

Racecar Engine Sounds

Volume 1.

Add-on sound pack for Realistic Engine Sounds 2

& FMOD version included too

By: Skril Studio



Thank you for purchasing Racecar Engine Sounds – Vol.1!

Racecar Engine Sounds – Vol.1 asset includes audio files and compatibility for **Realistic Engine Sounds 2** asset and for **FMOD**, packed inside separate .unitypackages.

The unitypackage made for RES2 contains engine sound prefabs bundled with additional sound effects: Turbo, Straight Cut Gearbox and Muffle Crackle. Sound clips and a sound controller are also included for Turbo, Straight Cut Gearbox and Muffle Crackle sounds. *(The RES2 engine sound controller is not included.)*

The unitypackage made for FMOD contains the assets, FMOD Studio project file and a pre-baked sound bank for Desktop platform.

Racecar Engine Sounds – Vol.1 is also an add-on sound pack for **Realistic Engine Sounds 2** asset, which means it contains engine sound packs that does not exist in any edition of **RES2**. For the best results use this sound pack with **Realistic Engine Sounds 2** which is a vehicle engine sound controller asset.

Get **Realistic Engine Sounds 2** here: <https://bit.ly/3aZ50Ag>

Package includes:

- 3 complete engine sound packs (120 wav files):
 - Racecar i6 1
 - Racecar i6 2
 - Racecar i6 3
- 4 sound clips for racecar gear changes, shifts
- Compatibility for **Realistic Engine Sounds 2** (packed inside a .unitypackage) contains:
 - Turbo sounds (**28 WAV files** + turbo sound controller made for RES2)
 - Straight Cut Gearbox (**20 WAV files** + gearbox sound controller made for RES2)
 - Muffler Crackle (**20 WAV files** + muffler sound controller made for RES2)
 - RES2 engine sound prefabs combined with the above mentioned sound effects
- Compatibility for **FMOD** (packed inside a .unitypackage) contains:
 - Assets for FMOD (including all sound clips)
 - A highly detailed FMOD Studio project (.fspro), so you can edit or bake the sound bank by yourself
 - Pre-baked sound bank for Desktop
- The highly detailed FMOD project comes with extra sound effects:
 - Wind SFX
 - Turbo SFX
 - Supercharger SFX
 - Straight Cut Gearbox SFX
 - Gear Changing SFX
 - Tyre Screeching SFX
- Each engine sound pack have seamlessly looping sound clips of stationary rpms named like this:
idle, idle-low, low, low-med, med, med-high, high, very-high and *maxRPM*. All of these sound clips (except idle and maxRPM) have „engine on load” and „engine off load” versions. Engine startup and engine-stop sound clips are also included.
Each engine sound pack also includes its own „Aggressiveness SFX”, which is used by **Realistic Engine Sounds 2** to mimic open or modified exhaust systems or engine tunings. It can turn a stock-sounding engine into a more aggressive vehicle sound. This SFX also implemented into the FMOD project.

Import the prefabs made for Realistic Engine Sounds 2

If you want to use this sound pack with **Realistic Engine Sounds 2** unity asset, import **RES2_Racecar-Vol1_Prefabs.unitypackage** into your project to get the prefabs made for *Realistic Engine Sounds 2*.

After importing the above mentioned .unitypackage, the new engine sound prefabs will be added in 3 different quality levels into the following folder:

Racecar_Engine_Sounds-Vol1\Assets\Prefabs

6 demo scenes will be available in the following folder:

Racecar_Engine_Sounds-Vol1\DemoScene

Drag and drop one of the newly imported prefab into a vehicle physics compatibility prefab and you're ready to test these new sounds (*Realistic Engine Sounds 2 comes with pre-made compatibility made for many vehicle physic controllers*).

Importing *RES2_Racecar-Vol1_Prefabs.unitypackage* without *Realistic Engine Sounds 2* already being in your project will give errors in the newly imported prefabs.

Setting up the demo scene for vehicle controllers

After importing *RES2_Racecar-Vol1_Prefabs.unitypackage* you will get 6 demo scenes, 3 demo scenes with names "RequiresCarController_Racecar_VehicleDemo" are made for testing the sound with a vehicle physics controller. These demo scenes already have the engine sound prefabs and the UI buttons for easy switch between engine sound prefabs, change their „Aggressiveness SFX level” and engine load type (pre-recorded or simulated).

Vehicle Test Scene Setup Tutorial:

Video Tutorial: https://youtu.be/gTW_zkp6Ew8

To one of the above mentioned scene, add a car and all of its required components (it's stock camera with it's controller script, UI, etc). Make sure your car is working properly without any errors, then drag and drop "RES2 Racecar Vol1 - HQ" gameobject into your car (which has all Racecar RES2 prefabs connected to the canvas buttons), reset "RES2 Racecar Vol1 - HQ" gameobject's transform to place it in the center of your vehicle and enable it. Add your vehicle controller's compatibility script made for RES2 to each parent of RES2 prefab pairs, like UVC_RES2, or VPP_RES2 or RCC_RES2, or other similiarly named script (this script translate your car's values to RES2 prefabs). After this, everything should work if it is done correctly.

For better results, you can reposition some parts of the prefabs such as the turbo, muffler crackles, and the straight cut gearbox to match their real-life positions. I recommend placing the interior engine prefab in the car's engine bay to avoid audio clipping when using the interior camera view.

Using the FMOD version

The .unitypackage for FMOD version can be found here: \Racecar_Engine_Sounds-Vol1\Assets_For_FMOD

This package contains FMOD Studio assets for Unity.

Note: This package does NOT include any scripts for FMOD implementation, you must implement your own playback logic.

You will need to create your own scripts to play the FMOD events in Unity and to connect the values to your vehicle physics controller.

Implementing the FMOD version requires intermediate programming skills. If you have issues implementing it, I recommend using **Realistic Engine Sounds 2** instead, which is compatible with multiple vehicle physics controllers and does not require intermediate programming skills.

Realistic Engine Sounds 2 is available here: <https://bit.ly/3aZ50Ag>

Official FMOD tutorial for Unity: <https://www.fmod.com/docs/2.00/unity/integration-tutorial.html>

Quick Start:

1. Import the Unity package into your project which contains the FMOD version of Racecar Engine Sounds - Vol. 1. (FMOD_Racecar_Sounds-Vol1.unitypackage).
2. Ensure to follow the official FMOD Unity Integration tutorial: <https://www.fmod.com/docs/2.00/unity/integration-tutorial.html>

More usefull links:

<https://www.fmod.com/docs/2.02/unity/welcome.html>

<https://www.fmod.com/docs/2.01/unity/user-guide.html>

<https://www.fmod.com/docs/2.01/unity/game-components.html>

<https://www.fmod.com/download>

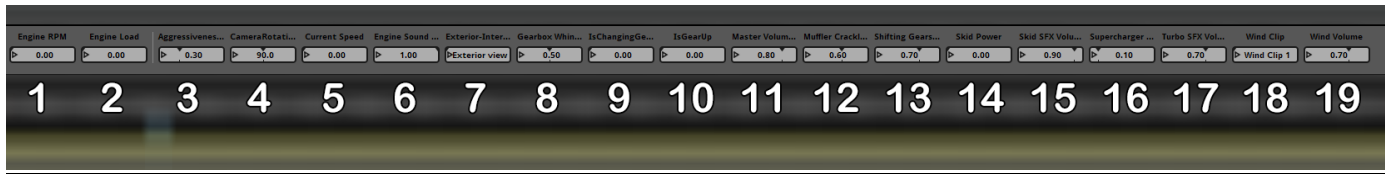
Notes:

- Only Desktop pre-built banks are included. For other platforms (Android, iOS), rebuild the banks in FMOD Studio.
- This asset does not include any Unity scripts, you must implement your own playback logic to connect the events and parameters to your vehicle physics controller.
- The FMOD Studio project is included so advanced users can modify events or rebuild banks as needed. **You are not allowed to resell the modified FMOD Studio project or the built FMOD banks to other developers, nor the original project & bank itself.**

Enjoy building your game with the FMOD version of Racecar Engine Sounds - Vol. 1.!

FMOD Project Overview:

See the image bellow to understand the values of the included FMOD project:



After integrating FMOD into UE, you should connect these FMOD values with the corresponding values in your UE vehicle that serve the same purpose. The FMOD project is well optimized to avoid reaching its limits.

1. **Current RPM:** the current RPM of the vehicle. Idle rpm is at around 900 RPM, maximum RPM can vary by vehicle type from 5000 to 10000 RPM. (This chapter of the Documentation is universally used for multiple products.)
2. **Engine Load:** the engine load of the vehicle. 0 = Off-load (decelerating or changing gears), 1 = On-load (accelerating or driving at steady speed).
3. **Aggressiveness SFX:** this will change the engine sound to a more aggressively sounding engine. It is good for games where you can tune your cars, increase aggressiveness value when an engine upgrade applied, also good for imitating "open exhausts" for modified cars, or when the car lost its exhaust after a damage.
4. **Camera Rotation:** 0 = looking at the rear of the vehicle, 180 = looking at the front of the vehicle.
The engine sound will vary based on whether the camera is viewing the front or the back of the vehicle (see the example in next chapter).
5. **Current Speed:** the current speed of the vehicle, required for extra sound effects, like the Wind SFX, and other SFX.
6. **Engine Sound Master:** sets the loudness just of the engine sound. You can tweak this value inside UE if needed.
7. **Exterior-Interior:** it can be used to switch between exterior and interior sounds, however, there is another way to switch between them (see the example in next chapter).
8. **Gearbox Whine SFX Volume:** sets the loudness of Straight Cut Gearbox SFX. You can tweak this value inside UE if needed, turn this volume down to 0 to disable this SFX.
9. **Is Changing Gears:** 0 = not changing gears, 1 = changing gears. Set this value to 1 for a short period of time (~0.3 seconds) when the vehicle is changing gears.
10. **Is Gear Up:** required for some SFX, like the Turbo SFX.
11. **Master Volume All:** sets the loudness of the entire sound pack. You can tweak this value inside UE if needed.
12. **Muffler Crackle Volume:** sets the loudness of the muffler crackle/rumble sounds. You can tweak this value inside UE if needed, turn this volume down to 0 to disable this SFX.
13. **Shifting Gears SFX:** sets the loudness of gear changing SFX. You can tweak this value inside UE if needed, turn this volume down to 0 to disable this SFX.
14. **Skid Power:** 0 = no skid, 1 = maximum skid power. Change this value to play tyre screeching/skid sound. Also depending on the vehicle's current speed.
15. **Skid SFX Volume:** sets the loudness of the tyre screeching/skid sound. You can tweak this value inside UE if needed, turn this volume down to 0 to disable this SFX.
16. **Supercharger SFX Volume:** sets the loudness of the supercharger sounds. You can tweak this value inside UE if needed, turn this volume down to 0 to disable this SFX.
17. **Turbo SFX Volume:** sets the loudness of the turbo sounds. You can tweak this value inside UE if needed, turn this volume down to 0 to disable this SFX.
18. **Wind Clip:** You can choose the wind clip here, right-click on this value and change the Initial Value to the one you prefer.
19. **Wind Volume:** sets the loudness of the wind sound. You can tweak this value inside UE if needed, turn this volume down to 0 to disable this SFX.

Credits

I would like to say a big **Thank You** to my friends and customers who allowed me to record their vehicles, or who sent me their own recordings of vehicle engine sounds and other sounds.

Submit your own recordings to me, and I will transform them into complete game ready engine sound packs. Please ensure that your recordings are of good quality, if possible with minimal wind and other unwanted background noises (such as crowds, people talking, etc.). The newly created sound packs might be featured in upcoming add-on sound packs. As a token of appreciation, you will receive a free copy of the final product if your donated recordings are utilized in the creation of new sound pack(s).

Feel free to contact me if you have any questions or suggestions for this asset.

Please write a review for this asset in the Unity Asset Store. Thank you!

Realistic Engine Sounds 2: <https://bit.ly/3aZ50Ag>

Add-on engine sound packs for Realistic Engine Sounds 2: <https://bit.ly/3km8rDI>

UI SFX Mega Pack (2682 wav files): <https://bit.ly/40oKeCd>

Check out my other assets: <https://bit.ly/2TBgK2z>

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May not be available to respond to messages during weekends and holidays.