

# KAM

## USER MANUAL

# PROFESSIONAL POWER AMPLIFIER

KXR2000/KXR3000/KXR4000/KXR5000

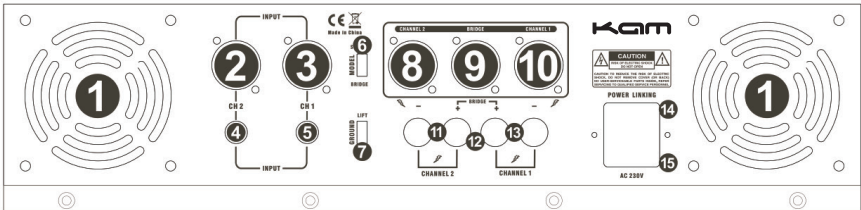


[www.kam.co.uk](http://www.kam.co.uk)

Thank you for purchasing this Kam Amplifier. Please read these operating instructions carefully prior to using your product to familiarize yourself with the unit. Please keep this manual in a safe place for future reference.

### Unpacking and Safety

Your amplifier was packed with the utmost care, and should arrive to you in perfect condition. Please inspect your unit carefully, to ensure that no damage to your unit occurred in transit. If any damage is found, please contact the retailer you purchased it from immediately. Please do not use your product if there is physical damage to the unit or to the electric cable.



### Rear Panel Controls & Connections

1. Fan Vents
2. Channel 2 XLR Input
3. Channel 1 XLR Input
4. Channel 2 1/4" Mono Input
5. Channel 1 1/4" Mono Input
6. Stereo / Bridge Mode Switch
7. Ground Lift / Ground Switch
8. Channel 2 Speak-on Audio Output Connection
9. Bridge Mode – Speak-On Audio Output Connection
10. Channel 1 Speak-on Audio Output Connection
11. Channel 2 -/+ "Banana" Binding Post Output Connection
12. Bridge Mode +/- "Banana" Binding Post Output Connection
13. Channel 1 -/+ "Banana" Binding Post Output Connection
14. AC Main Power IEC Connection
15. Built-In Fuse / Voltage Selector

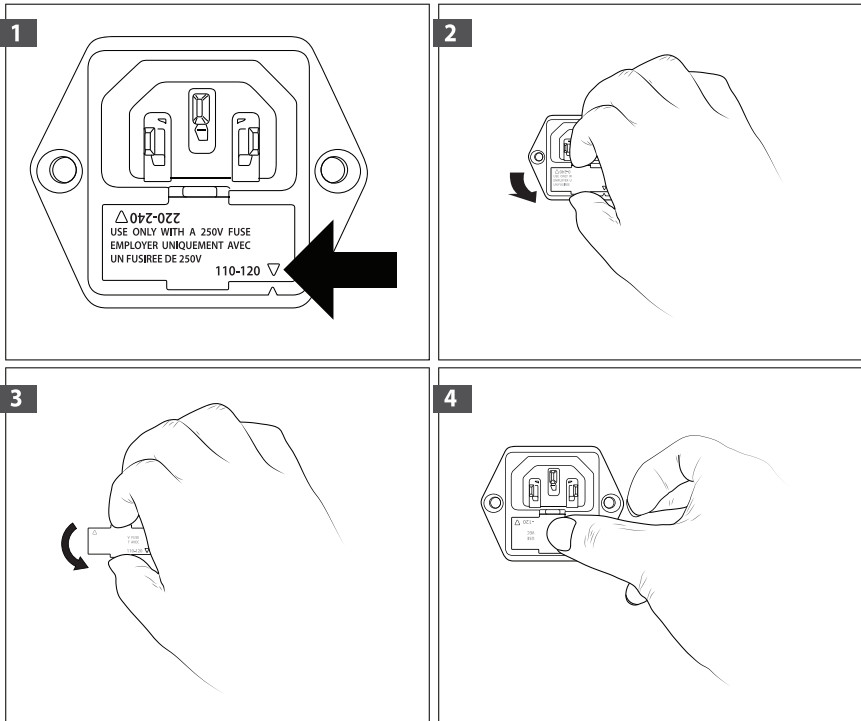
### IMPORTANT

**Always turn the amplifier OFF before changing any of the rear setting or connections (including Mode)**

## POWER VOLTAGE

Your product has been set to 240V voltage. If your power is 110V voltage please follow the steps below to switch the voltage from 240V to 110V. It is always good to check the voltage prior to use (even if you use 240V) to make sure the voltage is set correctly. Turning your amplifier on with the wrong voltage can result in severe damage to your amplifier and speakers.

1. Underneath the main power IEC connection is a fuse and the voltage selector. On the bottom right side it indicates the current selected voltage (110-120V or 220-240V). If the correct voltage is set, then you can skip over this part, if you need to switch the voltage, please follow steps 2-4.
2. While your amplifier is unplugged, carefully pull out the fuse/voltage selector. It will come completely out of the socket.
3. Rotate the fuse/voltage selector so that your desired voltage appears on the bottom right side.
4. Carefully insert the fuse/voltage selector back into the socket.



## Output Modes

Your power amplifier has 2 different output modes: Stereo and Bridge Modes

1. Stereo Mode – Normal operation, sends the signal from channel 1 input to the channel 1 output, and the signal from channel 2 input to the channel 2 output.
2. Bridge Mode – Combines the power from Channel 1 & Channel 2 into one signal mono channel. Doing this will double your output wattage of your amplifier. Make sure your speaker connected to the bridge output of the amplifier is able to handle the increased voltage and it is the correct impedance. During bridge mode only channel 1 volume will operate.

## Protective Circuit

Your amplifier features a built-in protective circuit to prevent damage to your speakers and to your amplifier. This includes PROTECT LED indicators located on the front panel next to each channel.

1. If your amplifier senses a problem the PROTECT LED indicators will light up approximately 1 second after switching your amplifier on.
2. If your amplifier is overheated, or if a short circuit has occurred at the speaker output, the PROTECT indicator LED of the corresponding channel will light up.

Either of these may also cause the sound to temporarily mute, until the problem is resolved. Please switch off your amplifier and correct the problem before continuing.

## Channel Clip LED Indicators

Your amplifier has a CLIP LED Indicator for each channel located in the front panel. This is to help control and monitor the amplifiers output and achieve your required sound. The CLIP LED indicators will light up when your audio signal level is so strong that the distortion reaches 1% THD. The CLIP LED indicators should NOT remain lit constantly, or flash on and off repeatedly during operation. For clean audio reproduction, the CLIP LED indicators should only light occasionally for an instant. If the LED remains on or flashes repeatedly, you will hear distorted sound that can potentially damage your speakers. If the CLIP LED indicators remain lit or flash repeatedly, reduce the signal level by reducing the volume level control for the respective channel, or reduce the level at the audio source. When you are using the amplifier in "bridge mode", both CLIP LED indicators will operate simultaneously.

## Ground Lift Switch

This is used to lift the balanced input connector ground/shield from the amplifier's ground. When the signal ground is lifted, the sound source disconnects from the amplifier's ground, preventing earth loops which can potentially generate hum.

## Operation Stereo Connection

1. Attach audio cables from the outputs of your audio source (mixer, Pre-amplifier, etc) to the audio INPUTS of your amplifier. Your amplifier features XLR and ¼" type inputs.
2. Connect speaker cables from your speakers to the OUTPUT of your amplifier. Your amplifier features Speak-On and "Banana" binding post OUTPUTS. Pay close attention to the polarity when connecting your speakers. Each connector type has a (-) Negative and (+) Positive position that should match in the amplifier and in the speaker.

## Mono Bridge Connection

1. Attach audio cables from the outputs of your audio source (mixer, Pre-amplifier, etc) to the audio INPUTS of your amplifier. Your amplifier features XLR and ¼" type inputs.
2. Connect a single speaker to your amplifier using a speak-on in bridge mode (#9) input, or with a "Banana" binding post cable with both cables on the PLUS polarity in bridge mode (#12).

**Important Note:** The total speaker impedance must not be lower than 4ohm per channel for stereo mode, or 8 ohm for mono bridge mode. Your amplifier was designed to accept low impedance loads, and will operate normally with most 4 ohm speakers in parallel speaker combinations.

## Switching On/Off

In order to avoid loud switching noise, always switch on ALL other units BEFORE switching on the power amplifier. Always switch the amplifier off FIRST after operation. Before switching the amplifier on or off always turn the volume controls to their minimum setting. Always ensure that your voltage setting is correct, and that the correct operating mode (Stereo/Mono) is selected prior to turning on your amplifier.

## Volume Level Adjustment

Set the output volume of your mixer or pre-amplifier to its rated level, or to the highest undistorted output signal. Then slowly turn up the amplifier volume controls until the maximum desired volume is reached. If the channel CLIP LED indicators illuminate (showing an overload of the amplifier), reduce the channel volume. When operating in bridge mode, only the channel 1 volume control will operate.

## IMPORTANT !! PLEASE READ !!!!

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 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 powered by electricity, 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 of high voltage with the unit's enclosure that may be of sufficient power to constitute a risk of electrical shock to anyone. To prevent the risk of electrical shock, do not attempt to open the unit. No user serviceable parts are inside. Refer all servicing of your amplifier to a qualified service personnel. The exclamation mark inside a triangle is intended to alert the user to carefully read the amplifier's instruction manual before use.

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).



This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment by ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

## Technical Specifications

### **KXR2000 - 200W**

Output Power Stereo 8 Ohms: 64W  
Output Power Stereo 4 Ohms: 100W  
Bridge 8 Ohms: 169W  
Frequency Response: 20Hz - 20Hz  
Input Sensitivity: AC1V  
Maximum Input Level: 5.5V  
Input Impedance Active Balanced: 20Kohms  
Signal/Noise Ratio: 84dB  
Dimensions: (L x W x H): ( 533 x 420 x 165)  
Rack Size: 2U  
Weight: 6.3kg

### **KXR3000 - 300W**

Output Power Stereo 8 Ohms: 98W  
Output Power Stereo 4 Ohms: 156W  
Bridge 8 Ohms: 264W  
Frequency Response: 20Hz - 20Hz  
Input Sensitivity: AC1V  
Maximum Input Level: 5.5V  
Input impedance Active Balanced: 20Kohms  
Signal/Noise Ratio: 86dB  
Dimensions: (L x W x H): ( 533 x 420 x 165)  
Rack Size: 2U  
Weight: 6.3kg

### **KXR4000 - 400W**

Output Power Stereo 8 Ohms: 145W  
Output Power Stereo 4 Ohms: 225W  
Bridge 8 Ohms: 450W  
Frequency Response: 20Hz - 20Hz  
Input Sensitivity: AC1V  
Maximum Input Level: 5.5V  
Input Impedance Active Balanced: 20Kohms  
Signal/Noise Ratio: 92dB  
Dimensions: (L x W x H): ( 533 x 420 x 165)  
Rack Size: 2U  
Weight: 6.3kg

### **KXR5000 - 500W**

Output Power Stereo 8 Ohms: 180W  
Output Power Stereo 4 Ohms: 256W  
Bridge 8 Ohms: 508W  
Frequency Response: 20Hz - 20Hz  
Input Sensitivity: AC1V  
Maximum Input level: 5.5V  
Input Impedance Active Balanced: 20Kohms  
Signal/Noise Ratio: 98dB  
Dimensions: (L x W x H): ( 533 x 420 x 165)  
Rack Size: 2U  
Weight: 6.3kg