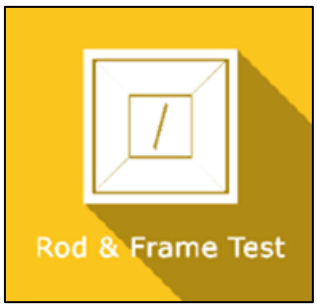


Rod & Frame Test (RFT)

Module tutorial

Table of contents

1. GENERAL

1.1. Description

Rod & Frame Test (RFT) software is an immersive 3D simulation based on virtual reality technology, i.e. it allows a person to be immersed in an artificial digitally created world.

RFT is a software used to assess the perception of verticality with the influence of the visual field (tilting).

1.2. Required accessories

Headset. Xbox controller, Hive controller(s) or keyboard are all optional.

1.3. Patient setup

These are simple, limited numbers of tips drawn from the literature.

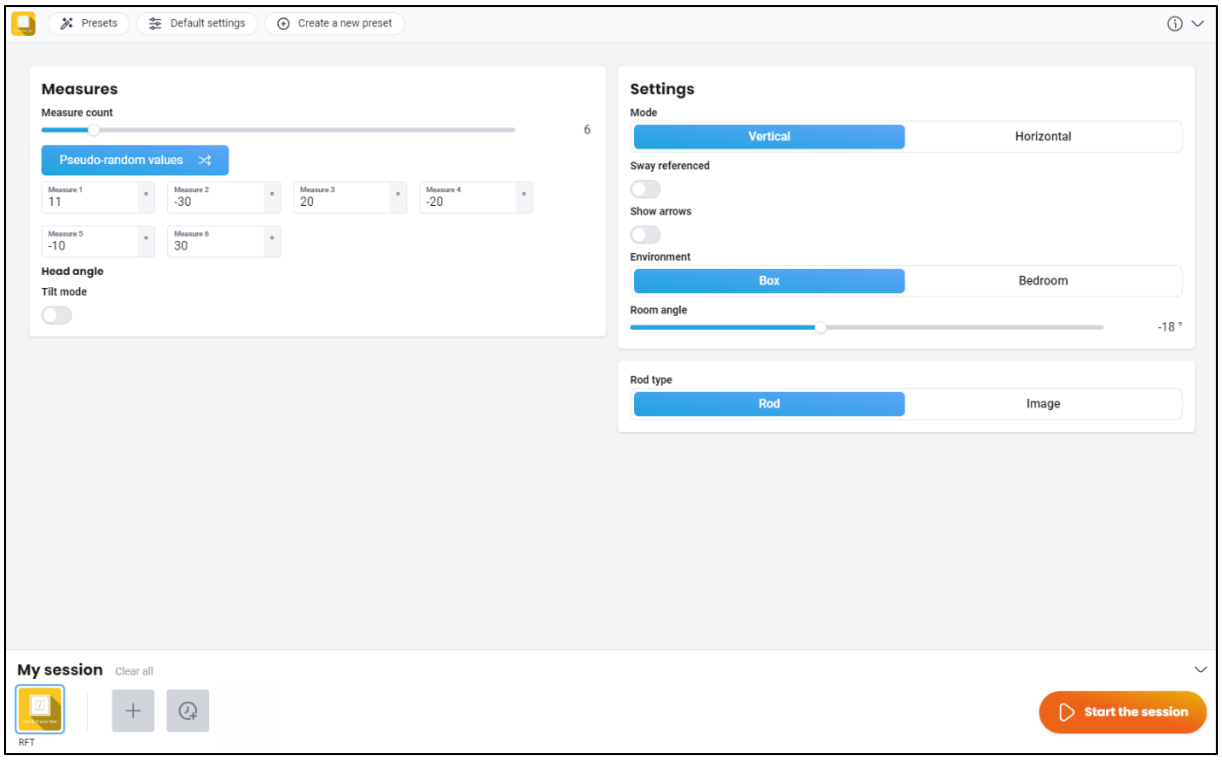
The principle of measuring patients' Subjective Visual Vertical is that they have no vertical or horizontal, visual or proprioceptive reference.

Take the measurements using the following installation:

- Patient seated (preferably on an upholstered seat, a swivel chair is ideal).
- Feet on a footrest, not on the ground.
- Keyboard, controller(s) or Xbox controller in hand so they can take the measurements themselves (if possible).

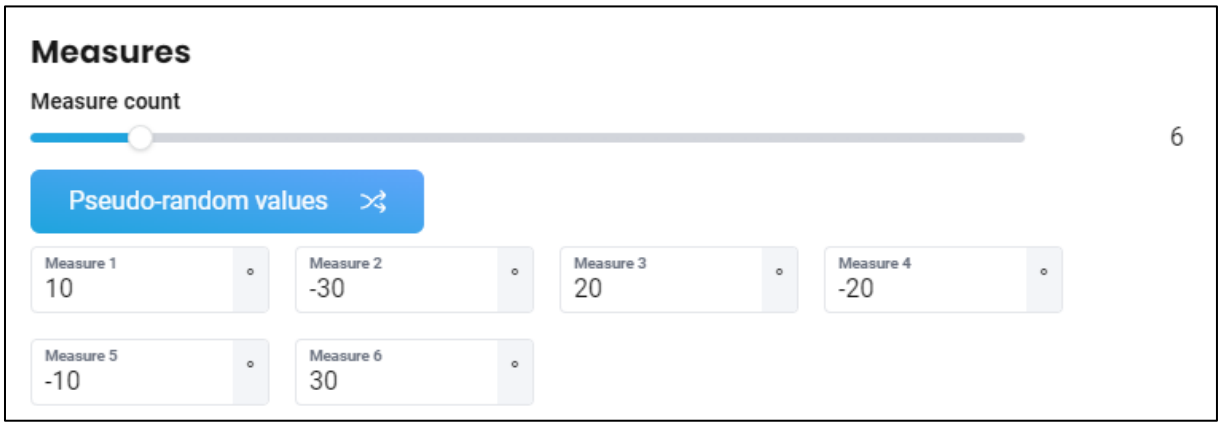
2. Settings

2.1. Session settings



The variable settings for this module are as follows:

2.1.1. Measures



Used to define the value of the various measurements for the entire protocol.

There are many different protocols in the literature.

It is often recommended to take:

- At least 6 measurements (6 to 12).
- Variable initial angle, same tilts to the right and left in random order.
- Alternating Sequence.
- Scenery angle: several studies recommend 18° (right or left).

Measure count:

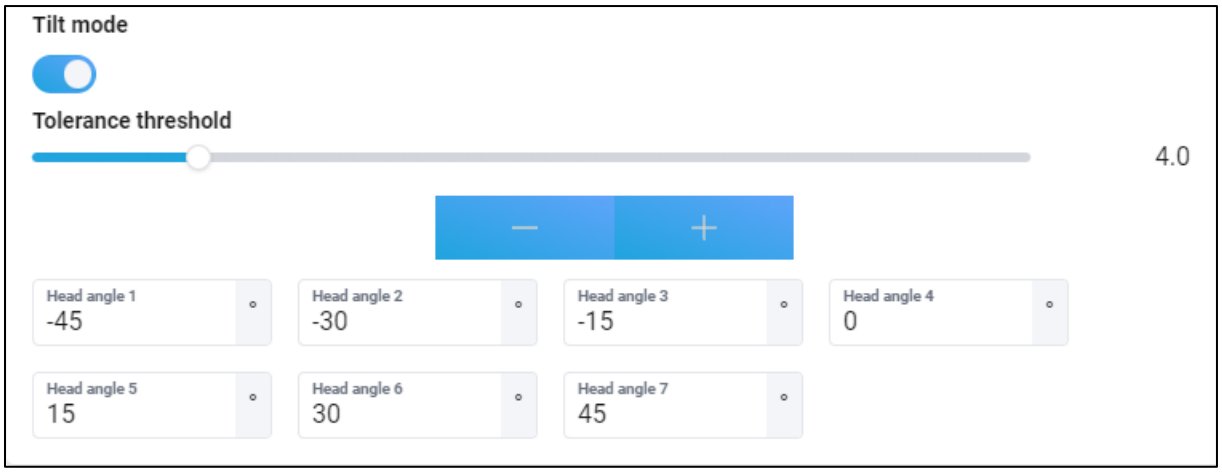
Number of measures taken during the session.

Value: 4 to 24.

Pseudo-random values:

Defines pseudo-random values for measurements. Values are mirrored: they are tilted both to the right (positive values) and to the left (negative values).

2.1.2. Tilt



Tilt mode:

Checking this option unlocks the following parameters:

- **Tolerance threshold:**

Modifies the tolerance threshold for the head tilt angle.

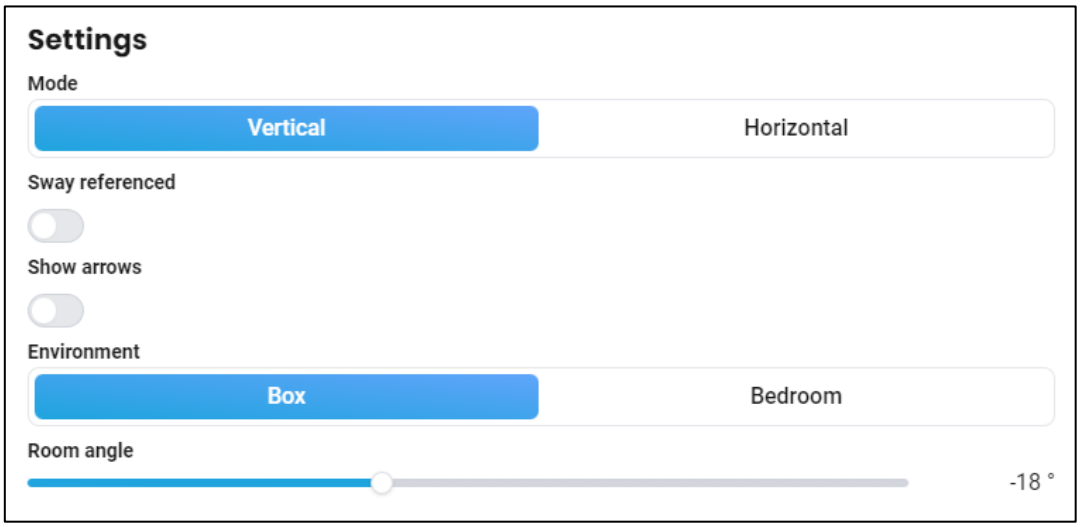
Value: 1.0 to 20.0.

- **Head angle:**

Used to define head inclination values to be measured.

Delete or add measures by clicking on the “**-**” or “**+**” button.

2.1.3. Settings



Mode:

Allows you to choose between vertical or horizontal measurements for the entire protocol.

Sway referenced:

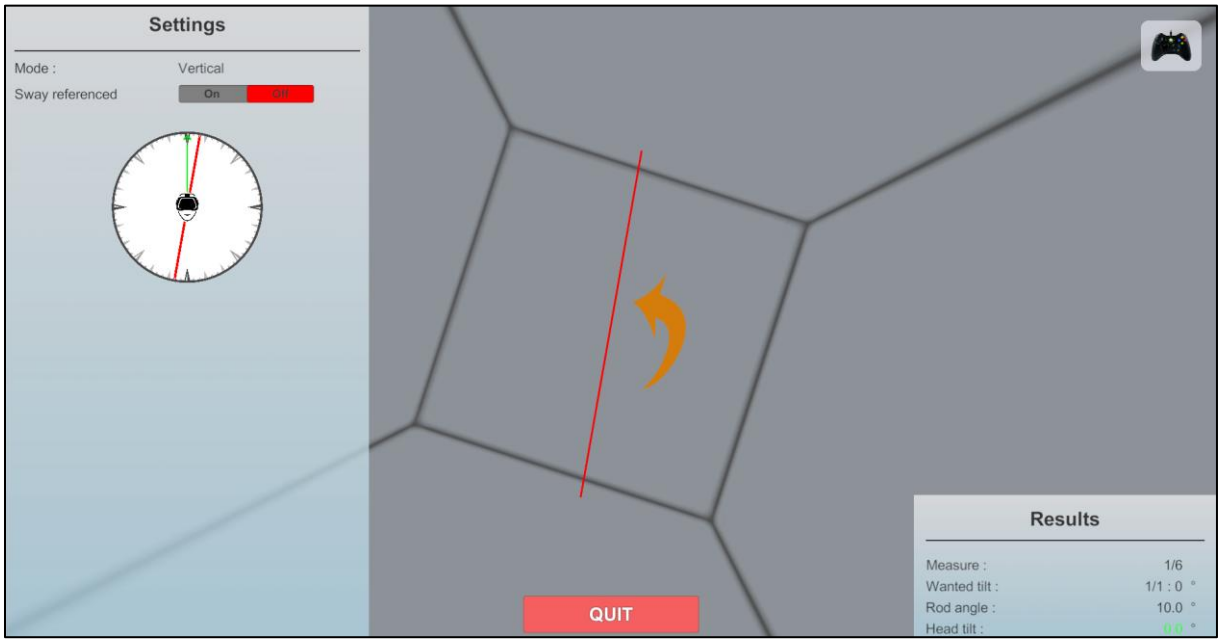
Check this option to have the image displayed in the VR headset matched to the patient's head movements.

If enabled, the bar is “fixed” in front of the patient, and tilts with the patient's own head tilts. Measured values are relative to the earth's vertical, without taking head tilt into account.

Otherwise, the bar is in “real conditions”, as if it were floating in the room. It is therefore unaffected by the patient's head movements.

Show arrows:

Check this option to make the arrows visible and help the patient visualize the direction of movement of the bar (right or left).



Environment:

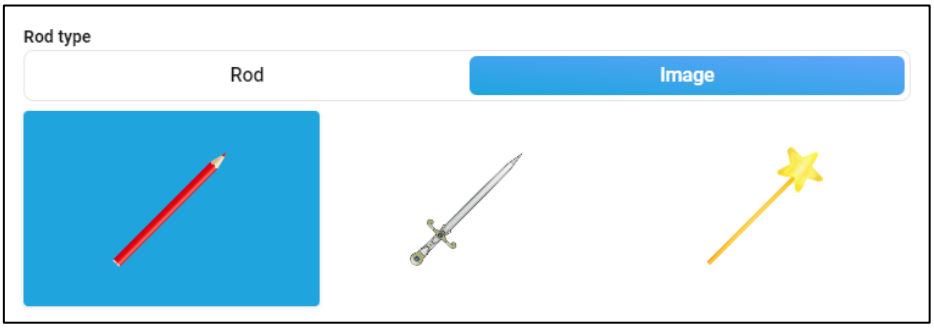
- **Box:** repeats the original Rod and Frame Test principle.
- **Bedroom**: tilting room with many references, for an examination in more "natural" conditions.

Room angle:

Determines the scenery tilt angle (box or bedroom) (-18 or +18 recommended).

Value: -90 to 90°.

2.1.4. Rod type

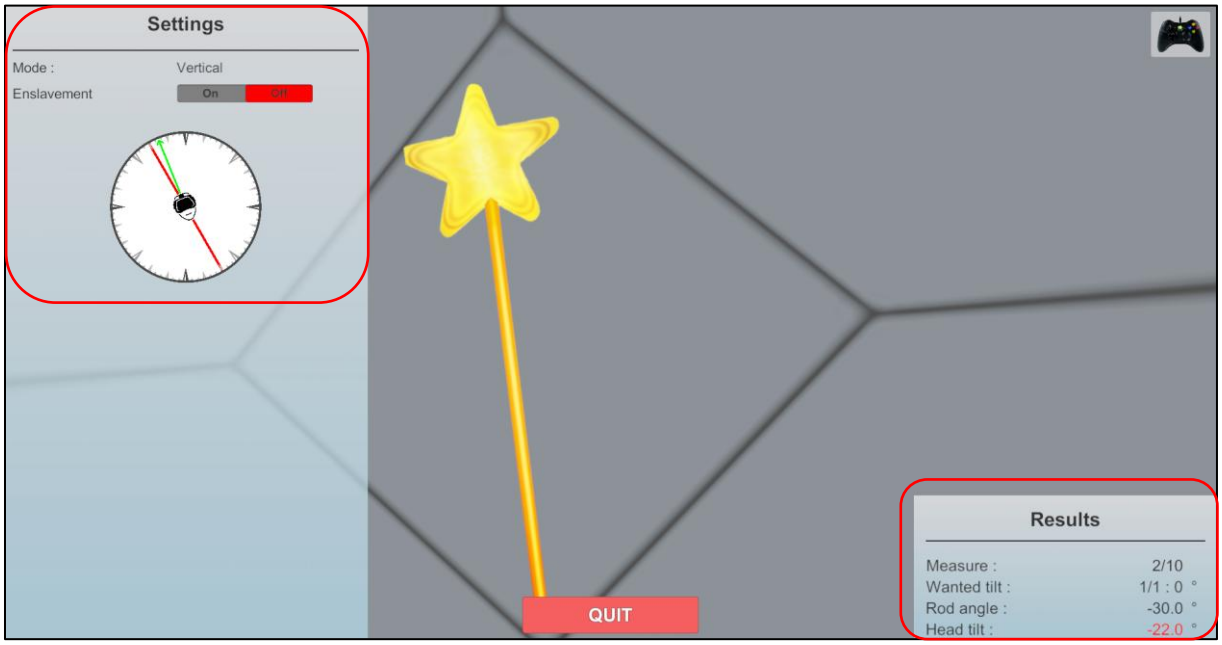


Changes the type of rod displayed on the screen.

3. Module

3.1. Session

Once the presets have been defined, click on the "**Start the session**" button.

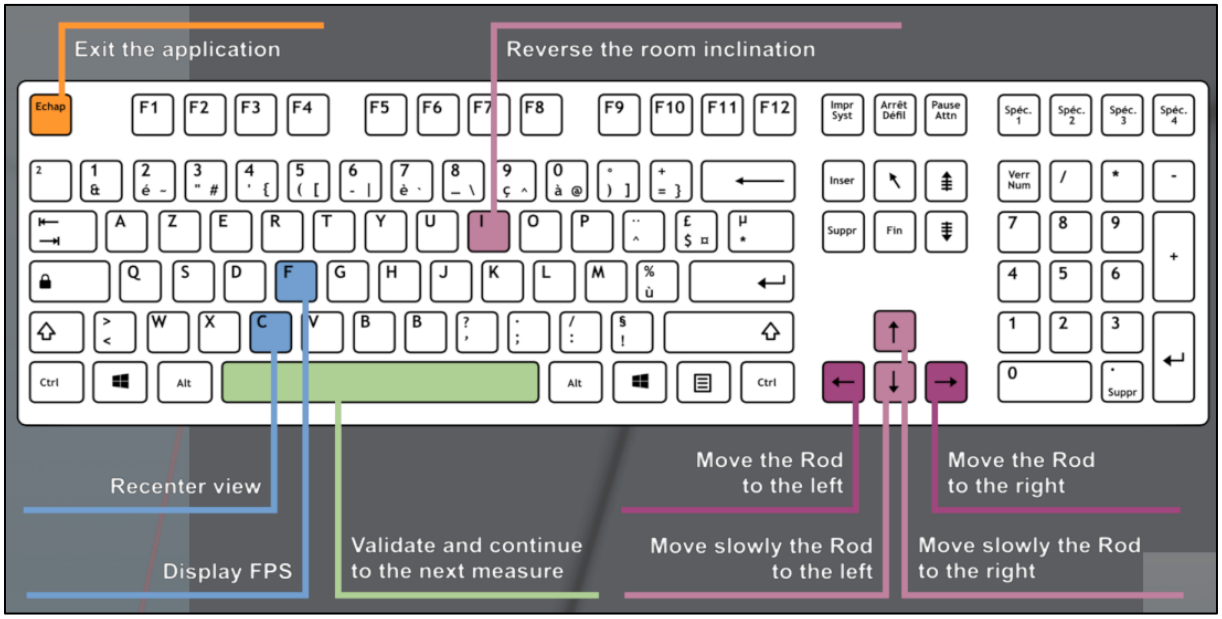


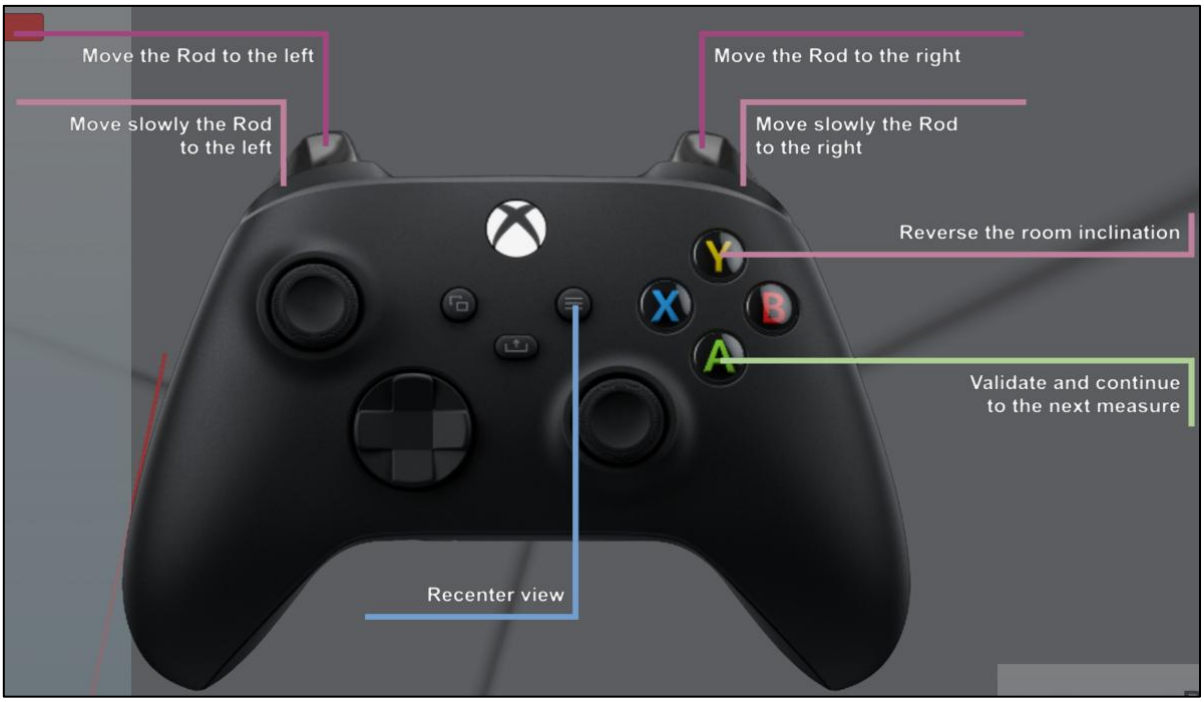
During the session, the user can modify the parameters from the **left side of the screen**. They are not visible to the patient.

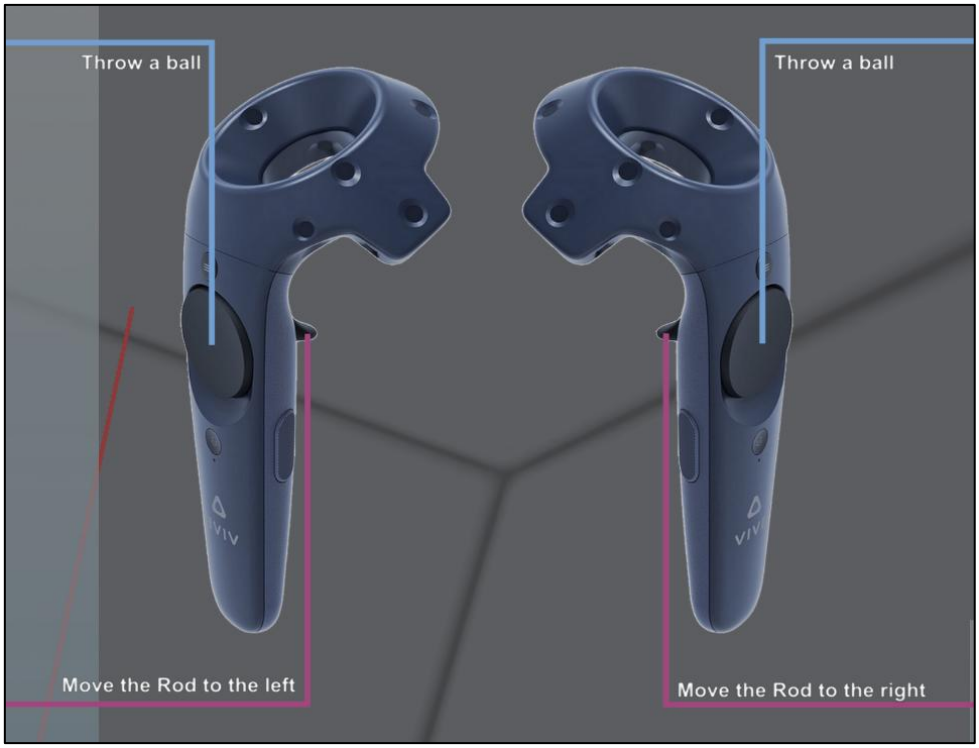
In the bottom right corner of the screen, the user can view the results of the session in real time.

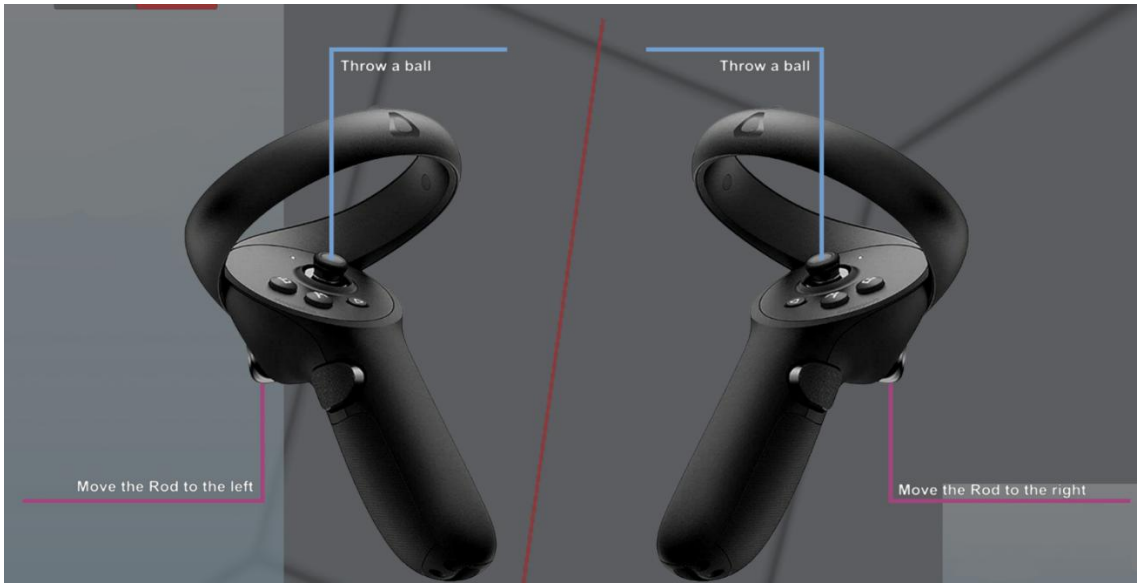
3.2. Shortcuts

During the session, the shortcut list is found by clicking on the Xbox controller icon in the upper right corner of the screen.


Exit the application
Reverse the room inclination
Recenter view
Display FPS
Validate and continue to the next measure
Move the Rod to the left
Move slowly the Rod to the left
Move the Rod to the right
Move slowly the Rod to the right


Move the Rod to the left
Move slowly the Rod to the left
Move the Rod to the right
Move slowly the Rod to the right
Reverse the room inclination
Validate and continue to the next measure
Recenter view





3.3. Results

At the end of the session, the different head inclination values of the patient are displayed.

3.3.1. Summarized results

No summarized results are displayed at the end of the session.

3.3.2. Graphs and report

To find the detailed results and to generate a report, click on the histogram icon.