-Joint2</i>	16
<i>K-Wall2L</i>	17
<i>K-Wall2</i>	17
<i>K-KCluster2 / K-PCluster2</i>	18
<i>K-Foot2</i>	18
<i>K-KStage2 / K-PStage2</i>	19
<i>13. SERVICE</i>	19
<i>14. SPECIFICATIONS</i>	20

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!



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, wherever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Read the manual!



Warning! Dangerous voltages: RISK of electric shock.



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



This device complies with Restriction of Hazardous Substances Directive.

1. INTRODUCTION

The K-array Kobras are passive speaker systems, comprised of 2" neodymium magnet transducers housed in an elegant and sturdy stainless steel chassis. Available in two lengths, the KK52 features 8 drivers in a 0.5 m (19.7"), while the KK102 features 16 drivers a 1 m (39.4") chassis. The vertical dispersion pattern can be switched for wide or narrow coverage, allowing for a great variety of applications. The Kobra's closely spaced cone drivers provide phase coherence, low distortion and focused listening both up close and at a distance.

To accommodate a range of applications, the vertical dispersion pattern can be switched for either wide or narrow coverage. Optional rigging and linking accessories allow multiple speakers to be interconnected, creating a wide array of vertical and horizontal configurations for temporary or permanent installation.

For integration with other speakers or amplifiers, the KK52 and KK102 offer selectable impedance (16Ω/64Ω for the KK52 and 8Ω/32Ω for the KK102). Set to 64Ω up to eight KK52s can be powered via a single amplifier channel, simplifying installation of wider distributed installed systems.

Kobras are able to reproduce the entire vocal frequency range with excellent intelligibility, starting from 150 Hz. Integrating powered subwoofers from K-array's Redline series (KMT12, KMT18, KMT21) ensures excellent coverage of the entire musical frequency range.

K-array's KA amplifier series also features custom presets, optimized for use with the Kobra series.

All Kobra components are designed by K-array and custom-made under K-array's quality control system.

2. APPLICATIONS

- Theatres, Club, Churches
- Front fill and under-balcony fill
- Portable and installed AV systems
- Stage and AV studio monitoring

3. KEY FEATURES

- Unique performance-to-size ratio
- Vertical, Horizontal and 3D line-array applications
- Multiple 2" long-excursion full-range cone drivers
- Wide horizontal coverage
- Electronically protected
- Selectable impedance (KK52: 16 / 64 Ω, KK102: 8 / 32 Ω)
- Selectable vertical pattern (Spot / Flood)
- Weather proof, suitable for outdoor installations
- Available in black or white

4. 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 loudspeaker. If you find any damage, immediately notify the shipping company. Only the consignee may institute a claim procedure regarding the system's electronic equipment.

5. WARRANTY

K-array systems are warranted against manufacturing defects in materials or craftsmanship over a period of 2 years from the date of original purchase. During the warranty period K-array will, at its discretion, either repair or replace products which prove to be defective provided that the product is returned in its original packaging, shipping prepaid, to an authorized K-array service agent or distributor. K-array cannot be held responsible for defects caused by unauthorized modifications, improper use, negligence, exposure to inclement weather conditions, acts of God or accidents, or any use of this product that is not in accordance with the instructions provided by K-array. K-array is not liable for consequential damages. This warranty is exclusive and no other warranty is expressed or implied. This warranty does not affect your statutory rights.

6. SAFETY



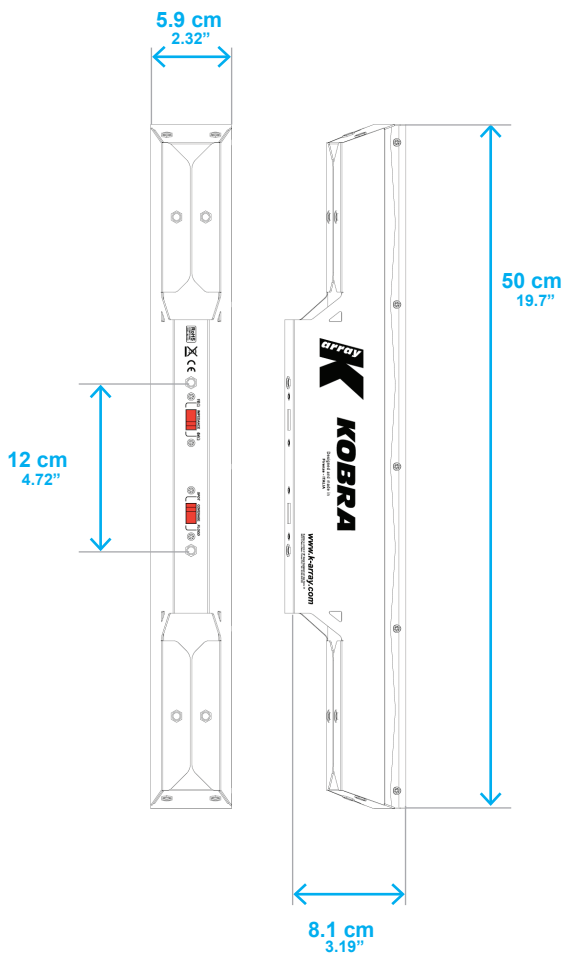
WARNING



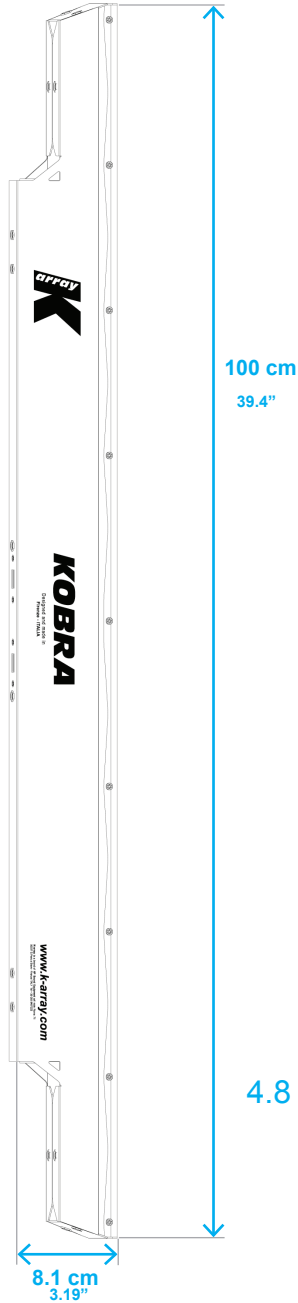
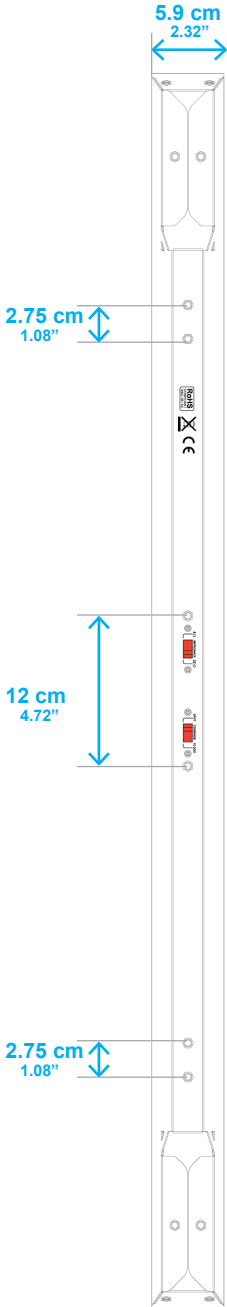
- Only install the speaker in a location that can structurally support the weight of the unit. Doing otherwise may result in the unit falling down and causing personal injury and property damage.
- Professional loudspeakers are capable of producing extremely high sound levels and should be used with care. Hearing loss is cumulative and can result from extended exposure to levels in excess of 90dB.
- Do not operate the speaker for an extended period of time with the sound distorting. This is an indication of malfunction, which can cause heat build-up and result in a fire.
- Never stand close to loudspeakers driven at high level.
- Suspending the system should only be done by qualified personnel, following safe rigging practices. Secure fixings to the building structure are vital. If there is any doubt, seek professional help from architects, structural engineers or other specialists.
- No open flame sources, such as lighted candles, should be placed near the device.
- Do not attempt to disassemble the unit. The unit contains no user serviceable parts. Repairs should be performed only by factory trained service personnel.

7. PHYSICAL

KK52

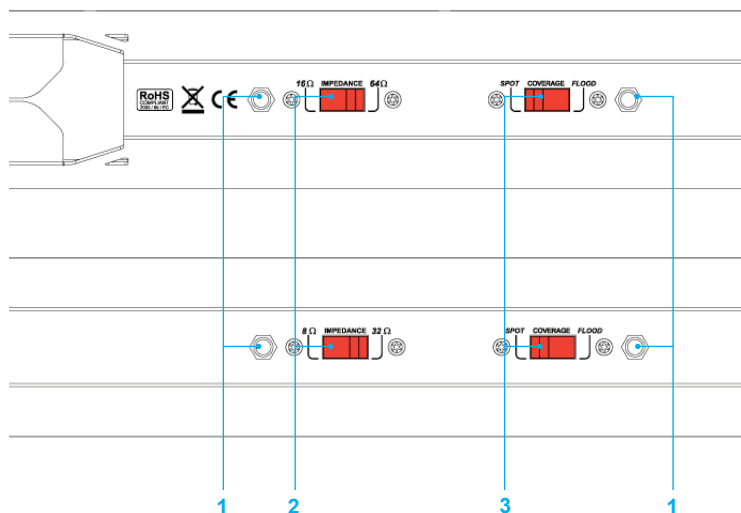


weight: 2.3 kg (5.07 lbs)



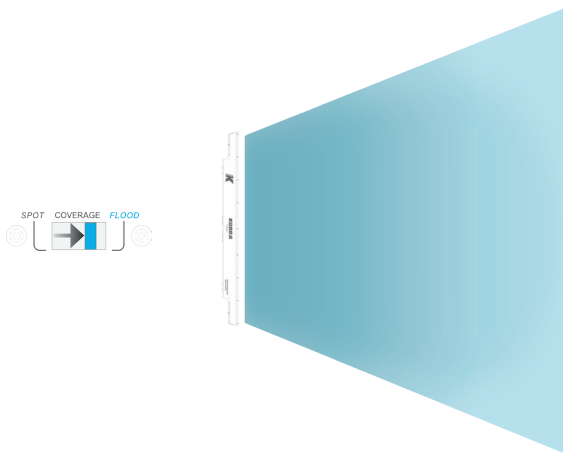
weight:
4.8 kg (10.58 lbs)

8. REAR PANEL



- 1) Mounting screw holes. Most K-array mounting or flying accessories are designed to screw into the speakers using these holes. The KK52 is equipped with two screw holes, while the KK102 is equipped with four.
- 2) Impedance switch. Selects the impedance of the speaker. Impedance must be set to high (64 Ω for KK52 and 32 Ω for KK102) when speakers are driven by KMT active modules. Low impedance may be used when speakers are driven by most KA series amplifiers (KA3, KA7, KA10). Please refer to your amplifier's specifications to select the correct speaker impedance for your configuration.
- 3) Coverage switch. Selects the vertical dispersion of the speaker. Flood coverage sets a wide vertical diffusion angle of 60° (KK52) / 35° (KK102). Flood coverage is suggested for single speakers in diffused ([image 1](#)) short throw applications, to obtain maximum diffusion with a minimum footprint. Spot coverage sets a narrower vertical diffusion angle of 10° (KK52) / 7° (KK102). Spot coverage is recommended for long throw or monitoring applications ([image 2](#)). In most multi-speaker applications, set coverage to Spot ([image 3](#)). A combination of Flood and Spot may also be effective for downfill applications ([image 4](#)).

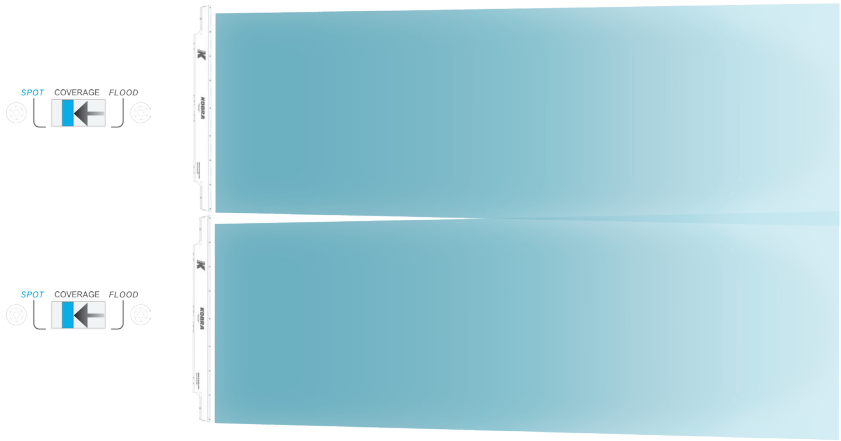
9. COVERAGE



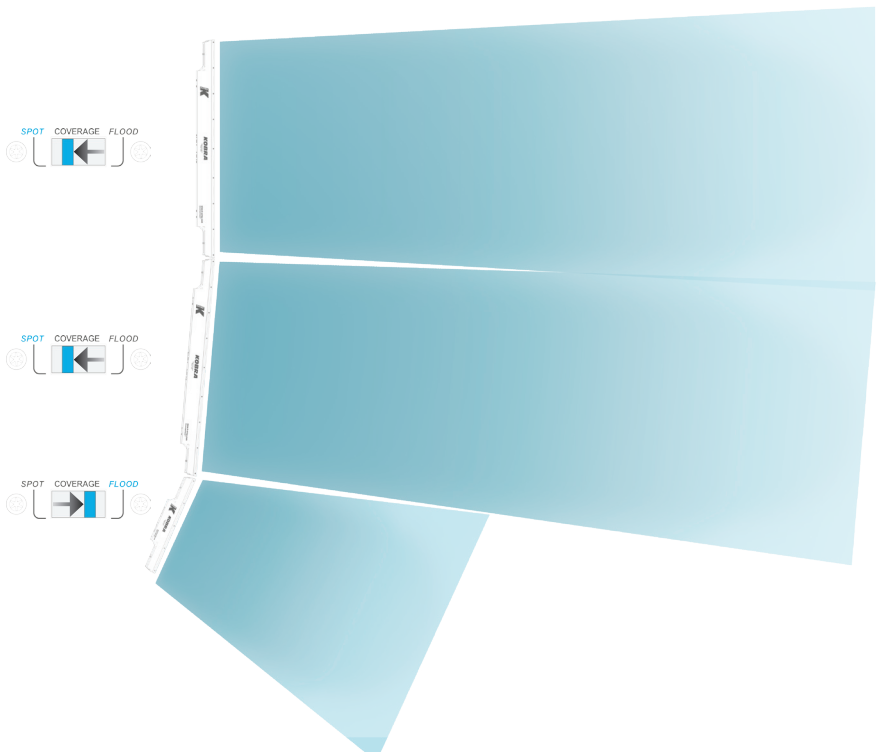
Img1: Flood coverage



Img2: Spot coverage

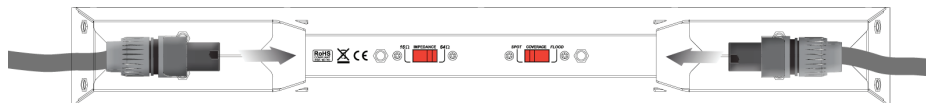


Img3: Array - spot coverage



Img4: Array - Downfill application

10. WIRING



Kobra KK52 and KK102 internal wiring is designed to pick up audio power signal from pins 1+ / 1- of a NL4 connector. 2+ and 2- pins, such as 1+ and 1-, are directly wired from one socket to the other, so signal can pass through multiple KK modules without additional external cabling.

11. PROTECTION CIRCUITRY

Speakers are electrically protected from brief power overloads, within a reasonable range. Overloading the speaker for extended periods of time can cause damage, so proper system design is strongly advised.

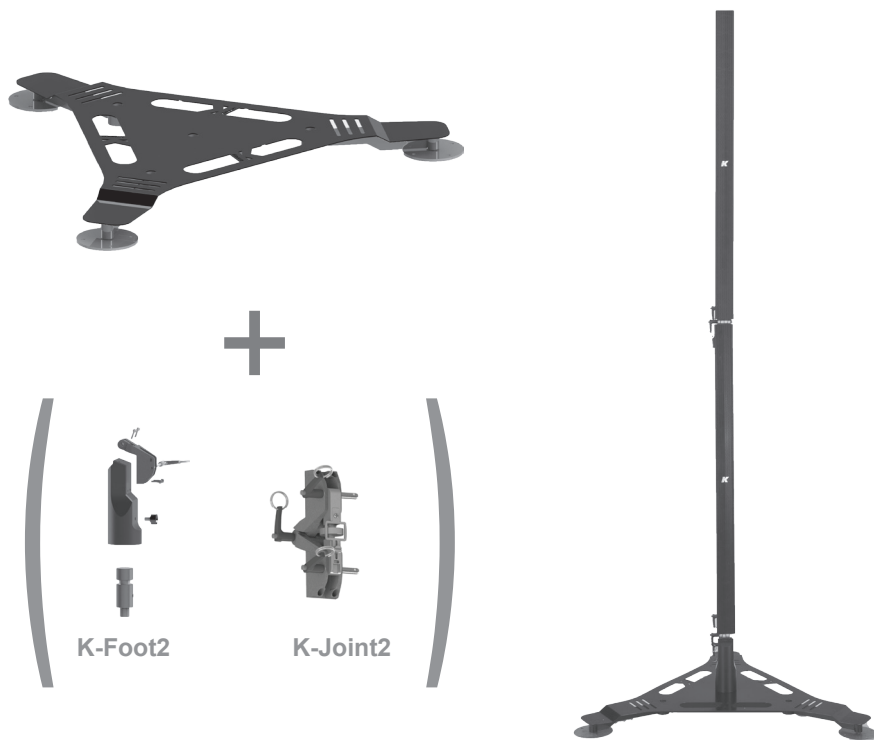
12. ACCESSORIES AND CONFIGURATIONS

K-array offers a variety of dedicated accessories to mount and interconnect KK (Kobra) and KP (Python) series speakers for a wide array of possible configurations.

K-Base2

Standing accessory for KK/KP speakers. For proper installation and operation, use with K-Foot2 and K-Joint2.

TIPS: where possible, screw the feet of K-Base2 to the ground.



WARNING

Before connecting KK/KP series speakers to a K-Base 2, check the stability of the ground where K-Base 2 is to be placed.

K-Base 2 should not be placed in a zone accessible to the audience.

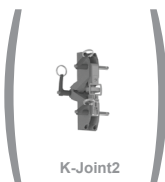
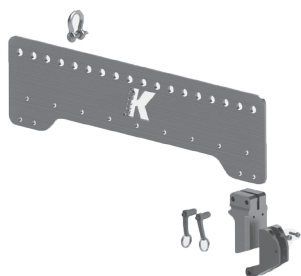
Take maximum precaution in highly windy locations, especially when screwing the K-Base2 to the ground is not possible.



K-Fly2

Flying accessory set for KK/KP speakers.

For proper installation and operation, use with K-Joint2.



WARNING

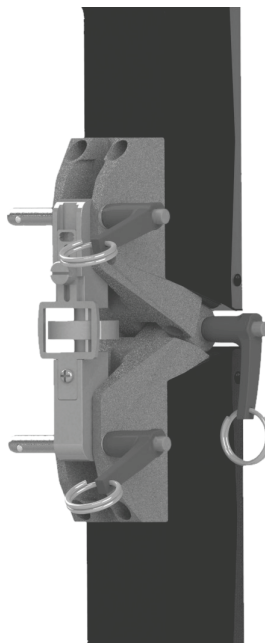
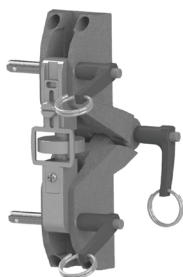


Consult the dedicated product manual for safety information and operation details.



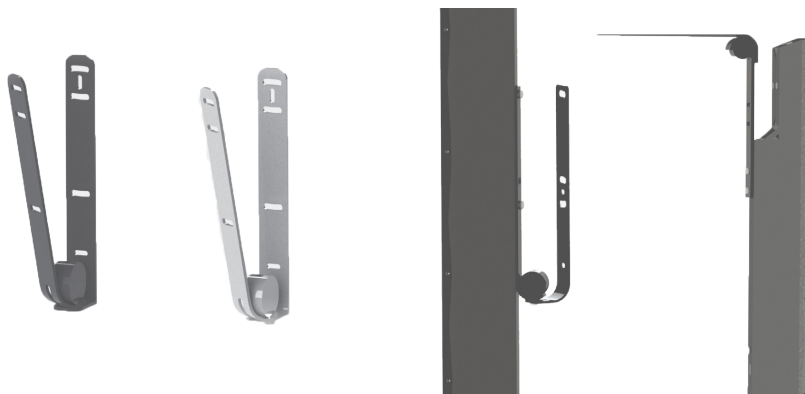
K-Joint2

Attachable joint to link a KK/KP speaker to most accessories or to another KK/KP speaker with continuously variable angle (-10° <...> 10°).



K-Wall2L

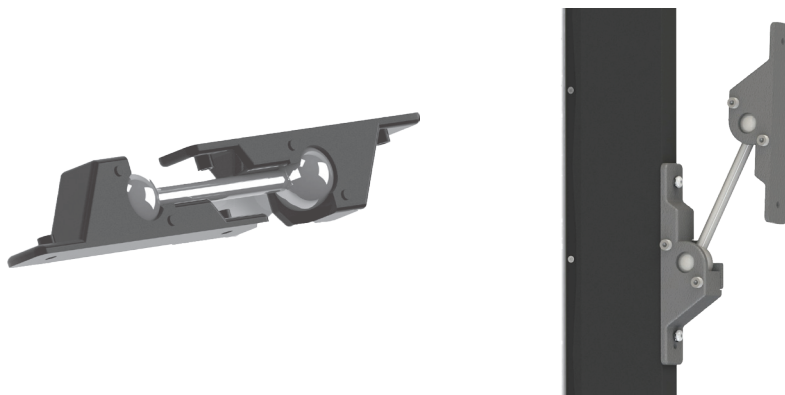
Wall / stand mounting accessory for KK/KP speakers with bi-dimensional tilting features.



K-Wall2L is designed to be screwed directly to the mounting screw holes of KK/KP speakers. When used with KK102 it can be screwed to the internal or the external screw holes depending on the width of the desired angle.

K-Wall2

Wall mounting accessory for KK/KP speakers with full 3-dimensional tilting features.

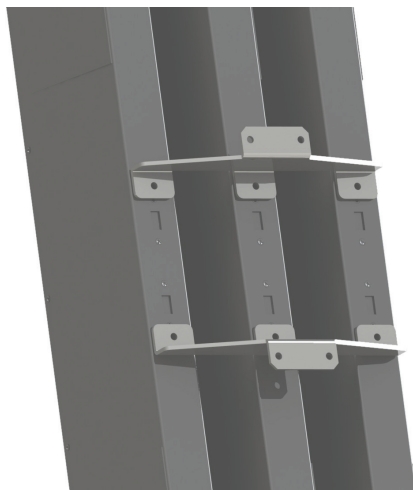
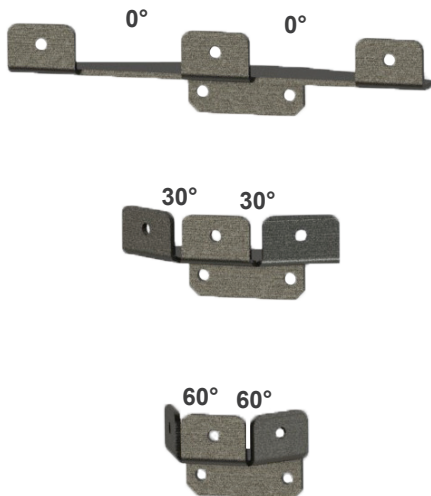


K-Wall2 is designed to be screwed directly to the mounting screw holes of KK/KP speakers. When used with KK102, the K-Wall2 can be screwed to either internal or external screw holes, depending on the width of the desired angle.

K-KCluster2 / K-PCluster2

Wall mounting accessory for a horizontal cluster of three KK52/102 speakers.

K-KCluster 2 / K-PCluster 2 comes in a set of three different models: one with no angle between the three hanging speakers, one with a 30° angle between speakers, one with a 60° angle between speakers.



K-Foot2

35 mm pole mounting accessory.

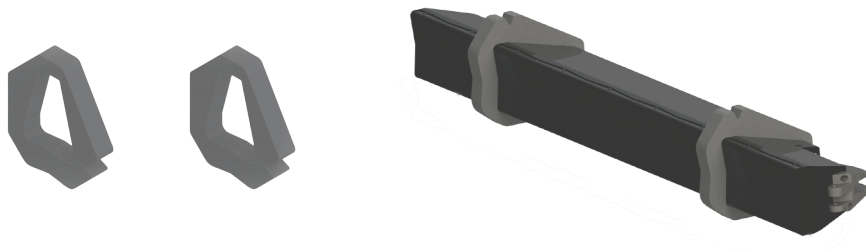
A 35 mm threaded pole is included for connecting additional K-array products such as KMT subwoofers or K-Base2.



K-KStage2 / K-PStage2

Ground laying accessories for KK/KP series speakers.

K-KStage 2 / K-PStage 2 allow users to safely lay KK / KP series speakers on the ground with three different angles: 0°, 30° and 45°. Ideal applications are monitoring and front-fill.



13. 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 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.

14. SPECIFICATIONS

	KK52
	Acoustics
Speakers power handling	200 W ^(AES)
Max power	400 W ¹
Impedance	16Ω or 64Ω (selectable)
Frequency range	150 Hz - 20 KHz.
SPL 1W / 1mt	95 dB ²
Maximum SPL	118 dB continuous - 124 dB peak
	Coverage
Horizontal	110°
Vertical	10°- 60° (selectable)
	Crossover
Type	External Crossover required
Frequency	High pass @150 Hz, 24 dB/oct suggested minimum
	Transducers
Full range	8 x 2" Neodymium magnet with 0.75" voice coil
	Power Audio Input
Connectors	2 x 4-pin Speakon
Wiring	1+ 1- (signal IN & LINK); 2+ 2- (through)
	Selection Switch
Vertical pattern	Spot - Flood
Impedance	16Ω - 64Ω
	Physical
Dimensions	8.1 x 50 x 5.9 cm (3.19" x 19.7" x 2.32")
Weight	2.3 kg (5.07 lbs)
	<p>1. Maximum RMS applicable power for a musical signal, the reference signal is the one proposed by EIAJ standard.</p> <p>2. Measured @4 mt then scaled @1 mt</p> <p>New materials and design are introduced into existing products without previous notice. Present systems may differ in some respects from those presented in this brochure.</p>

	KK102
	Acoustics
Speakers power handling	400 W ^(AES)
Max power	800 W ¹
Impedance	8Ω or 32Ω (selectable)
Frequency range	150 Hz - 20 KHz.
SPL 1W / 1mt	98 dB ²
Maximum SPL	124 dB continuous - 130 dB peak
	Coverage
Horizontal	110°
Vertical	7° - 35° (selectable)
	Crossover
Type	External Crossover required
Frequency	High pass @150 Hz, 24 dB/oct suggested minimum
	Transducers
Full range	16 x 2" Neodymium magnet with 0.75" voice coil
	Power Audio Input
Connectors	2 x 4-pin Speakon
Wiring	1+ 1- (signal IN & LINK); 2+ 2- (through)
	Selection Switch
Vertical pattern	Spot - Flood
Impedance	8Ω - 32Ω
	Physical
Dimensions	8.1 x 100 x 5.9 cm (3.19" x 39.4" x 2.32")
Weight	4,8 Kg (10.58 lbs)
	<p>1. Maximum RMS applicable power for a musical signal, the reference signal is the one proposed by EIAJ standard.</p> <p>2. Measured @4 mt then scaled @1 mt</p> <p>New materials and design are introduced into existing products without previous notice. Present systems may differ in some respects from those presented in this brochure.</p>

The contents of this manual are furnished for informational purposes only. Hp Sound Equipment s.r.l. assumes no responsibility for any errors or inaccuracies that may appear in this manual. Hp Sound Equipment s.r.l. reserves the right to make modifications without prior notice.



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