# Thank you for choosing Wolverine! Having difficulty using this product?

Please try the following options:

Call us at 949-458-9888 M-F 9:00-5:00 Pacific Time

Visit www.wolverinedata.com/support to find the latest documentation and other help tips

E-mail or write to our technical support staff at support@wolverinedata.com or our address: 9939 Muirlands Blvd. Irvine, CA 92618

#### INTRODUCTION

The Wolverine WIOS-WAS (Wireless Audio System-Integrator) integrates your existing audio equipment, amplifier, subwoofer, soundbar, or headphone, into the Wolverine WIOS family, wirelessly, no running wires, no drilling holes on the wall.

Wolverine WIOS-WAS combines the best of both worlds: you will continue to enjoy the rich sound from your existing audio system, such as a BOSE, a SONY, or a home theater system, with the freedom of wireless connection.

#### **FEATURES**

- 5.8 GHz Wireless Stereo System, minimize interference with other household equipments
- Premium sound quality
- 200 feet transmission range
- Connects to all smart phones, music players, TV and amplifier systems
- No-wires, simple setup in minutes

#### SAFETY INFORMATION AND INSTRUCTIONS

Please take the time to read and follow safety instructions in this Manual carefully. It will help you to use your new Wolverine® product properly and enjoy its features more.

- To reduce the risk of fire or electric shock, do not expose this product to rain, moisture, water dripping or splashing. Use care not to spill liquids into any part of the device. In the event that water or other liquids entered the interior, turn off the device immediately. Continue use of the device when wet, can cause failure and/or fire hazard.
- Do not drop or handle too aggressively as it may cause damage to the device. Warranty will be voided if the device is mishandled or misused. Always place device on a flat level surface and avoid places where may be subjected to strong vibration.
- Do not handle the device with wet hands. Doing so may cause electrical shock and damage the device.
- Do not place the device close to any equipment generating strong electromagnetic fields. Exposing to strong magnetic fields may cause device malfunction.
- Do not place or store device near heat source such as radiators, heat registers, stoves that produce heat. Clean device with dry cloth. Do not use abrasive clothes, thinner, alcohol, or other chemical solvents, because they may damage the finish or cosmetics.
- Do not block ventilation openings which may cause device to overheat.
- Protect the power cord from being walked on or sharp-pinched, particularly at plugs and the point where they exit from the device.

- Only use attachments/accessories specified by the manufacturer. If power adapter is needed, use the power adapter supplied in the package. Using wrong power adapter may short the device and cause fire hazard.
- Unplug this product during lightning storms or when unused for long periods of time.
- There is a risk that moisture may have condensed in the device when environmental temperature rapidly changed, which can cause damage to the device. To avoid condensed moisture damage to the device, allow it stand at room temperature for 2-3 hours before use. This will help moisture to evaporate and prevent unnecessary damage.
- Under no circumstances should user try to repair or modify the device or accessories. Opening the enclosure may expose you to high voltages or other hazards. Unauthorized alterations may compromise safety, regulatory compliance, and system performance, and will void the warranty.

# PACKAGE CONTENTS

- 1. Receiver
- 2. Transmitter
- 3. Power adapter: 2 pieces, DC 5V for transmitter and receiver
- 4. Audio cable: 3.5 mm to 3.5 mm stereo
- 5. Audio cable: 3.5 mm to RCA (red and white) stereo

#### **OPERATION**

#### Transmitter

You can connect the transmitter to audio devices such as TV, smart phones, tablet PC, MP3 players, or many others using Bluetooth connection or the included audio cables.

# Connect with audio cable

- Plug the included AC/DC power adapter to an electrical wall AC outlet.
- Insert the AC/DC power connector into the DC female-jack located on the back of the transmitter.
- Switch the POWER switch to ON, the Power LED on the transmitter will be red.
- Press the LINE-IN / BT button to confirm the LINE-IN input mode (if necessary). The transmitter's default setting is LINE-IN, MODE LED will be red.
- Connect audio devices to the audio cable and play. The Power LED will remain steady in red color.

#### **Connect with Bluetooth**

- Plug the included AC/DC power adapter to an electrical wall AC outlet.
- Insert the AC/DC power connector into the DC female-jack located on the back of the transmitter.
- Switch the POWER switch to ON, the Power LED of the transmitter will be red.

- Press the LINE-IN / BT button to confirm the Bluetooth input mode. MODE LED will turn to blue, and the BT SYNC LED will flash between blue and red.
- Turn on Bluetooth setting in your audio device to search for the Wolverine. When your device found the Wolverine, a device by the name "Wolverine\_SPK" will show.
- Select and connect Wolverine\_SPK and play audio. The BT SYNC LED will turn steady in blue color.
- The Power LED will remain steady in blue color. The transmitter will remain in Bluetooth mode until it is powered off.

#### Receiver

# **Connect Wolverine Receiver to Existing Audio System**

- Plug the included AC/DC power adapter to an electrical wall AC outlet.
- Insert the AC/DC power connector into the DC female-jack located on the back of the receiver.
- Switch the POWER switch to ON, the Power LED on the receiver will be red.
- Connect your favor audio system (Audio-In port on the system) to the audio-out jack on the Wolverine receiver by audio cable and start playing. The Power LED will remain steady in red color.

# Paring

Each transmitter can connect with more than one receiver (up to 8 receivers). You can pair additional speakers or receivers to the transmitter by following the steps:

- Connect power adapters to both transmitter and receiver and power them on.
- Connect audio source to transmitter, by either LINE-IN or Bluetooth, and PLAY the audio source. You must have audio signal go into the transmitter.
- Press and hold the PAIRING button located on the far right of the back of the transmitter until the TR-SP SYNC LED on the transmitter starts flashing. Release the PAIRING button.
- Press and hold the PAIRING button located on the far right of the back of the receiver until the SYNC LED on the receiver starts flashing. Release the PAIRING button.
- If the pairing process is successful, both SYNC LEDs will stop flashing and your favor audio equipment will play the music.
- In case of channel interference, repeat the pairing process one more time to allow the Wolverine to select a different channel (frequency).

# **Optional accessories**

# Colossal portable power pack

- Wolverine's Colossal portable power pack is designed specifically for long time enjoyment of quality digital sound anywhere you go, picnics, beach parties, or parks.
- Simply connect Colossal as the power source to the Wolverine transmitter or the receiver, Colossal will give you about 30 hours of playing time per charge.
- Colossal + WIOS is the perfect bundle for your outdoor parties.

# **Trouble shooting**

# - No sound

- Ensure the power adapter is fully inserted into the wall outlet, and the power connection is turn on.
- Ensure the speakers on your equipment are ON.
- Ensure the audio cable or Bluetooth to the transmitter / receiver is well connected.
- Ensure the connected audio or video equipment is playing.
- If the volume of the speakers is too low, adjust the volume to an appropriate level.

#### - Interference

- To avoid interference disturbance, place your transmitter and speaker away from other 2.4GHz or 5.8GHz electronics device such as microwave oven, wireless LAN, bluetooth device or cordless phone, at least 3 feet.
- If you could hear the interference, you can press the transmitter unit pairing button once to get another channel link for transmission.

#### - Distorted

- Pair the Transmitter and Receiver again.
- Ensure the volume levels of input and output devices are adjusted properly.
- The receiver are too far away from the transmitter, move them closer.
- The input level of the audio signal is too high. Turn down the volume of the audio source equipment.

# **TECHNICAL SPECIFICATIONS**

Carrier Frequency: 5.8GHz Digital, CSR Bluetooth 4.0

Operation Voltage:

Transmitter - DC 5V 1000mA adapter Receiver - DC 5V 1000mA adapter

Frequency Response : 20Hz ~ 20KHz

Distortion : <1% S/N Ratio : 80dB

Channel Separation: 65dB

Operation Distance: Up to 262 feet in open area

Dimensions:

Transmitter - 94mm x 94mm x 35mm (H) Receiver - 94mm x 94mm x 35mm (H)

# Information about products that generate electrical noise

The Wolverine WIOS-WAS complies with FCC and Industry Canada RF radiation exposure limits set forth for general population. The system must not be collocated or operating in conjunction with any other antennas or transmitters.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

# U.S.A. only

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, this is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, you are encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna on your radio or TV.
- Increase the separation between the WIOS and your radio/TV.
- Connect the WIOS to an outlet on different circuit than the one to which the radio/TV is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Any modification to WIOS that is not expressly approved by Wolverine Data will void the user's authority to operate this device.

# **One-Year Limited Warranty (United States Only)**

Wolverine Data manufactures its hardware products from parts and components that are new or equivalent to new in accordance with industry standard practices. Wolverine Data warrants that the hardware products it manufactures will be free from defects in materials and workmanship. The limited warranty term is one year beginning on the date of invoice, as further described in the following text.

Damage due to shipping the product to you is covered under this limited warranty. Otherwise, this limited warranty does not cover damage due to external causes, including accident, abuse, misuse, problems with electrical power, servicing not authorized by Wolverine Data, usage not in accordance with product instructions, failure to perform required preventive maintenance, and problems caused by use of parts and components not supplied by Wolverine Data.

The warranty extends only to the first consumer purchaser, and is not transferable. This limited warranty does not cover any items that are in one or more of the following categories: software; external devices (except as specifically noted); accessories or parts added to a Wolverine Data system after the system is shipped from Wolverine Data or its resellers; accessories or parts that are not installed in the Wolverine Data factory. During the one-year period, beginning on the invoice date, Wolverine Data will repair or replace products returned to Wolverine Data's facility.

To request limited warranty service, you must contact Wolverine Data's Technical Support Services within the limited warranty period. Refer to the section titled TECHNICAL SUPPORT to find the appropriate telephone number for obtaining customer assistance. If limited warranty service is required, Wolverine Data will issue a RMA (Return Material Authorization) Number. You must ship the products back to Wolverine Data in their original or equivalent packaging, prepay shipping charges, and insure the shipment or accept the risk of loss or damage during shipment. Wolverine Data will ship the repaired or replacement products to you freight prepaid if you use an address in the continental United States, where applicable. Shipments to other locations will be made freight collect.

To obtain service, you must include: (a) a copy of your receipt or other comparable proof of purchase; (b) a written description of the problem; (c) your address and telephone number; (d) Write the RMA number on the outside shipping packaging.

NOTE: Wolverine Data uses new and reconditioned parts made by various manufacturers in performing limited warranty repairs and building replacement products. If Wolverine Data repairs or replaces a product, its limited warranty term is not extended.

# **Warranty Exclusions**

#### Normal Wear and Tear -

Periodic maintenance, repair and replacement of parts due to normal wear and tear are excluded from coverage.

#### Abuse and Misuse -

Defects or damage that result from: (a) improper operation, storage, misuse or abuse, accident or neglect, such as physical damage (cracks, scratches, etc.) to the surface of the product resulting from misuse; (b) contact with liquid, water, rain, extreme humidity or heavy perspiration, sand, dirt or the like, extreme heat, or food; (c) use of the products or accessories for commercial purposes or subjecting the product or accessory to abnormal usage or conditions; or (d) other acts which are not the fault of Wolverine Data, are excluded from coverage.

# Use of non-Wolverine approved accessories -

Defects or damage that resulted from the use of Non-WIOS's accessories or other peripheral equipment are excluded from coverage.

# **Unauthorized Service or Modification -**

Defects or damages resulting from service, testing, adjustment, instillation, maintenance, alteration, or modification in any way by someone other than Wolverine Data are excluded from coverage.

# **Altered Products -**

Product or accessories with (a) serial numbers or date tags that have been removed, altered or obliterated; (b) broken seals or that show evidence of tampering; (c) mismatched board serial numbers; or (d) nonconforming or non-Wolverine Data parts or accessories, are excluded from coverage.

### **Other Limitations**

Any implied warranties shall be limited to the duration of this limited warranty, otherwise the repair, replacement or refund as provided under this express limited warranty is the remedy of the consumer, and is provided in lieu of all other warranties, express or implied. In no event shall Wolverine Data be liable, whether in contract or tort (including negligence) for damages in excess of the purchase price of the product, accessory or software, or for any indirect, incidental, special or consequential damages of any kind, or loss of revenue or profits, loss of business, loss of information or data, software or application with the ability or inability to use the product, accessories or software to the full extent these damages may be disclaimed by law. Some states (or jurisdictions) do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitation may not apply to you.