



## RemoteMix x4™ 4 Channel Field Mixer



User Guide

# Welcome

## Thank You

Thank you for purchasing a JK Audio RemoteMix x4 Field Mixer. Please read this guide for instructions on setting up and using your new product.

## Getting Assistance

If you have technical or application questions:

**Call us at:**  
**815-786-2929**

**Email us at:**  
**[support@jkaudio.com](mailto:support@jkaudio.com)**

Or check out our **FAQ** section for answers to common questions.

## Warnings & Safety Precautions

- Read and keep these instructions.
- Follow all instructions.
- Clean only with a soft dry cloth.
- Refer all servicing to qualified service personnel.
- Heed all warnings



### **Caution: To prevent possible hearing damage, avoid listening at high volume levels for long periods.**

RemoteMix x4 contains a headphone amplifier that is more powerful than the typical consumer product.

JK Audio products are designed for the broadcast industry. The broadcast professional must be able to hear headphone signals over the ambient noise level. From the cheering crowd at a football game to trackside at a car race, the program material or cues must be heard at high volumes without distortion.



### **Road Safety**

Never use headphones while driving or cycling, etc. It can be dangerous to turn up the volume even while walking. Doing so may hinder your hearing and can be hazardous on the roadways or at pedestrian crossings.



### **Handle with Care**

While RemoteMix x4 was designed to be very rugged and durable, it is not waterproof and care should be taken to keep the unit dry.

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## Limited Warranty

The RemoteMix x4 is covered by a 1 year warranty to be free from defective workmanship and materials. To obtain service, contact JK Audio by phone or email for return authorization. Once authorized, you will carefully pack and ship the faulty product and all accessories to us. You will pay for shipping to us and we will pay for return back to you.

This warranty does not cover damages due to accident, weather, fire, flood, earthquake, misuse, unauthorized repairs or modifications, or damages occurred in shipping, only defective workmanship or materials.

**There are no expressed or implied warranties which extend beyond the warranty here made.**

## Features

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Four Low Noise, High Headroom XLR  
Mic Jacks

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Mic/Line Switches on Channels 3 & 4

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Individually switchable  
48v Phantom Power

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120 Hz Low Cut Filter

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Master XLR Output 20 Hz – 20 kHz

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Four ¼" Headphone Jacks with  
Individual Source Selector and  
Level Controls

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## In the Box

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Universal Power supply with  
detachable cord

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¼" Headphone Cue Input

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Phone Headset Interface with 3.5 mm  
TRRS Plug

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3.5 mm Send and Receive Jacks

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LED VU Meter

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Hot-Swappable Dual 9-Volt Batteries

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100-240 VAC External AC  
Power Supply

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3.5 mm 4-conductor Wireless  
Interface Cable

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## Introducing the RemoteMix x4™

RMx4™ combines a four-channel field mixer with a four-channel headphone amplifier. After all, what good is a field mixer if you do not have a flexible monitoring capability for the whole crew?

**Great Sound** – Four low-noise, high-headroom, active-balanced mic inputs feature extremely high common mode rejection for outstanding cable noise immunity. High-Pass filter removes room rumble and mic handling noise. Direct drive DC coupled XLR output for improved output cable noise immunity. A soft limiter prevents over driving the full-duplex headset interface, while the master XLR and 3.5 mm outputs are pre-limiter (full range).

**Convenience** – 3.5 mm send and receive jacks for recording or playing back of recorded material. Separate headphone level and source selection controls for each headphone output. Monitor just the clean mixer output, or the Cue input plus the mix.

**Power Smart Design** – Phantom power is not always needed, yet it can be a real drain on batteries. The phantom power generator only runs if any of the rear panel 48V switches are set to “ON” position. Low noise, low power ICs are used throughout to preserve battery life. The 100-240 VAC desktop-style power supply (included) overrides the battery power only when the supply is actually providing power. If the power goes out, the batteries automatically cut in. Use one battery or two. The RMx4 is equipped with separate battery compartments for hot swapping batteries.

**Radio/Podcast** – RMx4 is designed for news, sports, and live remotes. Use it as a front-end mixer for your POTS, ISDN, IP or smart phone codec. XLR out, ¼” return to headphones.

**TV** – RMx4 is designed for ENG, Sports, and interviews, with four ¼” headphone outputs. 3.5 mm TRRS provides 2-way IFB audio from your cell phone or notebook.

**AV/Conference** – RMx4 is perfect for small press or hotel conferences.

Rugged design for field use, runs > 10 hours on two hot-swappable 9-volt batteries. RMx4 will also route audio through cell phones or notebooks with the included 3.5 mm TRRS headset interface cable.

# Getting to Know Your RemoteMix x4



## Controls & Indicators

### 1. Mic Level Controls

Each of the four XLR inputs has a level control knob with a separate red **<Peak>** LED to indicate clipping on each channel. If you see more than an occasional flash of the **<Peak>** LED you should decrease the level for that channel.

### 2. Master Level Control

The **<Master>** control knob will set the overall level of the sum of all the mic and line inputs. The LED meter for the master audio level ranges from -30 dB to +3 dB.

### 3. Headphone Controls

Each of the four headphone outputs has a separate level control and source selector so each listener can adjust their audio level independently. Monitor a mix of local mic and line inputs including the cue input or only the return audio from the Cue Input / Wireless Phone Interface without the local mix.

### 4. Cue Control

The **<Cue>** input control adjusts the signal going to the headphones from the 1/4" **<Cue Input>**. When using the 1/4" Cue Input Wireless Interface, the individual headphone level control adjusts the overall level of your headphones while the **<Cue>** input control adjusts the level of the person on the other side of the call in all headphones. You should keep in mind that your wireless telephone also has level control. If you are having level problems that cannot be corrected with the controls on the RemoteMix x4, try adjusting the level on the wireless telephone itself.

## Controls & Indicators Cont'd

### 5. 120 Hz Low Cut Filter

Turn on the Low Cut / High Pass filter to remove room rumble and mic handling noise.

### 6. LED VU Meter

Represents the signal level of all four channels being sent to the **<Master Output>** and **<Line Output>**.

### 7. Power

This is the main power switch that turns the unit on. Whenever the power is turned on, the red LED above this switch will be lit. The green **<AC>** LED will be lit whenever a live AC power source is connected, even if the main power switch is off.

RemoteMix x4 is powered by two 9 volt alkaline batteries located on the side of the unit. The red **<Power>** LED on the front of the device will gradually dim as the battery runs down, then extinguish about a half hour before the unit shuts down.

These two batteries are in separate drawers and wired in parallel, you can hot swap one battery at a time so you never lose power.

It is important to replace both at the same time with identical batteries. If two fresh batteries are not available, it is better to run using only one good battery. Since the battery fixtures are wired in parallel, it does not matter which one gets the single battery.

# Getting to Know Your RemoteMix x4



## Inputs & Outputs

- 1. Mic Inputs 1 and 2**  
Balanced XLR jacks with low-noise pre-amplifiers.
- 2. Mic Inputs 3 and 4**  
Balanced XLR jacks with low-noise pre-amplifiers. A **<Mic/Line>** selector switch adds a 40 dB pad for a line level balanced input.
- 3. Stereo 3.5 mm Line Level Input**  
The stereo 3.5 mm line level input can be used instead of or in addition to the channel 4 XLR input. You can connect either a mono or stereo signal to this mini jack. If you use a stereo input, both channels will immediately be summed together. Then the audio from the mini jack and the XLR would be added together and treated as one mono signal on channel 4
- 4. Stereo 3.5mm Line Level Output**  
Can be connected to your mini disk or other recording device. The **<Master Output>** will be on the Left channel and the Return mix from the **<Cue input>** on the Right channel.
- 5. The Master Output**  
A balanced XLR jack that contains the sum of all four input XLRs and the 3.5 mm input. This audio signal has a full 20 Hz to 20 kHz bandwidth.

## Inputs & Outputs

### 6. Cue Input / Wireless Phone Interface

RemoteMix x4 comes equipped with a **<Wireless Phone Interface>** built in to the 1/4" **<Cue Input>**. This 1/4" wireless interface accepts a specially designed 1/4" to 3.5mm cable provided with the unit. This interface works with any wireless phone or notebook that accepts standard third party headsets and earpieces. Your product has been supplied with a 1/4" TRS to 3.5mm TRRS interface cable. While the majority of current wireless phones use a 4 conductor, 3.5mm TRRS headset jack, some older phones use a 2.5mm TRS headset jack. If your phone uses this smaller 2.5mm headset jack, you may contact our support department to request a compatible interface cable.

When using the wireless interface, it is important to keep your wireless telephone 12" - 24" away from the RemoteMix x4 and any microphone or headphone cables. This will help prevent unwanted RF noise from entering the unit.

### 7. Headphone Jacks

Headphone output is determined by the source selector switch next to the Headphone Controls on the front.

### 8. Power Jack

RemoteMix x4 is battery powered but we also provide a high quality, regulated AC to DC adapter to power RemoteMix x4 when AC power is available. Simply plug it into the back of RemoteMix x4 and plug the transformer into a wall outlet. This is a switching power supply so you can connect to a 110 or 220 VAC power source. When the power connector is inserted into the jack, the batteries are bypassed. The AC adapter does not charge the batteries. If you lose power during your broadcast, the RemoteMix 4 automatically reverts to battery power so your broadcast will not be interrupted.

**Make sure you use only the supplied AC power adapter with the RemoteMix x4. Using any other adapter could damage the unit.**

**WARNING! It is strongly recommended that this product be connected to an adequate surge protection device.**

## FAQs

### 1) How long will the batteries last in my RemoteMix x4?

There are many variables that affect battery life, such as the number of headphones. All of our battery life tests included 4 headphones playing music at average listening levels. These tests use standard alkaline batteries. Lithium batteries can add 3 to 4 times the battery life, at 3 to 4 times the cost. The following number is from lab tests and may not represent your usage: **10 hours** using dynamic microphones.

### 2) Will any cellular telephone work with RemoteMix x4?

The wireless interface on the RemoteMix x4 works very well with most cellular telephones. However, some wireless telephones generate excessive RF noise which can be heard as a "chattering" or "motor boat" sound. The noise from these particular telephones will be unacceptable for most broadcast applications.

RemoteMix x4 is supplied with a 1/4" TRS to 3.5mm TRRS interface cable. While the majority of current wireless phones use a 4 conductor, 3.5mm TRRS headset jack, some older phones use a 2.5mm TRS headset jack. If your phone uses this smaller 2.5mm headset jack, you may contact our support department to request a compatible interface cable.

### 3) What kind of device can I connect to the Cue Input?

Setting the switch for the dual-purpose 1/4" input to *Cue Input* will provide a standard line level input for connection to another audio device, such as a portable radio. The audio signal will be sent to all of the headphone outputs. This way, your announcers can listen for a cue from their radio station at the end of a station break.

### 4) The cellular interface cable was left behind at our last event. Can I get a replacement at our local audio supply store?

This is a custom made cable and is not wired the same as those that may be available at your local electronics store. Please contact your JK Audio dealer or our Customer Service department and ask for a CN113 replacement cable. The CN113 has a 3.5 mm TRRS headset plug. Most newer phones, especially those that include a mp3 player, have a 3.5mm TRRS headset jack and therefore require the CN113 cable.

### 5) The output from Mics 3 & 4 are very low but the other mics are fine.

Check the position of the <Mic/Line> switch near **Mics 3 & 4**. This input can be switched to accept a line level signal from a mixer or other equipment.

**6) How can I tell how much battery life is remaining?**

The red <Power> LED functions as a battery life gauge that will gradually dim as the battery runs down. This red LED will go completely dark about a half hour before the unit shuts down. Keep in mind that the VU meter, Bluetooth, and clipping LEDs will remain bright until the unit stops functioning.

**7) Does the AC power supply charge the batteries?**

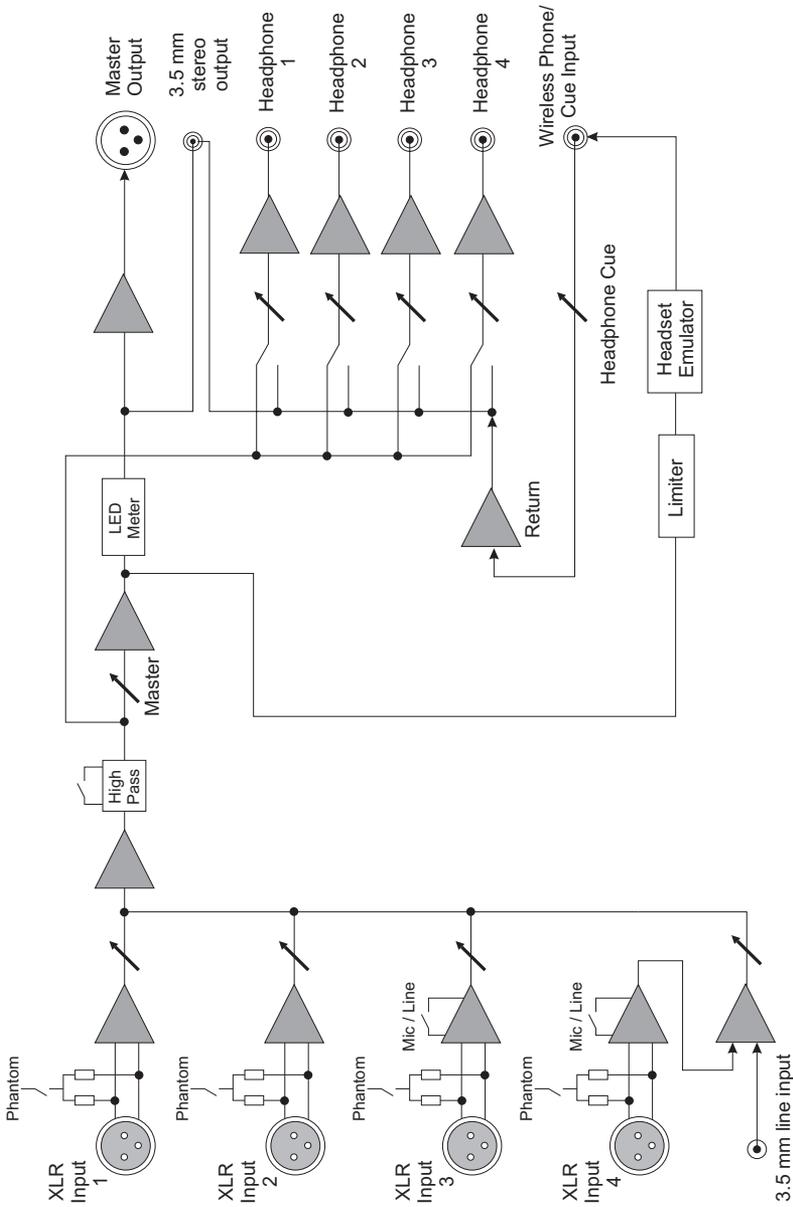
No. You may use rechargeable batteries, but you must remove and recharge the batteries outside of the RemoteMix x4.

**8) I have lost my power supply for my RemoteMix x4 unit. I have a power supply that fits from a different product. Can I use this instead?**

**No!** Never use a power supply other than the one that was supplied by your manufacturer. Power supplies are available in either AC or DC output with many combinations of voltage and available current. Most consumer power supplies are not regulated. This could invariably damage your equipment, and also create a great deal of noise. Our products are designed for and tested with their respective power supplies for optimum operation. If you have lost your power supply, please contact your JK Audio dealer or our Customer Service department and ask for a PS009 power supply for your RemoteMix x4.

# Technical Information

## Block Diagram



## Specifications

<b>Input</b>	<b>Impedance / Level</b>
Female XLR (4) Mics:	2k ohms / -25 dBu nom Channels 3 & 4 have a -40 dBu Mic/Line pad switch Line Level: 50k ohms / +20 dBu max
Phantom Power:	48 VDC with 6.8k ohm supply resistance
1/8" (3.5mm) Stereo Line:	20k ohms / -10 dBm nom
Headphone Cue 1/4" Mono:	20k ohms / -10 dBu nom
<b>Output</b>	
Balanced Male XLR:	50 ohms / +16 dBu max, 20 Hz - 20 kHz, +/- 1dB, 0.04% THD @ +16 dBu
1/8" (3.5mm) Stereo:	100 ohms, -10 dBu nom
Headphone 1/4" Stereo:	8 ohms / 1/3 watt per channel
<b>Misc.</b>	
Power	100-240 VAC, 50-60Hz or Two 9 VDC batteries
Size	9.5" x 8" x 3" (24 x 20 x 8 cm)
Weight	3.6 lbs (1.6 kg)

# FCC Registration

## Declaration of Conformity

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Manufacturer's Name: JK Audio, Inc.  
Manufacturer's Address: 1311 E 6<sup>th</sup> Street  
Sandwich, Illinois 60548 USA

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Declares that the product:

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Product Name: RemoteMix x4 Field Mixer  
Model Numbers: RemoteMix x4

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Conforms to the following Product Specifications:

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Safety: AS/NZS 60950.1:2003  
CAN/CSA-C22.2 No. 60950-01-03  
UL Standard 60950-01 1st edition

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ESD: EN 55024:1998; EN 61000-3-2; EN 61000-3-3

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Emissions: EN 55022:1998  
AS/NZS CISPR 22 (2002)  
FCC Part 15, Subpart B  
ICES-003  
EN 300 328  
FCC Part 15.247 FCC ID R47F2M03MLA  
IC Radio Standards RSS-210 Annex 8

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The product herewith complies with the requirements of the following Directives and carries the CE marking accordingly:

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LVD 2006/95/EC (Safety)  
R&TTE 1999/5/EC (Telecom)  
EMC 89/336/EEC (EMC)  
RoHS Directive 2015/863

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The Technical File containing supporting documentation is maintained at:

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JK Audio, Inc (Corporate Headquarters)  
Compliance Manager  
1311 E 6th Street  
Sandwich, Illinois 60548 USA  
815-786-2929 phone  
815-786-8502 fax

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## FCC Registration

Your new JK Audio product has been registered with the Federal Communications Commission (FCC). This product complies with the standards in Part 68 of the FCC rules.

## FCC Part 15 Subpart A Compliance

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense.

Changes or modifications not expressly approved by JK Audio can void the user's authority to operate the equipment.

**RemoteMix x4™**

Field Mixer



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