

MULTIPLE KEYPAD SYSTEM V1.2  
DOCUMENTATION

## Contents

Introduction.....	2
FAQ.....	3
Patch Notes .....	4
Manual Setup – Initial #1 .....	5
Script Linking – Initial #2 .....	6
Keypad Canvas Setup – Initial #3 .....	8
Finishing up / Things to remember .....	9
Extending the Keypad System.....	10
Contact .....	11

MULTIPLE KEYPAD SYSTEM V1.2  
DOCUMENTATION

## Introduction

DO NOT MOVE OR REPOSITION KEYPAD CANVAS ONCE PLACED IN YOUR SCENE!

Thank you for purchasing the “**Multiple Keypad System**” which is a complete template for implementing unlimited styles of UI keypads. The system has 3 included variants: Modern, Scifi and full keyboard - These allow you to input a varied string code (Number or symbols) to the length of your choice. If matched by the player will allow some type of interaction. I have included a PBR Door and controller for testing!



The asset includes:

- Full functioning number or symbol input keypad with display output at the top, along with a clear, enter and close buttons all directly editable and customisable within the appropriate canvas.
- Includes 3 simple keypad models, walls and pivot door.
- Easy to change valid code, by changing a single element in the inspector.
- Includes a basic door opening script, and integration with the default character controller (INCLUDED).
- Includes some basic sounds for key pressing, and invalid code input.
- Easy setup

## FAQ

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

**A).** Yes, you can open the “Keypad\_Demo\_Scene” to see the keypad asset 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 [“This Page”](#). Make sure to remember to import the standard assets into your scene before starting or you may have errors!

**Q). Why can't I see the UI or why is the UI in the wrong place?**

**A).** that might be because you may have dragged some UI objects into the scene rather than onto the hierarchy. Make sure the X, Y, Z positioning of all parent objects (Which contain the UI's) are set to 0, 0, 0 in the inspector.

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

**A).** Make sure your 3D keypad object has the “LayerMask” at the top right of the inspector as “Interact”. You can change this name as long as you change the value in the inspector based on the public variable of the “KeyPadRay”.

**Q). Can I use this asset with a different character controller or door interaction?**

**A).** This asset is intended for use with the provided Unity Standard Assets character controller and my included door interaction script provided but can be replaced by doing a couple of simple modifications. See [“Extending the keypad asset”](#) or send me an email and I'll be happy to help you out!

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

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

**Q). Do you want to organise the keypad elements into an empty GameObject?**

**A).** When you create an empty GameObject, please make sure that the X, Y, Z coordinates of the empty GameObject are all 0, 0, 0 before dragging the parts into the GameObject.

**Q). Can I use this asset with a 3<sup>rd</sup> person character with this asset?**

**A).** Yes, all you need is to use the trigger event and add the “KeypadTrigger” script and attach the specific keyboard object which has the script “PhysicalKeypadInteract”. See additional note for details!

**Q). My managers don't stay between scenes properly?**

**A).** Take make these work best, they shouldn't be in an empty game object, but loose within the hierarchy. This is just how the Don'tDestroyOnLoad works, I only put them with a managers parent gameobject to keep it looking neat and tidy!

MULTIPLE KEYPAD SYSTEM V1.2  
DOCUMENTATION

## Patch Notes

### Version 1.0 – May 2020

- Initial Release

### Version 1.1 – June 2020

- Added a trigger event for games that use systems other than First Person (For Example: 3<sup>rd</sup> Person Controller Integration)
- Created custom inputs for the raycast in the inspector for easy customisation
- Refactored and renamed code to be more consistent and optimised throughout
- Anchored all UI's for correct functionality

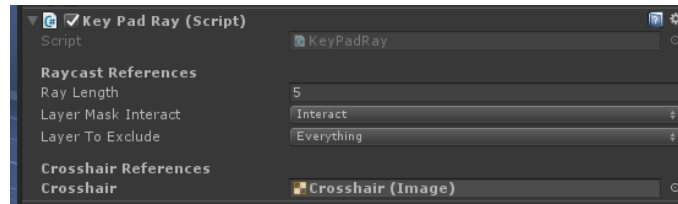
### Version 1.2 – July 2020

- UI Changes:
  - Edited the canvas layout and the way it is display in Unity
- Scripting Changes
  - Updated the Keypad Controller to incorporate “**UnityEvents**” to make successful code interaction multi-use, meaning you can produce multiple outcomes with ease
  - Added a new Audio Manager, so more sounds can be added and called within script
  - Added a new input manager, which allows easy control of all inputs from one place
  - Refactored the Raycast, KeypadController, ItemControllers and more!
- Miscellaneous
  - Updated and edited sounds, textures and materials
  - Added new manager examples to the prefabs and demo scene
  - Update all prefabs and set them to 0, 0, 0 for future use
  - Changed tag type to only require “Keypad” on each item

# MULTIPLE KEYPAD SYSTEM V1.2 DOCUMENTATION

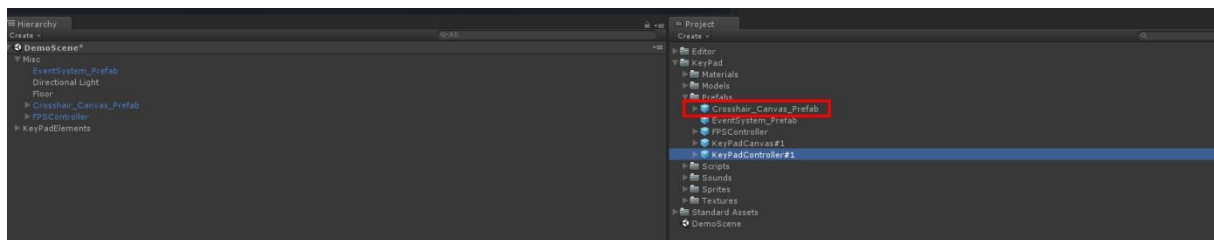
## Manual Setup – Initial #1

1. I have already added a character controller from the Unity “**Standard Assets**” to the project. Place the “**FPSController\_Prefab**” prefab in your scene from the “**Keypad System > Prefabs**” folder – On the MainCamera – Attach “**KeypadRaycast**” Script. (If not already).

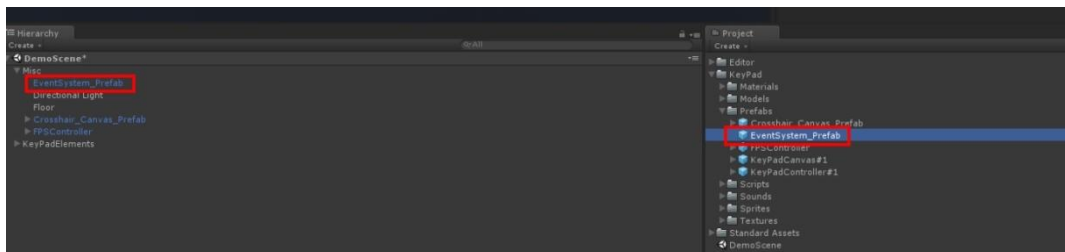


2. Add “**Crosshair\_Canvas\_Prefab**” from the “Managers – One Per Scene” folder to your Hierarchy from prefabs folder.

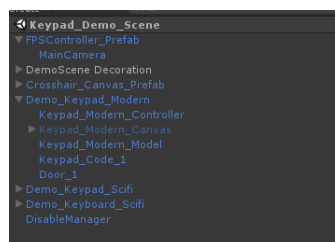
NOTE: Don't drag this into the scene view, only the Hierarchy.



3. Add “**EventSystem\_Prefab**” to your scene.  
NOTE: Have only ONE event system at any time.
4. Also add a “**DisableManager**”, “**AudioManager**” and “**InputManager**” to your hierarchy.

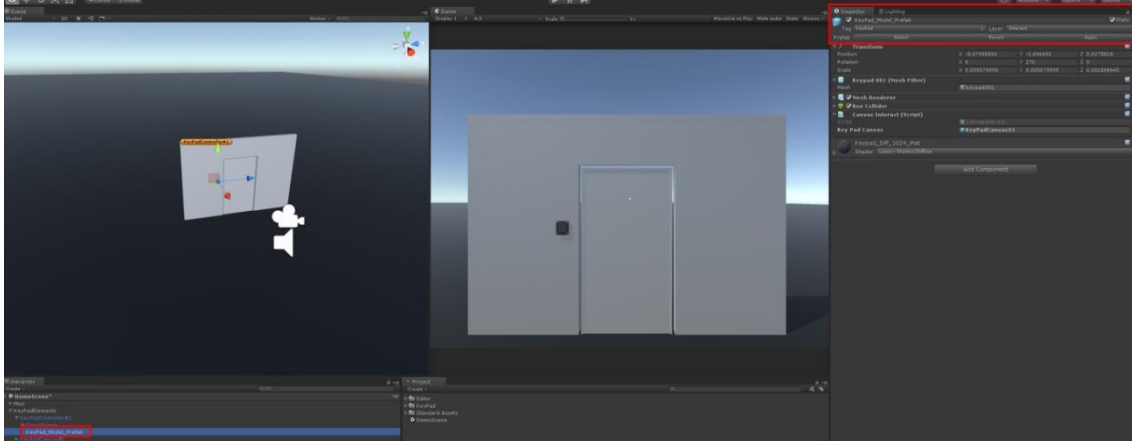


5. You can choose to add one of the “**Demo\_Prefabs**” to your scene. (Please drag one of those out to the hierarchy! This should include: **A keypad controller, Keypad canvas, Keypad model, Keypad code** and a **Door model**).
6. As above, you can add each of these items separately if you wish. Note: Don't drag any canvas' into the scene, only the Hierarchy.

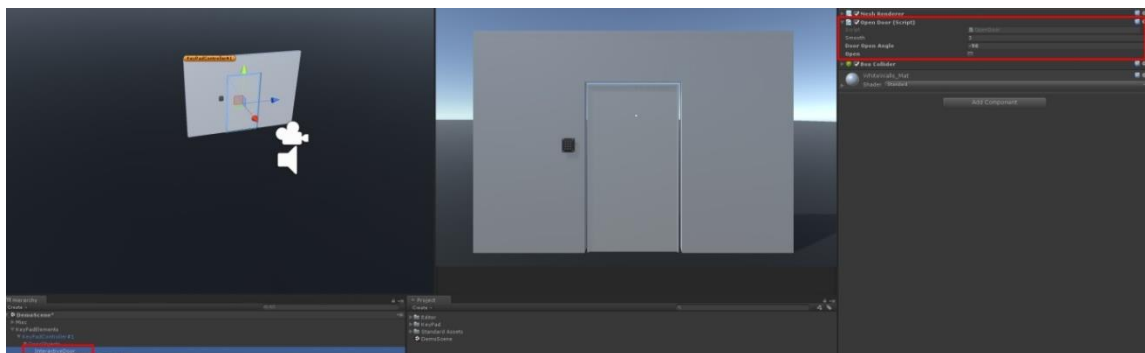


## MULTIPLE KEYPAD SYSTEM V1.2 DOCUMENTATION

7. Make sure any “Keypad\_Model” you use is tagged: **“Keypad”** if not already.
8. Set the same model for the Layer to **“Interact”** if not already.
9. Make sure this model also has **“KeypadItemController”** script attached, add the connecting **“KeypadController”** gameobject to the slot. (If not already added and attached).

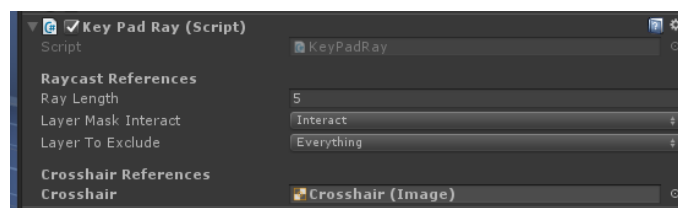


10. Add **“DoorController”** script to any door object you have, if not already.



### Script Linking – Initial #2

1. On **“KeypadRaycast”** (On MainCamera)  
Add **“Crosshair”** UI image from the **“Crosshair\_Canvas\_Prefab”** (In the Hierarchy) to **“Crosshair”** slot in inspector on **“KeyPadRay”** script.  
Set the **“Layer Mask Interact”** to **“Interact”** from the dropdown on **“KeypadRaycast”**.  
Set the **“Layer Mask Exclude”** to **“Everything”** by default from the dropdown on **“KeypadRaycast”**. (But can create your own layer to stop raycast from going through walls and such! Choose a raylength of your choice!



## MULTIPLE KEYPAD SYSTEM V1.2 DOCUMENTATION

2. Click on any of your **“Keypad Controller”** objects (Some of these might already be attached for you). Make sure this object has a **“KeyController”** and **“KeypadController”** script attached.

**Valid Code:** Choose your valid code for door

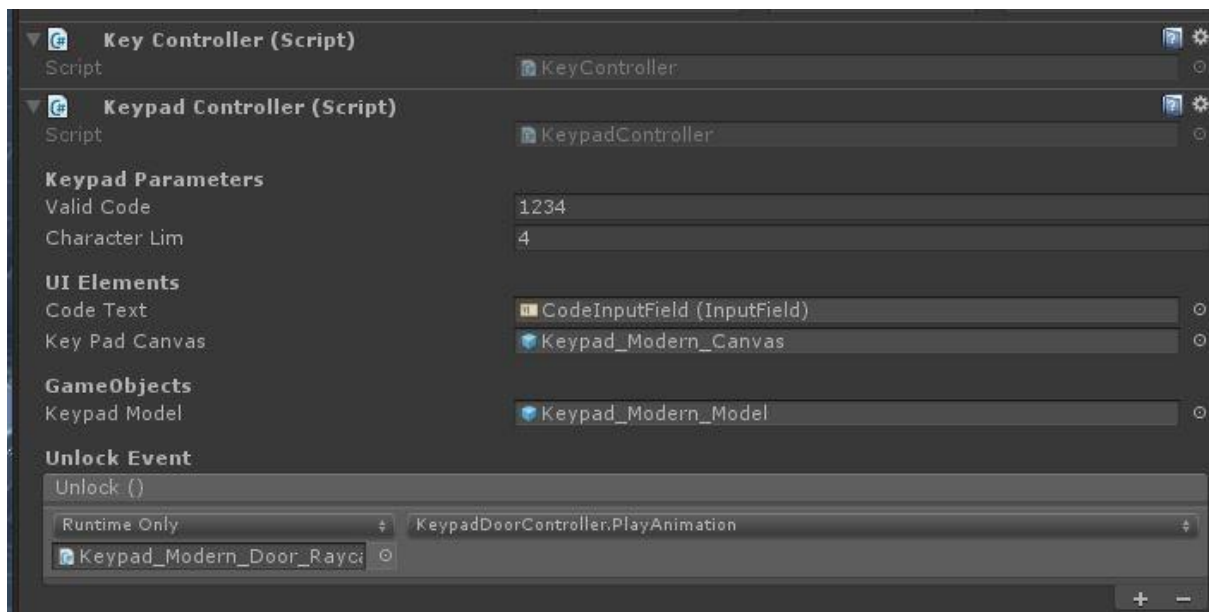
**Character Limit:** Set character limit, based on the code you’ve just chosen

Add **“CodeInputField”** from **“KeyPadCanvas”** Canvas to **“CodeText”** in inspector

Add your canvas to the **“Keypad Canvas”** slot in the inspector (This is so we can disable the keypad UI at any time!)

Add **“Keypad\_Model\_Prefab”** GameObject to **“KeypadModel”** slot in inspector

I have added a Unity event call for when you get the code correct, so you can click the little “+” icon in the bottom right, it will add a new event and you can place any gameobject which may have a script with a public method you want to call. In this case I have added the door object, this has a script called **“KeypadDoorController”** which has a public method called **“PlayAnimation”**. You can then run this code each time you unlock something, this can be changed on each door, and multiple events can happen in each! Making life really easy! (If you need any help do let me know).

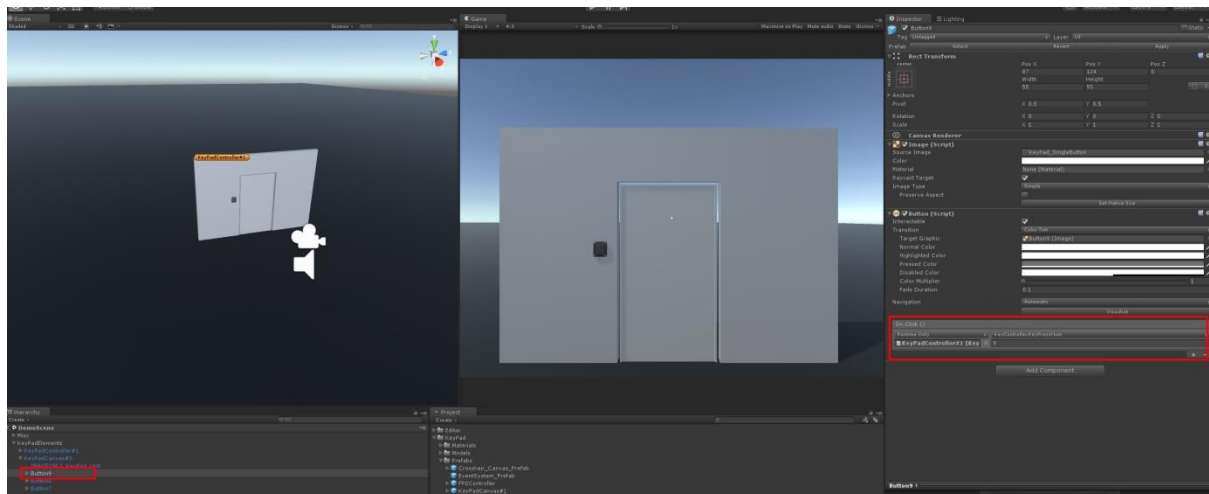


# MULTIPLE KEYPAD SYSTEM V1.2 DOCUMENTATION

## Keypad Canvas Setup – Initial #3

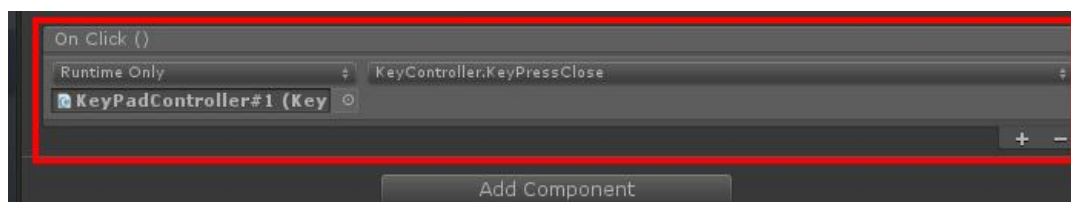
NOTE: This only needs to be done if you're setting the canvas buttons yourself or if anything might be missing.

1. Select and open out your **"KeypadCanvas"** (In Hierarchy) to find all the elements.
2. Select any of the Button numbers, add an **"OnClick()"** event in the bottom right of the inspector by clicking the **"+"**. (Unless it already has one added, image below).
3. Add your **"KeypadController"** object to the available slot (This will link the keycontroller script which exists on that object).
4. On the drop down on the right, (No function dropdown if nothing is selected) choose the **"KeyController"** option which will open out into more.
5. Choose **"KeyController.KeyPressString"**
6. You can then add whatever number or keyboard symbol you like in the slot below the dropdown.
7. Continue this for each button available.



NOTE: Similar setup for the CLOSE / CLEAR / ENTER Button.

1. Select any of the input keys, add an **"OnClick()"** event in the bottom right of the inspector by clicking the **"+"**.
2. Add your **"KeypadController"** to the available slot
3. On the drop down on the right, choose the **"KeyController"** option which will open out into more.
4. Choose **"KeyController.KeyPressClose"** or **"KeyController.KeyPressClr"** or **"KeyController.KeyPress.Ent"** to the corresponding buttons.





## Finishing up / Things to remember

After following these steps you will have completely setup the asset, any question don't hesitate to contact me. Please remember:

- Do not directly reposition any "KeyPadCanvas" or it will not appear on screen.
- Look at the extending the asset on the page below for more details.
- You can move the "KeyPadController" entire parent around without issue.
- You could add the non-essential items to its own empty GameObject if you wish.

### **REFERENCING THE AUDIO MANAGER:**

1). If you click on the audio manager you can add addition elements to the array by incrementing the value by as many sound clips as you want to add, make sure to give them a name you will remember as you will reference this in your code!

2). Use the code, within your scripts to reference your sounds to play!

**KPAudioManager.instance.Play("NAME OF YOUR CLIP");**

### **ADDING A TRIGGER EVENT – Using KeyPadTrigger script for 3<sup>rd</sup> person Controllers**

1). Create a box or other 3D Object, make sure this object has a collider set to "IsTrigger".

2). Add the "KeyPadTrigger" script to that 3D object and add the keypad object to the inspector slot named "My Keypad". (The keypad object will have the script "PhysicalKeyPadInteract")

3). Add your own or the "InteractPrompt" gameobject from the Crosshair canvas to the slot, which will have a UI prompt to help you and/or players know when you can interact!

4). Then set an input key you'd like to use for the interaction, by default set to "E"!

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 Keypad System

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

Using the UnityEvent feature on each controller will allow you to add multiple event types, see the demo scene for a clear example on this! 😊

### I want to use a different character controller whilst using this asset:

You can see that we create a reference to the FPSController at the top of the “DisableManager” script. You can create a new reference to the controller you’re using and make sure to disable input and mouse look when you disable the player!

```
public void DisablePlayer(bool disable)
{
    if (disable)
    {
        player.enabled = false;
        Cursor.lockState = CursorLockMode.None;
        Cursor.visible = true;
        //Disable crosshair & Player
    }

    if (!disable)
    {
        Cursor.lockState = CursorLockMode.Locked;
        Cursor.visible = false;
        player.enabled = true;
        //Enable crosshair & Player
    }
}
```

### I want to organise my keypad elements in the scene what can I do?

If you take a look at the demo scene it has the two major elements of the keypad system which include “KeyPadController” and “KeyPadCanvas” inside one GameObject called “KeyPadElements#1” or similar. You can put your two elements inside an empty GameObject to keep things organised. Make sure that when you create the empty GameObject you set the X, Y, Z position coordinates to 0, 0, 0. If not the object will take the position of the parent GameObject and the canvas UI’s might not appear.

### I want to add more than one keypad to one scene, how do I do this?

You can duplicate “KeyPadController” and “KeyPadCanvas” scripts **TOGETHER**, or add an additional demo prefab to your scene! You can increment the number once duplicated yourself and you just want to check that each of the inspector slots has the corresponding elements in the hierarchy, to what you just duplicated. For example: If you select the “KeyPadController#2” but make sure you organise everything correctly and all your gameobject link to the correct objects themselves, this is why it’s good to organise everything into one empty gameobject. Check out the demo scene for more tips!

MULTIPLE KEYPAD SYSTEM V1.2  
DOCUMENTATION

**I want to change the button UI, how do I do this?**

Select any of the buttons from the **“KeyPadCanvas”** and change the **“Source Image”**, so you can add your own sprite to create a different style of button. **“Highlight colour”**, to change how the button is highlight when hovered over.

**You can also change the overall style of the Keypad**

By changing the source image for the **“IMAGEONLY\_KeyPad\_Unit”**.

**I need to change the number on the buttons, how do I do this?**

Select one of the buttons from the **“KeyPadCanvas”** and drop the parent down to reveal the **“Text”** element, select this and you can change the text field to whatever you need. You can then change fonts, sizes and styles if you need too. Make sure to remember to also change that in the button properties at the bottom.

## Contact

Thanks very much for downloading! Please be sure to leave a **star rating** and **review** if you liked the package!

Support me on Patreon: <https://www.patreon.com/SpeedTutor>

Make a small donation: <http://www.paypal.me/speedtutor>

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

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

Website: <http://www.speed-tutor.com>