# Realistic R/C for RVGL

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Overview

So for the basic parameters of this project I'd like to:

   1. Keep the models (including all parts - body, wheels, springs, axles, pins and spinners) to 4k polys or less (But that doesn't mean more is not acceptable)

   2. Maintain a 512x512 minimum for the texture BMP

   3. Set a standard for wheel, axle and spring placement in the texture map

Here is an example of that placement on a 512x512 map
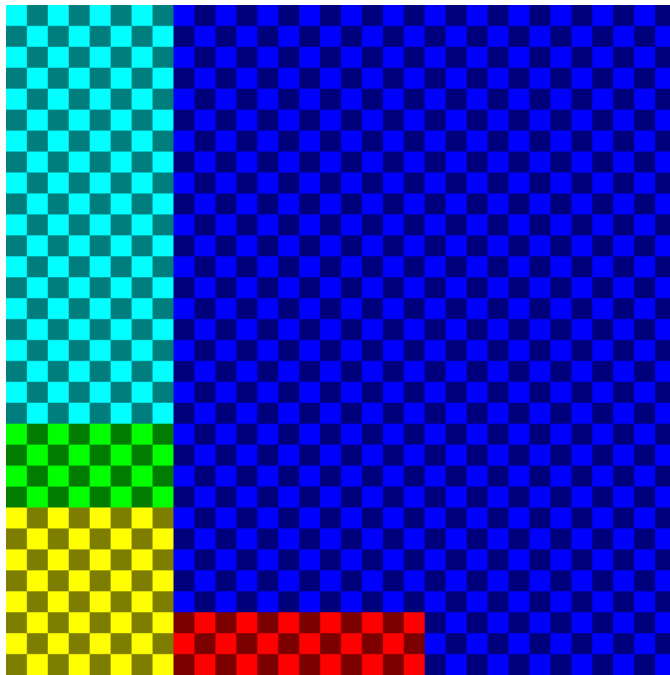
The blue area is for body/chassis (384x512 minus red area). The cyan area is for axles, springs and gearboxes (128x320) Note: They don't have to fit this area precisely, it's just a general area for them. The green, yellow and red areas are for wheels, green is the tread area (128x64), yellow is the tire rim area (128x128) and red is the side wall area (192x48) Note: Can be half or all of the sidewall area. These dimensions will change with the mip maps of coarse.

Here is an example of a texture map with the placement standard implemented.

Here is an example of this car mapped.

By realistic I don't mean every part, nut and screw has to be modeled, just a more realistic looking model and texture map. So the idea is that any part of the car that can be seen will get detailed. This means that the suspension items (axles and springs) that are exposed and can be seen should be more detailed.

In other words, springs and axles more like this example
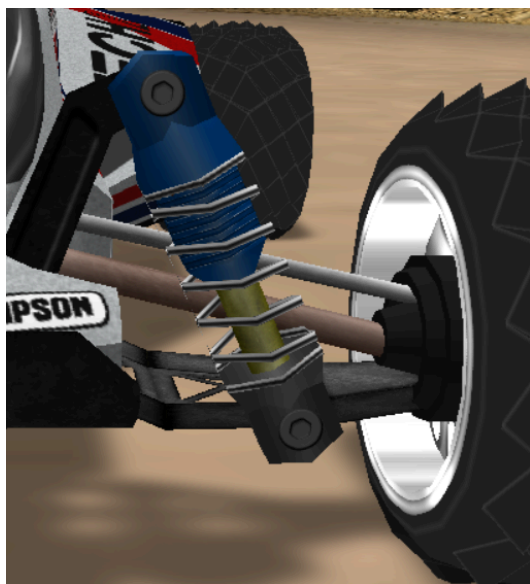
Instead of like this.

I will post some of the models I use when I get them packed.

The detailing should also extend to the chassis of the model. It should be modeled and detailed with the correct chassis type for the car. This includes motor, gearboxes and shock towers. All R/C cars come in one of three chassis types - Front Wheel Drive (FWD), Rear

Wheel Drive (RWD) or Four Wheel Drive (4WD). For these types the gearbox or gearboxes should be modeled and in the proper location because they can be seen. Also usually but not always the motor should be modeled and in the proper location because it can usually be seen (more often on FWD and RWD cars than on 4WD cars). The shock towers should also be modeled if they can be seen. They can always be seen on an open wheeled car and may or may not be seen on a closed or covered wheel car. Next we consider the top of the chassis. The only time this can be seen is if there are transparent windows on the car. So if the model is to have transparent windows it should have all the components on the top of the chassis modeled. But if the windows are not transparent the components can be omitted to save on polies. In the case of no transparent windows I usually extend the top of the main chassis into the body so it looks enclosed.

Next I'd like to address aerials, since it's been discovered that custom aerials are possible by putting the models in the cars\(carname) folder and associating them with model 15 and 16 in the parameters.txt file instead of models 17 and 18. Because models 17 and 18 take their texture mapping from FxPage1.bmp in the gfx folder and models 15 and 16 take their texture mapping from the car.bmp file in the cars\(carname) folder. I will be supplying a stock set of aerial files. You can find the link for these files below.

https://www.dropbox.com/s/p7nbsb5cgb4t91d/Aerial%20Standard.zip?dl=0

These aerial models are currently mapped to the upper right corner of the bmp file (example below).
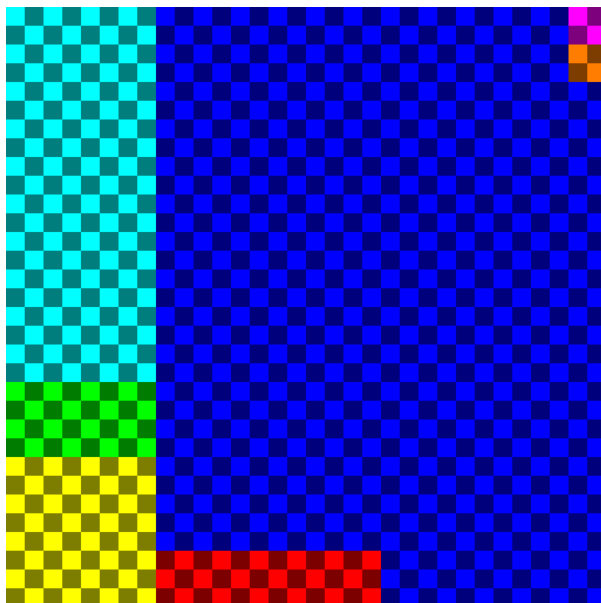
The aerial.m is mapped to the orange part and the aerialt.m is mapped to both the magenta and orange parts. The mapping for the aerials can be moved to wherever best suits your car. You can also supply your own aerial models. But they should remain on the

car.bmp texture map somewhere (preferably so they don't interfere with the wheel placement standard).

Next I'd like to do a Revolt - Realistic R/C comparison, Rookie Class in Revolt is the slowest class with a top speed of 32 mph (51.5 km/h). This is comparable to Real R/C's with a stock brushed motor. Amateur Class in Revolt is the next class up from Rookie with a top speed of 35 mph (56.33 km/h). This is comparable to Real R/C's with a modified brushed motor. Advanced Class in Revolt is a step up from Amateur with a top speed of 37 mph (59.55 km/h). This is comparable to Real R/C's with a stock brushless motor. Semi-Pro in Revolt is one class up from Advanced with a top speed of 41 mph (65.98 km/h). This is comparable to Real R/C's with a race prepped stock brushless motor or a stock Nitro motor. Pro in Revolt is currently the highest class with a top speed of 43 mph (69.2 km/h). This is comparable to Real R/C's with a modified brushless motor or a Modified Nitro motor. The new Super Pro class in Revolt with an estimated top speed of around 60 mph (96.56 km/h) is comparable to Real R/C's with a modified brushless motor and a high capacity battery or a Modified Nitro motor with the proper fuel mixture. Now I realize that brushless R/C's start at a lower speed range than comparable Nitro motor R/C's but at the top end of the spectrum brushless R/C's do have higher top end stats compared to Nitro R/C cars. The current speed record for an electric R/C car is 202.02 mph (325.12 km/h) while the current speed record (from what I can find) for a Nitro R/C is 126 mph (202.77 km/h).