



Installation Guide



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VIRTUALIS thanks you for your confidence.

In order to install the equipment in the best conditions,
please follow the instructions in this document in the order indicated.

The order consists of 4 packages (depending on the options chosen):

- 1 package containing the computer.
- 1 package containing the cart (if this option has been chosen).
- 1 package containing the virtual reality equipment.
- 1 package for the steering wheel support (if this option has been chosen).

These packages have already been opened by the technical team during the preparation and verification of your order. Some packages are supplied empty for warranty reasons, as the equipment contained in these packages has already been assembled during the preparation of the order.

Note: This guide details the installation of the complete solution, some sections may be optional depending on the hardware of the order. Please disregard these sections during installation.

Important: The packaging supplied must be retained in order to benefit from the manufacturer's warranty on the equipment.

Note: This guide contains a list of common errors and how to resolve them ("Known problems" section), so please keep it for future reference.

If you have any further questions, please refer to the
"Technical support" section at the end of this guide.

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1 Glossary

<p>Vive Pro headset</p> <p>HTC VIVE PRO Virtual reality headset</p>		<p>LeapMotion</p> <p>Installed on the headset</p> <p>Used to detect hand's position</p>	
<p>HTC Base Station</p> <p>HTC Vive Headset and other virtual reality accessories sensors</p>		<p>XBOX Controller</p> <p>Controller for remote software control.</p>	
<p>HTC link box</p> <p>Box between the HTC Vive headset and the computer.</p> <p>The headset shall be connected next to the blue button.</p>		<p>SteamVR</p> <p>Virtual reality management interface.</p> <p>Green color may vary according to version.</p>	
<p>Mini-USB Charger</p> <p>Charger for HTC trackers and controllers.</p> <p>Includes AC adapter and USB to mini-USB cable.</p>		<p>HTC Tracker</p> <p>Space tracking device.</p> <p>Used to detect the position of limbs or objects.</p>	
<p>HTC Controller</p> <p>Space tracking device.</p> <p>Used to detect the position of hands or interact with the virtual environment.</p>		<p>USB Cable</p> <p>Cable connecting various devices (HTC Vive headset, Thrustmaster steering wheel, USB HUB) to the computer, sometimes required with touchscreens.</p>	
<p>Dongle</p> <p>Connects HTC Trackers to the computer plugged into the USB HUB.</p>		<p>HDMI Cable</p> <p>Video cable connecting screen to the computer</p>	
<p>HUB 4-USB</p> <p>USB multi-socket for HTC dongles, steering wheel and controller.</p>		<p>DisplayPort Cable</p> <p>Video cable connecting the HTC VIVE headset to the computer.</p>	



2 Cart Assembly

For the cart assembly, please refer to the separate Spark Cart Assembly Instructions.

3 Hardware installation

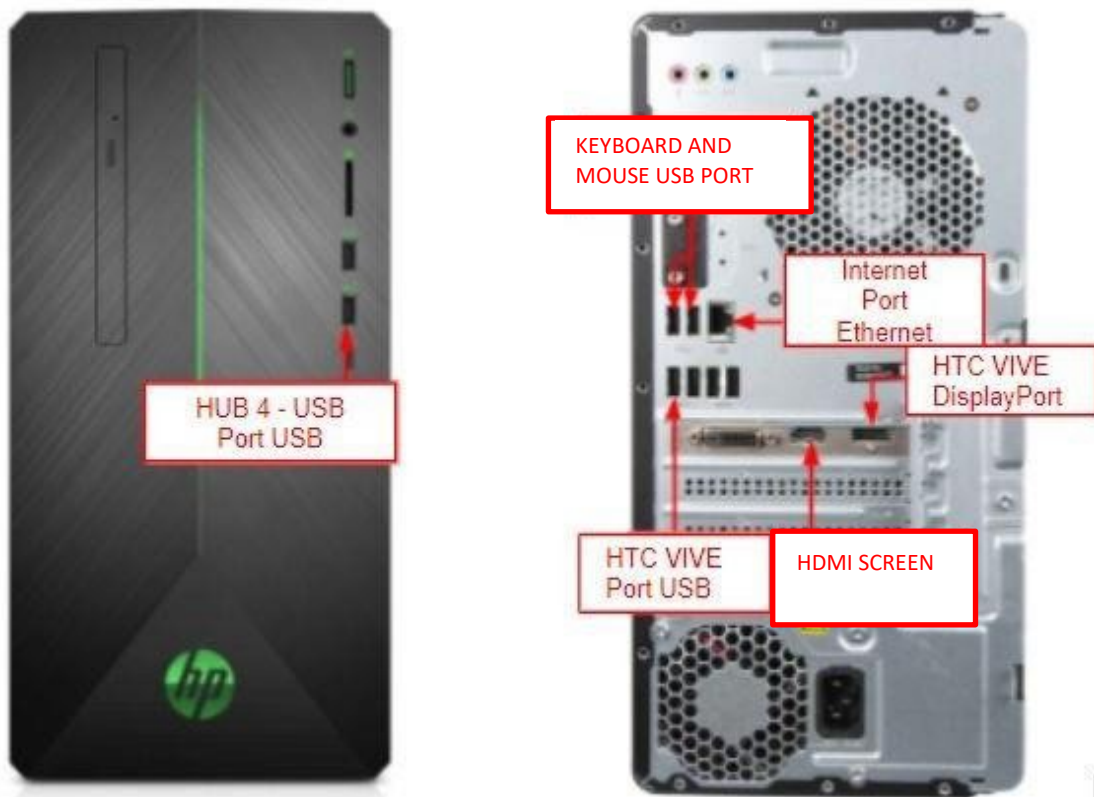
3.1 Installation

- Place the computer on the right plate.
- Place the keyboard and mouse on the main plate.
- Place the HTC headset on the left plate.



3.2 Computer connections

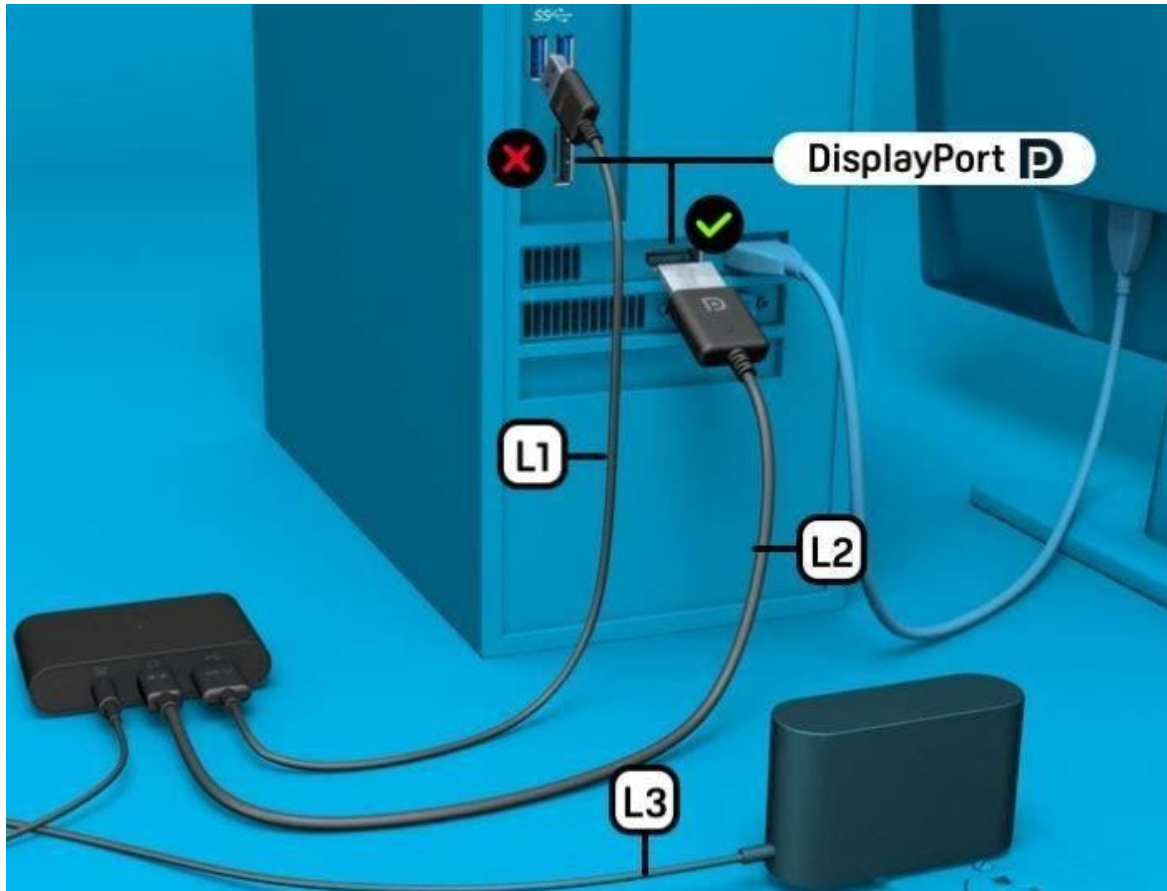
- Connect the computer screen to the graphics card using the HDMI cable supplied with the screen (see picture below). + **USB cable for touchscreen**
- Connect keyboard and mouse to a USB port.
- Connect display power cable to cart power socket.
- Connect computer power cable to cart power socket.
- Connect the computer to the Internet via the Ethernet port (*optionnel*).
- Connect the USB 4 - USB PORT to the PC, turn on the blue lights (where the dongles are connected), fix the USB 4 - USB PORT to the top of the PC with the PATAFIX



3.3 HTC VIVE PRO headset installation

- Connect the USB cable between the headset link box and the computer.
- Connect the DISPLAYPORT cable between the headset link box and the computer.
- Connect the power supply for the headset link box to the cart's power socket.

IMPORTANT: The headset DISPLAYPORT cable must be connected with the screen to the graphics card (horizontal port in the middle of the computer) and **NOT** to the motherboard (vertical port or top of the computer).



- Connect the headset cable to the link box and press the blue button.



3.4 LEAP Support installation

- Clip the LEAP Motion bracket onto the headset (the USB port must be on the side of the USB cable coming out of the headset).
- Connect cable to LEAP



3.5 Cables management

The cart is supplied with two clip-on brackets at the rear of the mast for cable management. Use them in conjunction with the **sheath** supplied to ensure optimum cable routing..

Here's what the final assembly should look like :



3.6 DAV accessory installation (optional)

- Take the 2 HTC Trackers, the screen clamp and the DAV headset (see image below).



- Screw one HTC Tracker onto the AVD headset.
- Screw the second HTC Tracker onto the screen clamp and place the screen clamp in the middle of the screen. *Be careful not to over-tighten the clamp to avoid damaging the screen.*
- Connect the triple pedal to a USB port



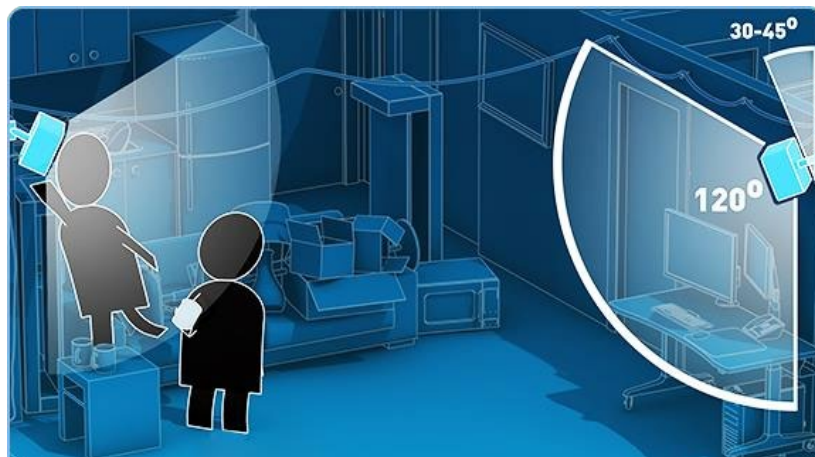
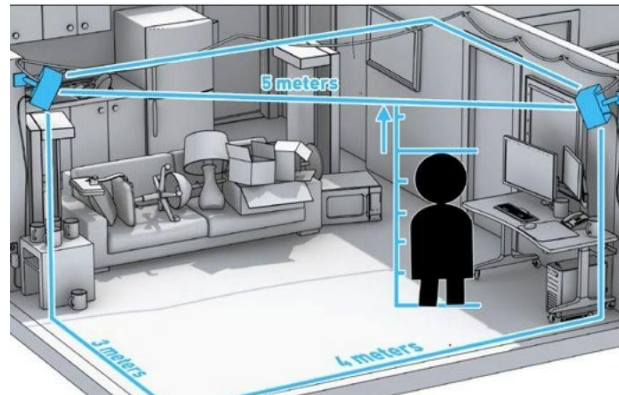
4 Room installation - Part 1

4.1 Bases positioning

Make sure that base stations are installed at the edge of the work area and that they are not in danger of being accidentally knocked over or dropped, to avoid damage to property..

- Place ball joints on each tripod. *(The ball joints are included in the tripod box).*
- Place the HTC base stations on the tripods by screwing them onto the ball-and-socket joints.
- Adjust the position of the base stations so that they are positioned diagonally across the work area. Base stations should face each other and be tilted slightly downwards.
- Connect the bases to a power outlet using the adapters supplied. Tighten the cables along the tripods using the Velcro fasteners supplied.
- Remove the plastic covers from the front of the bases.

NOTE : *Base stations should be placed at a height greater than the user's height (approx. 2m~2m50) and at a maximum distance of 5 m from each other. Base stations should face each other and be slightly inclined towards the ground in the center of the workspace (approx. 30°~45°).*

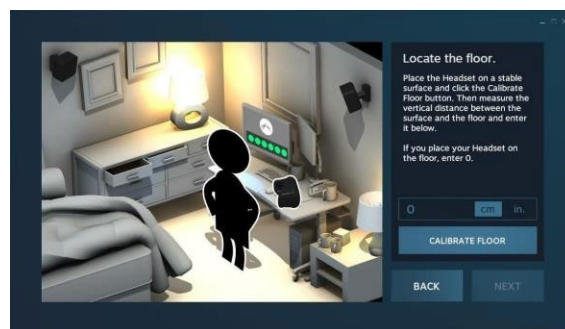
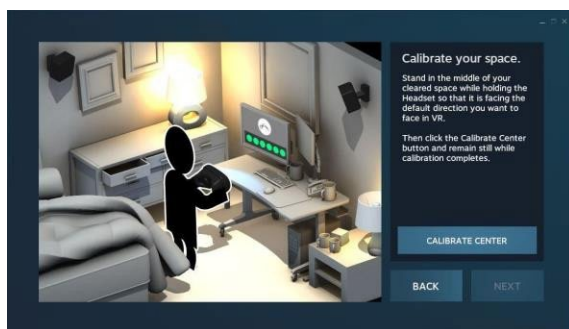
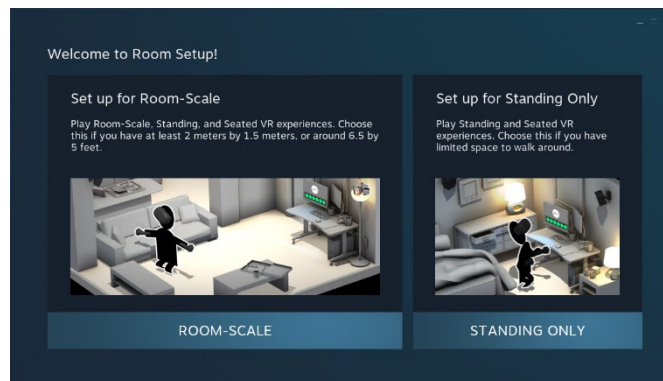
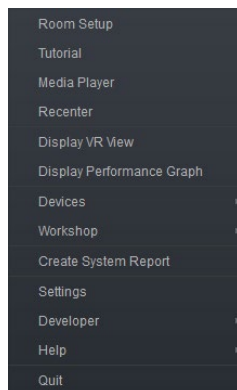


4.2 Virtual space configuration

- Switch ON the computer and wait for it to start up completely.
- If SteamVR (a small black window: see images below) does not launch automatically:
 - Open the "Virtualis Software" on the desktop.Launch one of the Virtualis applications. SteamVR will launch automatically.
- Wait until SteamVR has started up correctly. *SteamVR is started when the HTC Vive headset icon and base station icons appear in color.*

NOTE : If an error message appears, please consult the "[Known problems](#)" section at the end of this guide.

- Right-click on the SteamVR window (in an empty space) and select the "Room configuration" option.
- Select the "Standing only" configuration
- Place the headset on the floor in the center of the workspace. *The headset must be visible from the bases.*
- Follow the on-screen instructions and choose a height of 0 cm when calibrating the floor. *Without moving the helmet, select "Next", "Calibrate center", "Next", "Calibrate floor" with 0 cm, "Next", "Finish".*



5 Room installation - Part 2

5.1 Mounting base stations on the wall.

If virtual reality works and the headset's tracking in your workspace seems sufficient (no image

loss when you move or turn in the workspace), you can fix the bases to the wall if required (base support in the live headset box).

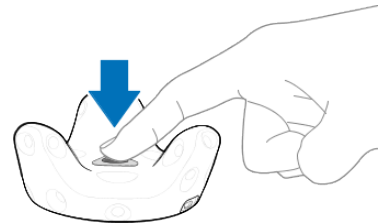
NOTE : Fixing the bases to the wall simplifies RV use, as it eliminates the risk of bumping into tripods or dropping the bases. If a base is moved, a new "Room configuration" is required."

5.2 Associating HTC accessories

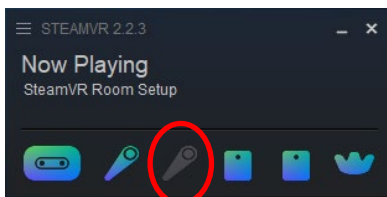
- ❑ Switch ON both HTC Trackers (optional) and both HTC Controllers. An icon should appear in SteamVR for each device.



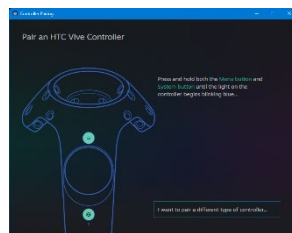
Press the System button to switch on the Tracker or Controller



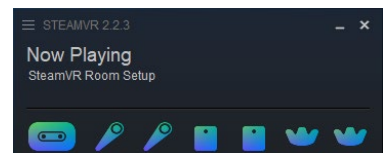
- ❑ If one of these devices is not detected in SteamVR, you need to associate it with SteamVR :



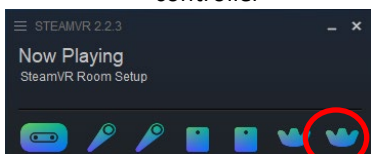
Right-click on the Controller icon, and select "Associate a controller"



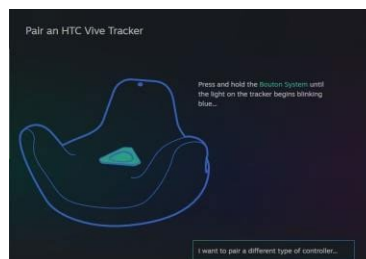
Follow the on-screen instructions to link the controller.



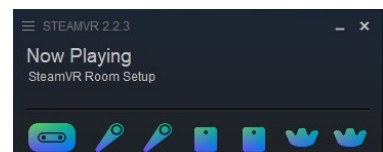
The controller icon should light up when the controller is linked.



Right-click on the Tracker (or Controller) icon, and select "Associate controller"

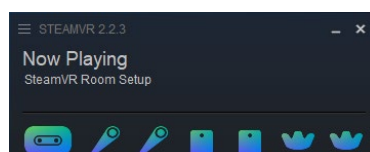


Change the device to be linked to an HTC Tracker and follow the on-screen instructions to link the controller.



The tracker icon should turn green when associated.

- ❑ Check that the SteamVR window looks like the photo below (optional Tracker icons):



5.3 Associating XBOX controller

- Switch on the Xbox controller by pressing the central logo until it lights up. If the logo lights up steadily, your controller is paired.
- If the central button is flashing, associate the controller by pressing the association button on the controller for a few seconds, then a Windows window will open. Simply click on connect to finalize the association.

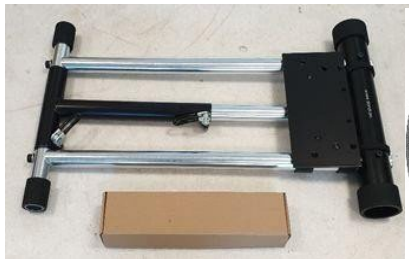


Xbox controller associating button

6 Steering wheel installation

6.1 Package content

The steering wheel support box and the steering wheel box contain the following components:



Steering wheel support



Steering wheel + Pedals



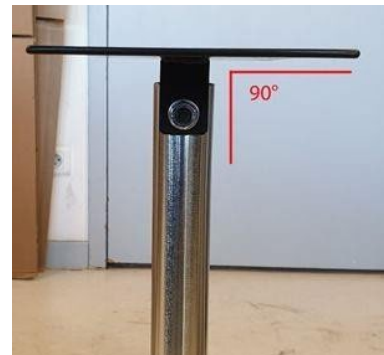
- Open the cardboard box.



- Remove all tools from the **Bag B**. The **Bag A** contains the hardware for attaching the pedals to the support.

6.2 Step 1 – Set up

- Loosen the steering wheel support using a wrench and Allen key.
- Set the steering wheel support perpendicular to the mast for ease of assembly, then tighten..



6.3 Step 2 – Steering wheel fastening

- Unpack the steering wheel, the **part A** and the **screw B** from the box.
- Put the **screw B** inside **thread C** under the steering wheel.
- Adjust the steering wheel on the mast with the **part A**.





6.4 Step3 – Pedals fastening

- Unpack the pedal fastener from the **pack A (Step 1)**.
- Place the rubbers on the red bar as shown in the figure below.
- Position the pedal bracket on the steering wheel support.
- Tighten the screws halfway to allow the pedal bracket to move.

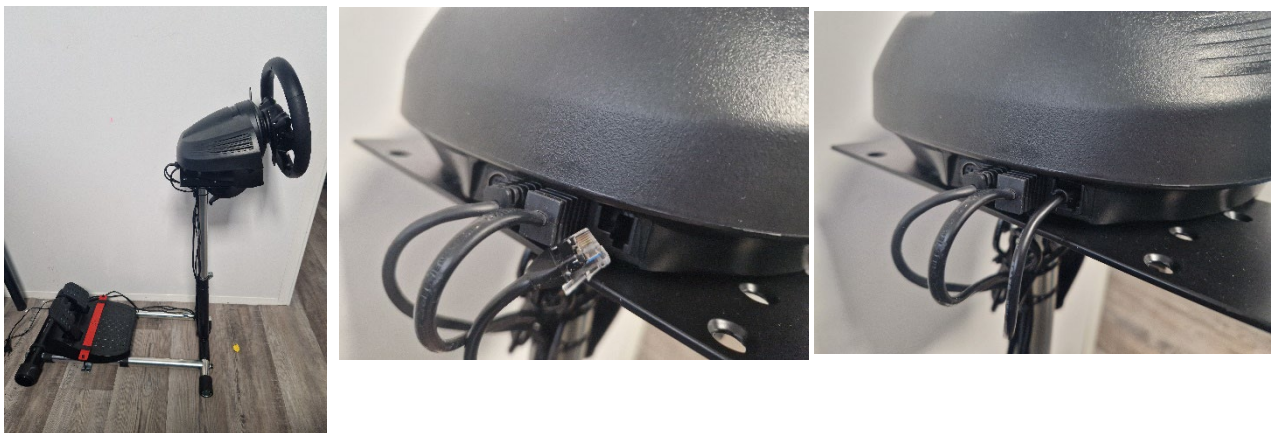


- Unpack the crankset and position it as shown in the figure below.
- Hold the pedals by screwing the fixing bar around them with the Allen key.



6.5 Step 4 - Connections

- Connect the **cable A** in the **socket B** (on the steering wheel).
- Connect the USB cable to the computer's USB HUB and the power supply to the cart's power socket.



NOTE : The inclination of the mast and support can be adapted to the patient's needs. Keep tools accessible..

NOTE : The steering wheel rotates automatically each time the computer is started. This is a normal calibration process.

IMPORTANT : The steering wheel and Xbox controller **CANNOT** operate at the same time.
The steering wheel must be **unplugged** when not in use..

For ease of use, simply connect the steering wheel's USB connector to the supplied USB HUB, and press the associated button to activate or deactivate it.

Note : we recommend using the USB extension cable to ensure the necessary distance for the exercise.



- Check that the steering wheel is working properly by running Virtualis software (e.g. Motorway Simulation). *If you encounter any problems, please refer to the list of known problems below..*

7 Finalization

7.1 Keep in the cart basket

Keep these items in the cart basket:

- The 2 **Trackstraps** (straps for hanging Trackers)
- Two **chargers** for controllers and trackers with associated **mini-USB cables**.
- The lens **cleaning cloth**.
- The additional VR Cover



7.2 Verification

Software verification **(Mandatory)**

- Call support to carry out the software check
- Take a photo of the finished installation and send it to support.

8 Known problems

In the event of a problem, check that:

- Base stations are plugged into a mains socket.
- All cables are properly connected.

8.1 Some software settings change by themselves

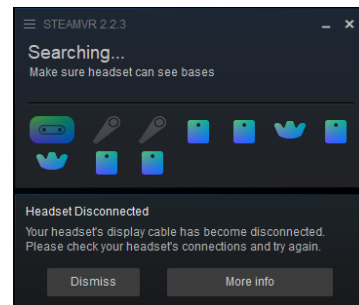
If certain software parameters change unexpectedly (e.g. the opacity value of Optokinetics increases until the screen is blue or grey), simply unplug the steering wheel (or switch it off from the USB HUB).

Reminder: The controllers and steering wheel **CANNOT** operate simultaneously. Only connect the steering wheel when you are using it.

8.2 Non detected headset

If the headset is not detected or SteamVR status is "Searching", check the following points:

- All cables are properly connected to the computer (see sections "Computer connection" and "Headset installation").
- The green light on the top of the case is on; if not, press the blue button on the edge.
- Base stations are correctly switched on and synchronized

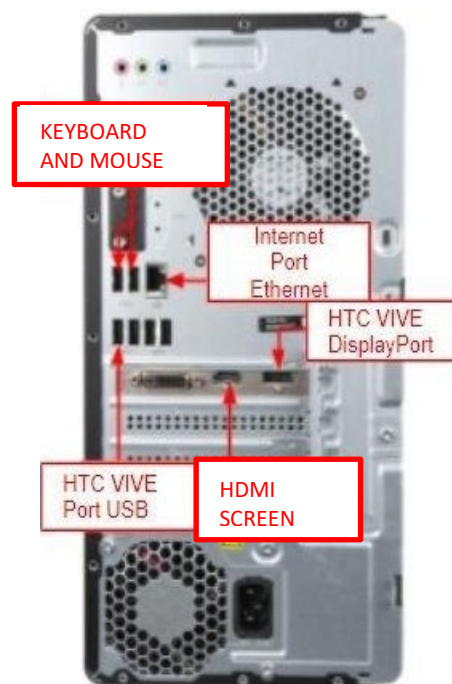


8.3 SteamVR error 208

This error is due to a problem with the video cable:

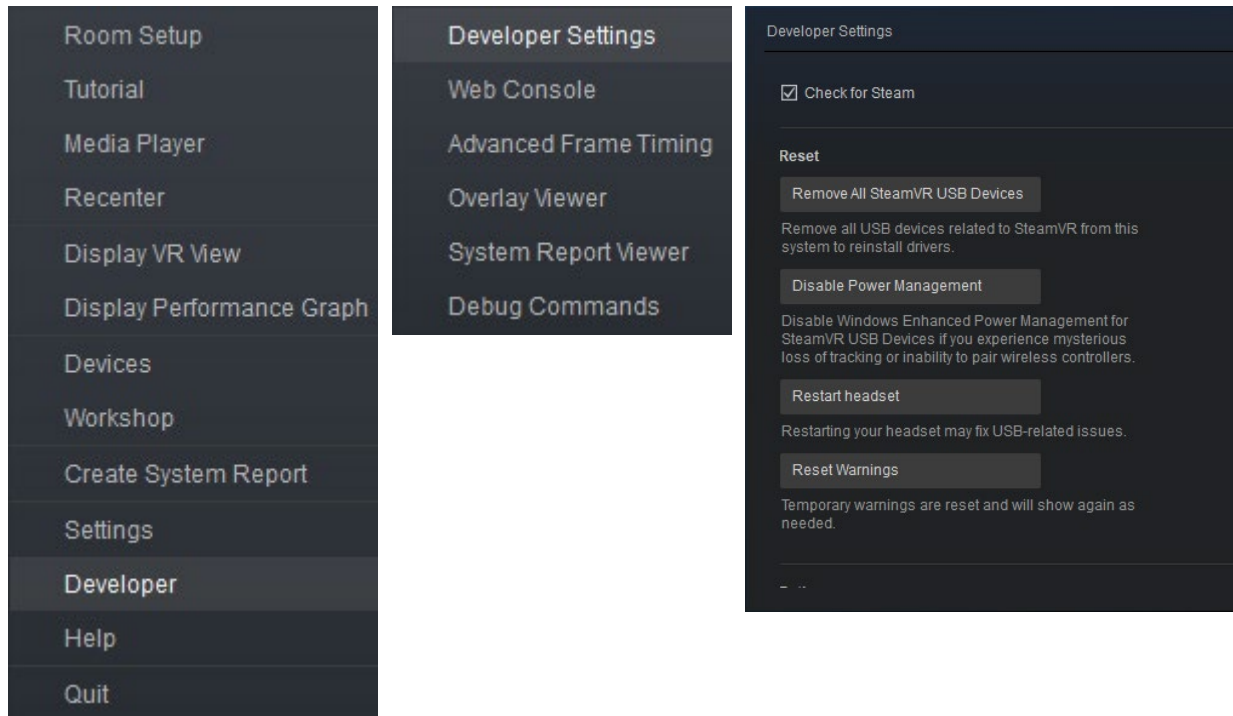
1 - Check that the monitor and headset are both connected to the graphics card (the graphics card ports are at the rear of the computer, at the bottom, and are generally horizontal). *Figure on the righth.*

2 - Check that all cables in the link box are correctly connected




8.4 SteamVR error 108

1. Restart computer.
2. Reset headset:
 - Disconnect USB cable between link box and computer.
 - In the SteamVR window, right-click in an empty area and open the Settings panel.
 - Under the "Developer" tab, « developer settings », click on "Remove all SteamVR USB Devices.».



- Accept and wait for confirmation message
- Restart computer.
- Reconnect the USB cable to another USB port on the computer.


8.5 LeapMotion does not detect hands

- Find the LeapMotion icon in the taskbar (the icon may also be in the list of hidden icons: up arrow ).



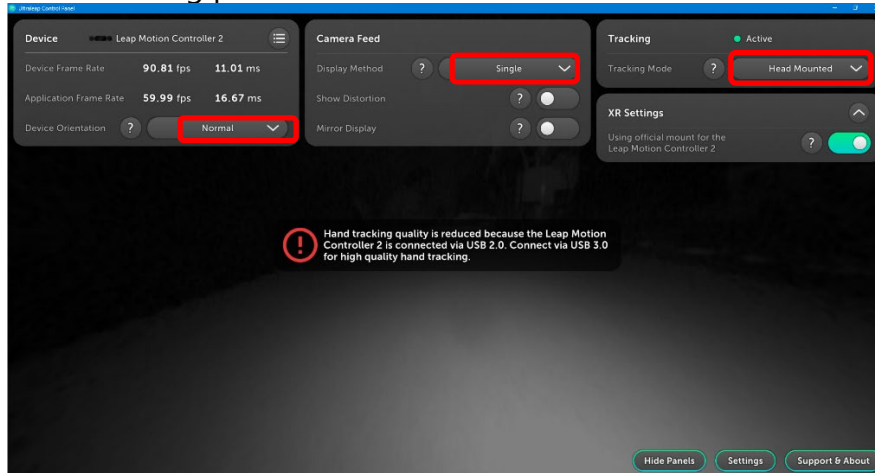
- If the icon is not present, enter "Leap Motion" in the Windows search bar and select "Leap Motion Control Panel".
- If "Leap Motion Control Panel" doesn't exist, download and install the following file [LeapMotionInstaller¹](#).

8.6 LeapMotion appears inverted

- Find the LeapMotion icon in the taskbar (the icon may also be in the list of hidden icons: up arrow ).



- ❑ Right-click on the icon, select "Open control panel" (or double click on the icon)
- ❑ Check the following parameters :



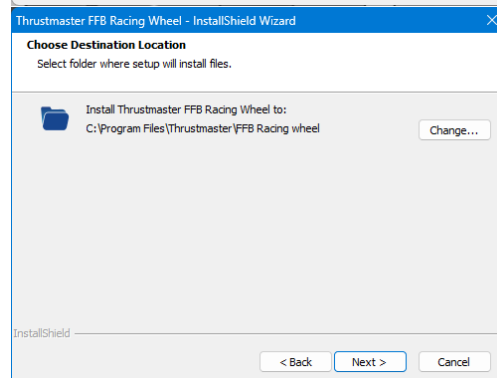
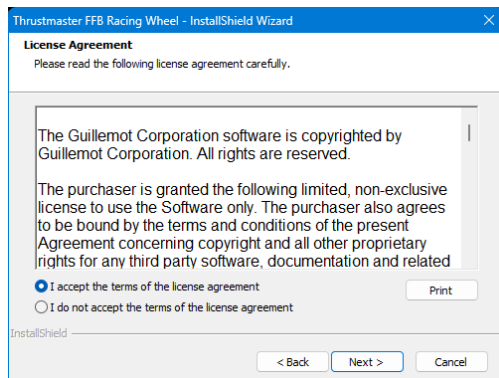
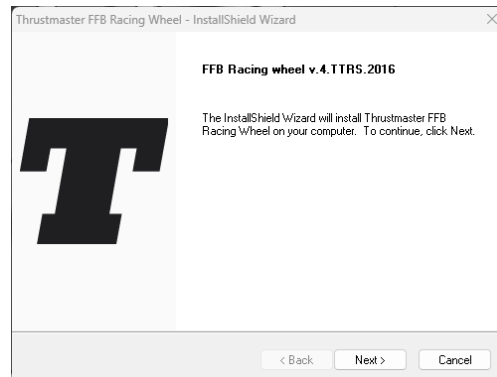
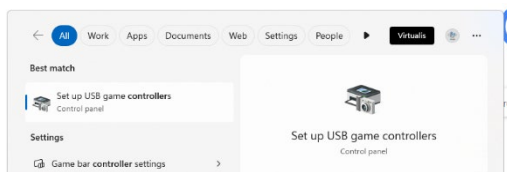
¹ https://file.virtualisvr.com/Resources/tracking-software_v5.16.0_windows.exe

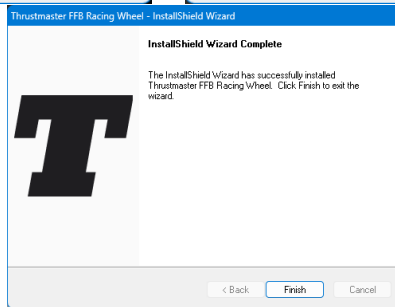
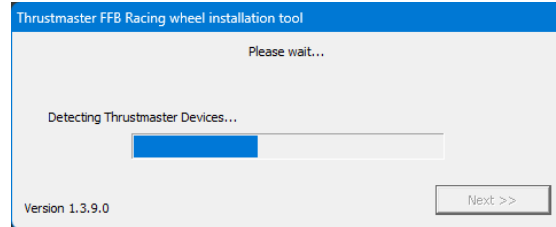
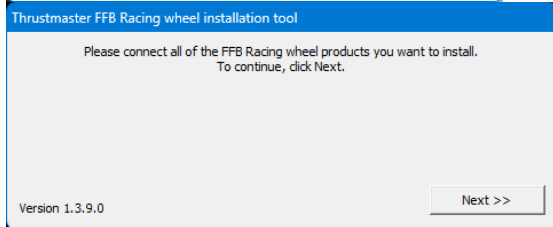
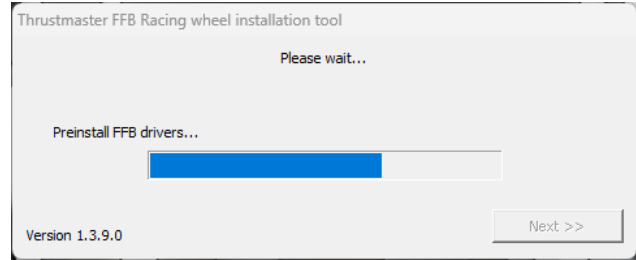
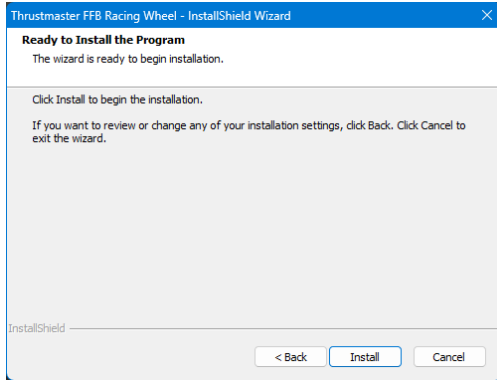


8.7 Abnormal behaviour of the steering wheel

Please check the following parameters:

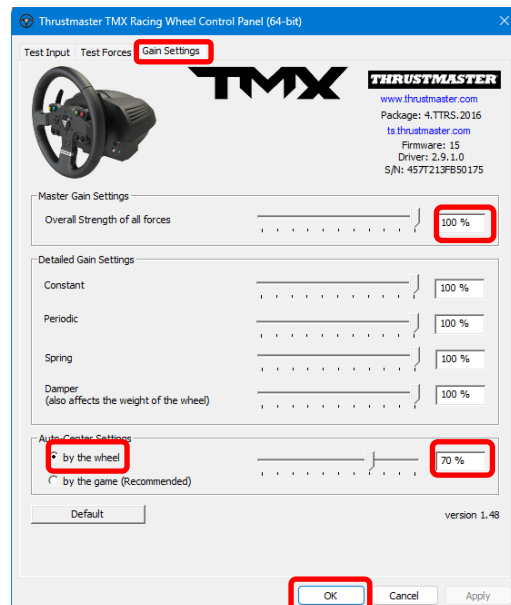
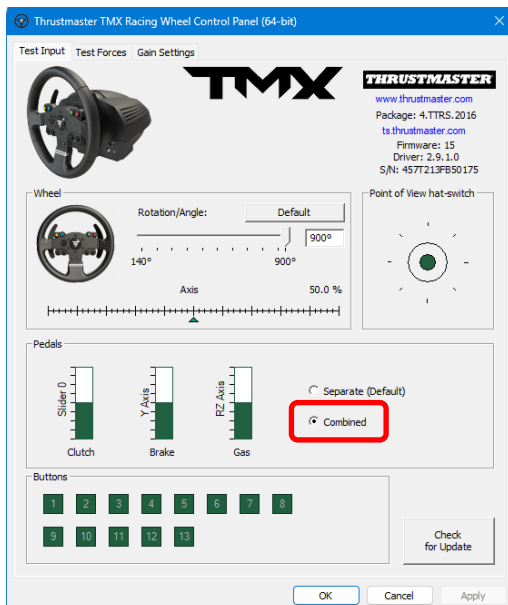
- Open the Windows menu (Windows key on keyboard) and enter "usb" in the search bar.
- Select "Configure USB game controllers".
- Click on "Thrustmaster TMX Racing wheel" then on "Properties".





If the window that opens doesn't look like the ones below, please contact support. Otherwise follow the instructions below:

- In the "Test Input" tab, select the "Combined" option. "
- In the "Gain settings" tab, set the "overall Strength of all forces" option to 100%.
- In the "Auto center settings" tab, select the "by the wheel" option and set the value to 70%.





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