# MW12 Lightmap Textures

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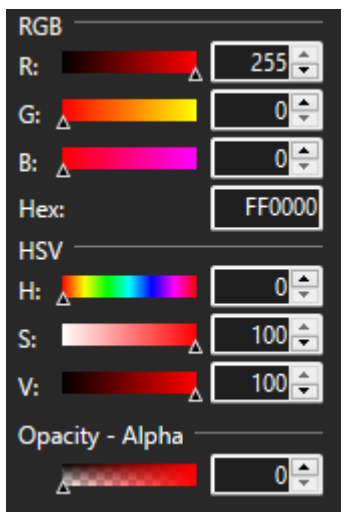
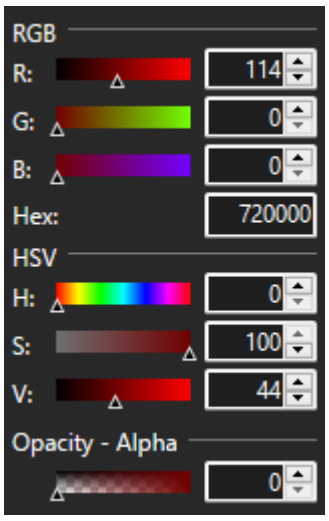
The game reads the red, green, blue and alpha (transparency) channels of a texture to make the car's lights work. The texture should be in DDS DXT5 format most of the time. Use DDS DXT1 format if you do not require an Alpha channel (if there is no running/position light in the mesh) or if the lightmap is for NFS HPR.

**Brake Lights - Red channel**

- Use a pure red colour only.
- Lower values make the light duller, higher values make it brighter.
- Alpha value should be 0 (completely transparent).

**FOR HPR**
Same as above except the Alpha value should be higher than 0.

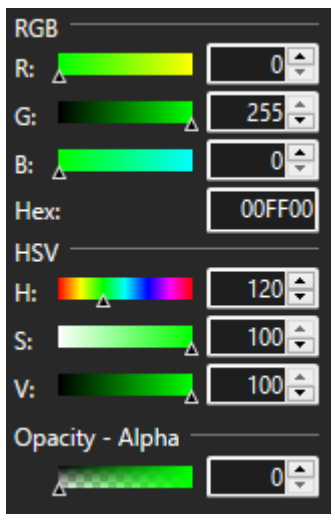



**Headlights or DRLs - Green channel**

- Use a pure green colour only.
- Lower values make the light duller, higher values make it brighter.
- Alpha value should be 0 (completely transparent).

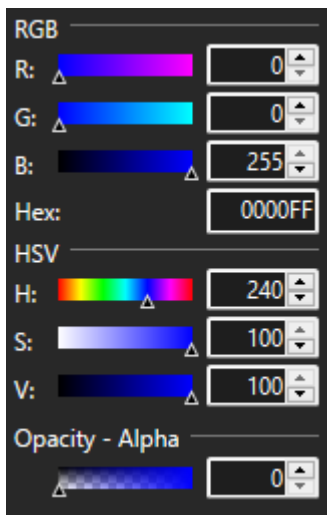
**FOR HPR**
Use the Green channel for *any* lights that are always on.
Alpha value should be higher than 0.




**Reverse Lights - Blue channel**

- Use a pure blue colour only.
- Lower values make the light duller, higher values make it brighter.
- Alpha value should be 0 (completely transparent).

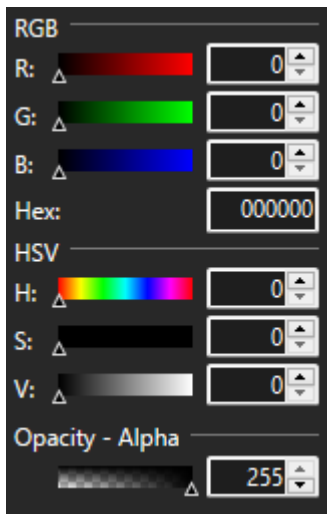
**FOR HPR**
Same as above except the Alpha value should be higher than 0.




**Running/position lights (at night) - Alpha channel**

- Use pure black only.
- Alpha channel's value should be higher than 0 (not completely transparent).
- Lower values make the light duller, higher values make it brighter.

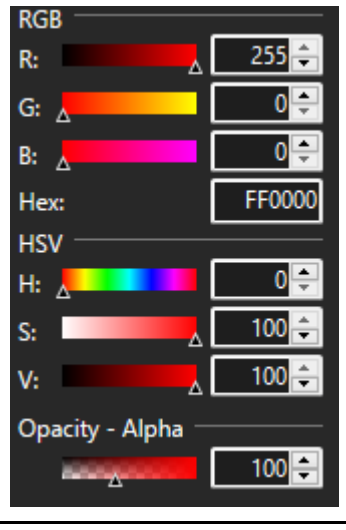
**FOR HPR**
HPR doesn't use the Alpha channel. Use the Green channel for this purpose.




**Combination Brake Lights and Running Lights**

- Use a pure red colour only.
- Lower values make the light duller, higher values make it brighter.
- Alpha value should be higher than 0 (not completely transparent).
- Do not set the alpha too high.

**FOR HPR**
Mix red and green channels to make a yellow.
Alpha value should be higher than 0.

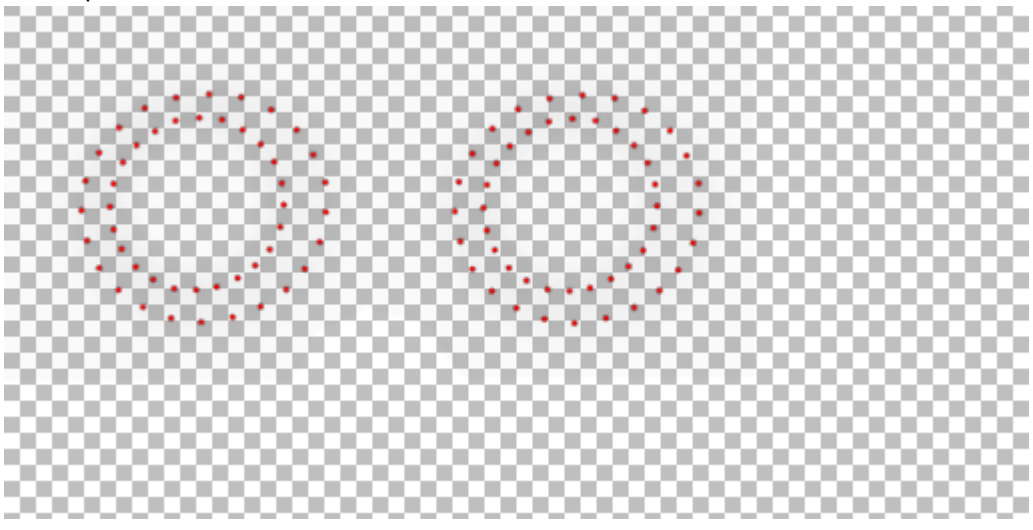


**Example textures from the Bugatti Veyron Super Sport (MW12 only)**

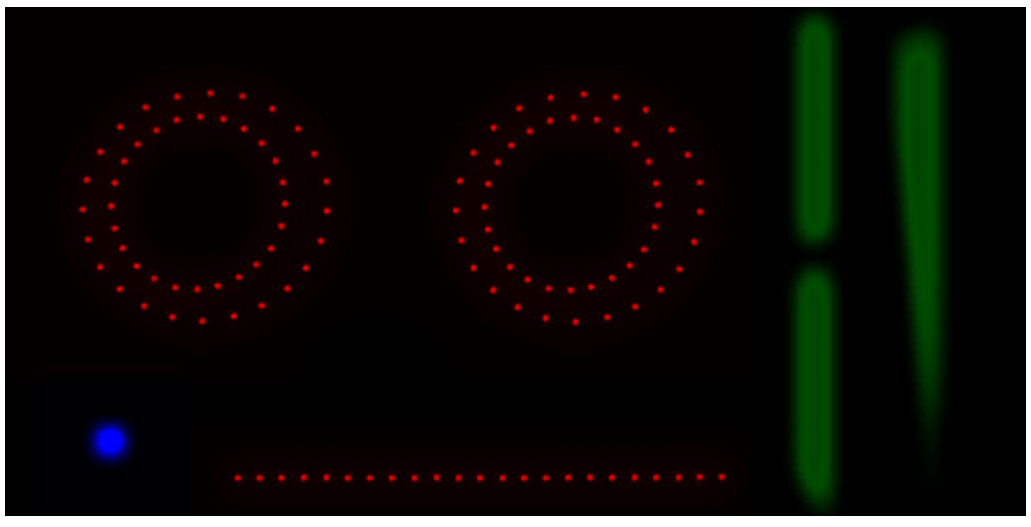
## Lightmap 1

This texture is for the brakes (red), running/position light (alpha), reverse (blue) and front DRLs (green).

With alpha

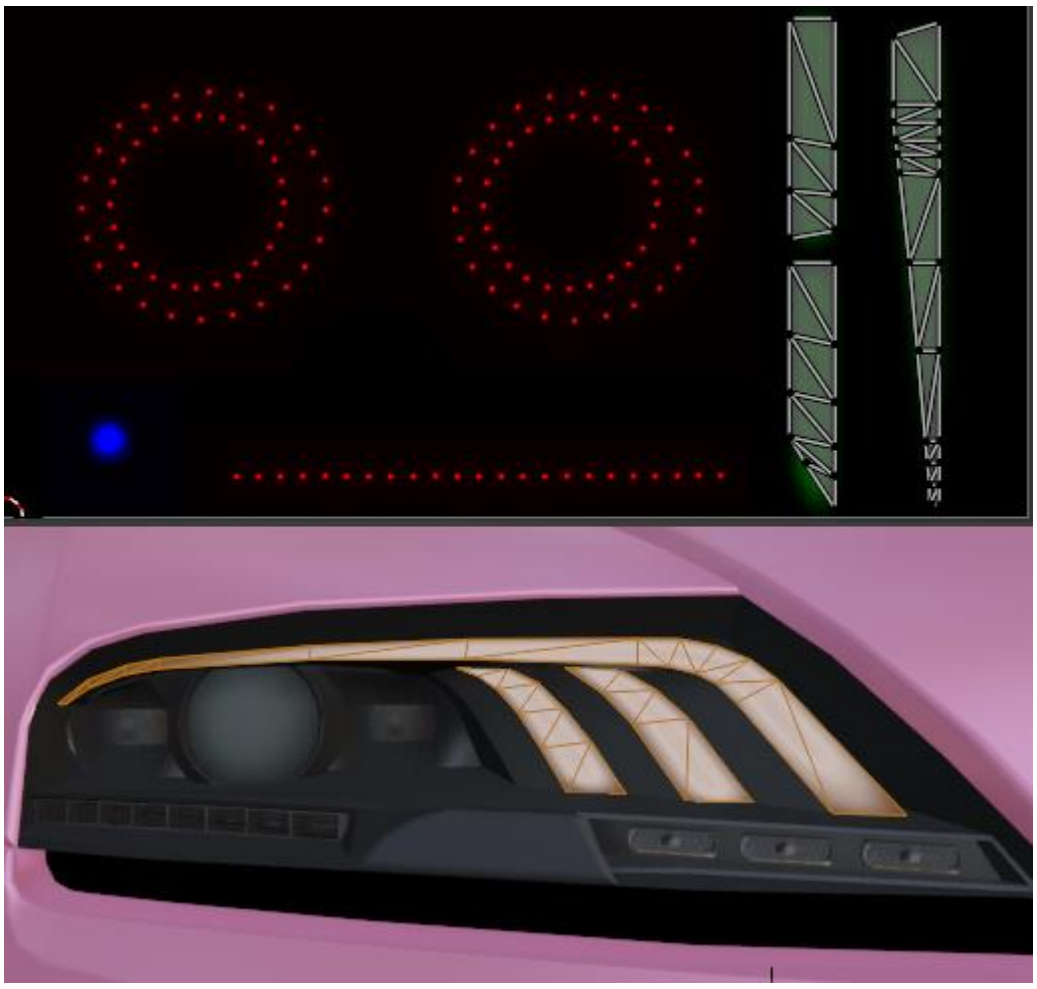


Without alpha (so you can see what's really there)

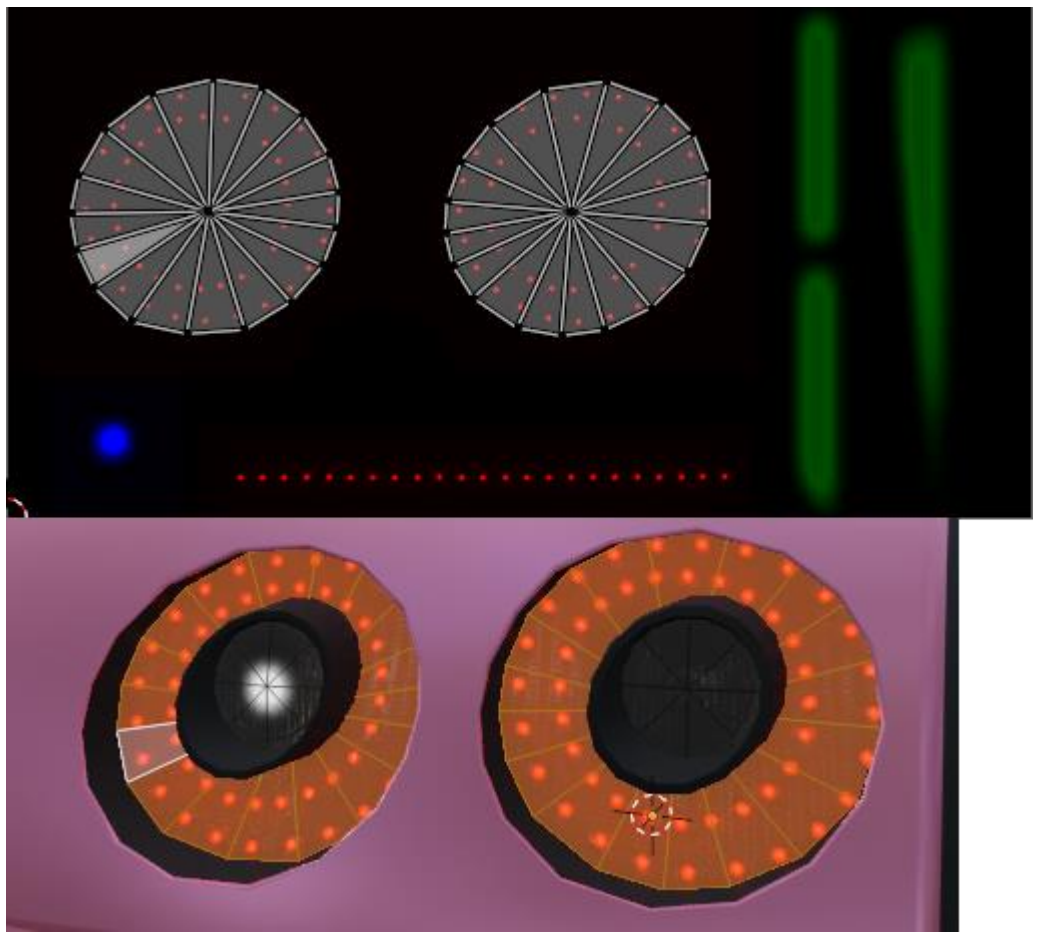


UV map view. The orange highlighted and outlined faces show the corresponding part of the texture.

Left - front DRLs



Right - combo brakes & running lights.



### Explanation

The circular Brake Lights and Running Lights are in the same place on the Veyron. We want the Running Lights always on, but it should become brighter when we brake. Therefore the Red part must have an Alpha value higher than 0.

The straight Brake Light should only be seen when braking, therefore the Red part has an Alpha value of 0. If the Alpha value was higher, it would be always on.

We only want to see the Reverse Light when reversing, therefore it is Blue and the Alpha value is 0.

The general rule is: If it's always on, the Alpha value must be higher than 0. If it's on sometimes, the Alpha value must be 0.

So why do the headlights break this rule?

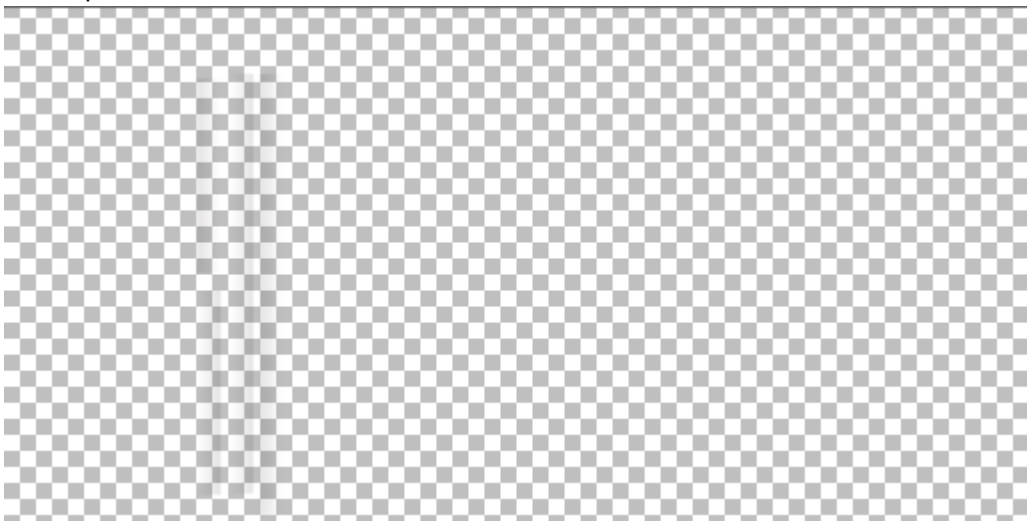
We want to see the DRL/headlight always on, they use Green but their Alpha value is 0. This is because Headlights, Brakes, Running Lights and Reverse Lights have their own glow colour setting in the material.

Let's say I changed the Running Lights to be purple in the material glow settings. If the Green part for the Headlights had an Alpha value of more than 0, they would also act as Running Lights and take the wrong colour (purple). Therefore the Headlights must be 0 Alpha, so they use the correct material glow colour setting.

**Lightmap 2**

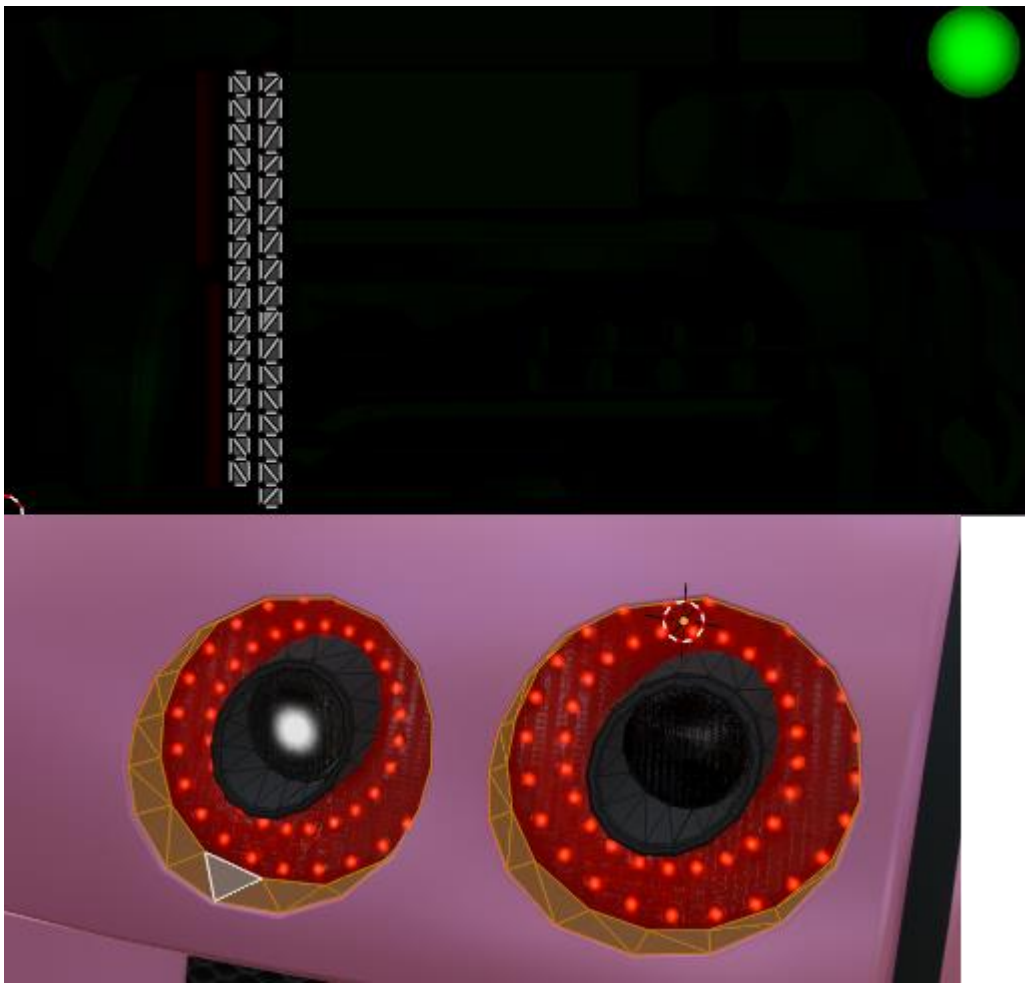
This texture is for the main headlight (green), and the glow of the brake (red) and running/position lights (alpha).

With alpha



Without alpha (so you can see what's really there)

Left - combo brake and running light glow



Right - headlight