

## Character Controller How-To

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### 1. Setup

- **Note: If you are not using the newer input system in Unity, you can delete the 'InputHandlerNewIS' script as well as the 'New Input System' Folder and that should fix any errors.**

The only setup that should be required is dragging either the 'PlayerNewIS' prefab or the 'PlayerLegacyIS' prefab into the scene, depending on which input system you are using. This assumes all of the scripts and scriptable objects were added to the project.

If not, refer to the following section.

For best practice, try and use the 'Player' prefab hierarchy order as it is already established. Modifications to the hierarchy order may result in errors with some scripts.

For reference it should look something similar to:

- Player
  - Camera\_Holder
    - Camera\_Pivot
      - Main Camera
  - Surface Check Guide
  - Surface Check Guide 2
  - Ground Check

The 'player' object should have the Character Controller component as well as the following scripts:

- First Person Controller
- Input Handler (New or Legacy IS)

- Leaning
- Wall Climb
- Slide
- Wall Run
- Dodge

The 'Camera\_Holder' object should have the following scripts:

- Camera Controller

The 'Main Camera' object should have the following scripts:

- Camera Breathing
- Camera Shake

All scripts can be disabled except for the First Person Controller, Input Handler, and Camera Controller, which are all essential.

Most values and fields are self-explanatory and do exactly what they say.

Any values or input fields under the category 'Public for Other Scripts' should not be altered. These are only public variables so they can be accessed by other scripts.

## **2. First Person Controller Script**

All values are customizable and labeled for the developers convenience.

Everything does what it is read as.

This script should have the corresponding scriptable objects in the data section of the inspector.

The 'Ignore Layer' layer mask defines what layers should not be used as the ground.

The 'Ground Check' object should be the game object with the same name, child to the 'Player' object.

Smoothing options decrease jaggedness in the movement.

'Obstacle Layers' is meant to determine what object tags can be seen as an obstacle while running, such as a wall.

Everything beneath 'Ignore Layer' is for debug purposes and should not be altered.

## **3. Input Handler Script**

This script should have the corresponding scriptable objects in the data section of the inspector.

If you are using the legacy input system and wish to alter the keys required to perform each action, you will need to access the scripts or scriptable objects and change them there.

## **4. Leaning Script**

'Lean Speed' determines how fast the player will reach the specified 'Lean Amount'.

## **5. Wall Climb Script**

The 'Surface Check Guide' fields should be matched with the corresponding object of the same name, child to the 'Player' object.

The 'Ignore Layer' defines what layer the wall climbing mechanic will ignore.

The 'Toggle for Use' fields determine whether or not those mechanics are active.

## **6. Slide Script**

The 'Ground Check' field should be matched with the corresponding object of the same name, child to the 'Player' object.

## **7. Wall Run Script**

The 'Ignore Layer' defines what layer the wall run mechanic will ignore.

## **8. Dodge Script**

Adjust any of the values here to your liking.

## **9. Camera Controller Script**

This script should have the corresponding scriptable object in the data section of the inspector.

The sway section determines the camera shift when moving.

Change the smoothing however. High values mean no delay between movement and camera adjustments, while lower values are meant for more cinematic cameras.

The yaw and pitch setting should be left alone.

## **10. Camera Breathing Script**

This script should have the corresponding scriptable object in the data section of the inspector.

The axis determines on which axis the breathing will take effect. By default, x is left and right, y is up and down, z is front and back.

## **11. Camera Shake Script**

With these values, know that amplitude basically means amount. Adjust these however.

## **12. Perlin Noise Data Scriptable Object**

This is a scriptable object that can be altered if the developer wishes.

## **13. Head Bob Data Scriptable Object**

This is a scriptable object that can be altered if the developer wishes.

## **14. Surface Check Guides and Ground Check**

The surface check guides are there to help the wall climbing script move past lips on a wall above them, allowing for smooth climbing on uneven surfaces. These object positions have been fine tuned so they should not be moved unless the developer has other plans.

The 'Ground Check' object serves the purpose of evaluating the level of the ground in the direction the player is moving. This helps the slide script determine the slope the player is on and dynamically adjust the slide.

## **15. Contact**

Any questions or tips to make the character controller better are encouraged. Contact:

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