

# Changelog

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## 4.6.7

- Update for 1.0.1737.0 (Thank you Sparten for the help!)
- Add throttle cut and blip on up and downshifts, both toggleable
- Add an option to change clutch change rate on shifts
- Add an option to change steering wheel gamma
- Fix some vehicles unable to upshift to 2 properly with the automatic mode
- Fix vehicle flags offsets for older game versions
- Fix an issue where visibility was constantly set, causing an equipped parachute to always appear as deployed
- Fix an issue where H-pattern shifter setup didn't display text for 8th gear and up
- Change the order of drawn throttle, brake and clutch axes to match pedal layout
- Improve shift indicators in API
- Improve debug info

## 4.6.6

- Revise automatic transmission shifting behavior
- Revise clutch creep and stalling behavior
- Revise sequential/auto shift clutch behavior
- Add experimental scripted ABS
- Add update checker, allows to be turned off or to ignore an update
- Add C-style exported functions, replaces decorators and adds AI blacklisting
- Fix an issue for FiveM other players where other vehicles are not shifting
- Fix support for 10th gear
- Fix an issue where steering deadzone is not saved properly
- Fix an issue where force feedback continues playing when ejected from a car
- Fix an issue where hazard lights cancelled when turning, like normal signal lights
- Fix an issue where turning lights would override hazard lights
- Fix an issue where script re-locks `DECOR_REGISTER` if something else unlocked it
- General code improvements

## 4.6.5

- Update for v1.0.1604.0 (Arena War)
- Add support for 8th gear (added in Arena War)
- Other bug fixes and general improvements

## 4.6.4

- Improve soft lock transition
- Improve version detection
- Fix FiveM compatibility
- Fix a bug where the menu gets messed up after 10 options scrolling.

- Fix a bug where the non-Xinput controller settings loads the wrong setting for shifting mode.
- Fix AI not shifting properly when shifting is patched

### 4.6.3

- Fix a few missing vehicle offset searches.

### 4.6.2

- Add a hard rev limiter
- The settings directory is now created if the user forgot to install it
- Fix a bug where the speedometer would not show up properly
- Fix a bug where some vehicles are stuck when the automatic look back option is enabled
- Fix a few bugs related to keeping vehicle state
- Other bug fixes and general improvements
- Update for b1493. Additionally it should be a tiny bit more future-proof.

### 4.6.1

- Add H-pattern shifter assignments for automatic gearbox drive/neutral selection
- Add a workaround for FiveM version mismatch issues
- Change understeer force feedback impact
- Change how a burnout-while-reversing works in realistic pedals mode
- Fix shift up patch for pre-b1365
- Fix a crash when getting out of a car when using a wheel and then using a controller
- Fix an issue where assigning a button resets current menu session changes
- Fix an issue where the auto gearbox can't shift out of neutral

### 4.6.0

- Add support for b1365
- Add support for [Custom Camera V Plus](#) via decorators
- Add cinematic cam to blockable controls
- Add player hiding in FPV option
- Add throttle and brake button inputs for steering wheel
- Tweak stalling parameters
- Bug fixes and general improvements

### 4.5.3

- Fix external shiftmode setter.

### 4.5.2

- Improve clutch catching
- Add option to allow H-pattern for controller
- Fix crash on pre-v1.0.1290.1 (caused by steering patching)
- Fix crash on invalid pool handles

## 4.5.1

- Update for v1.0.1290.1
- Fix starting of damper effect
- Fix effect params

## 4.5.0

Config changes: None to worry about

Changes:

- Improve redline detection and consistency across vehicles
- Re-write auto gearbox to accomodate new redline detection
- Fix NPC gearboxes not shifting properly
- Fix bikes shifting up without input
- Fix big trucks being weird in general
- Allow brake to switch input modes too
- Some bug fixes

Wheel changes:

- Add frontal collision force feedback
- Add proper damper effect
- Add brake gamma curve option
- Fix camera pitch change on looking sideways

## 4.4.2

- Fix a button assignment issue

## 4.4.1

Config changes: No incompatible changes.

Changes:

- Add option to block button for controller clutch
- Add option to ignore shifts in menus (controller)
- Add option for deadzone with steering wheels
- Add Manual Transmission title above notifications
- Add warning to configure driving devices
- Improve boat and amphibious force feedback
- Scale ffb effects to steering wheel degrees
- Fix crash for steering wheels without force feedback
- Fix crash on setting up wheel buttons
- Remove support for non-custom decorators
- Small improvements here and there

## 4.4.0

Config changes: Change force feedback related options.

Changes:

- Revamp force feedback, it's much more accurate now!
- Add engine restart if stalling is active (push start "sim")
- Add "Custom Steering" for keyboard/controller too
- Fix wheel ffb not resetting after exiting car while effect is active
- Fix engine over-rev from miss-shift damage (it completely trashes your engine now)
- Fix downshift in auto gearbox when engine braking
- Fix clutch catch restarting engine
- Fix engine stalling parameters

### 4.3.10

No config changes

Changes:

- Fix engine sound muted on clutch press
- Fix models without dashboard shifting problems
- Fix models without dashboard engine lock problems
- Improve steering wheel setup
- Change steering wheel's toggle mod button to a "button held" instead of "button pressed" for more consistent mod toggling

### 4.3.9

Thanks for your bug reports! Config changes: Updated defaults. No need to replace your config: it's just a more comprehensive start for new users/setups.

Fixes:

- Fix brake non-responsive while engine braking
- Fix engine locking and engine braking conflict

### 4.3.8

Config changes:

- Everything should be still compatible but I did clean up things here and there.

Updates:

- Support for v1.0.1180.2 (Smuggler's Run)

Other changes:

- Add wheels locking up due to mis-shifts and going faster than the gear supports
- Add options to show/hide individual HUD elements
- Add option to manually assign action blocking
- Re-write engine braking to work with a specified rev range, clutch+throttle dependent

- Re-write automatic gearbox downshift, now should shift down with higher revs depending on throttle input
- Implement custom rev limiter
- Fix cars moving in neutral by throttle (clutch values)
- Fix other scripts not being informed of these things (Neutral gear in speedos, etc)
- Fix car wheel steering jitteryness. Includes two codepaths, one using natives (slower, but reliable/fallback) and one just setting the value directly in memory after some patches.
- Fix reverse gear not locking up things
- Fix clutch being detected when not assigned
- Use values from game controls for steering wheel rotation picture
- Shift mode indicator is now blue when manual transmission isn't active
- Register decorators to prevent crashes (Thanks to Unknown Modder!)
- Register new decorators, check GitHub for details
- A bunch of refactoring and cleanup

Decorator changes:

- Change decorator names to be mod-specific. Check GitHub!

## 4.3.7

Config changes:

- Menu position changed again (sorry!) for different resolutions and safe space support!
- For the rest of the files, no incompatible changes. Just additions.

Additions:

- Add throttle and brake anti-deadzone
- Add steering wheel and pedal input HUD
- Separate stalling for H-patt. shift and seq. shift
  - Seq. clutch catch behaves like auto now, regarding brakes

Fixes:

- Properly disable steering wheel
- Draw wheel debug info boxes with less jerkiness
- Check if decorators exist before using them (prevent FiveM crash)

## 4.3.6

No incompatible config changes:

- Add `AlwaysHUD` to `[HUD]`
- Add `DisplayWheelInfo` to `[DEBUG]`
- `AlwaysHUD` allows using the mod's HUD/speedo even when the manual transmission part itself is off
- `DisplayWheelInfo` is decoupled from `ShowInfo` and can be shown on its own to prevent UI clutter

Fixes:

- Fix crash on exit/enter/switch vehicle and enable/disable mod

## 4.3.5

No incompatible config changes

- Add support for b877
- Fix menu title sizing
- Fix wrong version number being displayed

## 4.3.4

No incompatible config changes:

- Added "ALLOW\_KEYBOARD" to wheel H-Shifter options

Menu config changes:

- Changed MenuY position to visually match original position

Fixes:

- Update b1103 offsets
- Fix patches not applied when changing cars
- Fix steering lock not saved
- Fix global FFB settings readout typo
- Fix axis calibration not instantly applying

Improvements:

- Use wheel speed data for stalling decision
- Use drive bias data for stalling decision
- Add fancy debug info about wheels (suspension, speed, locking up)
- Use "tap" detection for XInput (need help with blocking default buttons)
- Add wheel address logging
- Update menu usage

## 4.3.3

No config changes

Critical bug fix:

- Fix crashing when entering anything without wheels

Menu changes:

- Added details pane for many options!

Gameplay changes:

- Only reset vehicle stats when entering a new vehicle, not when just stepping out

#### 4.3.3 hotfix:

- Change how steering multiplier is applied

### 4.3.2

#### Configuration changes:

- Added [CLUTCH\_BUTTON] for wheel
- Added steering multiplier for wheel You don't need to replace your existing configs. New values are added when set.

#### Menu changes:

- Update menu look and feel
- Allow to assign controller combo to open menu

#### Gameplay changes:

- Throttle is now considered for engine stalling
- Fix throttle only revving but not applying force when rolling back in first gear or higher
- Make clutch catching stronger again and force idle RPM when it's active.
- Significantly improve stalling mechanism

#### Wheel changes:

- Add support for button-based clutch
- Add option to change steering multiplier

### 4.3.1

#### No configuration changes

#### Menu changes:

- Fix subtitles not showing up on wheel button configuration
- Re-order wheel buttons and show TO\_KEYBOARD buttons being pressed

#### Gameplay changes:

- Fix brakes being applied when rolling back in neutral
- Fix gear rattle not playing when popping out of reverse w/o clutch
- Re-enable persistent shift toggle switch
- Use normal speed for speedometer if vehicle dashboard speedometer is missing
- Fix characters being corrupted for some system configurations
- Fix cinematic cam disabled after menu close

#### Wheel changes:

- Use a separate force feedback calculation for planes

## 4.3.0

### Configuration changes:

- Added `settings_menu.ini`
- `settings_wheel.ini`
  - `[FORCE_FEEDBACK]` section uses decimal numbers now
  - `[LOOK_LEFT]` and `[LOOK_RIGHT]` are added
  - Version updated to `430` to reflect this.
- `settings_general.ini`
  - Added `[CONTROLLER_LEGACY]` for non-Xinput stuff
  - In `[HUD]`, added `HUDFont`.
  - In `[CONTROLLER]`, `TriggerValue` uses decimal numbers now
  - Version updated to `430` to reflect this.
- `*.ini` files can now also have `true` or `false` instead of `0` or `1`. Both still work.

### Additions:

- Added a menu. By default accessible with `[{` key. Pretty much everything in the config files is changeable here 😊
  - Change mod options
  - Change HUD settings
  - Change wheel options, keyboard controls and controller controls
  - Assign controls in-game
  - Show existing control assignments
- Add gear rattle sound on miss-shift, clears on clutch press or proper gear change
- Support for non-Xinput controllers again (specify in `.ini`)

### FiveM:

- Fixed speed display for b505
- Still investigating crashes?
- Not sure what happened to the rev limiter :thinking:

### Wheel changes:

- Remove nonsense combined input code. Original code was plenty good to handle combined axes and I'm an idiot for making it complex...
- Delay `DirectInput` setup from construction to `main()`
- Rewrite ingame pedal logic 🤔. It was NOT fun.
- Input detection uses clutch too, now
- Add look left/right buttons
- Significantly increase wheel resistance when engine is off. This simulates no power steering!
- Decrease averaging delay for force feedback, for a faster FFB response

### Other changes:

- Revert to `GetAsyncKeyState()` because `ScriptHookV`'s API doesn't do mouse and/or differentiate between left/right shift so that's included now.



- Added normal +/-,/. to keymap
- Make clutch grab self-accelerate a bit more tame, stop revving over 0.3
- Set engine RPM display to 0 when engine is off.
- More aggressive custom revving
- Pretty debug info
- Pretty HUD font/text

## 4.2.0 - Release

Configuration changes:

- Separate [HUD] section for HUD stuff
  - settings\_general.ini: VERSION is 420R now

Wheel changes:

- Always initialize DirectInput, just to be safe

Changes:

- Add HUD elements. You can move these around freely or disable them
  - Shift mode indicator (H/S/A)
  - RPM indicator with redline options
  - Dashboard-data speedometer (kph, mph, m/s)
- Rename DIUtil to WheelConfigurator
- Gears.log is made in the ManualTransmission directory now.

FiveM support:

- Fix getWheelCompressions for FiveM
- Fix steering corrections patching for FiveM
- Ignore CrossScript for FiveM

Fixes 'n stuff:

- Adjust engine braking to be more reliable
- Adjust hill start effect so it's not affected by throttle position
- Fix a few instances where the brake/throttle are swapped while reversing
- Fix a few instances where the engine is wrongfully revved while braking
- Minor code optimizations
- Version strings for 1.0.1032.1

## 4.2.0 - beta 2

No configuration changes

Changes:

- Fix messed up clutch for single-axis throttle/brake settings
- Fix lag when patching fails: Limit patching attempts
- Update strings for game version 1.0.1011.1

- Fix vehicle moving before clutch catch point if throttle is pressed

Wheel changes:

- Fix crash when FFB applied on a null device after re-initialization
- Cleaner DirectInput Force Feedback code
- Cleaner wheel compression retrieval method for FFB detail
- Improve radio changing
- Add hold radio buttons to turn radio off

DIUtil changes:

- Fix a crash when refreshing after removing all devices
- Add dynamic device & axis detection
- Add dynamic device & button detection
- Add current function display for buttons
- Add wheel->keyboard input blocking option

## 4.2.0 - beta 1

Big changes to configuration!

Structural changes:

- Add a rudimentary configuration tool
- Restructured settings to ManualTransmission folder
- Separated wheel settings and normal settings
- Show warning for incorrect .ini versions

Wheel changes:

- Add support for multiple DirectInput devices
- Add countersteering and reduction patch
- Add axis support for handbrake
- Add back G27/G29 LEDs
- Add option for global FF multiplier
- Rework Force Feedback completely
- Tweaks to soft lock
- Add 7th gear support for H-shifter
- Disable controller rumble while wheel is active

Changes:

- Add option to turn on/off throttle+clutch engine starting
- Add option for clutch shifting in sequential
- Only stall if all wheels are on the ground
- Remove 8th gear for numpad
- General bug fixes

## 4.1.3

No changes to Gears.ini

- Fix LeFix Speedometer compatibility

## 4.1.2

No changes to Gears.ini

- Fix clutch not read in car when SimpleBike is on
- Fix gearbox control still active if player isn't the driver

## 4.1.1

No changes to Gears.ini

- Fix wheel used in bicycles

## 4.1.0

**This update changes Gears.ini**

Feature changes:

- Add wheel soft lock options
- Add FFB effects for burst tyres
- Add detail FFB effects for quads
- Add AutoGear1 for sequential as option
- Add gearbox change to Controller layout
- Experimental: Add support for boats and planes

Changes/Fixes:

- Fix version printing
- Fix engine revving while braking with steering wheel while rolling back in a non-reverse gear
- Fix engine revving while braking with steering wheel in reverse near stop
- Decrease CenterForce faster during oversteer: 0% centerforce @ 20% oversteer
- Remove dampener adjustment for oversteer
- Change README format

## 4.0.4

- Fix Dpad press register on toggle
- Print version number

## 4.0.3

- Revert XInput 1.4 usage
- Fix support for older game versions
- Fix default settings
- Increase version number for clarity

## 4.0.2

### New things

- Implement Cross-Script shift mode setting
- Restore auto look back in reverse gear as option
- Add color for top gear indicator
- Change .ini to use human readable keyboard keys
- Make blinkers self-cancel
- Use smoother oversteer transition

### More small fixes

- Support for Bikers DLC
- Fix FFDisable ignored
- Fix key presses being detected with GTA V in the background
- Fix Neutral gear still selected when car is in auto in a high gear
- Fix clutch pedal read in automatic mode (ignore it now)
- Fix non-working H-shifter mode for motorbikes (skip over it)
- Replace normal-stop handbrake with another way to keep the car on its place

## 4.0.1

### A few small fixes

- Fix crash when force feedback can't be initialized
- Fix wheel radio button toggled on reset
- Fix wheel jerk on reset
- Fix jerky reverse animation
- Disable automatic reversal on motorbikes if SimpleBike is turned off
- Add an option to only show the Neutral gear N
- Change gear 0 display to R

## 4.0

This release is primarily focused on making the mod compatible with all wheels.

- Add DirectInput for almost ALL wheels! All inputs should be supported:
  - All analog input axes
  - All buttons
  - 8 Dpad directions
  - Support for combined pedals
  - Analog ranges fully configurable
  - Clutch can be disabled for 2-pedal wheels
- Use wheel for driving without manual transmission
  - Force feedback enabled!
- Add wheel to keyboard assignments
- Rewrote FFB from scratch
  - More force feedback details on wheel level

- Better responsiveness
- Understeer and oversteer conditions for force feedback parameters
- Included a tool to read the raw axes, to help you configure your wheel
  - A G27 with separate axes example available in Gears.ini
  - A G27 with combined axes example available in Gears.ini
- Properly re-acquire wheel on mod toggle
- Removed Logitech specific wheel support

#### Non-wheel related changes

- Add an automatic gear box, implemented as R-N-D.
- Add a hill starting effect, compensating for GTA V's automatic brakes
- Allow turning off cross-script communication for CitizenFX-based mods
- Dropped SimpleReverse
- Disable engine damage for electric vehicles
- Add user defined controller analog-as-button trigger value
- Change onscreen debug text format
- Increase engine braking strength
- Enable clutch catching for reverse (driver might play animation weirdly)
- Fix clutch catching when car is upside down
- Add engine off toggle for engine button
- Disable low RPM power loss

### 3.0.2

- Fix keys not being disabled properly from wheel
- Add cross-script communication support (Decorator)
- Tweak truck speed limiter to be less harsh when shifting early

### 3.0.1

- Fix handbrake staying engaged when disabling the mod

### 3.0

- Add Logitech Wheel support
  - Steering wheel support
  - Pedal input support
  - Force Feedback, physics-based and fully configurable
  - 0-delay steering input (controller input is/was still smoothed out)
  - Useful vehicle functions available and mappable on wheel
- Add automatic input detection and isolation
  - Switch to sequential on controller input
- Change reverse in first gear behavior to do a burnout if the vehicle is strong enough
- Add separate neutral to be in between R and 1st: R-N-1-2-3... for sequential shifting
- Add clutch requirement option for H-shifting
- Add engine restart by pressing throttle
- Fix specific first gear only vehicles having a nonfunctional neutral (remove neutral for these)

- Rework neutral/clutch revving to be more gradual and natural
- Change clutch slipping in higher gears to be gradual
- Cleaner vehicle swap/leave procedure
- Fix vehicle change detection
- Fix other cars not moving when clutch pressed
- Minimize patching of game functions
  - Less risky
  - No AI impact
  - Performance improvement
- Change .ini format

## 2.0.2

- Disable clutch catching in reverse gear
- Enable free revving for trucks

## 2.0.1

- Add check for invalid configurations
- Improve requirement for AutoReverse
- Remove lockup when choosing reverse, going forwards

## 2.0

Additions:

- Add neutral gear functionality
- Add exception for motorcycles
- Add Clutch catching mechanism Changes:
- Switch to XInput controller readout
- Change engine braking to use apply force
- Engine braking locks up engine (handbrake) when going forward in reverse gear
- Reworked engine stalling with awareness of current gear (old version still available)
- Rework revving in higher gears Fixes and tweaks:
- RPM Disparity at high gear low RPM fixed
- Fix Utility Trucks not being recognized
- Tweaked engine braking and allow for trucks
- Remove engine stalling on lots of damage Misc:
- Add configuration presets

## 1.8.2

- Only conditionally patch lower-end full clutch

## 1.8.1

- Fix keyboard-controller detection
- Fix ToggleH button being overwritten instead of EnableH

## 1.8

- Refactor project
- Add controller button for toggle (Dpad Right for 0.5s)
- Add keyboard key for toggle H-shifter (default: }] key)
- Fix clutch fully depressed vehicle still moving
- Disable patches and manual control as passenger
- Tweak notifications behavior

## 1.7

- Add engine braking
- Fix big trucks accelerating infinitely
- Reset gear on changing vehicle
- Turn on engine when toggling mod

## 1.6.2

- Better compatibility: Dropped Microsoft Visual C++ Redistributable 2015 (x64) requirement

## 1.6.1

- Fix wrong key in Gears.ini
- Update readme.txt properly

## 1.6

- Enable Logging to Gears.log to clean up notifications
- Improve clutch control patching and restore
- Improve clutch control at very low speeds
- Change stalling conditions
- Turn on reverse light in reverse gear

## 1.5

- Top gear known (Thank you, kagikn!)
- Full clutch control (Thank you, leftas!)
- Allow analog clutch control
- Add engine damage
- Add engine stalling
- Changed build parameters - should work for more people now

## 1.4

- Enable accelerator to be used for reverse acceleration and brake pedal to only brake and not reverse. Like a real car.

## 1.3.2

- Enable/Disable manual gears by default in .ini
- Persistent enable/disable manual gears
- Enable/Disable engaging first gear on stopping
- Enable/Disable automatic reverse gear

### 1.3.1

- Full compatibility with LeFix Speedometer for gear shift indicators
- Restore 1.2 overrevving behavior
- Tweak low-RPM low-throttle behavior

## 1.3

- Full keyboard support
- H-Shifter support - mapped to keyboard buttons
- Preliminary compatibility with LeFix Speedometer for gear shift indicators
- Disable/enable manual notification
- Changes in ini and default config

## 1.2

- Fix version 350 compatibility issues
- Tweaked reverse behavior
- Fix overrevving behavior

## 1.1

- Transmission optimizations
- Disabled for bicycles
- Fixed motorcycle support

## 1.0

- Initial release