



I N S T R U C T I O N M A N U A L

KWM Quartet

Wireless microphone system

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Professional UHF wireless system
with 4 x USB rechargeable handheld microphones

Due to continuous product development, please ensure that you have downloaded the latest instruction manual for this product from the Kam website at www.kam.co.uk

For the latest instruction manual updates and information on the entire Kam range visit:

www.kam.co.uk

Kam products are manufactured by: **Lamba plc**, Unit 1, Southfields Road, Dunstable, Bedfordshire, United Kingdom LU6 3EJ
Telephone: (+44) (0)1582 690600 • Fax: (+44) (0)1582 690400 • Email: mail@lambapl.com • Web: www.lambapl.com

If this product is ever no longer functional please take it to a recycling plant for environmentally friendly disposal.

Due to continuous product development, specifications and appearance are subject to change. © Copyright Lamba plc. E&OE.

Thank you for purchasing this Kam product, we are sure that it will serve you for many years to come.

To optimise the performance of this product, please read these operating instructions carefully to familiarise yourself with the basic operations of this unit. Please retain them for future reference. This unit has been tested at the factory before being shipped to you.

To prevent or reduce the risk of electrical shock or fire, do not expose the unit to rain or moisture. To prevent a fire hazard, do not expose the unit to any naked flame sources. Unplug this apparatus during lightning storms or if it is unlikely to be used for long periods of time.

When installing the unit, please ensure you leave enough space around the unit for ventilation. Slots and openings in the unit are provided for ventilation to ensure reliable operation of the product and to protect it from overheating. To prevent fire hazard, the openings should never be blocked or covered.

If the unit is powered by the mains, always handle the power cable by the plug. Never pull out the plug by pulling on the cable. Never touch the power cable when your hands are wet as this could cause an electric shock. Do not tie a knot in the cable. The power cable should be placed such that it is not likely to be stepped on. A damaged power cable can cause a fire or give you an electrical shock. Check the power cord periodically, if you ever find that it is damaged, replace it before using the unit again. Contact your retailer for a replacement.

The voltage of the available power supply differs according to country or region. Be sure that the power supply voltage of the area where this unit is to be used meets the required written on the unit.

The lightning flash symbol inside a triangle is to alert the user to the presence high voltage within the unit's enclosure that may be of sufficient power to constitute a risk of electrical shock to persons.

Caution: to prevent the risk of electric shock, do not attempt to open the unit. No user-serviceable parts inside. Refer all servicing to qualified service personnel.

The exclamation mark inside a triangle is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying the appliance.

Select the installation location of your unit carefully. Avoid placing it in direct sunlight or locations subject to vibration and excessive dust. Do not use the unit where there are extremes in temperature (below 41°F / 5°C or exceeding 95°F / 35°C).

Unpacking and safety Please unpack your new product carefully. Your new product should reach you in perfect condition. Please check that no damage has occurred during transit. If any damage is found, do not operate your unit. Please contact the retailer you purchased it from immediately. If there is any damage to the mains cable do not use the device. Always disconnect the unit from the mains supply when carrying out any cleaning of the unit.

Manufacturer declarations



In compliance with the following requirements: **RoHS Directive (2002/95/EU)** and **WEEE Directive (2002/96/EU)**, and **Battery Directive (2006/66/EU)**. If this product is ever no longer functional please take it to a recycling plant for environmentally friendly disposal. Any supplied batteries can also be recycled.

CE declaration of conformity

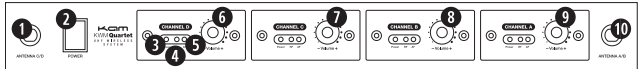
R&TTE Directive (1999/5/EU), EMC Directive (2004/108/EU), Low Voltage Directive (2006/95/EU).

The declarations are available on application from certification@lambapl.com

Before putting the devices into operation, please observe the respective country-specific regulations.

Features of the KWM Quartet receiver (front)

1. Antenna socket (channels C & D)
2. Power switch
3. Channel D power Indicator
4. Channel D radio frequency indicator
5. Channel D signal level indicator
6. Channel D volume control
7. Channel C volume control
8. Channel B volume control
9. Channel A volume control
10. Antenna socket (channels A & B)



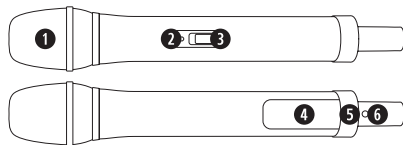
Features of the KWM Quartet receiver (rear)

1. Channel A output - balanced XLR
2. Channel B output - balanced XLR
3. Channel C output - balanced XLR
4. Channel D output - balanced XLR
5. Mix output - unbalanced 6.35mm jack
6. USB charger output (5V / 500mA)
7. DC power adaptor socket



Features of the USB rechargeable microphone

1. Grille covering microphone element
2. LED status indicator
3. Power switch (on/mute/off)
4. Battery compartment cover
5. Coloured ring indicator
6. Recharging socket



Battery compartment cover removal

Unscrew the coloured ring at the base of the microphone.
Remove ring and slide battery compartment down.

Charging the microphones

Ensure the rechargeable batteries have been correctly installed. Only use rechargeable Ni-MH batteries.
Do not use standard non-rechargeable batteries as this may result in damage to the equipment.

Plug the USB recharging lead (supplied) in to the USB socket on the rear of the KWM Quartet receiver.
This allows charging of two microphones at any one time.

Plug the other end of the USB charging lead in to the socket on the base of the microphone. The LED status light on the microphone will light up GREEN when charging is complete. Allow the microphones to charge fully before removing the charging lead. Charge time from empty is approximately 5 hours.

If microphones are not going to be used for an extended period of time please remove the batteries to prevent damage and corrosion.

Connecting the receiver and operating the system

1. Screw the antennas in to the antenna sockets on the front of the receiver. Point them both antennas upwards in a vertical position.
2. Ensure your mixer/amplifier is turned down before connecting the receiver.
3. Connect the receiver using the Mix output using the supplied 6.35mm jack (unbalanced) lead. This should go to the "Mic In" on your mixer or amplifier. Control of individual microphone channel levels is via the individual Channel volume controls on the front of the receiver.
Alternatively if you are using a multi-channel mixer you can connect the receiver using the individual Channel outputs using XLR (balanced) leads (not supplied).
4. Plug the DC power adaptor into the DC socket on the rear of the receiver. Plug the other end in to a suitable AC outlet.
5. Press the Power switch on the front panel of the receiver to "P". All four Channel power indicator LEDs should light RED.
6. Ensure all the Channel volume controls are turned down to minimum. Turn your chosen Microphone on using the Power Switch. If the battery level is low the LED will turn red to indicate it requires recharging.
7. When a microphone is turned on the status LED on the corresponding Channel on the receiver will light up. The radio frequency (RF) indicator will turn yellow to show a signal is being received from the microphone. The audio frequency (AF) indicator will turn green to show audio is being received (i.e. it will pulse with your voice as you speak in to the microphone).
8. Turn the microphone power switch to mute or "off" when you have finished speaking/singing in to the microphone and before you place it down on a table.

The receiver has 4 separate volume controls, one for each microphone. Use this in conjunction with the controls on your mixer/amplifier to adjust the sound level required. If the sound is distorted check the volume level controls on the receiver and the mixer/amplifier. If sound continues to be distorted move the microphone further away from your mouth and also check the battery is fully charged.

The receiver can be mounted in to a standard 19" rack mount case/rack using the supplied rack-mount brackets.

Fix one of these to each side of the receiver using the supplied screws, and then fit the unit in to your rack.

The microphones have a maximum effective range of around 100m, depending on the environment in which the system is being used. This can be reduced to 60m in many situations. If the sound becomes intermittent move the microphones closer to the receiver. Interference is occasionally possible when the distance between a microphone and the receiver is less than 1.5m. To achieve the best possible system performance, please keep the microphones at least 1.5m away from the receiver.

Ideally suited for:

1. Aerobics instructors
2. Vocalists & singers
3. Public speakers
4. Fitness instructors
5. Dance instructors
6. Musicals & theatre
7. Schools & colleges
8. DJs & musicians
9. Auctioneers
10. Video & filmmaker

Kam KWM Quartet features

1. Uses the UHF 863.00 - 865.00MHz band
2. 4 x colour-coded handheld microphones
3. 2 x removable/adjustable antennas
4. Microphones are USB rechargeable using supplied cable (maximum 2 at a time)
5. Individual (balanced) and mixed (unbalanced) audio outputs
6. Receiver uses external DC power supply
7. Ideal working distance is up to 100 meters
8. Easy to use - the receiver connects directly to an audio mixer or amp
9. 19 inch rack mountable using supplied brackets (rack ears)

Troubleshooting

Problem	Possible cause	Solution
Receiver – no sound Receiver – no LED	Power button is in the OFF position DC power adapter is not plugged in	Turn on the power button Plug in the power adapter
Microphone - no sound but LED indicators are lit	Mic transmitter is out of range Mic is switched off Mic volume is turned down Batteries in mic are not installed properly Receiver is not connected to an amp or mixer	Ensure that the mic is within range Turn on the mic switch Turn up the mic volume on the receiver Reinstall or use new batteries Connect an output cable to an amp or mixer
Distorted sound or feedback	The 4 mics may be too close together Batteries are running out of charge Mic volume may be too high Possible interference from another source	Increase the distance between mics Replace the batteries Reduce the volume Move the system away from other electric sources

Technical specification

Carrier frequency range: UHF 863-865MHz
Oscillation mode: quartz controlled fixed frequency
Carrier wave stabilisation: 10ppm
Sensitivity: -105dB @sinad = 12dB
Signal to noise ratio: more than 100dB
Total harmonic distortion: less than 0.5% @1KHz
Image rejection: 85dB typical
Spurious rejection: 75dB typical
Frequency response: 40Hz-18KHz
Squelch control: dual squelch circuit
AF output impedance: 2.2 Ohms
Maximum output level (balanced): 0-400mV
Maximum output level (unbalanced): 0-200mV
Power: DC 12-18V external supply
Balanced audio outputs: 4 x XLR sockets
Unbalanced audio output: 1 x jack 6.35mm socket
USB charge output: 5V / 500mA
Dimensions: 420 x 220 x 45mm (WxDxH)
Weights: 3.8Kgs

Please note: Always use high quality branded batteries.