Documentation

IMPORTANT

You need to enable *File->Build Settings->Player Setting->Virtual Reality Support*.
I was only able to test this using an HTC Vive with the OpenVR SDK, but should work the same with Oculus too.

Note

The word "Switch" is used here not specifically for the Switch Prefab, but encompasses all of the Buttons, Tuners and actual Switches.

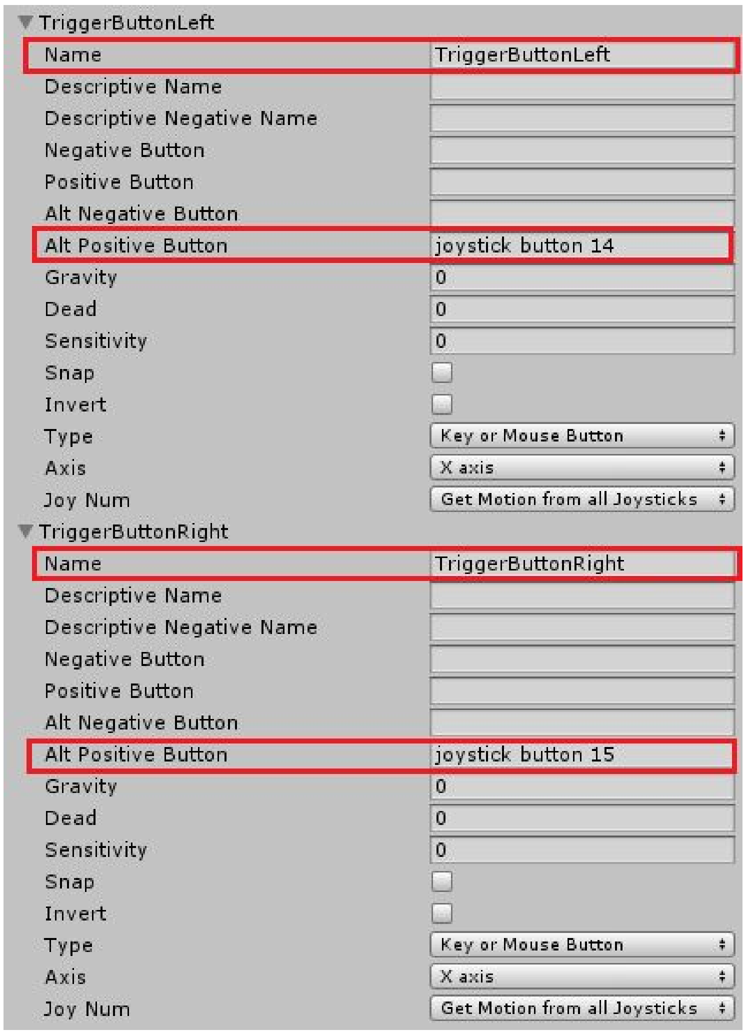
Contents

- Audio files (use them for Sound when interacting)
- fonts (only used for sharper import in the example scene)
- materials (Some Meshes share the same textures and have thus the same material)
- meshes (.obj)
- prefabs (for quick implementation)
- Scenes (only the demo scene)
- scripts (controller and buttons)
- textures (normals and occlusion maps)
- A visual documentation of how the scripts work
- the documentation you are reading now

How To

KeyBindings

Go to *Edit->Project Settings->Input* and Create two new Inputs for each Controller (left and right).
The only Important parts are the Name which should be "**TriggerButtonLeft**" or "**TriggerButtonRight**" with Alt Positive Button set to "**joystick button 14**" and "**joystick button 15**" respectively.
It should look something like this:



▼ TriggerButtonLeft

Name	TriggerButtonLeft
Descriptive Name	
Descriptive Negative Name	
Negative Button	
Positive Button	
Alt Negative Button	
Alt Positive Button	joystick button 14
Gravity	0
Dead	0
Sensitivity	0
Snap	☐
Invert	☐
Type	Key or Mouse Button
Axis	X axis
Joy Num	Get Motion from all Joysticks

▼ TriggerButtonRight

Name	TriggerButtonRight
Descriptive Name	
Descriptive Negative Name	
Negative Button	
Positive Button	
Alt Negative Button	
Alt Positive Button	joystick button 15
Gravity	0
Dead	0
Sensitivity	0
Snap	☐
Invert	☐
Type	Key or Mouse Button
Axis	X axis
Joy Num	Get Motion from all Joysticks

Create a scene

- Drag the XR Rig from the prefab folder into your scene
- Drag a Switch or Button Prefab into your scene

That's it.

(Optional) Custom XR Rig

If you have your own XR Rig, then to make it all work:

- Controllers/Hands need Trigger Collider attached
- Controllers/Hands need Rigidbody (for the Trigger collider to work) that is set to kinematic so it doesn't interact with Physics
- Attach the SP_Controller Script and set the Input Button Name to the one you set in the Input Manager

That's it. If you want a visual tutorial, check out this Quickstart guide on Youtube: https://youtu.be/RB-Adn8maq0

How it works

When the Trigger Collider (that is attached to the Controller) enters an Object with the "**SP**" Tag, the "**SP_Controller**" Script will keep that Object in its memory.
To make the Trigger Collider realize that there is a switch, the Object needs to have a Collider on its own.
To distinguish between a Switch and other Objects with Colliders, the "**SP**" Tag has to be attached (You can change the name in the "**SP_Controller**" Script).
When the Trigger on the Controller(the physical one) is pressed with the object in the memory of the "**SP_Controller**" Script the Update Loop on the Controller will call one of three functions depending on the state (just Pressed, Holding or just Released) on the Switch with the XRControllers rotation as parameter.
The Switch can then operate on its own and execute certain types of scripts from there (like a receiver Object that gets turned on and off when the switch is turned on and off). Currently there are tuners, buttons and mechanical flippable switches.

Implementing your own switches

There are only three things you have to do:
1. Attach the "**SP**" Tag to the Object that will carry the Switch functionality.
2. Attach a Collider
3. Attach a Script that has the 3 functions ("**grab**", "**hold**", "**letGo**") that get called from the "**SP_Controller**" script with them having a Quaternion rotation as Parameter.

All the rest is up to you. You can make it a Sprite and change color, make it call another Object, move something, or give any other kind of feedback to the user.

Additional Notes

The Color Textures have been left out deliberately, because of space, customizability and it's very easy to make one with any multi layered image editor like Photoshop and Gimp.
In case you have any questions, improvement suggestions, wishes or ideas write me an email to grasbock@gmail.com