

# First Person Parkour Controller

Version 1.0

A kinematic first person controller with sliding, clambering, wallrunning, rigidbody interaction, and headbob. And *many* tweakable values!

## Introduction

This character controller uses precise kinematic movement, and can also be affected by forces and ride on moving rigidbodies. It was designed to feel juicy, and includes headbob and a set of first person arm animations. Wallrunning, clambering, sliding, rolling, and headbob can all be tweaked for different kinds of characters, or disabled.

## Compatibility

Compatible with Unity 2017 and newer.

Works with Standalone and WebGL platforms.

The player input uses Unity's Input System package.

## Getting Started

After importing the package, your assets folder will contain a "FirstPersonController" folder. There you can find the "Player" prefab and a demo scene.

The demo scene uses URP materials – if you're in the built-in render pipeline or HDRP you may need to switch out the material.

To begin using the character controller:

1. Make sure your scene doesn't already have a camera in it.
2. Drag the player prefab into the scene.

The player uses two cameras – the main camera renders everything except for the designated first person layer, and its child camera renders only the first person layer. This is so that first

person models (such as arms and weapons) will always be rendered at the same FOV, and the main FOV can safely be changed.

- To set up the layers, click on any game object, then click on the layer dropdown on the top right. Choose “Add Layer” and add a new layer called “First Person”. Then select the player object and click the “Setup Cameras” button. Select the First Person layer from the dropdown and click “Apply Layer Mask”.
- Any first person objects can be childed to the camera and set to the First Person layer to be rendered at the fixed FOV and above other objects.

## **Input**

The character controller uses Unity’s new Input System package. Input bindings can be changed by opening the PlayerControls asset in the FirstPersonController folder.

## **PlayerMovement**

Sliding is implemented as an infinite slide. The player is given a speed boost when they start sliding and they will continue to slide until they slow enough to begin crouching. As long as they have enough speed, they will continue to slide. Rolling can be enabled from the slide section – this will spin the camera 360 degrees when landing from a slide that was started in the air.

Clamber is used to climb up ledges. If enabled, the player will automatically clamber when moving toward a ledge in the air.

If wallrun is enabled, the player will automatically begin running along a wall if they jump toward it while moving along its direction.

Other scripts can subscribe to events from PlayerMovement, including: StartRunning, StopRunning, Jump, Land, etc.

## **Camera**

### **Sensitivity**

Change the lookSensitivity variable on the PlayerLook script (on the camera) to control how fast the camera rotates.

## Headbob

The Headbob script controls headbob when moving and camera animations for various move states.

## Support

You can email me with any questions at [aggiedodeo@gmail.com](mailto:aggiedodeo@gmail.com).