

# Wave Creator

Thank you for buying Wave Creator. This manual is in 2 parts the setup and the options, you can either watch my [overview video](#) or read this manual as both cover the same topics:

## Setup

### Creating a Water Body

1. Save your scene
2. To create a Water Body go to **GameObject / Create Other / Water Body**.
3. Input the size of your water body (if using a terrain this will be the size of your terrain) and the Shader you want to use (see Water Body Creator options section of manual if not sure)
4. If you are using a skybox in your scene go to the water body object and in the Reflection section of the Shader click the button Regenerate Cubemap. It produces reflections in the water. (Always do this if you change your skybox)
5. Add the Set Cam Pos script to your camera object and in the Water Body variable select the water body in the scene. (Always attach this script to your main camera)

### Other

1. To add the float script to a game object go to **Component / Scripts / Float**.
2. To add the submerged effect to the camera, select the camera object and go to **Component / Scripts / Submerged Effect**.

## Options

In this section I will go over all the options you can change in Wave Creator.

### Water Body Creator

1. **Width** - Length of the Water Body along the x axis.
2. **Length** - Length of the Water Body along the z axis.
3. **Performance Options (Mesh Resolution)** – The higher the resolution of the mesh the more vertices and triangles there are in the mesh therefore there is more for the computer to calculate. Consider using a lower resolution mesh when developing for mobile or for a small terrain as a higher resolution mesh would not be needed.
4. **Performance Options (Shader)** – The first option is the full Shader, the second has no edge fade, use this Shader for recent mobile devices. The third option has no edge fade, specularity and has reduced reflection effects, use this when developing for older mobile devices.

### Wave Creator Shader

1. **Deep Water Colour** - The colour of the deep water.
2. **Shadow Water Colour** - The colour of the shallow water.
3. **Shallow To Deep Adjustment** - This variable dictates where the shallow water ends and where deep water starts.
4. **Edge Fade** – The distance between no colours and full colours, the larger the longer period of blending around the shoreline.
5. **Water Texture** - The water texture.
6. **Normal Texture** - The bump map used for specular reflection.
7. **Specular Colour** - The colour of the specular highlight. (black will not show up)
8. **Shininess** - How spread out the specular highlights are, this should not be below 25.
9. **Cubemap** - The Cubemap texture which is reflected in the water.

10. **Reflect Power** - How much the Cubemap reflects in the water.
11. **Foam Colour** - The colour of the foam (the alpha component is active)
12. **Foam Texture** - The foam texture.
13. **Foam Map** – A texture which control the foam tiling to make it aperiodic, you won't need to change this texture.
14. **Shoreline Foam Amount** - The amount of foam around the shoreline.
15. **Wave Foam Amount** - How shallow the wave has to be for foam to appear on it.
16. **Height** - The maximum height of a wave, the distance between the highest peak and shallowest trough is twice this value.
17. **Steepness** - How steep the sides of the wave are.
18. **Frequency** - The number of waves.
19. **Velocity** - The speed of the waves, can be set to a negative value for the waves to flow backward.
20. **Direction Type** - When Direction Type is set to Directional, X Direction and Z Direction make up a Vector2 direction which all waves travel in. When Direction Type is set to Circular, **Move Towards X** and **Move Towards Z** make up a point where the waves flow towards. (0,0) is the centre of the Water Body.
21. **Wave Fadeout** - How close the camera has to be to render waves.
22. **Regenerate Heightmap (button)** - Press this button to regenerate the heightmap if you modify your terrain.
23. **Heightmap** - Wave Creator uses this to create deep and shallow areas and shoreline foam. Don't change manually.

### Float Script

1. Water Body - Assign the Water Body you want the object to float on to this variable.
2. Offset - This is added to the actual height of the wave, if this is a negative number the game object will sink into the waves, if positive the game object will rise up, out of the waves.
3. Random Rotation Factor - How much the object rotates in the water, this creates a more realistic effect, use a small value for this if the object is large such as a ship.

If it's not working properly in scene view trying turning animated materials off in scene view, under the effects dropdown.

### Submerged Effect

1. Water Body – Assign the Water Body you want the camera to react to this variable.
2. Under Water Colour - The colour the fog changes to when the camera is underwater.
3. Under Water Visibility - The density of the fog when the camera is underwater (how far you can see underwater).