



# Virtual Reality Setup Instructions and Troubleshooting Guide

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# What is the Oculus Rift?

Invented by a VR enthusiast named Palmer Luckey, the Oculus Rift is a set of virtual-reality goggles that will work with your computer or mobile device. After he showed a prototype at the E3 gaming convention in 2012, Luckey founded Irvine, Calif.-based Oculus VR with Brendan Iribe, who became CEO. The two launched a Kickstarter project in August 2012 to sell prototype developer versions of the Oculus Rift, raising \$2.4 million.

On Mar. 25, 2014, Oculus VR was purchased by social networking giant Facebook for a combined \$2 billion dollars. Facebook CEO Mark Zuckerberg said that the headset "has the chance to create the most social platform ever," though we don't know how exactly the website will utilize the Oculus Rift. In an interview with Polygon, Luckey said that Oculus VR will continue to operate in its Irvine headquarters, and will use Facebook's backing to create a better, more affordable product.

On March 28<sup>th</sup>, 2016 Oculus released its consumer version with massively redone headset that set the standard for VR.



# How does the Oculus Rift work?

Picture a set of ski goggles in which two small screens replace the glass. Each screen displays a slightly different image, one for each eye. A set of lenses is placed on top of the screen, focusing and reshaping the picture for each eye, and creating a stereoscopic 3D image. The goggles have embedded sensors that monitor the wearer's head motions and adjust the image accordingly. The latest version of the Oculus Rift is bolstered by two external positional-tracking cameras, which helps track head movements more accurately. The result is the sensation that you are looking around a 3D world.

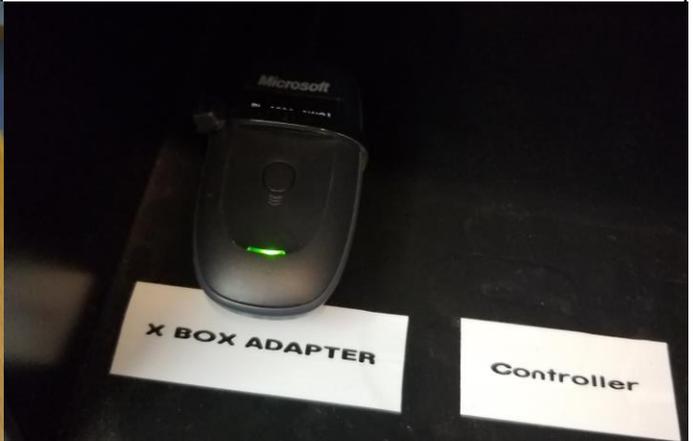


# Item Check List

- Before Starting, check that all of the following items have been included with the cart. If anything is missing, immediately contact circulation.

|   |  |
|---|--|
| Logitech Wireless Keyboard  | Mouse  |
|   |   |
| Oculus Rift Headset   | Oculus Rift Tracking Cameras   |
|  |  |

# Item Check List Cont.

|  |   |
|--|---|
| <p>Oculus Rift Controllers</p>          | <p>Xbox controller adapter</p>  |
| <p>Alienware Performance Computer</p>  | <p>Xbox controller</p>         |

# Item locations

- On the top you will see a umbilical cord consisting of a male dvi connector, two female usb connectors, and a female hdmi connector. You will also see on the top an Ethernet cord and a surge protector.
- The top shelf holds the Alienware computer and instruction booklet.
- The middle shelf holds from left to right the xbox adapter, then the xbox controller and finally the oculus rift headset.
- The bottom shelf from left to right holds the oculus rift controllers, then Oculus camera #1, then finally the keyboard and mouse.



# Cable Setup

- **Step 1:**

- Decide on your presentation screen
  - (Projector, Flatscreen Television Cart, etc.)

- **Step 2:**

- Identify supported connector types on your presentation screen
  - Supported Connector Types include DVI and HDMI

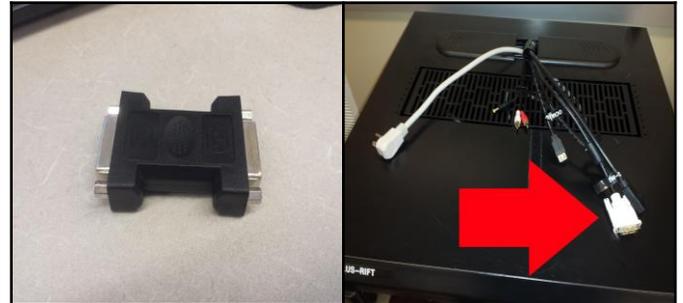


- If your screen supports DVI (the first cable in the picture) move on to Step 3A, otherwise proceed to Step 3B if you will be using HDMI

# Cable Setup Cont.

- **Step 3A:**

- Locate the DVI to DVI Coupler in the Cart
- Connect DVI Coupler to the DVI cable coming out of the cart
- Next, connect the coupled cable to the DVI cable coming from the Presentation Screen
- Verify that the Presentation Screen is on the right input and you are done



- **Step 3B:**

- Locate the DVI to HDMI Coupler in the Cart
- Connect HDMI Coupler to the DVI cable coming out of the cart
- Next, connect the coupled cable to the DVI cable coming from the Presentation Screen
- Verify that the Presentation Screen is on the right input and you are done



# VR Camera Setup

## Step 1:

- Remove camera 1 from the cart and place it on top of the cart
- Connect the usb from camera 1 to the front of the Alienware computer
- Turn the camera so that it is facing you when you are centered and 4 feet away.



## Step 2:

- Locate camera 2 and its tripod
- Raise up the legs to about the level that camera 1 is by unlocking the twist locks and then lengthen the legs. You can also raise up the center using the lever on the side.
- Place it at the same distance away from you and about 4 feet away from camera 1.
- Step back until you are 4 feet from the centerline and make sure the cameras are facing you
- Plug in the usb connector from the camera 2 into the labeled usb extension located on the umbilical cord .



# VR Headset Setup

- **Step 1:**
  - Identify the location of the Oculus Rift VR Headset
  - Take the HDMI and USB Connection Cables from the end of the Oculus Rift VR Headset and connect them to the remaining cable ends on the top of the cart
  - Make sure the line will reach your play area with an ample amount of slack for movement.



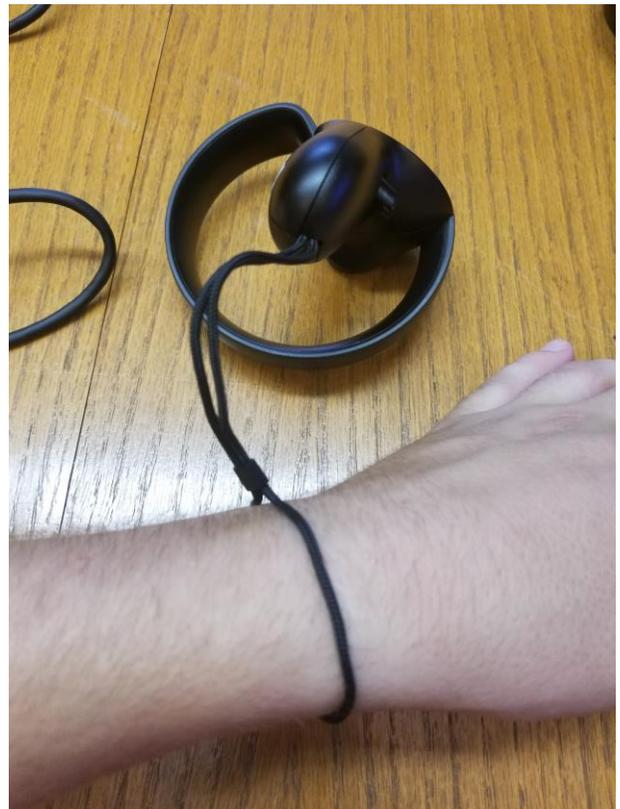
# VR Headset Setup Cont.

- Step 2:
  - Loosen the top, left, and right Velcro straps on the headset so to let the headset stretch to your head
  - To put on the headset you make sure the speakers on either side of the headset are out of the way and then hold the front with both hands. Then put on the headset as you would with a baseball cap
  - When the headset is comfortable tighten the straps on the sides and top.
  - On the bottom right there is a small slide. When you are in game you can slide this to focus the lens so the image is clearer.
  - **Before you play any game, make sure your play area is clear of all obstacles and away from any foot traffic. To do this hold your arms perpendicular to the floor and make sure that the you have clear space 1-2 feet past your fingertips.**



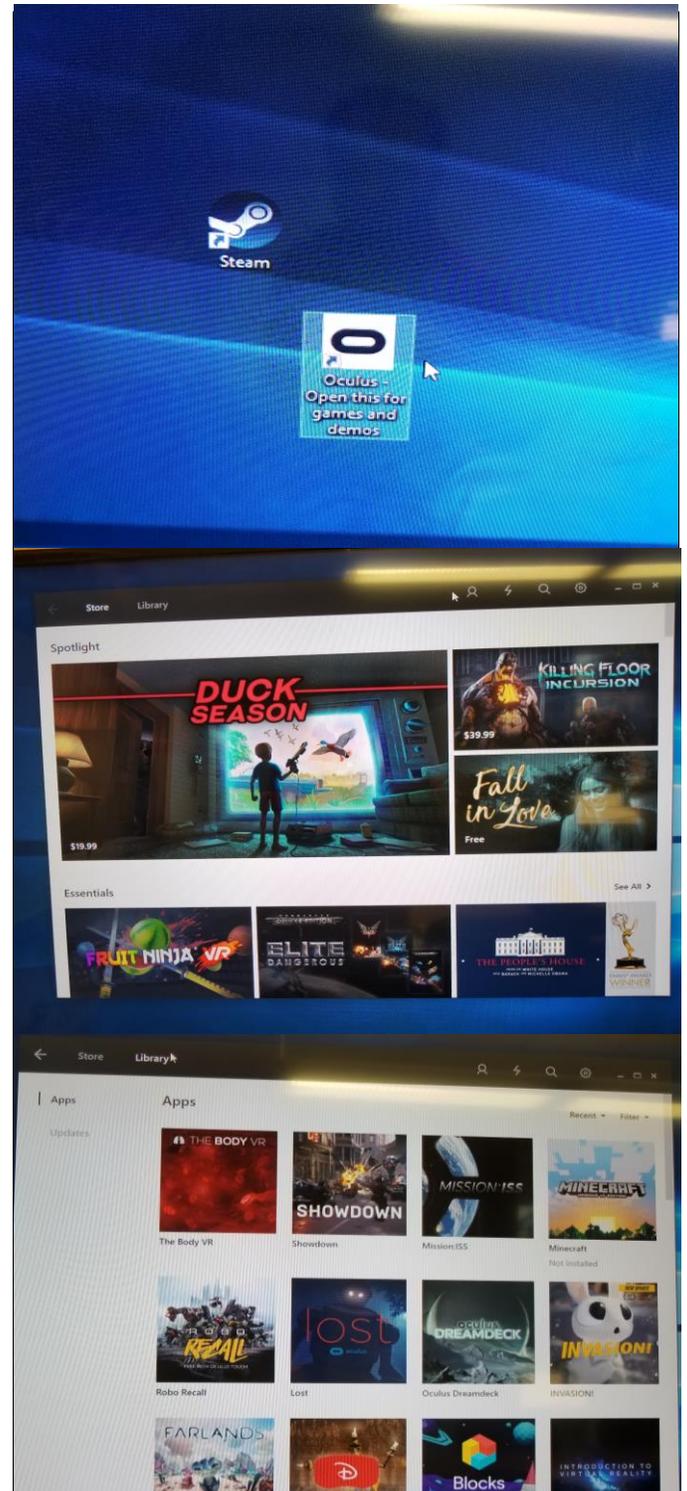
# Oculus Touch

- To use the Oculus Touch Controllers you first need to make sure they are securely strapped on you
- To do this you need to put the safety tether over your hand then push the plastic stop all the way tight.
- To hold the controller you place it in your palm and balance it on the top of your index finger and middle finger.



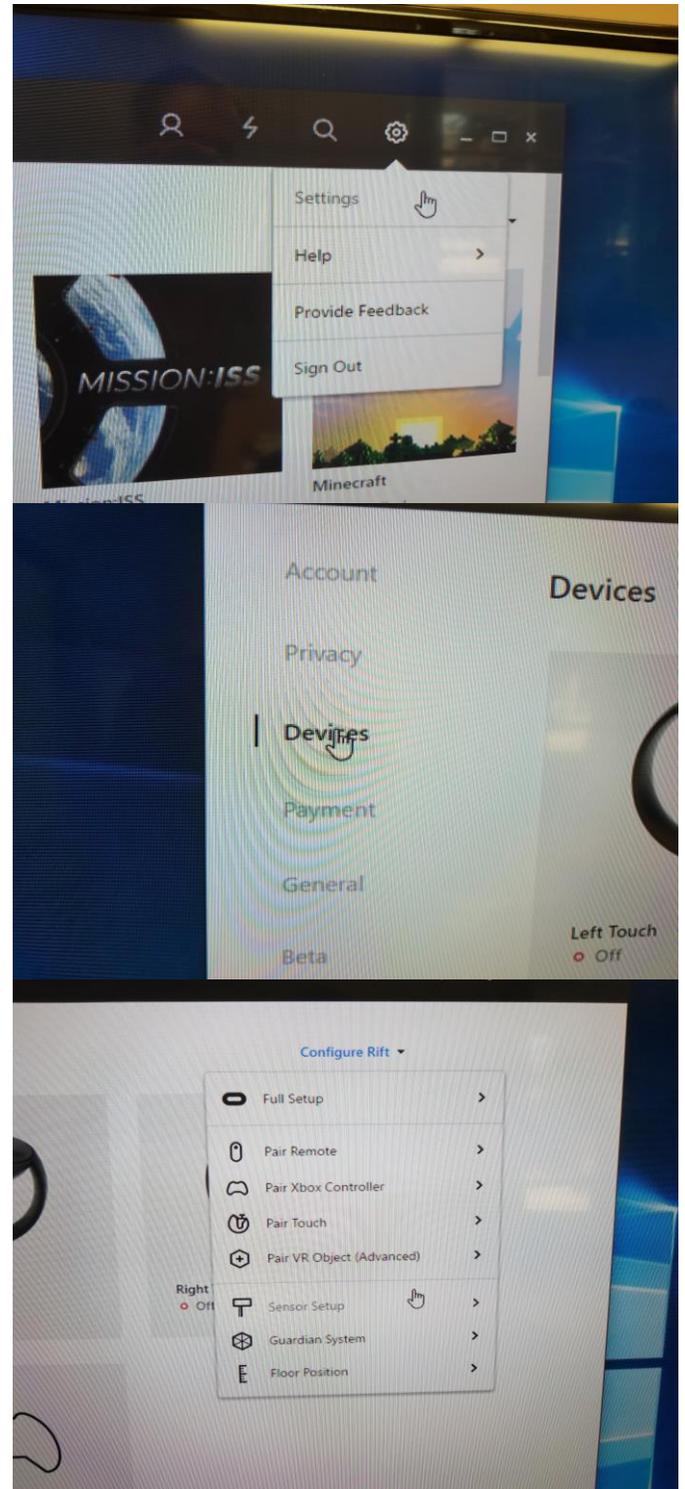
# VR Application Configuration

- In order to use the demos/games please follow the next set of instructions to execute them correctly:
  - On the Desktop there will be a application called "Oculus – Open this for games and demos" double click and the oculus home will open
  - On the top left there will be two tabs one named "Store" and the other "Library" click on "Library"
  - You will now be presented with a list of installed demos and games on page 16 will be a list of the preinstalled games and demos
  - Now you can select your desired game/demo and play it.



# Sensor Recalibrate

- If the tracking is not working or is very bad do a sensor recalibration
- To do a full recalibration of the sensor setup
  1. Click the gear in the top right of the oculus home then click "settings"
  2. On the left hand menu click on the "Devices" menu
  3. On the top right click on "Configure Rift" then click on sensor setup.
  4. The oculus home then will give you step by step instructions on how to recalibrate your setup.



# VR Demo List:

- Included, the following demonstrations that have been preloaded for your convenience. The list may change at any time:
- As a user of the Oculus, you are permitted to load your own software as well keeping in mind that the cart is a public utility

| Application Demos: | Games            |
|--------------------|------------------|
| The Body VR        | Mission ISS      |
| Showdown           | Robo Recall      |
| The Rose and I     | Echo Arena       |
| Colosse            | Luckys Tale      |
| Lost               | Toybox           |
| Oculus Dreamdeck   | Immersive Combat |
| Invasion!          | Elite Dangerous  |
| Farlands           |                  |
| Disney Movies VR   |                  |
| Blocks by Google   |                  |
| Google Earth VR    |                  |
| Surge              |                  |
| Face Your Fears    |                  |
| Luckys Tale        |                  |
| Henry              |                  |
| ABV VR             |                  |

# Troubleshooting

- If for any reason you are having issues working with the Oculus feel free to either let Circulation know or you may follow these included steps:
- Hardware Error – Oculus Rift Not Attached
  - Ensure that all cables are connected by following the setup at the beginning of this guide
- Software Error – Virtual Desktop is either frozen/has stopped responding
  - Open Task Manager and Close the Virtual Desktop Application
  - Re-Open Virtual Desktop from the shortcut on the Desktop
- Software Error – “Application Demo” is either frozen/has stopped responding
  - Press CTRL-ALT-DEL and close the “Application Demo” that is open
- Hardware Error – Computer is completely frozen or is going extremely slow
  - Press CTRL-ALT-DEL and attempt to close the application or video that was running on the Oculus
  - If this does not work and the computer is completely frozen induce a Forced Shutdown

# Credits

- This Guide was designed and written by Cody Garrett, for further contact please feel free to email him at [cody@garrett.ms](mailto:cody@garrett.ms)
- Guide was updated for the consumer edition by Matt Baird, for any need updates/Help please contact the Help desk .
- Additional Credits Include the Following:
  - Kurt Anderson
    - Stand In Model for VR Presentation
  - Oculus Rift Background Information
    - Tom's Guide
      - <http://www.tomsguide.com/us/what-is-oculus-rift,news-18026.html>