



## **BluePack™**

Wireless interview tool



User Guide

**JK Audio**

# Welcome

## Thank You

Thank you for purchasing the JK Audio BluePack. Please read this guide for instructions on using it.

## Getting Assistance

If you have technical or application questions:

In the US & Canada, call us toll free at: **800-552-8346**

All other countries dial: **815-786-2929**  
(M-F 8:30-5:00pm Central Time Zone)

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

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

## Limited Warranty

BluePack is covered by a 2 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.**

## Safety Precautions



### Use Caution to Prevent Hearing Loss

BluePack 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.

**Note:** While BluePack was designed to be very rugged and durable, it is not waterproof and care should be taken to keep the unit dry.

Overview	vi
Applications	1
Controls & Indicators	2
Getting Connected	4
Bluetooth Wireless Technology	6
6 Bluetooth Status LED	
7 Pairing	
8 Master or Headset Mode	
9 Switching between Master/Headset Mode, Master Mode Streaming	
10 Connection History, Disconnecting from a Device, Reconnecting to a Device	
FAQs	11
Technical Information	14

## Features

---

HD Voice\*

---

---

3.5 Mm Stereo Line Input and Output

---

---

Bluetooth Wireless Technology

---

---

¼" Stereo Headphone Jack

---

---

XLR Mic Input

---

---

>10 Hours on one 9 Volt Alkaline Battery

---

\* **HD Voice.** While standard phone calls have a narrow bandwidth of 300 Hz to 3.4 kHz, HD Voice calls offer 50 Hz to 7 kHz bandwidth. The additional 1.5 octaves on the low end gives voice a more natural sound, while the additional upper octave dramatically improves speech clarity and intelligibility.

**Wireless HD Calls.** To take advantage of this extended bandwidth, both phones on the call must support HD Voice, and both phones must be on the same carrier, in coverage areas that support HD Voice.



# Overview

## Introducing BluePack

JK Audio combines professional audio electronics with a flexible communications interface in a rugged new belt pack design. BluePack™ offers a professional look and feel to field reporters and live remote talent.

BluePack™ allows you to perform live man-on-the-street interviews through your cell phone in HD Voice. BluePack also provides two-way IFB connections through a cell phone or notebook for truly flexible remote monitoring.

HD Voice is available on many third party headsets and cell phones. Interview in 7 kHz audio bandwidth for rich, natural voice clarity.

Connect to cell phones and notebooks through Bluetooth Wireless Technology. This professional microphone preamp and powerful headphone amplifier provide a vast improvement in sound quality. A 3.5 mm stereo line input jack allows recordings to be mixed into the broadcast. The 3.5 mm stereo line output jack provides your full bandwidth microphone signal on the left channel and the return audio on the right channel.

The stereo headphone output gives you a mix of the XLR microphone input, 3.5 mm input, and return audio. This powerful stereo headphone amplifier will cut through any crowd noise.

### **Live Man-On-the-Street Broadcasts**

Connect your microphone and headphones to the BluePack, then establish a Bluetooth connection to your wireless phone. Dial up the studio and you are ready to go. Add prerecorded sound clips or background music to your interviews through the Aux Send input.

### **Telephone Interviews**

Call out and interview other people as part of your pre-game show. Connect your mic and headphones as shown and send audio through the line output to your laptop for live streaming or to your portable recorder for later broadcast.

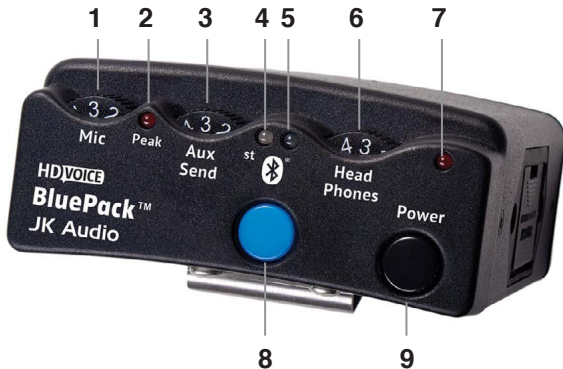
### **Mic Pre-Amp**

Connect your dynamic microphone to the XLR jack and connect the line level 3.5 mm output to your other audio equipment. Use the thumbwheel on the top of the BluePack to set the volume level for the mic input.

### **BluePack in Master Mode**

Configure the BluePack in Master mode, pair it with a Bluetooth enabled stereo headset and send stereo audio to the headset. Tap the **<MFB>** to switch to Hands Free mode and have a full-duplex conversation.

## Controls & Indicators



### 1) Mic Control

Controls the level of your microphone input.

### 2) Peak Indicator

The peak LED indicates clipping on the input channel if the level is set too high. The microphone and Aux Send are a combined input. If you see this red LED flashing, you should decrease the **<Mic>** and/or **<Aux Send>** input levels.



## Controls & Indicators

### 3) Aux Send Control

Adjusts the level of audio from the 3.5 mm Aux Send input jack.

### 4) Stereo LED (Listen-Only)

The <st> LED flashes **Red** when the BluePack has a stereo listen-only (Headset) audio connection with your Bluetooth device.

When you receive an incoming phone call, the stereo LED will turn off.

This LED will flash **Green** when the unit is in Master mode, sourcing stereo A2DP audio to a Bluetooth enabled headset device

### 5) Bluetooth LED

See section on Bluetooth Wireless Technology.

### 6) Headphones Control

Sets the level of audio sent to the headphone output jack.

### 7) Power Indicator

LED indicates when the power is turned on and dims when the battery charge is getting low.

### 8) Multi-Function Button (MFB)

Establish a connection with your Bluetooth enabled cell phone, laptop or other device.

### 9) Power Button

Press to activate the unit. Press again to turn the unit off.

## Getting Connected



### 1) Headphones

Connect your headphones to this 1/4" jack. The stereo headphone output gives you a mix of the XLR mic input, 3.5 mm Aux Send input and the Headset Interface audio.

### 2) Stereo Line Level Output

The unbalanced 3.5 mm stereo fixed line level output jack provides your full bandwidth microphone signal on the left channel and the Bluetooth audio on the right channel.

This stereo output jack allows you to make a full bandwidth recording using your favorite recorder for transfer back at the station or over the web.

### **3) Stereo Line Level Aux In**

Connect the output of your other audio equipment to this unbalanced stereo 3.5mm Aux In jack. This enables you to add background music or sound clips to your remote broadcast. This audio is not present at the Stereo Output but will be sent to the Headphone jack.

### **4) Mic Input**

Connect your dynamic microphone to the XLR jack. This device will not provide phantom power for a condenser type microphone.

You can use both the balanced XLR and unbalanced 3.5 mm inputs simultaneously. The line level Aux In jack allows recordings to be mixed into the broadcast with your microphone to be sent out through the Bluetooth connection.

# Bluetooth Wireless Technology

## Bluetooth Status LED

The blue LED on the front of the unit flashes in different sequences to indicate the current connection status. **When attempting to put the unit into Idle or Pairing mode, you should power the unit off then back on before pressing the <MFB>.** If you put the unit into the wrong state due to releasing the <MFB> at the wrong time, holding the <MFB> for "X" seconds will not put it into the desired mode.

### Pairing Mode

In *Pairing Mode*, any *Bluetooth* wireless technology enabled device within range can pair with your BluePack. To put the unit in *Pairing Mode*, press the blue <MFB> for **6** seconds while the unit is on. The blue LED will flash rapidly at a rate of **100ms off, 100ms on**. Once the pairing process is complete the unique device ID is stored in Connection History. Subsequent connections can be made automatically from *Idle Mode*.

### Idle Mode

In *Idle Mode*, BluePack searches for paired devices. To put the unit in *Idle Mode*, press the blue <MFB> for **4** secs when the unit is on. The blue LED will flash at a rate of **2 secs off, 200ms on**.

### Connected Mode

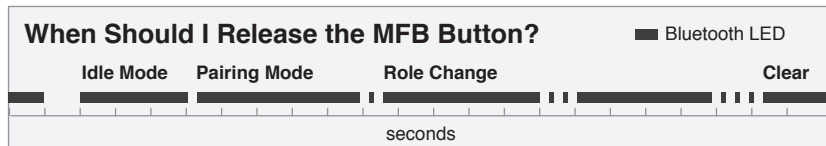
After bonding is complete, the blue LED will flash at a slower rate of **2 secs off, 1 sec on (2 secs off, 4 secs on for HD Voice)**. The connection to that device is secure.

# Bluetooth Wireless Technology

## Pairing to a Cell Phone with Bluetooth Wireless Technology

When you're first connecting to a new device, you should be in an environment with no other *Bluetooth* wireless technology enabled devices within range that might also be in *Pairing Mode*.

1. Turn the BluePack on, then hold the blue <MFB> button for 6 full seconds. After you release the <MFB> button, the blue LED should flash rapidly if BluePack is in *Pairing Mode*.
2. On your device, find and select the option to set up a connection. When the cell phone has found the new device, select from the list the device ID of "**JKBPxxxx**" where: **xxxx** = last four digits of the serial number.
3. If asked for a pin, enter "**0000**".
4. When bonding is complete, the blue LED will flash at a rate of **2 secs off, 1 sec on. (2 secs off, 4 secs on for HD Voice)** Once BluePack has been added to your cell phone, subsequent connections can be made more quickly from *Idle Mode*.



# Bluetooth Wireless Technology

## Master or Headset Mode

In the Bluetooth world, a Master device, such as a wireless phone, computer, or music player, is connected to a Headset device. The Master device controls the connection, and also has the ability to stream stereo A2DP audio to the Headset device. A2DP music streaming is a one-way path from Master to Headset. BluePack can act as either a Master or Headset. Please note that wireless phones typically cannot receive A2DP stereo music streaming.

BluePack will first attempt to connect using the Hands-Free profile, allowing 3.4 kHz (7 kHz if HD Voice is available on your phone) telecom bandwidth for a mono full-duplex connection. If the Hands-free profile is not available,

BluePack will attempt to connect in A2DP stereo streaming mode.

## What is the Difference between Profiles?

### A2DP (Advanced Audio Distribution Profile):

Used for stereo music streaming.

**Headset:** Facilitates mono, full-duplex audio between two paired devices.

**Hands-Free:** Similar to Headset profile, but allows the receiving device more control over the call, such as volume, accept/reject/end a call.

## Bluetooth Wireless Technology

### Switching between Master and Headset Modes

To switch between Master and Headset mode, you must start from the Bluetooth power-off state. Power off the unit, then back on again. Hold the **<MFB>** down for **11** seconds then release. The ST LED on the top of the BluePack will flash **Green** when the device is in Master mode. The ST LED will flash **Red** when it is in Headset mode. The **<st>** LED only indicates whether the BluePack is in Master or Headset Mode on Startup and when the Master/Headset role is switched. The timing of the LEDs while pairing with another device should remain the same for either state.

### Master Mode Streaming State

Simply tap the **<MFB>** button to toggle between stereo A2DP and mono Hands-Free profiles. This can only be done while the unit is in Master mode.

During A2DP streaming, the **<st>** LED will be lit **Green**.

The **<st>** LED will not be lit when the Hands-Free profile is in use.

# Bluetooth Wireless Technology

## Disconnecting from a device with Bluetooth Wireless Technology

To disconnect from the Bluetooth device, simply press the **<MFB>** and hold for **5** seconds or simply power the unit off.

When a Bluetooth connection is dropped or terminated, BluePack returns to *Idle Mode*. If the unit is in *Idle Mode* for >2 minutes without a connection, Bluetooth will automatically shut off. You may restart Bluetooth by pressing the **<MFB>** for **2** seconds.

## Connection History

BluePack retains a history of the 16 most recent devices. To clear the connection history and return to factory reset, hold the **<MFB>** button in for at least **20** seconds. After resetting, BluePack will return to *Pairing mode*.

## Reconnecting to a Device

When reconnecting to a device that is still in BluePack's pairing history, the device that will be in Headset mode should be powered up first. Then when the Master device is turned on, it will find the Headset device during its power up cycle.



### **What is the range of the Bluetooth transmitter/receiver?**

BluePack will transmit and receive audio signals up to 65 feet from your Bluetooth device. The maximum range of this product is achieved when a clear line of sight is maintained between connected devices, but may also be limited by interference due to the environment. While this product offers extended range capabilities, maximum usable range is limited by the weaker of the two paired/connected devices. Transmitting signals over longer distances will require more power, therefore you should keep BluePack as close as possible to your Bluetooth device to conserve battery power.

### **Can I pair my BluePack to two cell phones and send my audio to two locations simultaneously?**

No, your BluePack can only connect to one Bluetooth enabled device at a time. Paired devices remain in the history for easy connection later.

### **How long will the battery last?**

Based on our tests using a standard alkaline battery, the battery should last for >10 hours under normal use. Lithium batteries can significantly increase the battery life, but at a higher cost. As an indicator of low battery, the red power LED will grow dim and then extinguish a short while before the battery is completely exhausted and the unit shuts down.

## FAQs

### **Can I use my Bluetooth headset with my cell phone while I have my phone connected to the BluePack?**

No, your cell phone can only be connected to one Bluetooth enabled device at a time. In the standard mode of operation, your cell phone will be connected to our device as if the BluePack were a headset. So you need to use a microphone and headphones connected to the BluePack.

### **If I have an audio source connected to the Aux In jack, will that audio also be present at the Output mini jack?**

No, the stereo mini jack output only contains audio from the <Mic> input and the connected Bluetooth device. This input would be a good place to add background music or sound clips during a live interview that is being sent to your broadcast studio via the Headset Interface.

### **Can I send and receive audio at the same time?**

Yes, you can have full duplex conversations. The stereo line output contains your microphone audio on the Left channel and audio from the Bluetooth device is on the Right channel.

### **Why is the peak LED still red after I turned down the mic volume level?**

The microphone and Aux Send are a combined input. If you see this red LED flashing, you should decrease the **<Mic>** and/or **<Aux Send>** input levels until the combined input is no longer clipping.

### **My BluePack won't pair with my cell phone. Why won't it accept the PIN?**

If this is the first time you have paired the BluePack with this cell phone, make certain you are in *Pairing Mode* and not *Idle Mode*. You must hold the **<MFB>** in for approximately **6** seconds to reach *Pairing Mode* the first time you connect.

### **Can I have full duplex stereo conversations if my stereo headset uses A2DP?**

No, the A2DP profile is only used for stereo music streaming. Full duplex conversations will be in mono.

# Technical Information

## Specifications

Input	Impedance / Level
-------	-------------------

Female XLR Mic:	2k ohms / -34 dBu nom.
-----------------	------------------------

1/8" (3.5mm) Stereo Line:	20k ohms / -10 dBu nom.
---------------------------	-------------------------

### Output

1/8" (3.5mm) Stereo:	100 ohms / -10 dBu nom.
----------------------	-------------------------

Headphone 1/4" Stereo:	8 ohms / ½ watt per channel
------------------------	-----------------------------

### Bluetooth (3.0)

Distance:	65 feet (20 meters)
-----------	---------------------

Frequency Response:	Hands-Free (phone): 300 Hz - 3.4 kHz Hands-Free (HD Voice): 50 Hz - 7 kHz A2DP Mode: 30Hz - 17 kHz
---------------------	--

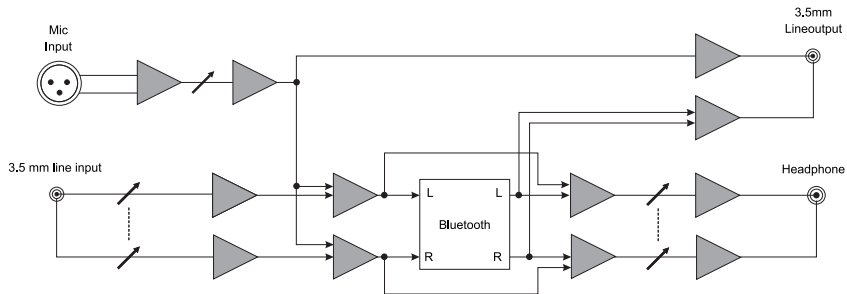
### MISC

Power:	9 VDC Battery
--------	---------------

Size:	4.7" x 3.75" x 1.65" (12 x 9.5 x 4.2 cm)
-------	--

Weight:	10 oz (275 g)
---------	---------------

## Block Diagram



# Declaration of Conformity

---

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

---

Declares that the product:

---

Product Name: BluePack™ Wireless Interview Tool  
Model Numbers: BluePack

---

Conforms to the following Product Specifications:

---

ESD: ESD: EN 61000-3-2, 3-3, 4-3, 4-4, 4-5, 4-6, 4-11  
EN 301 489-17 V1.2.1

Emissions: EN 55022:1998, +A, 2000+A3, 2003 Class B  
ETSI EN 300.328 V1.6.1: 2000  
FCC Part 15, Subpart B

Bluetooth Radio: EN 300.328  
FCC Part 15.247  
FCC ID QOQWT32AE  
IC 5132A-BGTWT32AE

---

## FCC Compliance Notice

---

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

---

R&TTE Directive 1999/5/EC  
EMC Directive 89/336/EEC, 92/31/EEC, 93/68/EEC  
RoHS Directive 2002/95/EC

---

The Technical File containing supporting documentation is maintained at:

---

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

---

### FCC Part 15 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 own expense. Changes or modifications not expressly approved by JK Audio can void the user's authority to operate the equipment.

**BluePack™**

Wireless Interview Tool



**User Guide Version 7/29/14**

JK Audio, Inc.

1311 E 6th St.

Sandwich, IL 60548

United States

Telephone: 815.786.2929

Toll Free: 1.800.jkaudio

Fax: 815.786.8502

[www.jkaudio.com](http://www.jkaudio.com)

© 2014 JK Audio, Inc. All rights reserved.

The Bluetooth word mark and logos are owned by the Bluetooth SIG, Inc. and any use of such marks by JK Audio, Inc. is under license.

**JK Audio**