

Oculus 2-Sensor 360° Experimental Setup

Quickstart Guide

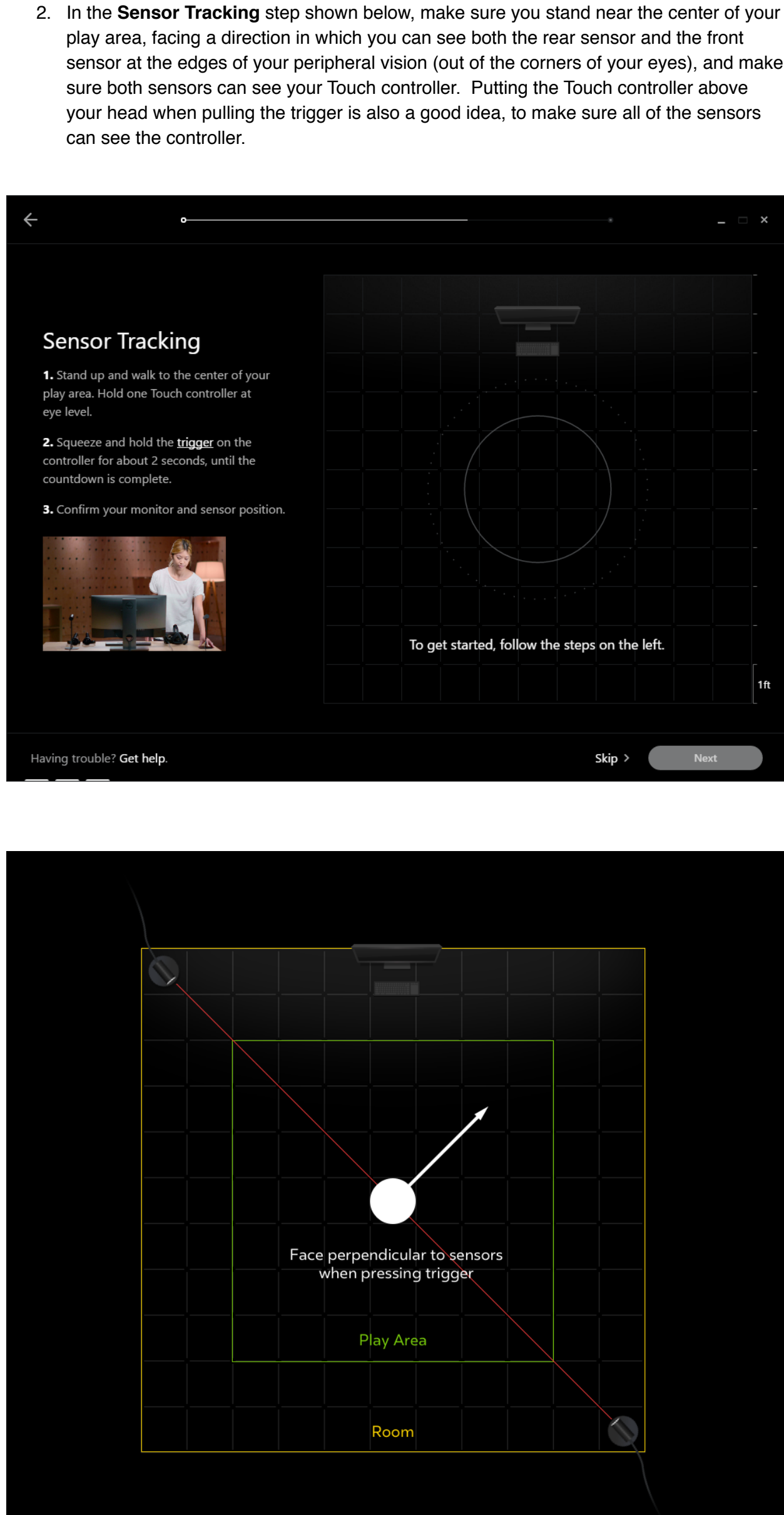
When you set up your Oculus Rift and Touch, we recommend putting your sensors in front of where you'll be wearing your headset. However, you can choose to try our experimental 2-sensor 360° tracking setup. For the best experience, we recommend an area of **5x5 feet (1.5x1.5 meters)**, although you may be able to expand that size depending on your room layout and sensor positioning. Note, however, that larger room layouts may result in some dropoff in tracking quality at the extreme edges of your play area.

Note: Using 2 sensors to support 360° tracking is an experimental configuration. Some of the steps in this guide may not work with your computer or play area. Note that because the minimum recommended play area for standing or roomscale apps and games is 7x5 feet (2x1.5 meters), you may get better results if you use this configuration with sitting games, or you may instead want to add a 3rd sensor to your setup for use with standing and roomscale apps.

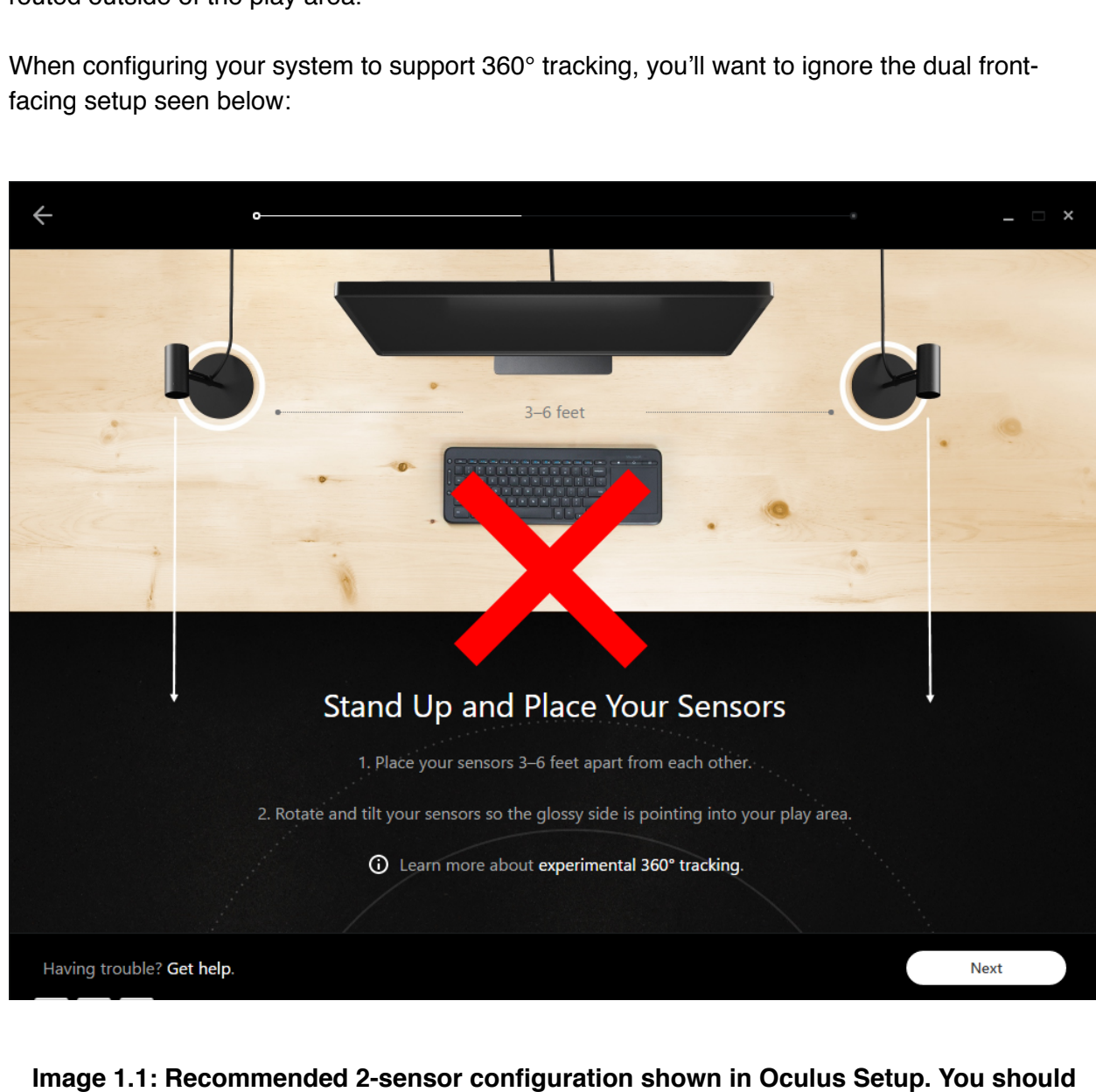
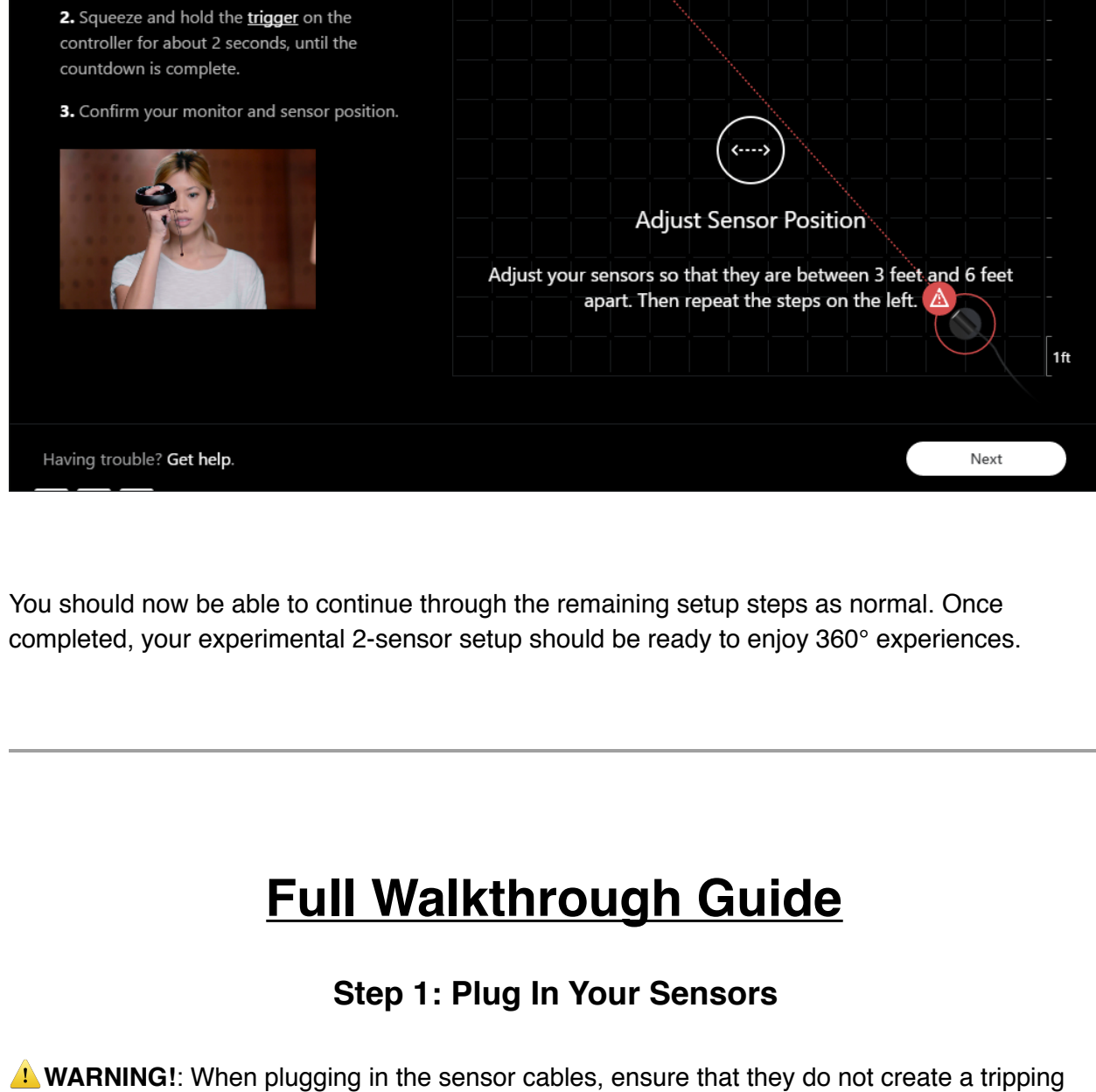
By following these steps you should be able to get a good experience with your 2-sensor 360° setup. If you're having problems with setup, contact [support.oculus.com](#)

⚠ WARNING: When plugging in the sensor cables, ensure that they do not create a tripping hazard and that your play area remains clear. It is recommended that the sensor cables be routed outside of the play area.

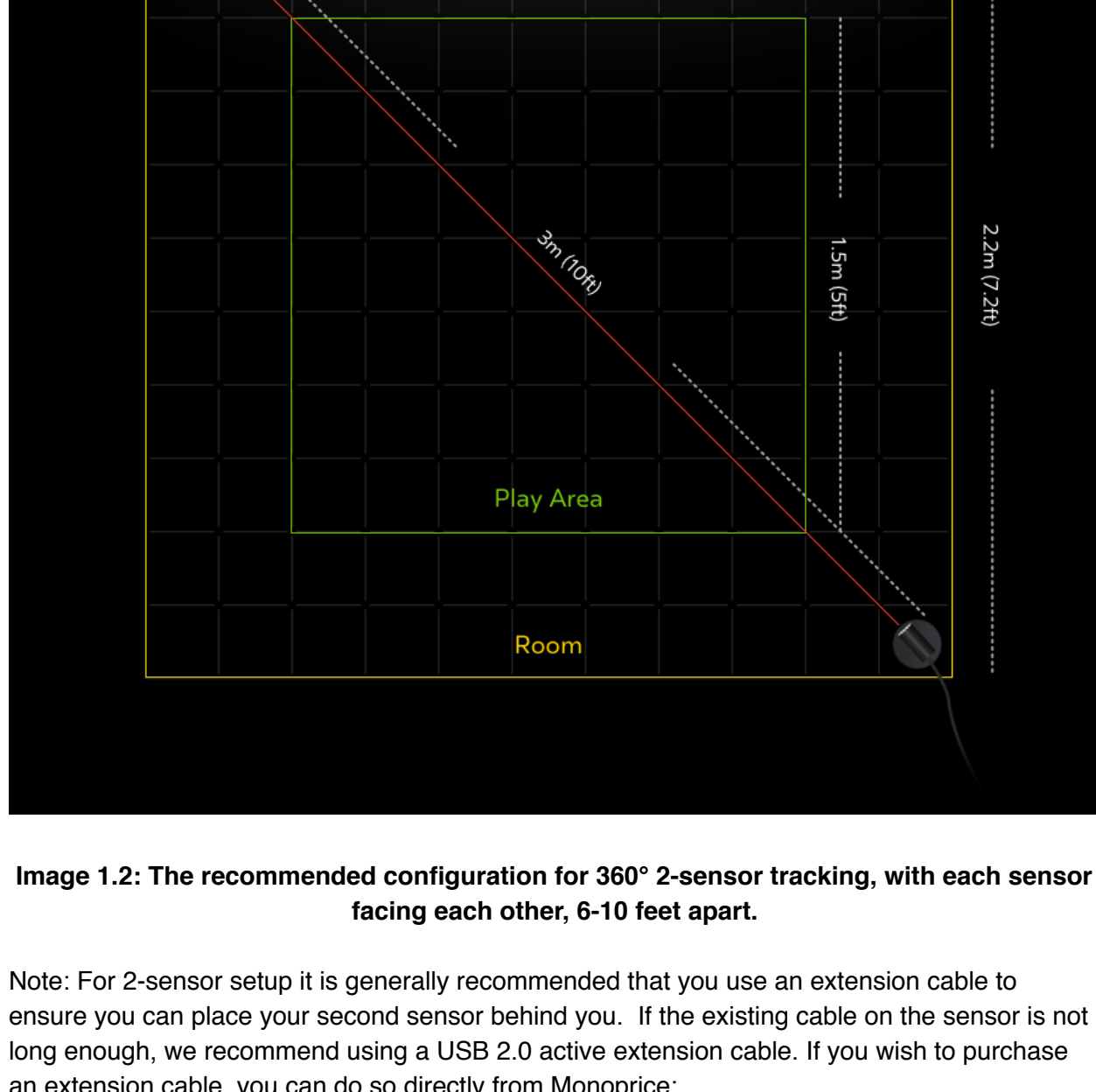
1. Set up your sensors in a configuration similar to the diagram below. We don't recommend exceeding the maximum dimensions shown.



2. In the **Sensor Tracking** step shown below, make sure you stand near the center of your play area, facing a direction in which you can see both the rear sensor and the front sensor at the edges of your peripheral vision (out of the corners of your eyes), and make sure both sensors can see your Touch controller. Putting the Touch controller above your head when pulling the trigger is also a good idea, to make sure all of the sensors can see the controller.



3. The **Sensor Tracking** screens will likely indicate that your sensors aren't positioned correctly, but if you've followed the diagrams above you can go ahead and skip past this error.



You should now be able to continue through the remaining setup steps as normal. Once completed, your experimental 2-sensor setup should be ready to enjoy 360° experiences.

Full Walkthrough Guide

Step 1: Plug In Your Sensors

⚠ WARNING: When plugging in the sensor cables, ensure that they do not create a tripping hazard and that your play area remains clear. It is recommended that the sensor cables be routed outside of the play area.

When configuring your system to support 360° tracking, you'll want to ignore the dual front-facing setup seen below:

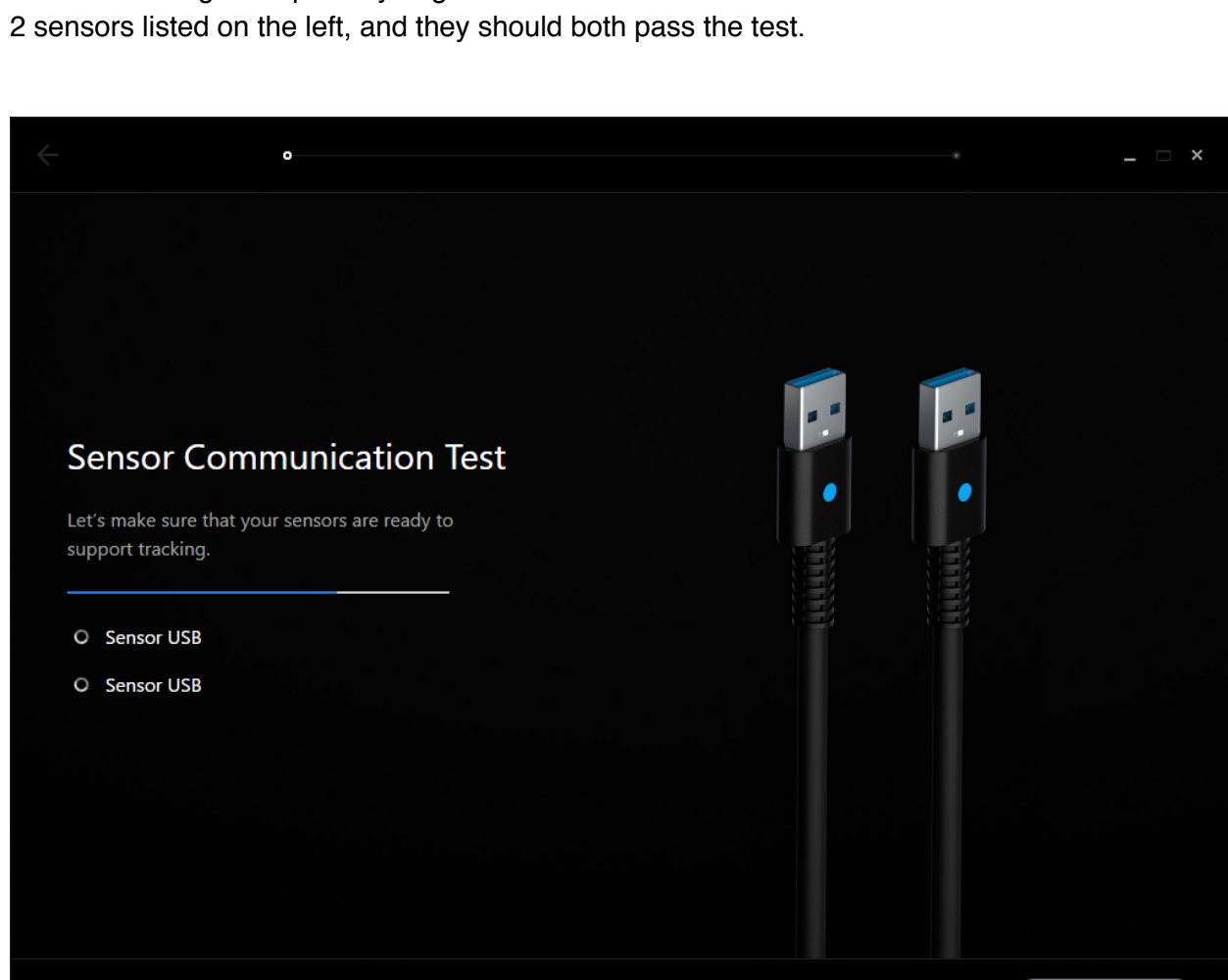


Image 1.1: Recommended 2-sensor configuration shown in Oculus Setup. You should ignore these recommendations.

Instead of following the on-screen instructions, you'll want to place the sensors facing each other, on opposite corners of your room. You may want to use a tape measure to ensure they are between **6-10 feet (2-3 meters)** apart. By placing them **10 feet (3 meters)** apart, you should get an approximate **5x5 feet (1.5x1.5 meters)** square of trackable area. Your sensors should be placed in a position similar to the diagram below.

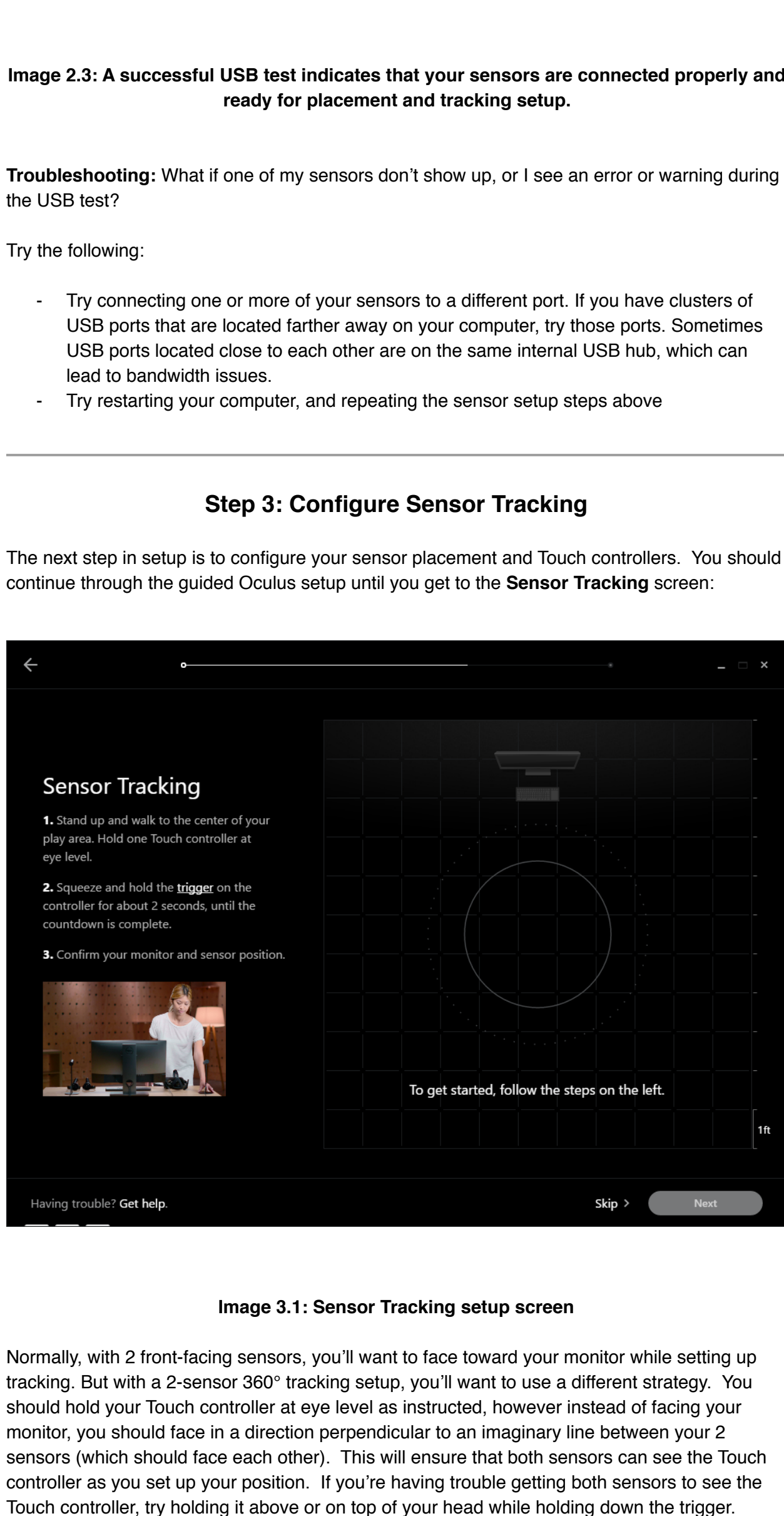


Image 1.2: The recommended configuration for 360° 2-sensor tracking, with each sensor facing each other, 6-10 feet apart.

Note: For 2-sensor setup it is generally recommended that you use an extension cable to ensure you can place your second sensor behind you. If the existing cable on the sensor is not long enough, we recommend using a USB 2.0 active extension cable. If you wish to purchase an extension cable, you can do so directly from Monoprice:

[Monoprice USB 2.0 Active 16ft Extender cable \(Product #8751\).](#)

Step 2: Start Configuration with Oculus Setup

If you've just purchased a Rift and your computer doesn't have the Oculus software installed, download Oculus Setup from [www.oculus.com/setup](#) and choose **Rift + Touch**, which will take you through setting up all of your Oculus devices, including your sensors.

If you've already purchased a Rift and/or Touch controllers, and want to reconfigure your room setup to support 360° tracking, start by going to your **Settings** menu in the Oculus app on your computer. Click **Devices** on the left, click **Configure Rift** in the top right and then select **Reset Sensor Tracking**. This will allow you to switch from a front-facing setup to a 360° tracking setup.

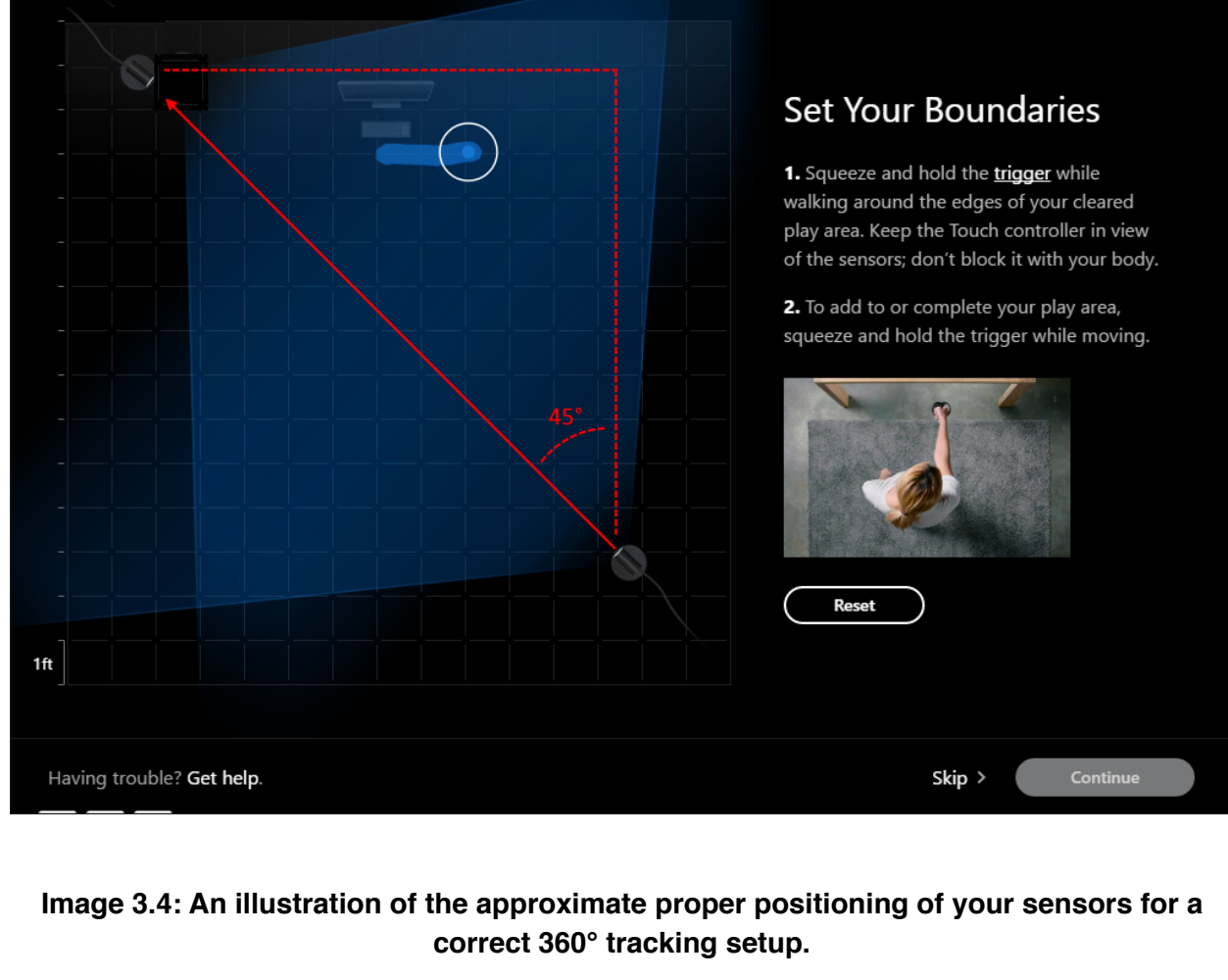


Image 2.1: The "Reset Sensor Tracking" Menu item, to be used if you've already gone through full Oculus setup.

Continue through setup until you get to the **USB Communication Test** screen. You should see 2 sensors listed on the left, and they should both pass the test.

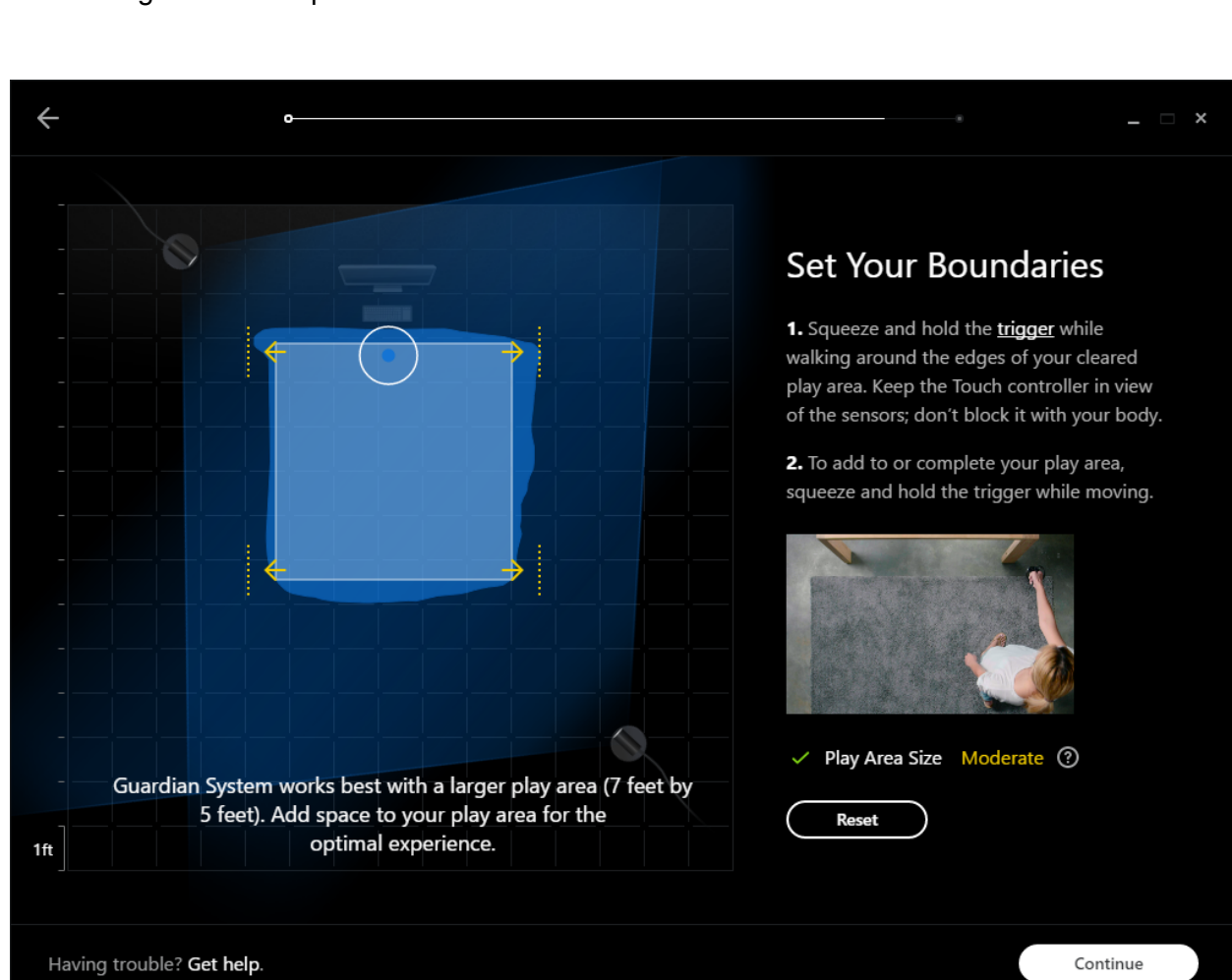


Image 2.2: You should see 2 sensors listed in the USB Communication Test screen.

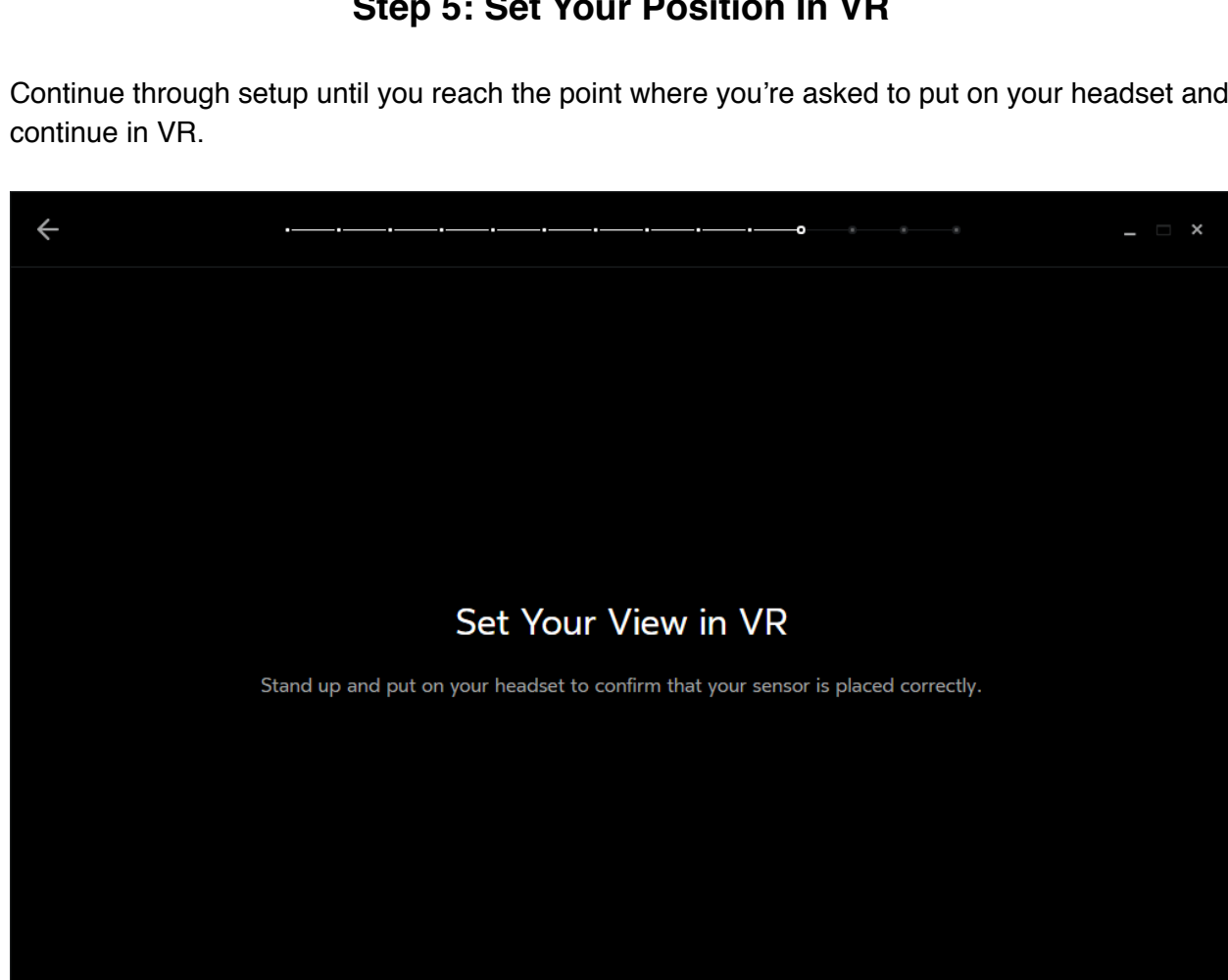


Image 2.3: A successful USB test indicates that your sensors are connected properly and ready for placement and tracking setup.

Troubleshooting: What if one of my sensors don't show up, or I see an error or warning during the USB test?

Try the following:

- Try connecting one or more of your sensors to a different port. If you have clusters of USB ports that are located farther away on the same internal USB hub, which can lead to bandwidth issues.
- Try restarting your computer, and repeating the sensor setup steps above

Step 3: Configure Sensor Tracking

The next step in setup is to configure your sensor placement and Touch controllers. You should continue through the guided Oculus setup until you get to the **Sensor Tracking** screen:

Image 3.1: Sensor Tracking setup screen

Normally, with 2 front-facing sensors, you'll want to face toward your monitor while setting up tracking. But with a 2-sensor 360° tracking setup, you'll want to use a different strategy. You should hold your Touch controller at eye level as instructed, however instead of facing your monitor, you should face in a direction perpendicular to an imaginary line between your 2 sensors (which should face each other). This will ensure that both sensors can see the Touch controller as you set up your position. If you're having trouble getting both sensors to see the Touch controller, try holding it above or on top of your head while holding down the trigger.

Note: Once you've fully completed sensor setup, you should see both of your sensors facing each other in the final screen of the tracking setup. If you run into an error indicating your sensors are too close together, feel free to ignore it. A successful setup should look something like below, depending on your particular room setup.

Image 3.2: Example of a successful 360° sensor setup, including error message.

Image 3.3: Ignore the error screen by selecting Skip and then selecting Skip again in the Are You Sure? screen.

You'll now be asked to point your Touch controller forward, and move your arm until sensors appear correctly in the diagram, relative to your monitor position. You should see both sensors on the screen, which will move as you move your arm. Squeeze the trigger when the sensor positions you see on the screen match their position in your room.

Before you proceed, check to make sure that your 360° setup has both sensors facing each other at approximately a **45° angle**, as seen below.

Image 3.4: An illustration of the approximate proper positioning of your sensors for a correct 360° tracking setup.

Troubleshooting: What happens if the **Sensor Tracking** screen doesn't show my sensors positioned correctly?

- Try following the on-screen instructions for suggestions on how to rotate/position your sensors for better tracking.
- Always use the positions and distances shown in this guide as a starting point, then adjust as needed from there.

Step 4: Setup Guardian System

After you've finished setting up your sensors, we strongly recommend mapping out the boundaries of your play area with Guardian System. This process should be the same as in a front-facing sensor setup.

Image 4.1: Mapping out Guardian System boundaries

Step 5: Set Your Position In VR

Continue through setup until you reach the point where you're asked to put on your headset and continue in VR.

Image 5.1: Set your view in VR

Put on your headset and look around. You should be able to see both of your sensors present in the VR environment. This will confirm you've properly configured your 360° setup. Stand in the middle of your play space while looking forward toward your monitor. Press the **Trigger** button as instructed. You should see beams coming out of both your front and rear sensors.

Step 6: Enjoy Your Experimental 360° Setup

Congratulations, you've now completed your experimental 2-sensor 360° setup and are ready to enjoy 360° experiences.