

Phantom 3 model - cycle and Eevee ready

Documentation

How to import the phantom 3 model in your scene

-The model is composed in several parts.

For 2.8x, Use the file "DJI_phantom3_v2.8_BM_03". Link/append the collection "phantom_3".

For older 2.7x, Use the file "DJI_phantom3_BlenderMarket_02". Everything is grouped under the name "phantom_full". To link/append the model in your scene once in the browser of the blend search for "full" in the blend. You will find the group that contains everything double click on it or select it then import.

Or for both

-You can also open the .blend file, select everything in the layer 1 and copy/paste to your scene.

How the model material is set up and how to interact with it

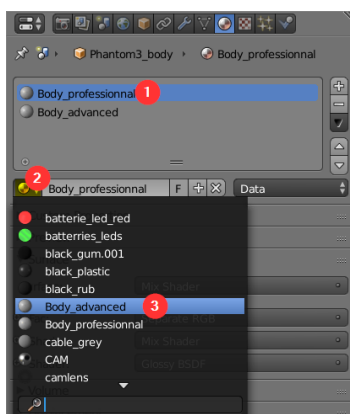
The model is composed with several shaders (26).

The two main shaders are the body part and the camera part.

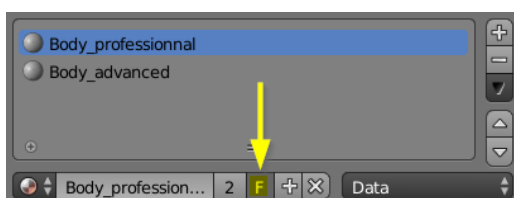
The body comes with two material attached (one for the professional edition and the other for the advanced edition) both materials have by default a different 4k bump texture.

The camera part keeps the same textures for both editions.

If you want to change from the professional edition ("Body_advanced", the gold one, set by default) to the advanced edition (silver) just select the body, then in materials switch to advanced edition ("Body_advanced").



In order to keep the unused material in the scene you must enable the fake user to prevent blender from erasing it.



2.7x file note:

there is no need to keep both material attached to the body, the second slot isn't assigned to the mesh at all. It's only there to assure that blended import correctly all material. You can enable fake user for both then delete the second slot

Shader tweak

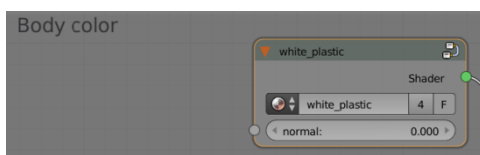
The shaders can be easily tweaked.

Say you want a custom color for the plastic body instead of the original white.

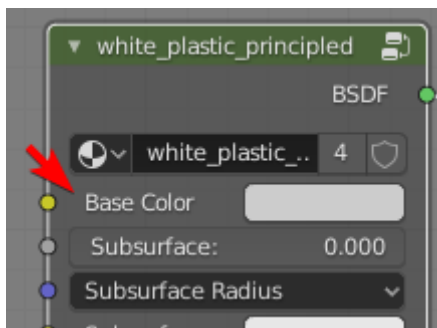
Select the body

For the 2.7x file : Just open the group called "phantom plastic" (select it in the node editor then toggle with tab)

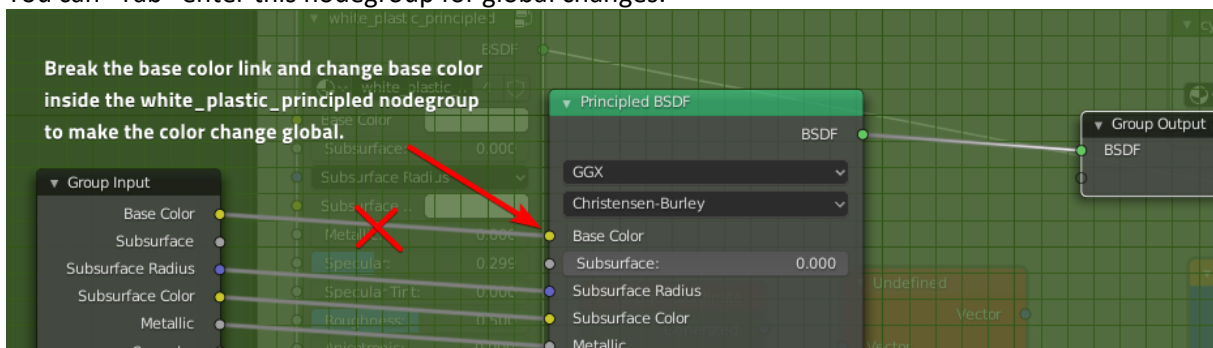
Then change the input color node. You can even replace it with a custom shader, just be sure to make your change inside the group to propagate the shader to every part concerned in the model that uses the same nodegroup.



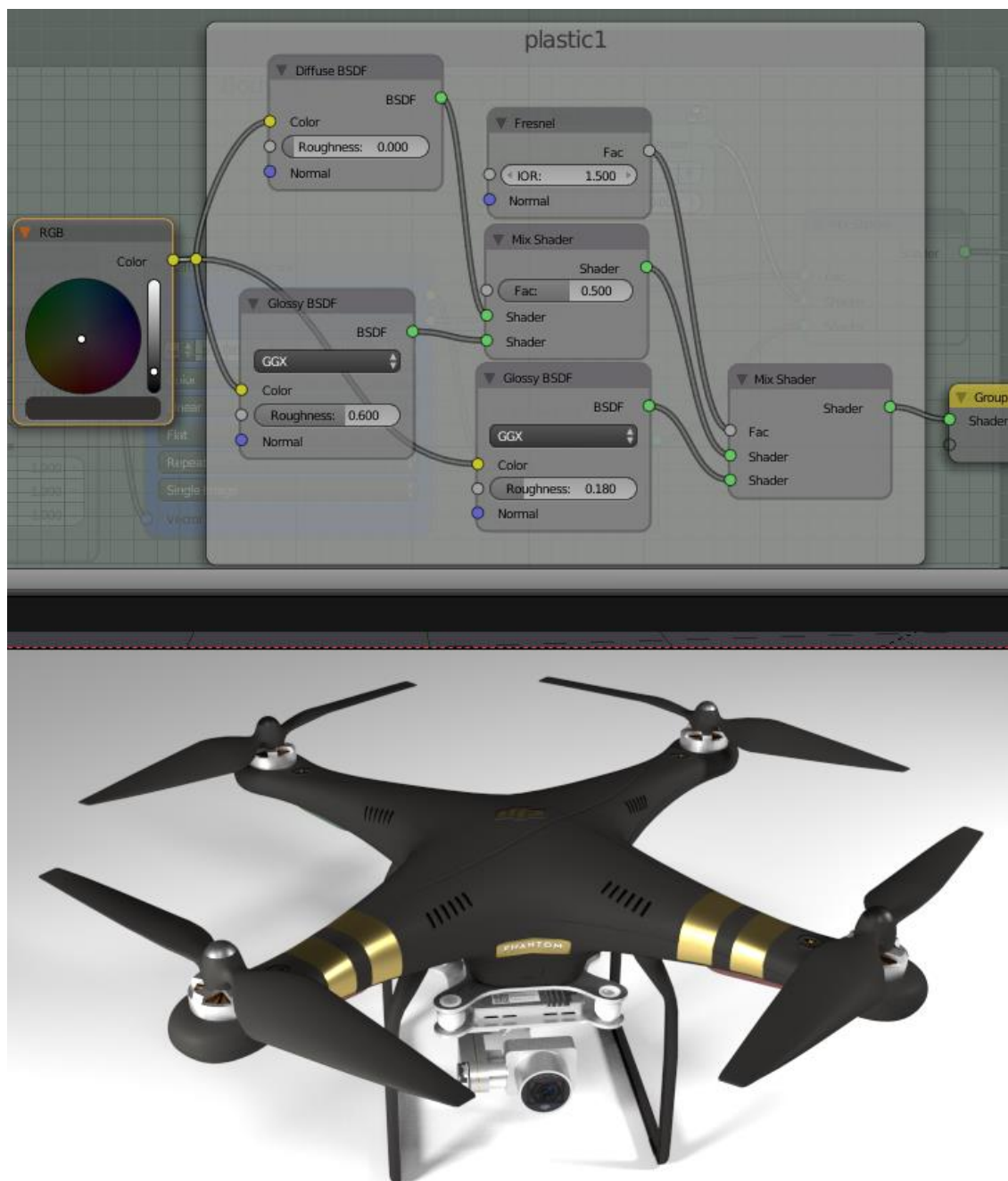
Same for 2.8x file : There is a nodegroup called "white plastic principled".



You can "Tab" enter this nodegroup for global changes.



Examples when changing color inside nodegroup :



How to interact with the model's modifiers for better scene performance

There are few modifiers in the model; the only one worth notice is the subsurf modifier of the body that will allow you a gain in performance. By default the level is set to 2. If the drone is always far away from the camera in your scene pass it to 1 or disable it. (From 2 to 1 you will gain 40k polys). Other object has subsurf that you may want to low down but the gain isn't that significant.

Tips:

If you want the propeller to appear realistic in the render, keep a motion blur between 0.1 and 0.4

Usefull information for Realism

The rotation speed of the propeller for the real model is 4500 rpm at average speed (idle in midair) up to 9300 rpm at full throttle.

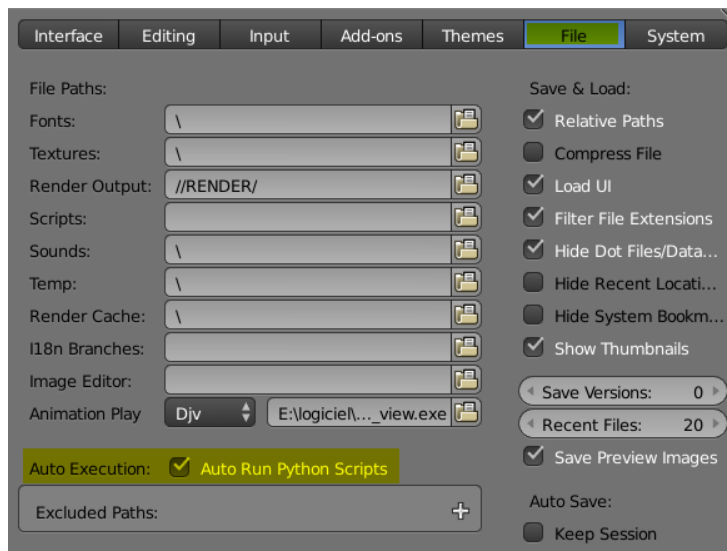
If you don't need variation in the rotation, you can setup a cycle in the rotation in the f-Curve.

Troubleshooting (concern only the file for 2.7x version, 2.8x version doesn't use drivers)

If the propellers do not follow when you rotate the propeller controller you may have denied access to automatic Python execution (that affect drivers too) in your user preferences.

For the propeller setup to work correctly you need to activate it.

File > user preferences > under system tab > tick "auto launch Python script"



Else you have to animate each propeller separately

If you just want to free the propellers from the driver. For each propeller right click in the violet zone in the transform panel (Transform > rotate field > clear driver)

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