LAMBORGHINI HURACÁN GT3 EVO

USER MANUAL

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DEAR iRACING USER,

Congratulations on your purchase of the Lamborgini Huracán GT3 EVO! From all of us at iRacing, we appreciate your support and your commitment to our product. We aim to deliver the ultimate sim racing experience, and we hope that you'll find plenty of excitement with us behind the wheel of your new car!

Years of racing heritage come together in the Lamborghini Huracán GT3 EVO, Lamborghini's latest GT3 challenger in sports car racing series from around the world. Developed in house in Sant'Agata Bolognese by Lamborghini Squadra Corse, the Huracán GT3 EVO builds on the winning formula of its predecessor, the Huracán GT3, with improved aerodynamics developed in conjunction with Dallara and a powerful 5.2-liter V10 engine.

2020 was a banner year for the car, with a clean sweep of the IMSA WeatherTech SportsCar Championship's driver and team titles in both its full-season and endurance race standings for Paul Miller Racing. Across the Atlantic, Barwell Motorsport ran the car to Lamborghini's first British GT title, while a class victory in the 24 Hours of Spa and multiple GT World Challenge victories rounded out a stellar season.

The following guide explains how to get the most out of your new car, from how to adjust its settings off of the track to what you'll see inside of the cockpit while driving. We hope that you'll find it useful in getting up to speed.

Thanks again for your purchase, and we'll see you on the track!

CHASSIS

ALUMINUM UNIBODY CONSTRUCTION WITH CARBON FIBRE BODYWORK

FRONT AND REAR DOUBLE A-ARMS WITH COILOVERS; OHLINS TTX-36 2-WAY ADJUSTABLE DAMPERS; BLADE-ADJUSTABLE FRONT AND REAR ANTI-ROLL BARS

LENGTH	WIDTH	WHEELBASE	DRY WEIGHT	WET WEIGHT WITH DRIVER
4550mm 179.2in	2220mm 87.4in	2645mm 104.2in	1285kg 2732lbs	1411kg 3111lbs

POWER UNIT

5.2 LITER V10

DISPLACEMENT	RPM LIMIT	TORQUE	POWER
5.2Liters 317CID	8500RPM	400lb-ft 545Nm	500bhp 374kW

Introduction

The information found in this guide is intended to provide a deeper understanding of the chassis setup adjustments available in the garage, so that you may use the garage to tune the chassis setup to your preference.

Before diving into chassis adjustments, though, it is best to become familiar with the car and track. To that end, we have provided baseline setups for each track commonly raced by these cars. To access the baseline setups, simply open the Garage, click iRacing Setups, and select the appropriate setup for your track of choice. If you are driving a track for which a dedicated baseline setup is not included, you may select a setup for a similar track to use as your baseline. After you have selected an appropriate setup, get on track and focus on making smooth and consistent laps, identifying the proper racing line and experiencing tire wear and handling trends over a number of laps.

Once you are confident that you are nearing your driving potential with the included baseline setups, read on to begin tuning the car to your handling preferences.

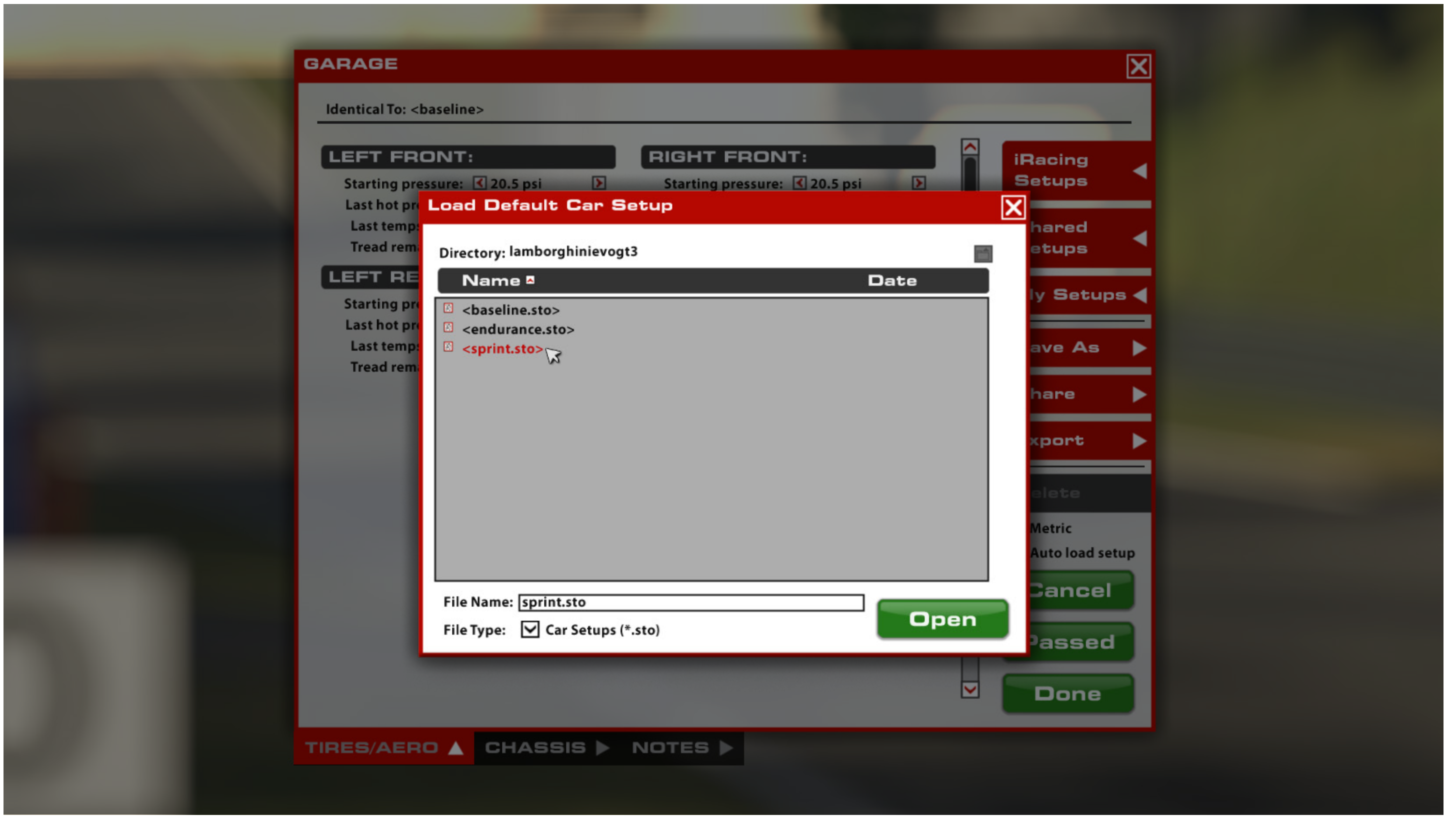
GETTING STARTED

Before starting the car, it is recommended to map controls for Brake Bias, Traction Control and ABS adjustments. While this is not mandatory to drive the car this will allow you to make quick changes to the driver aid systems to suit your driving style while out on the track.

Once you load into the car, getting started is as easy as selecting the upshift button to put it into gear, and hitting the accelerator pedal. This car uses a sequential transmission and does not require a clutch input to shift in either direction; the car's downshift protection will not allow you to downshift if it feels you are traveling too fast for the gear selected and would incur engine damage. If that is the case, the gear change command will simply be ignored.

Upshifting is recommended when the shift lights on the dashboard are fully illuminated in blue. This is at approximately 8000 rpm.

LOADING AN iRACING SETUP



When you first load into a session, the iRacing Baseline setup will be automatically loaded onto the car. If you would like to try any of the other iRacing pre-built options, you may select it by going to Garage > iRacing Setups > and then selecting another option that fits your needs. Because this car uses slightly different chassis and body configurations on different types of tracks, it will be necessary to load a setup from the same track type to pass tech inspection. For example, a setup for Talladega will pass at Daytona, but likely will not pass at Bristol.

If you would like to customize the setup, simply make the changes in the garage that you would like to update and click apply. If you would like to save your setup for future use click “Save As” on the right to name and save the changes. To access all of your personally saved setups, click “My Setups” on the right side of the garage. If you would like to share a setup with another driver or everyone in a session, you can select “Share” on the right side of the garage to do so. If a driver is trying to share a setup with you, you will find it under “Shared Setups” on the right side of the garage as well.

Dash Pages

The Bosch DDU S2 digital display in the Lamborghini Huracan GT3 EVO offers various formats and options to tailor the information on the display to whatever the driver may need or want at any time.

PIT LIMITER

When the pit limiter is active a large blue box displays across the dashboard along with the center 6 shift light LEDs flashing blue.

SHIFT LIGHTS

1 GREEN	6650 rpm
2 GREEN	6800 rpm
3 GREEN	6950 rpm
4 GREEN	7100 rpm
1 YELLOW	7250 rpm
2 YELLOW	7400 rpm
1 RED	7550 rpm
2 RED	7700 rpm
3 RED	7850 rpm
ALL BLUE	8000 rpm

DAYLIGHT

TOP ROW

TC	Current traction control setting (illuminates blue when TC is active)
MAP	Current engine map setting (Inoperable)
EPS	Inoperable
GEAR	Currently selected gear
APS	Inoperable
S12	Inoperable
ABS	Current ABS setting (illuminates blue when ABS is active)

CENTER GROUP

SPEED	Vehicle speed (km/h or mph)
RPM	Engine RPM
LAPTIME	Current lap time
DIFF	Difference to best lap time

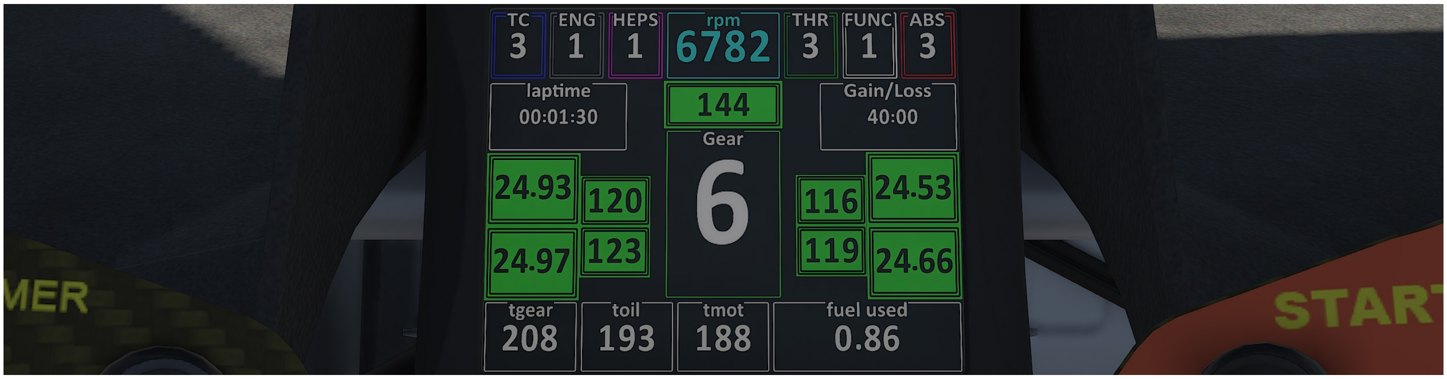
BOTTOM ROW

TGEAR	Gearbox oil temperature (Celsius or Fahrenheit)
TOIL	Engine oil temperature (Celsius or Fahrenheit)
TMOT	Engine water temperature (Celsius or Fahrenheit)
FUEL LAP	Fuel used this lap (Liters or US Gallons)
FUEL USED	Fuel used this stint (Liters or US Gallons)

NIGHT TIME

The Night display page is functionally identical to the Day page, however thecolors are inverted to help with vision outside of the car.

MAGNUS QUALIFYING



TOP ROW

TC	Current traction control setting (illuminates blue when TC is active)
ENG	Current engine map setting, inoperable
HEPS	Inoperable
RPM	Engine RPM
THR	Current throttle map setting
FUNC	Inoperable
ABS	Current ABS setting (illuminates blue when ABS is active)

CENTER GROUP

GEAR	Currently selected gear
LAPTIME	Current lap time
SPEED (GREEN BOX ABOVE GEAR)	Current road speed (km/h or mph)
GAIN/LOSS	Difference to best lap time
LEFT SIDE TIRE PRESSURES	The Left-side tire pressures are shown on the left edge of the screen in the larger, unlabeled boxes (bar or psi)
LEFT SIDE TIRE SURFACE TEMPS	The Left-side tire surface temperatures are shown next to the tire pressure values in smaller boxes (Celsius or Fahrenheit)
RIGHT SIDE TIRE PRESSURES	The Right-side tire pressures are shown on the right edge of the screen in the larger, unlabeled boxes (bar or psi)
RIGHT SIDE TIRE SURFACE TEMPS	The Right-side tire surface temperatures are shown next to the tire pressure values in smaller boxes (Celsius or Fahrenheit)

BOTTOM ROW

TGEAR	Gearbox oil temperature (Celsius or Fahrenheit)
TOIL	Engine oil temperature (Celsius or Fahrenheit)
TMOT	Engine water temperature (Celsius or Fahrenheit)
FUEL LAP	Fuel used this lap (Liters or US Gallons)
FUEL USED	Fuel used this stint (Liters or US Gallons)

QUALIFYING

TOP ROW	
TC	Current traction control setting (illuminates blue when TC is active)
MAP	Current engine map setting, inoperable
EPS	Inoperable
RPM	Engine RPM
APS	Inoperable
S12	Inoperable
ABS	Current ABS setting (illuminates blue when ABS is active)
CENTER GROUP	
LAPTIME	Current lap time
SPEED	Road speed (km/h or mph)
GAIN/LOSS	Difference to best lap time
GEAR	Currently selected gear
TIRE PRESSURES	The current tire pressures (bar or psi) are displayed on either side of the gear indicator.
BOTTOM	Delta bar to best lap time

ADVANCED SETUP OPTIONS

This section is aimed toward more advanced users who want to dive deeper into the different aspects of the vehicle's setup. Making adjustments to the following parameters is not required and can lead to significant changes in the way a vehicle handles. It is recommended that any adjustments are made in an incremental fashion and only singular variables are adjusted before testing changes.

Tires & Aero

TIRE SETTINGS (ALL FOUR TIRES)

STARTING PRESSURE

Air pressure in the tire when the car is loaded into the world. Higher pressures will reduce rolling drag and heat buildup, but will decrease grip. Lower pressures will increase rolling drag and heat buildup, but will increase grip. Higher speeds and loads require higher pressures, while lower speeds and loads will see better performance from lower pressures. Cold pressures should be set to track characteristics for optimum performance. Generally speaking, it is advisable to start at lower pressures and work your way upwards as required.

LAST HOT PRESSURE

Air pressure in the tire after the car has returned to the pits. The difference between cold and hot pressures can be used to identify how the car is progressing through a run in terms of balance, with heavier-loaded tires seeing a larger difference between cold and hot pressures. Ideally, tires that are worked in a similar way should build pressure at the same rate to prevent a change in handling balance over the life of the tire, so cold pressures should be adjusted to ensure that similar tires are at similar pressures once up to operating temperature. Hot pressures should be analysed once the tires have stabilised after a period of laps. As the number of laps per run will vary depending upon track length a good starting point is approximately 50% of a full fuel run.

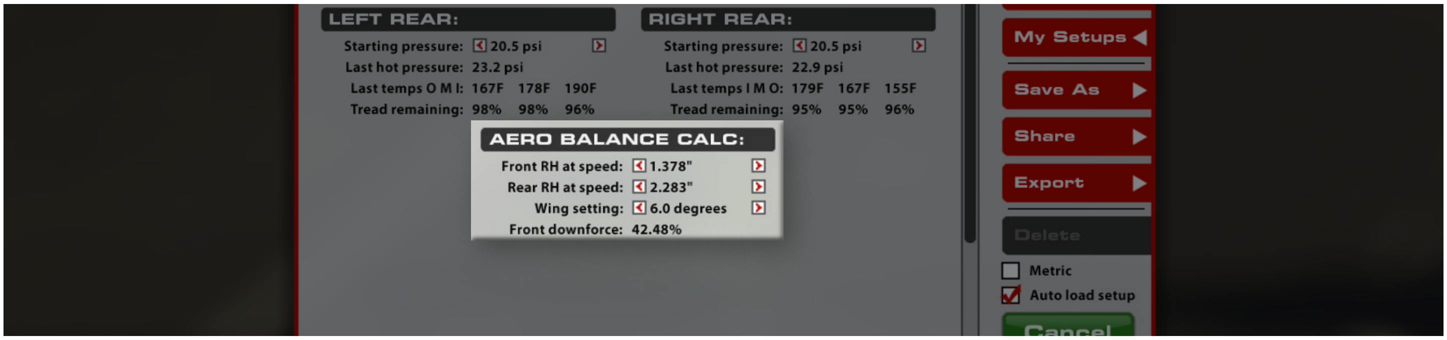
TIRE TEMPERATURES

Tire carcass temperatures once the car has returned to the pits. Wheel Loads and the amount of work a tire is doing on-track are reflected in the tire's temperature, and these values can be used to analyze the car's handling balance. Center temperatures are useful for directly comparing the work done by each tire, while the Inner and Outer temperatures are useful for analyzing the wheel alignment (predominantly camber) while on track. These values are measured in three zones across the tread of the tire. Inside, Middle and Outer.

TREAD REMAINING

The amount of tread remaining on the tire once the car has returned from the pits. Tire wear is very helpful in identifying any possible issues with alignment, such as one side of the tire wearing excessively, and can be used in conjunction with tire temperatures to analyze the car's handling balance. These values are measured in the same zones as those of temperature.

AERODYNAMICS



AERO CALCULATOR

This calculator is a reference tool ONLY. The Aero Calculator is a tool provided to aid in understanding the shift in aerodynamic balance associated with adjustment of the rear wing setting and front and rear ride heights. It is important to note that the values for front and rear ride height displayed here DO NOT result in any mechanical changes to the car itself, however, changes to the rear wing angle here WILL be applied to the car.

FRONT RH AT SPEED

The Ride Height (RH) at Speed is used to give the Aero Calculator heights to reference for aerodynamic calculations. When using the aero calculator, determine the car's Front Ride height via telemetry at any point on track and input that value into the "Front RH at Speed" setting. It is advisable to use an average value of the LF and RF ride heights as this will provide a more accurate representation of the current aero platform rather than using a single corner height.

REAR RH AT SPEED

The Ride Height (RH) at Speed is used to give the Aero Calculator heights to reference for aerodynamic calculations. When using the aero calculator, determine the car's Rear Ride height via telemetry at any point on track and input that value into the "Front RH at Speed" setting. It is advisable to use an average value of the LR and RR ride heights as this will provide a more accurate representation of the current aero platform rather than using a single corner height.

WING SETTING

The wing setting refers to the relative angle of attack of the rear wing, this is a powerful aerodynamic device which has a significant impact upon the total downforce (and drag!) produced by the car as well as shifting the aerodynamic balance of the car rearwards with increasing angle. Increasing the rear wing angle results in more total cornering grip capability in medium to high speed corners but will also result in a reduction of straight line speed. Rear wing angle should be adjusted in conjunction with front and rear ride heights, specifically the difference between front and rear ride heights known as 'rake'. To retain the same overall aerodynamic balance it is necessary to increase the rake of the car when increasing the rear wing angle.

The Wing Setting value in the Aero Calculator section is tied directly to the Wing Setting in the Chassis page's Rear section. Changing one will automatically change the other.

FRONT DOWNFORCE

This value displays the proportion of downforce acting at the front axle for the given wing and ride height combination set within the calculator parameters. This value is an instantaneous representation of your aero balance at this exact set of parameters and it can be helpful to pick multiple points around a corner or section of track to understand how the aerodynamic balance is moving in differing situations such as braking, steady state cornering and accelerating at corner exit. A higher forwards percentage will result in more oversteer in mid to high speed corners.

Chassis

FRONT END

ARB BLADES

The configuration of the Anti-Roll Bar arms, or "blades", can be changed to alter the overall stiffness of the ARB assembly. Higher values transfer more force through the arms to the ARB itself, increasing roll stiffness in the front suspension and producing the same effects, albeit on a smaller scale, as increasing the diameter of the sway bar. Conversely, lower values reduce the roll stiffness of the front suspension and produce the same effects as decreasing the diameter of the sway bar. These blade adjustments can be thought of as fine-tuning adjustments between sway bar diameter settings. 6 ARB blade options are available ranging from 1-1 (softest) to 3-3 (stiffest).

TOE-IN

Toe is the angle of the wheel, when viewed from above, relative to the centerline of the chassis. Toe-in is when the front of the wheel is closer to the centerline than the rear of the wheel, and Toe-out is the opposite. On the front end, adding toe-out will increase slip in the inside tire while adding toe-in will reduce the slip. This can be used to increase straight-line stability and turn-in responsiveness with toe-out. Toe-in at the front will reduce turn-in responsiveness but will reduce temperature buildup in the front tires.

FRONT MASTER CYLINDER

The Front Brake Master Cylinder size can be changed to alter the line pressure to the front brake calipers. A larger master cylinder will reduce the line pressure to the front brakes, this will shift the brake bias rearwards and increase the pedal effort required to lock the front wheels. A smaller master cylinder will do the opposite and increase brake line pressure to the front brakes, shifting brake bias forward and reducing required pedal effort.

REAR MASTER CYLINDER

The Rear Brake Master Cylinder size can be changed to alter the line pressure to the rear brake calipers. A larger master cylinder will reduce the line pressure to the rear brakes, this will shift the brake bias forwards and increase the pedal effort required to lock the rear wheels. A smaller master cylinder will do the opposite and increase brake line pressure to the rear brakes, shifting brake bias rearward and reducing required pedal effort.

BRAKE PADS

The vehicle's braking performance can be altered via the Brake Pad Compound. The "Low" setting provides the least friction, reducing the effectiveness of the brakes, while "Medium" and "High" provide more friction and increase the effectiveness of the brakes while increasing the risk of a brake lockup.

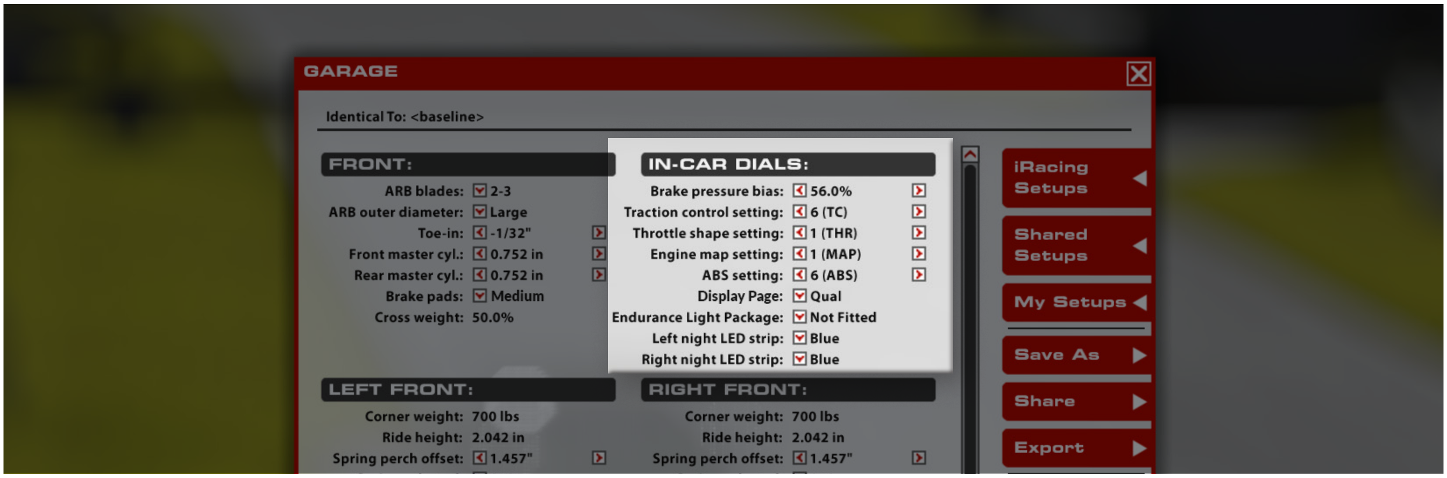
CROSS WEIGHT

The percentage of total vehicle weight in the garage acting across the right front and left rear corners. 50.0% is generally optimal for non-oval tracks as this will produce symmetrical handling in both left and right hand corners providing all other chassis settings are symmetrical. Higher than 50% cross weight will result in more understeer in left hand corners and increased oversteer in right hand corners, cross weight can be adjusted by making changes to the spring perch offsets at each corner of the car.

FRONT WEIGHT DISTRIBUTION (%F WTDIST)

The vehicle's Front Weight Distribution is the percentage of total vehicle weight on the front tires. This represents a rough approximation of the longitudinal Center of Gravity location in the vehicle and has a direct influence on the high-speed stability of the vehicle and low-speed handling balance. Higher Nose Weight values result in a more directionally-stable vehicle, good for low-grip tracks and situations where the vehicle is set up with extra front downforce. Conversely, lower distribution values are good for high-grip tracks and configurations with high rear downforce levels.

IN-CAR DIALS



BRAKE PRESSURE BIAS

Brake Bias is the percentage of braking force that is being sent to the front brakes. Values above 50% result in greater pressure in the front brake line relative to the rear brake line which will shift the brake balance forwards increasing the tendency to lockup the front tyres but potentially increasing overall stability in braking zones. This should be tuned for both driver preference and track conditions to get the optimum braking performance for a given situation. It is important to note that differing combinations of master cylinder size will necessitate differing brake pressure bias values, this is because increasing or reducing the split in master cylinder size difference between front and rear axles will produce an inherent forward or rearward bias in brake line pressure.

TRACTION CONTROL SETTING

The position of the traction control switch determines how aggressively the ecu cuts engine torque in reaction to rear wheel spin. 12 positions are available but only 10 maps exist. Settings 1-10 range from least intervention/sensitivity (position 1) through to highest intervention/sensitivity (position 10). Position 11 is the same as position 10 and position 12 disables the traction control completely. Positions 3 and 4 are the manufacturer recommended baseline settings. More intervention will result in less wheelspin and less rear tire wear but can reduce overall performance if the traction control is cutting engine torque too aggressively and stunting corner exit acceleration.

THROTTLE SHAPE SETTING

Throttle shape setting refers to how changes in the drivers pedal position result in changes in provided engine torque. 3 positions exist, position 1 results in a linear torque map relative to throttle position (e.g. 10% throttle position results in 10% engine torque, 50% throttle position results in 50% engine torque and so on.). Position 3 emulates a non-linear S shaped map similar to a cable throttle which results in reduced fidelity in the middle portion of the throttle range. Position 2 is a hybrid of position 1 and 3 throttle mapping styles.

ABS SETTING

The current ABS map the car is running. The ABS system features 12 positions divided into three groups to suit varying track conditions, with lower values providing less assistance and higher values providing more assistance to prevent brake lockup. Settings 1-6 are for slick tires in dry conditions, 7-11 are for wet conditions. Generally, setting 7 will be good for light rain while settings will need to be increased as conditions worsen, with setting 11 being for heavy rain. Setting 12 disables the system completely.

DISPLAY PAGE

Currently displayed in-car dashboard page. 4 display options are present with 2 options intended for race situations of day and night and 2 for qualifying. The race options are identical in terms of displayed information but with differing background colour while the qualifying options are similar in style but display different information.

ENDURANCE LIGHT PACKAGE

This setting determines if the car is fitted with an additional light bar on the nose for increased light output during night races.

NIGHT LED STRIPS

Changes the color of the two light strips on the sides of the car. Seven options are available: Blue, Purple, Red, Yellow, Orange, Green and Off, with no setting influencing the car's performance.

FRONT CORNERS

CORNER WEIGHT

The weight underneath each tire under static conditions in the garage. Correct weight arrangement around the car is crucial for optimizing a car for a given track and conditions. Individual wheel weight adjustments and crossweight adjustments are made via the spring perch offset adjustments at each corner.

RIDE HEIGHT

Distance from ground to a reference point on the chassis. Since these values are measured to a specific reference point on the car, these values may not necessarily reflect the vehicle's ground clearance, but instead provide a reliable value for the height of the car off of the race track at static values. Adjusting Ride Heights is key for optimum performance, as they can directly influence the vehicle's aerodynamic performance as well as mechanical grip. Increasing front ride height will decrease front downforce as well as decrease overall downforce, but will allow for more weight transfer across the front axle when cornering. Conversely, reducing ride height will increase front and overall downforce, but reduce the weight transfer across the front axle.

SPRING PERCH OFFSET

Used to adjust the ride height at this corner of the car by changing the installed position of the spring. Increasing the spring perch offset will result in lowering this corner of the car while reducing the spring perch offset will raise this corner of the car. These changes should be kept symmetrical across the axle (left to right) to ensure the same corner ride heights and no change in cross weight. The spring perch offsets can also be used in diagonal pairs (LF to RR and RF to LR) to change the static cross weight in the car.

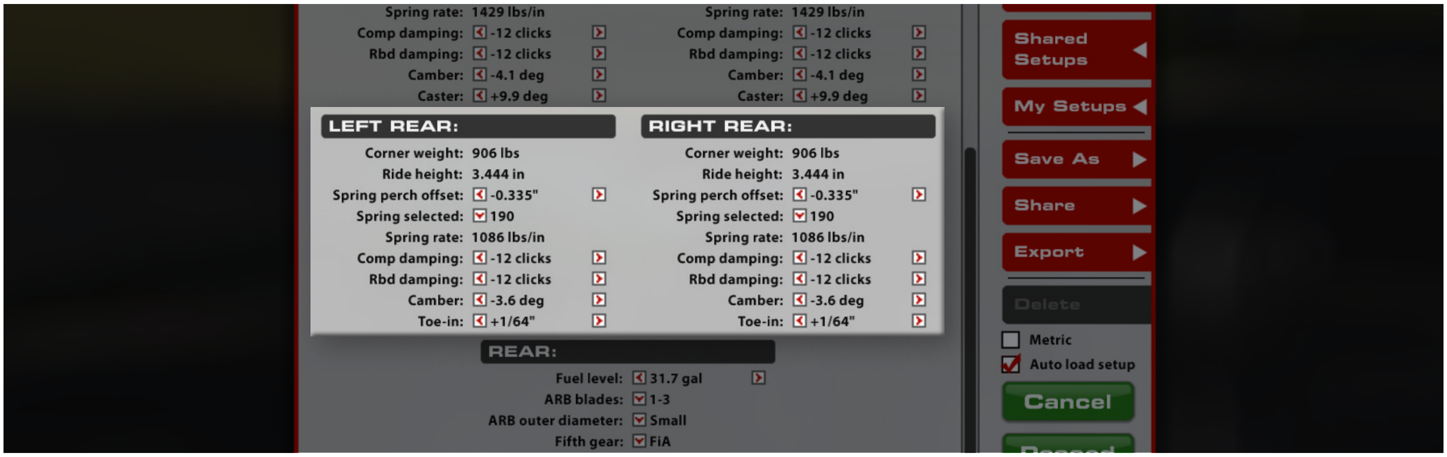
SPRING RATE

This setting determines the installed corner spring stiffness. Stiffer springs will result in a smaller variance in ride height between high and low load cases and will produce superior aerodynamic performance through improved platform control however, they will also result in increased tire load variation which will manifest as a loss in mechanical grip. Typically the drawbacks of stiffer springs will become more pronounced on rougher tracks and softer springs in these situations will result in increased overall performance. Corner spring changes will influence both roll and pitch control of the platform and ARB changes should be considered when altering corner spring stiffnesses in order to retain the same front to rear roll stiffness and overall balance. When reducing corner spring stiffness the ARB stiffness (either via blade or diameter depending on the size of the corner spring change) should be increased to retain the same roll stiffness as previously. Spring perch offsets must be adjusted to return the car to the prior static ride heights after any spring rate change.

CAMBER

Camber is the vertical angle of the wheel relative to the center of the chassis. Negative camber is when the top of the wheel is closer to the chassis centerline than the bottom of the wheel, positive camber is when the top of the tire is farther out than the bottom. Due to suspension geometry and corner loads, negative camber is desired on all four wheels. Higher negative camber values will increase the cornering force generated by the tire, but will reduce the amount of longitudinal grip the tire will have under braking. Excessive camber values can produce very high cornering forces but will also significantly reduce tire life, so it is important to find a balance between life and performance. Increasing front camber values will typically result in increased front axle grip during mid to high speed cornering but will result in a loss of braking performance and necessitate a rearward shift in brake bias to compensate.

REAR CORNERS



CORNER WEIGHT

The weight underneath each tire under static conditions in the garage. Correct weight arrangement around the car is crucial for optimizing a car for a given track and conditions. Individual wheel weight adjustments and crossweight adjustments are made via the spring perch offset adjustments at each corner.

RIDE HEIGHT

Distance from ground to a reference point on the rear of the chassis. Increasing rear ride height will decrease rear downforce as well as increase overall downforce and will allow for more weight transfer across the rear axle when cornering. Conversely, reducing ride height will increase rear downforce percentage but reduce overall downforce while reducing the weight transfer across the rear axle. Rear ride height is a critical tuning component for both mechanical and aerodynamic balance considerations and static rear ride heights should be considered and matched to the chosen rear corner springs for optimal performance.

SPRING PERCH OFFSET

Used to adjust the ride height at this corner of the car by changing the installed position of the spring. Increasing the spring perch offset will result in lowering this corner of the car while reducing the spring perch offset will raise this corner of the car. These changes should be kept symmetrical across the axle (left to right) to ensure the same corner ride heights and no change in cross weight. The spring perch offsets can also be used in diagonal pairs (LF to RR and RF to LR) to change the static cross weight in the car.

SPRING RATE

Similar to the front axle, stiffer springs will result in a smaller variance in ride height between high and low load cases and will produce superior aerodynamic performance through improved platform control at the expense of mechanical grip. This can be particularly prominent when exiting slow speed corners with aggressive throttle application. Stiffer springs will tend to react poorly during these instances especially so on rough tracks which will result in significant traction loss. Spring stiffness should be matched to the needs of the racetrack and set such that the handling balance is consistent between high and low speed cornering. As an example case, a car which suffers from high speed understeer but low speed oversteer could benefit from an increase in rear spring stiffness. This will allow for a lower static rear height which will reduce rear weight transfer during slow speed cornering while maintaining or even increasing the rear ride height in high speed cornering to shift the aerodynamic balance forwards and reduce understeer. Spring perch offsets must be adjusted to return the car to the prior static ride heights after any spring rate change.

CAMBER

As at the front of the car it is desirable to run significant amounts of negative camber in order to increase the lateral grip capability however, it is typical to run slightly reduced rear camber relative to the front. This is primarily for two reasons, firstly, the rear tires are 25 mm (~1") wider compared to the fronts and secondly the rear tires must also perform the duty of driving the car forwards where benefits of camber to lateral grip become a tradeoff against reduced longitudinal (traction) performance.

TOE-IN

At the rear of the car it is typical to run toe-in. Increases in toe-in will result in improved straight line stability and a reduction in response during direction changes. Large values of toe-in should be avoided if possible as this will increase rolling drag and reduce straight line speeds. When making rear toe changes remember that the values are for each individual wheel as opposed to paired as at the front. This means that individual values on the rear wheels are twice as powerful as the combined adjustment at the front of the car when the rear toes are summed together. Always keep the left and right toe values equal to prevent crabbing or asymmetric handling behaviour.

REAR

FUEL LEVEL

The amount of fuel in the fuel tank. Tank capacity is 120 L (31.7 g). Adjustable in 1 L (0.26 g) increments.

ARB BLADES

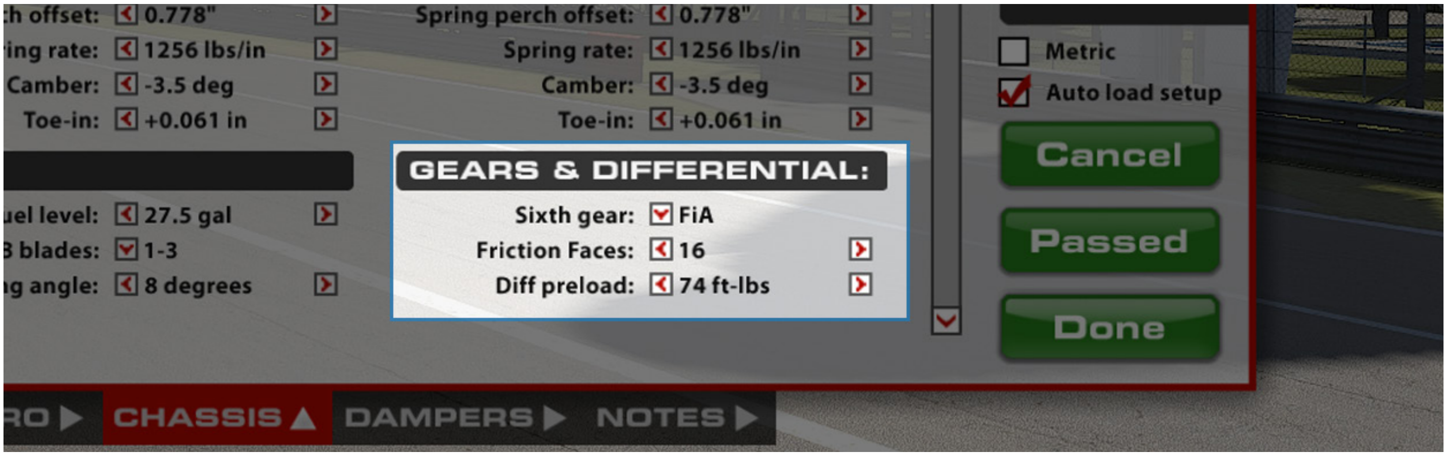
The configuration of the Anti-Roll Bar arms, or "blades", can be changed to alter the overall stiffness of the ARB assembly. Higher values transfer more force through the arms to the ARB itself, increasing roll stiffness in the rear suspension and producing the same effects, albeit on a smaller scale, as increasing the diameter of the sway bar. Conversely, lower values reduce the roll stiffness of the rear suspension and produce the same effects as decreasing the diameter of the sway bar. These blade adjustments can be thought of as fine-tuning adjustments between sway bar diameter settings. 6 ARB blade options are available ranging from 1-1 (softest) to 3-3 (stiffest).

REAR WING ANGLE

The wing setting refers to the relative angle of attack of the rear wing, this is a powerful aerodynamic device which has a significant impact upon the total downforce (and drag!) produced by the car as well as shifting the aerodynamic balance of the car rearwards with increasing angle. Increasing the rear wing angle results in more total cornering grip capability in medium to high speed corners but will also result in a reduction of straight line speed. Rear wing angle should be adjusted in conjunction with front and rear ride heights, specifically the difference between front and rear ride heights known as 'rake'. To retain the same overall aerodynamic balance it is necessary to increase the rake of the car when increasing the rear wing angle.

The Wing Setting value in the Chassis > Rear section is tied directly to the Wing Setting in the Aero Calculator section. Changing one will automatically change the other

GEARS & DIFFERENTIAL



SIXTH GEAR

Two options for 6th gear are available for selection depending upon track type. The FIA gear is shorter and should be used at the majority of tracks while the IMSA Daytona gear should be used at Daytona and Le Mans to prevent reaching the rev limiter before the end of the straightaways.

FRICTION FACES

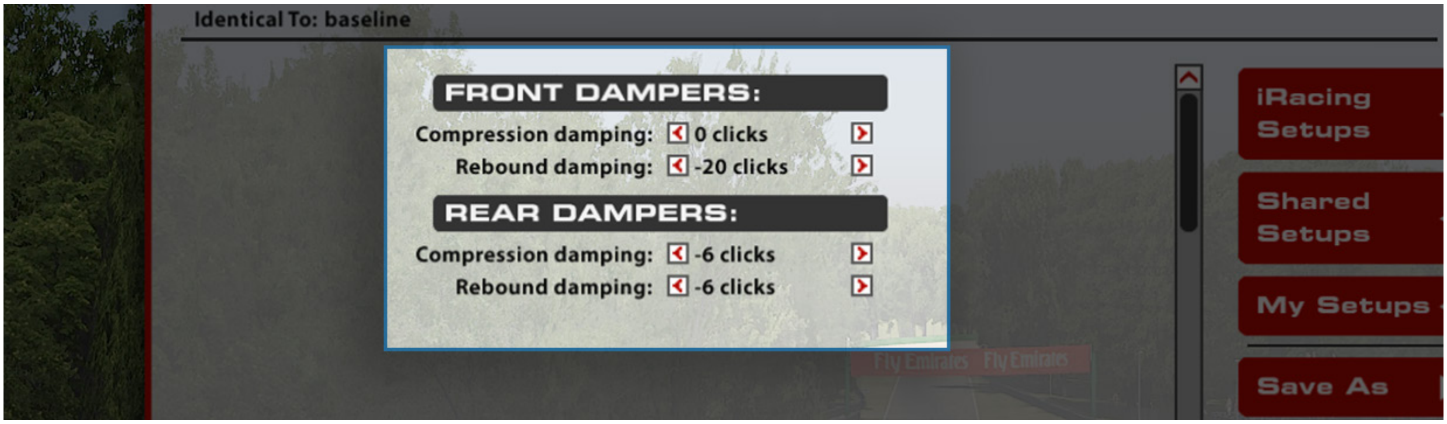
The number of friction faces in the differential affect how much overall force is applied to keep the rear axle locked. Treated as a multiplier, adding more faces produces increasingly more locking force. For example, 8 friction faces will have twice the locking force of 4 faces, which will have twice the force of 2 faces.

DIFF PRELOAD

Diff preload is a static amount of locking force present within the differential and remains constant during both acceleration and deceleration. Increasing diff preload will increase locking on both sides of the differential which will result in more understeer when off throttle and more snap oversteer with aggressive throttle application. Increasing the diff preload will also smooth the transition between on and off throttle behaviour as the differential locking force will never reach zero which can be helpful in reducing lift-off oversteer and increasing driver confidence. Typically diff preload should be increased when there is noticeable loss in slow corner exit drive and/or over-rotation during transition between the throttle and brake in low to mid speed corners.

Dampers

FRONT



COMPRESSION DAMPING

The Front Damper Compression setting controls the shock's stiffness when the suspension is compressing, with a single setting controlling both the high- and low-speed damping values. Higher values (closer to zero) will increase damping forces and resist compression, lower values (more negative) will allow the shock to compress more easily.

At the front of the car, increasing compression can induce understeer while braking and at turn-in, but can also help to produce better aerodynamic performance with the chassis's movement being slowed through changing loads. Reducing compression will allow the front end to compress faster, inducing oversteer at turn in and reducing straight-line stability under heavy braking.

REBOUND DAMPING

The Front Damper Rebound setting controls the shock's stiffness when the suspension is expanding, with a single setting controlling both high- and low-speed damping values. Higher values (closer to zero) will increase damping forces and will try to keep the suspension compressed when loads are removed, while lower values (more negative) will allow the suspension to expand more easily.

For the front of the car, increasing rebound can increase aerodynamic performance at high speed by keeping the front of the car lower as loads reduce. This can also cause the front tires to unload, especially over a bumpy track surface, and induce understeer on throttle and at high speeds. Reducing front rebound will help with front-end mechanical grip, inducing oversteer on throttle, but can reduce aerodynamic performance by allowing too much chassis movement.

REAR

COMPRESSION DAMPING

The Rear Damper Compression setting controls the shock's stiffness when the suspension is compressing, with a single setting controlling both the high- and low-speed damping values. Higher values (closer to zero) will increase damping forces and resist compression, lower values (more negative) will allow the shock to compress more easily.

At the rear of the car, increasing compression can induce understeer on throttle and corner exit, but can also help to produce better aerodynamic performance with the chassis's movement being slowed through changing loads. Reducing compression will allow the rear end to compress faster, inducing oversteer on throttle application.

REBOUND DAMPING

The Rear Damper Rebound setting controls the shock's stiffness when the suspension is expanding, with a single setting controlling both high- and low-speed damping values. Higher values (closer to zero) will increase damping forces and will try to keep the suspension compressed when loads are removed, while lower values (more negative) will allow the suspension to expand more easily.

For the rear of the car, increasing rebound can decrease aerodynamic drag slightly at high speed by keeping the rear of the car lower as loads reduce. This can also cause the rear tires to unload, especially over a bumpy track surface, and induce oversteer at high speeds. Reducing rear rebound will help with rear-end mechanical grip, inducing understeer when braking, but can reduce aerodynamic performance by allowing too much chassis movement.