



Dynamic Subjective Visual Vertical (DSVV)

Module tutorial



Table of contents

1.	GENERAL	3
1.1.	Description	3
1.2.	Required accessories.....	3
1.3.	Patient setup	3
2.	Settings	3
2.1.	Session settings	3
2.1.1.	Measures	4
2.1.2.	Tilt.....	5
2.1.3.	Settings	5
2.1.4.	Rod type	7
3.	Module.....	8
3.1.	Session	8
3.2.	Shortcuts	8
3.3.	Results	10
3.3.1.	Summarized results	11
3.3.2.	Graphs and report	11



1. GENERAL

1.1. Description

Dynamic Subjective Visual Vertical (DSVV) 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.

DSVV is a software used to assess the perception of verticality with optokinetic disturbance.

1.2. Required accessories

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

1.3. Patient setup

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

It is therefore recommended to 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 screenshot shows the VVS Dynamique software interface. At the top, there are tabs for 'Presets', 'Default settings', and 'Create a new preset'. The main area is divided into two panels: 'Measures' on the left and 'Settings' on the right. The 'Measures' panel includes a 'Measure count' slider set to 6, a 'Pseudo-random values' button, and six input fields for measures: Measure 1 (10), Measure 2 (-30), Measure 3 (20), Measure 4 (-20), Measure 5 (-10), and Measure 6 (30). There are also options for 'Head angle' and 'Tilt mode'. The 'Settings' panel includes a 'Mode' selector (Vertical/Horizontal), 'Sway referenced' and 'Show arrows' toggles, 'Rotation speed' (15 °/s) and 'Background distance' (1 m) sliders, and a 'Rod type' selector (Rod/Image). At the bottom, there is a 'My session' section with a 'Clear all' button and a 'Start the session' button.

The variable settings for this module are as follows:

2.1.1. Measures

This is a close-up screenshot of the 'Measures' panel. It shows the 'Measure count' slider set to 6. Below it is a blue button labeled 'Pseudo-random values' with a refresh icon. There are six input fields for measures: Measure 1 (10), Measure 2 (-30), Measure 3 (20), Measure 4 (-20), Measure 5 (-10), and Measure 6 (30). Each input field has a small circular icon to its right.

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

Measure count:

Number of measures taken during the session.

Value: 4 to 24.



Pseudo-random values:

Defines 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

The screenshot shows the 'Tilt mode' settings interface. At the top, there is a 'Tilt mode' toggle switch which is currently turned on (blue). Below it is a 'Tolerance threshold' slider set to 4.0. In the center, there are two blue buttons: a '-' button on the left and a '+' button on the right. Below these buttons are seven input fields for 'Head angle' values, arranged in two rows. The first row contains 'Head angle 1' (-45), 'Head angle 2' (-30), 'Head angle 3' (-15), and 'Head angle 4' (0). The second row contains 'Head angle 5' (15), 'Head angle 6' (30), and 'Head angle 7' (45). Each input field has a small circular icon to its right.

Tilt mode:

Checking this option unlocks the following parameters:

Tolerance threshold:

Value: 1.0 to 20.0.

Head angle:

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

2.1.3. Settings



Settings

Mode

Vertical

Horizontal

Sway referenced

☐

Show arrows

☐

Rotation speed

15 °/s

Background distance

1 m

Mode:

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

Sway referenced:

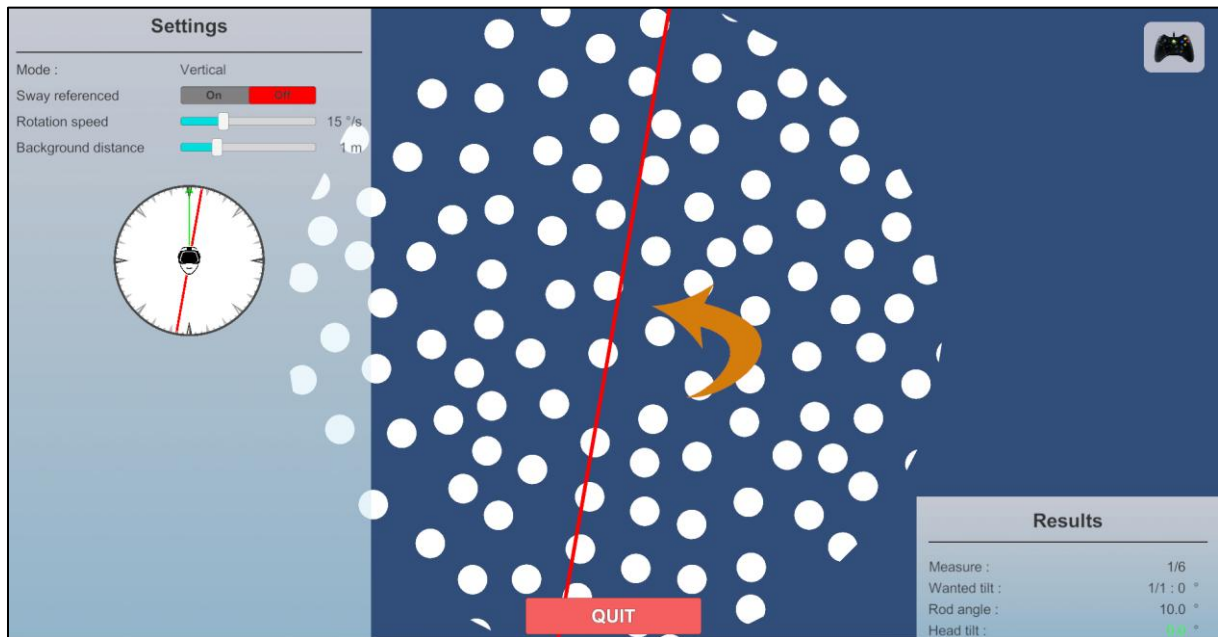
Check this option to have the image displayed in the VR headset matched to the patient's head movements.

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).



Rotation speed:

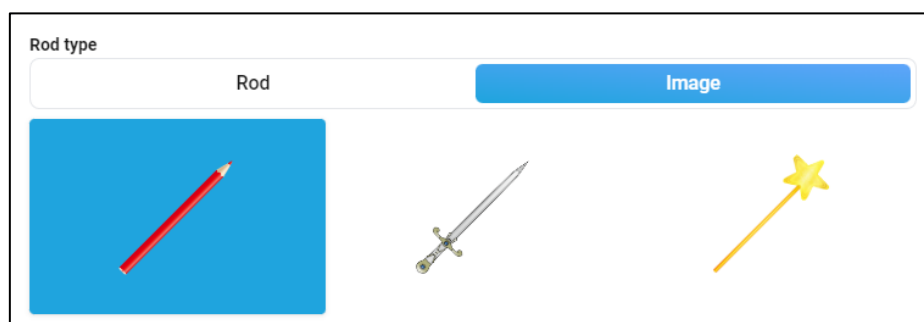
Determines the rotation speed of the optokinetic disk. Its direction of rotation follows the direction of bar inclination.

Value: 0 to 50°/s.

Background distance:

Value: 0 to 4 m.

2.1.4. Rod type



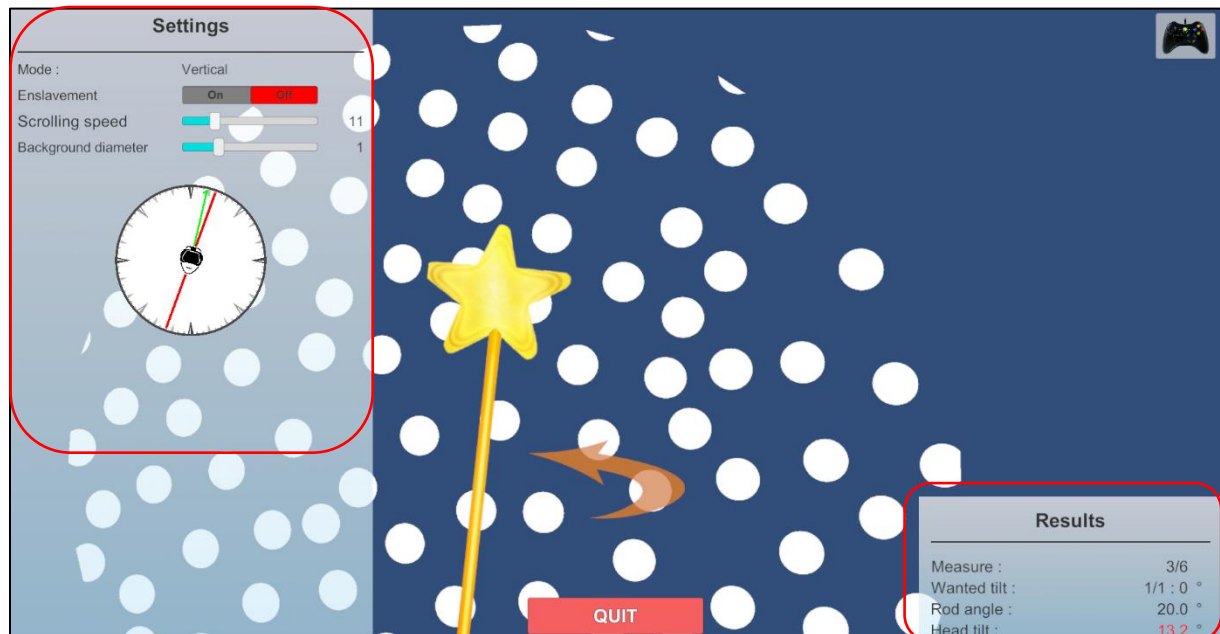
Changes the type of rod displayed on the screen.



3. Module

3.1. Session

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

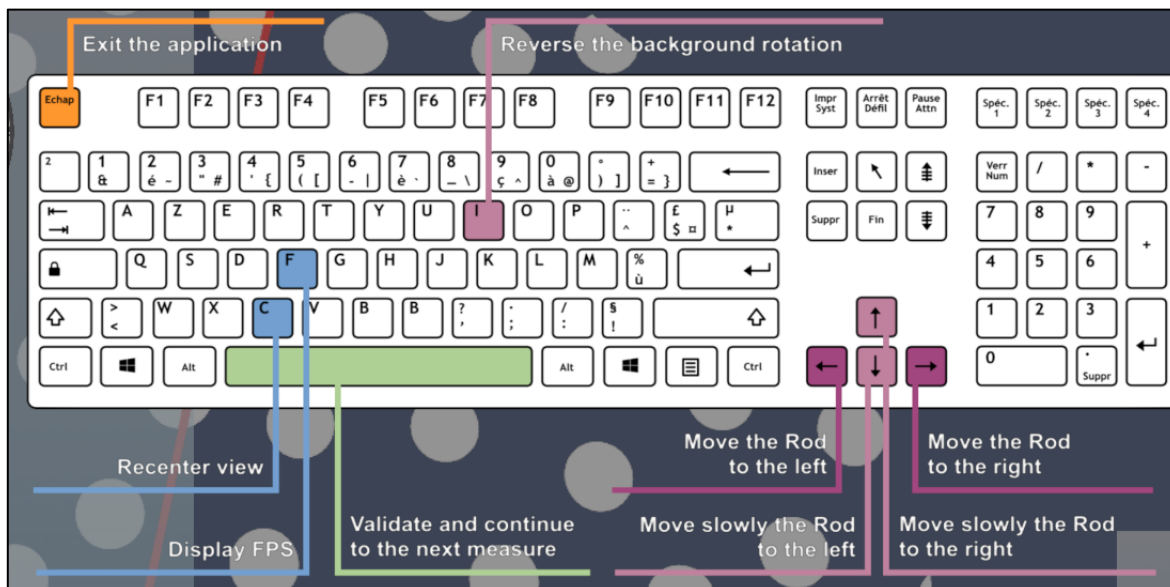


During the session, the user can modify the parameters from the **left side of the screen**. They are not visible to the patient.

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.





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.

Session details
15/05/2025 11:07



Dynamic SVV



Parameters

Results

Notes

Name	Result					
Results	[10, 0] °	[-30, 0] °	[20, 0] °	[-20, 0] °	[-10, 0] °	[30, 0] °