



Car Script basic

Dear User, thank you for your interest in our vehicle controller script Car Script basic.

In this documentation you will find next topics:

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What Car Script basic does?

As you know, Car Script basic is vehicle controller script. It uses standard Unity 5 Wheel Colliders. Script may be used to "drive" your 3d models of Cars and Trucks.

Car Script basic has next features

- Drag Wheel Collider & Visual Wheel;
- Specify number of Axles;
- Motor & Steering selection;
- Inverted steering;
- Brakes;
- Wheels reacting to Surface;
- Set Motor Torque and Steering Angle.

SETUP

To import Car Script basic into Your Project, go Assets -> Import New Asset -> And locate Dot_Truck_Controller.cs on Your PC.

To find Car Script basic in Your Project, You may write Dot_Truck_Controller into search box of Project tab.

To apply Car Script basic to vehicle, You may just drag and drop script Dot_Truck_Controller, which is Car Script basic, onto GameObject with Rigidbody. Also you may apply it from GameObject with Rigidbody by clicking on "Add Component" and writing Dot_Truck_Controller there.

How to use it?

At first, Dot_Truck_Controller has only 3 boxes where you may write stuff. These are:

- Max Motor Torque, used to set power of "Engine" of your 3d vehicle.
- Max Steering Angle, used to set how quickly your vehicle will turn or, in other words, its steering angle.
- Size, here you may set number of Axles for your vehicle.

For example, set Size to Two (2). You will see new elements will appear. These are our newly created Axles.

Front Wheels are represented by element at the top, which is "Element 0".

Every Element has same parameters to customize.

For "Element 0" they are:

- **Left Wheel**, drag and drop your Wheel Collider of Left Front Wheel.
- **Left Wheel Mesh**, drag and drop here your Visual Wheel of Left Front Wheel.
- **Right Wheel**, drag and drop your Wheel Collider of Right Front Wheel.
- **Right Wheel Mesh**, drag and drop here your Visual Wheel of Right Front Wheel.
- **Motor**, enable this to set power of engine onto pair of wheels for this axle.
- **Steering**, you may enable this to set if this pair of wheels can turn.
- **Reverse Turn**, if you would like to have this axle with Inverted Turn you may enable this option.

Which buttons are used to drive a vehicle?

W, [^] — Forwards
A, [<] — Turn Left
S, [V] — Backwards
D, [>] — Turn Right
Space — Brake

Please take a look at video on YouTube about How to Setup Basic Vehicle, with Rigidbody, Wheel Colliders and Car Script basic as Vehicle Controller Script.

Video has description with Table of Contents. For example, at 6:05 you may see how to add script for the vehicle.

<https://www.youtube.com/watch?v=CVO3WezvAzQ>

TIPS

1. Car Settings

In 3d program of your choice, all meshes, including mesh colliders, must have Zero (0) Scale and Rotation.

In order to rotate Car Wheels must be separate from Car body.

Meshes have to be exported in a way, that after importing in Unity they are Facing Z axis.

In order for Wheels to rotate in the right direction, there have to be individual meshes for Left Wheel and Right Wheel. Because you can not just rotate Left wheel for 180 degrees and set it as Right.

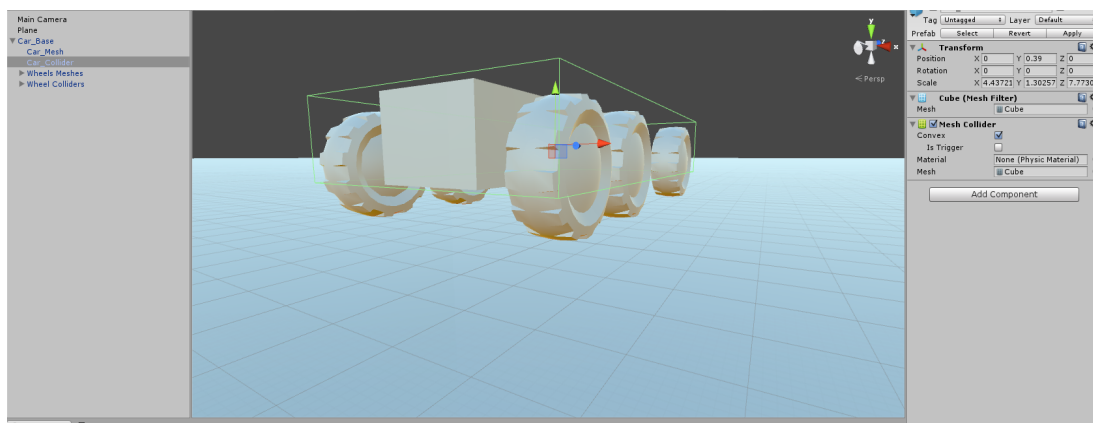
We recommend using following Prefab structure for Vehicles

- CAR MAIN (Game object with 0,0,0 position and rigid body)
 - Car Collider (box, capsule, ect.)
 - Meshes
 - Car body
 - Mesh collider of car (if you need - optional)
 - Visual wheels
 - 1
 - 2
 - 3
 - 4
 - ...
 - Wheel colliders
 - 1
 - 2
 - 3
 - 4
 - ...

Do not forget to setup Weight of a Car and Motor Torque.
Mesh collider of a Car must overlay wheels.

2. Car Collider

Collider of car have to overlay Wheels. It is good idea to make low poly version of mesh for vehicle and set it as collider. Do not forget to turn on "Convex" for this mesh collider.



3. Weight and Motor Torque

Depending on what car you are making - light sport car or heavy truck - first set approx. weight for it. Like 3 800 – 9 800 for the trucks.

Then, increase Motor Torque until you like how it looks.

Recommended Weight

Mini Cars	< 800
Ordinary Cars	800 — 1800
SUVs	1800 — 3800
Trucks	3800 — 9800

We recommend to not go over 10 000 for Weight of Vehicle. It is set in RigidBody.

LINKS

Sci-Fi Armored Vehicles Kit

<https://www.assetstore.unity3d.com/en/#!/content/58264>

Sci-Fi Low Poly Cars Kit

<https://www.assetstore.unity3d.com/en/#!/content/60989>