Installation protocol

Order informations :

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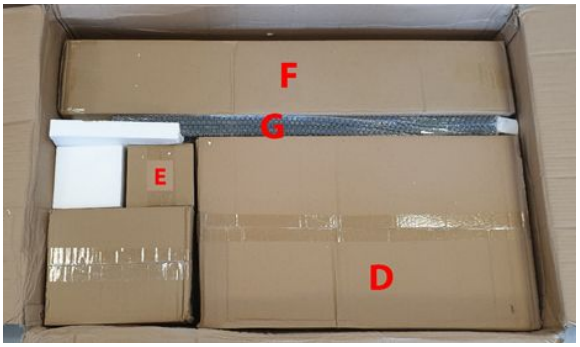
Cart installation

Package content

Once you have opened the cart package, you will find several boxes :



Open the **A Box** :

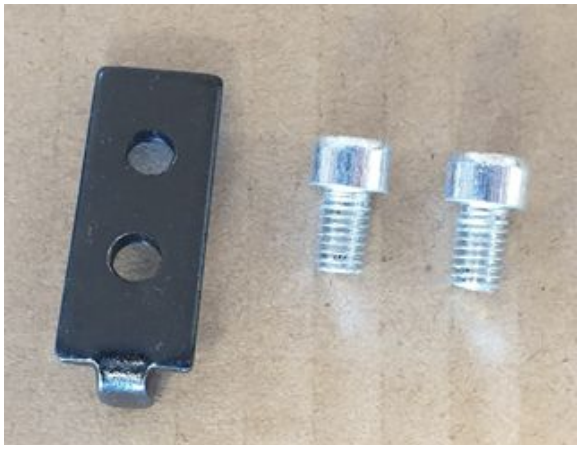
Extract all tools that can be used to mount the cart (**E Bag** and **F Bag**).

Preparation

Step 1 - Headset tray

- ❏ Unpack a black piece from the **H Bag** and two screws from the **I Bag**.
- ❏ Extract the tray from the **A Box** and screw the black piece according to the picture below.

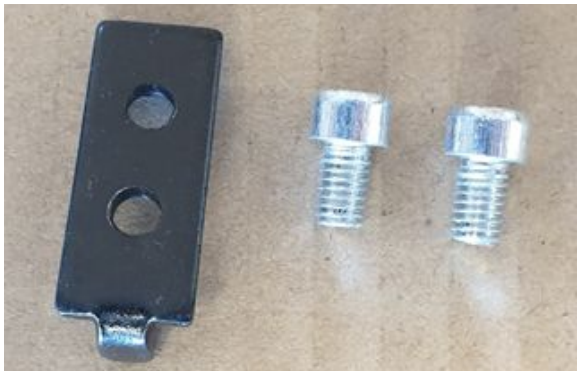
IMPORTANT : *Don't screw it totally, you must be able to move this piece to put it in a slide afterwards.*



Step 2 - Computer tray

- ❏ Extract the second piece from the **H Bag** and the last two screws from the **I Bag**.
- ❏ Extract the tray from the **C Box** and screw the black piece according to the picture below.

IMPORTANT: Don't screw it totally, you must be able to move this piece to put it in a slide afterwards.



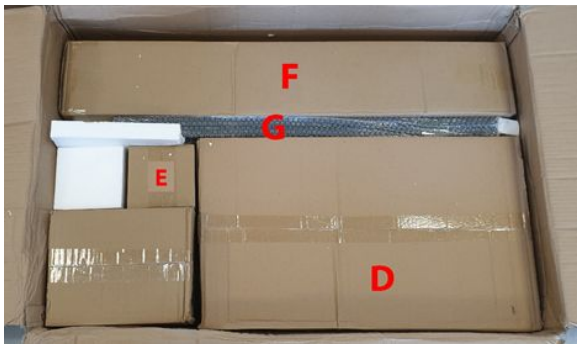
Step 3 - Keyboard/Mouse tray

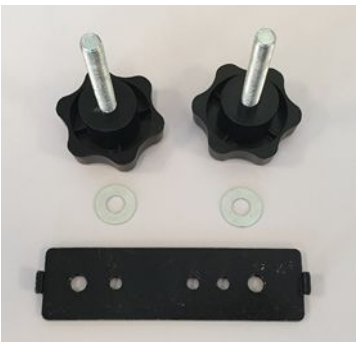
- ❏ Extract the black piece and the screws from the **B Bag**.
- ❏ Extract the tray from the **D Box** and screw the black piece according to the picture below.
- ❏

IMPORTANT : *Don't screw it totally, you must be able to move this piece to put it in a slide afterwards. The hooks must be oriented toward the board.*

Step 4 - Secondary mast

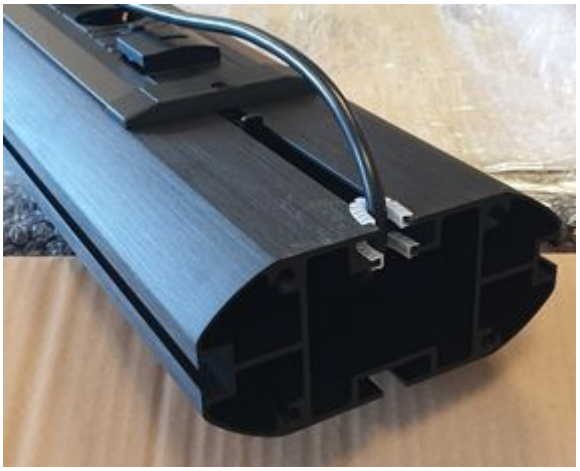
- ❏ Unpack everything from the **K Bag** and the mast in the **G Bubble wrap**.
- ❏ Place the washers on the thumbscrews.
- ❏ Place the metal piece as shown on the pictures below with the hooks facing inwards. Do not screw tightly.





Step 5 - Main mast

- ❏ Extract everything from the **A Bag**, the main mast in the **F Box** and the foot from the **A Box**. *The main mast has a multi-socket and a power switch. The socket is usually stored in the mast body, it must be extracted before continuing assembly.*
- ❏ Route the power cable through the notch provided.



❏ Assemble the main mast and the foot with the screws extracted from the **A Bag**. *The shorter footbars must be placed on the same side as the power strip. Tighten tightly.*

❏ Place the wheels on the cart stand. You will find two sets of wheels in the **A Box**. The wheels with brake must be placed on the front of the cart (longest foot bars). *Use the flat key found in the **E Bag**.*

Without brake

With brakes

Assembly

Step 6 - Bottom assembly

- ❏ Slide the HTC Vive tray **A** (**Step 1**) into the left slide at around 80 cm height and screw it tightly.
- ❏ Slide the computer tray **C** (**Step 2**) into the right slide as low as possible and screw it tightly.
- ❏ Slide the keyboard/mouse tray **D** (**Step 3**) into the left slide as high as possible and screw it tightly.

Step 7 - Masts assembly

❑ Place the secondary mast on the main mast **G** and close the top of the main mast using the cover in the **A Box**.

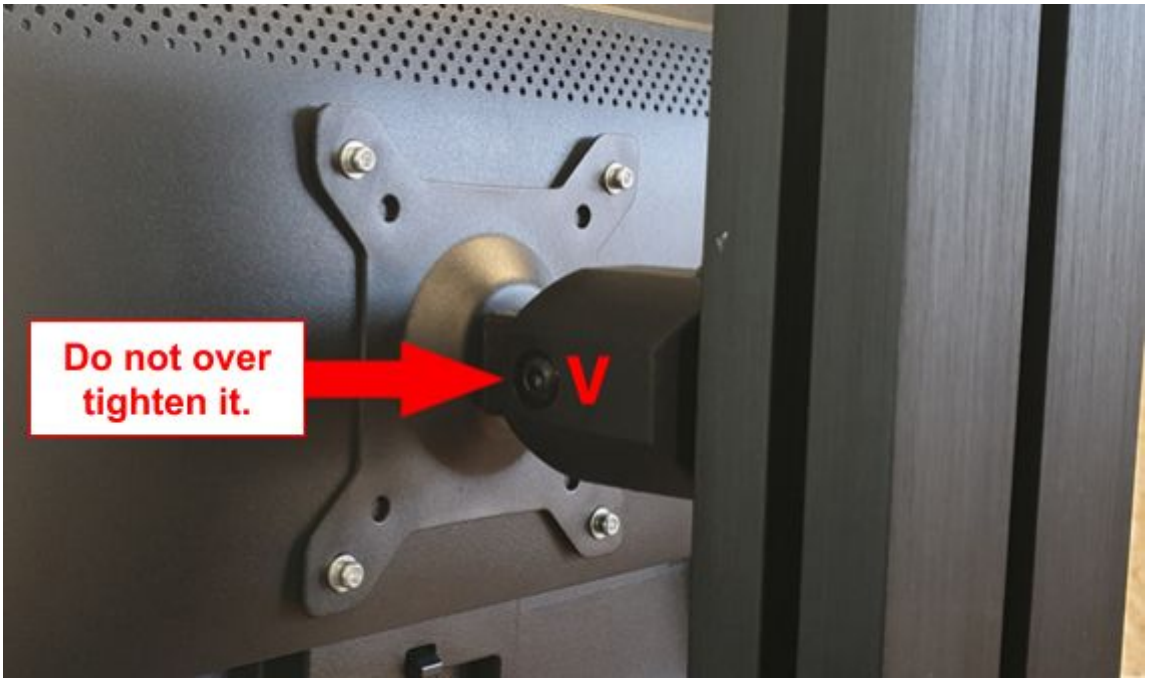
Step 8 - Top assembly

- ❏ Slide the basket (**B Box**) into the back rail according to the picture below, screw it tightly.
- ❏ Slide the screen support the **E Box** into the front rail according to the picture below, screw it tightly.
- ❏ Close the top of the secondary mast using the cover in the **A Box**.

Step 9 - Screen fixation

- ❏ Place the screen on his support using the screws in the **C Bag**. *In this bag you can find differents screws for each type of screen.*
- ❏ Once the screen was screwed, you can tight the screw **V**.

***IMPORTANT :** The **V** screw is made of plastic and can broke easily. Do not over tighten it.*



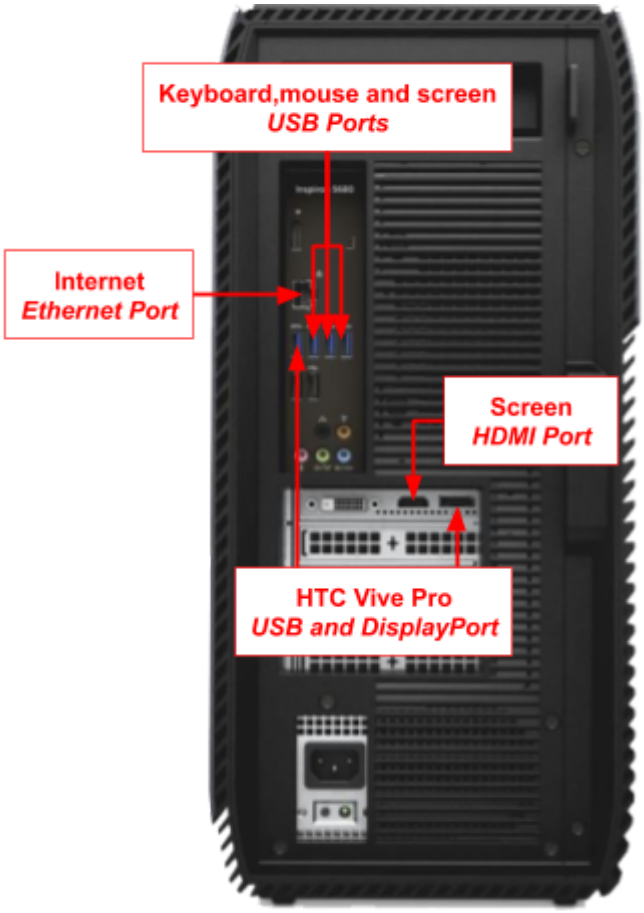
PC installation

Positioning

- ❏ Place the computer on the right tray.
- ❏ Place the keyboard and the mouse on the middle tray.

Connections

- ❏ Connect the computer's screen using the HDMI cable and the USB cable *(for the touchscreen mode)*.
- ❏ Connect the keyboard and the mouse the computer on USB ports.
- ❏ Connect the internet cable to the ethernet port *(optional)*.
- ❏ Connect the computer's power cable to the cart's multi-socket.
- ❏ Connect the screen's power cable to the cart's multi-socket.



DVA installation

- ❏ Get the two Vive Trackers, the screen clip and the DVA headset as shown in the picture below

- ❏ Screw one of the trackers on the top of the headset
- ❏ Screw the other tracker on the screen clip then mount the result on the center of your screen

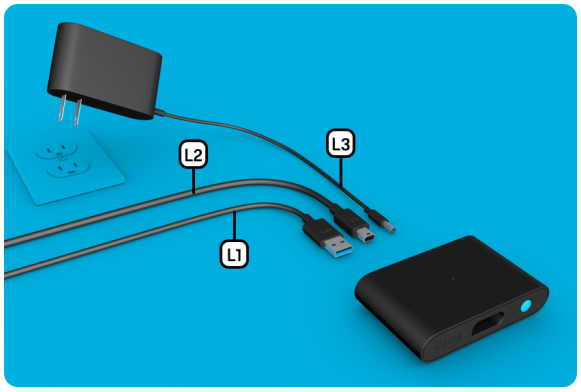
Cable management

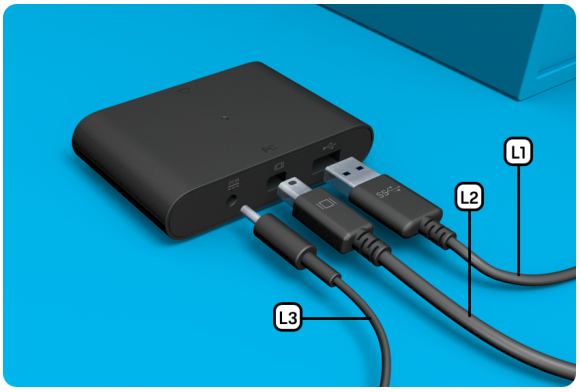
Included with the cart are two brackets that snap onto the back of the mast for cable management. Use these and Velcro to ensure that the cart is viably and neatly cable managed.

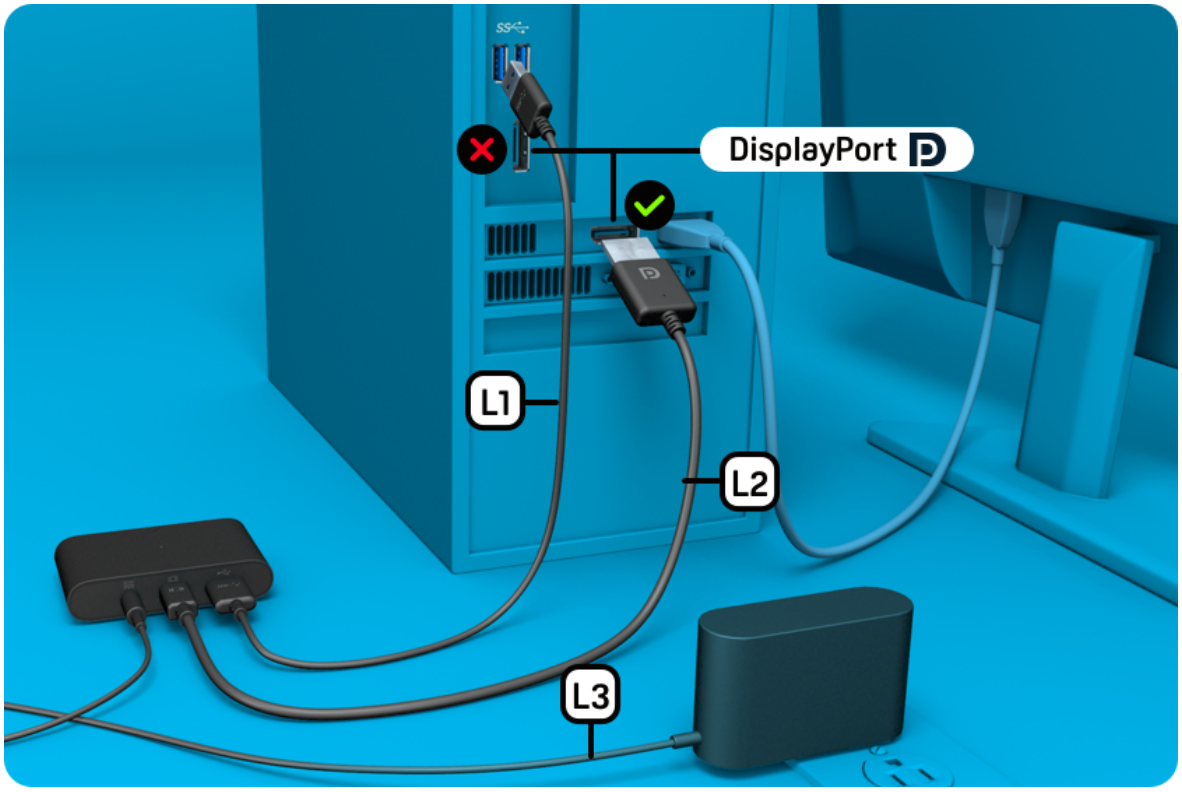
Headset installation

- ❏ Connect the USB cable between the link box and the computer
- ❏ Connect the HDMI cable to the link box and the computer
- ❏ Connect the power supply cable to the link box and the cart's multi-socket

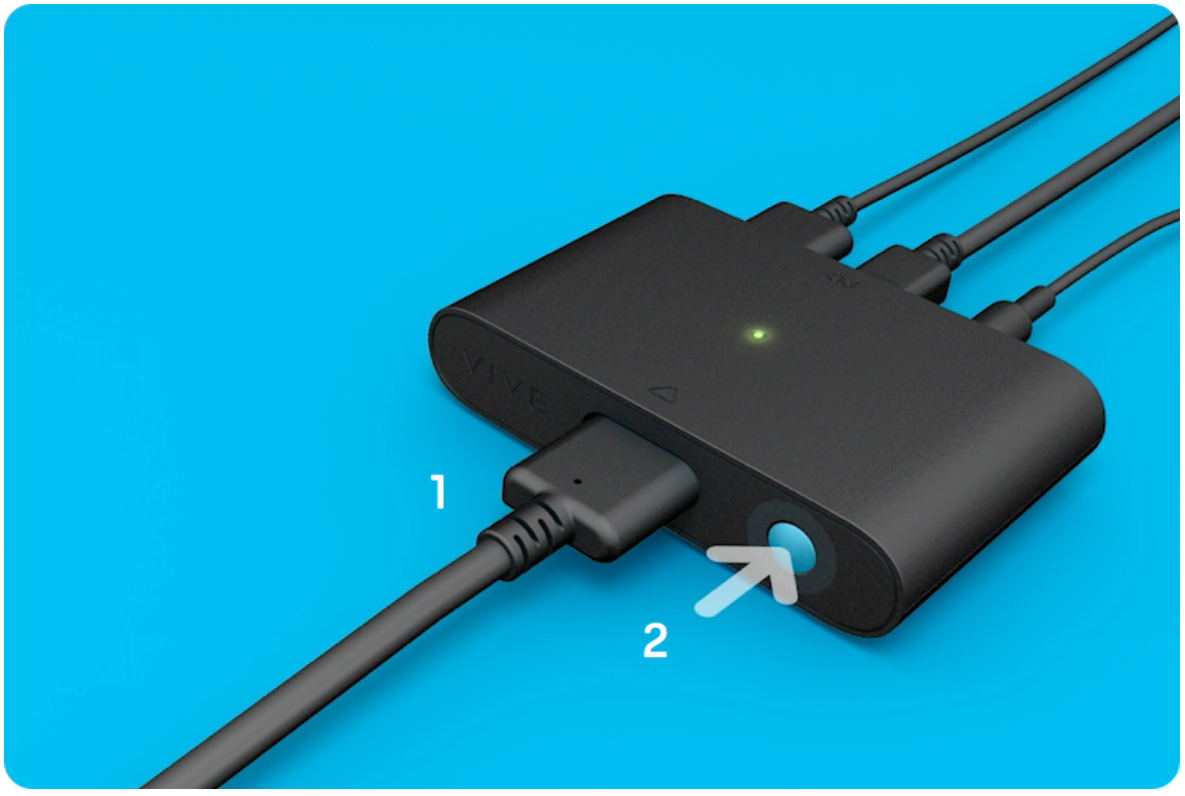
IMPORTANT : *The DisplayPort cable must be connected to the graphic card* ***NOT*** *on the motherboard (use the socket next to the screen socket).*







- ❏ Connect the headset cable to the link box.
- ❏ Press the power button on link box. *Link box's LED is green when the link box is powered on.*



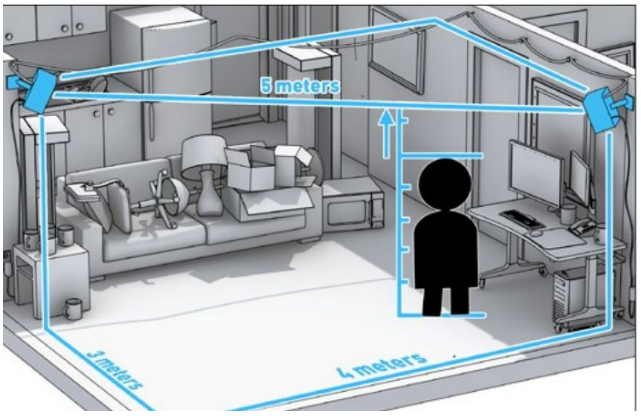
Room installation - Part 1

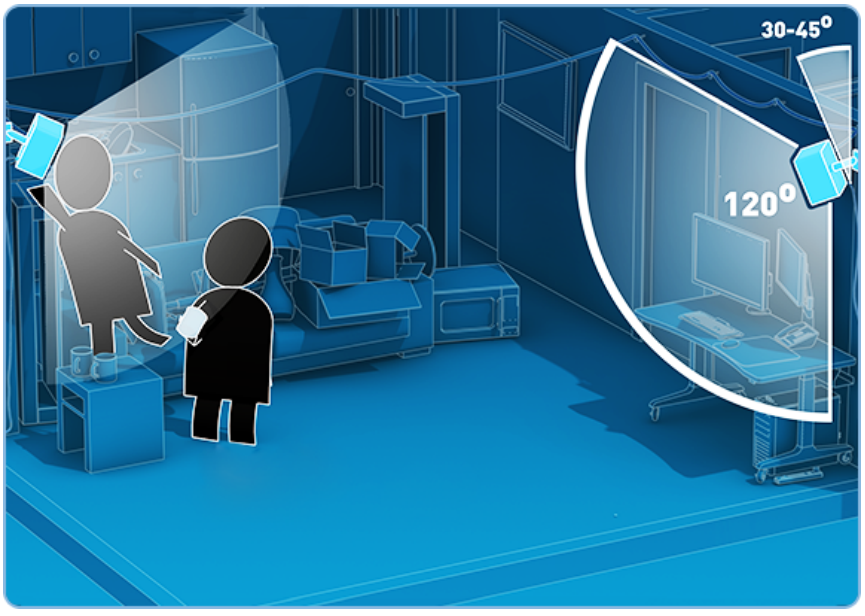
Bases positioning

Make sure that the base stations are installed outside the play area and securely set up from being accidentally struck, dropped, or bumped to avoid damage or compromised performance.

- ❏ Mount the base stations on the tripods.
- ❏ Place the base stations diagonally at opposite corners of your space.
- ❏ Adjust the base stations so that the front panels are facing toward the center of the play area.
- ❏ Attach the power cables to the base stations, and then plug each of the adapter into a power outlet to turn them on.
- ❏ Peel off the protective film from the front panel.

NOTE : *The base stations must be placed higher than an human height (about 2m~2m50). All the base stations must see other base stations and must be inclined to see the ground on the center of the playing area (about 30°~45°).*





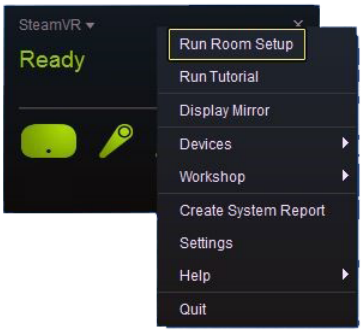
PC setup

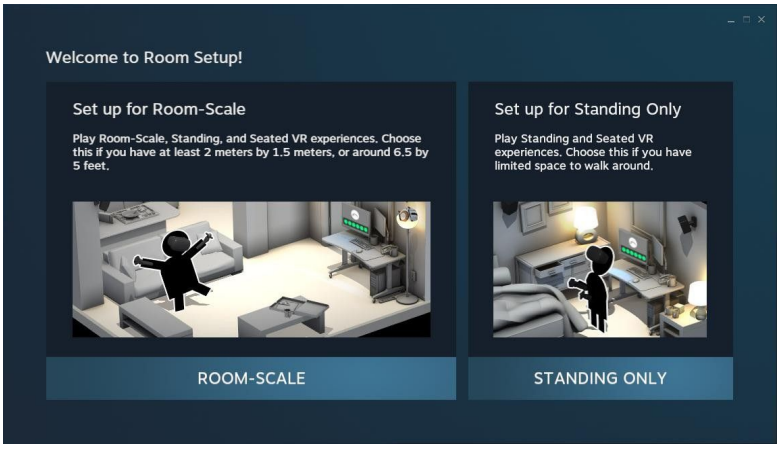
Room setup

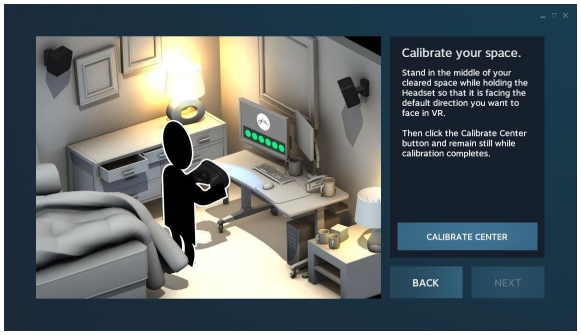
- ❏ Turn on the computer and wait until it's fully awaked.
- ❏ If SteamVR windows doesn't start automatically, open SteamVR
  - ➢ In Windows search bar, enter "SteamVR"
  - ➢ Select SteamVR application
- ❏ Wait until SteamVR is fully awaked. *SteamVR is fully awake when you see the HTC Vive pro and the base stations in green.*

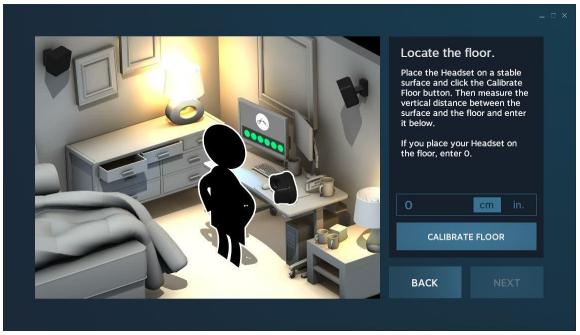
NOTE : *If an error occurs, please refer to the common troubleshooting below.*

- ❏ Right-click on SteamVR window (on an empty space) and select the "Room setup" option.
- ❏ Select the "Standing only" configuration.
- ❏ Place the headset on the floor in the middle of the playing area in the "default patient orientation". *Make sure the headset is visible from the base stations.*
- ❏ Follow the instructions on screen and set the headset height to 0 cm. *Without moving the headset select "Next", "Calibrate center", "Next", "Calibrate floor" with 0 cm, "Done".*





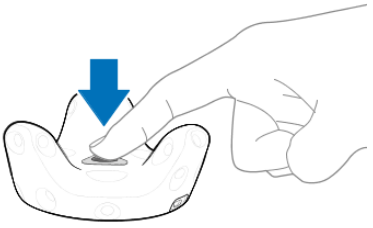




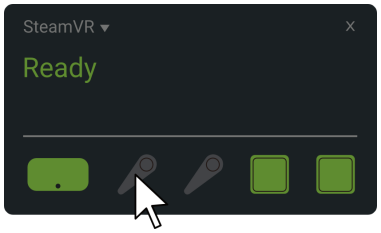
SteamVR devices pairing

❏ Turn on all HTC Trackers and HTC Controllers.

Press the System button to turn on each controller or tracker.



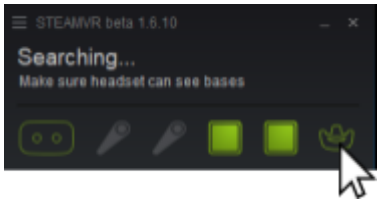
❏ If a controller or a tracker is not found in SteamVR, you have to pair him



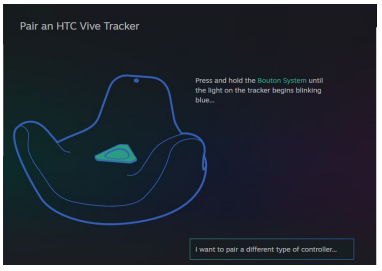
Right-click the controller icon, and select Pair controller

Follow the onscreen instructions to pair the controllers

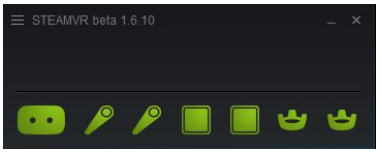
The status light turns solid green when the controllers are paired.



Right-click the tracker icon, and select Pair tracker

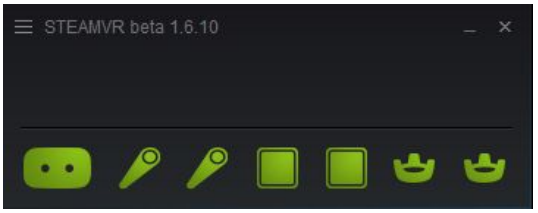


Follow the onscreen instructions to pair the controllers



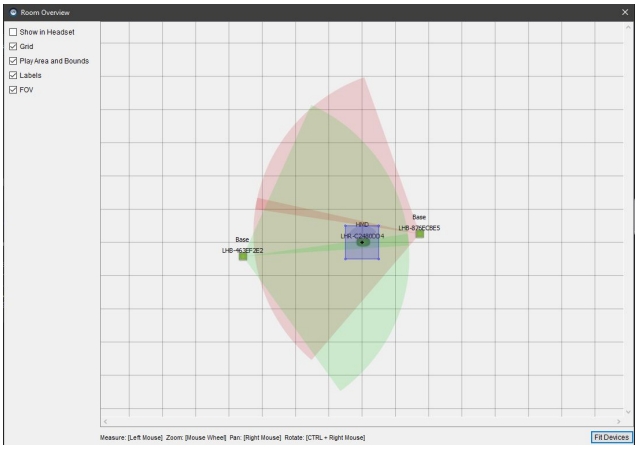
The status light turns solid green when the trackers are paired.

❏ Make sure to have a SteamVR window similar to the picture bellow



- ❏ You can control the room setup using the Room overview tool from SteamVR :
  - ➢ Right-click on SteamVR
  - ➢ Go to “Settings”
  - ➢ Under “Developer” tab
  - ➢ Click on “Room overview”

NOTE : *You are supposed to have a windows like the picture below, with the two base station in diagonal, the headset near to the center and all controllers and trackers visibles. You can control distance between the base station using the measurement tool (left mouse button).*



- ❏ Check if VR works fine by launching a Virtualis software.

XBOX Controller pairing

- ❏ Connect the XBOX Wireless Adapter to the USB HUB and enable it on the HUB by pressing the associated button.
- ❏ Turn on your XBOX controller. If the light go solid, your controller is already paired else follow the following step.
- ❏ Pair the Controller and the Wireless Adapter by pressing simultaneously the pairing buttons. Once the lights go solid, your controller is connected.

Press the bind button on the edge on the Wireless Adapter.

Press the controller bind button on the top of your controller.

Wait until the lights go solid.

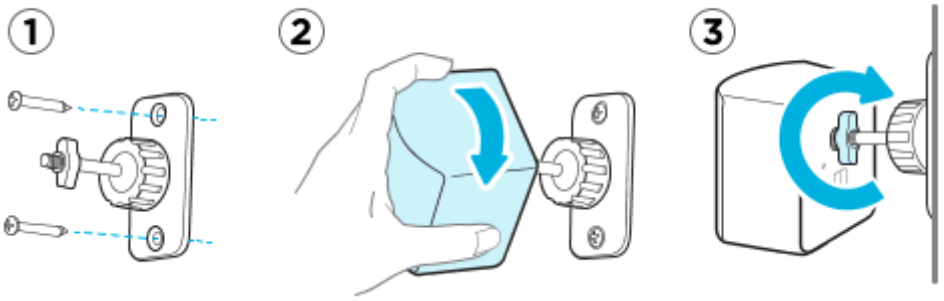
Room installation - Part 2

Use wall mount for base stations

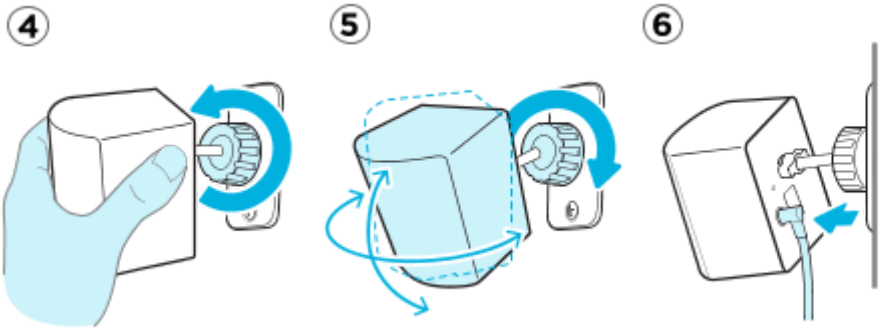
If the tracking works fine and everything has been tested, you can ask the customer if he wants to have his bases fixed on the walls.

NOTE : *Wall mounts are more comfortable for many reasons. Base stations can't be accidentally struck, dropped, or bumped. If a base station on a tripod has been moved, you must perform a new room setup.*

- ❏ Mark where you want to install each of the mounts on your wall, and then screw the mounts in. *When mounting on concrete or drywall, first drill ¼ inch holes and insert anchors before screwing mounts in.*
- ❏ Rotate the base station to screw it onto the threaded ball joint. Do not screw the base station all the way in, only enough to be stable and oriented correctly.
- ❏ Tighten the wingnut to the base station to secure it in place.



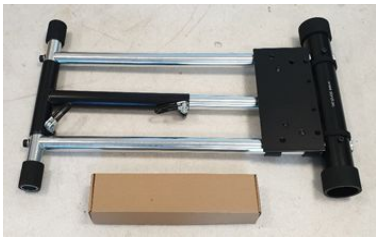
- ❏ To adjust the angle of the base station, loosen the clamping ring while carefully holding the base station to prevent it from falling.
- ❏ Tilt the base station toward the play area. To fix the angle of the base station, tighten the clamping ring back in.
- ❏ Attach the power cable to each base station.



Steering wheel installation

Package content

Once you have opened the steering wheel packages, you will find a lot of pieces :



Steering wheel stand

Steering wheel

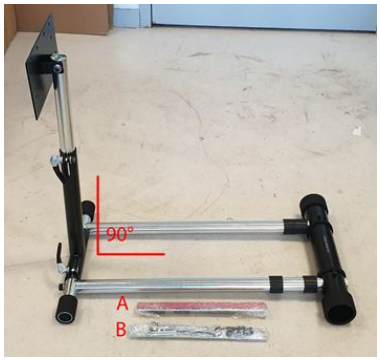
Steering wheel pedal set

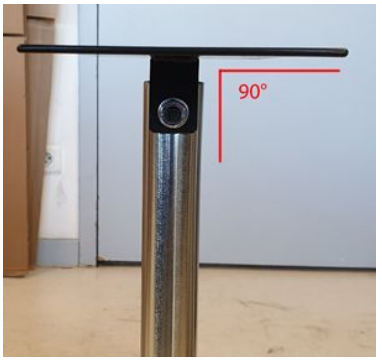
Open the cardboard box.

Extract all tools from the **B Bag**. The **A pack** is containing the footswitch attachment parts.

Step 1 - Setup

- ❏ Unflod the steering wheel stand for more convenience during the assembly.
- ❏ Loosen the steering wheel stand using the closed-end wrench and the Allen key.
- ❏ Set the steering wheel stand perpendicular to the mast, for more convenience during the assembly, then tighten it.



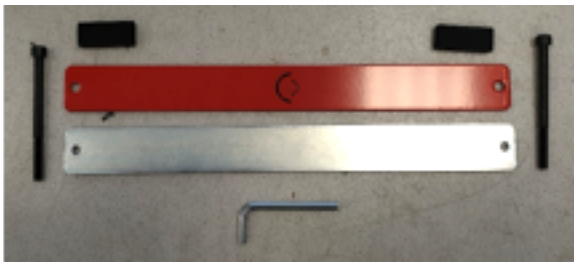


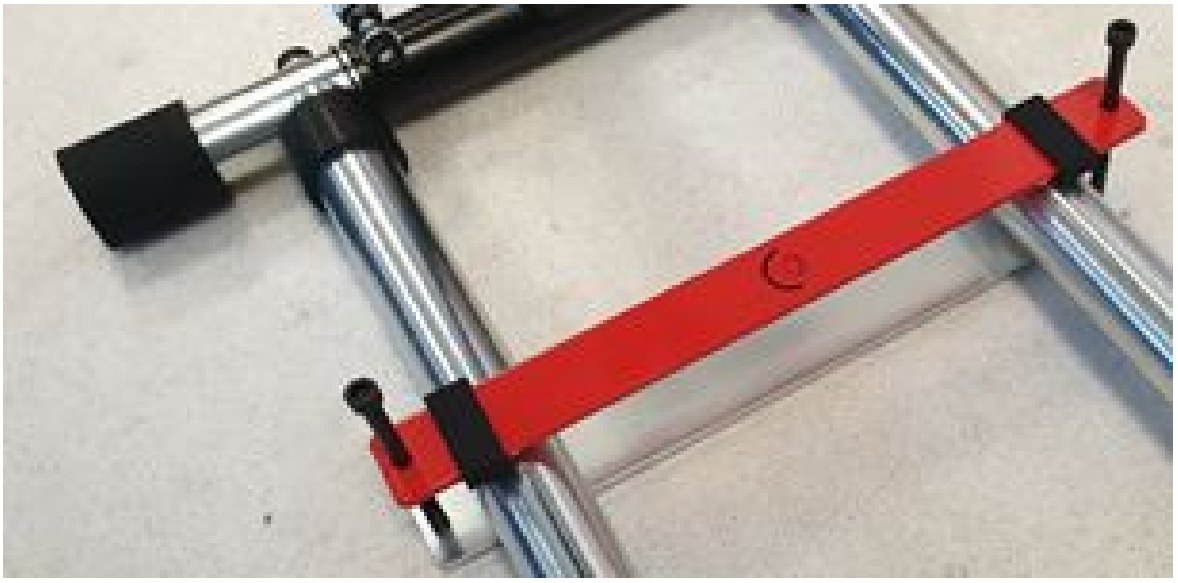
Step 2 - Steering wheel

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

Step 3 - Footswitch

- ❏ Unpack the footswitch attachment part from the **A pack** (**Step 1**) .
- ❏ Set the rubbers on the red bar as shown in the image below.
- ❏ Position the footswitch attachment on the steering wheel stand. Turn the screw very slightly.





- ❏ Unpack the Footswitch and position it as shown in the image.
- ❏ Lock the Footswitch by screwing the attachment bar around it with the Allen key.

Step 4 - Connection

- ❏ Connect the **A cable** into the **B plug** (onto the steering wheel).
- ❏ Connect the USB cable to the computer and the power supply to a power outlet.

NOTE : *The inclinations of the mast and the support can be adapted to the patient so keep the tools accessible.*

NOTE : *The steering wheel rotate every time the computer is starting, this is a normal calibration process.*

IMPORTANT : *The Steering wheel and the XBOX controller **CAN'T** work at the same time. As a rule, you must unplug the steering wheel when not in use.*

To facilitate their use, simply connect the steering wheel USB plug to the provided USB hub, so you can switch it on/off by toggling the button.

- ❏ Check if the steering wheel works fine by launching a Virtualis software (like Motorway Simulation). *If any trouble occurs, please refer to the common troubleshooting below.*

Finalization

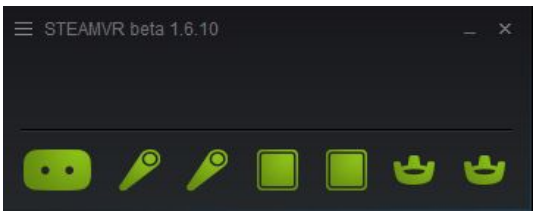
Software Check

- Open the **MirrorVR** software. *Open the desktop folder "**Virtualis software**", open the software "**NeuroVR**", click on "**MirrorVR**" then click on **"Start"** button.*
- When the software was started, put one hand in front of the Vive Goggles and check if you can see a hand moving like yours on the monitor. *If you do not see your hand or if your hand looks strange, please see the Troubleshooting section below.*

Pictures

Please take the following pictures (and send them to HTG) before leaving :

- **Complete Cart Set up :** *We must see the whole cart from the ground to the monitor, upfront.*
- **Monitor mount :** *We must see the 4 screws behind the monitor.*
- **Cables management :** *Take one picture behind desktop computer and one of the USB HUB.*
- **SteamVR window :** *Take a picture of the computer screen turned on, we must see the SteamVR window with all devices paired : Goggles, 2 Controllers, 2 Trackers, and 2 Base stations see example below.*
- **Final picture of the whole device set up :** *Take a picture from a distance so we can see everything including the base station set up (make separate pictures of the 2 base stations if necessary).*



Common troubleshooting

For each of the following troubleshoots, make sure :

- ➢ The link box is powered on
- ➢ The link box's LED is green
- ➢ All cables are correctly connected

SteamVR error 108

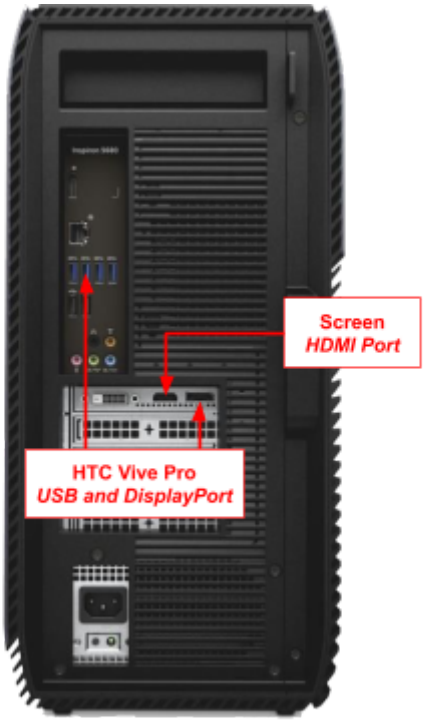
This error may be caused by many things. If a computer restart doesn't resolved it try this USB removal procedure :

- ➢ Unplug the HTC Vive USB cable from the link box on the computer
- ➢ In SteamVR windows, right-click and open the "Settings" panel
- ➢ Under "Developer" tab, under "Reset" section, click on "Remove all SteamVR USB Devices"
- ➢ Accept and wait for a confirmation message
- ➢ Close SteamVR window
- ➢ Reconnect the HTC Vive USB cable to another USB port on the computer

SteamVR error 208

Error 208 occurs when the display cable are not connected correctly.

- ➢ Make sure the headset and the screen are both connected on the same graphical card and not on the motherboard.
- ➢ Check if all cables are correctly plugged in on the computer and on the link box.



SteamVR can't detect bases or headset

Try to move the headset between the base station to wake up it, else restart the computer properly.

If it does not work follow the USB removal procedure from Error 108.

The LeapMotion doesn't detect your hand

Your steering wheel was set up by our staff before the shipment of your order. If you encounter any trouble, please check if every parameter was preserved :

- ❏ Search for the LeapMotion icon in the system tray

- ❏ If you can't find the icon in the system tray, type "Leap Motion" in the Windows search bar and select "Leap Motion Control Panel".
- ❏ If you can't "Leap Motion Control Panel", reinstall the Leap Motion driver using this link[1].
- ❏ For any other trouble see the section below.

The LeapMotion seems to be inverted

- ❏ Search for the LeapMotion icon in the system tray

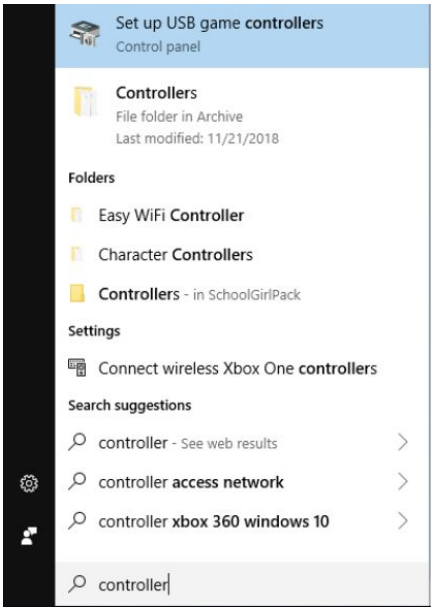
- ❏ Right-click on this icon, select "Settings"
- ❏ Uncheck the option "Automatic orientation", apply changes
- ❏ Press the button "Reverse orientation".
- ❏ You can control it by using the "Visualizer" option when right-click the LeapMotion icon

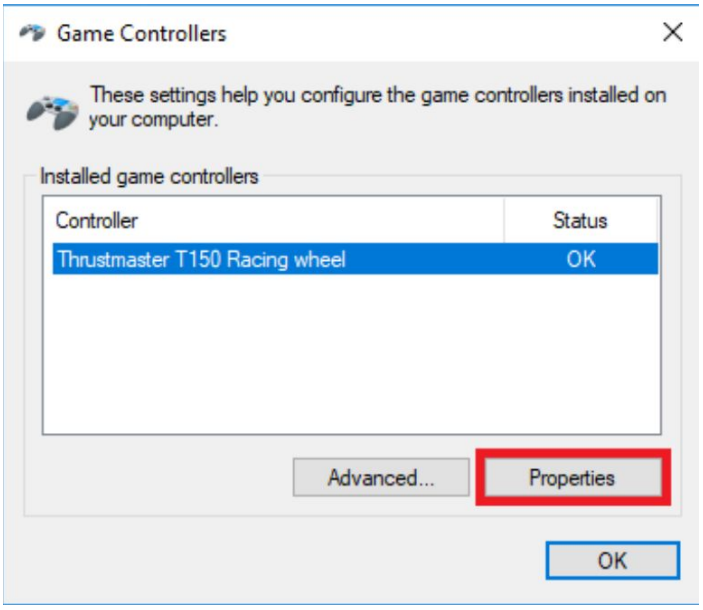
The steering wheel has abnormal behavior

Your steering wheel was set up by our staff before the shipment of your order. If you encounter any trouble, please check if every parameter was preserved :

- ❏ Type "*Controller*" into the Windows search bar
- ❏ Select "*Set up USB game controllers*"
- ❏ Click on the Steering wheel then on "*Properties*"

[1] http://virtualisvr.com/wp-content/uploads/EspaceClient/Leap_Motion_Setup_4.0.0+52173.exe

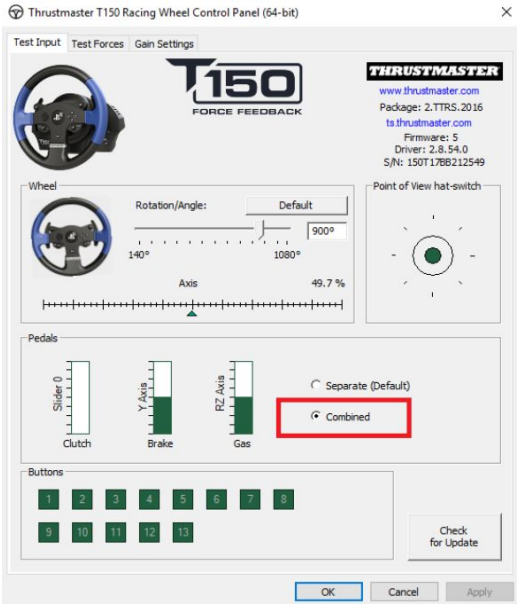




- ❏ On the newly opened window, enable "*Combined*" mode
- ❏ In the "*Gain Settings*" tab, set all the sliders on 100%.
- ❏ Enable "*By the wheel*" in *Auto-Center Settings* and set the last slider to 70%.

NOTE : If you do not have the window on the pictures below :

- ➢ *Make sure the switch PS3 / PS4 is set on PS3*
- ➢ *If the problem persists, uninstall and reinstall the steering wheel driver (This drive can be found on the computer by searching for "2016_TTRS_4.exe" or downloaded following this link[2].*



[2] http://www.virtualisvr.com/wp-content/uploads/EspaceClient/2016_TTRS_4.exe