

## Professional Assets : Drone Package (version: 2.1)

# DRONE PACK



Thank You for downloading Professional Assets : Drone Pack!

Also, don't forget to review the package! [ClickHere](#)

This pack contains:

- 4 physics scripted drone prefabs
  - 4 skin variations for each
- instructions on how to use your own custom models
- physics playground with desktop, mobile, & steamVR presets
  - FREE source code included

If you have any questions about the drone pack, suggestions for future updates, or questions about other asset packs, please contact us through this email address:

[ProfessionalAssetsUnity@gmail.com](mailto:ProfessionalAssetsUnity@gmail.com)

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# THIRD PARTY ASSETS:

(3rd party assets not bundled with pack in compliance with the unity Asset Store Provider Agreement)

(please download these before using the drone pack)

- Post Processing Stack by Unity Technologies : [ClickHere](#)
- Standard Assets / Effects by Unity Technologies : [ClickHere](#)  
(right clicking on main Assets folder and choosing (Import Package > Effects) also works)
- SteamVR Plugin by Valve Corporation : [ClickHere](#)  
(please only download if you intend to use the drones in VR)

# WHAT'S NEW / CHANGELOG:

25 April 2018 (v2.1)

- New quad drone + 4 skin variations
- New animated materials/shaders
- New improved camera controls
- updated bumblebee's camera
- optimized physics playground
- optimized PA\_DroneController(script)
- optimized PA\_AxisInput(script)
- merged gloss .pngs into packed PBR .tga files
- improved emission textures
- New readme.pdf with illustrated instructions

0 January 2018 (v2.0) - MAJOR UPDATE

- New drone sound effects
- New OpenVR support
- New Gamepad support
- New custom Input Axis support
- re-worked Mobile support
- organized script structures
- New demo scenes (showcases drone's abilities)
- New smooth follow camera options
- New acceleration/deceleration sliders (allows drone to be independent from input axis smoothing)
- replaced "orientation assist" with "stability"
- re-structured package contents for cross-package updating

19 September 2017 (v1.2)

- New 4 skin variations for each drone
- updated webGL demo to include skins

30 October 2017 (v1.1)

- New mobile control support (including a UI joystick prefab)

19 September 2017 (v1.0)

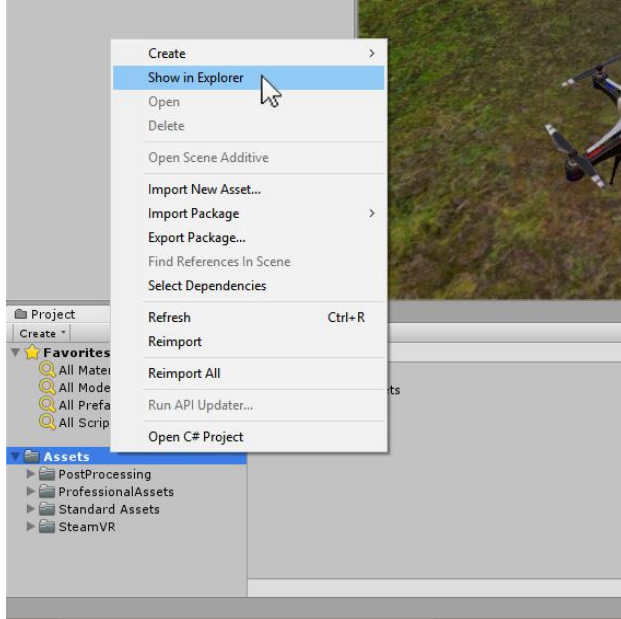
- Initial release created using unity 2017.1f

# How to setup Drone Input - Video Tutorial : [ClickHere](#)

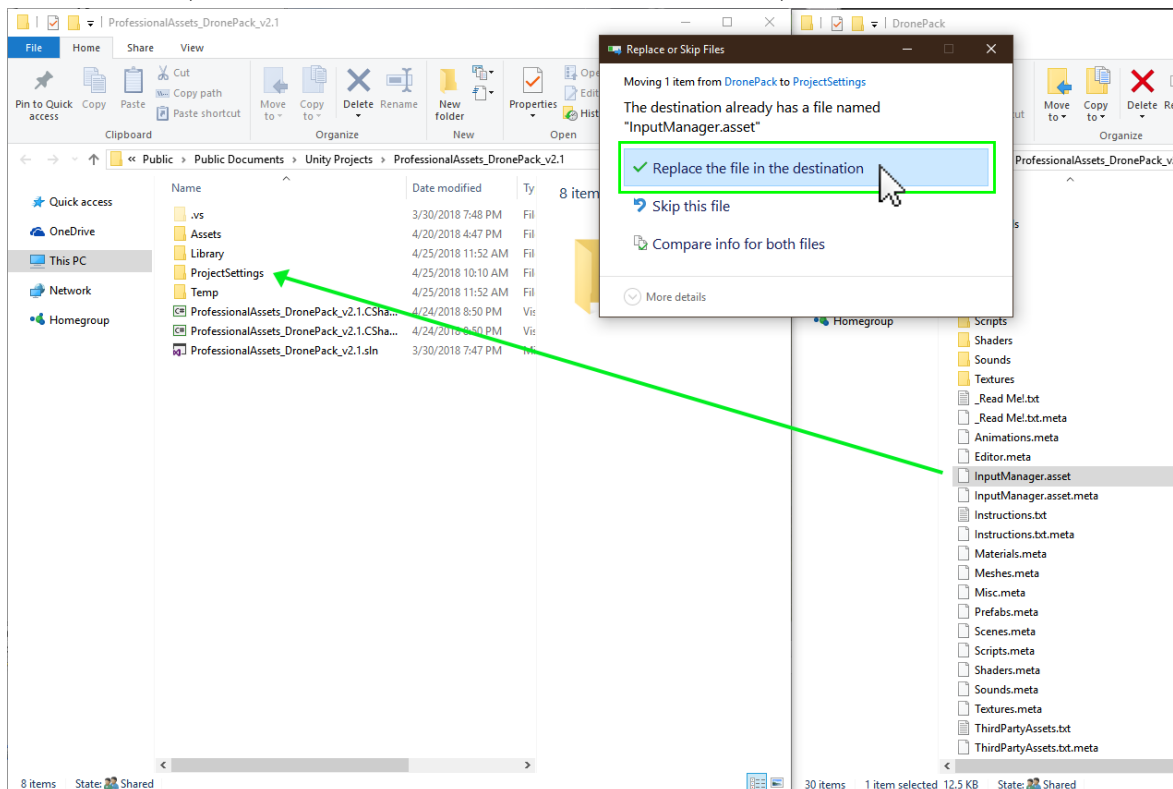
**WARNING** : this will overwrite all Input Axis data in your project!

(if you want to keep your current settings watch this video : [ClickHere](#))

- 1) Right click on the "Assets" folder found in your project's "Project" tab and select "Show in Explorer" on the popup menu.

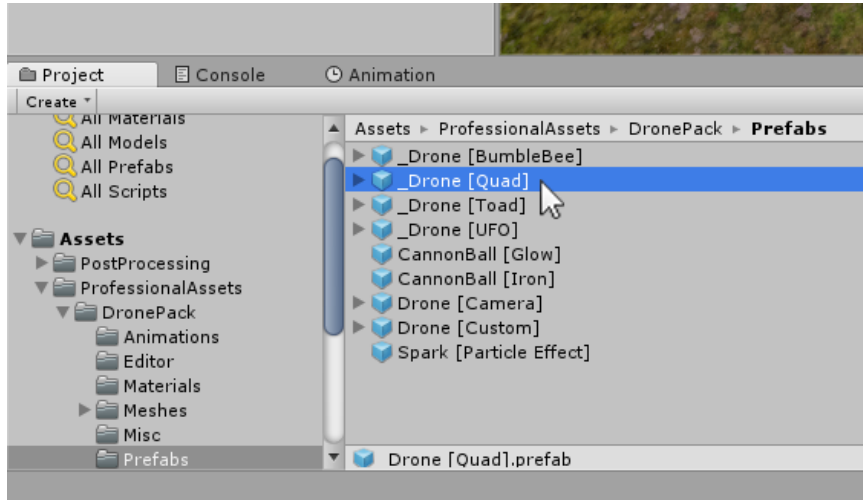


- 2) Replace the "InputManager.asset" file in the folder named "ProjectSettings" with the duplicate one found in ( Assets > ProfessionalAssets > DronePack ).

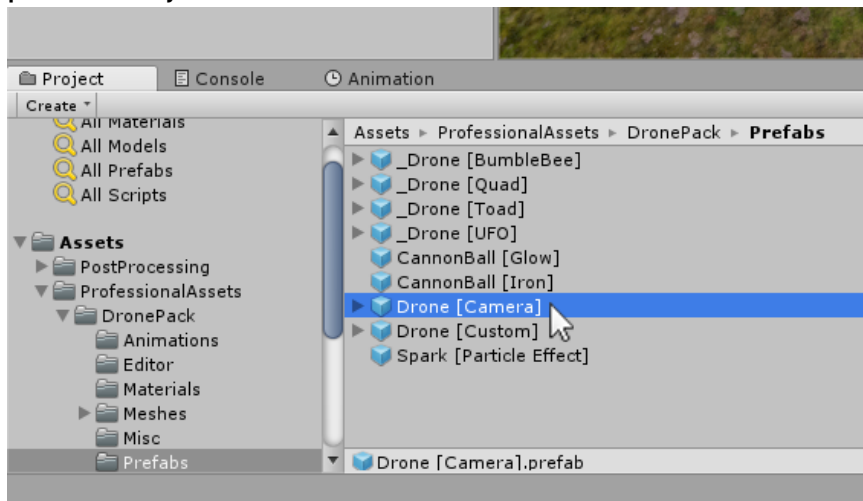


## How to add a Drone to your Scene - Video Tutorial : [ClickHere](#)

- 1) Navigate to ( Assets > ProfessionalAssets > DronePack > Prefabs ) and drag any of the four drone prefabs into your scene.



- 2) Navigate to ( Assets > ProfessionalAssets > DronePack > Prefabs ) and drag the "Drone [Camera]" prefab into your scene.

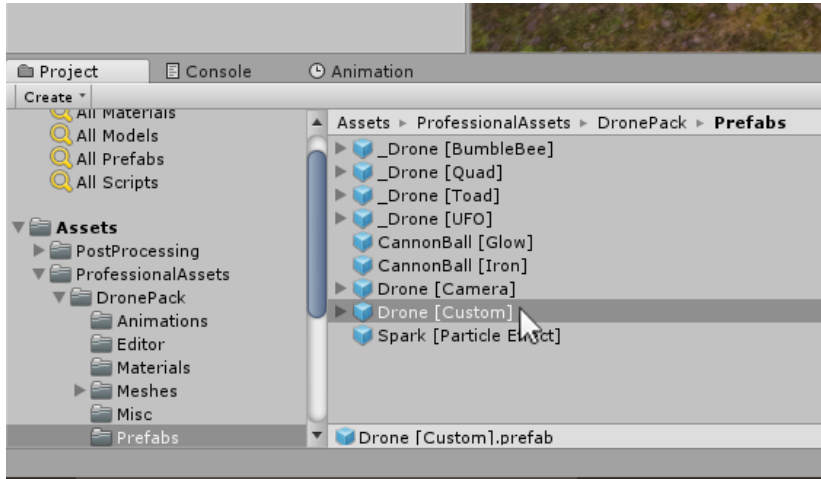


- 3) Position and Angle the camera prefab behind your drone. Press Play!

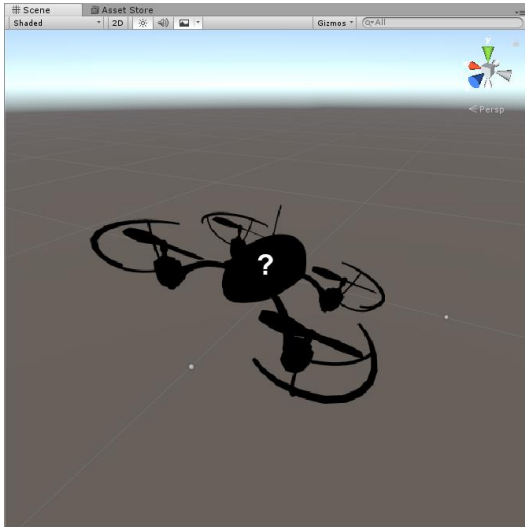


## How to setup a Custom Drone - Video Tutorial : [ClickHere](#)

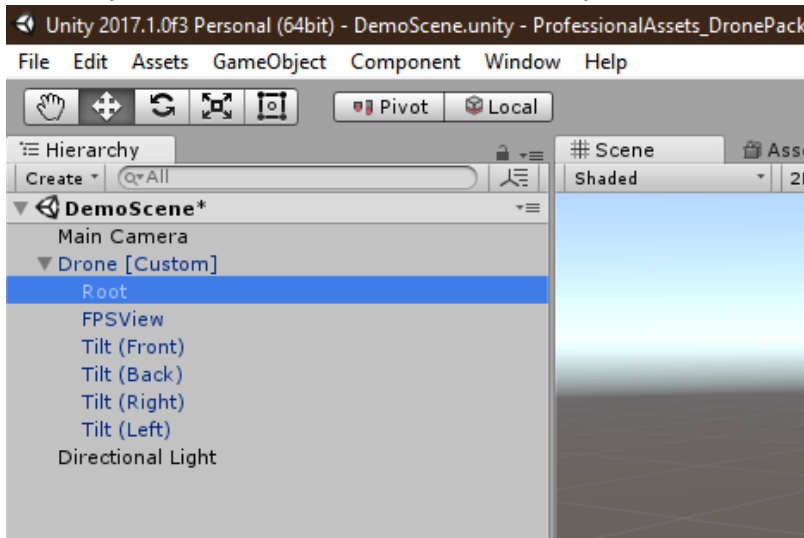
- 1) Navigate to ( Assets > ProfessionalAssets > DronePack > Prefabs ) and drag the "Drone [Custom]" prefab into your scene.



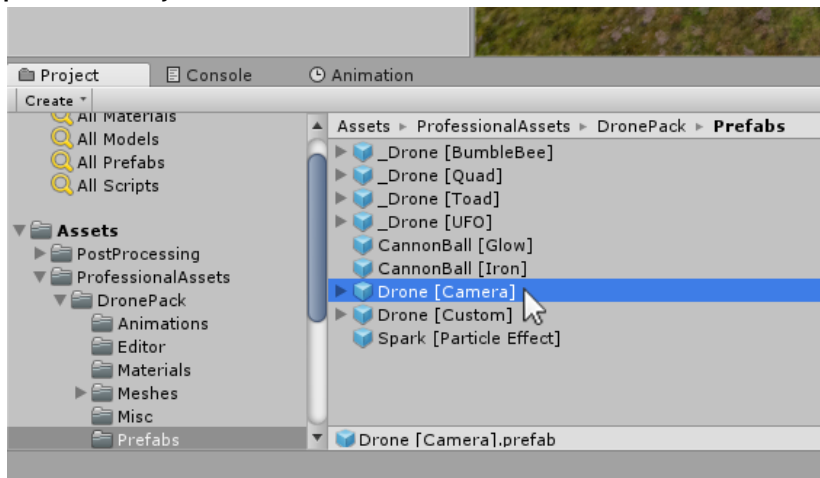
- 2) Drag/Import your own custom model or mesh into the scene.



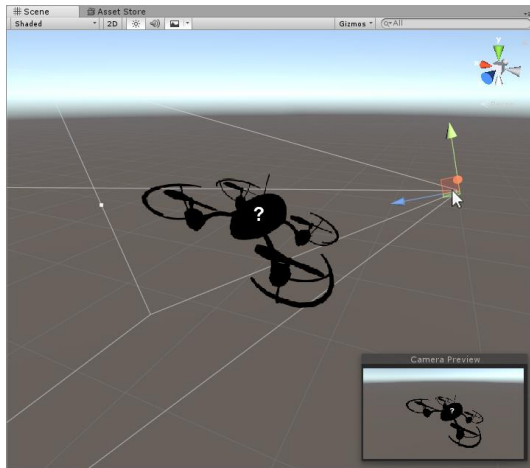
- 3) Parent your model to the Prefab Hierarchy under ( Drone [Custom] > Root )



- 4) Navigate to ( Assets > ProfessionalAssets > DronePack > Prefabs ) and drag the "Drone [Camera]" prefab into your scene.

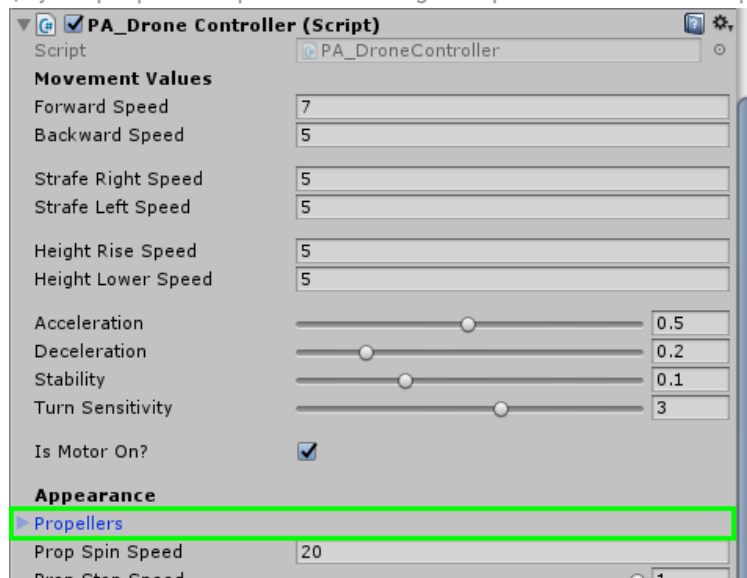


- 5) Position and Angle the camera prefab behind your custom drone.



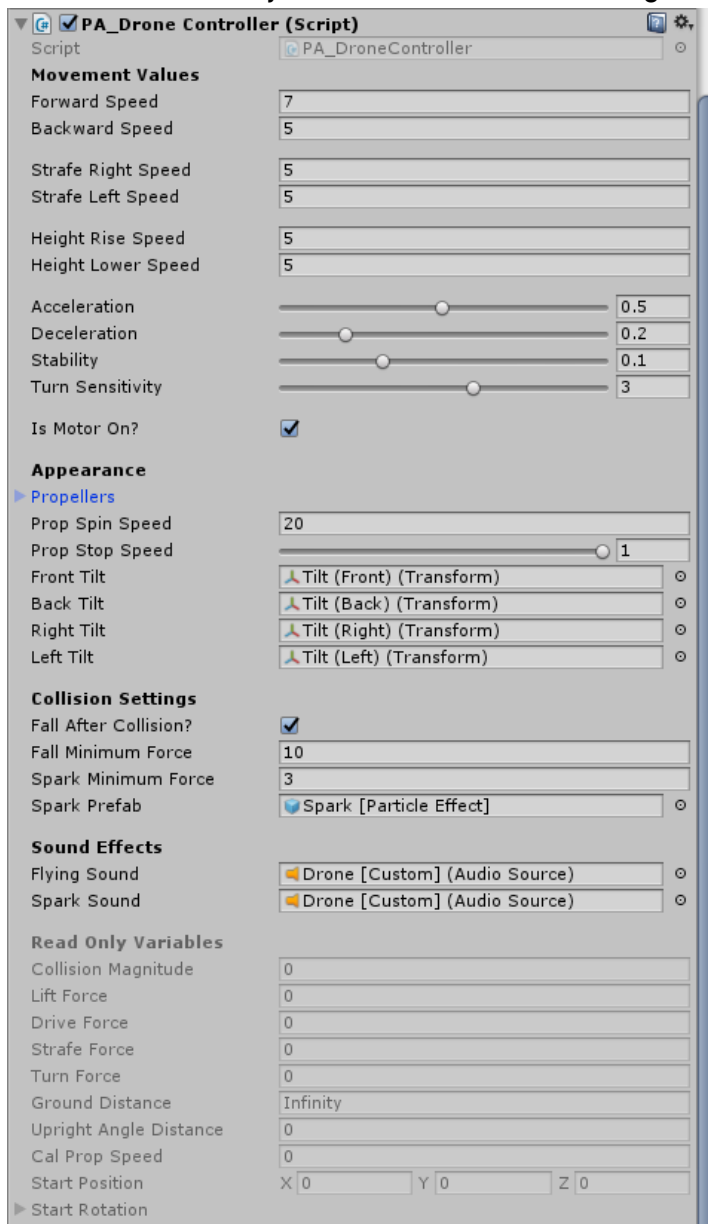
- 6) If your drone has propellers; drag them into the Propeller Array on the PA\_DroneController(script) this will make them spin on the Z Axis.

(if your propellers spin on the wrong axis; parent them to an empty GameObject that faces the right direction)

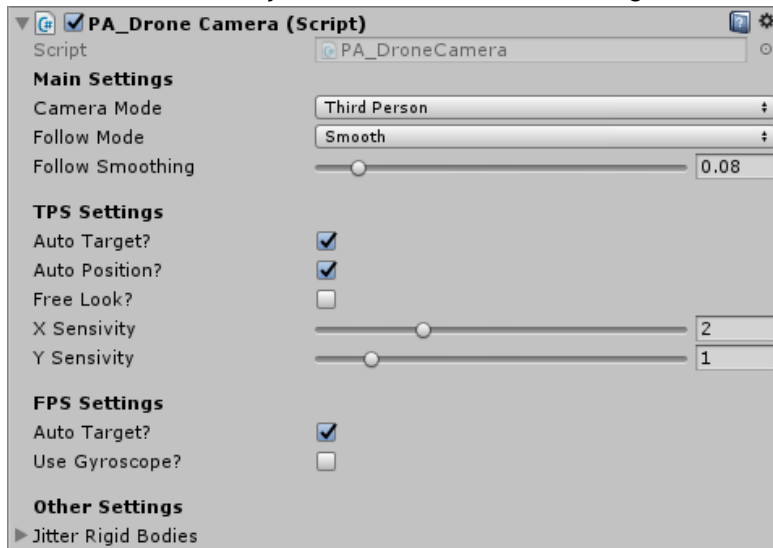




7) You can now modify the Drone Behavior settings on the PA\_DroneController(script).

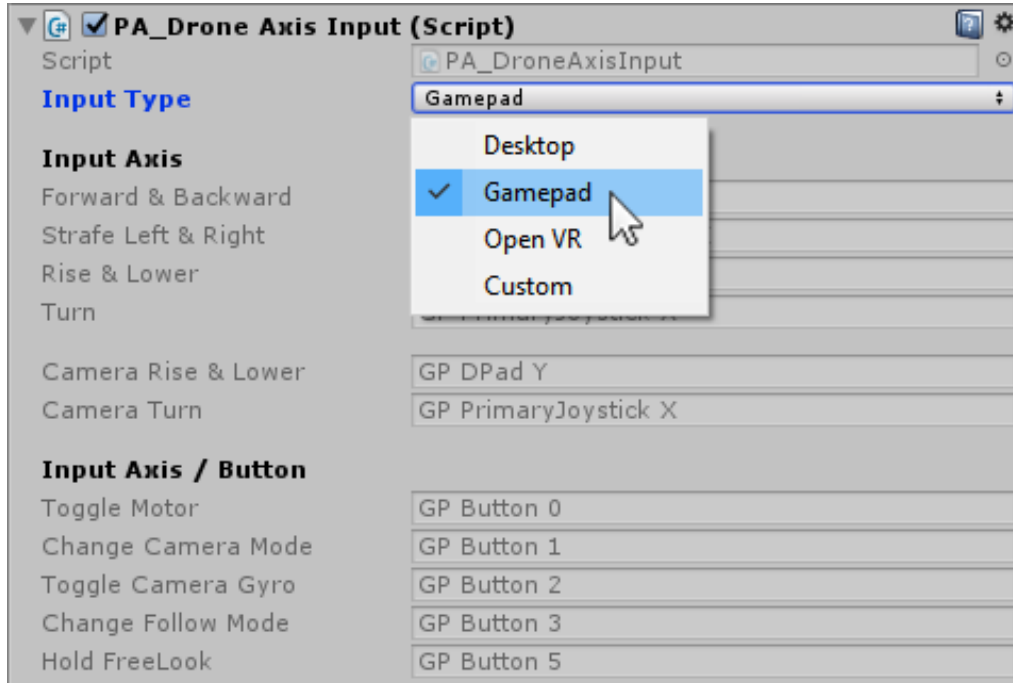


8) You can now modify the Drone Camera settings on the PA\_DroneCamera(script).



## How to setup Gamepad Controls – Video Tutorial : [ClickHere](#)

- 1) After you setup Drone Input and add a Drone Prefab to your scene, change the Input Type on the PA\_DroneAxisInput (script) from Desktop to Gamepad.

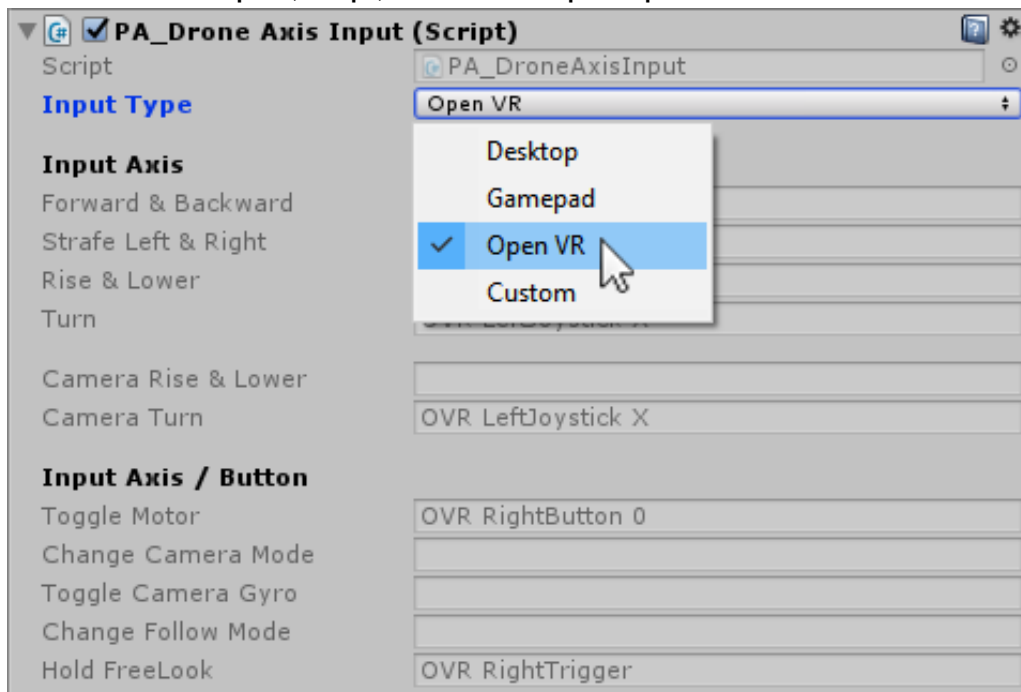


### ADDITIONAL INFO:

Please restart Unity if your gamepad controller is not responding.

## How to setup OpenVR Controls – Video Tutorial : [ClickHere](#)

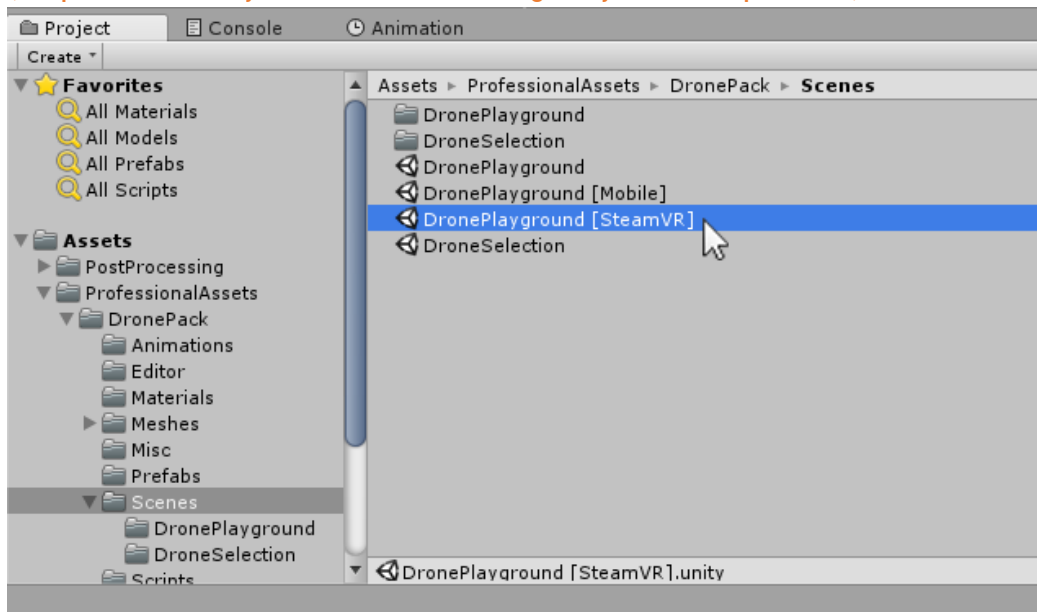
- 1) After you setup Drone Input and add a Drone Prefab to your scene, change the Input Type on the PA\_DroneAxisInput (script) from Desktop to Open VR.



### ADDITIONAL INFO:

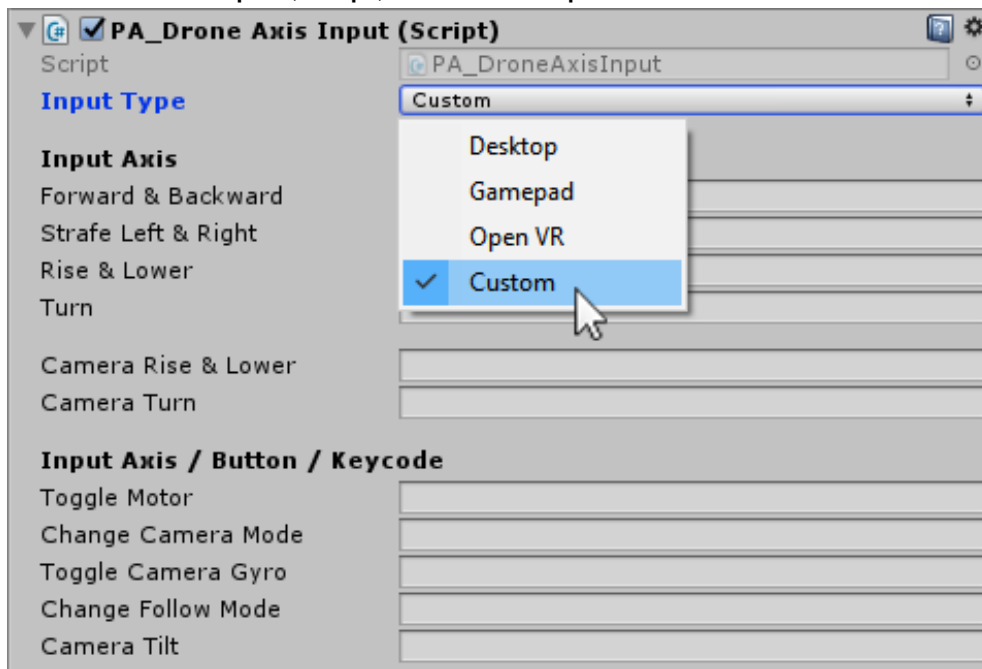
A demo scene using SteamVR controls is already setup, and can be found by Navigating to (ProfessionalAssets > DronePack > Scenes)

(Requires 3rd Party Asset : “SteamVR Plugin” by Valve Corporation)

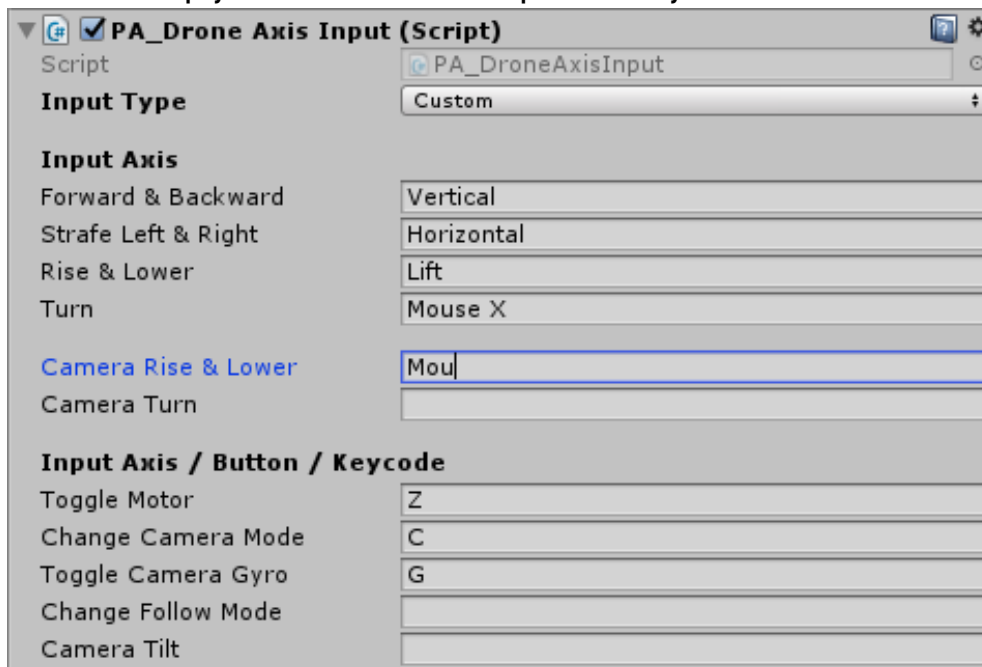


## How to setup Custom Controls - Video Tutorial : [ClickHere](#)

- 1) After you setup Drone Input and add a Drone Prefab to your scene, change the Input Type on the PA\_DroneAxisInput (script) from Desktop to Custom



- 2) Fill in the empty text fields with the Input Axes you want to use



## ADDITIONAL INFO:

You can find all the available Input Axes by navigating to (Edit > ProjectSettings > Input); you can also create new Input Axes and use them with the PA\_DroneAxisInput (script).

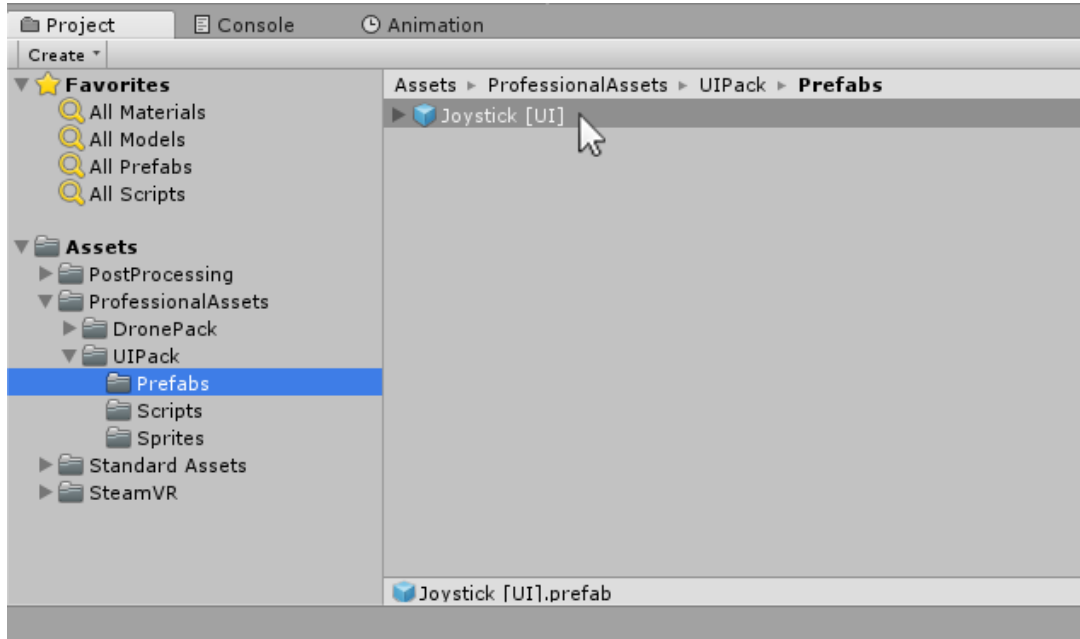
The screenshot shows the Unity Input Manager window. The 'Axes' section is expanded, and a new axis named 'Horizontal' is being configured. The 'Size' is set to 40. The 'Name' is 'Horizontal'. The 'Descriptive Name' and 'Descriptive Negative Name' fields are empty. The 'Negative Button' is 'left', and the 'Positive Button' is 'right'. The 'Alt Negative Button' is 'a', and the 'Alt Positive Button' is 'd'. The 'Gravity' is 3, 'Dead' is 0.001, and 'Sensitivity' is 3. The 'Snap' checkbox is checked, and the 'Invert' checkbox is unchecked. The 'Type' is 'Key or Mouse Button', the 'Axis' is 'X axis', and the 'Joy Num' is 'Get Motion from all Joysticks'. Below the configuration fields, a list of existing input axes is shown, including 'Vertical', 'Lift', 'Fire1', 'Fire2', 'Fire3', 'Jump', 'Mouse X', 'Mouse Y', 'Mouse ScrollWheel', 'Submit', 'Cancel', 'GP Button 0' through 'GP Button 9', 'GP PrimaryJoystick X', 'GP PrimaryJoystick Y', 'GP SecondaryJoystick X', 'GP SecondaryJoystick Y', 'GP DPad X', 'GP DPad Y', 'OVR LeftButton 0', 'OVR LeftJoystick Press', and 'OVR LeftTrigger'.

| Property                  | Value                               |
|---------------------------|-------------------------------------|
| Size                      | 40                                  |
| Name                      | Horizontal                          |
| Descriptive Name          |                                     |
| Descriptive Negative Name |                                     |
| Negative Button           | left                                |
| Positive Button           | right                               |
| Alt Negative Button       | a                                   |
| Alt Positive Button       | d                                   |
| Gravity                   | 3                                   |
| Dead                      | 0.001                               |
| Sensitivity               | 3                                   |
| Snap                      | <input checked="" type="checkbox"/> |
| Invert                    | <input type="checkbox"/>            |
| Type                      | Key or Mouse Button                 |
| Axis                      | X axis                              |
| Joy Num                   | Get Motion from all Joysticks       |

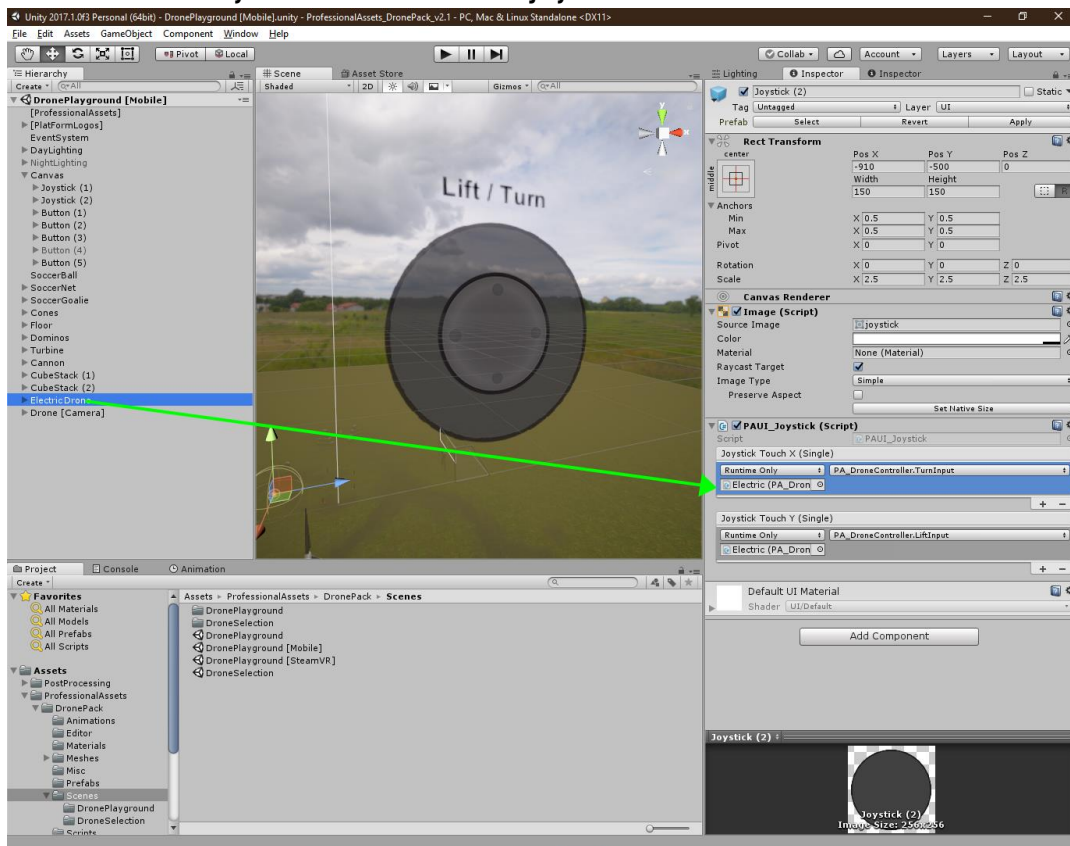
- ▶ Vertical
- ▶ Lift
- ▶ Fire1
- ▶ Fire2
- ▶ Fire3
- ▶ Jump
- ▶ Mouse X
- ▶ Mouse Y
- ▶ Mouse ScrollWheel
- ▶ Submit
- ▶ Cancel
- ▶ GP Button 0
- ▶ GP Button 1
- ▶ GP Button 2
- ▶ GP Button 3
- ▶ GP Button 4
- ▶ GP Button 5
- ▶ GP Button 6
- ▶ GP Button 7
- ▶ GP Button 8
- ▶ GP Button 9
- ▶ GP PrimaryJoystick X
- ▶ GP PrimaryJoystick Y
- ▶ GP SecondaryJoystick X
- ▶ GP SecondaryJoystick Y
- ▶ GP DPad X
- ▶ GP DPad Y
- ▶ OVR LeftButton 0
- ▶ OVR LeftJoystick Press
- ▶ OVR LeftTrigger

## How to setup Mobile Controls - Video Tutorial : [ClickHere](#)

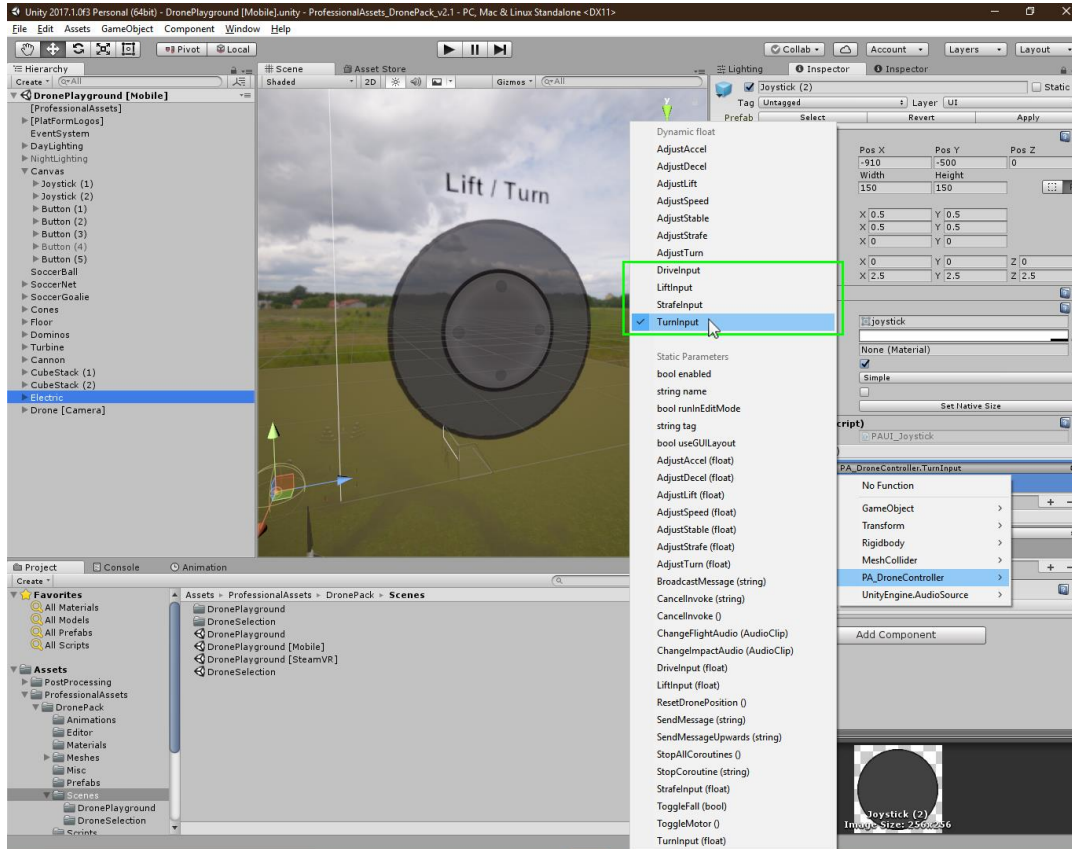
- 1) After you add a Drone Prefab to your scene, Navigate to (ProfessionalAssets > UIPack > Prefabs) and drag the Joystick [UI] prefab onto your scene's Canvas



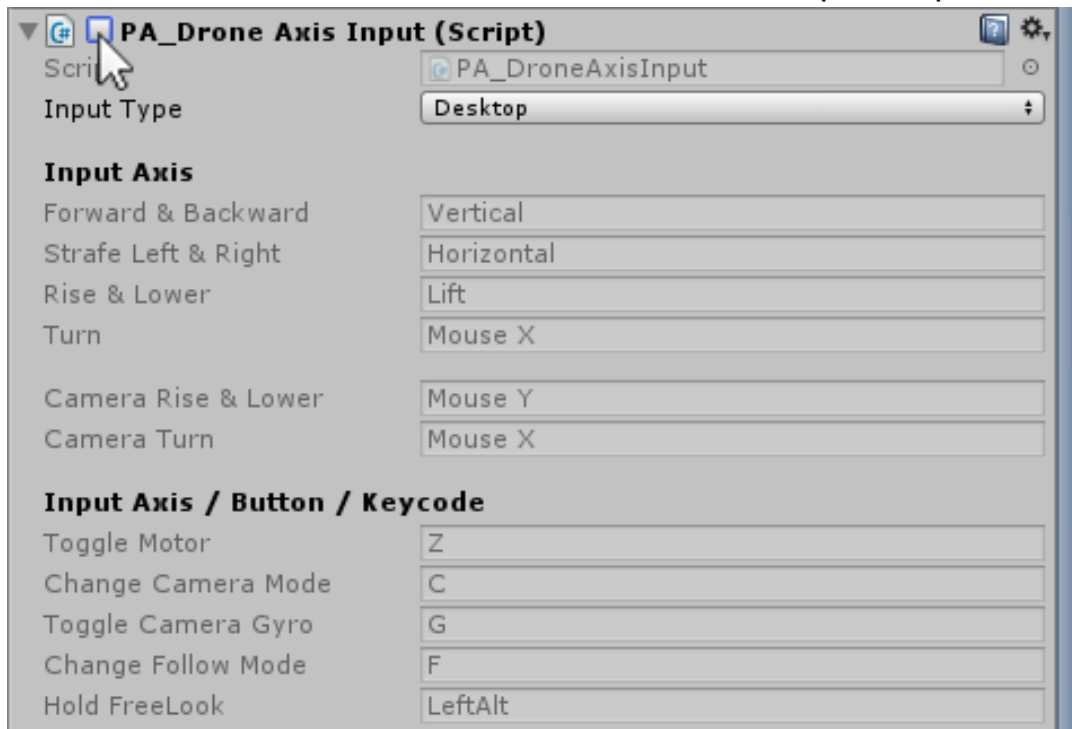
- 2) Now drag and drop your drone into one of the two Event Systems on the PAUI\_Joystick, The first Event System is linked to the joystick's X Axis, the second is linked to the Y Axis.



- 3) Select which property you'd like to control on the PA\_DroneController(script); DriveInput, LiftInput, StrafeInput, & TurnInput are all valid properties to control with the joysticks.

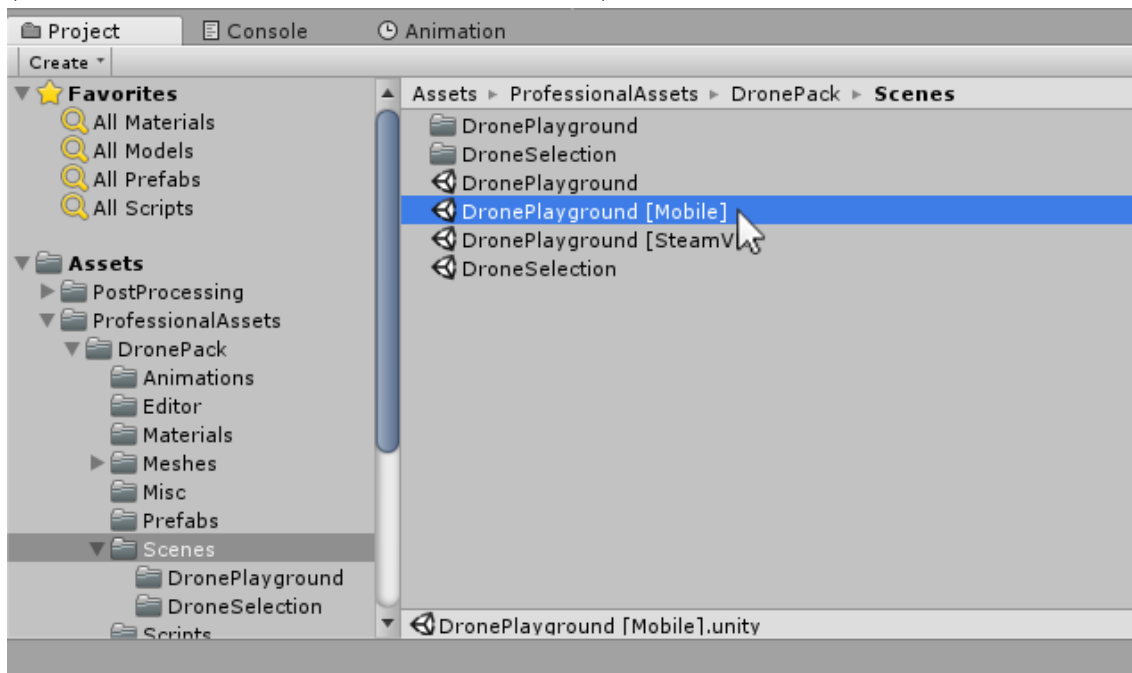


- 4) Make sure to either disable or remove the PA\_DroneAxisInput (script) from the Drone.



## ADDITIONAL INFO:

A demo scene using Mobile controls is already setup, and can be found by Navigating to (ProfessionalAssets > DronePack > Scenes)





# TROUBLESHOOTING + FAQ's:

**Q: WHY IS THE UFO PINK IN THE DEMO SCENE'S NIGHTMODE?**

**A:** You need to import unity's (Standard Assets / Effects) to allow light projectors to work in the night scene.

**Q: WHY DO SOME RIGIDBODIES LOOK JITTERY WHEN USING FIRM/SMOOTH CAMERA MODE?**

**A:** Because of the dsync between Update, Late Update, and Fixed Update timelines some rigidbodies will look jittery when using different camera modes on the drone. To fix this add the affected Rigidbodies to the 'Jitter Rigidbodies' Array on the 'PA\_DroneCamera (script)'.

**Q: THE DRONE IS NOT RESPONDING TO MOBILE CONTROLS!**

**A:** Make sure to either disable or remove the PA\_DroneAxisInput (script) from the Drone.

**Q: HOW LARGE CAN THE DRONES BE SCALED?**

**A:** Drones can be scaled to any size and/or mass but they behave best when their size is smaller than 2 meters (size of two unity standard cubes) and mass is between 1-10.

**Q: HOW DO I REPLICATE THE WIND EFFECT USED IN THE PLAYGROUND DEMO?**

**A:** Drones can be affected by any forces a normal rigidbody would be; so adding a directional force to the drones when inside a trigger collider will give the illusion of wind.

**Q: WHY DO SOME FILENAMES START WITH UNDERSCORE?**

**A:** The underscore at the beginning of files related to drones keeps them organized above all other files (for easier access).

**Q: I'M GETTING THE ERROR: You are trying to import an asset which contains a global game manager.**

**A:** This error is harmless, it is caused when importing the InputManager file. This file is used when setting up Drone Input, however if you don't want to use this file you can delete it and the error will go away.

**If you have any more questions about the pack, suggestions for future updates, or questions about other asset packs, please contact us through this email address:**

**[ProfessionalAssetsUnity@gmail.com](mailto:ProfessionalAssetsUnity@gmail.com)**

## BONUS FEATURES:

- The SteamVR scene uses the Vive touchpads to move the drone, but you can also control it with a Physical 3D Joystick which can be found by Navigating to (ProfessionalAssets > DronePack > Prefabs) and works very similar to the 2D UI Joystick.



(more info on how it works can be found inside the source code)

- The PA\_DroneCamera (script) has special functions that can be called by Unity's UI / Event systems. Check the DronePlayground [Mobile] scene for references.
- The Physics Playground scene and the assets inside can work without the drone pack, if you'd like, use it to test your own assets.
- If you delete or overwrite the InputManager file by mistake; you can re-download it here: [ClickHere](#).

***Also, don't forget...***

**Please Leave Your Review!!**

**[ClickHere](#)**

**Thank You!**