



Quick Start Guide

BY NEURODIGITAL TECHNOLOGIES S.L.

DEVELOPMENT KIT - VERSION 2.0 - MARCH 2019

Minimum System Specs

Operating System Windows 8.1 or newer

Processor AMD Phenom™ II or Intel® Core™ i3 processor or greater

Memory 2GB + RAM

Input 1x USB 2.0 port for wired operation

Bluetooth 4.0 Dual Mode for wireless operation

Requires internet connection

Devices with a VR HMD requires a “VR Ready” system

Operating System Windows 8.1 or newer

Graphics Card NVIDIA GTX 970 / AMD R9 290 equivalent or greater

Processor Intel i5-4590 equivalent or greater

Memory 8GB + RAM

Input 3x USB 3.0 ports

Output Compatible HDMI 1.3 video output

Bluetooth 4.0 Dual Mode for wireless operation

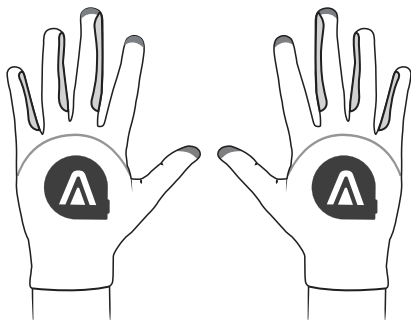
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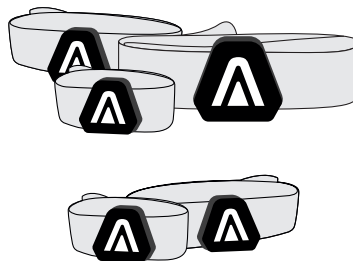
01 PACKAGE CONTENTS

Remove the contents from the box carefully. If any part is missing or damaged, please contact us at support@neurodigital.es

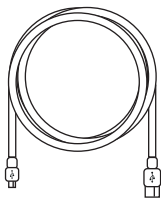
The kit contains the following:



Avatar VR (Left, right or both depending on your order)



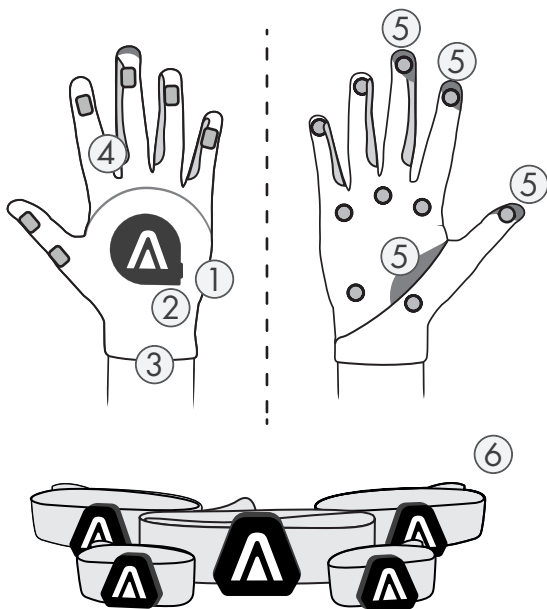
TrackBand3, TrackBand2 or both depending on your order



USB Cable

IMPORTANT: For battery calibration, before using the device, you must perform a first full charge with a less than 500mA charger or, failing that, via USB cable connected to your computer. This process can last, at least, 2:30 hours.

02 AVATAR VR PARTS



- IMU Sensors
- Actuators
- ① Power Button
- ② USB Port
- ③ Li-Po Battery
- ④ Breathable areas
- ⑤ Conductive zones
- ⑥ TrackBand

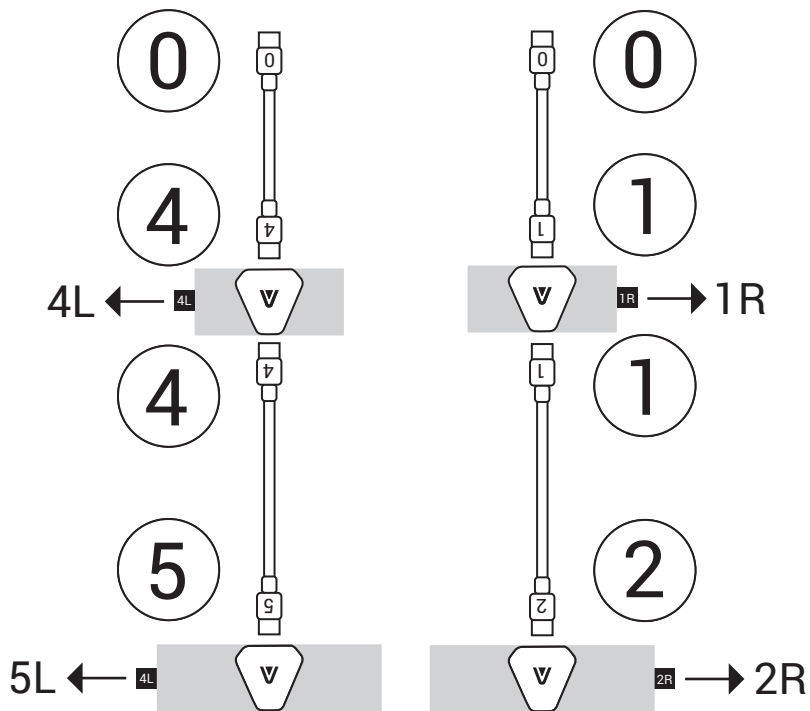
⚠ WARNING



The fabric composition is 80% polyamide with 20% elastomer.

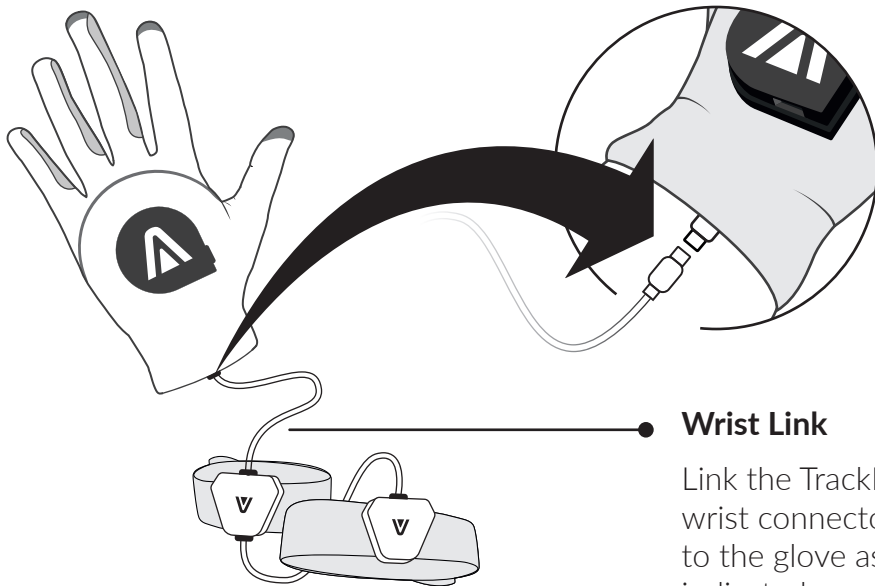
03 CONNECTING THE TRACKBAND

Connect the cables considering their numbering.



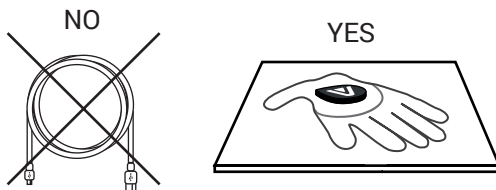
IMPORTANT: Changing the device's numbers position can cause errors.

Link the TrackBand's wrist connector to the glove as indicated.



04 USING AVATAR VR BY BLUETOOTH

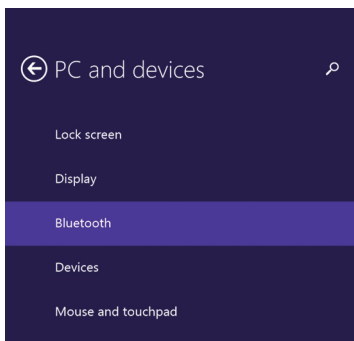
- ① Do not connect any micro-usb cable from Avatar VR to your computer.



- ② **Enable Bluetooth visibility:** Do the “pinch” gesture for a second while you see a **cyan light flicking** and feel a short vibration. A **permanent cyan light** will confirm the Bluetooth mode is visible and ready to be paired within 2 minutes.



- ③ **Pair the device with your PC:** Open the Bluetooth settings tab in your PC. Avatar VR should now appear as an accessible device. Pair with the device and wait until the pairing process finishes. It is important to close this settings tab once it is paired.

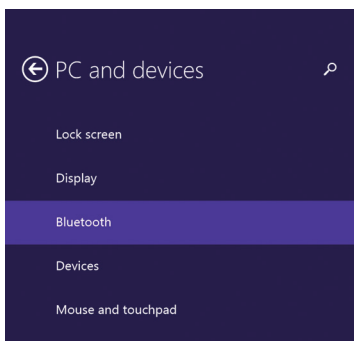
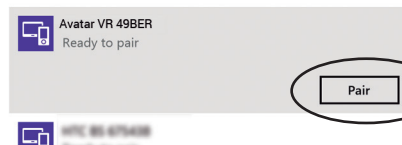


Manage Bluetooth devices

Bluetooth

On

Your PC is searching for and can be discovered by Bluetooth devices.



Manage Bluetooth devices

Bluetooth

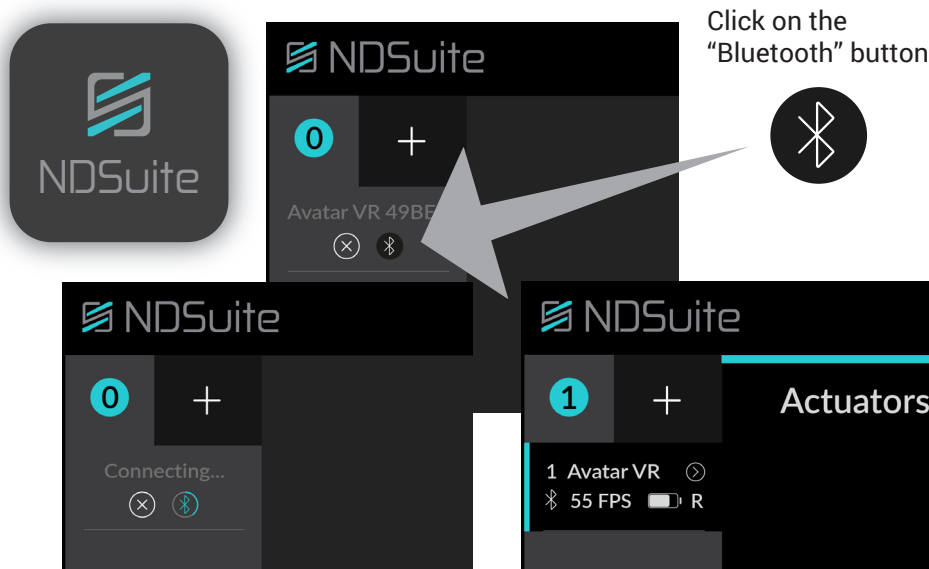
On

Your PC is searching for and can be discovered by Bluetooth devices.



IMPORTANT: Close the Bluetooth settings in order to make it work properly.

- ④ **Connect the device with ND Suite via Bluetooth:** Open the ND Suite software and **click on the “Bluetooth” button**, then select the device you just paired. In a few seconds, it will be connected. (The ND Suite is required for Avatar VR to communicate with your PC. To download the latest version of the installer, go to <https://www.neurodigital.es/developer/>)



NOTE: Next time you want to connect the device to your PC via Bluetooth, you only have to perform Step 4.

05 USING AVATAR VR BY USB

- ① **Connect a micro-usb cable from Avatar VR to your computer.**
- ② **Check the device in ND Suite:** Open the ND Suite software and check that the device appears as connected.
(The ND Suite is required for Avatar VR to communicate with your PC. To download the latest version of the installer, go to <https://www.neurodigital.es/developer/>).

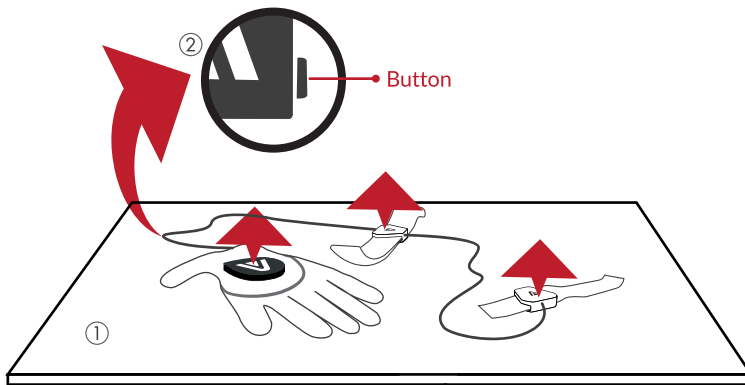
06 INITIALIZATION

First of all, you need to calibrate the gyroscopes.

In order to do that, please put the Glove/s and Trackbands in a **flat surface**.

Press the button on the right side of the plastic cover to **turn on Avatar VR**.

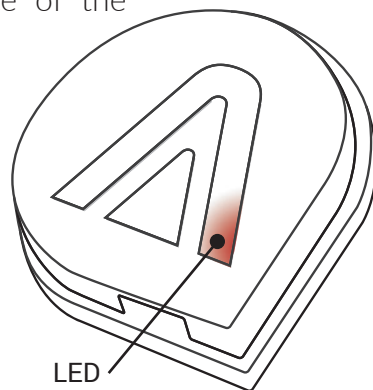
After that, you will see the LED blinking between **blue-green** colours. Once this process has finished, the device is calibrated. Don't move anything till the light changes to **blinking blue**.



07 COLOR CODE

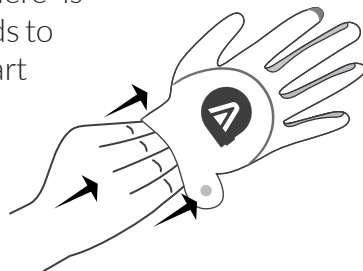
Avatar VR has a LED indicator that shows the state by means of a color code:

- If it is **red** (except while switching on) it tells us there is a problem, whether in functioning, low battery (in this case, it flashes), or it has stayed in an undetermined state (remains steady red until the power is switched off and on).
- If it is **flashing blue**, the glove is functioning perfectly, it is reading all the sensors information properly and it is also waiting to transmit the data via Bluetooth or the via USB wire, depending of which of them is listening at that moment. This is the normal state of the glove.
- If it is **steady blue**, it means the glove is transmitting data via Bluetooth.
- If it is **steady green**, it means it is transmitting data via USB connection.

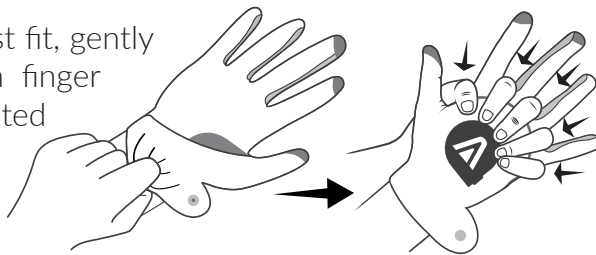


08 PUT THE GLOVE ON

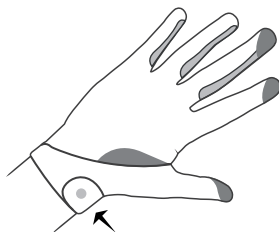
- ① Please be careful during handling as there is wiring inside the Avatar VR glove that needs to be placed correctly and not damaged. Start putting on the glove by gently looking for the finger holes while keeping a straight and steady hand and slowly introducing the glove on.



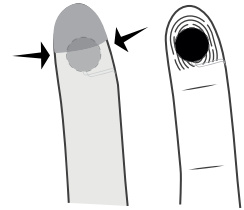
- ② In order to have the best fit, gently grab and pull between finger spaces as demonstrated on image 2 until it feels comfortable.



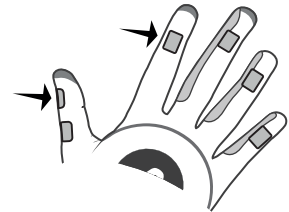
- ③ Button the glove's wrist.



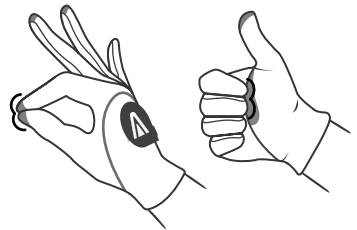
- ④ **“IMPORTANT”** Make sure that **each actuator** is well placed on the tip of each finger in order to have good haptic feedback. This is critical in order to have faithful haptic sensations while using Avatar VR.



- ⑤ **“IMPORTANT”** Make sure that each **IMU Sensor** is well placed as indicated in the image, centered on both phalanx for the thumb and in the middle phalanx for rest of fingers. This is critical in order to have a good finger tracking.

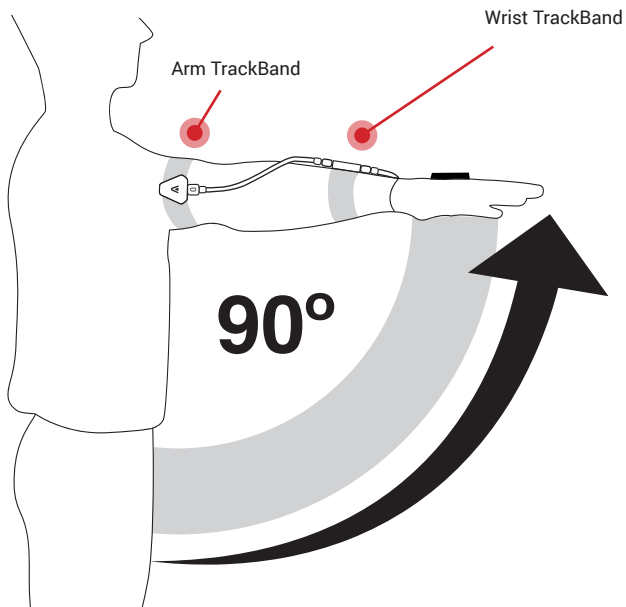


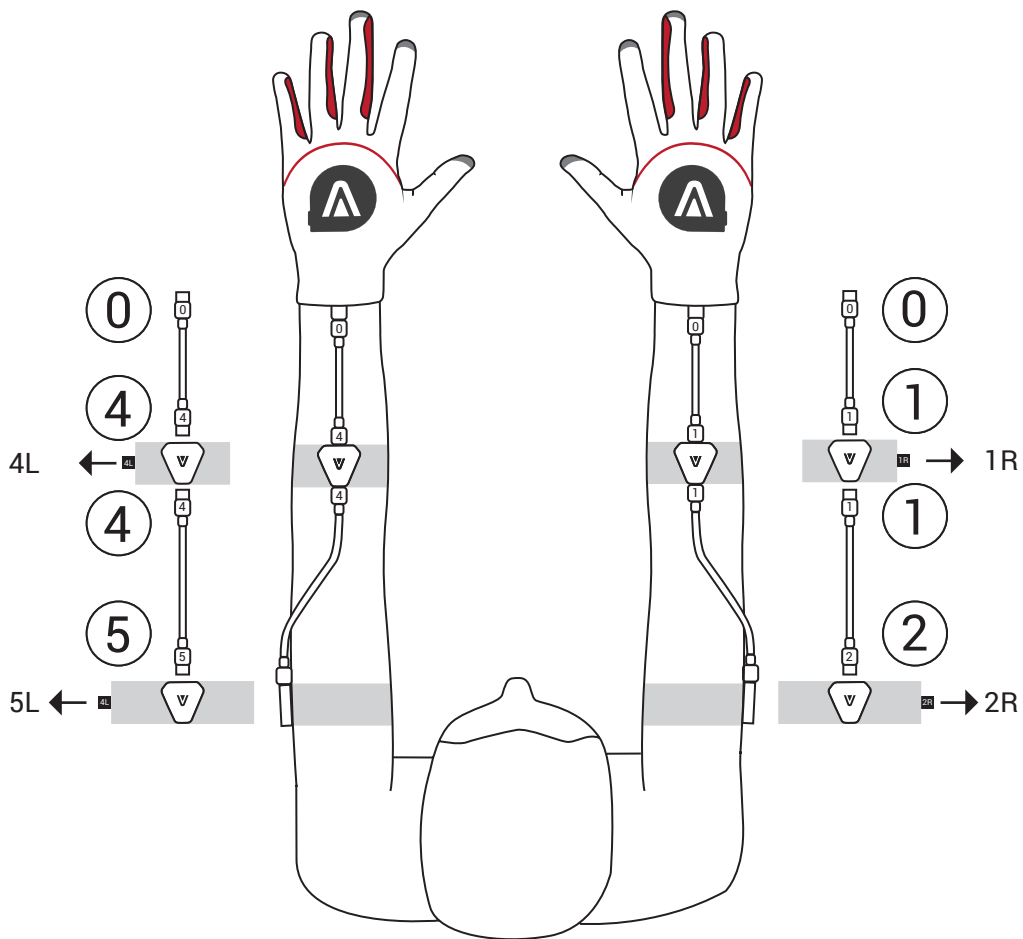
- ⑥ Test the fit to make sure everything feels as natural as possible. Gestures like pinching or grabbing should feel natural while allowing the respective grey zones (conductive fabric) to make contact.



09 AVATAR VR COLLOCATION

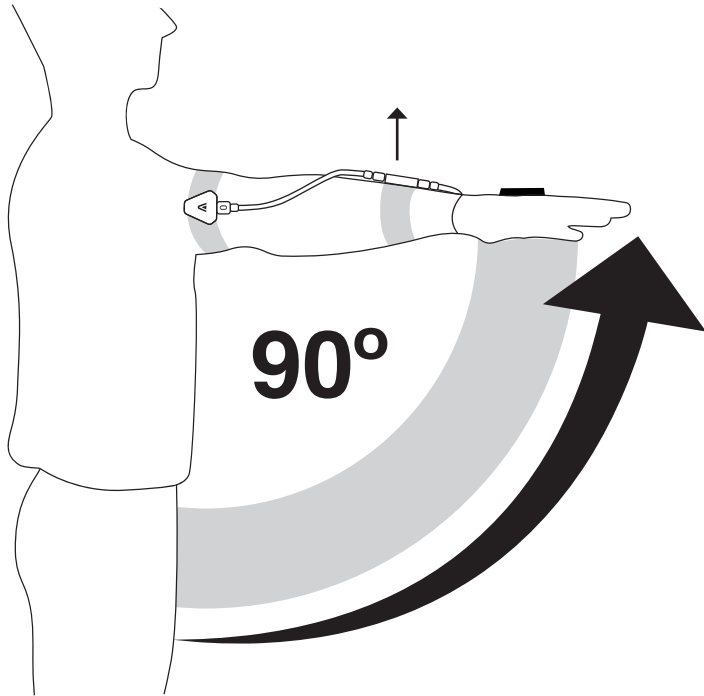
Put on the TrackBand elements in order as shown in the picture below.





10 CALIBRATION IN DEMO

When indicated, place your arms in front of you at a **90° angle** for a few seconds until prompted to PLAY.



11 REMOVING THE GLOVE

- ① **Unlink** the TrackBand's wrist connector from the glove as indicated.
- ② **Unbutton** the glove and carefully slide in your free hand into, starting from the palm until reaching the beginning of the gloved fingers.
- ③ Please be patient as this is the most critical step. You must be very careful as to not damage the glove's electronics. **Gradually remove the glove** until you can release your gloved hand completely, without putting any significant strain on any part of the glove.

