





(RealToon Shader)

It's an AAA Anime - Toon Shader/Cel Shading Shader for Unity3D. The goal/aim of this shader is to achieve real Anime/Toon look in RealTime 3D.

You can also achieve any style/stylized you want, more than Anime/Toon look.

All Real time lights can be use, from real time Directional Light, Spot, Point to real time Area Light.

It is possible to use RealToon in HDRP's DXR/Ray tracing mode. Realistic + NPR/Non-Photorealistic are possible with the combination use of Unity's Shaders + RealToon Shaders.

You can use RealToon and other shaders, together.

Use RealToon Shader for games, animations/film, illustrations/art, VTuber, Virtual Chat Avatar Shader and any projects.

RealToon shader can also be use on projects made, Mobile (Android/iOS) and Game Console (Xbox, PlayStation and Switch).



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[Getting Started]

- Before you start, you'll need to unpack the shader package that corresponds to your project render pipeline, before that there are some things you need to know about Unity's Render Pipeline. If you already know it, just skip to the **Unpacking the Shaders** section.
- Firstly there are 2 types of Unity Render Pipeline, Unity Built-In/3D Render Pipeline and Unity SRP/Scriptable Render Pipeline (URP HDRP).
 Under SRP there are 2 Unity made SRP, URP/Universal Render Pipeline and HDRP/High Definition Render Pipeline.
- *Unity Built-In/3D Render Pipeline is the old unity render pipeline.
- *Unity SRP/Scriptable Render Pipeline (URP HDRP), is the new and modern render pipeline.
 - *URP/Universal Render Pipeline Formerly named LWRP and It is universal and focuses on low and high quality visuals that can be deploy to all devices.
- *HDRP/High Definition Render Pipeline Focuses on advance high quality visuals and can be deploy to modern devices that supports compute and modern advance features and visuals.
- Now you know what those unity render pipelines are, so we can start unpacking the shader you need. All the shader packages are in the folder **RealToon Shader Packages**.

[Unpacking the Shaders]

*Recommended Unity versions for Built-In RP/3D:

From **Unity 5** to current latest unity version.

*Recommended Unity and SRP Versions:

[RealToon LWRP] - Unity 2018 and LWRP V4.0.0 or latest version.

[RealToon URP] - Unity 2019.3.0 to newer versions and URP V7.1.1 or latest version.

[RealToon HDRP] - Unity 2019 to newer versions and HDRP V7.2.0 or latest version.

*If your project is 3D or Built-In RP:

- 1. Go to folder RealToon Shader Packages -> Built-In RP [3D].
- 2. Double click **RealToon Built-In RP [3D]** package to unpack.

If you are using the latest unity version, double click - unpack the latest one with the 'Later' word on it.

3. Click **Import**.

*If your project is Universal Render Pipeline or High Definition RP:

- 1. Go to folder RealToon Shader Packages -> SRP (LWRP URP HDRP).
- 2. Open the folder that correspond to your project render pipeline.
- 3. Double click unpack the version you need or the latest one with the 'Later' word on it.
- 4. Click **Import**.
 - 4 RealToon (MJQ Studio Works © 2016 2024)



[How to use]

A. How to use RealToon Shader:

- a. Create a material by pressing mouse button **Right** on the **Project** window/panel.
- b. Go to **Create -> Material**.
- c. Name your material then press keyboard key **Enter**.
- d. Click your created material.
- e. Go to **Inspector** window/panel then change the **Shader** by left mouse button - click the drop down menu.
 - * For 3D/Built-In RP: Go to RealToon -> Default and select Default.
 - * For Universal Render Pipeline: Go to Universal Render Pipeline -> **Default** and select **Default**.
 - * For High Definition RP: Go to HDRP -> Default and select Default.
- f. Drag your created material to the object you want to apply.

B. How to use RealToon Effects (Built-In RP/3D):

- a. Select a camera.
- b. Add component -> RealToon -> Effects.
- c. Select the effect/s you want to use.

C. How to use RealToon Tools:

- a. Select an object or an empty game object
- b. Add component -> RealToon -> Tools.
- c. Select a tool you want to use.



[RealToon Shaders]

	(RealToon Shaders for Built-In RP/3D) (RealToon Shaders for SRP)		
A. Defa			
a.			
	* The default RealToon shader.		
b.	Fade Transparency	Α.	LWRP
	* A transparent shader.		a. Default
	* It also has the functions and feature of		* The default RealToon shader.
	the Default shader.		
	* It can't receive shadow		b. Fade Transparency
	but can cast shadow.		* A transparent shader.
			* It also has the function and
c.	Refraction		features of the Default Shader.
	* A Refraction shader.		* It can't receive shadow but can
	* It can't receive shadow		cast shadow.
	and can cast shadow.		
		В.	URP
B. Defa	ault - Tessellation		a. Default
a.	Default		* The default RealToon Shader.
	* The default RealToon shader.		* It has the transparent feature.
	* With tessellation.		* The transparent feature can
			receive and cast shadow.
b.	Fade Transparency		* With lightmap.
	* A transparent shader.		* With 2 available on shader
	* It also has the functions and feature of		outline to be use,
	the Default shader.		Traditional Outline and
	* It can't receive shadow		Screen Space Outline.
	but can cast shadow.		
	* With tessellation.	C.	HDRP
	Defuestion		a. Default
C.	Refraction		* The default RealToon Shader.
	* A Refraction shader. * It can't receive shadow		* It has the transparent feature.
			* The transparent feature can receive and cast shadow.
	and can cast shadow. * With tessellation.		* With DXR/Ray Tracing.
	with tessenation.		* With 2 available on shader
C. Lite			outline to be use,
a.	Default		Traditional Outline and
"	* Lite version of the Default shader.		Screen Space Outline.
	Lite version of the bejault shader.		Server space dumic.
b.	Fade Transparency		
	* Lite version of the Fade Transparency		
	shader.		



[RealToon Tools]

*Custom Shadow Resolution Tool

- This tool is use for customizing the light source shadow resolution. Can only be use on **Built-In RP/3D**.

Settings

Value (Default: 2048)

- It's the resolution value of the shadow map

Final Resolution (Default: No Default Value)

- This is the shadow map final resolution.
This is basically x2 value of the value you entered.

Reset (Default: Unchecked)

- To reset he settings - value

*Frame By Frame Rendering Tool

- Frame by Frame Rendering is a simple tool to render each frame to PNG File. (Use For Animation & Illustration/Art)
- Two types of Frame By Frame Rendering Tool script:
 - 1. Frame by Frame Rendering (Default) Auto Render when press play.
 - 2. Frame By Frame Rendering (Manual) Manual Render, frame by frame.

Settings

Path Folder (Default: Rendered Files)

- A path/location to where to save the PNG Files.

[Note]

*If you put the name folder only, it will be created to your Unity3D root project folder.

*If you want to save the files to a different location/drive, include the drive letter, Example C:\PNGFiles.

*If this field is empty, it will create the folder **Rendered Files**.



PNG File Name (Default: Frame)

- The file name

[Note]

*If this field is empty, it will name the file Frame.

Frame Rate (Default: 24)

- The frame rate of the frame by frame session.

Start Frame (Default: 0)

- The beginning of the frame.

End Frame (Default: 0)

- The end of the frame.

Single Frame Rendering Mode (Default: Unchecked)

- Render a single image only.

[Note]

- *This will ignore Frame Rate, Start Frame & End Frame.
- *It will only render Frame 1.
- *If Checked/Enabled file name will be named "YouFileName Hour_Min_Sec".
- *If Uncheck/Disable file name will be named "YouFileName FrameNumber".

Picture Mode (Default: Unchecked)

- Render a single image only.

[Note]

- *This option is only available on the **Frame by Frame (Manual)** version.
- *This is similar to **Single Frame Rendering Mode**.



Information - This section will only display information about the rendering and operations.

Last Rendered Frame (Default: No Default Value)

- Display the last rendered fame.

Info (Default: Empty)

- This is the shadow map final resolution.

*Smooth Object Normal – Helper Script Tool

- A helper script for the RealToon Feature Smooth Object Normal.
- This script will help the **Smooth Object Normal** to follow the object's animation.

Settings

Material (Default: Empty)

- A material that uses **RealToon – Smooth Object Normal** feature.

Object Helper (Default: Empty)

- An object to help adjust the smoothed/ignored object normal.

The Object To Follow (Default: Empty)

- The object to follow by the **Object Helper**.

Offset (Default: 10)

- Adjust the overall offset of the Smooth Object Normal to follow the Object Helper.

Additional Position Adjustment (Default: X:0 Y:0 Z:0)

- Additional position adjustment for Object Helper.



*Swap Shader To RealToon - Tool

- A tool to swap from VRoid VRM shader or Unity shaders to RealToon shader.
- It supports all Unity Rendering Pipeline shaders Built-In/BiRP, URP and HDRP.

Settings

From Shader

- From what shader is the selected material/s.

VRoid | VRM Options

*Force Unlit:

This will make the material to unlit look, no lighting and shadow.

It will enable RealToon's Hide Directional Light Shadow, Hide Point, Spot and Area Light Shadows/Hide Point and Spot Light Shadows options, enable Selflit feature and adjust the selflit Power option, disable Receive Environmental Lighting and GI option, disable Enable Punctual Lights/ Enable Additional Lights option, enable use Traditional Light Blend option, disable Normal Map feature and Self Shadow feature.

*Force Transparent Material To Cutout:

This will force all transparent material to cutout.

It will enable RealToon's Transparent Mode then Cutout feature and set the Cutout to 4.0.

* Enhance Light Highlight Color Intensity:

This will enhance the light highlight color on the material/object.

It will adjust the RealToon's Highlight Color Power option.

On Built-In/BiRP, this is not available if the Project Color Space is Gamma.

*Include Shade/Shadow Color:

This will include the selected VRoid | VRM Shade/Shadow color.

It will copy the selected VRoid | VRM Shade/Shadow color to RealToon's Overall Shadow Color options.

On URP, It will also adjust the Overall Shadow Color Power.

*Light Affect Shadows:

This will let the light intensity and color affect shadows.

If not enabled, The light will not affect the shadow and it will prevent overexpose shadow color when there are more lights on the scene and high intensity light value.

This will enable **RealToon's Light Affect Shadow** option.

*Disable Received Shadows:

This will disable received shadows from other objects including received self cast shadows. It will disable RealToon's Hide Directional Light Shadow, Hide Point, Spot and Area Light Shadows/Hide Point and Spot Light Shadows options.



*Include Emission:

This will include VRoid VRM Emission.

It will copy the Emission Color and Emission Map(if present) to RealToon Selflit Color and Mask. Take note: some **VRoid | VRM** default configuration will use **Emission** to light the character or to make it unlit, leave the **Include Emission** option disabled if you didn't configure the **Emission**.

*Use Emission Map and Color as Gloss Texture:

This will use the **Emission Map(***if present***)** and **Emission Color** as Gloss.

It will enable the RealToon's Gloss Texture feature then use the Emission Map to it and copy the Emission Color to RealToon's Gloss Color options.

*Force Enable Rim Light And Use White Color:

This will force to use **Rim Light** and use **White** color to it.

It will enable RealToon's Rim Light feature then set the Rim Light Color option to White.

*Enable Global Illumination Shade:

This will enable the GI soft shade look.

It will adjust the RealToon's GI Shade Threshold option to 1.

*Global Illumination Flat Shade:

This will make the GI shade to look flat or cel shade.

It will enable **RealToon's GI Flat Shade** option.

Unity Options

*Light Affect Shadows:

This will let the light intensity and color affect shadows.

If not enabled, The light will not affect the shadow and it will prevent overexpose shadow color when there are more lights on the scene and high intensity light value.

This will enable **RealToon's Light Affect Shadow** option.

Compatible Shaders			
VRoid VRM	Unity Built-In	Unity URP	Unity HDRP
VRM VRM10	Standard Standard (Specular setup) Unlit/Color Unlit/Texture Unlit/Transparent Unlit/Transparent Cutout	Complex Lit Lit Simple Lit Unlit Baked Lit	Lit Lit Tessellation Unlit



[RealToon Tools Tips/Notes/How to Use]

(Frame By Frame Rendering)

For Frame By Frame Rendering Both (Default & Manual)

- 1. You can pause rendering by click pause button.
- 2. Stop render immediately by click play button again.
- 3. You cannot start render if the folder has files on it so you need to change the Path Folder to another location or folder. (Applies only to Non Picture Mode & Single Frame Mode)
- 4. You can start render even if the folder has files on it. (Applies only to Picture Mode & Single Frame Mode)
- 5. You can create folder by just putting a folder name that is not yet exist in the current location/path. (Applies to Path Folder)
- 6. To set the resolution just set it in the Game view or Game panel.

For Frame By Frame Rendering (Manual)

- 1. Click **Render** to start render, once clicked it will turn back to unchecked means render 1 frame not continuous unlike Frame By Frame Rendering (Default).
- 2. You can overwrite a specific saved frame by setting the Frame Number to the frame number you want to overwrite then click Render. Be sure that frame number is in the folder. Be careful not to double the **Render** or else it will overwrite the next frame number that is already saved.

For Frame By Frame Rendering (Default)

- 1. Click play button to start render, once the button is clicked Current Frame will start moving or display the current frame once the Current Frame reached the Start Frame number it will start rendering then later if Current Frame reached the Start Frame number it will stop render. To completely end rendering click play button.
- 2. If you render a scene with timeline, set Frame Rate to the frame rate of timeline. Example "Timeline frame rate is 60 = Frame By Frame Rendering (Default) Frame rate is also 60". If the two is not equal the output is not synchronized especially if you edit it in your Video Editor Software or Compositor Software.



(For Importing PNG files to your Video Editor or Compositing Software)

- 1. Import PNG files as PNG Sequence or Image Sequence, be sure your video editor or compositing software has this features or option. Be sure PNG files are numbered frames like "Frame 0002 to Frame 9000 or higher".
- 2. Change the imported **PNG Sequence** or **Image Sequence** file frame rate to the frame rate you set in your Frame by Frame Rendering Settings.

(Smooth Object Normal – Helper Script)

How to use

- 1. Select the model you want the **Smooth Object Normal Helper Script** to be applied.
- 2. Click Add Component and go to RealToon -> Tools and select Smooth Object Normal Helper.
- 3. Create an empty game object.
- 4. Reset its **Transform** of the empty game object you've created. All transform (Position, Rotation and Scale) should be 0.
- 4. Put it on the **Root** bone of the model.
- 5. Select again the model that contains the helper script that you add earlier.
- 6. Go to the **Inspector** then **Smooth Object Normal Helper**.
- 7. Assign a material that uses **Smooth Object Normal** to the **Material** field.
- 8. Put the empty object that you created earlier to the **Object Helper field**.
- 9. Assign the object that will be followed by the **Object Helper** to the **The Object To Follow** field.

(Swap Shader To RealToon - Tool)

How to use

- 1. Click Window then go to RealToon -> Swap Shader To RealToon.
- 2. Select the **Materials** on your project window/panel.
- 3. Select from what **Shader**.
- 4. Select the options you need if available.
- 5. Click Click To Swap To RealToon Shader.
- 6. All materials shader are now swap to **RealToon Shader**.

^{*}Note: Not all Unity Shader properties and settings will be copied.



[RealToon Effects/Post-Processing]

*Sobel Outline Effect

- Full screen sobel type outline and can only be use on **Built-In RP/3D**.

Settings

Outline Width (Default: 0)

- Outline width or line thickness.

Outline Color (Default: White)

- Outline Color.

[Note]

*Change this to white if you want the screen color to color the outline.

*Increase the **Color Power** to make it dark.

Color Power (Default: 2)

- How strong the outline color is.

[Note]

*Negative values will make it light, while positive values will make it strong/dark color.

*DeNorSob Outline (Post-Processing)

- Depth, Normal and Sobel Based Outline into one Post-Processing.
- Can only be use on **URP** and **HDRP**.

Settings

Outline Width (Default: 0)

- Outline width or line thickness.

Depth Threshold (Default: 900)

- This will adjust the Depth near and far.



[Note]

- *Positive values will move the **Depth** far but will reduce inner outlines if too far.
- *Negative values will move the **Depth** closer but will create some unwanted outline looks if too close.
- *Be sure to balance it.
- *Increase this more than **900** to have a clean silhouette style outline.

Normal Threshold (Default: 1.3)

- This will adjust the Normals.

[Note]

- *Positive values will show more outer and inner outline.
- *Negative values will reduce more outer and inner outline.

Normal Min (Default: 1) Normal Max (Default: 1)

- This will adjust the Minimum and Maximum of the Normal.

[Note]

- *If **Min** and **Max** are in the same value, it will make the outline look hard or hard edge.
- *Adjusting these will help you to get more outlines.

Sobel Outline (Default: Unchecked)

- Turn on Sobel Outline.

[Note]

- *If this turned on, **Depth** and **Normal** based outline will be disabled.
- *If you want to use both **Depth Normal Base Outline** and **Sobel Outline**, Turn on Mix Depth Normal And Sobel Outline option.

Sobel Threshold (Default: 0)

- The amount of outline to be shown.

White Threshold (Default: 0)

- The amount of outline that has been detected in the white or highlight area of the screen.

Black Threshold (Default: 0)

- The amount of outline that has been detected in the black or dark area of the screen.



Outline Color (Default: Black)
- Outline Color.
Mix Full Screen Color (Default: Unchecked)
- This will mix the Screen Color into the Outline Color .
Show Outline Only (Default: Unchecked)
- Show outline only.
Mix Depth Normal And Sobel Outline (Default: Unchecked)
- This will mix Depth – Normal Based Outline and Sobel Outline .

[Note About DeNorSob Outline]

- The outline width will be affected by the screen resolution, the higher the resolution the thinner the outline width, the lower the resolution the thicker the outline width.
- If some of your objects are Transparent, the outlines from the other object will be visible on the object, see through effect.



[How To Use RealToon Post-Processing]

*Sobel Outline (Built-In RP/3D)

Built-In RP/3D

- 1. Select a camera on the scene.
- 2. Click **Add Component** and go to **RealToon** -> **Effect**.
- 3. Select Sobel Outline.

*DeNorSob Outline (URP and HDRP)

URP/Universal Render Pipeline

1. Open the folder Settings and select the default ForwardRenderer/Renderer or your own created renderer on the project window/panel.

[For URP 16 and below]

- a. Click Add Render Feature and select Depth-Normals Feature.
- b. Click Add Render Feature again and select De Nor Sob Outline.

[For URP 17 and later]

- a. Click Add Render Feature and select DeNorSob Outline Renderer Feature.
- b. Create a volume by right click the Hierarchy then go to Volume then click Global Volume.
- c. Select the Global Volume you've created in the Hierarchy then click New in the Inspector panel.
- d. Click Add Override then go to Post-Processing then RealToon then click DeNorSob Outline.

[Note]

- Before you start using it, you'll need to turn on **Depth Texture** on the camera or on URP settings. This is needed for the **Depth Based Outline**.
- Depth-Normals Feature is needed for the Normal Based Outline. (For URP 13 and below)

HDRP/High Definition Render Pipeline

- 1. Go to **GameObject -> Volume** then click **Global Volume**.
- 2. Then next click Global Volume in the Hierarchy window/panel or in the scene.
- 3. Click New, this will create a Global Volume Profile.
- 4. Click Add Override then go to Post-Processing -> RealToon then select DeNorSob Outline.
- * Then next we will add that effect in the Custom Post Process Order so that the effect will work.



5. To add Go to Edit -> Project Settings -> HDRP Default Settings then scroll down to Custom Post Process Order.

(For HDRP 7 and 8: Click the + sign under the After Post Process then click RealToon. Effects.DeNorSobOutline.) (For HDRP 10 to later: Click the + sign under the Before TAA then click RealToon. Effects.DeNorSobOutline.)

- * If you are planning to use the effect in making games or make a build
- 1. Go to **Edit -> Project Settings** then **Graphics**.
- 2. After that add 1 to the Size under Always Included Shaders, now it adds another element.
- 3. Click the last element then search for **DeNorSob Outline** then click it.



[RealToon Shader Options and Features]

Texture - Color	Shader Type	Render Pipeline
Double Sided (Default: Off) - Make the other side of a plane object or face visible.	All RealToon Shader	Built-In RP/3D LWRP
Culling (Default: Back)		
- Controls which sides of polygons should be culled (not drawn).		
[Note] * Back: Don't render polygons that are facing away from the viewer. * Front: Don't render polygons that are facing towards the viewer, Used for turning objects inside-out. * Off: Disables culling - all faces are drawn, This also called Double Sided."	Default Shader	URP and HDRP
Texture/Main Texture (Default: Empty)		
- The main texture of the object.	All RealToon Shader	All Render Pipeline
Texture Pattern Style (Default: Unchecked)		
- Turn Texture/Main Texture into pattern style.	All RealToon Shader	All Render Pipeline
Refraction Intensity (Default: 1)		
- How strong the Refraction is.	Refraction Shader	Built-In RP/3D
Texture Intensity (Default: 0)		
- How visible the Texture/Main Texture is.	Refraction Shader	Built-In RP/3D
Main Color (Default: White)		
- The main color of the object.	All RealToon Shader	All Render Pipeline
Main Color Power (URP Default: 0.8) (HDRP Default: 0.15)		
- How strong the Main Color color.		
[Note] *This option will also prevent overexposure when using white or bright colors. *Set this to 1 if you want the true brightness of the Main Color. *The default value for RealToon URP is 0.8 while the RealToon HDRP is 0.15 *Each time you change shader from RealToon URP to RealToon HDRP or opposite, it will automatically adjust to the right value.	Default Shader	URP and HDRP



Mix Vertex Color (Default: Unchecked)		
- Mix the object vertex color to the Main Color. [Note] *This can also be use as View Object Vertex Color for debug.	All RealToon Shader	All Render Pipeline
Main Color in Ambient Light Only (Default: Unchecked)		
- Put the Main Color into the Ambient light. [Note] *This will only works if there is Ambient/Environmental Light/GI. *Enable this if you're doing multi-shading.	All RealToon Shader	All Render Pipeline
Highlight Color (Default: White)		
- Put the Main Color into the Ambient light. [Note] *This will only works if there is Ambient/Environmental Light/GI. *Enable this if you're doing multi-shading.	All RealToon Shader	All Render Pipeline
Highlight Color (Default: 1)		
- Highlight color power or intensity.	All RealToon Shader	All Render Pipeline
Enable Texture Transparent (Default: Unchecked)		
- Enable texture transparent. [Note]	Default Shader	Built-In RP/3D LWRP
*This is disabled if no texture assign on the Texture/Main Texture .		

MatCap/Material Capture	Shader Type	Render Pipeline
Intensity (Default: 1)		
- How visible or strong the MatCap is.	All RealToon Shader	All Render Pipeline
MatCap (Default: Empty)		
- A MatCap texture to be use.	All RealToon Shader	All Render Pipeline
Specular Mode (Default: Unchecked)		
- Turn MatCap into specular style.	All RealToon Shader	All Render Pipeline
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Specular Mode (Default: Unchecked)		
- Turn MatCap into specular style.	All RealToon Shader	All Render Pipeline
Specular Power (Default: 1)		
- How strong or intense the specular look is.	All RealToon Shader	All Render Pipeline
Mask MatCap (Default: Empty)		
- Mask the MatCap .		
[Note] *Use a Black and White or Grayscale texture/map. *White is the MatCap while the Black is the non MatCap part.	All RealToon Shader	All Render Pipeline

Cutout	Shader Type	Render Pipeline
Cutout (Default: 0)		
- Cutout value or threshold	All RealToon Shader	All Render Pipeline
Alpha Based Cutout (Default: Unchecked)		
- Use the Main Texture alpha for cutting out.	All RealToon Shader	All Render Pipeline
[Note] *If this is unchecked it will follow the bright and dark colors of the Main Texture for cutting out.		
Soft Cutout (Default: Unchecked)		
- For a soft edge cutout. [Note] *This feature uses the dithering style cutout. * Currently to reduce the artifacts use a high resolution texture or use a high resolution screen size. You can also use some kind of full screen Anti-Aliasing.	Default Shader	URP and HDRP
Use Secondary Cutout Only (Default: Unchecked)		
- Use only the secondary cutout for cutting out.	All RealToon Shader	All Render Pipeline
Secondary Cutout (Default: 0)		
- A texture to be use as secondary cutout.	All RealToon Shader	All Render Pipeline
[Note] *You can use Colored or Black and White or Grayscale color texture.		
Enable Glow (Default: Unchecked)		
- This will add a glow edge.	Default Shader	URP and HDRP



Glow Color (Default: White)		
- The color of the glow.	Default Shader	URP and HDRP
Glow Width (Default: 1)		
- How thick or thin the glow edge.	Default Shader	URP and HDRP

Transparency	Shader Type	Render Pipeline
Simple Transparency (Default:Unchecked)		
- Common simple transparency.	Default Shader	URP and HDRP
[Note] *Only Opacity, Blend Modes and Affects Shadow (URP) are available. *Transparent Threshold and Mask Transparency are not available.		
Opacity (Default: 1)		
- How opaque the object is.	All RealToon Shader	All Render Pipeline
Transparent Threshold (Default: 0)		
- The transparent alpha threshold of the object Texture/Main Texture .	All RealToon Shader	All Render Pipeline
Blend – Source (Default: ScrAlpha)		
- Transparent blend source.	Default Shader	URP and HDRP
Blend – Destination (Default: OneMinusScrAlpha)		
- Transparent blend destination.	Default Shader	URP and HDRP
Affect Shadow (Default: Checked)		
- Transparent opacity affect shadow.	Default Shader	URP
Mask Transparency (Default: Empty)		
- Mask transparent.		
[Note] *Use a Black and White or Grayscale texture/map. *White is the non transparent part while the Black is the Transparent part or just normal part.	All RealToon Shader	All Render Pipeline



Normal Map	Shader Type	Render Pipeline
Normal Map (Default: Empty)		
- The Normal Map to be use.	All RealToon Shader	All Render Pipeline
Normal Map Intensity (Default: 1)		
- How strong the Normal Map is.	All RealToon Shader	All Render Pipeline

Color Adjustment	Shader Type	Render Pipeline
Saturation (Default: 1)	All RealToon Shader	All Render Pipeline
- Adjust the color saturation of the object. [Note]		
*- The outline width will be affected by the screen resolution, the higher the resolution the thinner the outline width, the lower the resolution the thicker the outline width.		

Outline	Shader Type	Render Pipeline
Width (Default: 0.5) - Outline width or thickness. [Note] *On Screen Space Outline mode, the Outline Width will be affected by the screen resolution, the higher the resolution the thinner the Outline Width, the lower the resolution the thicker the Outline Width.	All RealToon Shader	All Render Pipeline
Width Control (Default: Empty) - A black and white or grayscale color texture to be use control the outline width. [Note] *This will not work if the Width option is 0. *Black is 0 while White is 1.	All RealToon Shader	All Render Pipeline
- Use a normal map to enhance the outline normal direction.	Default Shader	HDRP
Normal Map (Default: Unchecked)		
- A normal map for enhancing the outline normal direction.	Default Shader	HDRP
Normal Map Intensity (Default: 1)		
- How strong the Normal Map is.	Default Shader	HDRP



Outline extrusion type/method to be use. [Note] 'Origin - The extrusion will be based on the object's center of origin. 'Normal - The extrusion will be based on the object's normal direction. Outline Offset (Default: X:0 Y:0 Z:0) - XYZ offset value of the outline. Double Sided Outline (Default: Off) - This will show the front side of the outline or change the culling of the outline to off. [Note] **Viscoli for plane object. **Outline Z Position In Camera option is needed to be adjust to show the object. **Outline Z Position In Camera option is needed to be adjust to show the object. **Outline Z Position In Camera option is needed to be adjust to show the object. **Outline Intensity (Default: Unchecked) - This will mix Texture To Outline (Default: Unchecked) - This will mix Texture To Outline (Default: Unchecked) - How noisy Is the outline is. Dynamic Noisy Outline (Default: Unchecked) - Moving noisy outline. [Note] **Noving noisy outline. [Note] **Intensity in ord work if the Noisy Outline Intensity is 0. Light Affect Outline Color (Default: Unchecked) - Light falloff, color and intensity affect outline color. Outline Width Affected By View Distance (Default: Unchecked) - Camera view distance affects outline width or thickness. [Note] **For distance will increase outline width. **Near distance will decrease outline width. **Real Toon Shader All Real Toon Shader All Render Pipeline All Render Pipeline All Real Toon Shader All Render Pipeline All Render Pipeline All Real Toon Shader All Render Pipeline All Real Toon Shader All Render Pipeline All Real Toon Shader All Render Pipeline All Render Pipeline All Real Toon Shader All Render Pipeline All Render Pipeline	Outling Extrude Mathed (Default: Normal)		T
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- The maximum width or thickness value when camera distance is far from the All RealToon Shader All Render Pipeline			
	Far Distance Max Width (Default: Unchecked)		
		All RealToon Shader	All Render Pipeline



Transparent Opacity Affect Outline (Default: Checked)		
- Transparent affect outline opacity. [Note] *This only works if Transparent Mode is enabled.	Default Shader	HDRP
Vertex Color Blue Affect Outline Width (Default: Unchecked)		
- Object vertex color blue channel affect Outline Width .	All RealToon Shader	All Render Pipeline
[Note]		-
*This will not work if the Width option is 0 .		
Use Screen Space Outline / Use Traditional Outline		
- Use Screen Space Outline or use Traditional Outline. [Note] *This is NOT PER-MATERIAL. *THIS WILL MODIFY THE SHADER FILE and change the type of outline to be use. *On RealToon URP, only Depth Based Outline is available and Depth Texture is needed to be On. *If Screen Space Outline is used and Transparent Mode is enabled, the outline from the other object will be visible even if the transparent Opacity is 1 and ZWrite is Off or On.	Default Shader	URP and HDRP

Screen Space Outline	Shader Type	Render Pipeline
Mix Outline To The Shader Output (Default: Unchecked)		
- This will mix the outline looks and color to the shader output.	Default Shader	HDRP
Depth Threshold (Default: 900)		
- This will adjust the Depth near and far. [Note] *Positive values will move the Depth far but will reduce inner outlines if too far. *Negative values will move the Depth closer but will create some unwanted outline looks if too close. *Increase this more than 900 to have a clean silhouette style outline.	Default Shader	URP and HDRP
Normal Threshold (Default: 1.3)		
- This will adjust the Normals. [Note] *Positive values will show more outer and inner outline. *Negative values will reduce more outer and inner outline.	Default Shader	HDRP



Normal Min (Default: 1) Normal Max (Default: 1)		
- This will adjust the Minimum and Maximum of the Normal .		
[Note] *If Min and Max are in the same value, it will make the outline look hard or hard edge. *Adjusting these will help you to get more outlines.	Default Shader	HDRP

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Gloss	Shader Type	Render Pipeline
Gloss Intensity (Default: 1)		
- How visible or strong the gloss is.	All RealToon Shader	All Render Pipeline



Glossiness (Default: 0.8)		
- How gloss the object is.	All RealToon Shader	All Render Pipeline
Softness (Default: 0)		
- How soft the gloss is.	All RealToon Shader	All Render Pipeline
Color (Default: White)		
- Gloss color.	All RealToon Shader	All Render Pipeline
Color Power (Default: 10)		
- How strong the gloss color is.	All RealToon Shader	All Render Pipeline
Mask Gloss (Default: Empty)		
- Mask Gloss. [Note] *Use a Black and White or Grayscale texture/map. *White is the Gloss part while the Black is the non Gloss part or just normal.	All RealToon Shader	All Render Pipeline

Gloss Texture	Shader Type	Render Pipeline
Gloss Texture (Default: Empty)		
- A texture or image to be use as Gloss .		
[Note]	All RealToon Shader	All Render Pipeline
*Use any Black and White or Grayscale color 4x4 or equal size texture/image. *If you're using a wide size image, Adjust the X Tiling of the Gloss Texture .		
Softness (Default: 0)		
- How soft the Gloss Texture is.	All RealToon Shader	All Render Pipeline
Pattern Style (Default: Unchecked)		
- Turn Gloss Texture into pattern style.	All RealToon Shader	All Render Pipeline
Rotate (Default: 0)		
- Rotate Gloss Texture.	All RealToon Shader	All Render Pipeline
[Note]		
*Adjust also the Gloss Texture Offset option to adjust the position if needed.		
Follow Object Rotation (Default: Unchecked)		
- Gloss Texture follows object rotation.	All RealToon Shader	All Render Pipeline



Follow Light (Default: Unchecked)		
- Gloss Texture follows light. [Note] *This will adjust the follow light sensitivity.	All RealToon Shader	All Render Pipeline

Shadow	Shader Type	Render Pipeline
- The overall shadow color of the object. [Note]	All RealToon Shader	All Render Pipeline
*This will affect Realtime shadow , Self Shadow/Shade and ShadowT . *Change this to White if you want to use the Color Shadow Texture feature to color the shadow.		
Overall Shadow Color Power (Default: 1)		
- How strong the Overall Shadow Color .	All RealToon Shader	All Render Pipeline
Self Shadow & ShadowT At View Direction (Default: Unchecked)		
- Self Shadow and ShadowT follow the camera's view or view direction.	All RealToon Shader	All Render Pipeline
Reduce Shadow (Default: 0)		
- Reduce self cast shadow of the object.	Default Shader	URP and HDRP
Reduce Shadow (Pointlight) (Default: 0)		
- Reduce self cast shadow of the object.	All RealToon Shader	Built-In RP/3D
[Note] *This option will take effect when there's a pointlight present on the scene.		
Point Light Shadow Visibility Distance (Default: 0)		
- The amount of visible Point Light shadow on the object when the Point Light is move away from the object.	All RealToon Shader	Built-In RP/3D
Reduce Shadow (Spot & Directional Light) (Default: 10)		
- Reduce self cast shadow of the object.		
[Note] *This option will take effect when there's a spotlight or directional light or both present on the scene.	All RealToon Shader	Built-In RP/3D
Shadow Hardness (Default: 0)		
- Realtime shadow hardness look.	All RealToon Shader	All Render Pipeline



Self Shadow & Realtime Shadow Intensity (Default: 1)		
- Self Shadow and Realtime Shadow intensity or visibility. [Note] *If Self Shadow feature is disabled, it will only affect RealTime Shadow.	All RealToon Shader	All Render Pipeline
Enable Screen Space Ambient Occlusion (Default: Unchecked)		
- This will enable the object to have SSAO/Screen Space Ambient Occlusion.	Default Shader	URP and HDRP
Ambient Occlusion Color (Default: Black)		
- The color of the SSAO/Screen Space Ambient Occlusion.	Default Shader	URP and HDRP
Enable Screen Space Shadow (Default: Checked)		
- Enable Screen Space type Outline .		
[Note] *If this option is enabled, it will also allow you to use DXR/Ray Tracing Shadow. *If this option is disabled, it will use the non Screen Space Shadow and shadow map.	Default Shader	HDRP

Self Shadow/Shade	Shader Type	Render Pipeline
Self Shadow Intensity (Default: 1)		
- How visible the Self Shadow/Shade is.	Fade Transparency Shader	Built-In RP/3D LWRP
Threshold (Default: 0.85)		
- The amount of Self Shadow/Shade on the object.	All RealToon Shader	All Render Pipeline
Vertex Color Green Affect Self Shadow Threshold (Default: Unchecked)		
- Object vertex color blue channel affect Self Shadow Threshold . [Note] *This will not work if the Width option is 0 .	All RealToon Shader	All Render Pipeline
Hardness (Default: 1)		
- Hardness looks of the Self Shadow/Shade . [Note] *Value 1 hard look. *Value 0 Soft look.	All RealToon Shader	All Render Pipeline



Self Shadow & Real Time Shadow Color (Default: White)		
- Self Shadow/Shade and RealTime Shadow color power or intensity. [Note] *Visible if the Overall Shadow Color option is color White or any light color.	All RealToon Shader	All Render Pipeline
Self Shadow & Real Time Shadow Color Power (Default: 1)		
- Self Shadow and RealTime Shadow color.	All RealToon Shader	All Render Pipeline
[Note] *Visible if the Overall Shadow Color option is color White or any light color.		·
Light Ignore Y Normal Direction (Default: Unchecked)		
- Light will ignore object's ${\bf Y}$ normal direction if the light angle or position is in ${\bf X}$ or ${\bf Y}.$	Default Shader	URP and HDRP
Self Shadow Affected By Light Shadow Strength (Default: Unchecked)		
- Self Shadow/Shade visibility will be affected by the light shadow Strength.	All RealToon Shader	All Render Pipeline



Smooth Object Normal/Ignore Object Normal	Shader Type	Render Pipeline
Smooth Object Normal (Default: 0) - The amount of smoothed object normal/ignored object normal.	All RealToon Shader	All Render Pipeline
Vertex Color Red Control Smooth Object Normal (Default: Unchecked)		
- Object vertex color red channel affect the amount of smoothed object normal/ignored object normal.	All RealToon Shader	All Render Pipeline
[Note] *Visible if the Overall Shadow Color option is color White. XYZ Position (Default: X:0 Y:0 Z:0)		
- The amount of smoothed object normal/ignored object normal.	All RealToon Shader	All Render Pipeline
XYZ Hardness (Default: 14)		
-The amount of hardness of the smoothed object normal/ignored object normal.		
[Note] *This will only affect Self Shadow/Shade features and ShadowT. *Higher value will turn the normal into hard and less movement and control for Self Shadow/Shade and ShadowT. *Lower value will turn the normal into soft and more headroom for movement and control for Self Shadow/Shade and ShadowT.	All RealToon Shader	Built-In RP/3D
Show Normal (Default: Unchecked)		
- Show the object normal. [Note] *Red color is X, Blue color is Y, Green color is Z.	All RealToon Shader	All Render Pipeline

Shadow Color Texture	Shader Type	Render Pipeline
Shadow Color Texture (Default: Empty)		
- Texture to be use to color the shadow. [Note] *Visible if the Overall Shadow Color option is color White or any light color.	All RealToon Shader	All Render Pipeline
Power (Default: 0)		
- How strong the Shadow Color Texture is.	All RealToon Shader	All Render Pipeline



ShadowT	Shader Type	Render Pipeline
ShadowT Intensity (Default: 1)		
- How visible the ShadowT is.	All RealToon Shader "Except the Lite"	All Render Pipeline
Shadow T (Default: Empty)		
- A Black and White or Grayscale texture to be use as shadow.		
[Note] *You can use a Flat, Gradient or SDF texture as shadow. *Black will always be visible and not affected by the light while Gray and White will always be affect by the light	All RealToon Shader	All Render Pipeline
Light Threshold (Default: 50)		
- The amount of light to affect ShadowT .	All RealToon Shader	All Render Pipeline
Light Threshold (Default: 0)		
- The amount of ShadowT .	All RealToon Shader	All Render Pipeline
Hardness (Default: 1)		
- Hardness looks of the ShadowT .	All RealToon Shader	All Render Pipeline
Color (Default: White)		
- ShadowT Color. [Note]	All RealToon Shader	All Render Pipeline
*Visible if the Overall Shadow Color option is color White or any light color.		
Color Power (Default: 1)		
- How strong the color is.	All RealToon Shader	All Render Pipeline
Ignore Light (Default: Unchecked)		
- Don't follow the light or Ignore light direction.	All RealToon Shader	All Render Pipeline
Show In Shadow (Default: Unchecked)		
- Show ShadowT in the shadow.	All RealToon Shader	All Render Pipeline
[Note] *Visible if the Overall Shadow Color option is color White or any light color.	"Except the Lite"	
Show In Ambient Light (Default: Unchecked)		
- Show ShadowT in Ambient Light.		
[Note] *Visible if the Ambient Light/Environmental Light or GI is present.	All RealToon Shader "Except the Lite"	All Render Pipeline



Show In Ambient Light & Shadow Intensity (Default: 1)		
- Show In Ambient Light and Show In Shadow visibility.	All RealToon Shader	All Render Pipeline
[Note]	"Except the Lite"	All Kelluel Fipeline
*Visible if the Ambient Light/Environmental Light or GI is present.		
Show In Ambient Light & Shadow Threshold (Default: 1)		
- Show In Ambient Light and Show In Shadow threshold.	All RealToon Shader "Except the Lite"	All Render Pipeline
Light Falloff Affect ShadowT (Default: Unchecked)		
- Light falloff will affect ShadowT .	All RealToon Shader	All Render Pipeline
[Note]		Tanada i ipomio
*Visible if the Ambient Light/Environmental Light or GI is present.		

PTexture	Shader Type	Render Pipeline
PTexture (Default: Empty)		
- A texture to be use as pattern.		
[Note] *This will only affect Self Shadow/Shade, ShadowT features and RealTime	All RealToon Shader	All Render Pipeline
Shadow.		
Power (Default: 1)		
- How strong the PTexture looks.	All RealToon Shader	All Render Pipeline

Lighting	Shader Type	Render Pipeline
Receive Environmental Lighting and GI (Default: Checked)		
- The object will receive environmental lighting and GI.	All RealToon Shader	All Render Pipeline
Environmental Lighting Intensity (Default: 1)		
- How strong or intense the environmental lighting. [Note] *This is connected to Receive Environmental Lighting and GI option.	All RealToon Shader "Except the Lite"	All Render Pipeline
Use Old Ambient Light (Default: Unchecked)		
- Use the old unity's Ambient Light.	Lite Shaders	Built-In RP/3D



Enable Screen Space Global Illumination (Default: Checked)		
- Enable Screen Space type Global Illumination .		
[Note] *If this option is enabled, it will also allow you to use DXR/Ray Tracing Global Illumination. *If this option is disabled, it will use the non Screen Space Global Illumination.	Default Shader	HDRP
If this option is disabled, it will use the non screen space Global manimution.		
GI Flat Shade (Default: Unchecked)		
- Turn GI Shade into flat look.	All RealToon Shader "Except the Lite"	All Render Pipeline
GI Shade Threshold (Default: 0)		
- The amount of GI Shade on the object.	All RealToon Shader "Except the Lite"	All Render Pipeline
Raytraced GI Shade Falloff (Default: 0)		
- This will adjust the Raytraced Global Illumination shade falloff.	Default Shader	HDRP
[Note] *This will only take effect if the object is in a real time light (Directional, Spot, Point and Area) and the Shadow Color is not color black.	Delault Silauei	ПОЛР
Light Affect Shadow (Default: Unchecked)		
- Light intensity, color and light falloff affect shadow.		
[Note] *This will only affect Self Shadow/Shade, ShadowT features and RealTime Shadow.	All RealToon Shader "Except the Lite"	All Render Pipeline
Light Intensity (Default: -1)		
- How strong or intense the light on the shadow.		
[Note] *This will only affect Self Shadow, ShadowT features and RealTime Shadow. *This is connected to Light Affect Shadow option. *The default value on RealToon URP and RealToon HDRP is 1.	All RealToon Shader "Except the Lite"	All Render Pipeline
Use Traditional Light Blend (Default: Unchecked)		
- This will use the traditional style light blending.		
[Note] * If enabled light blending will be in add mode. * If not enabled the light blending will based on high or maximum light intensity and the blending will be similar to Anime or Cartoon.	Default Shader	URP and HDRP
Enable Punctual Lights (Default: Checked)		
- This will enabled the object to receive Punctual Lights (Point Spot and Area Lights).	Default Shader	HDRP



Enable Area Light (Default: Unchecked)		
- This will enabled the object to receive Area Light.		
[Note] * If the size of a Rect Type Area Light is too un-even like 'X:24 Y:1' the light fall off will cause some noise. This only applies when Area Light Smooth Look option is disabled.	Default Shader	HDRP
Directional Light Intensity (Default: 0)		
- How strong or intense the Directional Light on the object.	All RealToon Shader	All Render Pipeline
Point and Spot Light Intensity (Default: 0.45)		
- How strong or intense the Point and Spot light on the object.	All RealToon Shader	All Render Pipeline
[Note] *On RealToon URP and RealToon HDRP the default value is 0.		
Area Light Intensity (Default: 0)		
- How strong or intense the Area Light on the object.	Default Shader	HDRP
Tube Light Falloff (Default: 20)		
- This will adjust the Tube Type Area Light falloff on the object.	Default Shader	HDRP
Area Light Smooth Look (Default: Unchecked)		
- This will make the Area Light shades and falloff on the object looks smooth.	Default Shader	HDRP
[Note] *If enabled, Tube Light Falloff option will be disabled.	Default Shader	пике
Light Falloff Softness (Default: 1)		
- How soft the Point and Spotlight light falloff is on the object.	All RealToon Shader	All Render Pipeline
[Note] *Set this to 0 if you want an anime style light falloff, it is usually hard look.		

Custom Light Direction	Shader Type	Render Pipeline
Intensity (Default: 0)		
- The amount of custom light direction sensitivity.	All RealToon Shader	All Render Pipeline
Custom Light Direction (Default: X:0 Y:0 Z:10)		
- Custom Light Direction vector value.	All RealToon Shader	All Bandar Binalina
[Note] *This will only affect Self Shadow/Shade and ShadowT features.	All Real 1000 Shader	All Render Pipeline



Follow Object Rotation (Default: Unchecked)		
- Custom Light Direction will follow object rotation. [Note] *This will only affect Self Shadow/Shade and ShadowT features.	All RealToon Shader	All Render Pipeline

Reflection	Shader Type	Render Pipeline
Intensity (Default: 0)		
- How visible the reflection is	All RealToon Shader	All Render Pipeline
Roughness (Default: 0)		
- How rough the reflection looks.	All RealToon Shader	All Render Pipeline
Metallic (Default: 0)		
- How metallic the object is.		
[Note]	All RealToon Shader	All Render Pipeline
*Change the Main Color to something dark to make it more metallic and dark.		
Enable Screen Space Reflection (Default: Checked)		
- Enable Screen Space type Reflection .		
[Note]	Default Shader	HDRP
*If this option is enabled, it will also allow you to use DXR/Ray Tracing Reflection.	Default Siladei	HDRP
*If this option is disabled, it will use the non Screen Space Reflection and use		
the normal style Reflection .		
Mask Reflection (Default: Empty)		
- Mask Reflection .	All RealToon Shader	All Render Pipeline
*Use a Black and White or Grayscale texture/map.		
*White is the Reflection part while the Black is the non Reflection part.		

FReflection	Shader Type	Render Pipeline
FReflection (Default: Empty)		
- A texture or image to be use as reflection.		
[Note] *use any 4x4 or equal size texture/image. *If you're using wide size image, Adjust the X Tiling of the FRelfection. *FReflection stands for Fake Reflection.	All RealToon Shader	All Render Pipeline



Rim Light/Fresnel	Shader Type	Render Pipeline
Rim Light Intensity (Default: 1)		
- How visible the Rim Light is.	Default Shader	URP and HDRP
Unfill (Default: 1.5)		
- Reduce Rim Light on the object.	All RealToon Shader	All Render Pipeline
Threshold (Default: 900)		
- The amount of Rim Light effect on the object.	Default Shader	URP and HDRP
Softness (Default: 1)		
- How soft the Rim Light is.	All RealToon Shader	All Render Pipeline
Light Affect Rim Light Color (Default: Unchecked)		
- Light intensity, color and falloff affect rim light color.	All RealToon Shader	All Render Pipeline
Color (Default: White)		
- Rim light color.	All RealToon Shader	All Render Pipeline
Color Power (Default: 10)		
- How strong the rim light color is.	All RealToon Shader	All Render Pipeline
Screen Space Rim Light (Default: Unchecked)		
- Screen Space type Rim Light	Default Shader	URP and HDRP
Rim Light In Light (Default: Checked)		
- Rim light in the light area of the object.	All RealToon Shader	All Render Pipeline

Depth	Shader Type	Render Pipeline
Depth (Default: 0.2)		
- The amount of Depth effect.	Refraction Shader	Built-In RP/3D
Edge Hardness (Default: 0.1)		
- How hard the depth edge looks.	Refraction Shader	Built-In RP/3D
Color (Default: RGB: 128)		
- Depth edge color.	Refraction Shader	Built-In RP/3D



Color power (Default: 1.8)		
- How strong the color is.	Refraction Shader	Built-In RP/3D

Tessellation	Shader Type	Render Pipeline
Smoothness (Default: 0.5)		
- Smooth tessellated faces.	All RealToon Shader With Tessellation	Built-In RP/3D
Tessellation Transition (Default: 0.8)		
- Transition distance between Near and Far .	All RealToon Shader	
[Note]	With Tessellation	Built-In RP/3D
*0 means mostly near tessellation value while 1 means mostly far tessellation value.		
Tessellation Near (Default: 1)		
- The amount of Tessellation when Near .	All RealToon Shader With Tessellation	Built-In RP/3D
Tessellation Far (Default: 1)		
- The amount of Tessellation when Far .	All RealToon Shader With Tessellation	Built-In RP/3D

See Through	Shader Type	Render Pipeline
ID (Default: 0) - ID or Reference value.	All RealToon Shader	Built-In RP/3D LWRP URP
Set 1 (Default: None) Set 2 (Default: None)		
[Note] *A the see through object. * B the object to be seen through A. *If Set 1 is set to A, Set 2 is also set to A. (See through object) *If Set 1 is set to B, Set 2 is also set to B. (Object to be seen through "A") *If the ID of the see through object A is set to 1, the ID of the object to be seen through A is also set to 1. (Important) [See through object "A"] Render Queue set to Geometry (2000). ["B" object to be seen through "A"] Render Queue set to Geometry (2000) and minus 1. [VRChat users that don't use this, Set both A and B to "Blank"] (See/open scene "See Through Example" for more info)	All RealToon Shader	Built-In RP/3D LWRP URP



Near Fade Dithering	Shader Type	Render Pipeline
Min Distance (Default: 0)		
- The minimum start fade distance.	Default Shader	URP and HDRP
Max Distance (Default: 2)		
- The maximum end fade distance.	Default Shader	URP and HDRP

Triplanar	Shader Type	Render Pipeline
Tile (Default: 1)		
- Tiling scale of the texture.	Default Shader	URP and HDRP
Blend (Default: 4)		
- Blending of the triplanar texture.	Default Shader	URP and HDRP



Disable/Enable Features	Shader Type	Render Pipeline
MatCap		·
- It is a complete material including lighting, specular and reflection that is baked into texture/image.	All RealToon Shader	All Render Pipeline
Normal Map		
- Normals that are baked into texture/image.	All RealToon Shader	All Render Pipeline
Outline	All RealToon Shader	All Render Pipeline
Cutout		
- Cutting out parts of the object based on the assign texture.	All RealToon Shader	All Render Pipeline
Color Adjustment		
- Adjusting the colors of the shader output.	All RealToon Shader	All Render Pipeline
Self Lit		
- Self lit, Self illumination or Emission.	All RealToon Shader	All Render Pipeline
Gloss		
- Glossy style or looks.	All RealToon Shader	All Render Pipeline
Gloss Texture		
- Glossy style or looks in texture/image form.	All RealToon Shader	All Render Pipeline
Self Shadow		
- Objects own shadow or shade.	All RealToon Shader	All Render Pipeline
Smooth Object Normal		
- Smooth the normals of the object Useful on Anime/Cartoon model face.	All RealToon Shader	All Render Pipeline
Shadow Color Texture		
- Shadow colors in texture/image form It is use for coloring shadow using texture/image.	All RealToon Shader	All Render Pipeline
ShadowT		
- Shadows in texture/image form Add more detailed shadows that can't produce by the Real time shadow.	All RealToon Shader	All Render Pipeline
PTexture		
- Patterned texture for comics, pop or manga style shadows.	All RealToon Shader	All Render Pipeline
	-	1



Custom Light Direction		
- Customize light direction for shades Useful on Anime/Cartoon model face.	All RealToon Shader	All Render Pipeline
Reflection	All RealToon Shader	All Render Pipeline
FReflection		
- Reflection in texture or image form A Fake Reflection.	All RealToon Shader	All Render Pipeline
Rim Light		
- Light at the edge of the object.	All RealToon Shader	All Render Pipeline
Depth	Refraction Shader	Built-In RP/3D
Near Fade Dithering		
- Object fades when the camera is near.	Default Shader	URP and HDRP
Triplanar		
- For a uniform texture scale and tiles	Default Shader	URP and HDRP



Other Options	Shader Type	Render Pipeline
No Light and Shadow On BackFace (Default: Unchecked)		
- No light and shadow on the back side on a face of the object.	All DealTean Chaden	All Dondon Binolino
[Note]	All RealToon Shader	All Render Pipeline
* Useful for objects that are plane or quad.		
Hide Directional Light Shadow (Default: Unchecked)		
- Hide Directional Light cast shadow and received shadow on the object.	All RealToon Shader	All Render Pipeline
Hide Point & Spot Shadow (Default: Unchecked)		
- Hide Point and Spot Light cast shadow and received shadow on the object.	All RealToon Shader	All Render Pipeline
Hide Cast Shadow (Default: Unchecked)		
- Hide or disable object cast shadow.	Fade Transparency	Built-In RP/3D
Hide Contact Shadow (Default: Checked)		
- Hide or disable cast and received contact shadow.	Default Shader	HDRP
Disable Cast Shadow (Default: Checked)		
- Disable object cast shadow.	Default Shader	URP and HDRP
ZWrite (Default: On)		
- Turn on Z Depth on object.	All RealToon Shader	All Render Pipeline
Disable DOTS Mesh Deformation (Default: Checked)		
- Disable DOTS Mesh Deformation: Linear Blend Skinning and Compute Deformation.	Default Shader	URP
[Note] * Enable this for Static Objects.		
Receive Decal (Default: Checked)	-	
- The object will able to Receive Decals.	Default Shader	URP



Optimize for [Light Mode:Baked] (Default: Unchecked)		
- This will disable all real time features on the shader and optimize it for [Light Mode: Baked] [Note] * Disable or uncheck this for [Light Mode: RealTime or Mixed] use.	Default Shader	URP
Automatic Remove Unused Shader Keywords (Default: Unchecked)		
- Remove unused shader keywords automatically in all materials with Realtoon Shader.		
[Note] * Warning: This will also remove stored previous shaders shader keywords.) * This will take effect once this enabled and when the RealToon Inspector shown.	All RealToon Shader	All Render Pipeline
* You can just enable and disable it right away just to remove the unused shader keyword * Disable this if you experience too slow Inspector.		
Recursive Rendering (Default: Unchecked)		
- A replacement pipeline for rendering Meshes in the High Definition Render Pipeline (HDRP) .		
[Note] * This option will only work on DXR/Ray Tracing enabled project. * Enable transparency to be visible on a reflective surface. * Ptexture feature and Pattern Style option will not work on this. *If enabled, object will not receive Ray Traced Global Illumination.	Default Shader	HDRP

RealToon Inspector Bottom Toolbar	Shader Type	Render Pipeline
Remove Outline (On Shader) Add Outline (On Shader)		
- Remove or Add the outline on the shader.		
[Note]	Default Shader	URP and HDRP
* This is NOT PER-MATERIAL .		
*THIS WILL MODIFY THE SHADER FILE to remove or add the outline on the shader.		
Refresh Settings		
- This will refresh and re-apply the settings properly.		
[Note]		
* Click this if there are some problem, after you update, after material reset or re-import RealToon.	Default Shader	URP and HDRP



Video Tutorials		
- RealToon video tutorials.	All RealToon Shader	All Render Pipeline
RealToon (User Guide).pdf		
- RealToon user guide or documentation.	All RealToon Shader	All Render Pipeline
Hide UI		
- Hide RealToon inspector UI. [Note] * This is NOT PER-MATERIAL. *This is Global.	All RealToon Shader	All Render Pipeline

Settings	Shader Type	Render Pipeline
Change Shader Compilation Target to 2.0 or 4.5		
- This will change the Shader Compilation Target of the RealToon Shader file to '2.0' or '4.5'.		
[Note]	Default Shader	URP
*If the Shader Compilation Target is changed to 4.5, the shader will support DOTS/DOTS Hybrid Renderer, GPU Resident and Tessellation. *GPU Resident available on Unity 6 and beyond. * This is NOT PER-MATERIAL.		
DOTS HR – Use Compute Deformation or Linear Blend Skinning		
- Will let you change from Compute Deformation or Linear Blend Skinning.		
- For more information about Compute Deformation see : <u>Unity - Compute Deformation</u>		
- For more information about Linear Blend Skinning see :		
<u>Unity - Linear Blend Skinning</u>	Default Shader	URP
[Note]		
*This will only visible if your project is on DOTS and Hybrid Renderer and		
Compilation Target is on 4.5.		
*Use Compute Deformation for blend shape support.		
* This is NOT PER-MATERIAL .		
*If your object is static, it is recommend to enable		
<u>Disable DOTS Mesh Deformation</u> option.		



[Important Notes/Tips]

A. You can control the properties of the shaders in your code. To see/access the shader properties, just go to RealToon Shaders folder and select the shader you want to access.

If you want to learn how to access shader properties by code, just visit this link: <u>Unity Doc - API Script - Material</u>

- B. If you are going to use RealToon URP or RealToon HDRP for environment object, Just disable the **Outline** because the custom outline pass on the shader, can't be batch.
- **C.** To use **RealToon URP** on a **DOTS Hybrid Renderer** project, change the **Shader Compilation Target** to **4.5** under the **Settings** section. RealToon HDRP is already Shader Compilation Target 4.5.
- D. To use GPU Resident on RealToon URP, just change the Shader Compilation Target to 4.5 under the **Settings** section, On **RealToon HDRP**, no need to change. GPU Resident available on Unity 6 and Beyond.
- E. Disable Outline if your object/s don't need outline or if you don't want to use outline and want less draw calls or want to use a 3rd party image effects/Post Processing outline.
- F. On Screen Space Outline mode, the Outline Width will be affected by the screen resolution, the higher the resolution the thinner the **Outline Width**, the lower the resolution the thicker the Outline Width.
- G. On Screen Space Outline mode, if your object is transparent, the outlines from the other Objects with **RealToon Screen Space Outline** will be visible on the object.
- H. Adjust Reduce Shadow to reduce unwanted object self cast shadow, especially shadow artifacts.
- I. To properly color shadow, Adjust Lighting -> Environmental Intensity to 0 then change your object shadow color, after that, change Environmental Intensity back to 1 or your own value.
- J. Note that tessellation only work on DX11/12 to up, OpenGL Core, OpenGL ES 3.1 mobile & PS4/XBoxOne and Shader Model 4.6 to up.
- K. You can use RealToon together with Unity3D Standard Shader or your other shaders.



- L. RealToon can receive GI, skylight/environment light & can do baked/real-time reflection.
- **M.** You can use **ShadowT** as 2nd self shadow/shade.
- N. You can use both **Directional Light** & **Point Spot light** at the same time.
- **O.** If you want a manga/comics look, use **PTexture** and use a half tone texture.
 - *Adjust Saturation to 0 if you want that Black and white look and you don't want to edit the texture again.
 - *To use **Saturation**, just enable **Color Adjustment**.
- P. Always Change the Overall Shadow Color to White if you want to color other shadow features like ShadowT & Self Shadow and use PTexture.
- **Q.** Enable **Light Affect Shadow** if you want your shadow to be affected by lights.
- **R.** Fade Transparency & Refraction doesn't receive shadows.
- **S.** Make your **Normal Map** smooth for smooth better shading details.
- T. Use **ShadowT** for more detailed or additional shadows like the shadows on a cloth or hair.
- U. For better anime/toon shadow/shading, edit the Vertex Normal of your model by editing it to your 3d modeling software or use **Smooth Object Normal** feature or override object normal by using Normal Map.
- V. Use Custom Light Direction if you don't want Self Shadow & ShadowT to not follow Light Direction and follow other object by script. Useful for anime style faces.
- **W.** Adjust **Outline Offset** if you want to adjust the outline position.
 - * For silhouette outline effect, just adjust **Outline Z Position In Camera** option.
- X. Image Gallery: http://mjq3690.deviantart.com/gallery/61884975/RealToon-Shader-Gallery
- Y. Video Tutorials: https://www.youtube.com/playlist?list=PL0M1m9smMVPJ4qEkJnZObqJE5mU9uz6SY
- Z. Video Demo: https://www.youtube.com/playlist?list=PLOM1m9smMVPI1XRV 1UL Vz3IAHkPtQYT
- AA. Other Videos

https://www.youtube.com/playlist?list=PL0M1m9smMVPK_vLCBnJ8qIc3w5WsHrCM5

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[Contact/Support/Social Network]

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Youtube:

https://www.youtube.com/channel/UC5sHbeOQdyMPV_Ck0kRgJgQ

MJQ Studio Works Unity Publisher Profile (Support Links & Email):

http://u3d.as/vDv

Unity 3D Forum:

https://forum.unity3d.com/threads/realtoon-pc-mobile.414237/

Website:

https://mjqstudioworks.weebly.com/