



# BlueSet™

## Wireless Headset Interface



User Guide

**JK Audio**

# Welcome

## Thank You

Thank you for purchasing the JK Audio BlueSet Wireless Headset Interface. Please read this guide for instructions on setting up and using your new product.

## 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

BlueSet 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.**

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## Features

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HD Voice\*

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Electret / Dynamic Headset  
Compatibility

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1/8" (3.5 mm) Mic Level Output

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Trim Pot adjusts Bluetooth Return

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Mini USB Power Jack

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>10 Hours on Internal Li-Ion Battery

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\* **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.



### **Introducing the BlueSet.**

These headset interfaces plug directly into most Party- Line (PL) belt packs, replacing the wired headset. A 3.5 mm stereo headset jack contains a mic level output signal suitable for recording, with the beltpack headphone signal on the left channel, and the Bluetooth return signal on the right. A switch selects between connection to a 3rd party Bluetooth headset or a cell phone.

**Headset Connect:** Leave your belt pack on the desk as you walk around the room. Some Bluetooth headsets allow you to switch between two phones, or in this case, switch between your intercom and your cell phone.

**Phone Connect:** Pair BlueSet to your cell phone to grant remote access to the Party-Line for a distant member. The belt pack Mic/Talk button controls audio from the cell phone into the intercom system.

**Headset Compatibility:** Female and Male XLR four and five pin versions available: BlueSet-F4, BlueSet-F5, BlueSet-M4, BlueSet-M5.

# Getting To Know your BlueSet

## Mode Switch

In the Bluetooth world, a Master device, such as a wireless phone, computer, or music player, is connected to a Headset device.

Before you turn the BlueSet on, be sure to set the **<Headset/Phone Switch>** to the correct position. If you change that switch while the unit is on, you will need to power the unit off, then power the unit back on before the change takes effect.

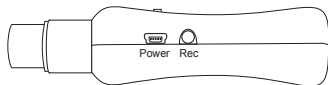
Select **<Headset>** if you will be using your BlueSet with a *Bluetooth* enabled headset or any device that emulates a headset. Select **<Phone>** if you will be using your BlueSet with a cell phone or other master device. See **page 8** for more information on Bluetooth profiles for different wireless applications.

## Mic Trim

A small flat blade screwdriver can be used to adjust the **<Mic Trim>** pot on the back of the unit. This adjusts the level of the audio coming from the *Bluetooth* wireless technology enabled device as it is sent into the beltpack headset connector.

## Recording Output

A 3.5 mm stereo output jack contains a mic level signal suitable for recording, with the clean mic signal on the left channel and the *Bluetooth* wireless technology return audio on the right.



### Charging

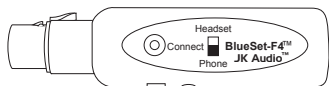
To achieve maximum battery capacity, BlueSet should be fully charged before its first use. While this battery will normally charge in about 2 1/2 hours, please allow 4-5 hours for this first charge. Connect the power supply cable to the mini USB connector on your BlueSet to charge the battery. The red LED will flash to indicate that the battery is charging, once charging is complete, the LED will turn off.

If the battery becomes completely discharged for an extended period of time, the red LED will not flash until it can begin its charge cycle. This may take several minutes.

If the power cable is connected when the unit is shut down, the blue LED will stay lit. If the unit is in use, the

blue LED will indicate the current connect mode. Feel free to use your BlueSet while it is charging.

### Connect Button



The **<Connect Button>** is used to initialize connections. See **pages 4-6**.

This button is also used to disconnect and turn off the BlueSet. See **page 7**.

### Pairing your BlueSet

Your devices are now ready to be paired. See Bluetooth Wireless Technology on **page 5** for pairing instructions.

# Bluetooth Wireless Technology

## Bluetooth Status LED

The blue LED on the side of the unit flashes in different sequences to indicate the current connection status.

### Pairing Mode

In *Pairing Mode*, any Bluetooth wireless technology enabled device within range can pair with your BlueSet. To put the unit in *Pairing Mode*, press the **<Connect Button>** for **6** seconds. 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

To connect from *Idle Mode*, hold the **<Connect Button>** for **2** seconds. Upon release, the blue LED will flash at a slow rate of **2 secs off, 200ms on**. In *Idle Mode*, BlueSet searches for paired devices.

### 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.

**Note:** If you put the unit into the wrong state due to releasing the **<Connect Button>** at the wrong time, please start over from the **powered-off** state.



# 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. Set the **<Headset / Phone Switch>** to the **<Phone>** position.
2. From the **powered-off** state\*, hold the **<Connect Button>** on the BlueSet for at least **6** seconds. Upon release, the blue LED should flash rapidly as the BlueSet enters *Pairing Mode*.
3. On your phone, search for

\* Holding the **<Connect Button>** for **5** seconds while in the **powered-on** state will power off the BlueSet.

*Bluetooth* wireless technology devices. If this is the first time you have paired with this device, select the option to add an audio device. When the cell phone has found the new device, select from the list the device ID of 'JKBSETgpxxxx' where: *g* = XLR gender;  
*p* = XLR pin count;  
*xxxx* = the last four digits of the serial number.

4. Enter the pin number as '0000' if requested
5. When bonding is complete, the blue LED will flash at a rate of **2** seconds *off*, **1** second *on* (**2 secs off, 4 secs on for HD Voice**). Once BlueSet has been added to your cell phone, subsequent connections can be made more quickly from *Idle Mode* by holding the **<Connect Button>** for only **2** seconds before releasing.

# Bluetooth Wireless Technology

## Pairing to a Headset 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*.

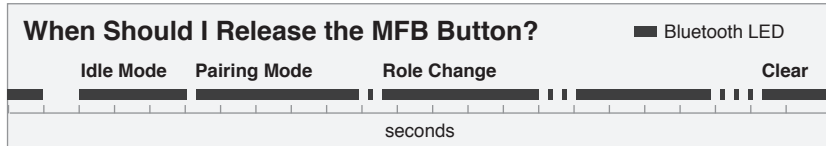
1. Set the **<Headset / Phone Switch>** to the **<Headset>** position.
2. Following manufacturer's instructions, set your headset to *Pairing Mode*.

**Note:** Connecting via Bluetooth wireless technology varies with different cell phones.

3. From the powered-off state, hold the **<Connect Button>** on the BlueSet for at least **6** seconds. After you release it, the blue LED should flash rapidly if the BlueSet is in *Pairing Mode*.
4. When bonding is complete, the blue LED will flash at a rate of **2** seconds off, **1** second on (**2 secs off, 4 secs on for HD Voice**). Subsequent connections can be made more quickly from *Idle Mode* by holding the **<Connect Button>** for only **2** seconds before releasing.

**Note:** If left unused in *Idle* or *Pairing Mode*, the BlueSet will automatically disconnect the Bluetooth connection in two minutes and power off.

# Bluetooth Wireless Technology



## Disconnecting from a Device

To disconnect from any *Bluetooth* wireless technology enabled device and turn the power off, simply hold the **<Connect Button>** until the blue LED turns off (approx. 5 seconds).

## Connection History

BlueSet retains a history of the 16 most recent devices. To clear connection history and return to factory default, with the BlueSet powered off, set the switch to the **<Headset>** or **<Phone>** position, then hold the **<Connect Button>** in for at

least 20 seconds. After resetting, the BlueSet will return to *Pairing Mode*.

## Reconnecting to Paired Devices

To reconnect to a device that is in **Connection History**, the BlueSet should be in *Idle Mode* (pg. 4) and will automatically connect to a paired device that is within range.

When reconnecting to your cell phone, the BlueSet should be set to **<Phone>**. For Bluetooth headsets, the BlueSet should be set to **<Headset>**.

## Wireless Applications

### Master(Phone) or Headset Mode

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(Phone) to Headset. BlueSet can act as either a Master or Headset. Please note that wireless phones typically cannot receive A2DP stereo music streaming.

BlueSet 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,

BlueSet will attempt to connect in A2DP stereo streaming mode.

### What is the Difference between Profiles?

**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.

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

BlueSet transmits and receives audio signals up to 50 feet from your Bluetooth wireless technology enabled 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 BlueSet as close as possible to your Bluetooth device to conserve battery power.

### Why won't the BlueSet pair with my phone?

If this is the first time you are trying to pair to this cell phone, you might be in *Idle Mode* instead of *Pairing Mode* and your BlueSet is not being recognized. To reach *Pairing Mode*, hold the **<Connect button>** in for a full 5 seconds.

### Why won't BlueSet connect to my device?

Ideally, the master device will search for the headset device. If the BlueSet isn't pairing with your device, try turning the second device on first from your initial attempt to connect.

## FAQ's

### **What kind of intercom headset jack is BlueSet compatible with?**

BlueSet can be used to replace an electret or dynamic intercom headset.

### **Why doesn't the BlueSet change connections when I move the switch from Headset to Phone?**

If you change this switch while the unit is on, you will need to power the unit off (see **page 7**), then power the unit back on before the change takes effect.

### **How long does it take to recharge the battery?**

BlueSet can fully charge the internal battery in about 2 1/2 hours. These

batteries do not have a “charging memory” and they can be recharged at any time without changing their life expectancy.

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

Based on tests with BlueSet about 1 meter from a Bluetooth device, the battery should last for about 10 hours under normal use. As an indicator of low battery, the blue LED will grow dim and then extinguish a short while before the battery is completely exhausted and the unit shuts down.

### **How do I replace the battery in this unit?**

This is not a user replaceable battery. Please contact JK Audio or a factory authorized service center for battery replacement.

### Battery Information

BlueSet contains a rechargeable Lithium-Ion battery. These batteries do not have a “charging memory” and can be recharged at any time without changing their life expectancy. All rechargeable batteries have a limited life and will gradually lose their capacity to hold a charge. This loss of capacity is irreversible. To get the most from your BlueSet, the battery should not be allowed to fully discharge. If this unit is not in use, the battery should be recharged at least every 90 days. The Lithium-Ion battery in this device is not user replaceable. Please contact JK Audio or a factory authorized service center for battery replacement.

### Safety Precautions

This unit should only be charged at temperatures of 0° - 45°C (32° - 113° F).

Operating temperatures for these devices is -10° to 60°C (14° to 140°F). When not in use, they should be stored as -20° to 45°C (-4 to 113°F) to prolong battery life.

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

# Technical Information

## Output

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Connection:	1/8" (3.5 mm) stereo
Impedance:	1000 ohms
Level:	15 mV RMS; -34 dBu nom.

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## Bluetooth Wireless Technology

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Standard:	Bluetooth 3.0
Range:	66 feet ( 20 meters )
Frequency	<b>HF</b> = full duplex voice 300 Hz - 3.4 kHz
Response:	<b>HF (HD)</b> = full duplex HD Voice 50 Hz -7 kHz

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## Misc

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Power	120-240 VAC
Supply:	5V DC, 50 ma
Connector:	Mini-USB Series B
Battery:	Internal Lithium-Ion Polymer rechargeable

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## Dimensions

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Size:	1.1" x 4.4" (2.8 cm x 11.2 cm)
Weight:	2.1 oz (60 g)

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## XLR Pinout

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Pin 1:	Headset Mic (low)
Pin 2:	Headset Mic (high)
Pin 3:	Headphone (low)
Pin 4:	Headphone (high)

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Pins 4 & 5 are mixed together on BlueSet F5/M5 to accomodate dual-sided headsets.

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Pin 5:	Headphone (high)
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### FCC-B 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.

# 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: BlueSet™ Wireless Headset Interface  
Model Numbers: BlueSet-F4, BlueSet-M4, BlueSet-F5, BlueSet-M5

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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  
Nemko-CCL File Number NA201010004

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

Emissions: EN 55022:2006  
AS/NZS CISPR 22 (2002)  
FCC Part 15, Subpart B  
ICES-003

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

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## Declaration of Conformity

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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)  
EMC 04/108/EEC (EMC)  
RoHS Directive 2002/95/EC

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The Technical File containing supporting documentation is maintained at:

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

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**JK Audio**