

Capture-KMC50

USER GUIDE

50-cm-line array microphone
with Pure Array Technology



K-ARRAY
Unique Audio Solutions

Index

Unpacking	4	Mechanical Drawings	12
Getting Started	5	Capture-KMC50	12
Single unit	5	K-FLYM5 flybar	13
Multiple units	5	KMC50-JOINT	13
Assembling	6	K-PREMC01 preamplifier	13
Single-unit microphone assembly	6	K-PREMC02 preamplifier	14
Multiple-unit microphone assembly	7	Technical Specifications	15
Connecting	9	Vertical Polar Pattern	15
XLR power connector assembly	10	Horizontal Polar Pattern	15
Service	12		
Cleaning	12		

Capture-KMC50

User Guide

IMPORTANT SAFETY INSTRUCTIONS

Read these instructions - Keep these instructions
Heed all warnings



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

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



Switch-off the mains power supply before carrying out any connection or maintenance operations.

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.



The lightning 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.



This device complies with Restriction of Hazardous Substances Directive.

General heed and warnings

- Read these instructions.
- Keep this instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Only use attachments/accessories specified by the manufacturer.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- This microphone is intended for professional use.
- Before connecting the microphone to other devices, turn off any power supply or phantom power.
- In order to operate the microphone, the unit must be connected to a dedicated preamplifier and a power supply or the P48 phantom power must be present, according to the actual microphone configuration.
- Use only microphone cables for connecting the microphone to audio device.
- Be sure to observe the microphone load impedance recommendation.
- 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.
- K-array will not shoulder any responsibilities for products modified without prior authorization.
- K-array cannot be held responsible for damage caused by improper use of the microphone and its accessories.

Thank you for choosing this K-array product!

To ensure proper operation, please carefully read this owner's manual and safety instructions before using the product. 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.

Composed of 16 x 6 mm electret condenser cardioid capsules aligned in a line array configuration, the KMC50 has been designed for voice and instrument amplification as well as for capturing environmental sound with the precision of a perfect directive microphone.

Thanks to the Pure Array Technology, the KMC50 polar response is cardioid in the horizontal plane and very narrow in the vertical plan, which allows for a precise and clean concentration of the signal capture.

Achieving higher directivity with the Capture-KMC50 by linking up to 4 units to create an impressive continuous steerable array allows users to explore new microphone techniques and applications.

Capture-KMC50

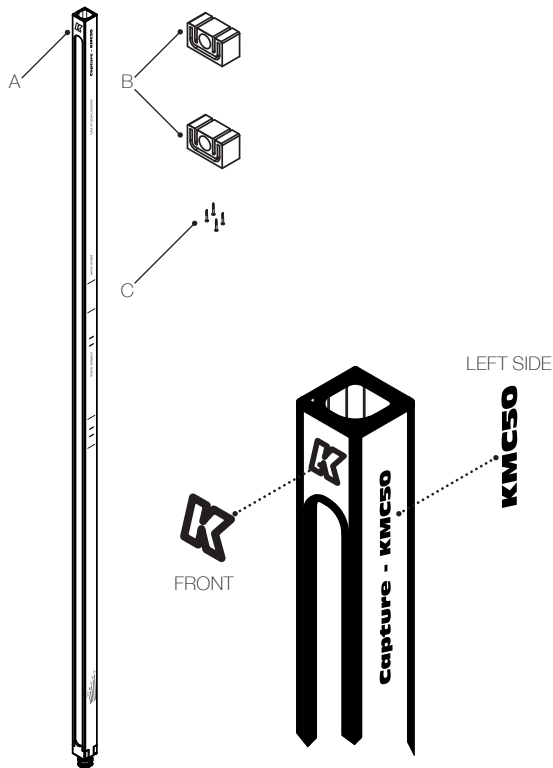
User Guide

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. If you find any damage, immediately notify the shipping company. Check that the following parts are supplied within the package:

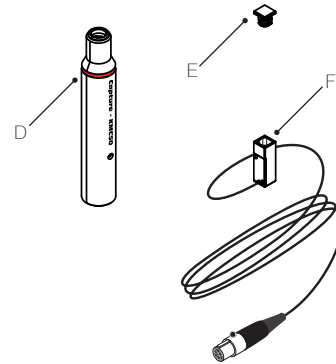
Capture-KMC50 Microphone basic kit

- A. 1x Capture-KMC50 line array microphone
- B. 2x Foam brackets
- C. 4x Screws



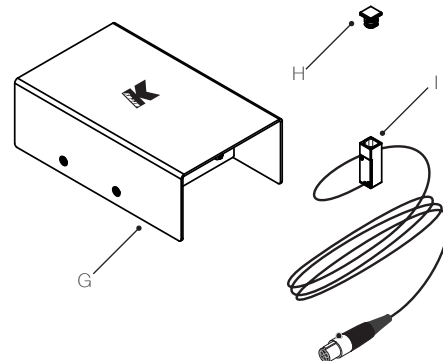
K-PREMC01 single unit preamplifier kit

- D. 1x K-PREMC01 single unit preamplifier
- E. 1x KMC50 top cap
- F. 1x KMC50 female adapter with cable and MiniXLR connector



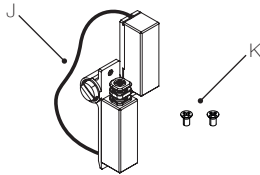
K-PREMC02 multiple units preamplifier kit

- G. 1x K-PREMC02 multiple units preamplifier
- H. 1x KMC50 top cap
- I. 1x KMC50 female adapter with cable and MiniXLR connector



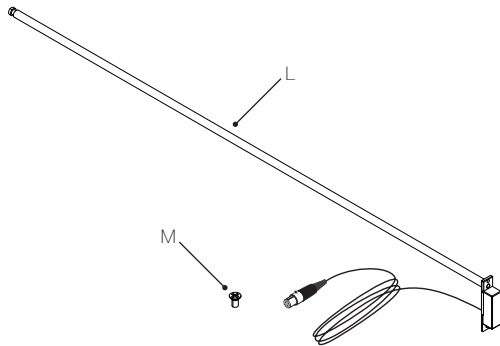
KMC50-JOINT multiple unit connection hardware

- J. 1x KMC50-JOINT accessory
- K. 2x M2 screws



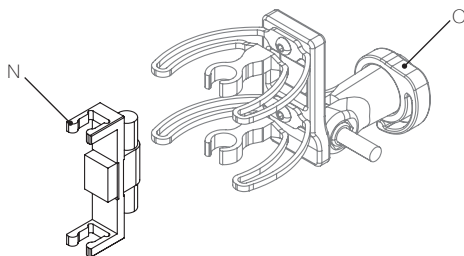
K-FLYM5 flybar for suspending and aiming microphone arrays

- L. 1x K-FLY5 flybar with cable and MiniXLR connector
- M. 1x M2 screw



K-BRK50 bracket compatible with Rycote InVision INV-1 adapter (not provided)

- N. 1x K-BRK50 bracket
- O. Rycote InVision INV-1 adapter (NOT INCLUDED)



K-WIND150 Rycote accessory for maximum isolation from wind and handling noise.

Getting Started

Unpack the Capture-KMC50 microphone and its accessory kits. A preamplifier kit is required! Select either the K-PREMC01 or the K-PREMC02 preamplifier kit according to the number of microphone units and the configuration you want to make.

Single unit

1. Assemble the Capture-KMC50 microphone and the female adapter with cable and MiniXLR connector supplied in the K-PREMC01 preamplifier kit (see [Single-unit microphone assembly, page 6](#)).
2. Plug the top cap on the Capture-KMC50 microphone.
3. Connect the MiniXLR connector to the K-PREMC01 single unit preamplifier.
4. According to the type of application:
 - Stand mounting applications: mount the K-BRK50 bracket on the Capture-KMC50 microphone assembly and set it on the Rycote InVision INV-1 adapter.
 - Surface mounting applications: slip the Capture-KMC50 microphone on the foam brackets: four screws are provided for fixing the foams to the surface.
5. Plug the microphone to the input device and switch on the Phantom power (see [Connecting, page 9](#)).

Multiple units

1. Assemble the Capture-KMC50 microphones and the KMC50-JOINT according to the desired array configuration (see [Multiple-unit microphone assembly, page 7](#)).
2. According to the type of application:
 - Custom bracketing: plug the female adapter with cable and MiniXLR connector supplied in the K-PREMC02 preamplifier kit to one end of the Capture-KMC50 microphone line array.
 - Suspended microphone line array: plug the K-FLYM5 flybar to one end of the Capture-KMC50 microphone line array.
3. Plug the microphone cap on the opposite end of the Capture-KMC50 microphone array.
4. Connect the MiniXLR connector to the K-PREMC02 preamplifier.
5. Connect a reliable 5 V 500 mA power supply to the K-PREMC02 preamplifier (see [Connecting, page 9](#)).
6. Plug the K-PREMC02 microphone preamplifier to the input device and switch on the Phantom power.

Capture-KMC50

User Guide

Assembling

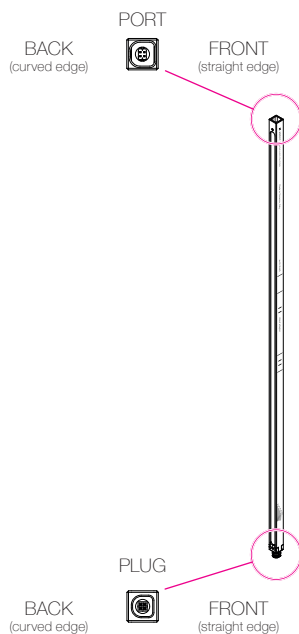
In order to operate the Capture-KMC50, the microphone and the proper preamplifier kit – either the K-PREMC01 or the K-PREMC02 – must be assembled.

Single-unit microphone assembly

The K-PREMC01 preamplifier is designed to drive a single Capture-KMC50 microphone unit.

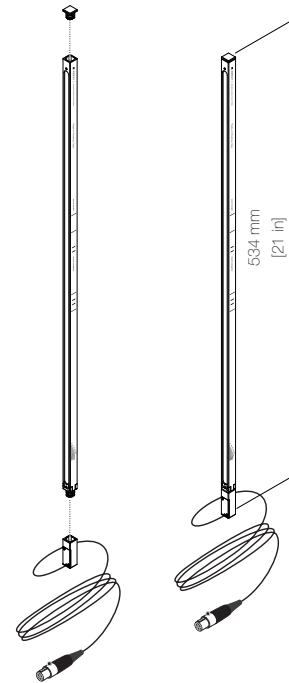
The K-PREMC01 single unit preamplifier kit comprises the top cap and the bottom adapter with cable and MiniXLR connector. Follows the images below to assemble the microphone.

- 1 The connectors on top and at the bottom of the microphone are shaped according to the unit orientation.



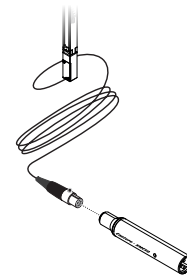
2

- 2 Set the microphone cap and the adapter with cable at the opposite ends of the unit.



3

- 3 Plug the miniXLR connector to the K-PREMC01 preamplifier.

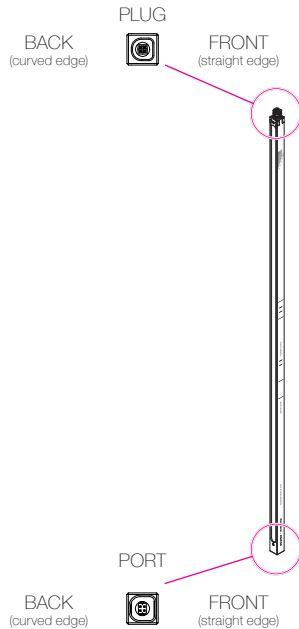


Multiple-unit microphone assembly

The K-PREMC02 preamplifier is designed to drive up to 4 (four) Capture-KMC50 microphone units in line array arrangement. The KMC50-JOINT accessory is needed to joint multiple microphone units.

The optional K-FLYM5 flybar is available for ease the aiming of the microphone array.

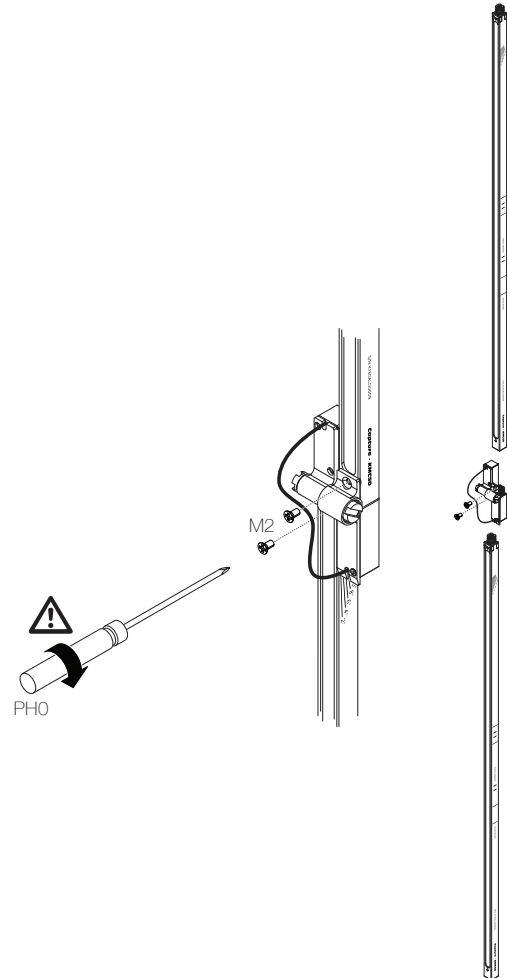
- 1 The connectors on top and at the bottom of the microphones are shaped according to the unit orientation.



In order to plug the first unit to the K-FLYM5 flybar, the Capture-KMC50 microphone shall be oriented upside-down with the plug connector on top.

2

- 2 Connect two microphone units to the KMC50-JOINT accessory and gently tighten the 2x M2 screws.

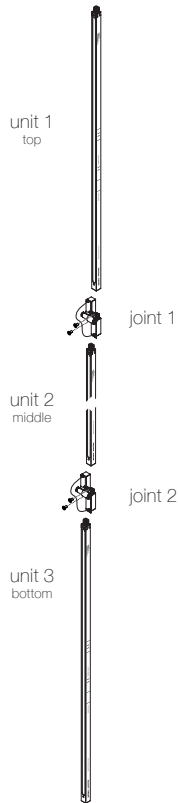


Capture-KMC50

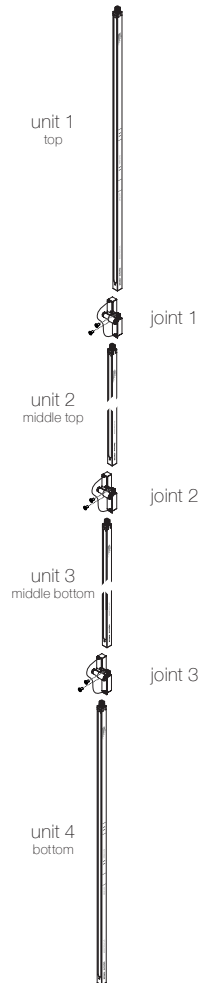
User Guide

- 2bis** It is possible to connect up to 4 (four) Capture-KMC50 units using 3x KMC50-JOINT accessories achieving a maximum of 2-meter-long (6.5 ft) steerable microphone line array.

1,5 m (5 ft)
microphone line array
(3x Capture-KMC50 units)

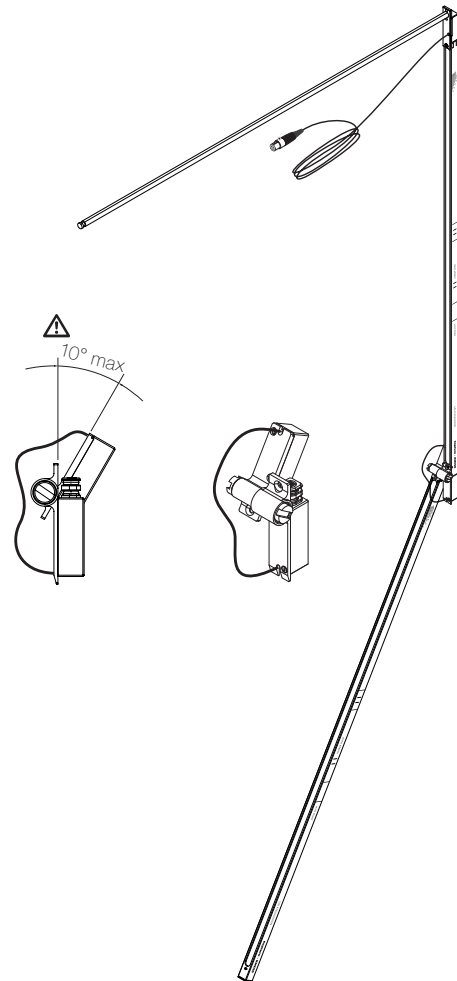


2 m (6.5 ft) max extension
microphone line array
(4x Capture-KMC50 units)



- 3** Place the cap at the bottom unit and connect the microphone line array assembly to the K-FLYM5 flybar. Gently tighten the flybar M2 screw to secure the assembly.

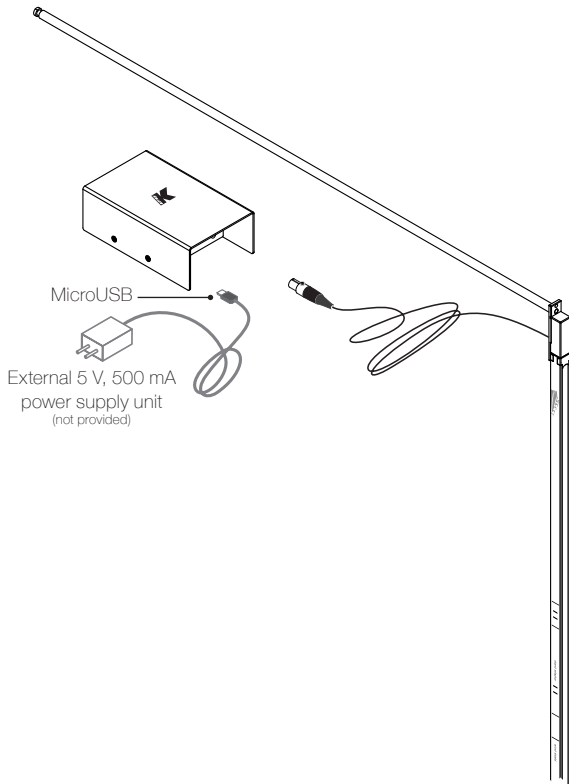
You can possibly angle the joint in order to achieve the desired microphone array pick-up coverage.



- 4** Connect the MiniXLR to the K-PREMC02 preamplifier.



Use only the K-PREMC02 preamplifier for powering multiple microphone units.



A further 5V_{DC} 500mA power supply unit (not provided) is needed to guarantee proper microphone operating.

Connecting

The Capture-KMC50 microphone needs the 48V phantom power supply.

When the phantom power is supplied, the LED on the K-PREMC01 preamplifier lights up.

When more than one Capture-KMC50 microphone unit is employed in line array configuration, the K-PREMC02 preamplifier must be used AND a further DC power supply must be connected to the K-PREMC02 preamplifier.



Use only high quality 5V_{DC}, 500mA power supply for guarantee pristine audio.



K-array assumes no liability for any damage caused by a defective power supply.

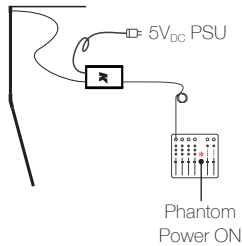
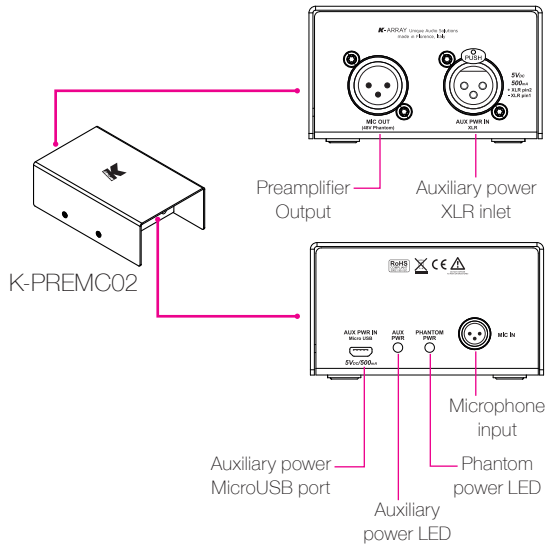


Always mute the sound reinforcement system before switching on the power supplies

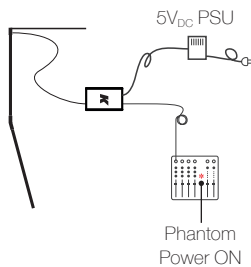
The auxiliary DC power supply can be connected to the K-PREMC02 preamplifier either via a MicroUSB connector or using a XLR connector.

Capture-KMC50

User Guide



K-PREMC02 powered via the MicroUSB



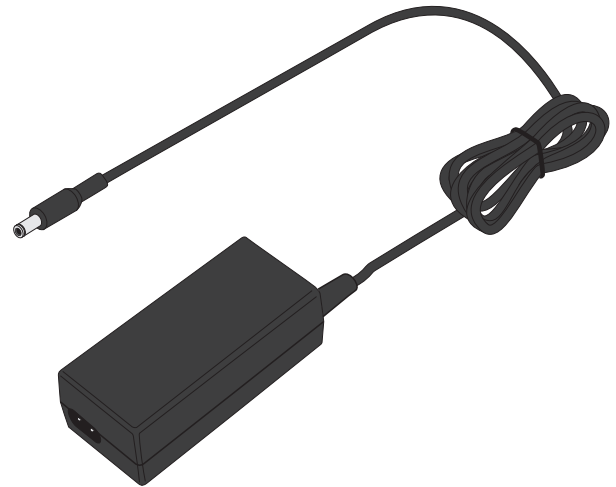
K-PREMC02 powered via the XLR connector

XLR power connector assembly

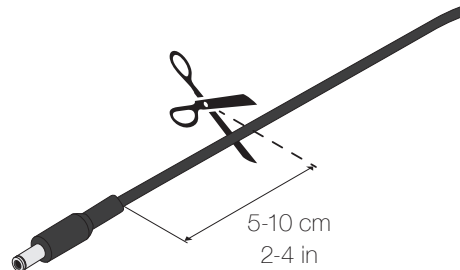
Needed materials (not provided by K-array):

- 1x 5V_{DC} 500mA power supply (e.g. Meanwell GE12105-P1J)
- 1x XLR 3-M connector
- Tools and soldering station

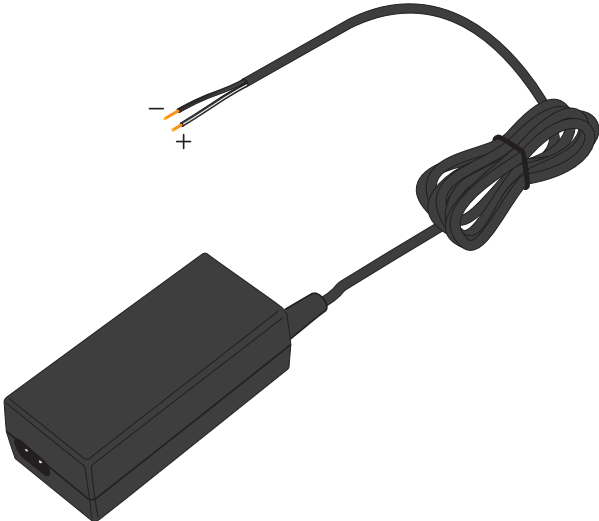
- 1 Disconnect the power supply from any power source and wait at least one minute before making any modifications to the DC connector.



- 2 Cut away the DC connector.

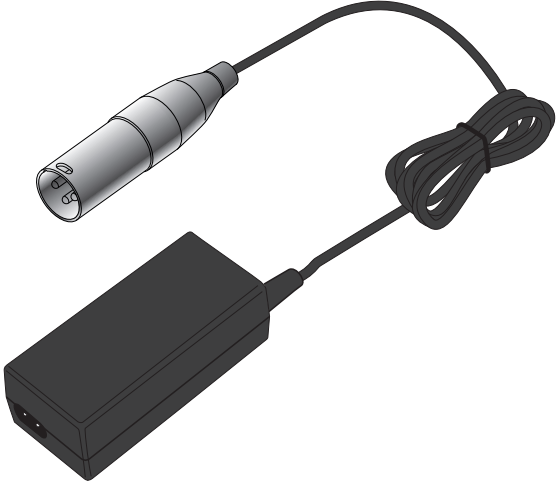


3 Cut away the rubber and reveal the internal leads. Identify the positive lead: usually a white line is drawn on the lead carrying the positive voltage.

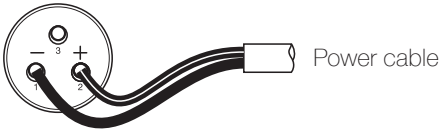


4 Solder the leads to the contacts 1 (-) and 2 (+) of the XLR 3-M connector as show below:

XLR connector	Power cable
pin 1	Negative
pin 2	Positive +5V _{DC}
pin 3	not connected
chassis	not connected



XLR connector rear side



Capture-KMC50

User Guide

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 online 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.

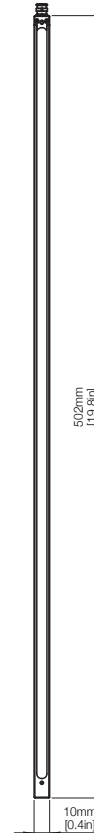
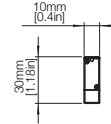
Any attempt to modify or replace components of the device will invalidate your warranty. Service must be performed by an authorized K-array service center.

Cleaning

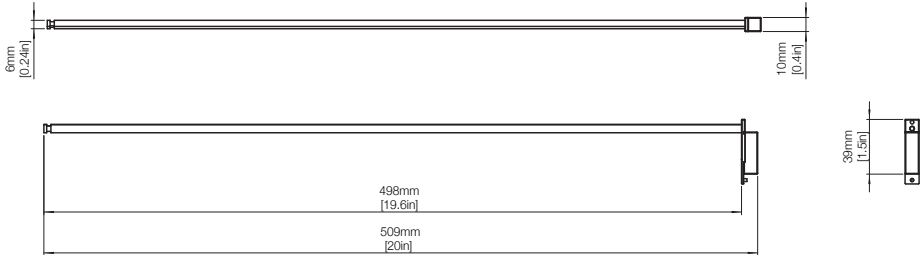
Use only a soft, dry cloth to clean the housing. Do not use any solvents, chemicals, or cleaning solutions containing alcohol, ammonia, or abrasives. Do not use any sprays near the product or allow liquids to spill into any openings.

Mechanical Drawings

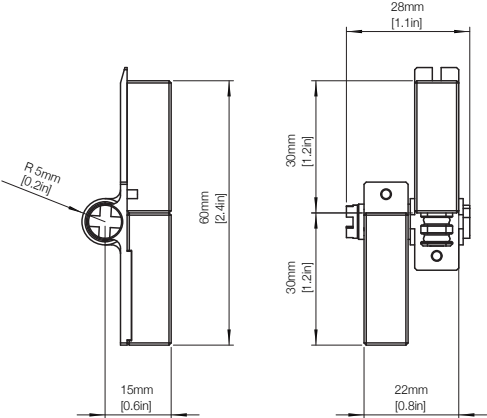
Capture-KMC50



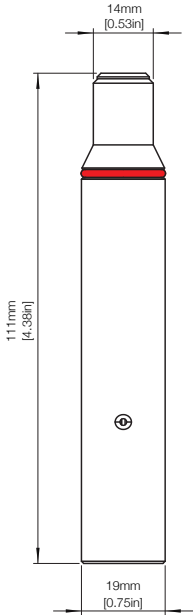
K-FLYM5 flybar



KMC50-JOINT



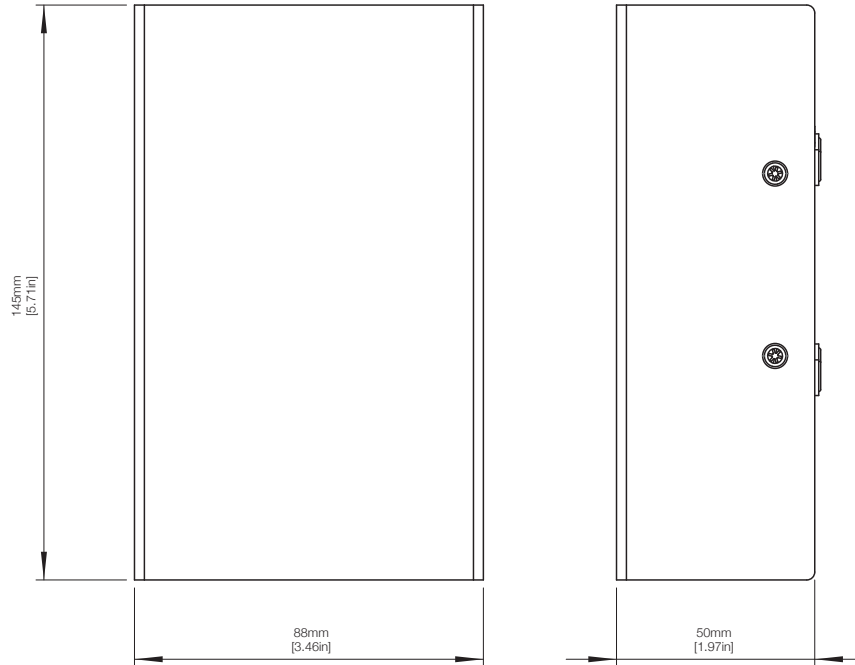
K-PREMC01 preamplifier



Capture-KMC50

User Guide

K-PREMC02 preamplifier



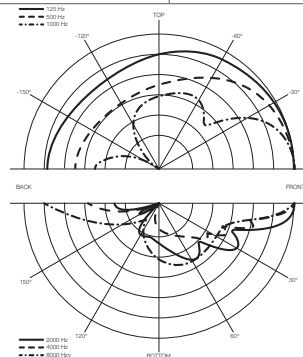
Technical Specifications

General	
Type	Line array microphone
Capsule	16 x 6mm electret condenser
Frequency Response	55 – 20000 Hz
Sensitivity	-32 dBV (1kHz @ 94 dB SPL)
Maximum SPL	110 dB SPL (1 kHz, 10% THD)
Signal to Noise Ratio	57 dB (1 kHz, A-weighted)
Connector	XLR-M
Polar pattern	Cardioid line array

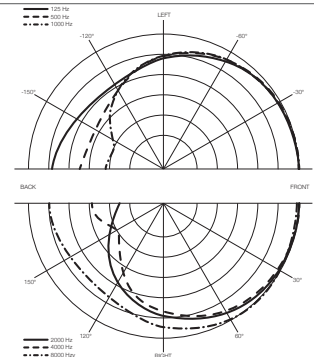
Power supply	
Preamplifier	Single unit: wired preamplifier Multiple units: preamplifier box requiring external 5 V _{DC} 500 mA power supply
Phantom Supply Voltage	36 to 52 V _{DC} , (+) pins 2 and 3

Handling and Finish	
IP Rating	IP54
Dimensions (WxHxD) & Weight	10 x 10 x 510 mm (0.39 x 0.39 x 20 in)
Weight	0.080 kg (0.176 lb)
Finish	Ruthenium-plated Aluminum

Vertical Polar Pattern



Horizontal Polar Pattern



Capture-KMC50

User Guide

This page left intentionally blank



Designed and Made in Italy

K-ARRAY surl
Via P. Romagnoli 17 | 50038 Scarperia e San Piero - Firenze - Italy
ph +39 055 84 87 222 | info@k-array.com

www.k-array.com