Making a Thruster

This tutorial teaches you how to make a basic thruster.

Step 1 - Add a Thruster

Right click in your Hierarchy window, and select **Space Graphics Toolkit → Thruster**, and you should see a new Thruster GameObject in your scene with the SgtThruster component attached.

If you want the thruster to add force to a Rigidbody then drag and drop your Rigidbody into the Rigidbody inspector setting.

Step 2 - Add a Visual

The most basic visual for a thruster is a sprite. To add one, just add the SpriteRenderer component to your Thruster GameObject, or one of its children. You can then set the **Sprite** setting to the **Thruster** sprite that comes with SGT. To make it transparent and have an easily adjustable color, change the **Material** to the **Thruster** material that comes with SGT. You can now change the color in a way that preserves the white glow in the middle.

Step 3 - Rotate The Visual

Currently your thruster is just a flat sprite that looks bad from different angles, so to make the visual rotate to the camera you can add the **SgtThrusterRoll** component. This will automatically roll it to the currently rendering camera.

Step 4 - Scale The Visual

Currently your thruster remains the same size regardless of the thruster being on or off. To fix this, you can add the **SgtThrusterScale** component. This will scale the current GameObject based on the **SgtThruster** component's **Throttle** value, and also has options for flickering, and dampening.

NOTE: By default the **Throttle** value is 0, which means the **SgtThrusterScale** component will make the scale 0,0,0. To test what different thrust values look like, set the **Throttle** value to 1.

Step 5 - Done!

You now have a basic thruster that can add forces to your spaceships.

To control the thrusters based on user input, you need to write a simple script that stores a reference to each **SgtThruster** you have, and adjust the Throttle value (e.g. 0 to 1) based on these inputs.