Simple Camera Control System

What is Simple Camera Control System? :

Simple Camera Control System is an easy to use basic Camera System for Unity users, beginner and advanced alike. The Simple Camera Control System includes First Person, Third Person and RTS Modes as well as dynamic switching between the three, It is easy to adapt all the scripts included if need be as all the code is well documented with notes within the scripts.

How do I start using Simple Camera Control System in my Game? :

To start using Simple Camera Control System in your game all you have to do is drag either the "Player Cube" or "Player Capsule" into the scene and you are almost good to go, just go down to the "How do I set up the Tag System?" and set up the KeyCodes on the "Camera Switcher", "Lock Mouse" and on the "RTS Camera" Scripts and you are finished!!

How do I set up Simple Camera Control System for a custom GameObject? :

First of drag your custom player prefab into the scene. Then Drag the "Player Camera" prefab into the scene as a child of your prefab. Attach the following scripts to your player prefab, "Character Controller" (you may need to import this from the asset store if it does already show up. You can find this under the Characters Package), "Lock Mouse"(this is only if you want to be able to hide and reveal the cursor), "Camera Switcher" and "First Person Controller". Once this is done we can now set up the scripts. Follow the "Essential Script Guide" below and "How do I set up the Tag System?" and you are set to go!!

How do I set up the Tag System? :

To set up the Tag System you have first create a unique tag for the camera. If you don't know how to do this, follow the advice in the following Unity Documents : Tag Manager Tags How To Use Tags(Video). Once you have created a unique tag for the Camera and applied it to the "PlayerCamera" GameObject go to the "Camera Switcher" script on your custom your Player GameObject and copy it exactly into the "Player Camera Tag" String at the top of the script. You have now set up the Tag System.

Essential Script Guide:

The Essential Script Guide will walk you through the essential changes need to set up the Simple Camera Control System in your Game.

First I will start off on the scripts attached to the Player GameObject you have chosen. First ensure you have the the "Character Controller" Script attached as the "First Person Controller" Script depends on this script. If you cannot find the "Character Controller" Script you can import it under from the Asset Store under the "Characters" Package from Unity. Below are the scripts used in the Simple Camera Control System. If you wish to have this set up in minutes the only read the "Camera Switcher", "Lock Mouse" and RTS Camera script descriptions.

Scripts:

First Person Controller:

Movement Speed: A general movement speed for the player.

Sprint M: The sprint multiplier, in other words how many times faster do you go when sprinting.

Sense: The First Person Camera sensitivity.

Jump Speed: The force of the player's jump.

Up Down Range: How many degrees up and down you can look, essentially an "Up Down Limiter".

Player Camera: The player's camera. This is set up through the "Tag System" above.

(P.S : Unfortunately the controls from this script are not editable yet from the editor, this will come however in a future update. The movement uses the "Horizontal" and "Vertical" Inputs and the jump uses the "Jump" Input)

Camera Switcher:

Player Camera Tag: This is the unique tag you have assigned to your PlayerCamera. Please insure they match perfectly otherwise it will not work(case included).

Is Key Code: This tells the Camera Switcher whether to use the the KeyCode or the Input Options below to trigger the First Person to Third Person Switch.

Key: The key used to switch between the First Person and Third Person camera views.

Input Name: The input name used to switch between the First Person and Third Person camera views.

Use RTS Camera: This is used to enable and disable the ability to

use the RTS Camera view. This was implemented due to the fact that some people may never need to use the RTS Camera so this is a dynamic (can be changed in run time) way to solve this problem.

RTS Is Key Code: This tells the Camera Switcher whether to use the the KeyCode or the Input Options below to trigger the RTS Camera Switch.

RTS Key: The key used to switch between a "normal" camera view (Third or First Person) and the RTS Camera View.

RTS Input Name: The input name used to switch between a "normal" camera view and the RTS Camera View.

Local First Person Pos: This is the position you want the First Person Camera to be located in terms of your character's position.

Local Third Person Pos: This is the position you want the Third Person Camera to be located in terms of your character's position.

Local RTS Camera Pos: This is the position you want the RTS Camera to be located in terms of your character's position.

Is First Person: This is a dynamic variable that shows whether the Camera is in First or Third Person. If true it is in First Person, if false it is in Third Person. You can set this to set the starting camera view. Please keep in mind that the "Is RTS Camera Enabled" will over ride this and cause the Camera to be in RTS view if it is enabled.

Is RTS Camera Enabled: This is a dynamic variable that shows whether the camera is in RTS view or in a "normal" view. You can set to set up that starting camera view. Please keep in mind if this is enabled it overrides the "Is First Person" variable.

Lock Mouse:

Cursor Should Be Locked: This dynamic variable shows whether or not the cursor is locked. If true the cursor is locked, if false the cursor is not locked. This can be set at start up for the cursor's starting state.

Use Cursor Hide Keycode: This is used to enable or disable the use of keycode for the camera lock. If enabled it uses the keycode. If disabled it uses the Input.

Cursor Hide Keycode: The keycode used to enable and disable

the cursor lock.

Cursor Hide Input: The input used to enable and disable the cursor lock.

Camera Collision:

Min Distance: During a collision this is the closets the camera can to the character.

Smooth: How smooth/fast the camera moves to the point at which an object has moved in front of your view of the character.

Add On Height: This is the add on height to insure that the floor or ground does not collide with the view of the camera. If if you are unsure leave at the default 2. If this causes bugs (jumpiness of the camera) then set this to half the character's height.

Smooth 3rd Person Follow:

Degrees Clamp: This is how many degrees in the X axis and how many degrees is the Y axis you can look. If you want the player to be able to turn around leave it at 360 for the X, if not then set it to your desired value. The Y axis is the up down clamp. If you are unsure leave it at the default and change it as necessary from there.

Sensitivity: This is how sensitive the camera is in the X axis and Y axis. If unsure leave to the defaults (2, 2) and change as desired from there.

Smoothing: This is how smooth the camera movements are on the X axis and Y axis. If you are unsure of these settings leave them as default.

Target Dir: The direction the camera is currently heading in. Please leave these as the default(0, 0) as changing them will have no effect.

Target Char Dir: The direction of the character. Please leave this as default(0, 0) as changing them will have no effect.

Character: This is the object that the camera is a child of. This is set in code so if you would like to change it please do so there.

RTS Camera:

Use Key Code: This tells the Camera Switcher whether to use the the KeyCode or the Input Options below to trigger the RTS Camera rotation.

Key Code: The key, that when held down, enables you to rotate

the camera.

Input Code: The input, that when held down, enables you to rotate the camera.

Is Rotation Inverted: If this variable is true it means that the rotation will be inverted.

Rot Sensitivity: The rotation sensitivity of the RTS Camera. If you unsure on a value leave it as its default of 3.

Trans Sensitivity: The movement sensitivity of the RTS Camera. If you are unsure on a value leave it as its default of 1.

Zoom Sensitivity: The sensitivity of the zoom ability of the RTS Camera. If you are unsure on a value leave it on the default of 20 and change accordingly.

Max Height: The max height the camera is allow to go above the player.

Up Down Range: This is how many degrees in the Y axis you can look (Up and Down). If you are unsure leave it at the default and change it as necessary from there.

(P.S : Unfortunately the controls from this script are not editable yet from the editor, this will come however in a future update. This unfortunately includes the zoom which currently uses the mouse scroll wheel. The movement uses the "Horizontal" and "Vertical" Inputs)

Video Tutorials and Demonstrations:

How to set up Simple Camera Control Scripts with an included prefab: Link.

How to set up Simple Camera Control Scripts with a custom prefab: Link.

General Demonstration of Simple Camera Control Scripts: Link.

How to use Tags: Link.