

Realistic Car Shaders - Mobile

By: Skril Studio



Thank you for purchasing Realistic Car Shaders – Mobile.

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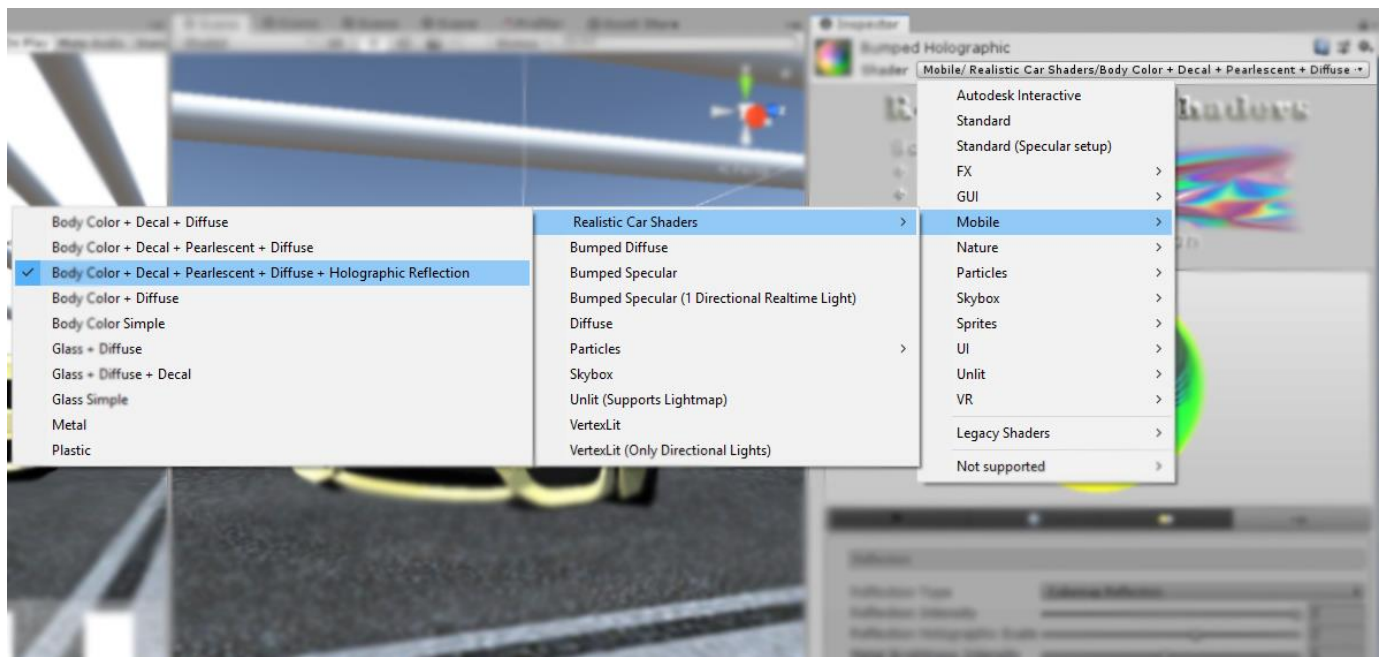
Package includes:

- 12 Shaders, from which are:
 - 5 made for vehicle paint (simple and complex shaders)
 - 3 made for glasses (simple and complex shaders)
 - 1 made for metals (aluminium, chrome, stainless steel)
 - 1 made for plastics
 - 1 made for wheel blurring effect
 - 1 made for car lights (headlights and taillights)
- 92 Premade, ready to use materials + 89 materials for demo scenes
- 50 textures (some are normal maps)
- 3 Cubemaps
- 6 Demo scenes
- One 3D model a sports car
- UI color picker used for demo scenes, licensed under MIT license.

Source: https://github.com/SnapshotGames/cui_color_picker

(Color picker's source code is modified to make it work with the demo scenes and to save the picked color's value)

Shaders location in the editor for new materials:



Getting Started:

1. *Diffuse, Flakes/Carbon, and Decal* textures **must have a texture**. Without it it will give a blank white material. If you don't want to use any of these textures, use the included blank texture named as „0.png” or choose a simpler RCS shader that not need any of this textures.

Diffuse: transparent parts of the diffuse texture are colorable, non transparent part are ignore reflection. This makes it good to add some dirt or rust effect to your vehicle. Diffuse textures bumpmap is good multiple purposes. For example it can add the orange peel effect to your car paint using one of my premade bumpamps made fot this. It can also be used to add wet effect (for example during rain or after rain / car wash), for realistic results also apply more reflection to the material. For matte look materials diffuse bumpmaps are not visible.

Flakes/Carbon: perfect for adding a flakes or carbon look with bump map/ normal map between *Diffuse* and *Decal* layers.

Decal: transparent and black parts are not colorable of the texture, white parts are the best to color your decals, colored parts are give mixed results with your choosed color. Try out the included decal texture to understand how does the decals work.

2. Bump map / normal map texture can be leaved as „None”. This textures will scale with it's main texture, when *UV Scale* value is changed, because it have the same UV value.

3. There are four options for reflections: *Rendered Texture, Cubemap, Both, and Turned Off*.

- **Rendered Texture Reflection**: this uses a camera that renders to a texture and this texture is used as reflection. In this package there is a prefab for this camera named as *Reflection Main* that have all the required scripts for best results (read step 5. for more about using *Reflection Main* prefab). Camera settings are setted for best results, framerate can be limited in Reflection Cam Limiter script. This script can also be disabled to get Reflection Camera's native FPS for reflections. *Rotate To Camera* script rotates Reflection Camera to the Main Camera to get more accurate reflections. It will automaticaly detect the Main Camera of the scene if it is Tagged as „MainCamera”. Some car controller don't have this tag on their Main Camera, then you need to drag and drop the Man Camera by hand on *Rotate To Camera* script. This will give you „realtime” reflection on mobile devices, but for nicer results use *Both Reflection*. This reflections are not 100% accurate, bit it looks way better than a regular, boring cubemap. Note that using *Reflection Main* prefab may give 10 Batches in your scene, depending on the Frame Limiter's settings.

- **Cubemap Reflection**: perfect for ingame menu, or garage scenes where you can look around your vehicle.

- **Assigned Cubemap Reflection**: will use the scene's assigned cubemap.

- **Both Reflections**: this uses both *Rendered Texture* and *Cubemap* for reflection. In this setup for better results I recommend it to bake a cubemap for your scene that only contain terrain/road and skybox, because buildings and other objects will be rendered by *Reflection Main* prefab. Video tutorial: https://www.youtube.com/watch?v=AEEax_tzRu8

This will give you „realtime reflection” on mobile devices. This reflections are not 100% accurate, but it looks way better than a regular, boring cubemap.

- **Turned Off**: this turns off all type reflections on the material, giving you a mate effect. At this option the shader skip its reflection part, which save some performance.

4. Vehicles must be on their own's Layer if **Rendered Texture Reflection** or **Both Reflections** are used and *Reflection Main* prefab's camera *Culling Mask* must uncheck this layer. (Read lower for video tutorials).

5. When using **Rendered Texture Reflection** or **Both Reflections** in your material, drag and drop *Reflection Main* prefab on your Player's car, but only when Player in your scene can't change its car. In a scene where Player can change its car, drag and drop *Reflection Main* prefab on main camera and make sure that it stays Horizontally during gameplay (for nicer reflections), also position this prefab approximately where players car going to be during gameplay. (Read lower for video tutorials).

You can change *Rendered_Texture*'s Wrap Mode: *Repeat* and *Mirror* wrap modes looks the best. It's on your taste which one you likes more.

For interior scenes like a showroom I recommend using cubemaps. Using **Rendered Texture Reflection** for interior scenes is not necessary.

Video Tutorials for setting up realtime reflections for mobile devices:

Unity Standard Assets car:

https://www.youtube.com/watch?v=M8HvpwLF_Bs

Realistic Car Controller:

<https://www.youtube.com/watch?v=RNnNXsCf57Q>

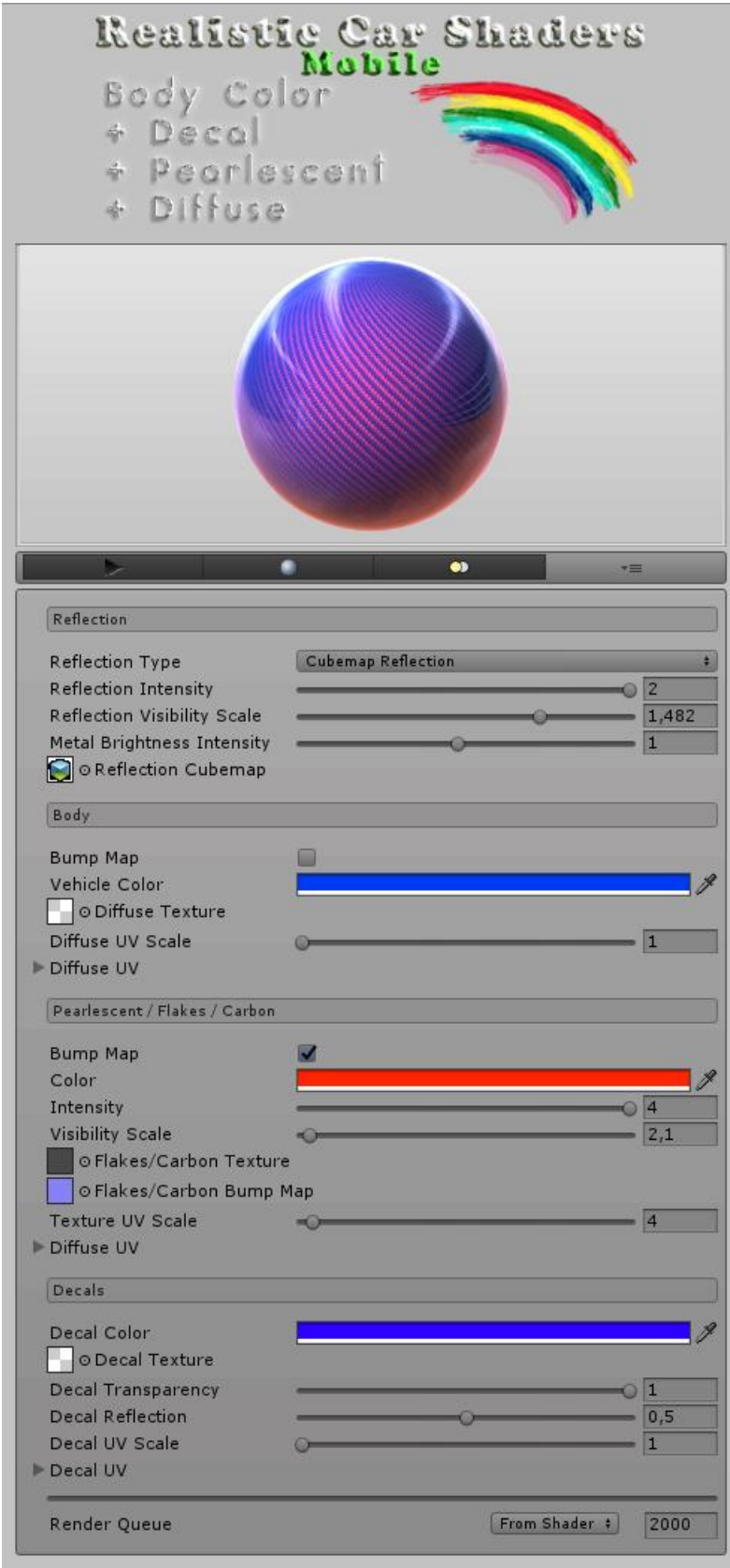
Tutorial for scenes where player can change its car during gameplay (~GTA style), demonstrated in Edy's Vehicle Physics scene:

https://www.youtube.com/watch?v=u5Ragyal_bA

How to Bake Custom Cubemap:

https://www.youtube.com/watch?v=AEEax_tzRu8 and <https://www.youtube.com/watch?v=3vtHWTLF7bk>

Pearl/Flakes/Carbon, Body, Decal Shader



This shader have a feature to add Pearl: Flakes or Carbon with Body paint Decals.

Reflection:

Reflection Type: (settings: Rendered Texture Reflection, Cubemap Reflection, Assigned Cubemap Reflection, Both Reflection, Turned Off) let you choose the reflection's type. Rendered Texture Reflection can give you fake realtime reflections effect. Read above in **Getting Started** for more information about how to setup and use this feature.

Reflection Intensity: sets the reflections intensity.

Reflection Visibility Scale: the scale of reflection's visibility.

Metal Brightness Intensity: modify the shader's brightness if *Vehicle Color* is not set to black color. This can be used to add a darker effect to your vehicle's color, good for dark, night scenes. 1.0 is default value.

Rendered Texture: texture rendered by „*Reflection Main*” prefab and used for fake realtime reflections. Read above in **Getting Started** for more information about how to setup and use this feature.

Reflection Cubemap: set here the shader's reflection cubemap.

Body:

Bump Map: Diffuse texture's bump map and it can be turned on and off. Add bump effect to your diffuse texture, for example rust, dirt, damages or scratches. It can also be used to add wet, rain, or orangepeel effect to the shader's reflection. Also good for to add bumped wood effect for floors, furnitures, ... etc textures.

Vehicle Color: sets the shaders body color, only change colors on diffuse texture's transparent part.

Diffuse Texture: sets the diffuse texture, it can be used to add rust, dirt, damage, scratches,...etc effects. It MUST have a texture, unless it will give a blank white shader. Transparents parts of the used texture are paintable, non transparent parts are not paintable and not getting any reflections, but it does get bumpmap effect. To not use any effect, just use the included „*0.png*” texture (it is an empty transparent png texture).

Diffuse UV Scale: it sets the diffuse texture's scale. 1 value will give the texture's original size, 100 will give it's 100x size.

Diffuse UV: it can be used to add custom UV size for diffuse texture by change it's *Tiling* and *Offset X* and *Y* values. It can be also used to add bigger scale size for diffuse texture if *Diffuse UV Scale's* 100x size is not enough for you.

Pearlescent / Flakes / Carbon:

Bump Map: „*Flakes/Carbon*” texture's bump map, can be used to add bumped „3D” effect for carbon textures or it can be used to add „flakes” effect to your shader.

Color: it adds a secondary color to the shader, perfect for „Pearlescent” like body paints. The secondary color's size and intensity can be tweaked by the values explained bellow. It can be also used to create pearlescent colored carbon body.

Intensity: sets the intensity if the secondary color and for the used textures like carbon or pearlescent textures.

Visibility Scale: sets the visibility scale for secondary color, carbon or pearlescent texture. By tweaking this value you can get the wished result for a two colored body or for a fully carbon material body, or set flakes visibility scale.

Flakes/Carbon Texture: diffuse texture for flakes or for carbon textures (it can be used for other textures too if you have a different idea). This texture's color can be changed even in non transparent areas.

Flakes/Carbon Bump Map: bump map texture for flakes or for carbon texture, it can be used to add a „3D“ carbon effect for carbon body materials.

Texture UV Scale: it sets the *Flakes/Carbon Texture's* scale. 1 value will give the texture's original size, 100 will give it's 100x size.

Diffuse UV: it can be used to add custom UV size for *Flakes/Carbon Texture* by change it's *Tiling* and *Offset X* and *Y* values. It can be also used to add bigger scale size for *Flakes/Carbon Texture* if *Texture UV Scale's* 100x size is not enough for you.

Decals:

Decal Color: sets the decal's color, only non-transparent parts of the texture get this color. Texture's white area will give exactly the choosed color, other colors of the texture will mix with the choosed color.

Decal Texture: texture's transparent parts are not paintable, all other parts of the decal texture are yes. Works the best with *.png decals.

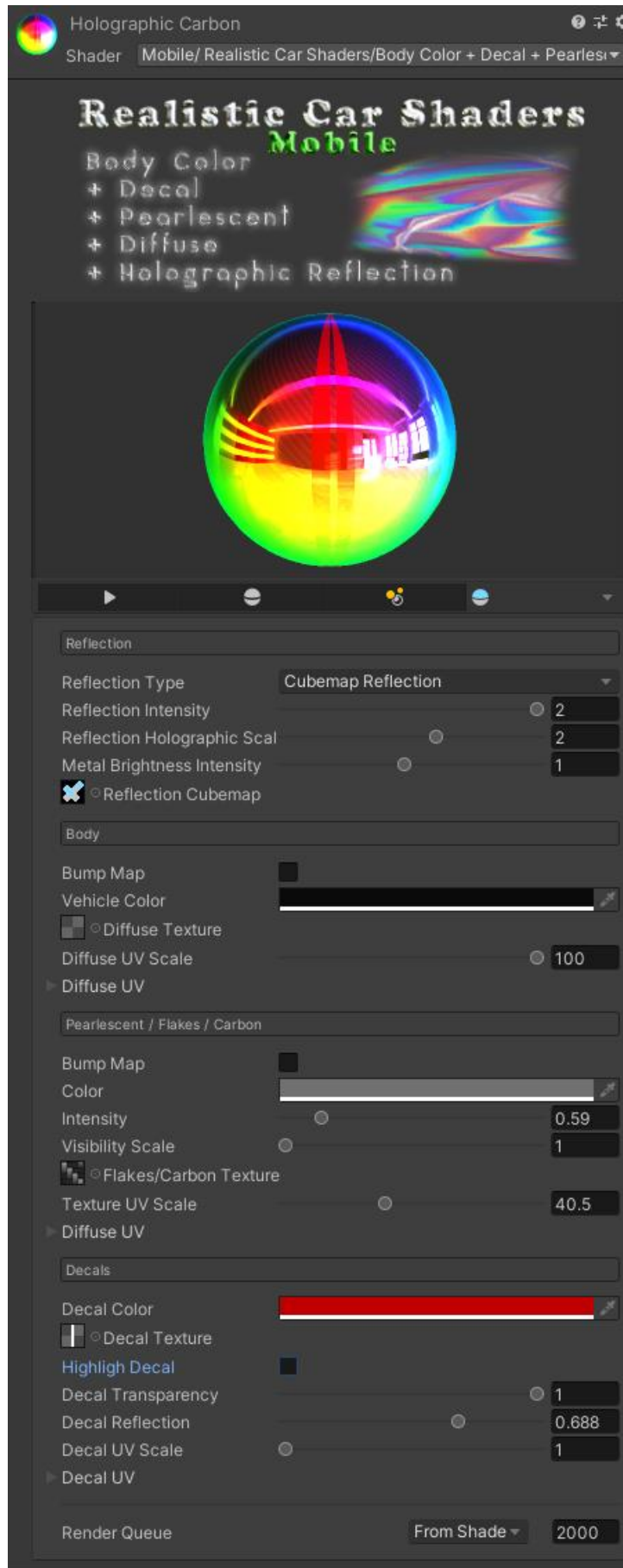
Decal Transparency: sets the decal's transparency, the smallest possible value is 0.1f.

Decal Reflection: sets the decal's reflection, 0 = mate decals 1 = fully reflective. Default value is 0.5f.

Decal UV Scale: it sets the decal texture's scale. 1 value will give the texture's original size, 100 will give it's 100x size.

Decal UV: it can be used to add custom UV size for decal texture by change it's *Tiling* and *Offset X* and *Y* values. It can be also used to add bigger scale size for decal texture if *Decal UV Scale's* 100x size is not enough for you.

Holographic Reflection Shader:



Holographic Reflections Shader have the same features as the Pearlescent Shader but it's reflections are have RGB colors effect which gives the holographic reflections effect. In this shader reflections are can't be turned off.

Reflection:

Reflection Type: (settings: Rendered Texture Reflection, Cubemap Reflection, Assigned Cubemap Reflection, Both Reflection) let you choose the reflection's type. Rendered Texture Reflection can give you fake realtime reflections effect. Read above in **Getting Started** for more information about how to setup and use this feature.

Reflection Intensity: sets the reflections intensity.

Reflection Holographic Scale: the scale of holographic reflection.

Metal Brightness Intensity: modify the shader's brightness if *Vehicle Color* is not set to black color. This can be used to add a darker effect to your vehicle's color, good for dark, night scenes. 1.0 is default value.

Rendered Texture: texture rendered by „*Reflection Main*” prefab and used for fake realtime reflections. Read above in **Getting Started** for more information about how to setup and use this feature.

Reflection Cubemap: set here the shader's reflection cubemap.

Body:

Bump Map: Diffuse texture's bump map and it can be turned on and off. Add bump effect to your diffuse texture, for example rust, dirt, damages or scratches. It can also be used to add wet, rain, or orangepeel effect to the shader's reflection. Also good for to add bumped wood effect for floors, furnitures, ... etc textures.

Vehicle Color: sets the shaders body color, only change colors on diffuse texture's transparent part.

Diffuse Texture: sets the diffuse texture, it can be used to add rust, dirt, damage, scratches,...etc effects. It MUST have a texture, unless it will give a blank white shader. Transparents parts of the used texture are paintable, non transparent parts are not paintable and not getting any reflections, but it does get bumpmap effect. To not use any effect, just use the included „*0.png*” texture (it is an empty transparent png texture).

Diffuse UV Scale: it sets the diffuse texture's scale. 1 value will give the texture's original size, 100 will give it's 100x size.

Diffuse UV: it can be used to add custom UV size for diffuse texture by change it's *Tiling* and *Offset X* and *Y* values. It can be also used to add bigger scale size for diffuse texture if *Diffuse UV Scale's* 100x size is not enough for you.

Pearlescent / Flakes / Carbon:

Bump Map: „*Flakes/Carbon*” texture's bump map, can be used to add bumped „3D” effect for carbon textures or it can be used to add „flakes” effect to your shader.

Color: it adds a secondary color to the shader, perfect for „Pearlescent” like body paints. The secondary color’s size and intensity can be tweaked by the values explained bellow. It can be also used to create pearlescent colored carbon body.

Intensity: sets the intensity if the secondary color and for the used textures like carbon or pearlescent textures.

Visibility Scale: sets the visibility scale for secondary color, carbon or pearlescent texture. By tweaking this value you can get the wished result for a two colored body or for a fully carbon material body, or set flakes visibility scale.

Flakes/Carbon Texture: diffuse texture for flakes or for carbon textures (it can be used for other textures too of you have a different idea). This texture’s color can be changed even in non transparent areas.

Flakes/Carbon Bump Map: bump map texture for flakes or for carbon texture, it can be used to add a „3D” carbon effect for carbon body materials.

Texture UV Scale: it sets the *Flakes/Carbon Texture*’s scale. 1 value will give the texture’s original size, 100 will give it’s 100x size.

Diffuse UV: it can be used to add custom UV size for *Flakes/Carbon Texture* by change it’s *Tiling* and *Offset X* and *Y* values. It can be also used to add bigger scale size for *Flakes/Carbon Texture* if *Texture UV Scale*’s 100x size is not enough for you.

Decals:

Decal Color: sets the decal’s color, only non-transparent parts of the texture get this color. Texture’s white parts are give exactly the chosed color, other colors of the texture will mix with the choosed color.

Decal Texture: texture’s transparent parts are not paintable, all other parts of the decal texture are yes. Works the best with *.png decals.

Highlight Decal: highlight the decal’s color and it will also outline the decal texture.

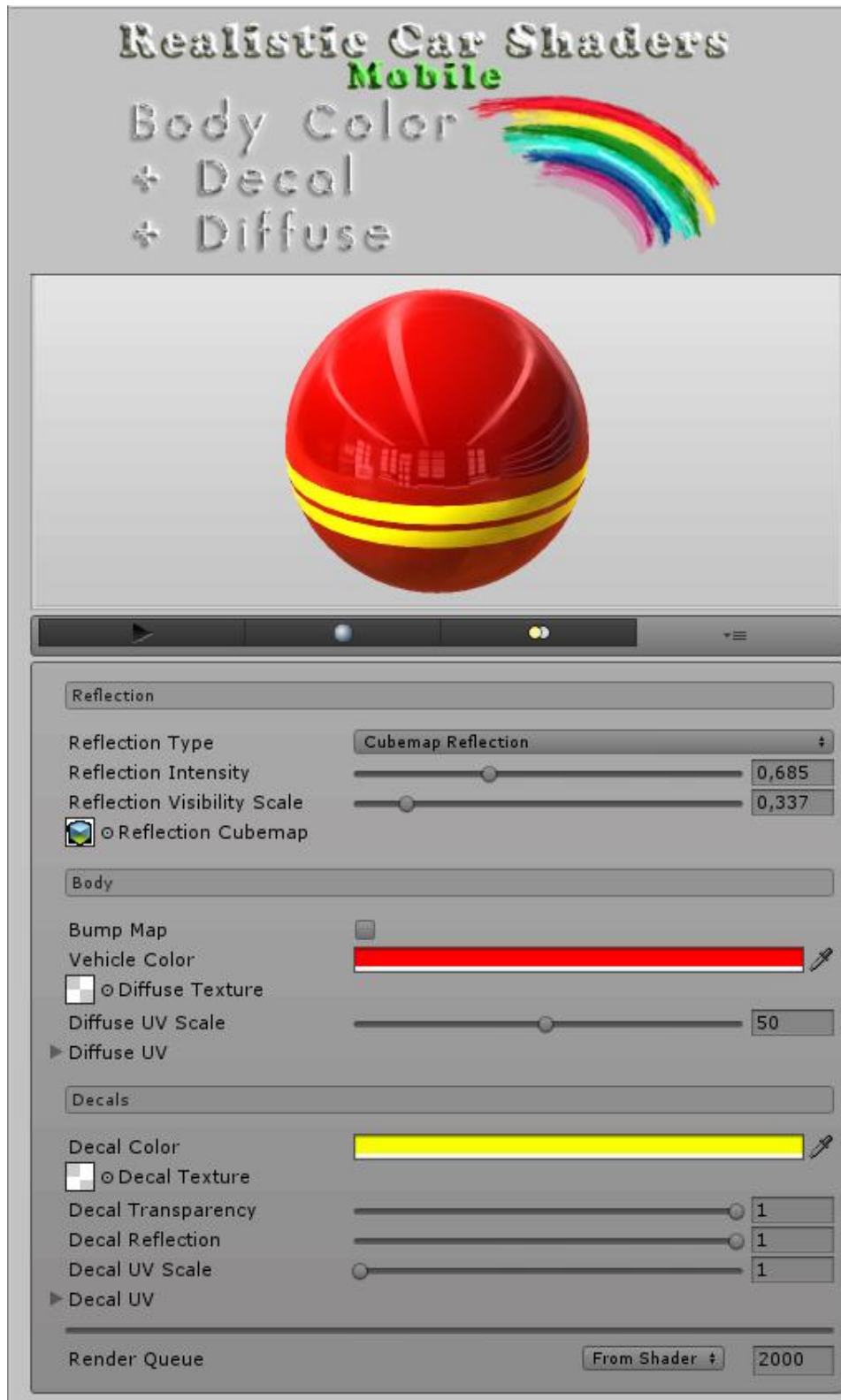
Decal Transparency: sets the decal’s transparency, the smallest possible value is 0.1f.

Decal Reflection: sets the decal’s reflection, 0 = mate decals 1 = fully reflective. Default value is 0.5f.

Decal UV Scale: it sets the decal texture’s scale. 1 value will give the texture’s original size, 100 will give it’s 100x size.

Decal UV: it can be used to add custom UV size for decal texture by change it’s *Tiling* and *Offset X* and *Y* values. It can be also used to add bigger scale size for decal texture if *Decal UV Scale*’s 100x size is not enough for you.

Body Paint and Decal Shader:



This shader is good for Body paint, Decals and Diffuse texture.

Reflection:

Reflection Type: (settings: Rendered Texture Reflection, Cubemap Reflection, Assigned Cubemap Reflection, Both Reflection, Turned Off) let you choose the reflection's type. Rendered Texture Reflection can give you fake realtime reflections effect. Read above in **Getting Started** for more information about how to setup and use this feature.

Reflection Intensity: sets the reflections intensity.

Reflection Visibility Scale: the scale of reflection's visibility.

Rendered Texture: texture rendered by „*Reflection Main*“ prefab and used for fake realtime reflections. Read above in **Getting Started** for more information about how to setup and use this feature.

Reflection Cubemap: set here the shader's reflection cubemap.

Body:

Bump Map: Diffuse texture's bump map and it can be turned on and off. Add bump effect to your diffuse texture, for example rust, dirt, damages or scratches. It can also be used to add wet, rain, or orangepeel effect to the shader's reflection. Also good for to add bumped wood effect for floors, furnitures, ... etc textures.

Vehicle Color: sets the shaders body color, only change colors on diffuse texture's transparent part.

Diffuse Texture: sets the diffuse texture, it can be used to add rust, dirt, damage, scratches,...etc effects. It MUST have a texture, unless it will give a blank white shader. Transparents parts of the used texture are paintable, non transparent parts are not paintable and not getting any reflections, but it does get bumpmap effect. To not use any effect, just use the included „*0.png*“ texture (it is an empty transparent png texture).

Diffuse UV Scale: it sets the diffuse texture's scale. 1 value will give the texture's original size, 100 will give it's 100x size.

Diffuse UV: it can be used to add custom UV size for diffuse texture by change it's *Tiling* and *Offset X* and *Y* values. It can be also used to add bigger scale size for diffuse texture if *Diffuse UV Scale's* 100x size is not enough for you.

Decals:

Decal Color: sets the decal's color, only non-transparent parts of the texture get this color. Texture's white parts are give exactly the choosed color, other colors of the texture will mix with the choosed color.

Decal Texture: texture's transparent parts are not paintable, all other parts of the decal texture are yes. Works the best with *.png decals.

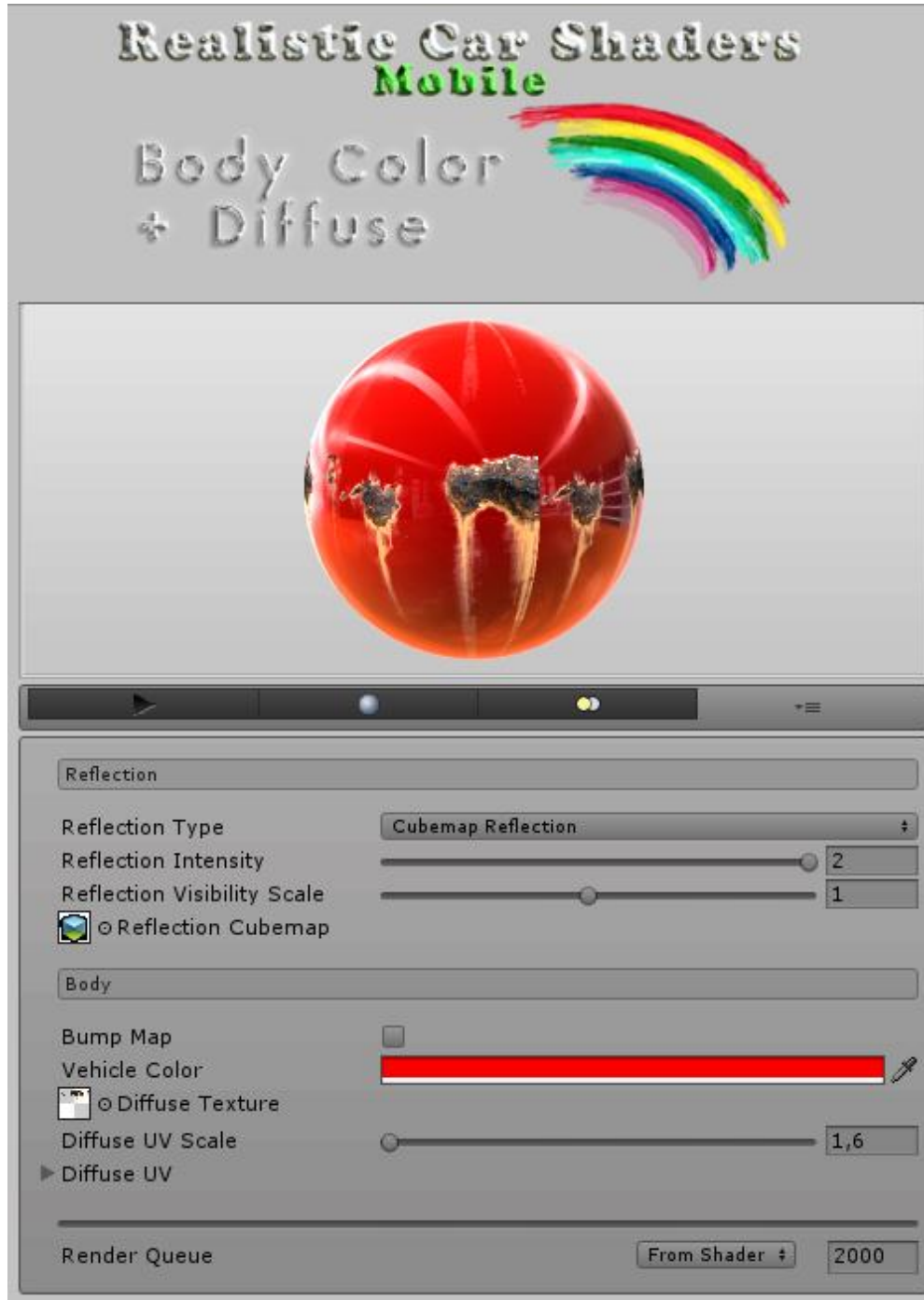
Decal Transparency: sets the decal's transparency, the smallest possible value is 0.1f.

Decal Reflection: sets the decal's reflection, 0 = mate decals 1 = fully reflective. Default value is 0.5f.

Decal UV Scale: it sets the decal texture's scale. 1 value will give the texture's original size, 100 will give it's 100x size.

Decal UV: it can be used to add custom UV size for decal texture by change it's *Tiling* and *Offset X* and *Y* values. It can be also used to add bigger scale size for decal texture if *Decal UV Scale's* 100x size is not enough for you.

Body Paint and Diffuse Texture Shader:



This shader is good for Body paint and Diffuse texture.

Reflection:

Reflection Type: (settings: Rendered Texture Reflection, Cubemap Reflection, Assigned Cubemap Reflection, Both Reflection, Turned Off) let you choose the reflection's type. Rendered Texture Reflection can give you fake realtime reflections effect. Read above in **Getting Started** for more information about how to setup and use this feature.

Reflection Intensity: sets the reflections intensity.

Reflection Visibility Scale: the scale of reflection's visibility.

Rendered Texture: texture rendered by „Reflection Main” prefab and used for fake realtime reflections. Read above in **Getting Started** for more information about how to setup and use this feature.

Reflection Cubemap: set here the shader's reflection cubemap.

Body:

Bump Map: Diffuse texture's bump map and it can be turned on and off. Add bump effect to your diffuse texture, for example rust, dirt, damages or scratches. It can also be used to add wet, rain, or orangepeel effect to the shader's reflection. Also good for to add bumped wood effect for floors, furnitures, ... etc textures.

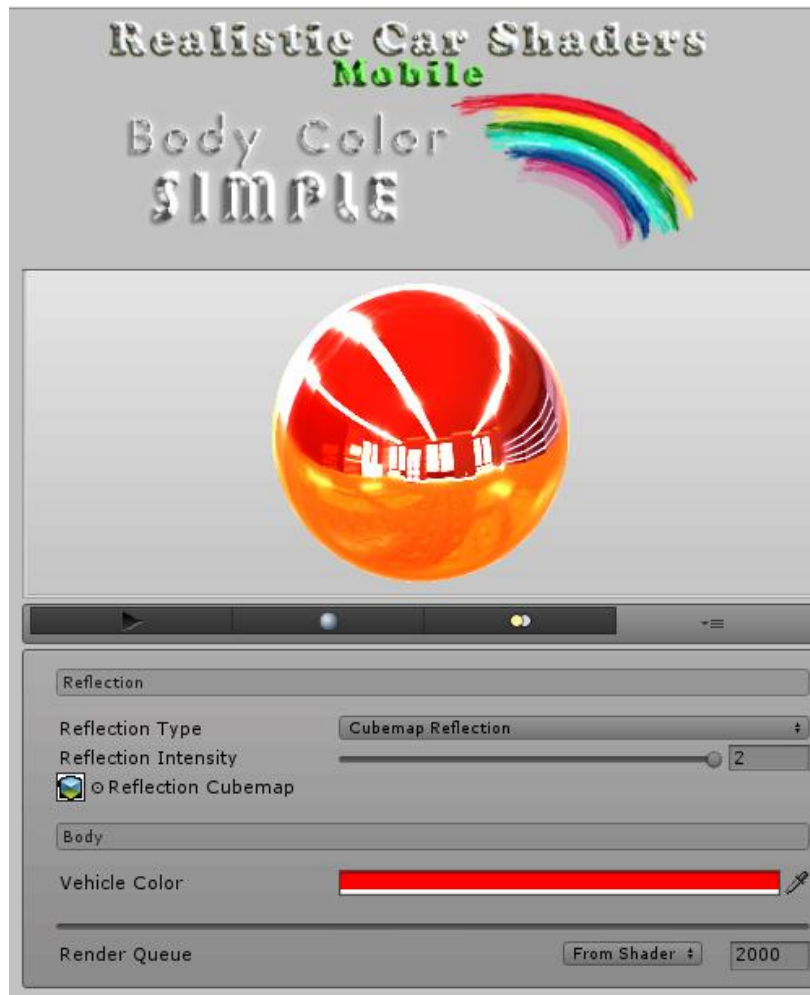
Vehicle Color: sets the shaders body color, only change colors on diffuse texture's transparent part.

Diffuse Texture: sets the diffuse texture, it can be used to add rust, dirt, damage, scratches,...etc effects. It MUST have a texture, unless it will give a blank white shader. Transparents parts of the used texture are paintable, non transparent parts are not paintable and not getting any reflections, but it does get bumpmap effect. To not use any effect, just use the included „0.png” texture (it is an empty transparent png texture).

Diffuse UV Scale: it sets the diffuse texture's scale. 1 value will give the texture's original size, 100 will give it's 100x size.

Diffuse UV: it can be used to add custom UV size for diffuse texture by change it's *Tiling* and *Offset X* and *Y* values. It can be also used to add bigger scale size for diffuse texture if *Diffuse UV Scale's* 100x size is not enough for you.

Simple Body Paint Shader:



This shader is good for a Simple Body paint with simple reflection.

Reflection:

Reflection Type: (settings: Rendered Texture Reflection, Cubemap Reflection, Assigned Cubemap Reflection, Both Reflection, Turned Off) let you choose the reflection's type. Rendered Texture Reflection can give you fake realtime reflections effect. Read above in ***Getting Started*** for more information about how to setup and use this feature.

Reflection Intensity: sets the reflections intensity.

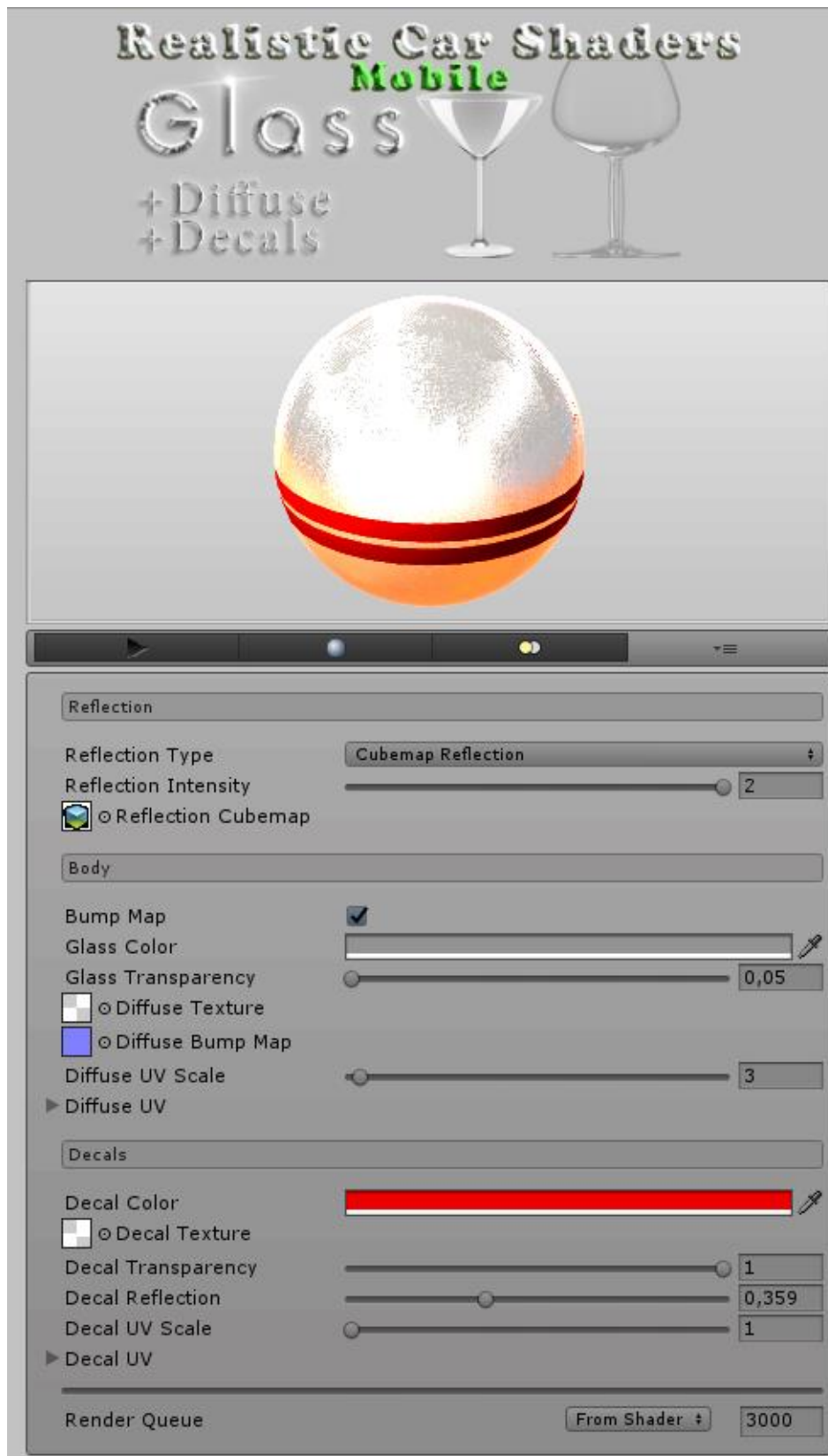
Rendered Texture: texture rendered by „Reflection Main” prefab and used for fake realtime reflections. Read above in ***Getting Started*** for more information about how to setup and use this feature.

Reflection Cubemap: set here the shader's reflection cubemap.

Body:

Vehicle Color: sets the shaders body color.

Glass Shader with Diffuse and Decals:



This shader is good for Glassed with Decals and Diffuse textures. Glass shaders are also good for grill, chain-link fence or other similiar materials with transparent background. If you are using multiple glass materials which are overlapping each other, modify the *Render Queue* value of the Glass material to fix this issue. For example modify it's value form 3000 to 3001 to highlight it from other glass materials.

Reflection:

Reflection Type: (settings: Rendered Texture Reflection, Cubemap Reflection, Assigned Cubemap Reflection, Both Reflection, Turned Off) let you choose the reflection's type. Rendered Texture Reflection can give you fake realtime reflections effect. Read above in **Getting Started** for more information about how to setup and use this feature.

Reflection Intensity: sets the reflections intensity.

Rendered Texture: texture rendered by „*Reflection Main*” prefab and used for fake realtime reflections. Read above in **Getting Started** for more information about how to setup and use this feature.

Reflection Cubemap: set here the shader's reflection cubemap.

Body:

Bump Map: Diffuse texture's bump map and it can be turned on and off. Add bump effect to your diffuse texture, for example bumped glass body, damages or scratches. It can also be used to add wet, rain, or orangepeel effect to the shader's reflection.

Glass Color: sets the shaders body color, only change colors on diffuse texture's transparent part.

Glass Transparency: set the glass'es transparency, the lowest value is 0.05f.

Diffuse Texture: sets the diffuse texture, it can be used to add dirt, damage, scratches,...etc effects. It MUST have a texture, unless it will give a blank white shader. Transparents parts of the used texture are paintable, non transparent parts are not paintable and not getting any reflections, but it does get bumpmap effect. To not use any effect, just use the included „0.png” texture (it is an empty transparent png texture).

Diffuse UV Scale: it sets the diffuse texture's scale. 1 value will give the texture's original size, 100 will give it's 100x size.

Diffuse UV: it can be used to add custom UV size for diffuse texture by change it's *Tiling* and *Offset X* and *Y* values. It can be also used to add bigger scale size for diffuse texture if *Diffuse UV Scale*'s 100x size is not enough for you.

Decals:

Decal Color: sets the decal's color, only non-transparent parts of the texture get this color. Texture's white parts are give exactly the chosed color, other colors of the texture will mix with the choosed color.

Decal Texture: texture's transparent parts are not paintable, all other parts of the decal texture are yes. Works the best with *.png decals.

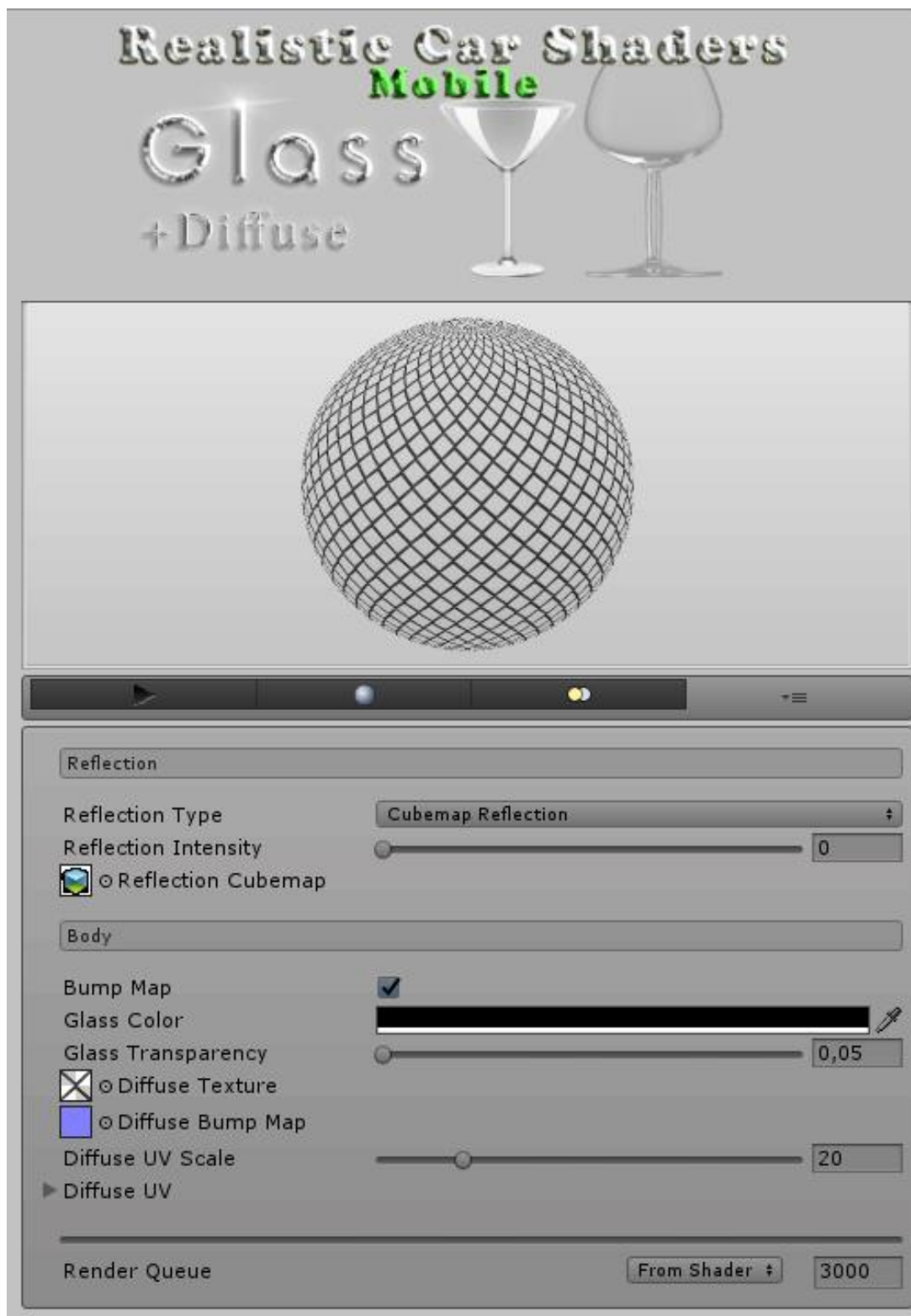
Decal Transparency: sets the decal's transparency, the smallest possible value is 0.1f.

Decal Reflection: sets the decal's reflection, 0 = mate decals 1 = fully reflective. Default value is 0.5f.

Decal UV Scale: it sets the decal texture's scale. 1 value will give the texture's original size, 100 will give it's 100x size.

Decal UV: it can be used to add custom UV size for decal texture by change it's *Tiling* and *Offset X* and *Y* values. It can be also used to add bigger scale size for decal texture if *Decal UV Scale*'s 100x size is not enough for you.

Glass Shader with Diffuse texture:



This shader is good for Glassed with Diffuse texture. Glass shaders are also good for grill, chain-link fence or other similiar materials with transparent background. If you are using multiple glass materials which are overlaping each other, modify the Render Queue value of the Glass material to fix this issue. For example modify it's value form 3000 to 3001 to highlight it from other glass materials.

Reflection:

Reflection Type: (settings: Rendered Texture Reflection, Cubemap Reflection, Assigned Cubemap Reflection, Both Reflection, Turned Off) let you choose the reflection's type. Rendered Texture Reflection can give you fake realtime reflections effect. Read above in **Getting Started** for more information about how to setup and use this feature.

Reflection Intensity: sets the reflections intensity.

Rendered Texture: texture rendered by „Reflection Main” prefab and used for fake realtime reflections. Read above in **Getting Started** for more information about how to setup and use this feature.

Reflection Cubemap: set here the shader's reflection cubemap.

Body:

Bump Map: Diffuse texture's bump map and it can be turned on and off. Add bump effect to your diffuse texture, for example bumped glass body, damages or scratches. It can also be used to add wet, rain, or orangepeel effect to the shader's reflection.

Glass Color: sets the shaders body color, only change colors on diffuse texture's transparent part.

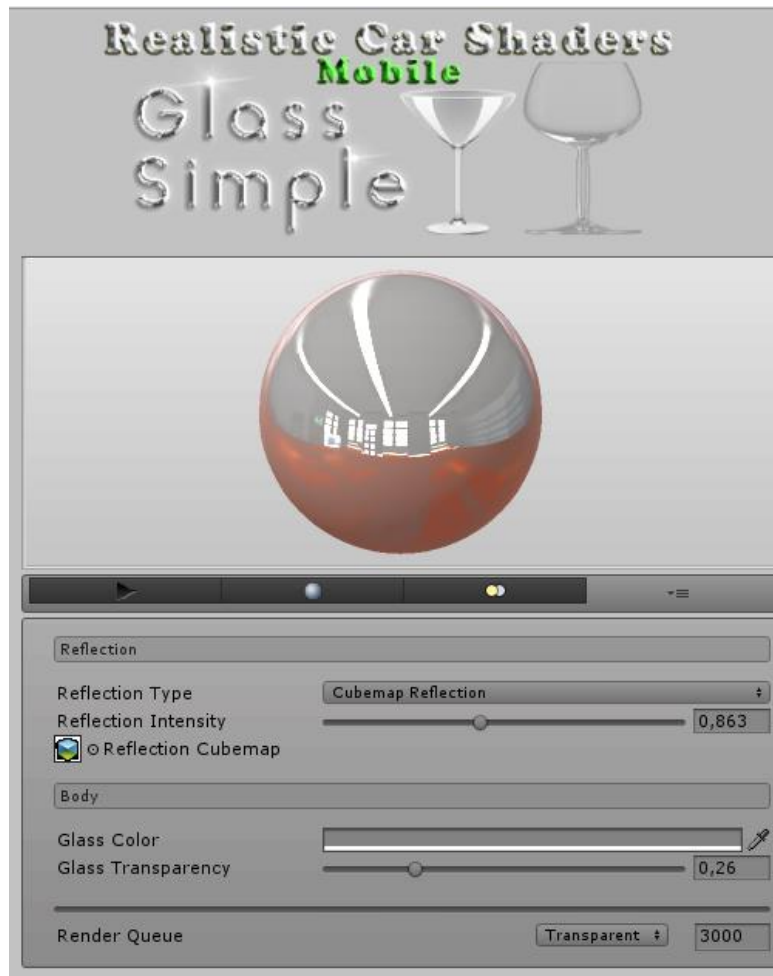
Glass Transparency: set the glass'es transparency, the lowest value is 0.05f.

Diffuse Texture: sets the diffuse texture, it can be used to add dirt, damage, scratches,...etc effects. It MUST have a texture, unless it will give a blank white shader. Transparents parts of the used texture are paintable, non transparent parts are not paintable and not getting any reflections, but it does get bumpmap effect. To not use any effect, just use the included „0.png” texture (it is an empty transparent png texture).

Diffuse UV Scale: it sets the diffuse texture's scale. 1 value will give the texture's original size, 100 will give it's 100x size.

Diffuse UV: it can be used to add custom UV size for diffuse texture by change it's *Tiling* and *Offset X* and *Y* values. It can be also used to add bigger scale size for diffuse texture if *Diffuse UV Scale's* 100x size is not enough for you.

Simple Glass Shader:



This shader is good for a Simple Glasse material.

Reflection:

Reflection Type: (settings: Rendered Texture Reflection, Cubemap Reflection, Assigned Cubemap Reflection, Both Reflection, Turned Off) let you choose the reflection's type. Rendered Texture Reflection can give you fake realtime reflections effect. Read above in ***Getting Started*** for more information about how to setup and use this feature.

Reflection Intensity: sets the reflections intensity.

Rendered Texture: texture rendered by „*Reflection Main*“ prefab and used for fake realtime reflections. Read above in ***Getting Started*** for more information about how to setup and use this feature.

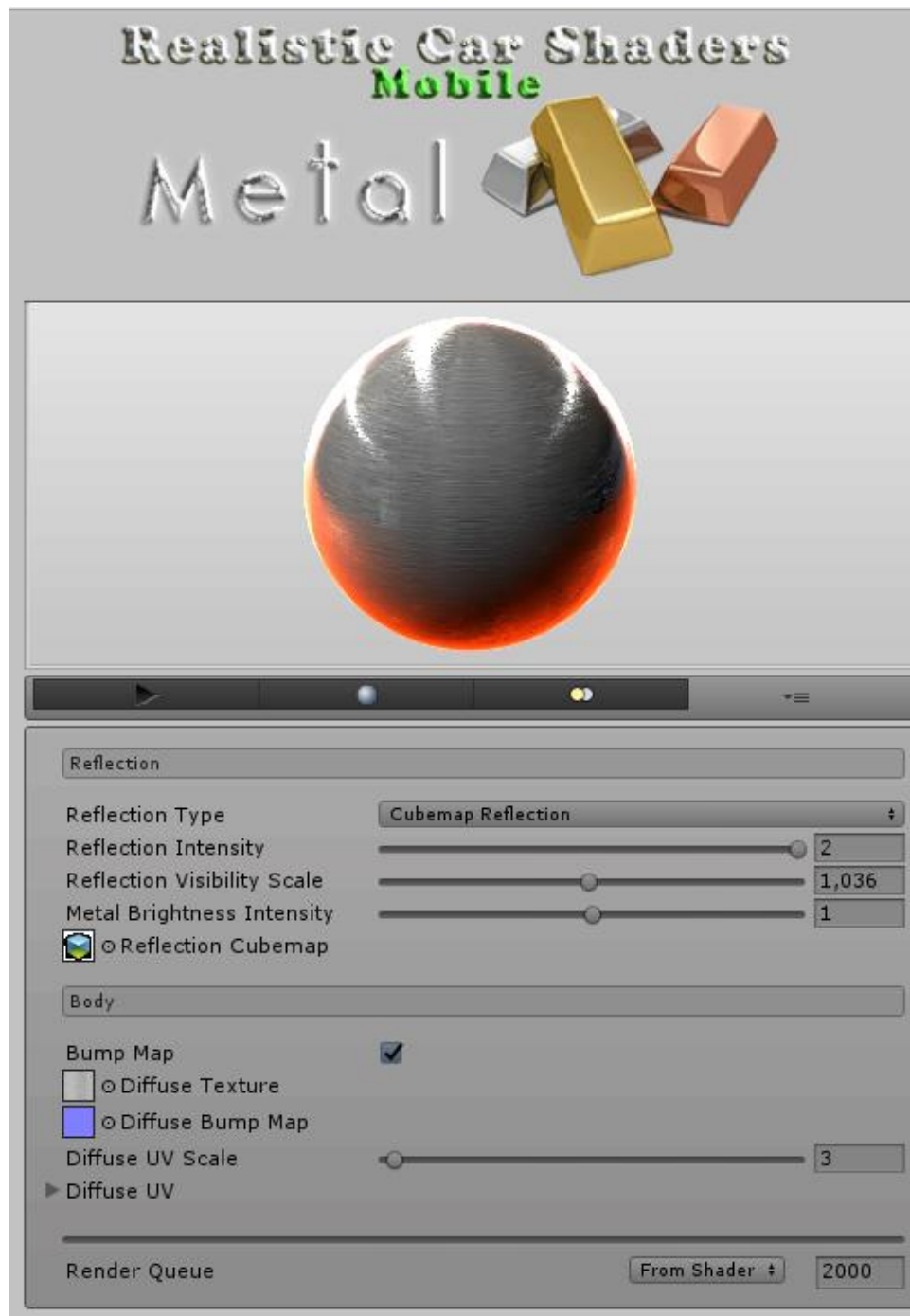
Reflection Cubemap: set here the shader's reflection cubemap.

Body:

Glass Color: sets the shaders body color, only change colors on diffuse texture's transparent part.

Glass Transparency: set the glass'es transparency, the lowest value is 0.05f.

Metal Shader:



This shader is made for metal parts like stainless steel, aluminium, chrome,... etc.

Reflection:

Reflection Type: (settings: Rendered Texture Reflection, Cubemap Reflection, Assigned Cubemap Reflection, Both Reflection, Turned Off) let you choose the reflection's type. Rendered Texture Reflection can give you fake realtime reflections effect. Read above in **Getting Started** for more information about how to setup and use this feature.

Reflection Intensity: sets the reflections intensity.

Reflection Visibility Scale: the scale of reflection's visibility.

Metal Brightness Intensity: modify the shader's brightness. This can be used to add a darker effect to your metal material, good for dark, night scenes. 1.0 is default value.

Rendered Texture: texture rendered by „Reflection Main“ prefab and used for fake realtime reflections. Read above in **Getting Started** for more information about how to setup and use this feature.

Reflection Cubemap: set here the shader's reflection cubemap.

Body:

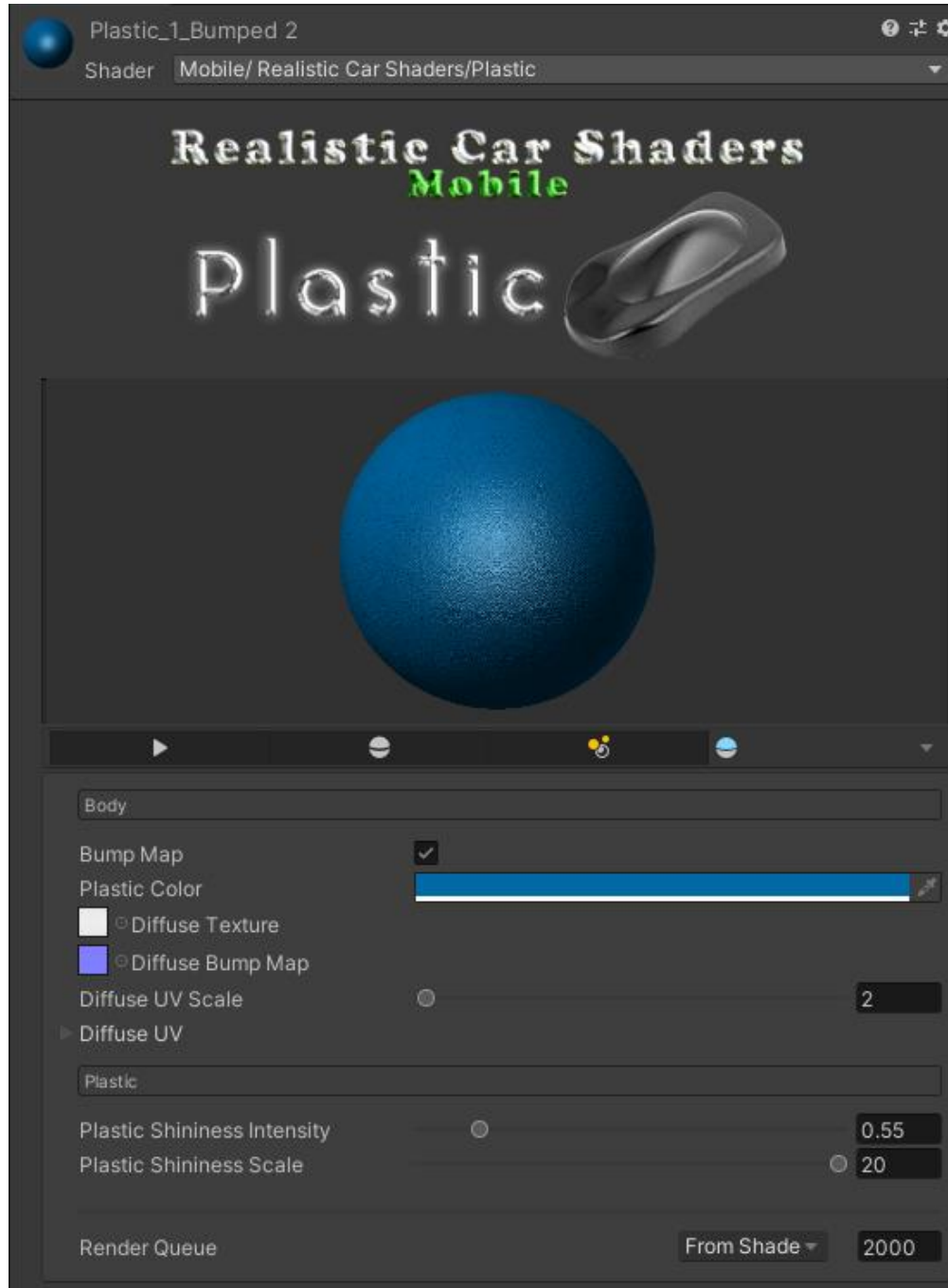
Bump Map: Diffuse texture's bump map and it can be turned on and off. Add bump effect to your diffuse texture, for example dirt, damages or scratches. It can also be used to add wet, rain, or orangepeel effect to the shader's reflection.

Diffuse Texture: sets the diffuse texture, it can be used to add rust, dirt, damage, scratches,...etc effects. It MUST have a texture, unless it will give a blank white shader.

Diffuse UV Scale: it sets the diffuse texture's scale. 1 value will give the texture's original size, 100 will give it's 100x size.

Diffuse UV: it can be used to add custom UV size for diffuse texture by change it's *Tiling* and *Offset X* and *Y* values. It can be also used to add bigger scale size for diffuse texture if *Diffuse UV Scale's* 100x size is not enough for you.

Plastic Shader:



This shader is made for plastic materials.

Body:

Plastic Color: sets the color of Diffuse texture. Works the best with white textures.

Bump Map: Diffuse texture's bump map and it can be turned on and off. Add bump effect to your diffuse texture.

Diffuse Texture: sets the diffuse texture, this is where you add your plastic texture.

Diffuse UV Scale: it sets the diffuse texture's scale. 1 value will give the texture's original size, 100 will give it's 100x size.

Diffuse UV: it can be used to add custom UV size for diffuse texture by change it's *Tiling* and *Offset X* and *Y* values. It can be also used to add bigger scale size for diffuse texture if *Diffuse UV Scale's* 100x size is not enough for you.

Plastic:

Plastic Shininess Intensity: sets the shininess intensiti for your plastic material.

Plastic Shinnines Scale: sets the shininess scale for your plastic material.

Drag Racing Demo Scenes:

There are two drag racing like sample scenes. The first one is not endless and have 3d buildings, the other one is endless and only have planes that have moving offset. These moving offset gives a feeling that the car is moving forward.

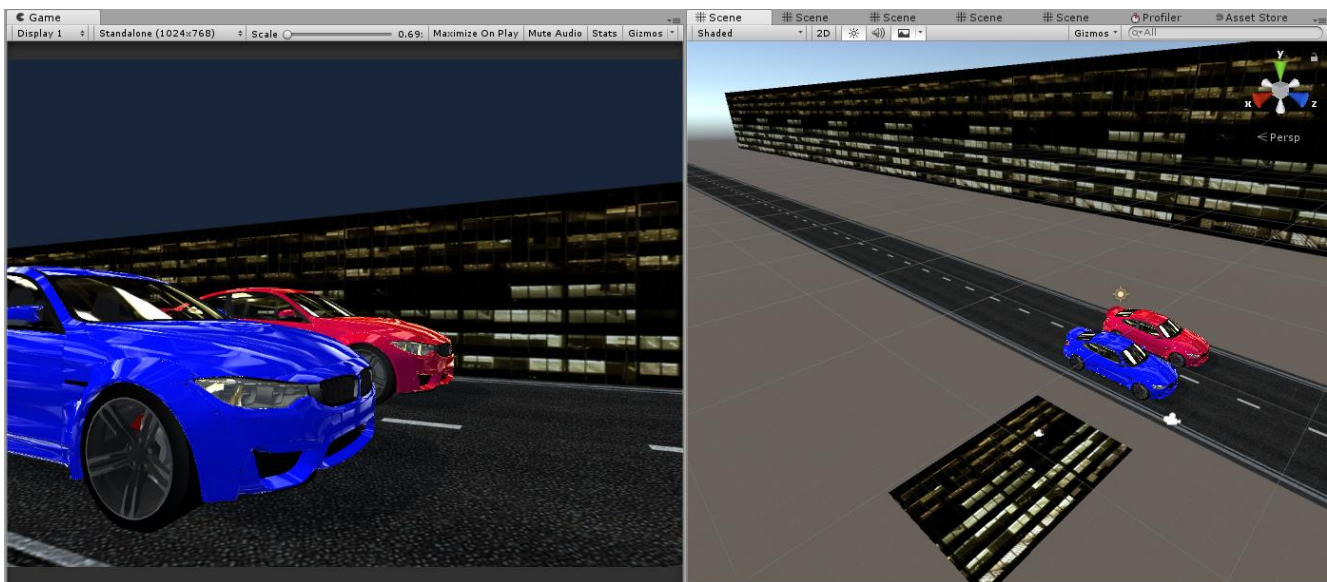
Here is a video of these scenes: <https://www.youtube.com/watch?v=FP5kqtM6uhk>

DragRacing 3D scene:



This scene is not endless and have 3d buildings. The road with dashed lines is not rendered to reflection, instead there is a secondary road under the first one without dashed lines, for better results. You can change the field of view of the reflection rendering by your taste with a slider. Reflections are look like realtime rendered reflections. Roads and buildings are moving backwards, this gives the feeling that the cars are accelerating.

DragRacing Simple scene:



This scene is endless and only contain planes. The plane above the road is rendered as reflection. All planes' material have moving offset, this gives the feeling that the cars are moving forward.

Blurry Wheel Effect



Reflection:

Reflection Type: (settings: Rendered Texture Reflection, Cubemap Reflection, Assigned Cubemap Reflection, Both Reflection, Turned Off) let you choose the reflection's type. Rendered Texture Reflection can give you fake realtime reflections effect. Read above in ***Getting Started*** for more information about how to setup and use this feature.

Reflection Intensity: sets the reflections intensity.

Reflection Visibility Scale: the scale of reflection's visibility.

Rendered Texture: texture rendered by „*Reflection Main*” prefab and used for fake realtime reflections. Read above in ***Getting Started*** for more information about how to setup and use this feature.

Reflection Cubemap: set here the shader's reflection cubemap.

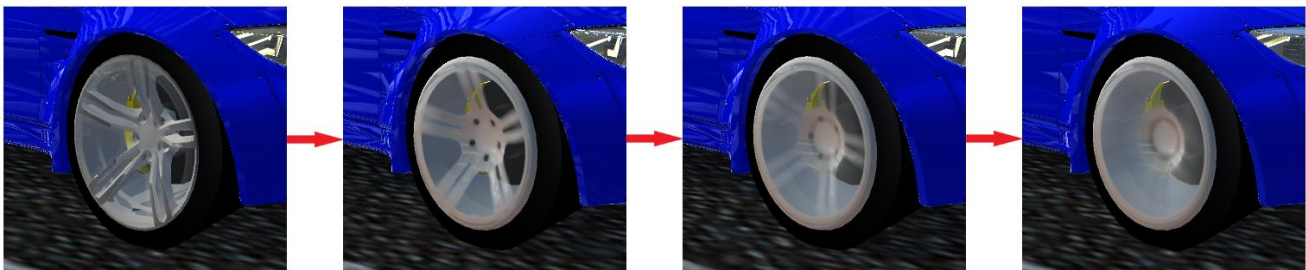
Body:

Wheel Color: sets the shaders body color, white parts of the blurred wheel texture gets colored better.

Blurred Wheel Transparency: set the blurred wheel transparency. It is good for hiding the mesh of blurred wheel when the car's speed is too low for that.

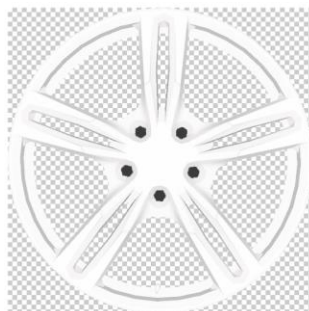
Blurred Level: transition between the two levels of the blurred wheel's texture.

Blurred Wheel Texture: it is the texture that contain two differently blurred version of the wheel. This texture could be made by yourself (link to video tutorial is available at the end of this chapter). This texture size is 1024x512 pixels. An example of this texture is shown in the next page (page 29).

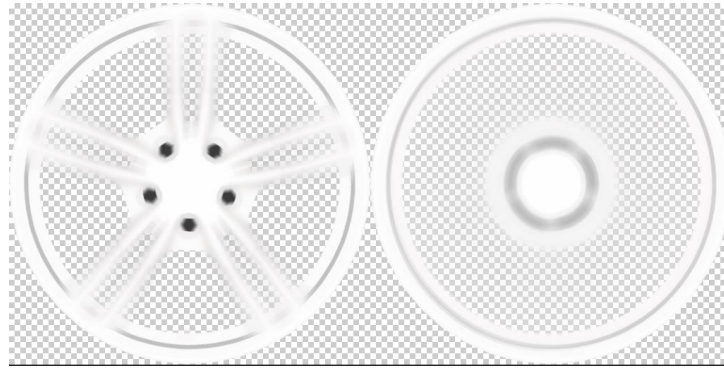


Blurred wheel effect have it's own mesh and texture which contain two differently blurred photo of the original wheel's mesh. This photo is need to be made by you in Photoshop or in an other application that can do „circle blurring”. This texture that I included in the assed is a *.psd (Photosop) file that contain „Smart Objects” which can be modified easily by simply replacing the photo of the wheel with your wheel's photo (it must have a transparent background). You can find this file in the following location: ..\RealisticCarShaders-Mobile\Textures\Other\blured_wheel.psd

You should also edit the photo of your wheel into a pure white wheel if you want to color it correctly within the material:

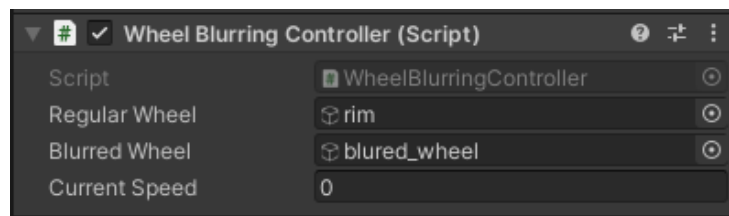


You need to do this to both smart layers. After doing these modifications, your edited psd file should look like this after saving and closing the Smart Objects editing:



The blur effect is already applied to both Smart Objects. Now save your edited psd file, it is ready to be used within Unity.

Blurred wheel effect is controlled by the „WheelBlurringController.cs” script.



Regular Wheel: this is the mesh of your original wheel’s rim. It must be a separate mesh from the tyre mesh.

Blurred Wheel: this is the mesh of the blurred wheel which comes with the asset. You can model your own blurred wheel mesh if you wish to do.

Current Speed: this value should be equal with your car’s current speed. You need to do some programming to connect this value to your car’s speed value. I assume that you know some programming if you are a video game developer. If you do not know programming then ask your programmer to do this task for you.

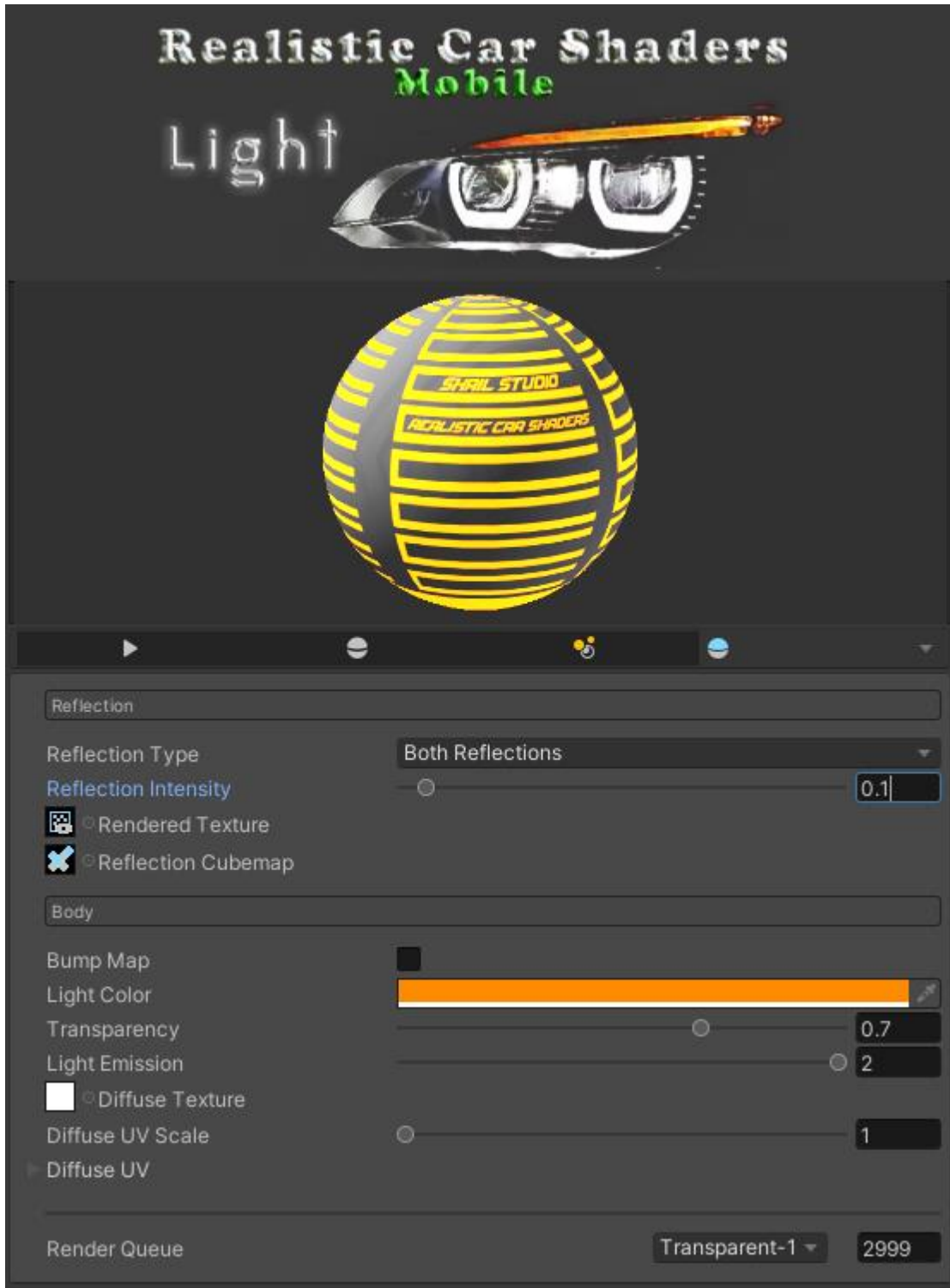
The original wheel’s rim is need to be a separate mesh from the tyre mesh and the rim mesh should not contain any wheel colliders because the game object that contains the rim mesh will be disabled by WheelBlurringController.cs script when the car goes above a certain speed (20km/h). Meanwhile the script will increase the blurred wheel’s transparency to 100% and will slowly increase „Blurred Level” value of the shader if the car keeps increasing it’s speed. When the car’s speed is decreasing the script will dynamically revert everything to what it was at lower speeds.

Here two tutorial videos about how to setup the wheel blurring effect for your car’s wheel:

How to set up blurry wheel effects: <https://youtu.be/s5ZGMzIIYrk>

How to create your own blurry wheel texture: <https://youtu.be/qVEi6UV0I20>

Car Light Shader



This shader is designed for car lights. Ideal for both headlights and taillights. Only the transparent parts of the Diffuse texture will emit light.

Reflection:

Reflection Type: (settings: Rendered Texture Reflection, Cubemap Reflection, Assigned Cubemap Reflection, Both Reflection, Turned Off) let you choose the reflection's type. Rendered Texture Reflection can give you fake realtime reflections effect. Read above in **Getting Started** for more information about how to setup and use this feature.

Reflection Intensity: sets the reflections intensity.

Rendered Texture: texture rendered by „Reflection Main“ prefab and used for fake realtime reflections. Read above in **Getting Started** for more information about how to setup and use this feature.

Reflection Cubemap: set here the shader's reflection cubemap.

Body:

Bump map: enable or disable the assigned bumpmap texture.

Diffuse Texture: only transparent parts of this texture will emit light.

Light Color: sets the light color, only change colors on texture's transparent part.

Transparency: sets the light transparency.

Light Emission: sets the light emission.

License

You can use this asset for unlimited games.

One license per seat for personal and commercial use.

You can't resell or redistribute the package or any single file from the package on any store!

Credits

All of the scripts and shaders are written by me, except some demo scene scripts used for demonstration, like the camera orbit script which is available from online tutorials, and the Color Picker which is available on GitHub under MIT license. The Color Picker is only used for demonstration purposes in the demo scenes, it's not a main feature of this asset!

Feel free to contact me if you have any questions or suggestions for this asset.

Youtube playlist with tutorials and sample videos:

<https://www.youtube.com/playlist?list=PLYFtdNoo8S3jUYvfo5Vr19CsSK29uCj-2>

Please write a review for my asset in the Unity Asset Store. Thank you!

Check out my other assets:

Realistic Engine Sounds 2: <https://bit.ly/3aZ50Ag>

Add-On packs for Realistic Engine Sounds 2: <https://bit.ly/2QYutD3>

UI SFX Mega Pack (2682 wav files): <https://bit.ly/40oKeCd>

Everything else: <http://bit.ly/2TBgK2z>

Made by: Skril Studio

Contact: info@skrilstudio.com

Website: <http://skrilstudio.com>

Facebook Page: <https://www.facebook.com/yugelmobile>

Speaking: English, Hungarian and Serbian.

May not be available to respond to messages during weekends and holidays.