INSTRUCTION MANUAL

# KWM1960 V2

## UHF wireless microphone / bodypack systems

MANUAL VERSION 1.0
10-01-16

**UHF receiver**
16 UHF frequencies from 863.0 to 865.0 MHz
Balanced output sockets (3-pin XLR)
Unbalanced 6.3mm jack for mixed audio output
Twin adjustable antenna system
Frequency stabilisation: <±30ppm
Dynamic range: >90dB
Total harmonic distortion: <0.5%
Frequency response: 40Hz-15KHz ±3dB
S/N ratio: >90dB
Image and spurious rejection: >80dB
Border upon channel rejection: >80dB
Receiving sensivity: 5dBuV
De-emphasis: 75uS
Receiver power supply DC 17V 300mA
Power consumption: 5W
Dimensions: 210 x 185 x 45mm (WxDxH)

**Handheld microphone transmitters**
Steel metal grille
Transmitter power: 10mW
Modulation type: FM
Max deviation: ±25KHz
Spurious emission: >40dB
Mic battery voltage: 3V (2 x 1.5V AA batteries)
Continuous usage: 5 hours
Working distance: 50m
Dimensions: 55 x 55 x 260mm (WxDxH)

**Bodypack transmitters**
Easy access on/off switch / battery indicator
Illuminated display
Mic battery voltage: 3V (2 x 1.5V AA batteries)
Continuous usage: 5 hours
Working distance: 50m
Dimensions: 160 x 35 x 65mm (WxDxH)

Due to continuous product development, please ensure that you have downloaded the latest instruction manual for this product from the Kam website:

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@lambaplc.com • Web: www.lambaplc.com


RoHS COMPLIANT 1622

MADE IN CHINA

**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.

The unit is mains powered, 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 periodicaly, 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 41ºF / 5ºC or exceeding 95ºF / 35ºC).

**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.

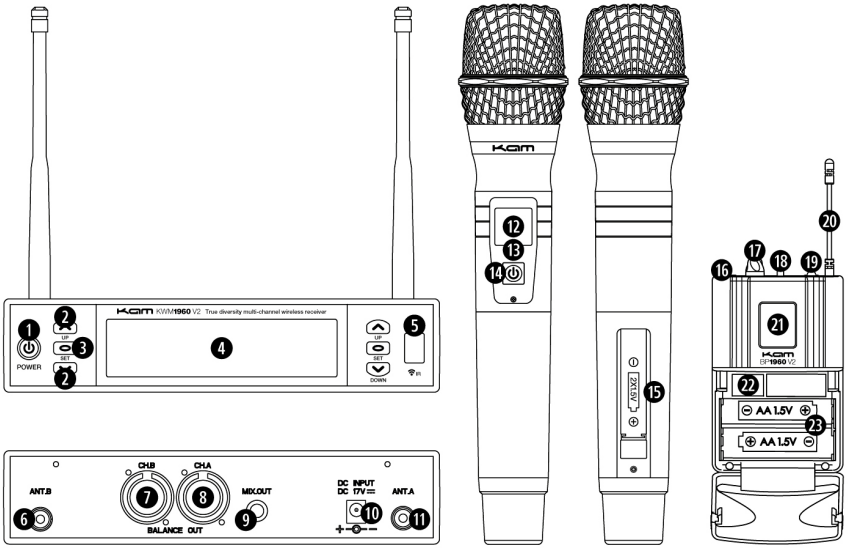
**Manufacturer declarations**


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@lambpalc.com

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

**IMPORTANT**
**Kam KWM1960 V2 systems** use 16 UHF frequencies from 863.0 to 865.0 MHz.
Systems are available with handheld microphones or bodypacks (including headset mic, lavalier/lapel mic and guitar/instrument lead). If you have purchased the optional **Kam BP1960 V2 Kit**, you will also need a Kam KWM1960 V2 receiver (not included in the BP1960 V2 Kit) to operate and receive signals from your bodypack.




**Receiver front panel**

1. Power On/Off switch
2. Selection buttons (up/down)
3. Set button
4. Illuminated display screen
5. Infrared connect window (ACT)

**Receiver rear panel**

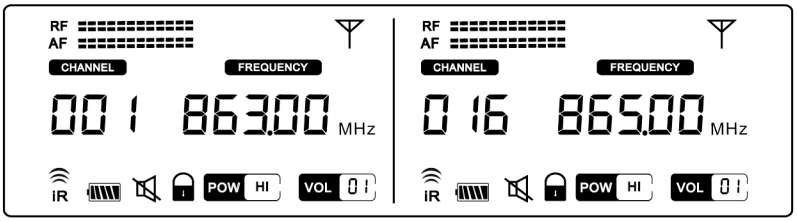
6. Channel B antenna socket
7. Channel B balanced XLR socket for audio output
8. Channel A balanced XLR socket for audio output
9. Unbalanced 6.35mm jack socket for mixed audio output from both channels
10. DC power supply input socket
11. Channel A antenna socket

**Handheld microphone transmitter** (if applicable)

12. Illuminated display screen
13. Infrared connect window (ACT)
14. Mic power On/Off switch
15. Compartment for 2 x AA 1.5V batteries

**Bodypack transmitter** (if applicable)

16. Mic/guitar/instrument input socket
17. Volume control
18. Power On/Off switch
19. Power indicator
20. Flexible transmitter antenna
21. Illuminated display screen
22. Infrared connect window (ACT)
23. Compartment for 2 x AA 1.5V batteries




**Receiver illuminated display screen**

The transmitter battery level indicator can be found in the lower left of each half of the display (next to the ACT IR icon). This shows how much battery power is left in your mic/bodypack transmitter. Always check this battery level if you are having trouble connecting your mic/bodypack transmitter. When the lock indicator is lit, the controls are 'frozen' to avoid accidental changes. To unlock, simply press and hold the Set button (2.). For further instructions on the display please read below.

**Receiver operation**
1. Connect audio outputs for channel A and B to your mixer/amplifier/PA speaker system, choose either two balanced XLR cables for dual output or a single unbalanced 6.35mm jack cable for mixed output of both channels.
2. Turn down the volume controls on your mixer/amplifier/PA speaker system before connecting your transmitters.
3. Connect the DC power supply to the receiver (10.) and plug into an appropriate power outlet.

**Automatic transmitter connection to receiver (ACT)**
1. Ensure that the microphone/bodypack is turned OFF and the receiver is turned ON.
2. Decide which of the 16 frequencies you wish channel A to operate on. In this example we will choose the first frequency (863.00MHz). On the receiver unit, press and hold the Set button (3.) until the word 'Channel' starts flashing on the receiver display (4.). Press the up or down buttons (2.) to move through the frequencies until you reach your chosen frequency (e.g. 001 / 863.00). Press and hold the Set button (2.) for three seconds to select the frequency and move on to connecting the mic/bodypack transmitter. The ACT icon will now flash on the display.
3. Remove the battery compartment cover on the handheld mic or open the bodypack battery compartment.
4. **Now turn ON your mic/bodypack transmitter.**
5. Ensure that there is a short and direct line-of-sight between the transmitter infrared connect window (13. on the mic or 22. on the bodypack) and the receiver's infrared connect window (5.). In other words, point the front of the mic or the **open** battery compartment of the bodypack towards the right hand side of the receiver's front panel.
6. When the mic/bodypack display (12./21.) shows the same frequency as the receiver, the two are connected. The RF indicator should also change to indicate the connection and the ACT icon will stop flashing.
7. If the receiver displays stops flashing before connection, press the Set button again to restart the process.
8. To test the connection, speak into the mic, the AF indicator should change indicate that the unit is receiving an audio signal. To test the bodypack, attach one of the mics or an instrument to the bodypack input socket (16.), turn up the volume control (17.) and speak/play, the AF indicator will change to indicate that the unit is receiving a signal.

Whenever the mic/bodypack transmitter or system are turned off and then turned on again, the ACT connection should remain in place until you change the channel frequency on the receiver. This allows the mic/bodypack to be turned on and off during performance. If for any reason the connection is lost, simply repeat from step 1.

To connect the second microphone/bodypack to Channel B, repeat the above procedure from step 1. (but choose a different frequency in step 2.). **To avoid interference between the two channels**, ensure that your chosen frequencies are not too close to each other (e.g. 1+2), instead choose two separated frequencies e.g. 1+14 or 5+15.

When both channels have transmitters connected, turn up the channel volume controls on your connected mixer/amplifier/PA speaker system, you should hear the signal coming through and you can adjust the volumes to suit your performance. To adjust the output volume of each channel of the receiver, press the up/down Selection buttons (2.) to increase or decrease the volume.

**VERY IMPORTANT** - if you wish to run 2 receivers and 4 transmitters together and to avoid interference between the two systems, it is recommended you use the following setup:
**Unit 1** - set **channel A** to frequency **1** and set **channel B** to frequency **14.**
**Unit 2** - set **channel A** to frequency **5** and set **channel B** to frequency **15.**

**Other functions**
To search for a free channel on the receiver, press and hold the Set button (3.), press the Set button repeatedly until Frequency on the display begins to flash. Use the up/down Selection buttons (2.) to find a free channel, then press the Set (3.) button again to confirm your choice.
To adjust the mic/bodypack transmitter power output, press and hold the Set button (3.), press the Set button repeatedly until POW on the display begins to flash. Use the up/down Selection buttons (2.) to choose either HI (high power) or LO (low power), then press the Set (3.) button again to confirm your choice.

**Troubleshooting**
If you are having trouble connecting the mic/bodypack transmitters to the receiver, first **check whether you have fresh working batteries correctly installed.** Weak or dead batteries will NOT be able to make a connection. If you still fail to connect the two, start by turning both units OFF for 5 seconds, then turning the receiver only back on and starting the connection procedure from step 1. If you get intermittent interference while using a handheld microphone ensure that you are holding it in them middle and NOT by either end as this is where the antennas are situated.