

## Manual-Manual

You have selected the Manual-Manual task.

Press '**Next**' to receive further instructions.

## *Step 0: Straighten Head*

You will observed a ball floating in a black sky through a halo.



Look straight ahead with your head aligned with your body axis.

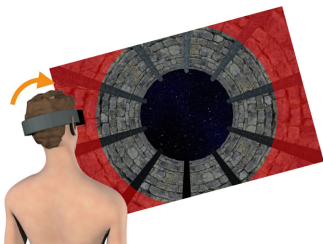
Tilt the head in pitch and yaw to center the target ball.



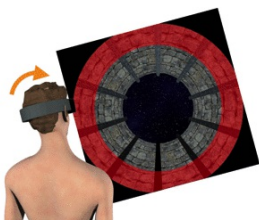
When the target ball is centered and green, press the ***Select Button*** to start the trial.

## *Step 1: Straighten Head*

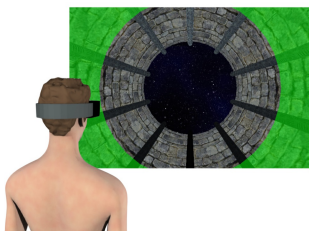
If the halo is red you must reorient your head:



Look straight ahead then slowly tilt your head on your shoulders. This will make the halo turn progressively from red to green:

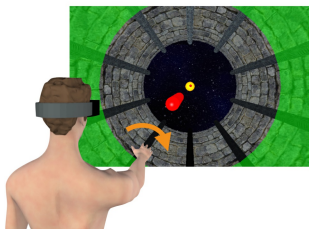


When the halo pops to bright green, hold this position.

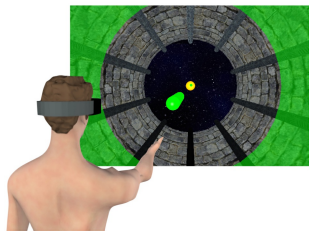


## *Step 2: Acquire the Target Orientation*

Once your head is aligned with your body (i.e. when the halo is bright green), a yellow spherical target will appear. Raise your arm and point your hand such that the virtual laser-pointer falls on the target.



Rotate your hand in a rolling motion around the axis of your arm until the virtual pointer and tool turn bright green. Memorise the hand orientation.



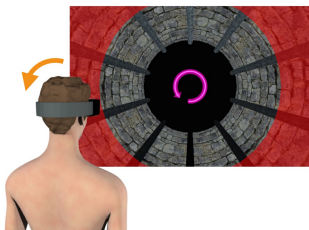
When the target disappears, lower your arm to a neutral

position on your lap.

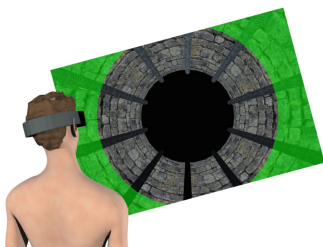
**Note:** Please ***do not*** try to maintain the memorised roll orientation of the hand. After target acquisition you should return your hand to the same neutral position on every trial.

### *Step 3: Tilt the Head*

If the halo turns red, you must tilt your head to a new orientation. The arrow tells you which way to rotate the head.



Roll your head slowly in the indicated direction until the halo turns bright green and hold this position.

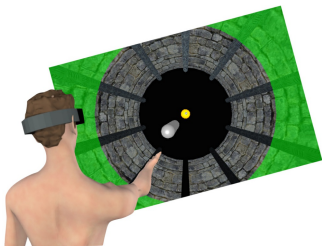




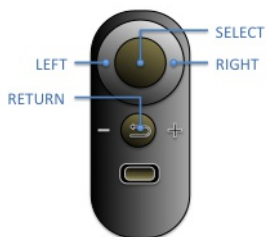
## *Step 4: Align to Target*

When the orange disk reappears, raise your arm and aim with the hand until the virtual laser pointer falls on the disk. Rotate your hand in a rolling motion around the axis of your arm to the remembered target orientation.

**Note:** In this phase the virtual tool gives no indication about the orientation of the hand around the roll axis. You must rotate the hand to the **remembered** orientation while pointing to the target in azimuth and elevation.



With your left hand, press the *Select Button* on the *VR Headset Remote* to validate your response once you think your hand is aligned with the memorised target.



## *Step 5: Check Response*

In some of the trials a line of target balls will be projected from your hand towards the targets, allowing you to verify whether or not you correctly aligned your hand. On other trials you will see only a single spherical projectile without any indication as to whether your hand was correctly aligned to the memorised target orientation.

A green sphere appears briefly if the task sequence is completed correctly, regardless of the accuracy of the hand's alignment to the target.

