Physics Debug Extension

Rotary Heart

Documentation Version: 1.3

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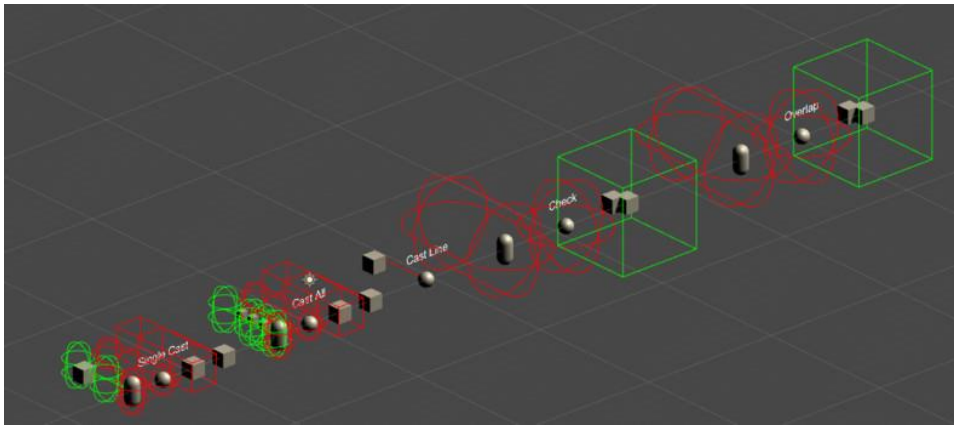


Description:

This is a lightweight extension to the physics class that adds the ability to preview casts, checks and overlaps. It works with all the available functions that the UnityEngine Physics have.

Setup:

To use simply add the PhyiscsExtension folder to your project (which is on the package). It doesn't need to be on root of your project, so feel free to move it wherever you want.

How to use:

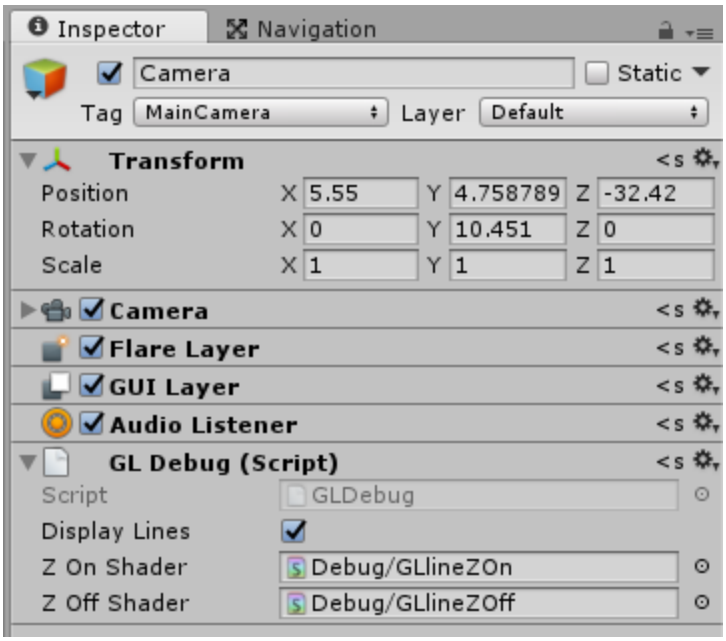
The system calls are the same as Physics calls. The only difference is that all the functions include the following optional parameters:

1. `PreviewCondition` **`preview`**: Indicates how you want to preview the information, it could be one of the followings
    a. *None:* Ignores any additional preview code and calls Unity Physics directly.
    b. *Editor:* Can only be viewed from the editor (it uses Debug.Draw calls)
    c. *Game:* Uses GLDebug to draw lines using GL. This allows the lines to be viewed from the game Camera.
2. `float` **`drawDuration`**: For how long the lines will be drawn, if it's set to 0 it will be drawn for 1 frame.
3. `Color` **`hitColor`**: What color will the lines be drawn when it hits something. Default is green
4. `Color` **`noHitColor`**: What color will the lines be drawn if it doesn't hit any color. Default is red

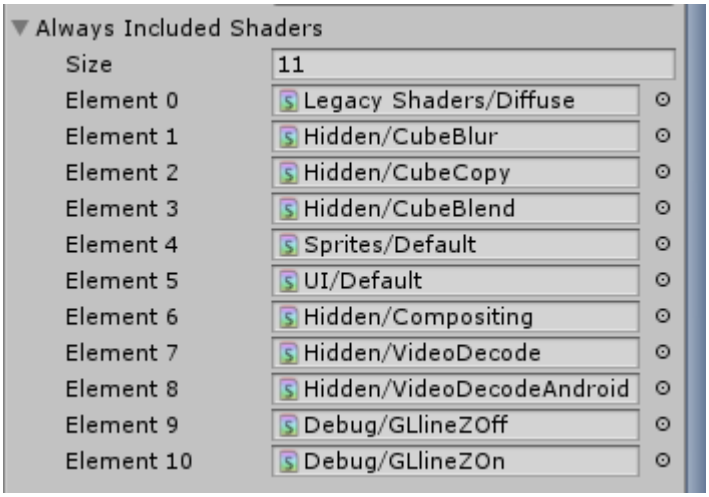
To be able to use the system you can manually attach the component *GLDebug* that is inside the .dll to your camera or call the static functions GLDebug.DrawLine(…). If the static functions are used the system will try to find your main camera and attach the component by itself. Note that only 1 component can be used.

In some cases, Unity will not include the materials needed to draw the lines. There currently are 2 ways to solve this:

1. If you manually added the component to your camera you can set the correct shader reference on the inspector. This will ensure that Unity includes the shader on the build game.



2. You need to add the shaders in the project settings to always be included. To do this you need to go to Project Settings > Graphics and on the section that says "Always Include Shaders" include the shaders GLlineZOff and GLlineZOn



If when compiling, you get an error saying: "*An asset is marked with HideFlags.DontSave but is included in the build:*" and it points to both shaders just open them add an empty line at the end and save them. This way Unity will not mark them as *HideFlags.DontSave*

Additional Notes:

GLDebug source code can be found at the following link https://gitlab.com/RotaryHeart-UnityShare/GLDebug/tree/master/ It's included as a dll on the package for easier implementation only.