



**VUZIX**  
*View the Future*



**iWear® AV920**  
**USER GUIDE**

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## Introduction

Welcome to the world of big screen viewing! Your Vuzix™ iWear® AV920 consists of a wearable binocular viewer with adjustable, removable hi-fi stereo headphones, adjustable nosepiece, AC charger, headstrap, audio/video cables, and carrying case. iWear® AV920 delivers extraordinary high quality images and iWear 3D™ video support (with 3D content). It's like having your own personal, portable movie theater!

Please read the included safety instructions before using the product.

### Package Contents

Your Vuzix Video Eyewear system contains the following:

iWear® AV920 Video Eyewear  
USB Cable and Charger  
iPod Cable (for video iPod only)  
RCA Female AV Cable  
DVD Player Cable  
Headstrap  
Soft Carrying Case (Lens Cleaner)

## Important Safety Instructions

Follow these safety instructions when using or handling your VUZIX Video Eyewear to reduce the risk of fire, electric shock, and injury to persons and property.

1. READ ALL OF THE INSTRUCTIONS AND SAFETY INFORMATION PROVIDED BEFORE USING THIS PRODUCT.
2. Use the product only for its intended use, as described in this manual.

3. Close supervision is needed when this product is by or near children.
4. Children under the age of seven (7) are still learning to focus and track with their eyes. Their vision is still immature. For these reasons, THIS PRODUCT SHOULD NOT BE USED BY CHILDREN UNDER THE AGE OF SEVEN (7).
5. A very small portion of the population may experience epileptic seizures when viewing certain kinds of flashing lights or patterns that are commonly present in our daily environment. These persons also experience seizures while watching some kinds of television pictures or playing certain video games including the use of a display system, such as this product. Consult a physician if you have any epileptic condition or if you experience any of the following symptoms while using this device: altered vision, muscle twitching, other involuntary movements, loss of awareness of your surroundings, mental confusion, and/or convulsions.
6. Immersive video, whether viewed on a regular TV, a movie theater screen or an VUZIX video display, can potentially have adverse effects on the user including motion sickness, perceptual after effects and disorientation, and decreased postural stability and eye strain. Take frequent breaks to lessen the potential of these effects, as is commonly suggested for other items, such as keyboards and computer monitors, that you may tend to fixate or concentrate on. If your eyes show

- signs of fatigue or dryness or if any of the above symptoms is noted, immediately discontinue use of this device and do not resume using it for at least 30 minutes after the symptoms have subsided.
7. Permanent or temporary hearing loss or impairment can result from excessive volume levels emitted from the headphones. Always adjust the volume to a safe level BEFORE wearing the product or headphones.
  8. Always be aware of the world around you. This product will immerse you in realistic sights and sounds, possibly causing you to forget about the real world around you and the threats to your well being and the well being of others. DO NOT use this product near stairs, balconies, or other things that can be tripped over, run into, knocked down or fallen over. This product should only be used while you are seated and never while using sharp or potentially dangerous objects, operating any form of mechanical device, driving motor vehicles, or performing any act that normally requires you to see what you are doing.
  9. This product may be tethered to a power outlet and cables may extend between components. Be careful that these cords do not tangle around you or pose a potential threat to the safety of others.
  10. Do not disassemble this product. If service work is required, contact VUZIX using the Support contact information shown in this manual.
  11. Do not pull or yank on the cable, kink any of the cables or tie them in sharp or tight knots. Do not hang the product or allow it to be suspended by any of its cables. To disconnect cables, pull on the cable connector. Cables damaged by such actions are not covered by the product's limited warranty.
  12. Do not drop, strike, or cause any portion of the product to be struck or shaken aggressively. Such actions may damage the product and void your warranty.
  13. Save these instructions.

**Immediately unplug the product from external power sources if:**

- The power cord or USB cord is damaged or frayed.
- Liquid has been sprayed, splashed or poured on the product.
- Any component of the product has been dropped or damaged.
- The product exhibits any distinct change in performance.

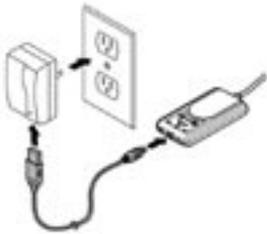
**Battery Safety Instructions**

- Batteries contain toxic materials. Do not burn, disassemble, mutilate, or puncture the batteries.
- Do not dispose of batteries in a fire.
- Dispose of batteries in a method that is consistent with your local laws and regulations.

## iWear® AV920 Connectivity

The iWear® AV920 has a single input mini-jack for line level stereo audio and either NTSC or PAL video. There is a second mini-jack for connecting your personal head phones in the event you prefer them over the included speakers. Finally, iWear® AV920 has a mini USB connection for charging the battery and updating the firmware in the device.

### Charging

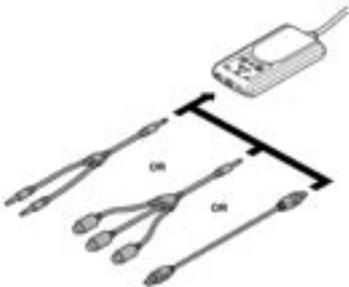


Plug the charging cable into the Battery Box and the AC adaptor.

LED indicator:

- green* - charge OK
- red* - charge low
- flash red* - needs charging
- amber* - charging

### Plugging In



The following are a few examples of acceptable ways of plugging in your iWear® AV920. This will vary from system to system.

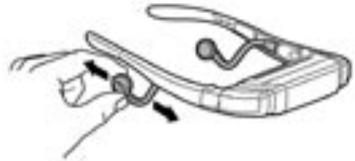
### Note on Stereoscopic 3D

iWear® AV920 is capable of displaying stereoscopic 3D images in two different ways. If the content being viewed is enabled with iWear 3D control information, iWear® AV920 will automatically be set in the proper 3D mode. If you are viewing interlaced 3D content without the iWear 3D, 3D can be enabled via the OSD controls with either L/R or R/L modes.

## iWear® AV920 User Adjustable

iWear® AV920 features many user adjustable design elements to ensure a comfortable experience. These allow you to customize iWear® AV920 for a perfect fit.

### Speaker Adjust



Your iWear® AV920 includes flexible, removable speakers. These speakers are adjustable. Simply grasp the speaker and flex the stem into place for maximum comfort.



To remove the speakers, pull them out along the inside of the temple piece. Note that the speakers are not designed to fit in your ears.

## Nose Bridge Adjust



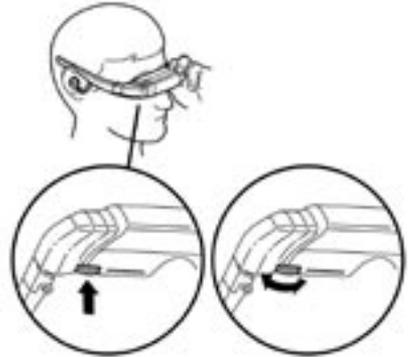
Your iWear® AV920's nose bridge is adjustable for comfort. To adjust the nose bridge grasp it and pull it away from the face of iWear® AV920. The nose bridge can be removed and inserted up-side-down for additional adjustability.

## AccuTilt™ Viewer Adjust



Vuzix' AccuTilt™ technology allows viewer adjustment through 15 degrees to properly align the viewer with your eyes. Grasp the viewer and tilt it until the displays are comfortably aligned with your line of sight. Each temple of the viewer pivots independently for precision adjustment.

## Power/Volume Adjust



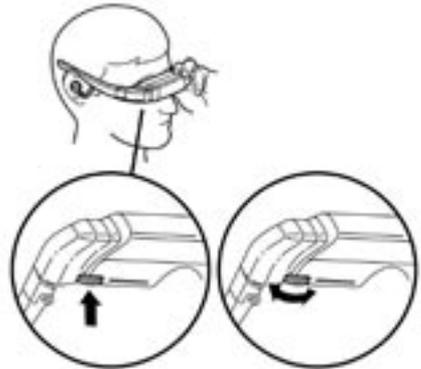
To turn the unit on, press the Contol Wheel once.

To turn the unit off, press the Contol Wheel for about 3 seconds or remove video and unit will automatically shut off after several minutes.

To adjust volume with the OSD off, rotate the Contol Wheel.

## iWear® AV920 On Screen Display

iWear® AV920 On Screen Display (OSD) allows access to important adjustable features such as brightness control and 2D/3D mode controls.



To open the OSD, press the Control Wheel once to display the OSD Selection Menu. Rotate the Control Wheel to highlight the icon representing the parameter you wish to adjust and press the Control Wheel to select that parameter. Rotate the Control Wheel to adjust the value. When you are satisfied, press the Control Wheel to return to the OSD Selection Menu.

You will see the following display in your iWear® AV920.



OSD Icon	Effect
	LCD Brightness
	Contrast
	Video Mode Control 2D/3D
	Backlight Brightness
	Reset to factory defaults
	Exit OSD

To exit the OSD, select the OSD Exit icon or wait 3-5 seconds.

## Monoscopic 2D and Stereo 3D Modes



When using stereoscopic 3D content it may be necessary to adjust the iWear® AV920 3D mode. When viewing 3D content in 2D mode it will look fuzzy on the display. If this happens, adjust viewing mode from 2D to 3D stereo mode by pressing the Control Wheel on the Video Mode Control 2D/3D icon in the OSD and then select one of the three options. Make sure you select the appropriate 3D mode so that each video display has the correct left and right eye information.

It is recommended to use 2D mode for all non 3D content. Although you can view 2D content in 3D mode the resolution is cut in half and there will be differences in the video to each eye.

## Cleaning

Use a soft dry cloth to clean your iWear® AV920 and its optics. *Do not use liquid cleaners.*

## Updating

Your iWear® AV920 is fully field upgradable to ensure that you have the best experience possible. To upgrade your iWear® AV920 firmware or to download updated software, please visit [www.vuzix.com/support](http://www.vuzix.com/support).

## Troubleshooting

<p>The product will not turn on.</p>	<p>Did you:</p> <ol style="list-style-type: none"><li>1. Press the Control Wheel on the viewer?</li><li>2. Charge the battery?</li></ol>
<p>The product turns off immediately after I turn it on.</p>	<p>Did you:</p> <ol style="list-style-type: none"><li>1. Charge the battery?</li></ol> <p><i>When the battery charge is extremely low, allow it to charge for several minutes before turning the product on.</i></p>
<p>There is no audio in one or more speakers.</p>	<p>Did you:</p> <ol style="list-style-type: none"><li>1. Ensure all connections are fully plugged in?</li><li>2. Try to unplug the speakers and plug them back into the viewer temples?</li></ol>

## Worldwide Limited Warranty

### General Terms

EXCEPT AS EXPRESSLY SET FORTH IN THIS LIMITED WARRANTY, VUZIX MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. VUZIX EXPRESSLY DISCLAIMS ALL WARRANTIES AND CONDITIONS NOT STATED IN THIS LIMITED WARRANTY. ANY IMPLIED WARRANTIES THAT MAY BE IMPOSED BY LAW ARE LIMITED IN DURATION TO THE LIMITED WARRANTY PERIOD. SOME STATES OR COUNTRIES DO NOT ALLOW A LIMITATION ON HOW LONG AN IMPLIED WARRANTY LASTS OR THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR CONSUMER PRODUCTS. IN SUCH STATES OR COUNTRIES, SOME EXCLUSIONS OR LIMITATIONS OF THIS LIMITED WARRANTY MAY NOT APPLY TO YOU.

This Limited Warranty applies to the VUZIX branded hardware products sold by or leased from VUZIX Corporation, its worldwide subsidiaries, affiliates, authorized resellers, or country distributors (collectively referred to in this Limited Warranty as "VUZIX") with this Limited Warranty. This Limited Warranty is applicable in all countries and may be enforced in any country where VUZIX or its authorized service providers offer warranty service subject to the terms and conditions set forth in this Limited Warranty. However, warranty service availability and response times may vary from country to country and may also be subject to registration requirements in the country of purchase.

VUZIX warrants that the VUZIX hardware product and all the internal components of the product that you have purchased or leased from VUZIX are free from defects in materials or workmanship under normal use during the Limited Warranty Period. The Limited Warranty Period starts on the date of purchase or lease from VUZIX. Your dated sales or delivery receipt, showing the date of purchase or lease of the product, is your proof of the purchase or lease date. You may be required to provide proof of purchase or lease as a condition of receiving warranty service. You are entitled to warranty service according to the terms and conditions of this document if a repair to your VUZIX branded hardware is required within the Limited Warranty Period. This Limited Warranty extends only to the original purchaser or lessee of this VUZIX branded product and is not transferable to anyone who obtains ownership of the VUZIX branded product from the original purchaser or lessee.

VUZIX products are manufactured using new materials or new and used materials equivalent to new in performance and reliability. Spare parts may be new or equivalent to new. Spare parts are warranted to be free from defects in material or workmanship for thirty (30) days or for the remainder of the Limited Warranty Period of the VUZIX hardware product in which they are installed, whichever is longer.

During the Limited Warranty Period, VUZIX will repair or replace the defective component parts or the hardware product. All component parts or hardware products removed under this Limited Warranty become the property of VUZIX. The replacement part or product takes on either the Limited Warranty status of the removed part or product or the thirty (30) day limited warranty of the spare part. In the unlikely event that your VUZIX product has a recurring failure, VUZIX, at its discretion, may elect to provide you with a replacement unit of VUZIX's choosing that is at least equivalent to your VUZIX branded product in hardware performance. VUZIX reserves the right to elect, at its sole discretion, to give you a refund of your purchase price or lease payments (less interest) instead of a replacement. This is your exclusive remedy for defective products.

YOU SHOULD MAKE PERIODIC BACKUP COPIES OF THE DATA STORED ON YOUR HARD DRIVE, FLASH MEMORY, OR OTHER STORAGE DEVICES, WHERE APPLICABLE, AS A PRECAUTION AGAINST POSSIBLE FAILURES, ALTERATION, OR LOSS OF THE DATA. BEFORE RETURNING ANY UNIT FOR SERVICE, BE SURE TO BACK UP DATA AND REMOVE ANY CONFIDENTIAL, PROPRIETARY, OR PERSONAL INFORMATION. VUZIX IS NOT RESPONSIBLE FOR DAMAGE TO OR LOSS OF ANY PROGRAMS, DATA, OR REMOVABLE STORAGE MEDIA. VUZIX IS NOT RESPONSIBLE FOR THE RESTORATION OR REINSTALLATION OF ANY PROGRAMS OR DATA OTHER THAN SOFTWARE INSTALLED BY VUZIX WHEN THE PRODUCT IS MANUFACTURED.

VUZIX does not warrant that the operation of this product will be uninterrupted or error-free. VUZIX is not responsible for damage that occurs as a result of your failure to follow the instructions that came with the VUZIX branded product. This Limited Warranty does not apply to expendable parts. This Limited Warranty does not extend to any product from which the serial number has been removed or that has been damaged or rendered defective (a) as a result of accident, misuse, abuse, or other external causes; (b) by operation outside the usage parameters stated in the user documentation that shipped with the product; (c) by the use of parts not manufactured or sold by VUZIX; or (d) by modification or service by anyone other than (i) VUZIX, (ii) a VUZIX authorized service provider, or (iii) your own installation of end-user replaceable VUZIX or VUZIX approved parts if available for your product in the servicing country.

These terms and conditions constitute the complete and exclusive warranty agreement between you and VUZIX regarding the VUZIX branded product you have purchased or leased. These terms and conditions supersede any prior agreements or representations-including representations made in VUZIX sales literature or advice given to you by VUZIX or an agent or employee of VUZIX - that may have been made in connection with your purchase or lease of the VUZIX branded product. No change to the conditions of this Limited Warranty is valid unless it is made in writing and signed by an authorized representative of VUZIX.

## **Limitation of Liability**

IF YOUR VUZIX BRANDED HARDWARE PRODUCT FAILS TO WORK AS WARRANTED ABOVE, YOUR SOLE AND EXCLUSIVE REMEDY SHALL BE REPAIR OR REPLACEMENT. VUZIX'S MAXIMUM LIABILITY UNDER THIS LIMITED WARRANTY IS EXPRESSLY LIMITED TO THE LESSER OF THE PRICE YOU HAVE PAID FOR THE PRODUCT OR THE COST OF REPAIR OR REPLACEMENT OF ANY HARDWARE COMPONENTS THAT MALFUNCTION IN CONDITIONS OF NORMAL USE.

VUZIX IS NOT LIABLE FOR ANY DAMAGES CAUSED BY THE PRODUCT OR THE FAILURE OF THE PRODUCT TO PERFORM, INCLUDING ANY LOST PROFITS OR SAVINGS OR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES. VUZIX IS NOT LIABLE FOR ANY CLAIM MADE BY A THIRD PARTY OR MADE BY YOU FOR A THIRD PARTY.

THIS LIMITATION OF LIABILITY APPLIES WHETHER DAMAGES ARE SOUGHT, OR A CLAIM MADE, UNDER THIS LIMITED WARRANTY OR AS A TORT CLAIM (INCLUDING NEGLIGENCE AND STRICT PRODUCT LIABILITY), A CONTRACT CLAIM, OR ANY OTHER CLAIM. THIS LIMITATION OF LIABILITY CANNOT BE WAIVED OR AMENDED BY ANY PERSON. THIS LIMITATION OF LIABILITY WILL BE EFFECTIVE EVEN IF YOU HAVE ADVISED VUZIX OR AN AUTHORIZED REPRESENTATIVE OF VUZIX OF THE POSSIBILITY OF ANY SUCH DAMAGES.

THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY ALSO HAVE OTHER RIGHTS THAT MAY VARY FROM STATE TO STATE OR FROM COUNTRY TO COUNTRY. YOU ARE ADVISED TO CONSULT APPLICABLE STATE OR COUNTRY LAWS FOR A FULL DETERMINATION OF YOUR RIGHTS.

## **Warranty Period**

The warranty period for VUZIX products is one (1) year from the date of product purchase. This warranty does not extend to any expendable parts, if applicable.

## **Types of Warranty Service**

If your product needs service, refer to the VUZIX website at [www.vuzix.com](http://www.vuzix.com) or your product's manual. You can also call the VUZIX Technical Support Center at (800) 436-7838 in North America. A technical support specialist will help you diagnose the problem. If it is determined your product needs service, the following options are available to you.

### **Pick-up Warranty Service**

If your product needs a hardware repair that is covered under warranty, please repackage the unit in its original packaging or equivalent packaging material to protect the product for return shipment. VUZIX will then give you return shipping instructions from your location. The product will be repaired and delivered to the location of your choice within the same country. For valid warranty claim servicing, VUZIX will pay the return shipping costs for your product.

### **VUZIX Replaceable Parts Program**

Where available, the VUZIX Replaceable Parts program ships approved replacement parts directly to you to fulfill your warranty. This will save considerable repair time. After you call the VUZIX Technical Support Center at (585) 359-7575, a replaceable part can be sent directly to you. Warranty parts can be ordered or requested from the customer assistance sections of our website.

### **Warranty Transfer to Another Country**

Under the VUZIX Global Warranty program, products may be purchased in one country and transferred to another country, where VUZIX has a service presence, without voiding the warranty. Warranty terms, service availability, and service response times may vary from country to country. A customer may be required to provide product-specific information, in accordance with the VUZIX Global Warranty Notification process, prior to moving the products. The required information ensures that VUZIX is prepared to provide the required level of warranty service in the destination country and that the product is designed to work in the destination country. Contact VUZIX, your local VUZIX authorized reseller, or refer to the website at [www.vuzix.com/support](http://www.vuzix.com/support) to begin the VUZIX Global Warranty Notification process prior to transferring VUZIX products to another country.

VUZIX is not responsible for any tariffs or duties that may be incurred in transferring the products. Products may be covered by export controls issued by the United States or other governments.

## **Technical Support**

Technical support is defined as assistance with questions on issues about the hardware and software that was either preinstalled by VUZIX on the VUZIX branded product or that was included with the VUZIX branded product at the time of your purchase or lease of the product. Technical support for hardware and software is available for the first ninety (90) days from date of product purchase or lease. Your dated sales or delivery receipt, showing the date of purchase or lease of the product, is your proof of the purchase or lease date. You may be required to provide proof of purchase or lease as a condition of receiving software technical support. After the first ninety (90) days, technical support for hardware and software that was either preinstalled by VUZIX on the VUZIX branded product or included with the VUZIX branded product at the time of your purchase or lease of the product is available for a fee. Contact VUZIX for additional information at (585) 359-7575.

## **Service Upgrades**

VUZIX may offer extra coverage for your product. For information on service upgrades, refer to [www.vuzix.com](http://www.vuzix.com) or ask your local reseller. Service upgrades purchased in one country are NOT transferable to another country.

## **Contacting VUZIX**

In the United States or Canada, refer to the VUZIX website at [www.vuzix.com](http://www.vuzix.com) or call (800) 436-7838.

Technical support and general product information in the United States and Canada, 5 days a week, 9AM to 5PM Eastern Time.

Be sure to have the following information available before you call VUZIX :

- Serial number, model name, and model number
- Operating system and version of operating system
- Applicable error messages
- Third-party hardware or software installed
- Add-on options if applicable
- Detailed questions you need answers to

NOTE: 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, there 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, the user is encouraged to try to correct the interference by one or more of the following measures: 1) Increase the separation between the equipment and receiver or 2) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

iWear® is a registered trademark of Vuzix Corporation.

iPod is a registered trademark of Apple Corporation. iPod is referenced for compatibility purposes only.

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