Manual Transmission v3.0 by ikt

With Logitech Racing Wheel support

This guide will explain the usage of Gears.ini and what the options mean. It’s highly recommended to play this mod with a controller or a wheel.

# Options

The options section is where you can configure how the mod behaves globally and turn off and on features you want.

**Enable: 0 or 1**

This option is whether to enable or disable the mod. Toggling the mod ingame will write the new value to this option, so your preferences will be stored between sessions.

At 0, the mod is disabled and the original automatic transmission from GTA V is fully restored.

At 1, the mod is active and this mod will take over the transmission with manual control.

**EnableH: 0 or 1**

This option is the toggle for sequential shifting, or H-pattern shifting. For the steering wheel and the keyboard this option can be enabled and shifting happens with the numpad or with the H-shifter. **If a controller is picked up, this option automatic reverts to sequential.** Toggling the mod ingame will write the new value to this option, so your preferences will be stored between sessions.

At 0, sequential shifting is enabled.

At 1, H-pattern shifting is enabled.

**RealReverse: 0 or 1**

This option is to choose if you want to reverse with the throttle pedal/trigger/button.

At 0, in reverse, the brake pedal reverses and the throttle pedal brakes.

At 1, in reverse, the throttle pedal reverses and the brake pedal brakes.

**SimpleBike: 0 or 1**

This option controls whether some functionality is disabled if you’re on a bike. These functions are stalling and clutch catching.

At 0, these functions will not be disabled.

At 1, these functions will be disabled for easier driving in bikes.

**EngineDamage: 0 or 1**

This option turns on or off the engine damage when overrevving or shifting without pressing the clutch. The damage values can be configured: **RPMDamage** and **MisshiftDamage**.

At 0, the engine will not be damaged on shifting without pressing the clutch or when overrevving.

At 1, the engine will get damaged.

**EngineStalling: 0 or 1**

This option turns on or off the engine stalling when releasing the clutch with a low RPM at very low speeds. The point it shuts down is configured with **ClutchCatchpoint**.

At 0, the engine won’t stall.

At 1, the engine stalls.

**EngineBraking: 0 or 1**

This options controls engine braking. If driving at speed and downshifting to a lower gear, the car will be slowed down accordingly.

At 0, the car won’t slow down as quickly when downshifting.

At 1, the car will slow down quicklier.

**ClutchCatching: 0 or 1**

This option will make the vehicle drive slowly if clutch is released gently, and keeps the vehicle rolling at a speed depending on the gear.

At 0, releasing the clutch doesn’t drive the vehicle and it will slow down to a stop without input.

At 1, releasing the clutch will roll the vehicle. Without input, the car will keep rolling when in gear.

**ClutchShifting: 0 or 1**

This option controls the requirement to hold the clutch for H-shifting.

At 0, you can shift without pressing the clutch.

At 1, you need to press the clutch to shift. If EngineDamage is enabled, the engine will be damaged when misshifting with the value specified in **MisshiftDamage**.

**DefaultNeutral: 0 or 1**

This option controls whether new vehicles start in neutral or not when you enter them. This is useful to turn on when you have **ClutchCatching** and **EngineStalling** turned on.

At 0, new vehicles will be in gear when you enter them.

At 1, new vehicles will be in neutral when you enter them.

**ClutchCatchpoint: 0 to 100**

This specifies the point where the clutch starts making your vehicle roll. The higher this value, the high you need to lift the clutch pedal to get going.

**StallingThreshold: 0 to 100**

This specifies the point where your engine stalls with regard to the clutch point. If you’re going too slowly and your clutch is lifted higher than this point, your engine will stall. Keep this higher than **ClutchCatchpoint** to get both working together nicely.

**RPMDamage: 0 to anything, divided by 100.**

Requires: **EngineDamage = 1**

This specifies how much damage your engine receives while overrevving. Every tick, the engine gets damaged with RPMDamage/100.

**MisshiftDamage: 0 to anything**

Requires: **EnableH = 1**

Requires: **EngineDamage = 1**

Requires: **ClutchShifting = 1**

This specifies how much damage your engine receives when you shift. Every time you shift into a gear without pressing the clutch past **ClutchCatchpoint**, your engine will be damaged by MisshiftDamage. When you shift into Neutral with an insufficiently pressed clutch, your engine will be damaged by MisshiftDamage/10.

**UITips: 0 or 1**

This option is whether to show this mods gear indicator onscreen. It is recommended you leave this at 1 during normal gameplay.

**UITips\_X: 0 to 100**

This value is where the gear indicator appears horizontally. 0 is left, 100 is right.

**UITips\_Y: 0 to 100**

This value is where the gear indicator appears vertically. 0 is top, 100 is bottom.

**UITips\_Size: 0 to anything**

This value controls the size of the gear indicator.

## Recommendations

For realistic gameplay, enable everything from **RealReverse** onwards. If you also want to have stalling and clutch catching on bikes, **disable SimpleBike**. If you like a more arcade gameplay, turn off **EngineStalling** and **ClutchCatching**, which makes your vehicle more controllable. Since you won’t stall, turn off **DefaultNeutral** too, to get going quickly.

# Controls

The Controls consists of 3 sections, one for each input method. You can use all of them in one session, the mod automatically switches between them. This means you can hop off an airplane with your controller and jump into a car, driving with your steering wheel and pedals, while shooting with your mouse.

## Generic Controls

**Toggle** is the button to turn off or on manual transmission.

In each section you’ll find **Throttle** and **Brake**. If you have non-standard inputs, configure these to get correct **RealReverse** behavior.

**ShiftUp**

Sequential shift up

**ShiftDown**

Sequential shift down

**Engine**

Turn on engine (after stalling)

## Controller

The controller can only be used for sequential shifting. Upon having switched to this input, sequential shifting mode will automatically engage.

The default settings are laid out so they conflict least with regular gameplay. The controller assumes an Xbox 360 controller, the following buttons and options are available.

"DpadUp",

"DpadDown",

"DpadLeft",

"DpadRight",

"Start",

"Back",

"LeftThumb",

"RightThumb",

"LeftShoulder",

"RightShoulder",

"A",

"B",

"X",

"Y",

"LeftTrigger",

"RightTrigger",

"LeftThumbLeft",

"LeftThumbRight",

"RightThumbLeft",

"RightThumbRight",

"LeftThumbUp",

"LeftThumbDown",

"RightThumbUp",

"RightThumbDown",

## Keyboard

The Keyboard section accepts hexadecimal values for Virtual-Key Codes. You can find a full listing by Microsoft here:

<https://msdn.microsoft.com/en-us/library/windows/desktop/dd375731%28v=vs.85%29.aspx>

Again, this has been pre-configured to be not too invasive without conflicting with too many buttons. The Gears.ini files have a header with the used keys.

A difference from real shifting with an H-knob is that you can manually engage the neutral gear. Up to 8 gears are supported in this mode.

## Logitech Wheel

Logitech Wheel support is included from this version on, using the Logitech Racing Wheel SDK. The RPM LEDs on top of various models works, as well as force feedback using game data. A few probably commonly used options have been made available to map buttons to. There is full support for an H-shifter.

When assigning buttons, **beware that this is 0-indexed!** This means **Button 1** in the Logitech Profiler should be mapped as **0**. By default, this has been configured for a Logitech G27.

**Force Feedback calculation model**

Force feedback is implemented. It uses vehicle telemetry data from the game, taking in account velocity, direction, acceleration and user input. More specifically:

* The centering spring force is affected by speed and acceleration. A high acceleration and/or high speed will make the force stronger.
* The feedback force is affected by acceleration in the sideways direction. Cornering, getting hit and crashing all are relayed back. In order to smoothen out some quirks, a filter of 4 frames of data is used. This might delay some effects by 4 frames, but high amplitude events should still register fine.
* The damper force is affected by speed. The friction is highest when stationary and immediately drops when the car starts rolling. Friction increases gradually after dropping.

**Enable: 0 or 1**

Disable detection and usage of a Logitech Racing Wheel. Turn this on if you want to use your racing wheel with GTA V and this mod.

**WheelRange: 0 to 1080, or your steering wheel max**

This value sets the soft lock on your steering wheel. The max value depends on your steering wheel. The G27 has a max lock of 900 degrees, for example.

To map the wheel 1:1 to GTA V’s First Person View in a vehicle, use a value of **180** degrees. For a better experience, change to whatever makes sense for your preferred vehicle. I prefer 560 degrees for sport vehicles.

Handbrake Hold this to hold handbrake.

Horn Hold this to sound the horn.

LookBack Hold this to look back.

Engine Press this to restart the engine.

Lights Press this to turn on lights/full beam/off lights.

Camera Press this to switch camera views.

RadioNext Press this to go to the next radio station.

RadioPrev Press this to go to the previous radio station.

IndicatorLeft Press this to toggle blinkers on left side.

IndicatorRight Press this to toggle blinkers on right side.

IndicatorHazard Press this to toggle hazard lights.

Additionally, the Dpad left and right also serve as radio next/previous buttons.

**FFEnable: 0 or 1**

Disable (0) or Enable(1) force feedback effects.

**FFDamperStationary: 0 to 100**

This value controls the friction feel when the vehicle is at a stop. A higher value means more friction. Keep this higher than **FFDamperMoving**.

**FFDamperMoving: 0 to 100**

This value controls the friction feel when the vehicle is moving. A higher value means more friction. Keep this lower than FFDamperStationary**.**

**FFPhysics: Anything**

This value controls how much physics affect your steering wheel. A higher value means a stronger force feedback.

**FFCenterSpring: 0 to anything**

This value controls how much the centering spring is affected by speed. A higher value means a more strong force when going faster.

### Recommendations

With a higher steering lock, lower the effect forces. Default values should feel reasonable all round, but this is just a default preset.

FFPhysics is affected by FFCenterSpring. A weak FFCenterSpring will mean the car is more prone to sway out of control, a weak FFPhysics will mean less feel of the car being transferred to the wheel. A relatively strong FFCenterSpring attenuates the FFPhysics effects.

FFPhysics is affected by FFDamper\* too. A strong FFDamper\* will make the physics reactions weaker and slower.

# Debug

**Info: 0 or 1**

Sometimes it’s useful to know certain things about the mod, the car and the game. Turn this on to look at some statistics or to debug your wheel.

# Final words

I hope this document fully explains all the options in a clear way. If you’re curious and want to know how everything works exactly or if you want to contribute, the source is always available at the following link: <https://github.com/E66666666/GTAVManualTransmission>