

# Realistic Car Controller V3.2 by BoneCracker Games

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## **RCC**

Explained in separate document.

## **RCC\_AI BrakeZone**

Brake Zones are meant to be used for slowing AI vehicles. If you have a sharp turn on your scene, you can simply use one of these Brake Zones. It has a target speed. AI will adapt its speed to this target speed while in this Brake Zone. It's simple.

## **RCC\_AI BrakeZonesContainer**

Used for holding a list for brake zones, and drawing gizmos for all of them on Editor.

## **RCC\_AI CarController**

AI Controller of RCC. It's not professional, but it does the job. Follows all waypoints, or chases the player. Must be attached to root of the vehicle. RCC\_CarControllerV3.cs will not receive any inputs from player.

## **RCC\_AI WaypointsContainer**

Used for holding a list for waypoints, and drawing gizmos for all of them.

## **RCC\_API Example**

An example script to show how the RCC API works. Uses the RCC.cs.

## **RCC\_Caliper**

Rotates the caliper.

## **RCC\_Camera**

Main RCC Camera controller. Includes 7 different camera modes with many customizable settings. It doesn't use different cameras on your scene like \*other\* assets. Simply it parents the camera to their positions that's all. No need to be Einstein.

Also supports collision detection for this new version (V3.2).

## **RCC\_CameraConfig**

Sets new camera settings to RCC Camera per vehicle.

## **RCC\_CarControllerV3**

Main vehicle controller that includes Wheels, Steering, Suspensions, Mechanic Configuration, Stability, Lights, Sounds, and Damage. All In One script.

## **RCC\_ChangableWheels**

Changes wheels (visual only) at runtime. It holds changable wheels as prefab in an array.

## **RCC\_CharacterController**

Animates Driver Sofie (Credits to 3DMAesen). Simply feeds floats and booleans of Sofie's animator component.

## **RCC\_Chassis**

Simulates chassis movement based on vehicle rigidbody velocity.

## **RCC\_CinematicCamera**

Tracks the car and keeps orientation nicely for cinematic angles. It has a pivot gameobject named "Animation Pivot". This gameobject has 3 animations itself currently.

## **RCC\_CreateAudioSource**

Creates new audiosources at runtime with specified settings.

## **RCC\_Customization**

Main Customization Class For RCC.

## **RCC\_CustomizerExample**

A simple customizer example script used for receiving methods from UI elements and send them to RCC\_Customization script. Also updates all UI elements for new spawned vehicles too.

## **RCC\_DashboardColors**

Changes HUD image colors by UI Sliders.

## **RCC\_DashboardInputs**

Receiving inputs from active vehicle on your scene, and feeds dashboard needles, texts, images.

## **RCC\_DashboardObjects**

Receiving inputs from active vehicle on your scene, and feeds visual dashboard needles.

## **RCC\_Demo**

A simple manager script for all demo scenes. It has an array of spawnable player vehicles, public methods, setting new behavior modes, restart, and quit application.

## **RCC\_Exhaust**

Exhaust based on Particle System. Based on vehicle engine RPM.

## **RCC\_FixedCamera**

Fixed camera system for RCC Camera. It simply parents the RCC Camera, and calculates target position, rotation, FOV, etc...

## **RCC\_FOVForCinematicCamera**

Animation attached to "Animation Pivot" of the Cinematic Camera is feeding FOV float value.

## **RCC\_GetBounds**

Gets total bound size of a gameobject.

## **RCC\_GroundMaterials**

Configurable Ground Materials are collected in an array of class.

## **RCC\_HoodCamera**

RCC Camera will be parented to this gameobject when current camera mode is Hood Camera.

## **RCC\_Light**

General lighting system for vehicles. It has all kind of lights such as Headlight, Brake Light, Indicator Light, Reverse Light.

## **RCC\_LightEmission**

Feeding material's emission channel for self illumin effect.

## **RCC\_Mirror**

It must be attached to external camera. This external camera will be used as mirror.

## **RCC\_MobileButtons**

Receiving inputs from UI buttons, and feeds active vehicles on your scene.

## **RCC\_PoliceSiren**

Flashes red and blue lights with proper timing. If vehicle is an AI vehicle and chaser vehicle, toggles lights on / off automatically.

## **RCC\_Recorder**

Record / Replay system. Saves player's input on record, and replays it when on playback.

## **RCC\_SceneManager**

Scene manager that contains current player vehicle, current player camera, current player UI, current player character, recording/playing mechanism, and other vehicles as well.

## **RCC\_Settings**

Stores all general shared RCC settings here.

## **RCC\_ShadowRotConst**

Locks rotation of the shadow projector to avoid stretching.

## **RCC\_Skidmarks**

Skidmarks Manager for RCC.

## **RCC\_SuspensionArm**

Rotates and moves suspension arms based on wheelcollider suspension distance.

## **RCC\_TruckTrailer**

Truck trailer has additional wheelcolliders. This script handles center of mass of the trailer, wheelcolliders, and antiroll.

## **RCC\_UIController**

UI input (float) receiver from UI Button.

## **RCC\_UIDashboardButton**

UI buttons used in options panel. It has an enum for all kinds of buttons.

## **RCC\_UIDashboardDisplay**

Handles dashboard elements.

## **RCC\_UIDrag**

Mobile UI Drag used for orbiting RCC Camera.

## **RCC\_UISliderTextReader**

Receives float from UI Slider, and displays the value as a text.

## **RCC\_UISteeringWheelController**

UI Steering Wheel controller.

## **RCC\_UnetNetwork**

Streaming player input, or receiving data from server. And then feeds the RCC.

## **RCC\_WheelCamera**

RCC Camera will be parented to this gameobject when current camera mode is Wheel Camera.

## **RCC\_WheelCollider**

Based on Unity's WheelCollider. Modifies few curves, settings in order to get stable and realistic physics depends on selected behavior in RCC Settings.

# Photon Scripts

## **RCC\_PhotonDemo**

A simple manager script for photon demo scene. It has an array of networked spawnable player vehicles, public methods, restart, and quit application.

## **RCC\_PhotonManager**

Connects to Photon Server, registers the player, and activates player UI panel when connected.

## **RCC\_PhotonNetwork**

Syncs the player. Streams player input, or receiving data from server. And then feeds the RCC.

# NGUI Scripts

## **RCC\_NGUIController**

Attached to controller NGUI buttons such as gas, brake, handbrake, left – right buttons, etc...

## **RCC\_NGUIDashboardButton**

Attached to external NGUI buttons such as ABS, ESP, TCS, Lights, Change Camera, etc...

## **RCC\_NGUIDashboardDisplay**

Manages all dash displays such as gauges, displays, numbers, needles, etc...