

VR Manager™
Calibration & Extension Manager

User Guide

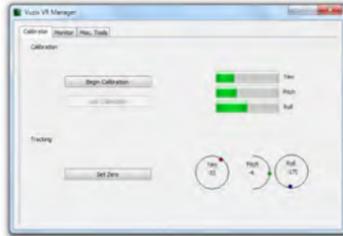
Table of Contents

VR MANAGER 3 OVERVIEW	3
System Requirements	3
INSTALLATION & SETUP	4
VR MANAGER INSTALL	4
VR MANAGER	6
CALIBRATOR	7
CALIBRATING THE TRACKER	7
Zeroing the Gyros	7
The Calibration Process	8
Drift	9
MONITOR	11
Extension Notes	11
ENABLING EXTENSIONS	12
Detecting Installed Applications	13
How to Enable an Extension	13
MISC. TOOLS	15
Zero Gyros	15
SUPPORT SERVICES	17
How to Obtain Technical Support	17
How to Obtain Warranty Support	17
Limitation of Liability	17
Duration of Implied Warranties	18

VR Manager 3 Overview

VR Manager version 3.1. is a software application that provides head tracker and stereoscopic 3D video support for Vuzix video eyewear products connected to a 32 or 64-bit Windows based personal computer.

The VR Manager's interface is divided into three sections, Calibrator, Monitor, and Misc. Tools, each accessed through tabs along the top of its window.



System Requirements

- Desktop or laptop computer with 32-bit or 64-bit Microsoft Windows 7, Vista or XP operating system
- Graphics card with VGA or graphics port*
- USB 2.0 port

* VGA compatible adapter may be used

Installation & Setup

VR Manager can be downloaded as part of a complete software and documentation package for supported Vuzix products:

www.vuzix.com/DD

VR Manager and updates are also available as separate downloads from the *Downloads and Drivers* page of the Vuzix website:

www.vuzix.com/support/downloads_drivers.html

Pre-installation Tips

- Do not connect your Vuzix video eyewear to your computer until after the VR Manager installer has been run.
- It is suggested that any prior version of VR Manager be uninstalled before a new version is installed.
- If you have 3rd party stereoscopic drivers installed, disable them prior to installing the Vuzix software.
- The VR Manager software should be installed prior to connecting the your Vuzix video eyewear to your computer. Failure to pre-install VR Manager may result in incorrect driver associations and some components or features failing to perform as intended.

VR Manager Install

The VR Manager installer application and its resource software are provided in a “VR Manager Installer” folder.



- Open the “*VR Manager Installer*” folder and run the “setup.exe” application.
- Follow the onscreen installation instructions.

The on-screen instructions and messages will vary, based upon which version of Windows you are using.

- Enable all actions and permissions requested by the installation program and your Windows operating system.

The latest version of DirectX, an application programming interfaces (APIs) from Microsoft, is required. The installation program may request you run the DirectX, installer apply updates.

- If presented with the DirectX installer, enable its installation.

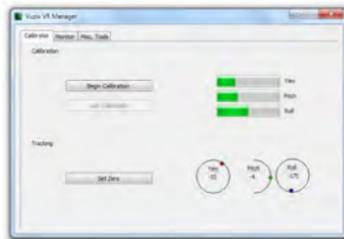
When the installation is complete, you can connect your Vuzix video eyewear and configure your display settings in accordance with the instructions provided in that product's User Guide.

VR Manager

To run VR Manager, open its directory under “Vuzix Corporation” in your applications folder and run “VR Manager.exe”.



The VR Manager’s interface is divided into three sections, Calibrator, Monitor, and Misc. Tools, each accessed through tabs along the top of its window.



Calibrator:

Enables calibration of the Wrap Tracker.

Monitor:

Provides access to and management of Vuzix Extension files. These Extension files enable stereoscopic 3D video and/or head tracking in select applications lacking native support for these features.

Misc. Tools:

Technical data and diagnostic resources designed to assist in troubleshooting stereoscopic 3D and tracking problems.

Calibrator

Calibrating the Tracker



The Wrap Tracker 6TC uses multiple sensors for calculating movement and positioning. Its magnetic sensors are sensitive magnetic fields created or influenced by certain electronic devices, metal objects and fluctuations in the earth's natural magnetic fields. To compensate for these the tracker must be calibrated for its specific operating environment. As these change whenever change your environment you must re-calibrate the tracker whenever you move to a different location or otherwise alter your operating environment.

Zeroing the Gyros

The Tracker also contains gyroscopic sensors that must be zeroing before being used or whenever it is connected to a different computer system.

To calibrate the tracker:

- Start the calibration process by connecting your Wrap eyewear to your computer, with the display configuration correctly set and your desktop displayed in the eyewear.
- Run the VR Manager application.

If this is the first time VR Manager has been run with the Tracker installed, a *Zero Gyros* application will automatically start up.

When the Zero Gyros screen appears:

- Place the Wrap eyewear flat on your desk facing your computer.
- Do not move the eyewear while the gyro zeroing process is being performed.
- Follow the on-screen instructions.

The Calibration Process

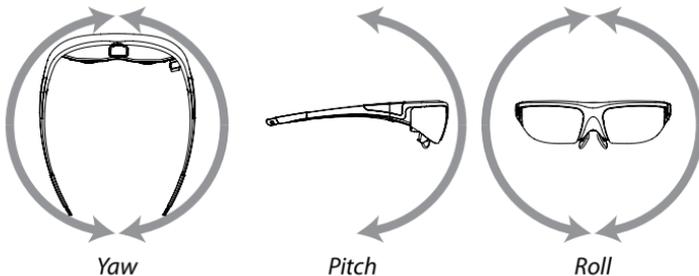
Upon completion of the gyro zeroing process, the VR Manager program will present you with the Calibrator screen.

Tip: For the most accurate calibration, minimize earphone movement (they have magnets in them) and position your eyewear as close as possible to the position in which it will be used. This will minimize fluctuations in the eyewear's relative position to nearby magnetic influences.

- Press the “Begin Calibration” button.



- Holding your eyewear as near as possible to where they would be when worn, upright and facing your desktop computer monitor, rotate them as illustrated below:

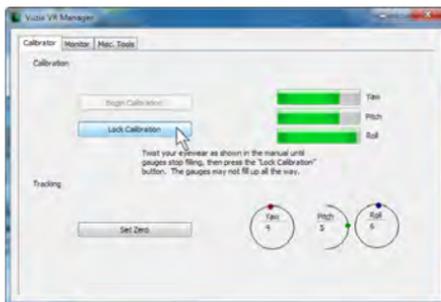


- Rotate your eyewear fully through each of the three axes.

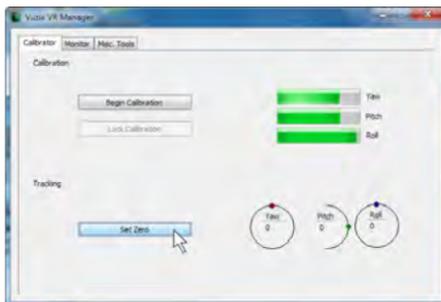
This process captures tracker's data through its full range of movement on the yaw, pitch and roll axis. The green progress bars indicate tracker movement. The length of the bars will increase as new data is received and stop when there is not more new information.

Note: The indicator bars will not fill completely – this is normal.

- When the indicator bars stop moving, press the “Lock Calibration” button.



- Put on your eyewear or place them in the position in which they will be used – upright, at eyelevel and facing your computer – and then press the “Set Zero” button.



The Set Zero button establishes the Tracker’s home or centered position. As you move your head you will see the indicators and values in the Yaw, Pitch and Roll indicators reflect movement relative to that centered position.

Drift

Some degree of drift, especially on the Yaw axis is normal.

The Wrap Tracker provides an auto-centering capability that automatically compensates for drift while the Tracker is in use.

Occasionally, before starting a session, you can use the Set Zero button to re-center the Tracker for optimum calibration.

- Place your eyewear in the position in which they will be used – upright, at eyelevel and facing your computer – and then press the “Set Zero” button.

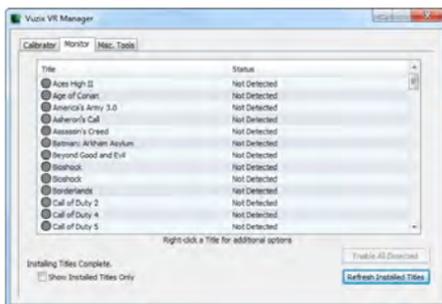
You do not have to go through the entire calibration process to use the Set Zero function.

Monitor

Stereoscopic 3D video and head tracking require support specific in an application and display its output in the correct format. The correct format for all models of the Vuzix Wrap and STAR lines of video eyewear is “side by side”. This support may be incorporated directly into the application’s code (native support) or externally through a Vuzix Extension.

The VR Manager’s Monitor system enables you to manager your Extensions.

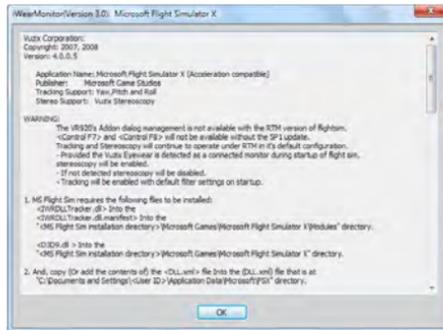
A Title list shows the Vuzix Extensions currently available and one of three status indicators.



Note: Software titles employing native 3D video and/or head tracking support are not listed in the Monitor, as they do not require VR Manager Extension support. Only titles requiring Extensions are included in the Monitor listing.

Extension Notes

Extension Notes describe the capabilities, configuration instruction and manual installation information for each Extension.



Not all Vuzix Extension includes both stereoscopic 3D video and tracking support; some may support only one. Some Extension may also include support for additional features and capabilities, such as Hot Keys for zooming in your view.

To access the Vuzix Extension Notes:

- Double-click on any Extension title, or
- Right-click on an Extension title and choose “View Extension Info” from the pop-up menu.

Enabling Extensions

Vuzix Extensions are automatically installed with the VR Manager but they are not automatically enabled.

In order for an Extension to be used, the VR Manager must detect the appropriate file directory and the Extension and it must be enabled. Tracking and/or stereoscopic 3D video support will not be available for use if the Extension has not been enabled.

Color-coded indicators show the current status of each Extension.



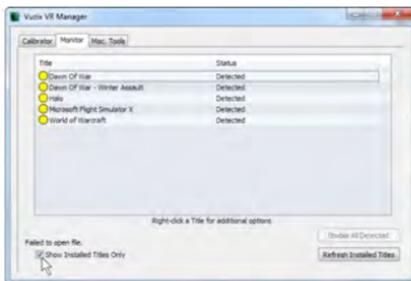
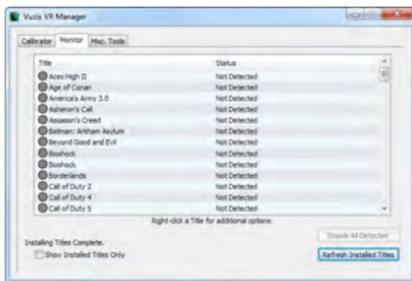
A grey marker indicates an Extension that has not yet been associated with an application directory.



A yellow indicator identifies Extensions for which the appropriate directories have been found but the Extension has not yet been enabled.



A green indicator identifies Extensions linked to applications and enabled, ready to use.



To better manage the long list of Extensions, enable the “*Show Installed Titles Only*” option, in the lower-left corner of the window. This restricts the list to only Extension with matching applications on your computer.

Detecting Installed Applications

When the VR Manager is installed it searches for installed applications with matching Vuzix Extensions. It then identifies the appropriate Extension with a yellow indicator – available but not enabled. If an application is installed after VR Manager, you must manually initiate a title search for an Extension to be associated with the newly installed programs.

To detect newly installed programs:

- Press the “Refresh Installed Titles”.

Tip: VR Manager may be unable to find applications that have been installed in a directory other than the one suggested by their install program. You can manually locate an application’s file directory by right clicking on the desired Extension and choosing “Browse for Directory” from the pop-up menu.

How to Enable an Extension

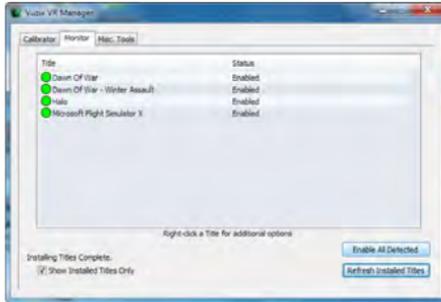
To use an Extension, it must be associated with an application and then enabled. Enabling loads the required files and makes program configuration changes if required.

To enable a single Extension:

- Right-click each detected Extension (yellow) and choose “Enable Title Support” from the menu options.

To enable all Extensions:

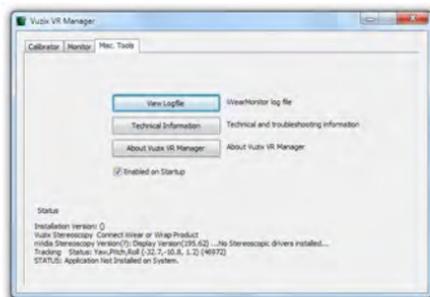
- Press the “Enable All Detected” button to enable all the detected (yellow) Extension in a single action.



Once enabled, the Extension’s indicator will be green.

Misc. Tools

VR Manager's *Misc. Tools* provides assistance in identifying and correcting technical problems with your Vuzix eyewear and Extensions. It provides Vuzix Customer Service with the information required to quickly identify the cause and solution to your problem.



View Logfile

The VR Manager creates a log file of recent activity. Customer Service may request you open the file and provide them with its contents.

Technical Information

This provides technical information that may assist you in troubleshooting problems encountered with your eyewear and extension supported titles.

About Vuzix VR Manager

Clicking on this button provides information on the current versions of supporting software and hardware firmware.

Status

Status displays technical information regarding your Vuzix hardware, drivers and other information that might assist Customer Service in identifying the cause of a problem you are encountering.

Zero Gyros

The first time VR Manager is run, it will sense the Tracker and advise that its Gyros require zeroing.

If you connect your Wrap Tracker to a different computer, you will have to zero your Tracker's gyros again.

To manual initiate a Zero Gyro process:

- Place your eyewear flat on a desktop and do not move it during the Zero Gyro process.
- Press the “Zero Gyros” button.
- Follow the on-screen instructions.

Support Services

For product support and information please contact Vuzix at:

Corporate website:	www.vuzix.com
Email Customer Support:	technical_support@vuzix.com
Customer Helpline:	(800) 436-7838
Customer service hours:	9 AM to 6 PM EST, weekdays

When contacting support services please provide the following information:

- Serial number, complete model name, and model number of your video eyewear.
- Make and model number of the audio/video device being used.
- The name of any video content related to your support needs.
- Detailed explanation of the symptoms you are experiencing.

How to Obtain Technical Support

Technical support is defined as assistance with questions on issues about the Vuzix hardware product. Technical support for hardware and its software is available for the first ninety (90) days from date of product purchase. 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. The addresses and technical service contact information for Vuzix can be found in the documentation accompanying your product and on the web at our global site: www.vuzix.com.

How to Obtain Warranty Support

Vuzix is the warrantor under this Limited Warranty. Before submitting a warranty claim, we recommend You visit the support section at www.vuzix.com for technical assistance. Warranty claims cannot be processed through the point of purchase and any other product related questions should be addressed directly to Vuzix. The addresses and customer service contact information for Vuzix can be found in the documentation accompanying Your product and on the web at our global site at www.vuzix.com, which will also identify any Vuzix subsidiary or branch serving Your country and its local address. You may also write to: Vuzix Sales Support, 75 Town Centre Drive, Rochester, NY 14623, USA.

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indirect, incidental or consequential damages, so the above limitation or exclusion may not apply to You, but the remainder of this Limited Warranty shall remain in full force and effect.

Duration of Implied Warranties

EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS HARDWARE PRODUCT IS LIMITED IN DURATION TO THE LIMITED WARRANTY PERIOD STATE ABOVE FOR YOUR PRODUCT. Some jurisdictions do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to You. Please note that in the European Union, any warranty period less than two years shall be increased to two years except in the case of use for commercial purposes.



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