KRM33P

USER'S GUIDE

English

CONTENTS

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

Warning! Dangerous voltages: RISK of electric shock.
Terminals marked with this symbol are HAZARDOUS LIVE and the external wiring connected to these terminals requires installation by an instructed person 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 Restriction of Hazardous Substances Directive.

1. INTRODUCTION

The KRM33P or “the cheese box” as it has been affectionately nicknamed, is an ultra-compact and low-profile passive wedge speaker with a controlled horizontal pattern and has an extended frequency response. It is made up of three 3.15” cone drivers and one 6” passive radiator. This combination guarantees a controlled and linear emission on a really wide range, dedicated bass enhancement presets for K-array amplifiers allows to go from 70 Hz to 18 KHz.
The KRM33P is equipped with a switch to select the horizontal coverage, Spot or Flood, this can be used without changing the amplifier’s preset.
The controlled horizontal dispersion gives the possibility of creating horizontal arrays which increase the SPL and the coverage while maintaining a high and constant signal-before-feedback within all the cluster’s beams.
The stainless steel chassis is a sturdy and durable box solution which is also remarkably short in height. Thanks to this feature the KRM33P can be easily and discreetly integrated in scenography designs, broadcast studios as well as under-balcony speakers in theaters.
All the components of the Redline KRM33P are designed by the K-array R&D department and made in Italy under the K-array quality control system.

2. APPLICATIONS

- Selectable horizontal coverage
- Extended frequency response
- Strong stainless steel chassis
- Controlled horizontal dispersion

3. KEY FEATURES

- Arrayable wedge monitor
- Ceiling and under-balcony speaker
- Corporate installations
- House of worships
- Small clubs
- Theatrical sound reinforcement

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. SAFETY

WARNING

Read all safety information below and operating instructions before using this device to avoid injury.

SAFETY AND HANDLING INFORMATION

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

It is important that loudspeaker systems are used in a safe manner.

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. Over time you can adapt to a higher volume that may sound normal but can be damaging to your hearing. Hearing loss get worse every time you're exposed 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.

Keeping the Outside Clean. Handle the device with care to maintain its appearance. To clean it, unplug all cables and turn it off. Then use a soft, dry or slightly damp cloth. Don't use window cleaners, household cleaners, aerosol sprays, solvents, alcohol, ammonia, or abrasives to clean the device.

Carrying, Handling and Installing the device. The device contains sensitive components. Do not drop, disassemble, open, crush, bend, deform, puncture, shred, microwave, incinerate, paint, or insert foreign objects into it.

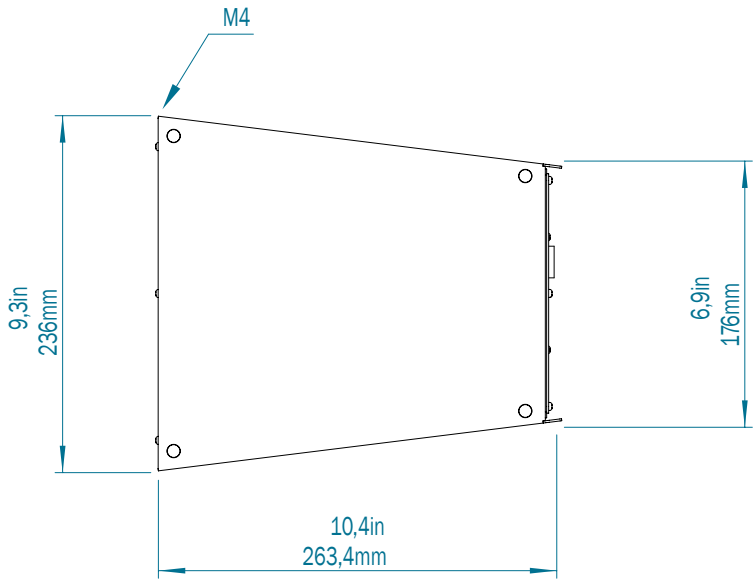
Do not operate speakers for an extended period of time with sound distortion. This is an indication of malfunction, which in turn can generate heat and result in a fire.
To reduce the risk of overheating , avoid installing it near heat emitting appliances, such as a room heater or stove.
No naked flame sources such as lighted candles should be placed near the device.
Operate the device in a place where the temperature is between -20°C and 50°C (-4°F to 122° F). Avoid dramatic changes in temperature or humidity when using it, as condensation may form on or within the device.
Set your device up on a stable surface. Install the unit only in a location that can structurally support the weight of the unit, far away from people who can interfere with the stability of the system. In case of outdoor installation, assure that the wind does not interfere with the system's stability, taking extra securities like any certified anchoring systems. Doing otherwise may result in the unit falling down, causing personal injury or property damage. 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.

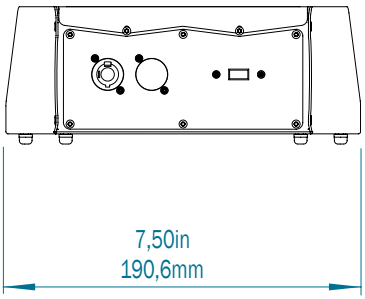
This audio system is not intended for use in nuclear facilities, aircraft navigation or communication systems, air traffic control systems,or for any other use where any malfunction or failure of the audio system could lead to death, personal injury, or sever environmental damage.

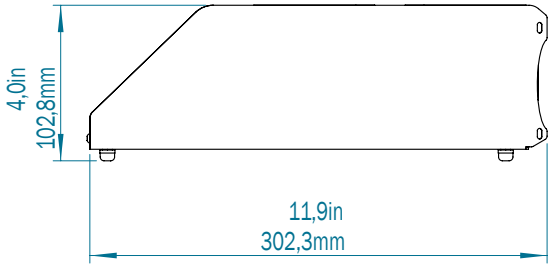
Do not make repairs yourself. Caution, risk of electric shock. Do not open the device, it contains potentially hazardous voltage. Never attempt to disassemble, repair or modify the system yourself.

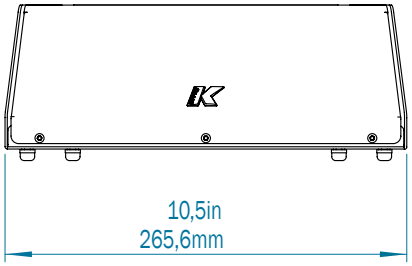
Disassembling the unit may cause damage that is not covered under the warranty. The device contains no user-serviceable parts. Repairs should only be performed by manufacturing trained service personnel. Do not connect the unit to an amplifier if you suspect that your device needs service or repair.

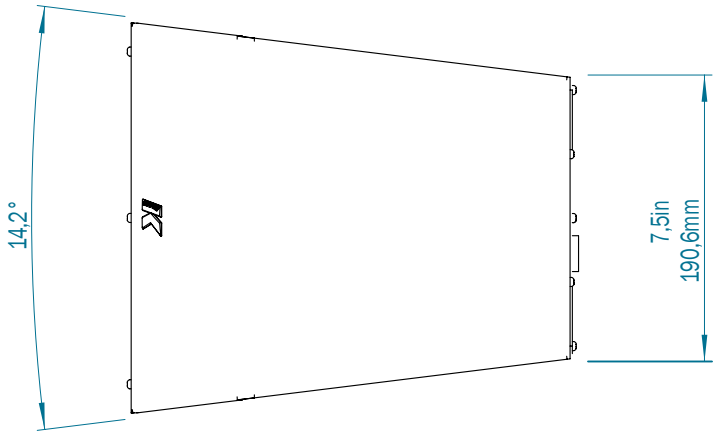
6. PHYSICAL





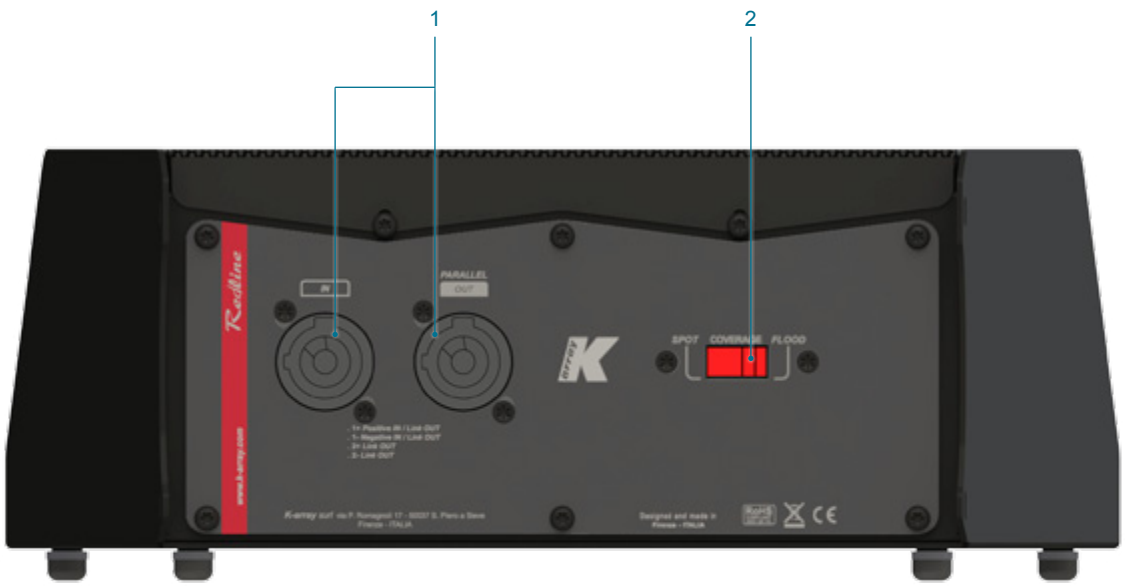






WEIGHT: 4.4 Kg
9,5 lb

7. REAR PANEL



img. 1

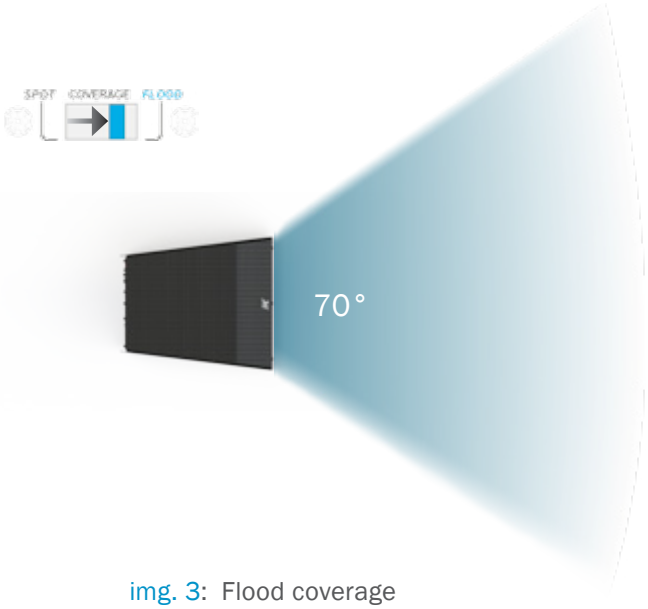
1) INPUT / PARALLEL OUT Speakon connectors. Each connector offers 2 channels of power audio signal. KMT12P and KMT18P internal wiring is designed to pick up audio power signal from pins 1+ / 1- of a NL4 connector. 2+ and 2- pins, just like 1+ and 1-, are directly wired from one socket to the other, so the signal can pass through multiple speaker modules without additional external cabling.

2) Coverage switch. Selects the horizontal dispersion of the speaker.

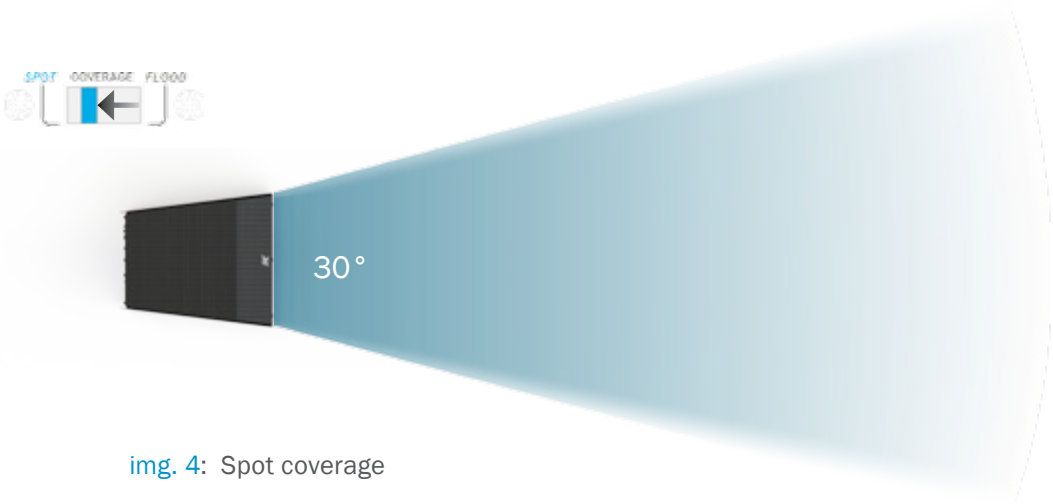
8. COVERAGE

KRM33P provides two different coverage settings in order to meet different operating needs.

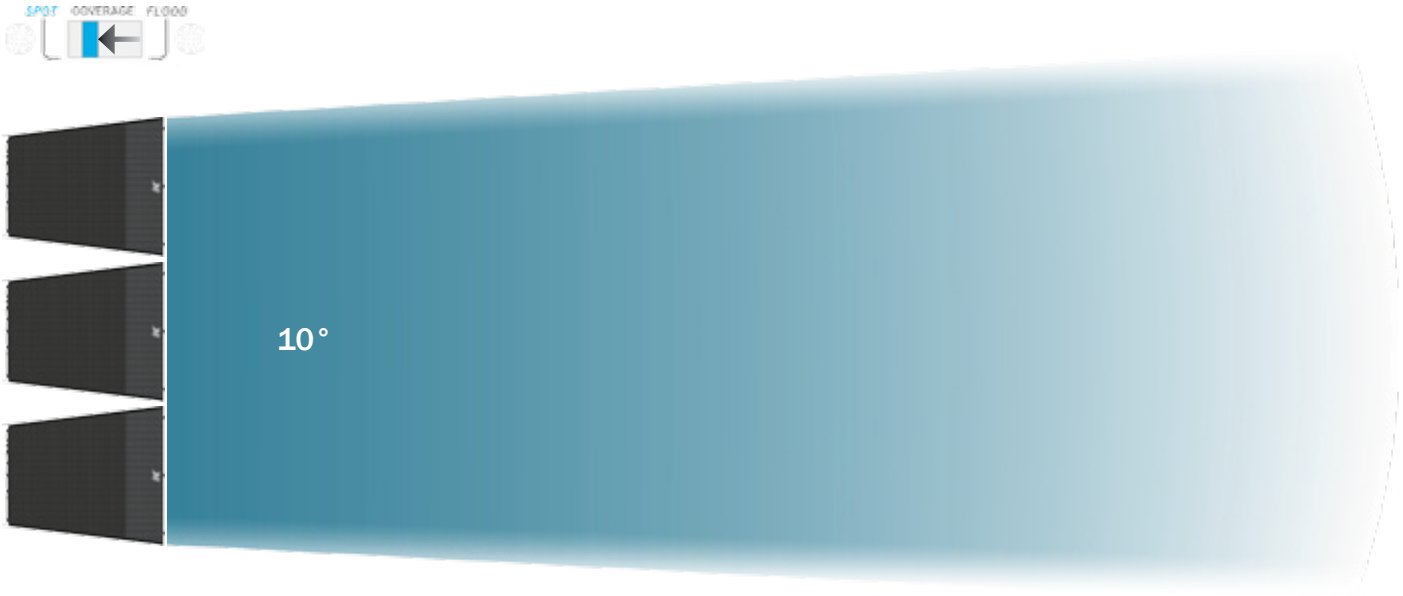
- Flood setting (70°) widens horizontal dispersion (img. 3) and is suggested for single speaker applications.
- Spot setting (30°) is suggested when a narrow coverage is needed (img. 4) and when KRM33 is used in array configuration with other KRM33Ps or KRM33s (img. 5 & 6).



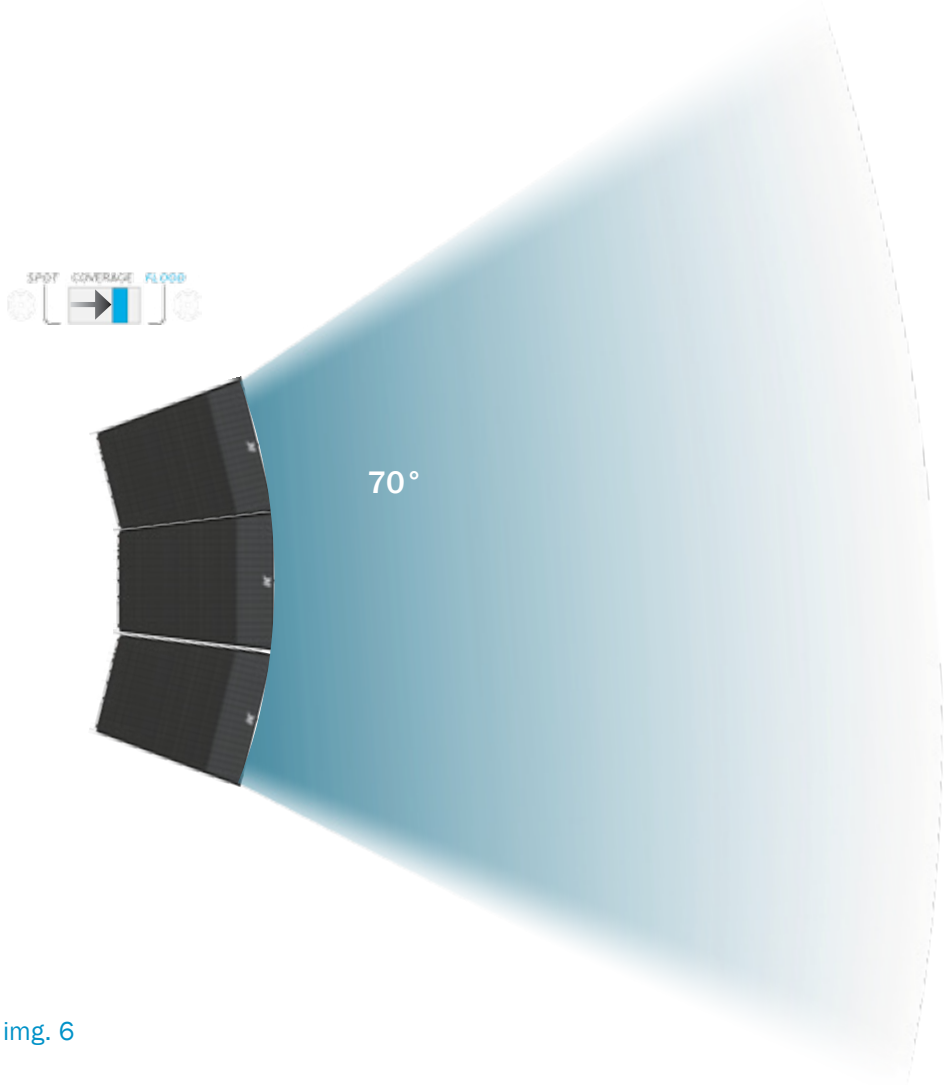
img. 3: Flood coverage



img. 4: Spot coverage



img. 5



img. 6

9. ACCESSORIES AND CONFIGURATIONS

K-R3WALL1

The K-R3WALL1 mounting accessory is designed to fasten KRM33 and KRM33P on walls and ceilings.

WARNING

Before connecting KRM33/KRM33P speakers to a K-3WALL1, check the stability of the surface where K-3WALL1 is to be fixed to.

The K-3WALL1 should not be placed in a zone accessible to the audience.

Please, read the K-3WALL1's user manual and follow the mounting instruction.

The KRM33, or KRM33P, can be installed as a ceiling speaker to create a PA system in low clearence rooms.

img. 7

The KRM33, or KRM33P, can be used on small and medium live stages as floor monitor. The controlled horizontal pattern allows to manage easily coverage and SPL for different needs.

img. 8

10. 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.

11. SPECIFICATIONS

Acoustics

Speaker power handling	180 W(AES)
Max power	300 W (1)
Impedance	8 Ω
Frequency range	70 Hz – 20 KHz (2)
SPL 1W/1mt	93 dB (3)
Maximum SPL	115 dB (cont.) – 121 dB (peak) (4)

Coverage

Horizontal	30° – 70° selectable
Vertical	90°

Crossover

Type	External cross over required
Frequency	High pass @ 70Hz, 24dB/oct suggested minimum

Transducers

Full-range	3 X 3,15” Neodymiun cone driver with 1” voice coil 1 X 6” passive radiator

Power Audio Input

Connectors	2 x 4-pin speakon
Wiring	1+ 1- (signal IN & LINK) 2+ 2- (Through)

Selection Switch

Horizontal pattern	Spot – Flood

Recommended Amplifiers

KA10, KA10-10

Certification

IP	55

Physical

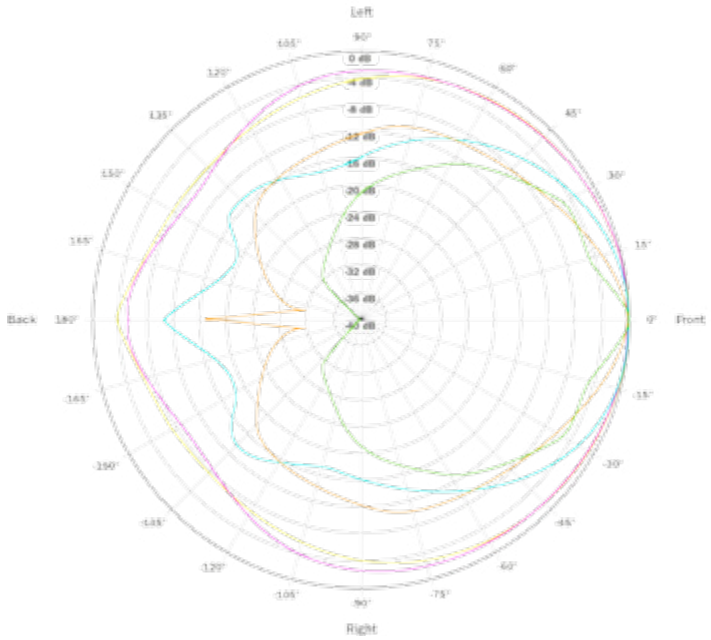
Dimensions	26.6 x 10.3 x 30.2 cm (10.47” x 4.06” x 11.89”)
Weight	4.4 Kg (9.5 lbs)

Notes for data

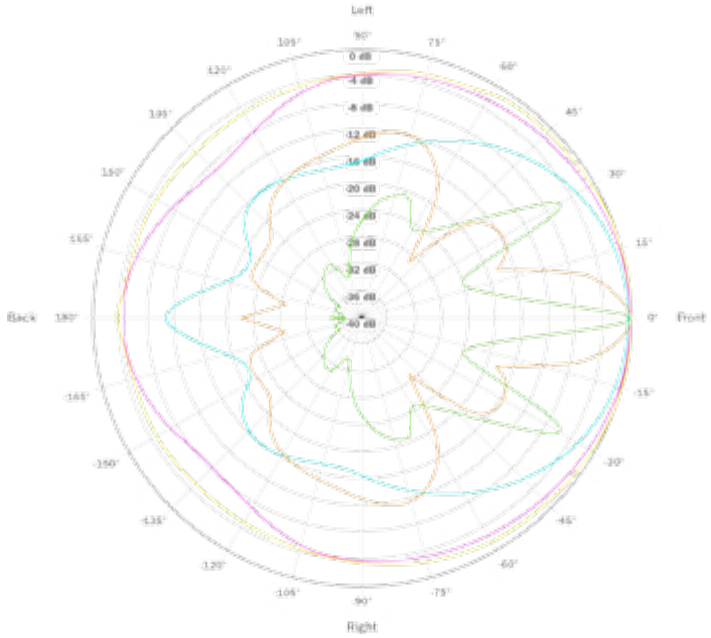
1. Maximum RMS applicable power for a musical signal. The reference signal is the one proposed by EIAJ standard;
2. With dedicated preset;
3. Mesured @8 m, then scaled @1 m;
4. Mesured with musical signal;

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.

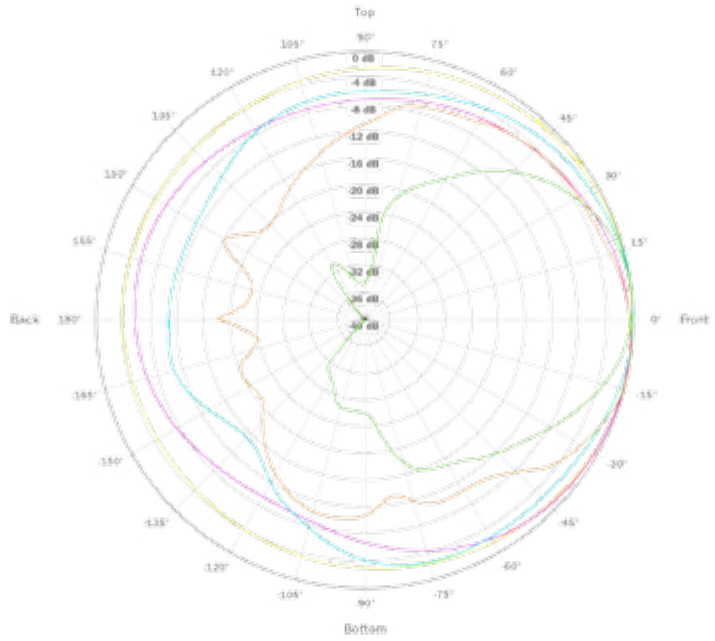
12. DISPERSION DIAGRAMS



Horizontal - Flood
- 8KHz
- 4KHz
- 1KHz
- 500Hz
- 250Hz



Horizontal - Spot
- 8KHz
- 4KHz
- 1KHz
- 500Hz
- 250Hz



Vertical
- 8KHz
- 4KHz
- 1KHz
- 500Hz
- 250Hz

13. DECLARATION OF CONFORMITY

Manufacturer/Importer: **K-array** s.u.r.l.

Brand:	**K-ARRAY**
Address:	via Paolina Romagnoli 17 50037 S. Piero a Sieve Firenze ITALY
Date of Issue:	10 / 01 / 2013
Model Code:	**KRM33P**

2004/108/EC on the approximation of the Laws of the Member States relating to electromagnetic compatibility.

This declaration applies to all specimens manufactured in accordance with the attached manufacturing drawings which form part of this declaration. Assessment of compliance of the product with the requirements relating to electromagnetic compatibility and low voltage directive was based on the following standards:

EMC:

EN55103-1 2009
EN55103-2 2009

Marking: CE

Applying Year: **2013**

Applied by: **K-array** s.u.r.l.
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Signed by: **Franco Spataro**
Technical Manager

K-array s.r.l. unipersonale

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