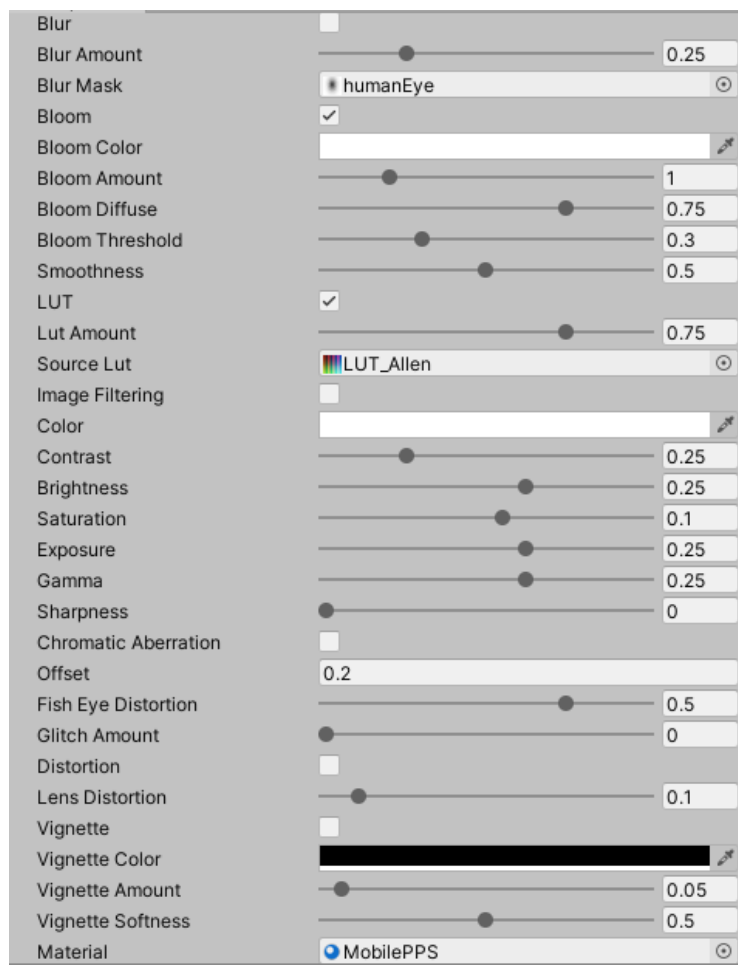


MOBILE POST PROCESSING

This package contains the Post processing shader, which allows you to add some effects to camera renders. You can separately apply bloom, blur or color correction to your scene and even all of them together. Overall performance remains 35-39 fps on low end mobiles(tested on Meizu M2 Note with Android 5.1 with ~35fps)

How to apply:

1. Add Mobile Processing Script to your camera



2. Pick the Shader(MobilePostProcess.shader file) , pick the LUT texture from the LUTS folder and pick one of the mask textures(humanEye.png)

And here it is you have the color correction applied to your scene.

You can also check the Lut and Blur checkboxes to turn on or off these effects. P.S you can apply both of them simultaneously.

PARAMETERS

- **BLUR** – if you tick this checkbox Blur will be applied to your scene. Untick if you are not using for performance reasons.
- **BLUR AMOUNT** – level of blur on your scene
- **BLURMASK**- Mask texture is greyscaled texture, used by blur shader. Darker the area, less blur will be applied to that area in final image. Strongly advice for mobile to have at least some areas not blurred, to increase the performance.
- **BLOOM** – if you tick this checkbox Bloom will be applied to your scene. Untick if you are not using for performance reasons.
- **BLOOM COLOR** – color of the bloom effect
- **BLOOM AMOUNT** – amount of bloom applied to final image
- **BLOOM DIFFUSE** – diffuse amount of the bloomed areas
- **BLOOM THRESHOLD** – reduces the brightness of not bloomed part of the scene.
- **BLOOM SOFTNESS** – the softness of the bloom threshold
- **LUT** - if you tick this checkbox Color Correction(LUT) will be applied to your scene. Untick if you are not using for performance reasons.
- **LUT AMOUNT** - amount of lut applied to the scene. Not active when blur applied due to performance reasons.
- **SOURCE LUT** - the lut texture
- **IMAGE FILTERING** – enable image filters. Untick if you are not using for performance reasons.
- **COLOR** – tint color of th image
- **CONTRAST** – changes the constrast of the image
- **BRIGHTNESS** – changes the brightness of the image
- **SATURATION** – colourness of the image, from black and white to colored
- **EXPOSURE** – brightens the brighter areas
- **GAMMA** – darkens the darker areas
- **SHARPNESS** – edge sharpness of the image
- **CHROMATIC ABERRATION** – enables chromatic aberration effect. Untick if you are not using for performance reasons.
- **OFFSET** – horizontal shift of the red and blue channels

- **FISH EYE DISTORTION** – smoothly distorts the red channel towards the edge and blue channel from the edge. Center of the image is not affected
- **GLITCH AMOUNT** – value describes the random horizontal shifts of the red and blue channels
- **DISTORTION** – enables the camera distortion. Untick if you are not using for performance reasons.
- **LENS DISTORTION** – distorts and stretches the edges of the image
- **VIGNETTE** – enable vignette effect. Untick if you are not using for performance reasons.
- **VIGNETTE COLOR** – blacks out the edges of the image
- **VIGNETTE AMOUNT** – amount of blackness of the corner
- **VIGNETTE SOFTNESS** – softness of the dark corners
- **MATERIAL** – here just select the PostProcessing material

OPTIMIZATION SUGGESTIONS

1. LUT and Image filter provide the same functionality. Lut maps have all the filters in one lut map, while image filtering allows to edit the filters manually. **Try to use one of them.**
2. **Untick of the effects that you are not using.** If you untick It will boost your performance significantly.
3. **If you are not using Sharpness set it to 0.** It uses the edge detection algorithm, which can affect the performance negligibly.
4. **Try to keep Bloom diffuse and Blur amount values as low as possible, it will boost your performance.** Here is the scheme of passes according to blur amount or bloom diffuse:
 - a. **0 – 0.25** **1 pass**
 - b. **0.26 - 0.5** **2 passes**
 - c. **0.51 - 0.75** **3 passes**
 - d. **0.76 - 1** **5 passes**

Overall, in the 40k polugonal scene, with 68 materials applied to 50 gameobjects and one Directional light we have this results on Meizu M2 Note(Octa-core 1.3 GHZ ARM Cortex-A53, Mediatek MT6753, GPU Mali-T720MP3, RAM 2 GB)

Lut+Blur+Bloom – 32-40 fps

Blur+Bloom – 45-55 fps