

EXAMINATION SYSTEM V1.0
DOCUMENTATION

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Introduction

Thank you for purchasing the “Examination” system, this is a Raycast based system where the aim is to interact with any number of 3D objects you have in your scene and allow you to examine or view those up close to reveal secrets, or allow the player to look at interesting things. Just as you see in a lot of horror and adventure games. It is extremely easy to setup, add your 3D object to the scene, apply a script, add a few tags. Duplicate the object and parent to your camera for rendering, apply another script and you will be able to interact with them! The system uses the emission value of your materials to create an additional selection highlight.



The asset includes:

- Raycast system that detects any number of 3D objects you have in your scene
- Add as many objects as you desire to your game.
- Simple setup and fully tooltipped and commented scripts.
- A basic test scene included for you to see functionality.
- System to allow you to view, rotate and specify a visual name for your object.
- Scripts which can be easily modified.
- Disable and audio managers for easy editing and use.
- 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 “**ExaminationSystem**”.

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). The blur isn't working or is missing?

A). Please download the image effects which includes the blur shader we need from the “**Legacy Unity Image Effects**” standard assets that can be downloaded here:

<https://www.assetstore.unity3d.com/en/#!/content/83913>

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

A). Yes, you can open the “**Examination_Demo**” to see the examination 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 examination system](#)”.

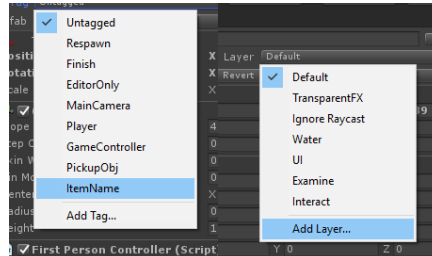
Q). How can I add more than one examinable object to my scene?

A). Check the “[Final Notes](#)” for more information.

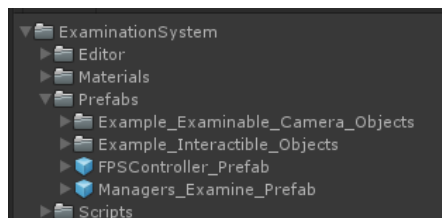
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Manual Setup – Initial #1

1. Setup some basic tags and layers before we start! Make sure to create a tag called **“PickupObj”** and **“ItemName”**. Also create two layers: **“Examine”** and **“Interact”**. See screenshot.



2. When starting your new project please import the **“Characters”** Standard assets or any FPSController you wish. (Right click in the **“Project”** > **“Import Package”** > **“Characters”**).
3. Please download the **“Blur”** shader from the **“Legacy Unity Image Effects”** standard assets that can be downloaded here: <https://www.assetstore.unity3d.com/en/#!/content/83913>
4. Add the **“FPSController”** from the standard assets **“Prefabs”** folder to your scene. You can drag this into the hierarchy or the main scene. I will provide my own FPS prefab so the next steps might not be applicable for you if you use it (You will still need to import standard assets)

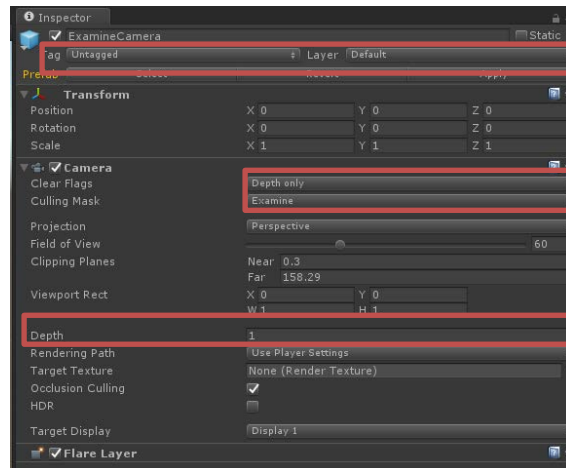


5. The **“FPSController”** will have a main camera parented to it, it is usually called **“FirstPersonCharacter”**. Make a duplicate of this and rename it to something similar to **“ExamineCamera”** and parent this to the **“FirstPersonCharacter”** so it now sits as a child. See screenshot. (Or if you used my FPS prefab it should already be setup!)

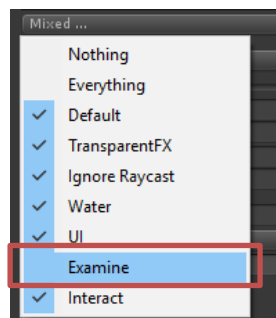


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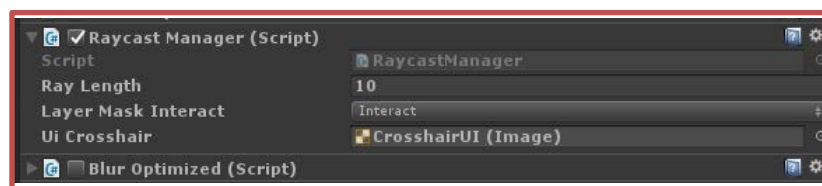
6. Make sure to untag the “**ExamineCamera**” so it is now “**Untagged**”. Set it’s “**ClearFlags**” to “**Depth Only**”, It’s “**Culling Mask**” to “**Examine**” and it’s “**Depth**” value to “**1**”. Also set this cameras rendering path to “**Forward**” for the shaders to work correctly. Delete all components from this camera apart from “**Flare Layer**” and “**Camera**” component.



7. On the “**FirstPersonCharacter**” camera click the “**Culling Mask**” dropdown and make sure “**Examine**” is unticked.



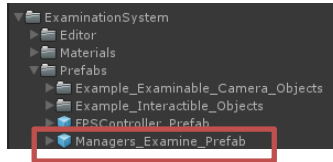
8. Please navigate to the scripts folder and add the “**RaycastManager_Examine**” script to your “**FirstPersonCharacter**” or “**MainCamera**”. (If not already from the FPSController_Prefab I have provided).
9. Navigate to the “**Scripts**” folder again and add the “**BlurOptimized**” script to your “**FirstPersonCharacter**” or “**MainCamera**”. (If not already on the prefab I provided). Untick the script so it isn’t active.



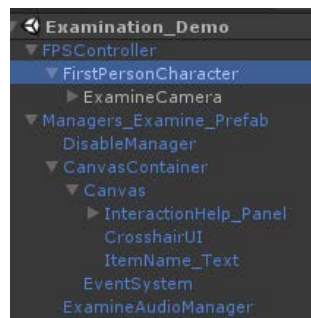
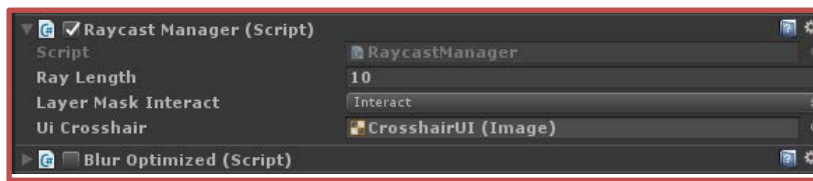
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10. Now drag the “Managers_Examine_Prefab” from the “Prefabs” folder into the hierarchy.

NOTE: Only drag this prefab into the hierarchy, not the scene.

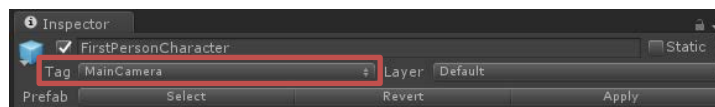


11. Click on the “FirstPersonCharacter” camera again and find the “RaycastManager_Examine” crosshair slot in the inspector, and add the new “CrosshairUI” to that slot. (Navigate to “Managers” > “Canvas Container” > “Canvas” > “CrosshairUI” to find the crosshair).



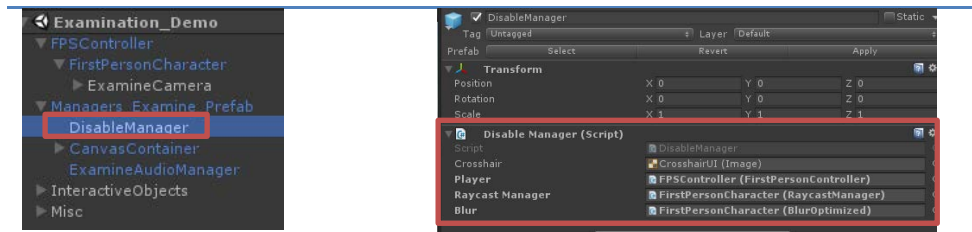
12. Make sure the “Layer Mask Interact” is set to “Interact”. **NOTE: If this isn’t available in the dropdown you will need to create it at the top right of the Unity inspector, by choose the “Layer” dropdown and choosing “Add Layer”**. Once you create the layer it should auto fill the LayerMask box in the inspector!

13. Make sure the “FirstPersonCharacter” camera is tagged as “MainCamera”.



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14. Inside the “**Managers**” container in the Hierarchy, find the “**Disable Manager**” gameobject. Click on it and you will need to add the specific references in the inspector. Add the “**CrosshairUI**” to the “**Crosshair**” slot like we did on the camera. Add your “**Player**” object (Usually “**FPSController**” to the “**Player**” slot). Add the “**RaycastManager_Examine**” which will be located on the “**FirstPersonCharacter**” to the “**Raycast Manager**” slot. Finally add the “**FirstPersonCharacter**” to that slot which will automatically find the “**BlurOptimized**” script for you. See screenshot.



15. Everything is ready for you to start adding 3D Objects to your scene. Add your first 3D object or add once from the “**Prefabs**” folder. Add “**Cube_Interact_Red**” as an example for now (if you wish).
16. Make sure that any object you wish to interact with as a tag of “**PickupObj**” and a layer of “**Interact**”. You give the object a collider if not already. Add the “**InteractObject**” script from the “**Scripts**” folder.

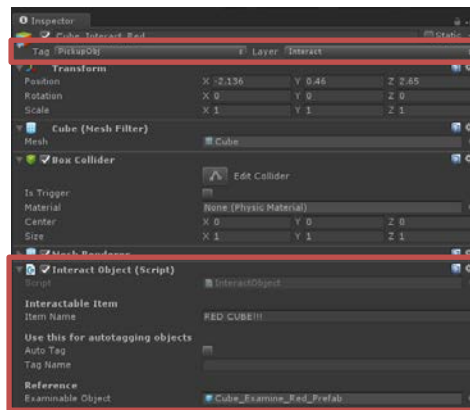
On the “**InteractObject**” script we have some functionality that I will explain:

Item Name: Give your object any name you like and it will be add to the text component which sits in the canvas. Edit as you wish.

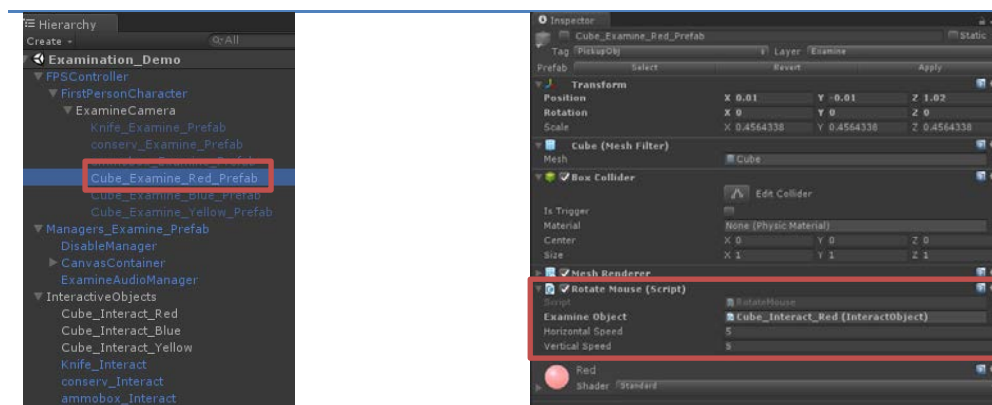
AutoTag: Tick this box if you wish for the script to automatically tag your object at runtime based on the “**TagName**” you give in the box below. **NOTE: You don’t need to use this if you have already tagged your object at the top.**

Examinable Object: You will add your duplicate object which you have parented to the camera to this slot later.

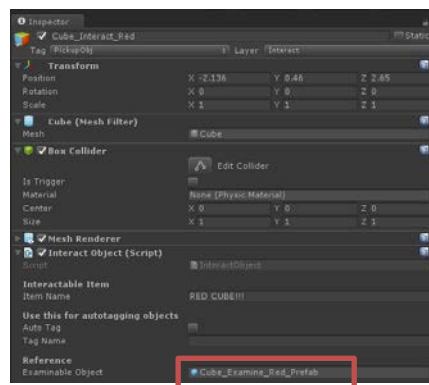
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17. Now make a duplicate of this object and parent it to your “**ExamineCamera**”. Position this object using the GameView in your desired position. (You will need to position it directly in front of your camera for best results) You can rename it to something that you will remember later. (For Example “**Cube_Examine_Red**”). When you have done this select the object and remove the “**InteractObject**” script from it, and add the “**RotateMouse**” script from the “**Scripts**” Folder. Change the objects “**Layer**” to “**Examine**”. Leave everything as default but add the interact version of your object. (In our example “**Cube_Interact_Red**” to the “**ExamineObject**” slot in the “**RotateMouse**” script for your examinable object. Make sure this object is inactive by unticking it at the top of the inspector.



18. Go back to your interactable object (In our example **Cube_Interact_Red**) and add the examinable object to the “**Examinable Object**” slot.



Final Notes

Your asset is setup and ready to use in your scene, add as many objects as you like in the same way I just described from steps 14-17.

- 1). Follow steps 14-17 again for adding more objects to your examine system!
- 2). You can disable the hints or tips which explain controls by navigating to the **"Managers"** > **"CanvasContainer"** > **"Canvas"** > **"InteractionHelp_Panel"** and either hiding or deleting it.
- 3). The system uses the materials **"Emission"** value to make a highlight, you can set each materials emission values to **"0.5"** if you aren't using the emission value on the object. The script turns emission on and off so no need to do anything special.

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 Examination System

How do I use another controller with this system?

In the **"DisableManager"** script we reference the player controller so we can disable the **"FirstPersonController"** script so when we interact with the object we disable character movement and camera rotation. If you're using a different controller please replace that reference with the way to disable your controllers movement and camera rotation!

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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

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

Big thanks to "SHOGUN" from the assets store for allowing me to use the "Starter Starter Kit" in the demo scene, check his assets out if you're interested! ☺

Characters / Weapons / Survival Items - [HERE](#)