3M Welding Demo VR - VIVE
User Instructions

July 2018

The goal of this experience is to show the productivity differences by using a welding helmet with an auto-darkening filter (ADF) lens and a welding helmet with a passive lens and a passive filter welding helmet in a virtual scenario.
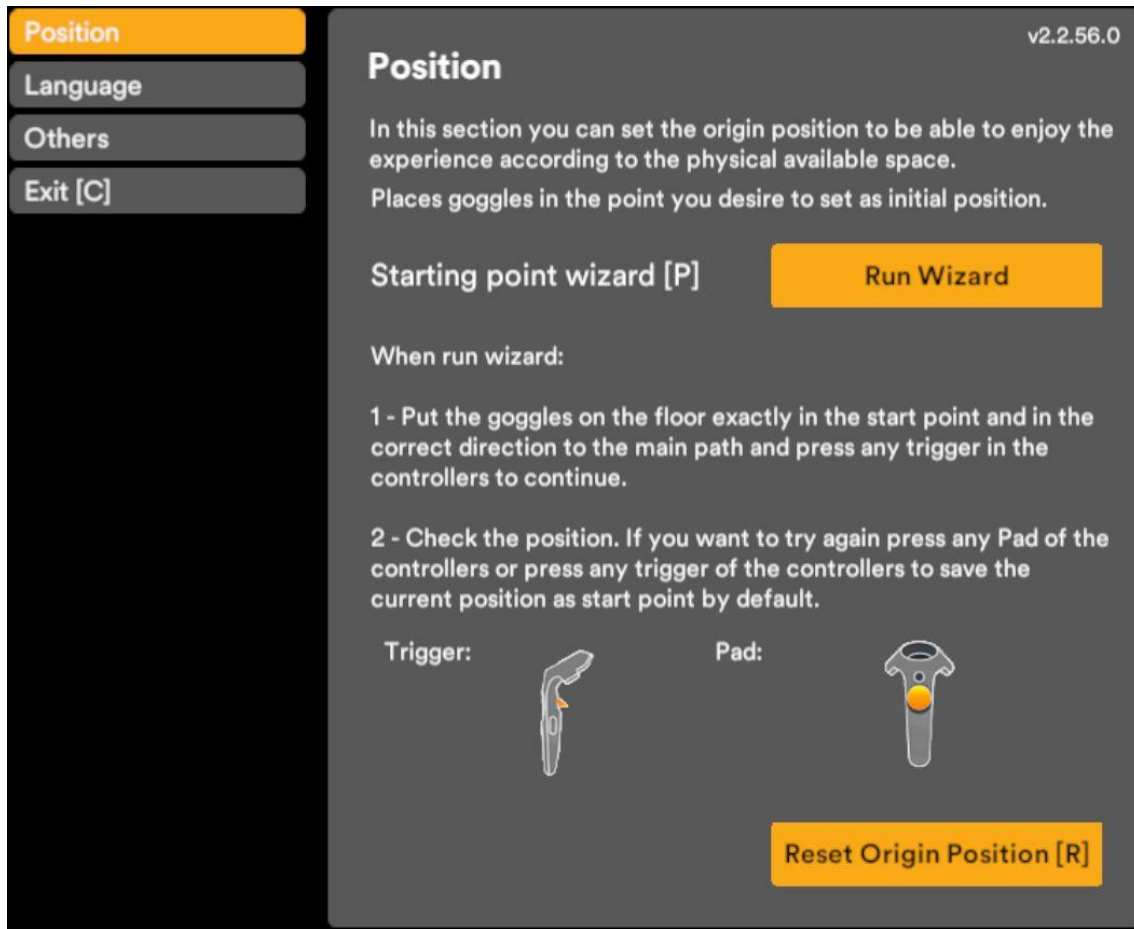
Settings menu

Using the C key, you will access the settings menu and general preferences of the application, which will allow you to set up how the application will run and establish the default values of features that can be customized by the staff in charge of managing the VR experience.

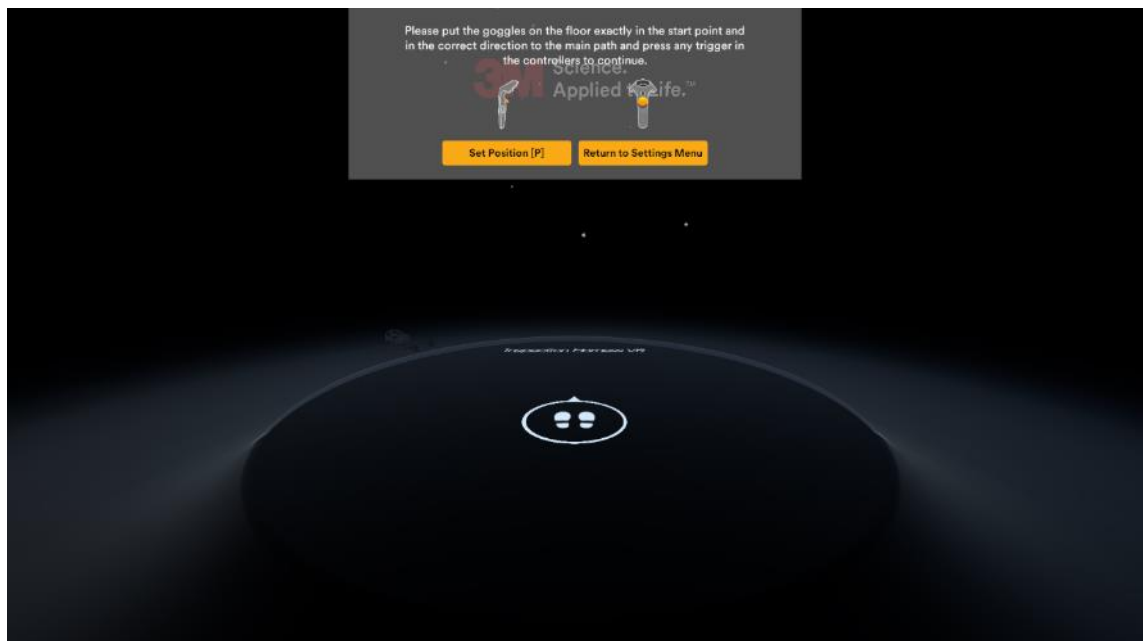## Initial Position (*Very Important*)

Under this option, the system will allow you to establish the best starting point for the physical setup in terms of both the position and rotation of the space so that the user is optimally positioned.
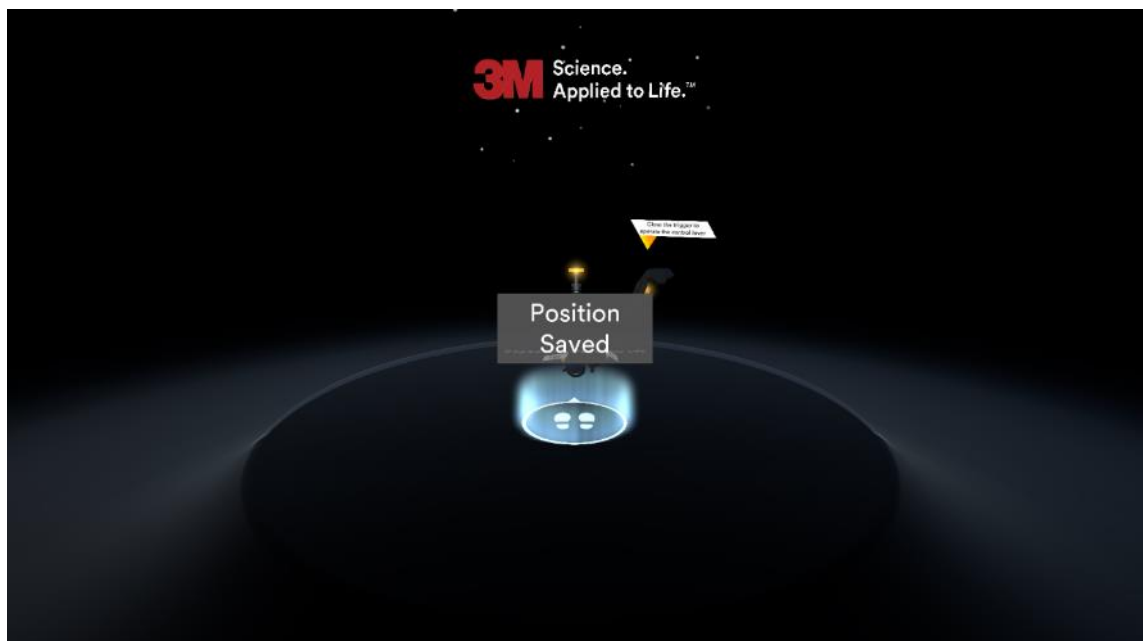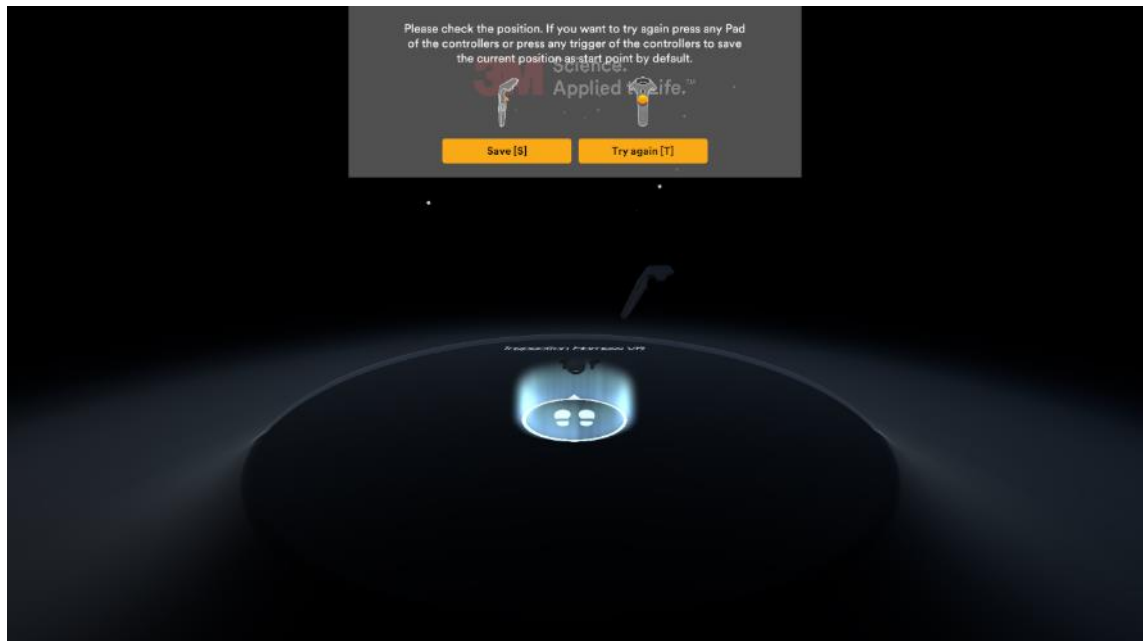
If you have problem with the starting position or the system does not detect that the user is standing in the starting position, please press R to reset the origin position and set the starting point again by using the Starting Point Wizard

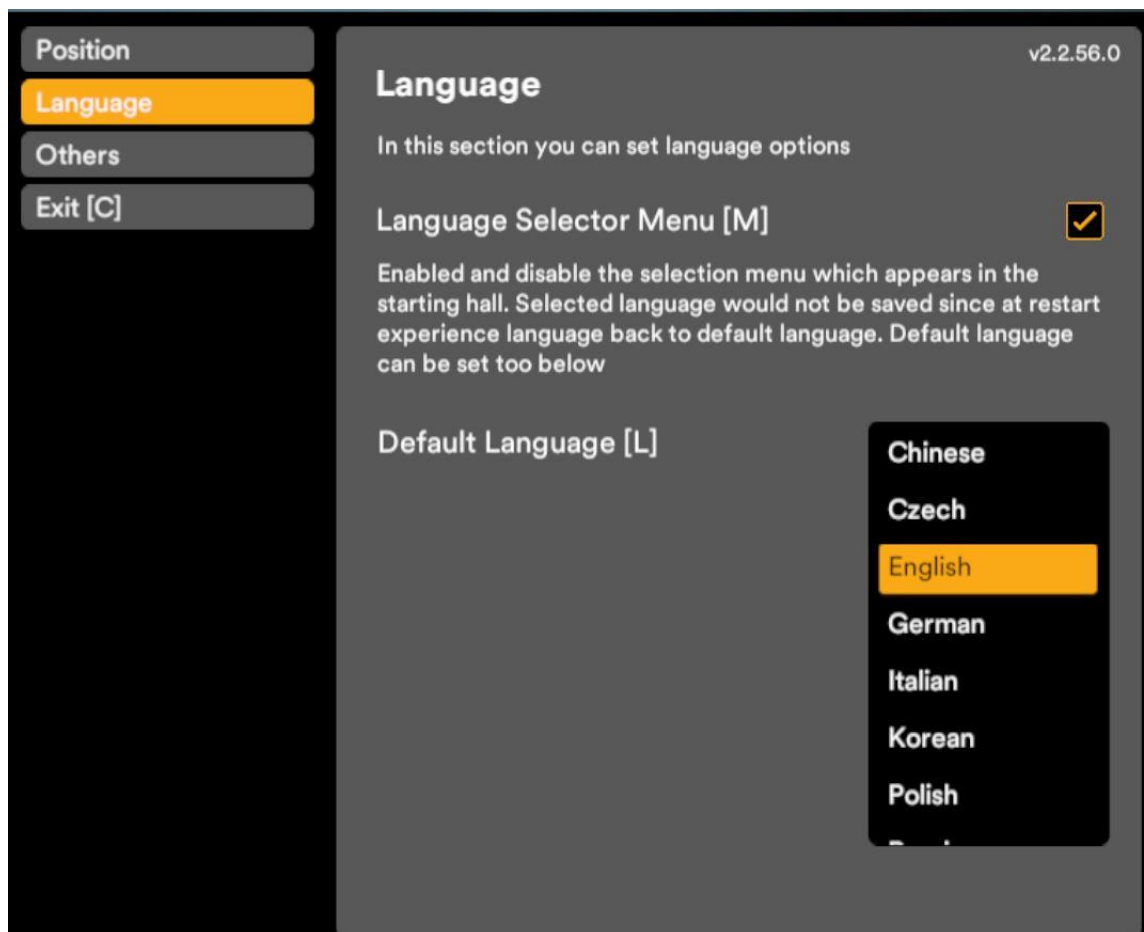If you need help, the steps to do this are listed on the settings screen
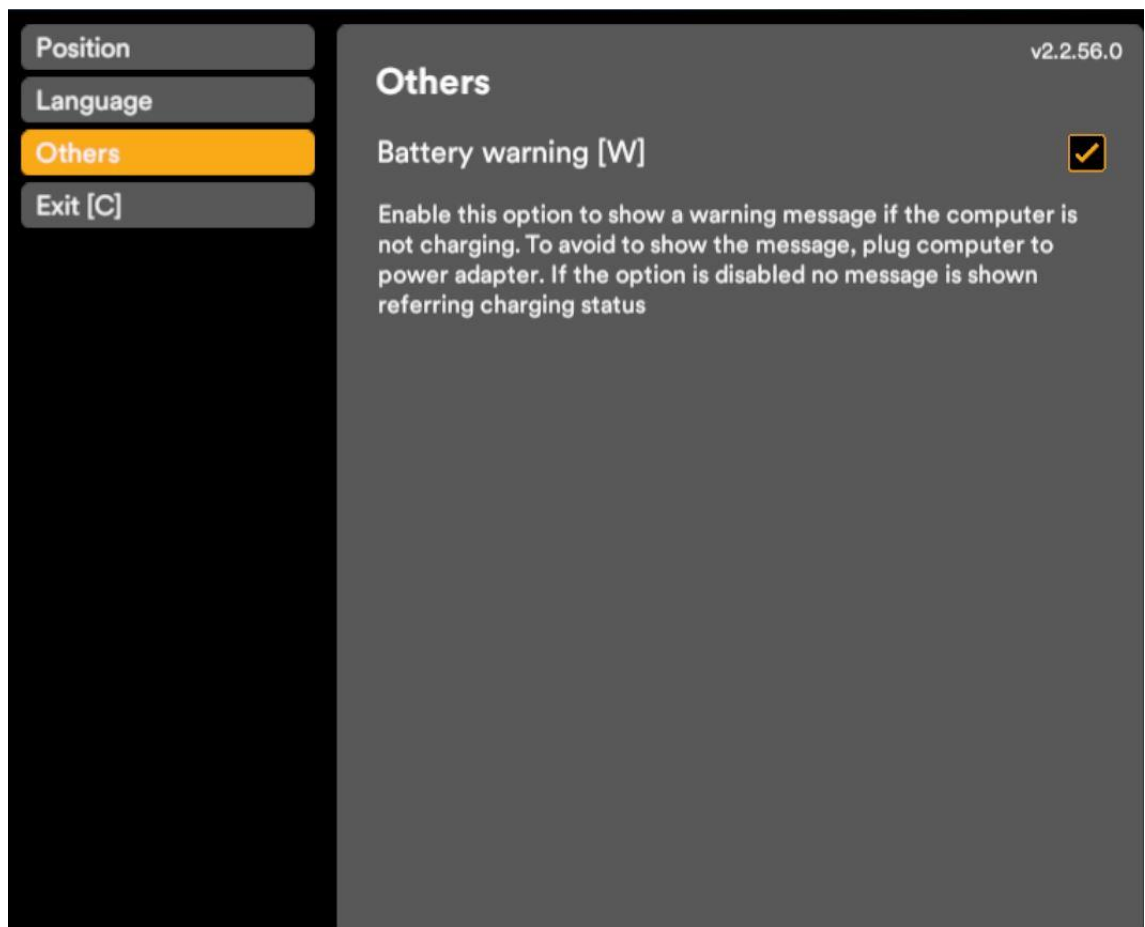

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Language

The application has been developed with a multilingual interface, which means you can set the default language and choose whether or not you want the user (customer) to be able to choose the language at the beginning of the experience.

Battery warning

If you are using a portable device, it is very important to have it connected to a power source at all times so that the application always runs at maximum performance. Failure to do so will result in the activation of energy saving settings that may reduce the level of performance of the experience and the image could jump, causing the user to get dizzy, etc. The system will alert the user if it detects that the device is not connected to a power source or for any other similar performance issue. Given the wide range of devices, not all computer hardware supports this feature so it can be deactivated if it is incompatible.

This initial configuration is only necessary the first time it's used, as the system will save these position settings.
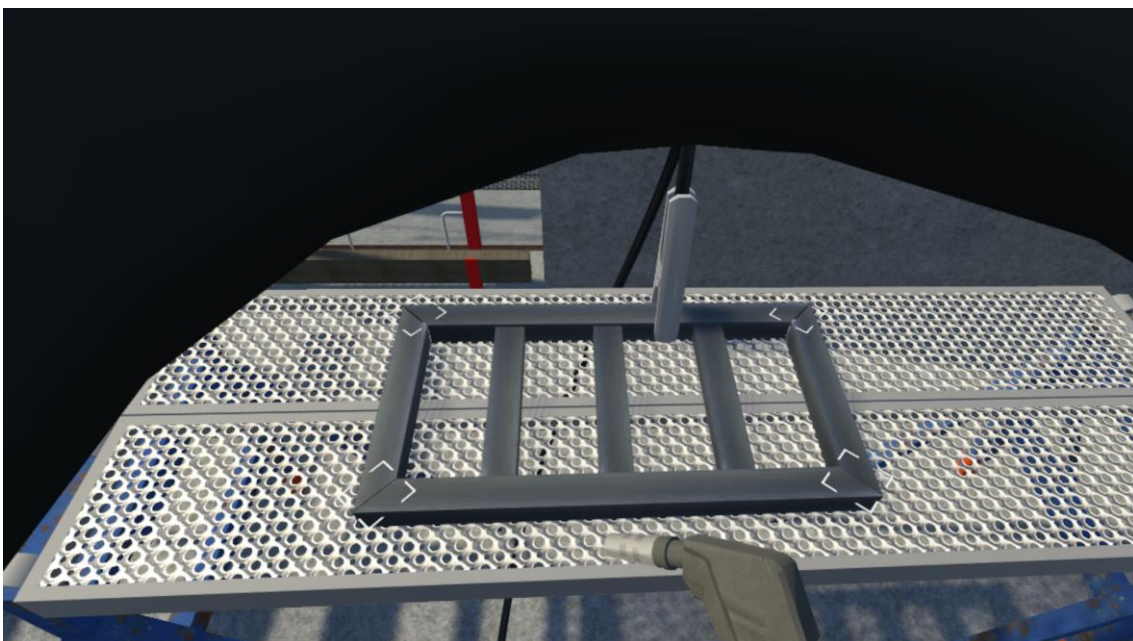
Keyboard comments

Key	Command
C	Settings menu
B	Restart scene (back)
N	Skip to the next scene (next)
ESC	Exit the application

Experience the Welding VR

- In order to take the welding helmet, just bring your hands close to it and close the trigger to grab the helmet.
- Once the welding helmet is positioned, it can be lifted and lowered with your hand to protect yourself when weld (close the trigger to grab the welding helmet and make a natural lifting or lowering gesture).
- With the passive filter, just like what happens in reality, you must bring the welding gun point to the weld area before lower the welding helmet in order to see the starting point of the weld area. Lower the passive filter and start to weld by pushing the trigger.
- The welding should be performed between the arrows that are marked on the metal beam. Weld the gap until a green check mark shows up.

- With the passive filter, just like what happens in reality, the user will have no choice but to constantly lift and lower the mask, so it will go much slower.

- After 45 seconds (the time is shown in a display), or if all the welding points are completed, you have to do the same task with the Speedglas welding helmet with Auto-darkening filter

- Once you put on the Speedglas helmet, you will repeat the welding operation. However, this time it will be much easier and faster with the automatic filter since you won't have to lift your mask to be able to see properly where to weld.

- After 45 seconds, or if all the welding points are completed, a notice will be displayed showing your achieved score and your time taken for comparison.

TIPS:

- The welding process only starts when the welding gun touches the metal of the beams.

- If you start welding without your protective welding mask completely lowered, you will see an intense flash of white light and a warning to protect your eyes.