

Air Vehicle Effects (or AVE for short)

AVE is a configuration driven effects mod that adds environmental effects to flying vehicles. You use a Config builder mod to add generators to the vehicle and those generators cause the effects to be created. So you can get something like this:



That picture is of an NPC driven Police Maverick during a desert shootout, so you can see that the mod works for NPC vehicles as well as the player's vehicle. Using some creative trickery in the Rockstar Editor, it can enhance screenshots with air vehicles in them. Here's another shot from that shootout.



Requirements:

A working copy of GTAV (The mod has been tested with game versions 1868, 2189 and 3028)

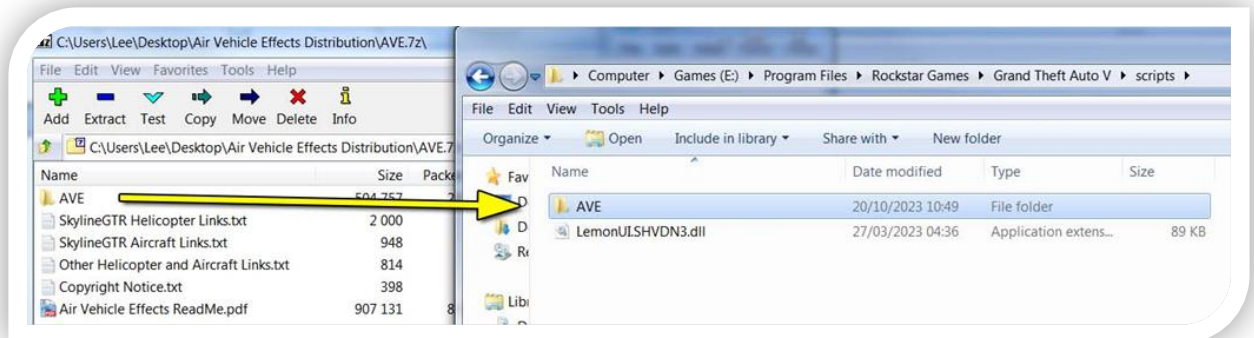
ScriptHookV - <http://www.dev-c.com/gtav/scripthookv/>

ScriptHookVDotNet v3 - <https://github.com/scripthookvdotnet/scripthookvdotnet/releases>

LemonUI for SHVDN3 - <https://www.gta5-mods.com/tools/lemonui>

Installation:

Inside the AVE.7z file you will have noticed several files as well as an AVE folder. Only the AVE folder needs to be copied into your scripts folder, so you end up with [GTAV main folder]/scripts/AVE



Because this mod uses LemonUI for the menus, you will need to make sure you have LemonUI for ScriptHookVDotNet 3 installed correctly.

The mod files:

The mod contains quite a few files, so I will explain what they do here.

AirVehicleEffects - This mod collects all the vehicles around the player, works out which vehicles are compatible with the AirVehicleEffectsPool effects mod and then sends them to it. Compatible vehicles are either helicopters or planes, including the Thruster.

AirVehicleEffectsPool - This mod handles all the effect generation for any vehicles that are sent to it by AirVehicleEffects.

AVEConfigBuilderLUI - This mod lets you build the configurations for each vehicles so that AirVehicleEffectsPool knows which parts of the vehicles should create effects. For example Rotors on helicopters, Propellers on planes etc... This is important because without a configuration, the vehicle won't generate any effects.

airvehicle_configs.xml - This file contains all the configurations for the vehicles.

AVECalibrationConfig.xml - This file contains important information that allows the mod to create updated settings for itself after Rockstar have updated the game. This file should not be edited under any circumstances.

AirVehicleEffects.ini

[SETTINGS]

STATUS DISPLAY - Shows text in the top left corner about the mod status

STARTUP MESSAGE - Shows a notification about mod name, version and copyright

NPC EFFECTS - Choose whether NPC vehicles use the effects

[AIR VEHICLE EFFECTS SETTINGS]

AVE ACTIVE - Turns the mod on or off without having to delete the mod files

AirVehicleEffectsPool.ini

[SETTINGS]

STARTUP MESSAGE - Same as above

STATUS DISPLAY - Same as above

[AIR VEHICLES SETTINGS]

AVE NPC RANGE - The maximum distance from the player that the mod will apply effects to NPC vehicles

AVEConfigBuilderLUI.ini

[SETTINGS]

STARTUP MESSAGE - Same as above

[KEYS]

KEY - The key to open the menu when you are in a valid vehicle.

Mod Functionality

Calibration Mode:

Inside **AVECalibrationConfig.xml** is a Game Version number, when the mod runs it compares the current Game Version with the one in that file. If they both match, everything starts as normal. If they don't match, then the mods go into Calibration Mode which will require the player to go through a quick and easy process to get things all matched up again.

Calibration happens at the Sandy Shores airfield, a message will be displayed at the bottom of the screen telling you about this. There will also be a blip on the Pause Map showing where this location is. Once you get close to that location, 3 markers will appear on the ground. The 2 **RED** markers are where the calibration vehicles will spawn. The **YELLOW** marker is where the player needs to stand for calibration to move onto the next phase.



When you are stood in the correct place, the marker will turn **GREEN** and a message will be displayed on-screen telling you what to do next. Pressing the required button/key will spawn the calibration vehicles and after a short time, they will disappear again. The mods now have the correct values they need and everything will work as normal.

You do NOT need to reset the scripts, the new values are loaded and used straight away.

Configuration Building: Main Menu



Each vehicle must have a configuration for the mod to be able to generate effects. To do this, you use the **Config Builder** mod. To activate the mod, get into a compatible vehicle and press the key to open the menu. By default the key is **NumPad 0** but this can be changed in the ini file.

When the menu is open, it will show you some info about the vehicle at the top and if that vehicle is okay to use, it will say **VALID** at the top. Select **New Config** and you should see a notification and the **Edit Config** option will be enabled.

Configuration Building: Config Menu

The Config Menu is where the generators are added, so there are quite a lot of options here. When you first enter the menu, everything will be disabled apart from the **Add Generator** option. So select that and everything else comes to life.



Generators - lets you select between any of the generators that have been added to the vehicle.

Delete Generator - Deletes the current Generator

Dust Effect Scale and **Water Effect Scale** - Change the size of each effect type **for all generators on that vehicle**.

Radius - The distance from the centre to the edge of the generator circle.

Generator Type - Choose between Rotor, Propeller, Afterburner, Exhaust and Nozzle. Exhaust is a low powered air outlet, Nozzle is used on things like the Hydra VTOL outlets. Rotor, Propeller and Afterburner should be fairly self-explanatory, Rotor is usually downward facing, Propeller is usually front-to-back* and Afterburner is at the rear of jet planes.

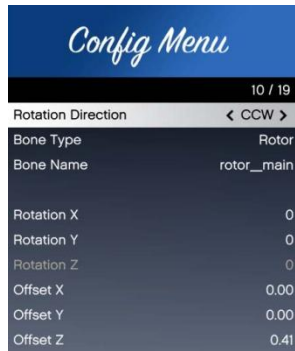
Movement Type - Choose between Fixed, VTOL and FixedVTOL**.

Rotation Direction - Lets you set the rotation direction of the generator, this is important for dual-rotor vehicles like the KA-52 which has counter-rotating rotors.

* The exception is for VTOL aircraft like the Avenger, where the propellers start in a top-down direction. They are still Propellers as it is the VTOL that changes their orientation.

** FixedVTOL is only used on one plane so far and that's the Raiju. This is because it has outlet ports that don't rotate, the have doors that open and close based on the VTOL position.

Configuration Building: Config Menu Continued...



Bone Type - There are 4 bone types and each type has a collection of bone names associated with them. For example **Rotors** typically have **rotor_main** and **rotor_rear**, whereas **Afterburner** only has **afterburner**. So changing this **Bone Type** selects what options appear in **Bone Name**.

Bone Name - Selects the bone that the generator is attached to.

Rotation X and Y - Can be used to tilt the generator if required. These are normally set to zero but aircraft like the Volatus has a tilted rotor of around 5 degrees.

Offset X, Y and Z - Can be used to move the generator by up to 1 meter in any direction if you want to line it up exactly with things like rotor blades on the model. Y is forwards and backwards on a vehicle, Z is up and down.

Here's a picture of the Tula config showing different generator types.

