

Mouse/Keyboard to CAVE2 Wand Input



CAVE2 Template Guide

- Also provides an example for how to convert from mouse/keyboard input to CAVE2 wand input in Introduction section:

<https://github.com/uic-evl/omicron-unity/wiki/Guide-for-running-Unity-in-CAVE2>

A simple Unity movement code snippet:

```
void Update() {  
    float forward = Input.GetAxis("Vertical") * 5;  
    float strafe = Input.GetAxis("Horizontal") * 5;  
  
    transform.Translate( forward * Vector3.forward * Time.deltaTime );  
    transform.Translate( strafe * Vector3.right * Time.deltaTime );  
  
    if( Input.GetButtonDown("Fire1") )  
    {  
        // Fire  
    }  
}
```

The CAVE2-Omicron Equivalent:

```
void Update() {  
    float forward = CAVE2.GetAxis(CAVE2.Axis.LeftAnalogStickUD) * 5;  
    float strafe = CAVE2.GetAxis(CAVE2.Axis.LeftAnalogStickLR) * 5;  
  
    transform.Translate( forward * Vector3.forward * Time.deltaTime );  
    transform.Translate( strafe * Vector3.right * Time.deltaTime );  
  
    if( CAVE2.GetButtonDown(CAVE2.Button.Button3) )  
    {  
        // Fire  
    }  
}
```



Pre-Done Interactions

- Some interactions are already scripted for the CAVE2 wand:
 - Grabbing/Throwing: X Button (Button3)
 - Laser Pointer: L1 Button (Button5)
 - CAVE2 Menu: O Button (Button2)
 - Navigation: Analog Stick (Button6)
- Be careful when re-using buttons!



Our Example

- The following code causes a sound to play when the up key is pressed:

```
if (Input.GetKeyDown(KeyCode.UpArrow)) {  
  
    AudioSource.Play();  
  
}
```



CAVE2 Buttons



- These are the button names on the wand that you will use for scripting.
- This image is also provided in the CAVE2 template guide.
- Suppose we want to use L2 (Button7) to trigger our sound.

Our Example Converted

- The if condition has been updated for the CAVE2 wand:

```
if (CAVE2.GetButtonDown(CAVE2.Button.Button7)) {  
  
    AudioSource.Play();  
  
}
```



Use OR Operator for Ease

- Instead of replacing the mouse/keyboard input with the CAVE2 wand input, use them both with the OR operator.
 - This allows you to continue working on your laptops without having to keep converting back and forth.

```
if (Input.GetKeyDown(KeyCode.UpArrow) || CAVE2.GetButtonDown(CAVE2.Button.Button7)) {  
  
    AudioSource.Play();  
  
}
```

