Simulation Learning System with Virtual Reality (SLS VR): Using VR Hardware

Portions of this guide are adapted from the SimX Instruction Manual and from the Oculus website. Elsevier, RELX, and their affiliates are not responsible for the information taken from the SimX manual or the Oculus website.

Introduction


When you participate in VR simulations, your instructor will likely have the equipment and play space set up, but please become familiar with how to fit your headset properly (Headset Fit) as well as how to use the controllers (Using the Oculus Controllers). If you like to learn more about managing the VR play space, see Managing the VR Play Space.

Headset Fit

The headset is the user’s window into the VR world, and it is vital to the VR experience that the headset is worn snugly with the display in focus. See the following Oculus Support pages and videos on headset fit:

- Oculus Quest 1 Headset Fit at support.oculus.com/85551644803876#faq_525406631321134.
- Oculus Quest 2 Headset Fit at support.oculus.com/795778631158860#faq_2665604847015573, and at business.oculus.com/support/51907565348016/#faq_2286848421434788.
• **Oculus Quest 2 Elite Strap with Battery** at
  [support.oculus.com/644734226478453/#faq_24815682980587](support.oculus.com/644734226478453/#faq_24815682980587).
  
  O Headset Fit – Elite Strap video at
  [www.youtube.com/embed/ljkx6wEsAe8?start=80&feature=oembed](www.youtube.com/embed/ljkx6wEsAe8?start=80&feature=oembed).

**NOTE:** If you experience blurriness or discomfort in VR, please adjust the headset so that it fits correctly, as these issues are usually related to headset fit.

**Using the Oculus Controllers**

Refer to the image below for button mapping (image courtesy of Oculus Reference Guide):

![Oculus Controller Diagram]

In the SimX VR application, the Oculus Controllers allow you to interact with the VR world and VR patients. The controllers allow you to signal to each other, point to objects, do physical exam maneuvers on the patient, use a stethoscope, pick up the tablet that house the EHR, and navigate the VR menus.
For many actions, such as swiping tablet pages, checking pulses, and examining the abdomen, you can use your hands normally. Other functions require specific button pushes:

- **Trigger (#6 in the diagram)** – Squeeze to pick up tools or grab an object (medication bottle, tablet).
- **X/Y (left) and A/B (right) Buttons** – Press to point, draw medication from vial, depress syringe plunger when holding syringe.
- **Menu Button (left controller - #2 in the diagram)** – Press to access the SimX pop-up menu window.
- **Oculus Button (right controller - #3 in the diagram)** – Short-press to pause the simulation or exit the SimX app, long press (3 seconds) to recenter the virtual environment to the current headset position.
- **Thumbsticks (#1 in the diagram)** – Use the thumbstick to draw or push medication back in a medication vial.
- If you press the Menu or Oculus buttons in error while in the simulation, simply pressing the button again will exit.
- Press the **Oculus** button on the right controller to show the main Oculus menu if it is hidden.

**Oculus Quest Support**

For detailed guidance on the Oculus Quest hardware, please talk to your instructor or review the Oculus Support Center at [support.oculus.com/quest](https://support.oculus.com/quest).