

COMBINATION / PADLOCK SYSTEM V1.0  
DOCUMENTATION

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## Introduction

Thank you for purchasing the “Combination / Padlock” system, this is a Raycast based system where the aim is to interact with a padlock and cycle through the combination spinners to find the correct combination to unlock it. Each of the combination spinners has their own number that you can set, and the “CombinationController” script controls the combination you can use to unlock it. It’s very easy to setup and even allows for more than one padlock per scene.



The asset includes:

- Raycast system that detects the padlock to bring up the large interact-able version in front of the camera.
- Add as many padlocks as are desired for your game.
- 4 spinner combination system with a 4 code string.
- PBR Padlock with brass / dark metal textures included.
- Animated latch to show the combination has been entered correctly.
- Scripts which can be easily modified.
- Sound effects for the system are included.

## FAQ

**Q). How do I Import the asset?**

A). Go to the Unity asset store and visit your “Download manager”. Download the asset if not already downloaded and click “Import”, import all required features of the asset for your use. It should have appeared in your project under “Combination / Padlock System”.

**Q). Before you start / Why isn't my character moving in the demo scene?**

A). I was advised by Unity to delete the “Standard Assets” > “Characters” from the asset, so please make sure to right click in the “Project Panel” > “Import Package” > “Characters” so the FPSController will be updated for you to use!

**Q). Is there an example of this asset working?**

A). Yes, you can open the “PadlockDemo” to see the padlock asset in action or use this scene as your initial base of your project.

**Q). How can I manually setup this asset?**

A). See the manual setup instructions on [“Page 2”](#).

**Q). I'm having trouble getting the interaction to work. What can I do?**

A). Make sure your Interactive objects have the “Layer” at the top right of the inspector as “Interact”, and the appropriate tags are added to each. See setup for more details.

**Q). How can I use a different Character Controller with the padlock system?**

A). Check the [“Extending the padlock system”](#).

**Q). How can I add more than one padlock set to my scene?**

A). Check the [“Extending the padlock system”](#).

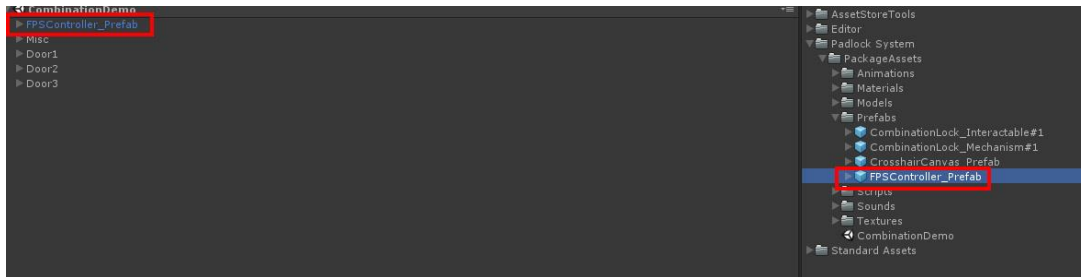
**Q). How do I change the material of the padlock?**

A). Check the [“Extending the padlock system”](#).

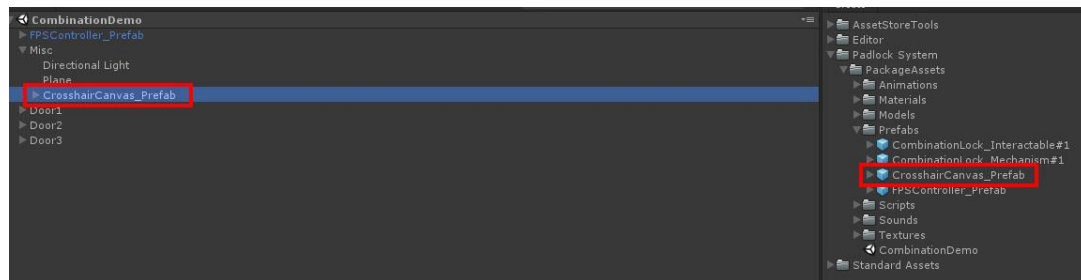
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## Manual Setup – Initial #1

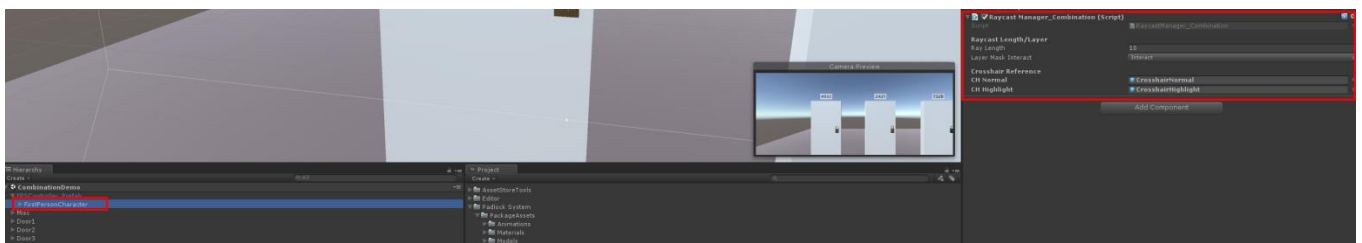
1. When starting your new project please import the **“Characters”** Standard assets or any FPSController you wish. (Right click in the **“Project”** > **“Import Package”** > **“Characters”**) Add the **“FPSController\_Prefab”** from the **“Prefabs”** folder to your scene. You can drag this into the hierarchy or the main scene. Please navigate to the scripts folder and add the **“RaycastManager\_Padlock”** script to your **“FirstPersonCharacter”** or **“MainCamera”**. (If not already from the FPS\_Prefab I have provided.



2. Now drag the **“CrosshairCanvas\_Prefab”** from the **“Prefabs”** folder into the hierarchy.  
**NOTE: Only drag this prefab into the hierarchy, not the scene.**

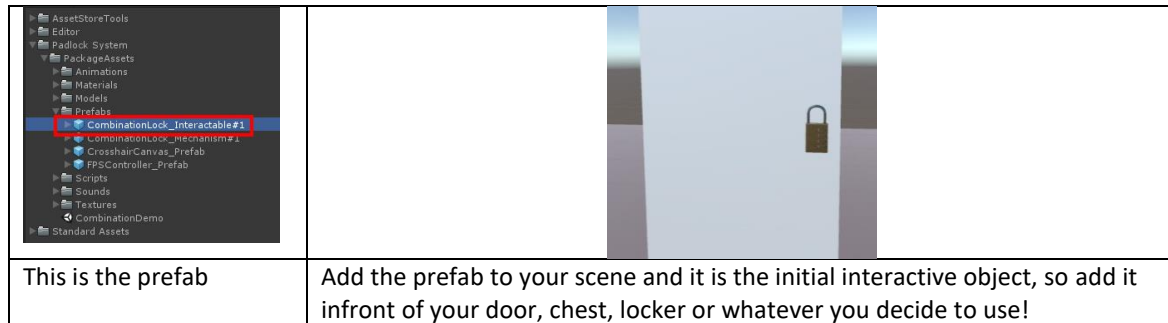


3. Add the two crosshair canvas components to the **“FPSController”** > **“FirstPersonCharacter”** **“RaycastManager\_Padlock”** crosshair slots in the inspector.
4. Make sure the **“Layer Mask Interact”** is set to **“Interact”**. **NOTE: If this isn’t available in the dropdown you will need to create it at the top right of the Unity inspector, by choose the “Layer” dropdown and choosing “Add Layer”**. Once you create the layer it should auto fill the LayerMask box in the inspector!

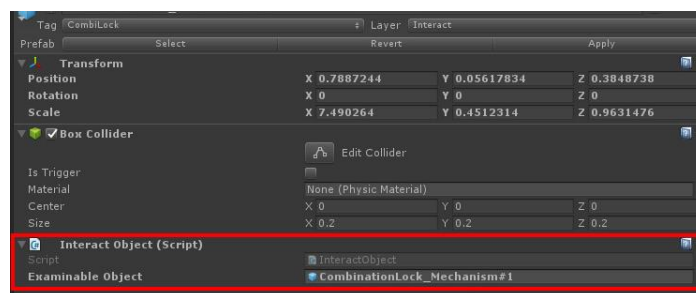


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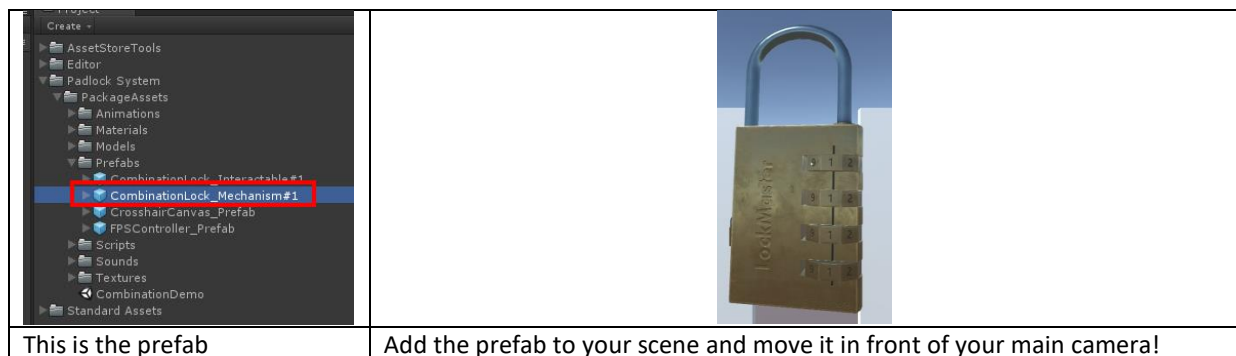
5. Add "**Combination\_Interactable**" to your hierarchy or scene from the assets "**Prefabs**" folder. Add this asset wherever you want in your scene. See the example below:



6. **NOTE:** Make sure your "**CombinationLock\_Interactable**" has a "**Box Collider**" and the "**InteractObject**" script should already be on the prefab. If not, add it from the "**Scripts**" folder.
7. **NOTE:** Make sure the "**CombinationLock\_Interactable**" object has a Tag of "**CombiLock**" which you may need to create yourself and the layer "**Interact**" which you may also need to create yourself. Once created they should auto fill for you!
8. Place the "**CombinationLock\_Mechanism**" in front of your camera and parent it to the camera like the image below. Position the padlock by moving it around in your scene using a half split of game view and scene view to get it into your desired place!

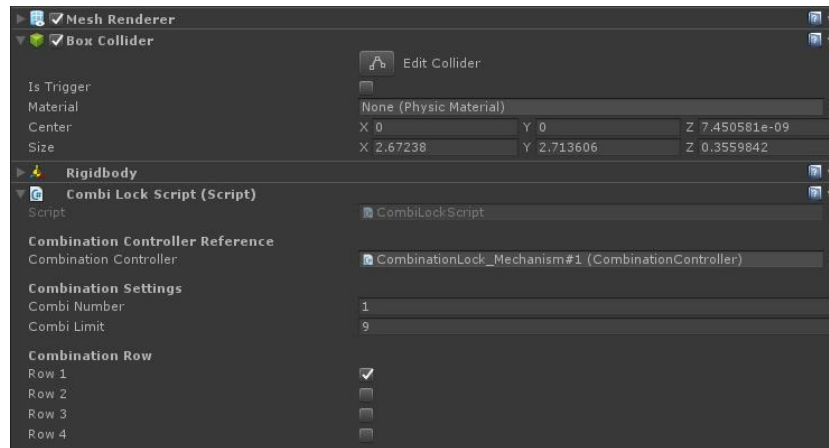


9. Place the "**CombinationLock\_Mechanism**" into the "**Examinable Object**" slot of this object as above.



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10. **NOTE:** Make sure each of the “**PadLock\_Combination**” spinners that are on the “**CombinationLock\_Mechanism**” have a “**rigidbody**” (Set to IsKinematic or the spinners will fall), “**boxcollider**” and the “**CombiLockScript**” attached. This is how you can control which row the combination spinner is on. **NOTE:** The prefab should already have these components attached so you shouldn’t need to do anything.



11. Select the “**CombinationLock\_Mechanism**” Object that you parented and hide that gameobject by going to the very top left of the inspector and unticking it so it will not be available in the scene until we tell it to be. Below I’ll explain the different options.

**NOTE:** Read through the information below and attach the correct GameObjects in the “**CombinationController**” script in the inspector. See the image on the next page for more details!

**PlayerCombi:** Leave this blank, it will auto populate as the combination is changed.

**Your Combination:** This is the code order you wish to open the padlock. 4 digits (1-9) only.

**Spin Sound:** Add your own sound or use the provided “PadLock\_Spin” sound effect

**Unlock Sound:** Add your own sound or use the provided “PadLock\_Unlock” sound effect.

**Interact Sound:** Add your own or use the provided “PadLock\_Interaction” sound effect.

**Main Camera:** Add your main camera for the scene here

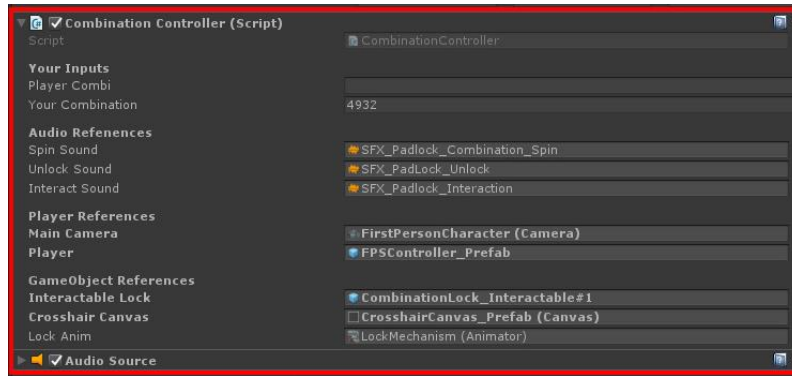
**Player:** Add the “FPSController” main parent here

**Interactable Lock:** This is the GameObject that exists as the padlock on your chest or door that you first interact with, usually named “CombinationLock\_Interactable”.

**Crosshair Canvas:** The crosshair canvas needs to be added here, so we can disable it when interacting with the padlock system.

**LockAnim:** This is the Animator component on the “LockMechanism” which can be found inside the “CombinationLock\_Mechanism” prefab object in your hierarchy.

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12. You might want to increment the **“CombinationLock\_Interaction”** and **“CombinationLock\_Mechanism”** with a **“#1”** and **“#2”** if you have more than one padlock in each scene to make linking up the scripts easier.

For example: **“CombinationLock\_Interaction#1”** and **“CombinationLock\_Mechanism#1”** so you know these two assets are to be used together!

If you have duplicates then name those other assets to:

**“CombinationLock\_Interaction#2”** and **“CombinationLock\_Mechanism#2”**.

## Final Notes

Your asset is setup and ready to use in your scene, please remember a few things.

1). The “**Combination\_Interactive**” GameObject has a script called “**InteractObject**”. Make sure to add the padlock that exists parented to your main camera to the “**ExaminableObject**” slot. (If not, you will get errors).

2). There are two variations of the same object that are prefabbed, one has the black and the other a brass padlock. Either can be used or you can change the textures on the padlocks by dragging the desired materials from the “**Materials**” folder onto the GameObject. (For more information check out the “Extending the padlock system” below)

Remember to take a look at the demo scene if you have any troubles, it might give you an idea on how to fix an issue!

If you find the package helpful, please leave a positive review and star rating as it would really help me out! 😊 If you have any problems, feel free to send an email to me!



## Extending the Padlock System

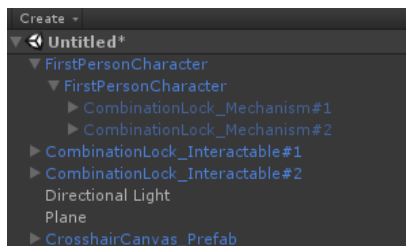
### I want to do something different when the code is valid:

In the “**CombinationController**” script you can find line 51 which has a function called “**UnlockDoor()**” In this function can add your own outcome for opening the padlock, you could allow the player to know interact with a door or secret passage, or play an animation. It’s dependant on the game and the setting it’s being used. If you feel any sort of confusion about this, please don’t hesitate to send me an email!

```
51 void UnlockDoor()  
52 {  
53     //DO YOUR DOOR UNLOCKING OR WHATEVER RESULT OF THE PADLOCK COMBINATION BEING CORRECT THAT YOU WANT!  
54 }
```

### How to add another padlock set to the same scene?

Duplicate the “**CombinationLock\_Interactive**” and “**CombinationLock\_Mechanism**” from your scene and increment the numbers like I mentioned in the Final Notes section. See image below:



You can then move the “**CombinationLock\_Interactive#1 or #2**” to another place in your scene where it is needed!

**NOTE:** Make sure you click on the newly duplicated “**CombinationLock\_Interactive#2**” and “**CombinationLock\_Mechanism#2**” and check the two scripts are pointing to the correct objects, as they might be pointing to the old “**CombinationLock\_Mechanism#1**” and such.

You can then edit the “**Your Combination**” code in the newly duplicated “**CombinationLock\_Mechanism#2**” script to a different (1-9) four digit value of your choice!

### I want to change the material on the padlock to the alternative, how do I do this?

Visit the “**Materials**” folder of the package and look for the folder named “**M\_Padlock\_Black**” and open the folder. Add the “**M\_PadLock\_Combination\_Black**” to each of your spinners and the “**M\_PadLock\_Main\_Black**” to the main body and metal latch of the interact able object and mechanism that resides on your camera or add the prefabs to your scene!

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### How do I use another controller with this system?

In the “**CombinationController**” script we reference the player controller so we can disable the “**FirstPersonController**” script so when we interact with the padlock we disable character movement and camera rotation. If you’re using a different controller please replace these lines with appropriate for you.

```
player.GetComponent<UnityStandardAssets.Characters.FirstPerson.FirstPersonController>().enabled = false;
```

### Contact

If you have any problems with the pack, or have some ideas for new features you’d be interested in, please feel free to contact me.

Email: [volumetricgames@gmail.com](mailto:volumetricgames@gmail.com)

Website: <http://www.volumetric-games.com>