



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

KWD220 HH

2.4GHz dual hand held wireless system

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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

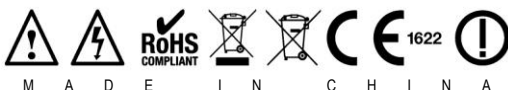
For the latest updates and information on the entire Kam range visit:

www.kam.co.uk

Kam products are manufactured by: **Lamba plc**, Unit 1, Southfields Road, Dunstable, Bedfordshire, United Kingdom LU6 3EJ

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Due to continuous product development, specifications and appearance are subject to change. © Copyright Lamba plc 2012. 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)**. If this product is ever no longer functional please take it to a recycling plant for environmentally friendly disposal.

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.

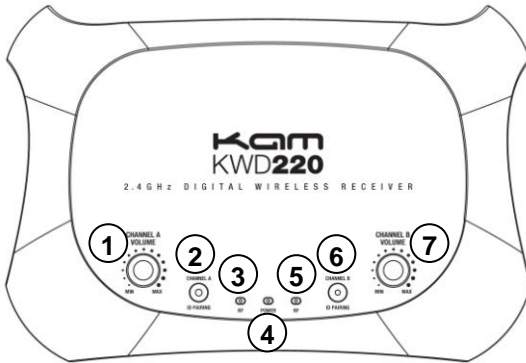
Before use

The handheld microphones requires 2 x AA batteries in each microphone. Please use quality branded batteries for the best results. Ensure the batteries are fitted correctly and that the polarity is correct. The battery LED will flash when the battery power level is low.

Place the receiver on a suitable flat surface. Plug in the DC mains adaptor into the receiver. Connect the 6.35mm mono jack from the receiver into a suitable mic/mixer input.

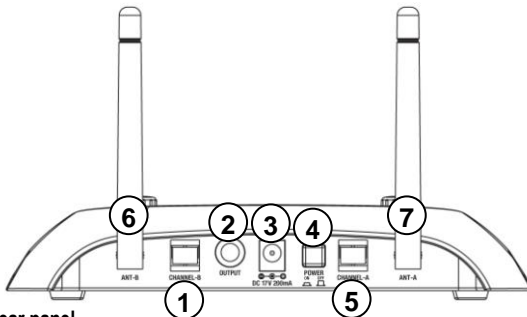
Important note

Before you plug the DC adaptor into a suitable mains voltage supply, 240v or 110v AC. Please check the voltage input of the power supply is correct, as different countries use different voltages.



Top panel

1. Channel 1 volume control
2. Channel 1 pairing LED
3. Channel 1 RF LED
4. Power on LED
5. Channel 2 RF LED
6. Channel 2 pairing LED
7. Channel 2 volume control



Rear panel

1. Channel 2 dipswitch
2. 6.35mm audio output to mixer / mic input socket
3. DC mains adaptor input
4. Power on/off switch
5. Channel 1 dipswitch
6. Channel 1 aerial
7. Channel 2 aerial

Dipswitches



2406MHz/
2446MHz/

2408MHz/
2448MHz/

2410MHz/
2450MHz/

2450MHz/
2452MHz/

2414MHz/
2454MHz/

2416MHz/
2456MHz/

2418MHz/
2458MHz/

2420MHz/
2460MHz/



2422MHz/
2462MHz/

2424MHz/
2464MHz/

2426MHz/
2466MHz/

2428MHz/
2468MHz/

2430MHz/
2470MHz/

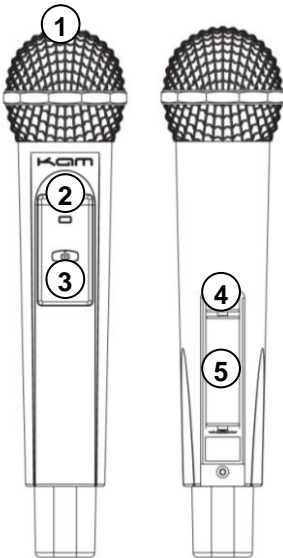
2432MHz/
2472MHz/

2434MHz/
2474MHz/

2404MHz/
2444MHz/

This wireless receiver has 16 available channels, each channel has 2 sub frequencies which are automatically selected by the receiver, the receiver works in the same way as a diversity radio mic system and will automatically switch between the 2 sub frequencies to obtain the best possible signal available on that channel. You cannot manually select a sub frequency.

(A maximum of 4 transmitters should be used at any one time)



Hand held microphone

1. Mic mesh
2. Power LED
3. On/off switch
4. Battery cover
5. Battery

2 x AA batteries per microphone

Pairing microphones to your receiver

IMPORTANT - Please read the instructions fully before you start pairing

There is a time limit to pair the microphone, if the pairing LED does not illuminate (either flashing or static) turn the handheld microphone off, then press and hold the pairing button to start the sequence again.

1. Using the dipswitches on the rear of the receiver select the desired channel to be paired with the microphone (see chart above for frequencies and switch settings).
2. Turn the power on to the receiver and the red power LED will illuminate.
3. Remove the battery cover from the handheld microphone.
4. Press and hold Channel 1 pairing button until the green RF LED flashes, then release the pairing button. (while the LED is flashing) continue to step 5.
5. Hold the microphone approx 6 inches above the receiver, with the open battery compartment towards the receiver.
6. Turn on the power to the microphone and the red battery LED will illuminate.
7. Then press and hold the microphone on/off button (make sure green RF LED is still flashing).
8. When pairing is complete the green RF LED will stop flashing and will stay illuminated.
9. The green LED may go off due to the microphone being switched off. Turn microphone back on using the on/off switch. If the green RF light is illuminated and remains on then the mic is paired.
10. Repeat these steps to pair Channel 2 microphone.
11. There is no need to repeat this everytime you use the system as the frequencies will be locked in and stored for the next use.
12. If in future you need to re-tune the microphone due to interference etc, please follow the above steps again for one or both microphones as required.

IMPORTANT NOTES

Do not set both microphones to the same frequency as this will cause interference and may damage your equipment. If the interference is occurring make sure that your channel selections are far enough apart from each other. See channel frequency list for help.

Trouble shooting

Problem	Check
No output from microphone	Check power to receiver is on and the red power led is illuminated, check batteries in handheld microphone
	Check the microphone volume level is turned up sufficiently (one for left and one for right hand microphone)
	Check that the 6.35mm audio lead from the receiver to your mixer is connected correctly
	Check the microphone input on your mixer has the correct volume and level settings
The hand held microphone will not connect to the receiver	Check batteries and fully charged (always use good quality branded batteries)
	Check that the microphone is paired correctly to the receiver . the green RF light should illuminate. If not ,Follow steps for pairing and try again
	Ensure that the microphone frequency is not set the same as the other microphone. Use the dipswitches on rear of the receiver to select a a different frequency

Specifications

Receiver

Frequency: 2404-2476MHz

Built-in ACT system

16 preset channels

Dynamic range: 85dB

Total harmonic distortion: 0.1%

Frequency response: 40Hz-15kHz±3dB

Audio output level: 0±450mV

Range: 30m optimal line of sight

Twin aerials

Signal to noise ratio: more than 90dB

Receiving sensitivity: -80dBm

Mixed outputs

Power supply output range: DC 12-17V

Power consumption: 2w

Power supply MA: 110mA

Dimensions (WxHxD): 190 x 155 x 41mm

Weight: 0.25Kgs

Handheld microphones

Mic power on & off

Transmitter power: 10mW

Modulation type: GFSK

Spurious emission: -20dBm

Battery voltage & type: 1.5V AA x 2

Continuous usage (battery time): 5 hours approx

Dimensions (WxHxD): 53 x 53 x 236mm

Weight: 0.22Kgs