MK Glow

General rule: If possible, always use a **Linear Color Space, Color Grading and HDR** to get the **best** results.

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1.0 Setup Workflow

1.1 Natural

The Natural Workflow is based on a more realistic behavior. No color cutoff, just like in real life. This workflow should give you the most realistic results. Additionally it's super simple to set up.

1. **Adjust the Emission**. You can simply raise the emission on your materials to make them glow.

That's all.

1.2 Threshold

The Threshold Workflow is based on the brightness of the pixels and a threshold value.

1. **Setup your threshold**. The left part of the threshold slider defines your color cutoff, while the right part defines your maximum brightness of the resulting glow. Threshold values are represented in the gamma space.
2. **Adjust the Emission**. You can simply raise the emission on your materials to make them glow.

1.3 Selective

The Selective Workflow allows you to apply a glow effect per object.
This workflow is based on Unity's Replacement Rendering feature (not available in custom render pipelines (LWRP, HDRP)).

1. **Set your Render Layer**. Controls which layers are redrawn by the Replacement Rendering feature. The recommended setting for the selective Render Layer is *"Everything"* to avoid Z-Issues.
2. **Apply a *"MK/Glow/Selective/"* shader** to the material that is supposed to glow. All shader features are using the exact same raw glow map. The raw glow map can be viewed, by setting the debug view to "raw".
3. **Adjust your glowing material**. Add a glow texture to define which parts should glow and setup the material as you wish.

2.0 Debugging

For debugging you have the DebugView option on the inspector. You can inspect every rendering step which is done while rendering.

None:	Normal rendering is done
Raw Bloom / Lens Flare / Glare:	Shows the parts, which are glowing
Bloom / Lens Flare / Glare:	Shows the finished result of a rendering step
Composite	Shows the combined final result

3.0 Scriptable Render Pipeline Setup

3.1 Builtin Pipeline

Simply attach the MK Glow component to your rendering camera. You can also use the Post Processing Stack V2, see below.

3.2 LWRP And Post Processing Stack V2

1) Import the “LWRP_And_PPSV2_Component.unitypackage” , which you find under: “_MK/MKGlow/Components/”
2) On your Post Processing Stack V2 Profile add the “MK/MKGlow” component

3.3 HDRP

In order to use custom post processing on the HDRP you need a 2019.3+ Unity Editor version and one of the latest builds of the HDRP.

1) Import the “HDRP_Component.unitypackage” , which you find under: “_MK/MKGlow/Components/”
2) Add MKGlow to your custom post processing under HDRP Default Settings on the “Before Post Process” List.
3) On your Volume Component add the Glow Component via “Post-processing/MK/MKGlow”

3.4 URP

1) Import the “URP_Component.unitypackage” , which you find under: “_MK/MKGlow/Components/”
2) On your Universal Render Pipeline Renderer Asset add a custom Renderer Feature: MK Glow Renderer Feature
3) On your Volume Component add the Glow Component via “Post-processing/MK/MKGlow”

4.0 Mobile Setup

Post-processing especially on mobile can have heavy performance impacts. However MK Glow has a really good trade-off in terms of quality and performance for mobile.

It's **recommended** to **enable HDR** rendering. You can do this under ***"Project Settings/Graphics/Tier Settings/Use HDR".*** 10 Bits per channel should be enough to get nice results.

The following **settings** are recommended for **mobile devices**:

Render Priority	Performance / Balanced
Quality	Very Low / Low / Medium
AntiFlicker	Balanced
Bloom Scattering	~5

5.0 FAQ

Q: MK/Glow/Selective/Standard Shader is not visible or throwing a MetaPass Error
A: Fix: Right Click on the *"_MK/Glow/Shaders/VariantsSelective"* folder and select "reimport"

Q: **Selective Workflow doesn't work when using a Custom Render Pipeline**
A: Currently it's impossible to use the Selective Workflow on custom render pipelines. The Replacement rendering feature, which is required for the selective workflow seems to not get called on SRPs.

Q: How to make Screen Spaced UI glow
A: In order to make Screen Spaced UI work, your Render Mode of the Canvas has to be set to *"Screen Space - Camera"*, otherwise no Post-processing is applied to Screen Spaced Elements.

6.0 Feedback / Get in touch

Do you have some cool stuff to show?
I would love to see your results (High resolution screenshots / videos) using the shader!

Questions, bug reports, feature requests, feedback:
Feel free to get in touch via support@michaelkremmel.de.