

EB GUIDE tutorial

Rendering gamma correctly

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1. Tutorial: Rendering gamma correctly

TIP



Default window layout

All instructions and screenshots use the default window layout. If you want to follow the instructions, we recommend to set the EB GUIDE Studio or EB GUIDE Monitor window to default layout by selecting **Layout > Reset to default layout**.

In EB GUIDE Studio you can adjust the gamma value on different scopes: For the display, for single images, scene graphs, or textures. This tutorial shows you how to configure global sRGB rendering and how to exempt images and textures that already are sRGB-encoded. For best results, work through the steps in order presented.

For this tutorial you require the following files:

- ▶ An sRGB-encoded image in `.png` or `.jpeg` format
- ▶ An sRGB-encoded image in `.png` or `.jpeg` that is going to be used as a texture
- ▶ A 3D model with a textured 3D object in the `.fbx` file. The texture has to be embedded in the `.fbx` file. Alternatively, you can embed relative references to the texture files and deliver these files along with the `.fbx` file.

Approximate duration: 15 minutes.



Configuring gamma encoding for the display

The following steps guide you through the process of setting up EB GUIDE Studio to output gamma-encoded values to the display.

Prerequisite:

- The content area displays the **Main** state machine.
- The **Main** state machine contains an Initial state and a View state.
- The Initial state has a transition to the View state.

Step 1

Click .

The project center opens.

Step 2

In the navigation area, click **Configure > Profiles**.

Step 3

For each profile that is sRGB-aware configure the following:

Step 3.1

In the content area, click the **Scenes** tab.

Step 3.2

From the `colorMode` drop-down list box, select the following:

- ▶ If your rendering pipeline uses the hardware sRGB support of the GPU, select `32-bit sRGB (4)`
- ▶ If your rendering hardware does not support sRGB, select `32-bit sRGB (Emulated) (5)`.

Step 4

To save the project, click  in the command area.

Step 5

To restart the project, click **Open** and click your project.

You configured the sRGB encoding for the display.



Configuring gamma encoding for images

Prerequisite:

- You completed the previous instruction.
- An image file is available in the `resources` folder.

Step 1

Go to the project editor and double-click the View state. Drag an Image from the **Toolbox** into the View.

Step 2

In the **Properties** component, from the `image` drop-down box, select an image file.

The image probably appears too bright. This is caused by the sRGB color mode that was configured in the scene properties and now applies gamma correction to an already gamma-corrected image.

Step 3

In the **Properties** component select `sRGB`.

The image is exempt from the renderers sRGB encoding and is displayed correctly.



Configuring gamma encoding for scene graphs

Prerequisite:

- You completed the previous instructions.
- A 3D model with a 3D image, for example an `.fbx` file, with at least one 3D object is available.

Step 1

Drag a Scene graph from the **Toolbox** into the View.

Step 2

In the **Properties** component, click **Import file** and select the 3D model.

The 3D model is imported and is visible in the View.

Step 3

To switch off the gamma correction, in the **Properties** component, in the `gamma` text box enter `1.0`.

You configured the gamma encoding for the Scene graph.



Configuring gamma encoding for textures

This task shows you how to adjust the gamma for sRGB textures for widget feature **Diffuse texture**. You can do the same for widget features **Ambient texture**, **Base color texture**, **Diffuse texture**, **Emissive texture** or **Specular texture**.

Prerequisite:

- You completed the previous instructions.
- A texture image is available in the `resources` folder.

Step 1

In the **Navigation** component select the Scene graph. Within the Scene graph structure, select a Material widget.

Step 2

Add widget feature **Diffuse texture**.

Step 3

In the **Properties** component, from the `diffuseTexture` drop-down box, select a texture image file.

Step 4

Select the `diffuseSRGB` property.

The texture is exempt from the renderers sRGB encoding and is displayed correctly.